

# ***VSI-FAX 4***

## **SERVER MANUAL**

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# FOREWORD

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## Scope and Intended Audience

This manual provides detailed information about how to use, integrate and maintain a VSI-FAX Server (fax server) following successful installation. We expect that persons maintaining a fax server already possess detailed technical knowledge about the hardware and software platform that the fax server will be running on.

Refer to your *VSI-FAX Getting Started Manual* for detailed installation instructions. Also refer to your *VSI-FAX Integration Manual* for detailed information about how to integrate a VSI-FAX server with existing business applications.

## Typeface Conventions

The following tables show examples of standard typeface styles used in this manual to convey various kinds of information.

EXAMPLE	DESCRIPTION
Click <b>OK</b> . - or - Choose File > <b>Close</b> .	Bold text is used to show actual Graphical User Interface (GUI) menus, commands and buttons. Also note that in the second example, sequential commands are separated by a greater-than (>) character.
Enter <b>vfxadmin...</b>	Bold monospaced text is used to show literal user input that must be entered exactly as it appears in the manual.

EXAMPLE	DESCRIPTION
<b>&lt;my_filename&gt;</b> - or - <b>&lt;my_password&gt;</b>	Bold monospaced text inside angle brackets shows a type of user input (not a literal user input). Your actual entry will be your file or your personal password.
Installation Complete. - or - ...set the VSIFAX variable... - or - ...are stored in \$VSIFAX/spool/dbs	Regular monospaced text is used for file, directory and environment variable names, as well as file entries and displayed messages.

## A Word About Unix, Linux and Windows Notation

This manual supports Unix, Linux and Windows platforms. Whenever possible, meaningful examples are provided in all applicable formats. However, in the interest of clarity, directories and filenames are usually given in only one format. In most cases, these are interchangeable between platforms if you remember the following:

Unix and Linux environment variables are prefixed with a dollar sign (\$) ; Windows environment variables are enclosed in percent signs (%).

Unix and Linux path statements use forward slashes (/) ; Windows path statements use backlashes (\).

The following path statements are equivalent::

\$VSIFAX/MY_DIR/my_file	Unix and Linux
%VSIFAX%\MY_DIR\my_file	Windows

## Notes

The following kinds of notes appear in this manual:

**NOTE:** This is a general note. We strongly suggest that you read these as they always contain important information you should be aware of before performing some action.

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**IMPORTANT:** This is a warning. Warnings always contain information that if not heeded could result in unpredictable behavior or loss of data.

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**TIP:** Tips present optional information intended to speed up your work or otherwise enhance your experience with our product. Tips never contain information that will cause a failure if ignored.

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## Obtaining Additional VSI-FAX Manuals

The VSI-FAX manuals are available in Adobe Acrobat (.pdf) format in the /docs directory of your installation CD. You can also download manuals in Acrobat format from the VSI FTP site as follows:

1. Connect to ftp.vsi.com.
2. Login in as anonymous
3. Go the /pub/releases/vsifax4 directory.
4. Go the directory for your version (e.g., /latest or /V400).
5. Go to the /docs directory.
6. Download the .pdf files.

You must have Adobe Acrobat Reader 4.0 installed on your system to view these .pdf files. The Acrobat Reader is available free of charge from the Adobe web site at <http://www.adobe.com>

You can also contact VSI ([sales@vsi.com](mailto:sales@vsi.com)) if you would like to purchase additional printed manuals.

## Additional Technical Information

Additional technical information is available from the Technical Support area of the VSI web site. Point your browser to <http://www.vsi.com/support>, then go to the Knowledge Base.



# FUNDAMENTALS

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This chapter introduces and briefly describes various fundamental concepts that should be thoroughly understood before you begin administering your VSI-FAX server (fax server).

## Important Terms and Concepts

This topic introduces some important terms and concepts that you should understand before you begin administering your fax server.

### Fax Devices

Fax devices (devices) can be either single-channel modems or multi-channel fax boards.

There are also two special devices: loopback(lb) and send mail (sm). The loopback device is used to route fax requests back to the originating user's fax inbox. The send mail device is used to send faxes as email attachments.

### Classes

Faxes can be sent to either a single physical device or a group of devices called a *class*. For example, a class could be a group of devices dedicated to long distance calls, or a group of devices used only for high-volume fax requests. A class can only contain physical devices - it cannot contain other classes. However, any device can be included in one or more classes. When a fax is sent to a class, it will be routed to the first available device in that class.

### Queues

Each device and class has a queue. Pending fax requests are held in the queue until the job is completed.

## Users

In order to send or receive faxes, a person must be registered in the fax server user database. User information is only the most basic and unique information about each fax user (e.g., user name, password, etc.). Most fax settings and privileges are actually controlled via profiles.

## Profiles

Profiles provide centralized management of fax user settings and privileges. There are two kinds of profiles:

**Master Profile** The master profile is created during fax server installation. Depending on how you use it, the master profile can provide completely centralized control over a user's fax settings and privileges.

**IMPORTANT:** Do not delete the master profile under any circumstances.

**User Profiles** Unless a user profile exists for a fax user, all fax settings and privileges are centrally controlled from the master profile. If you want to grant certain users greater flexibility or privileges, create a user profile for them.

**Inheritance** If a user profile exists for a fax user, each time they access the fax server (e.g., send a fax or explicitly log into the fax server for some other reason), their user profile is dynamically created at that moment by merging the inheritable settings from the master profile with persistent user preferences stored in their user profile. If the user explicitly logged in to the fax server, these settings remain in effect until the user logs off.

## Licenses

VSI-FAX uses a pure client/server architecture. Even users logged directly into the fax server are in fact communicating with the fax server via a network connection - this network connection just happens to have the same IP address as the server. If you send a fax from a different IP address than the fax server (i.e., you do not telnet, rlogin or use the keyboard at the fax server), you must have a valid VSI-FAX client license to do so.

**Serial Numbers and Activation Keys** All VSI-FAX licenses comprise two elements: a serial number and an encrypted activation key. You must have *both* pieces of information in order to activate that license on your fax server.

**Maintenance License** When you subscribe to one of VSI's maintenance plans, you are given a maintenance license serial number and activation key. You must install this license on your fax server in order to perform future upgrades to your fax server. Each fax server can have only one maintenance license installed.

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## Directories

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**NOTE:** Phone books are called “directories” in most VSI products in order to more closely agree with prevailing groupware terminology.

---

Directories store fax addressing and routing (i.e., fax recipient) information.

<b>People</b>	People records store fax addressing and routing information for a single individual.
<b>Groups</b>	<p>Group records are lists of people. They are a convenient to send the same fax to more than one person. This is useful for faxing an entire department or marketing prospect list.</p> <p>Groups can also be used to receive faxes for an entire workgroup. This allows any member of that group to process received faxes on behalf of the entire group. This is useful for departments like Customer Support or Sales where fax supports duties can be shared among various persons in the group.</p>
<b>Public Directory</b>	There is only one public directory. It is read-only to all fax users and can be used to send or route faxes to anyone listed in the public directory. Only fax administrators can modify information in the public directory.
<b>Private Directories</b>	Private directories are owned by a particular user and are typically controlled so that only that user can access these entries. Only one private directory can be displayed at a time and the owner is the only person who can modify information in that private directory.
<b>External Directories</b>	VSI-FAX supports external Lightweight Directory Access Protocol (LDAP) directories for storing fax addressing and routing information. However, before you can use an LDAP directory, you must explicitly add it via MMC. Refer to the <i>MMC Fax Administration</i> online help for additional information.

## Resources

Resources are common elements that are available to all users when they send faxes.

- Attachments** Attachments are text, PCL, TIFF or Postscript files that can be added to a fax transmission. Attachments are usually re-usable items such as price lists and promotional materials that are repeatedly sent.
- Cover Pages** VSI cover pages are template files that dynamically populate themselves with information when a fax is sent. You can use the default cover pages that VSI provides or design your own with CoverMaker.  
Refer to your *Getting Started Manual* for CoverMaker installation instructions and refer to the CoverMaker online help for information about using CoverMaker to design custom cover pages.
- Folders** Folders are entire operating system directories containing attachments. When you attach a folder to a fax, every file in that directory is included with the fax.
- Overlays** Overlays are TIFF files that can be placed on top of a fax.

## Logs

The fax server generates many different kinds of logs. You can use these logs to troubleshoot problems, get fax status or review server history.

- Event Logs** Event logs provide detailed information about each device, class or fax server process.
- Inbound Fax Log** The inbound fax log maintains a detailed record of each received fax.
- Outbound Fax Log** The outbound fax log maintains a detailed record of each sent fax request.

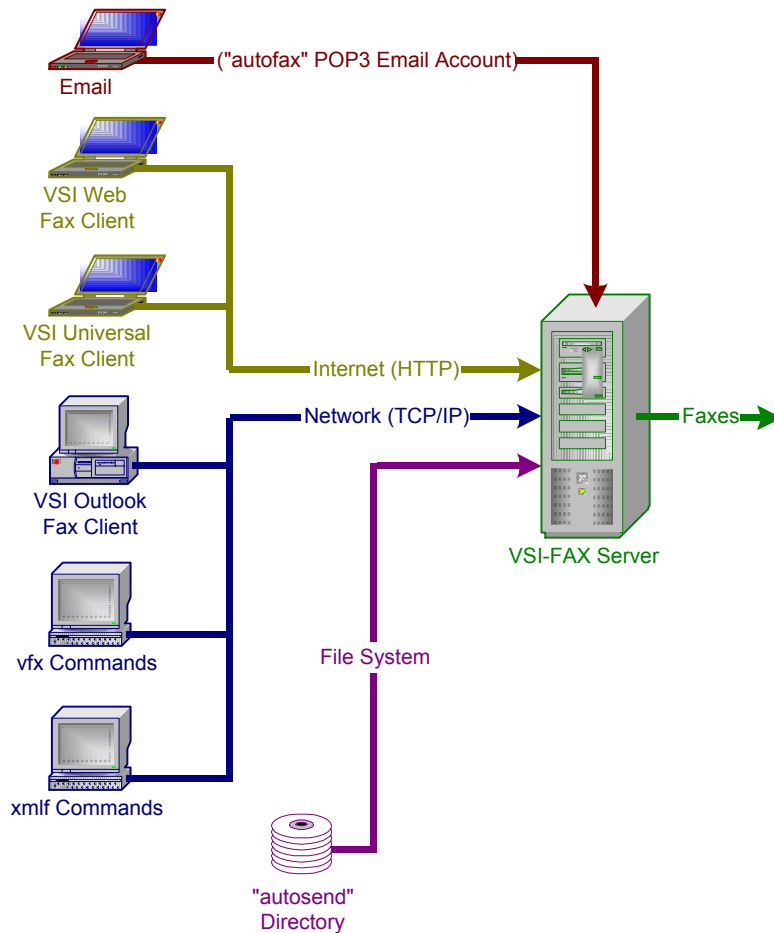


# Functional Overview

This topic briefly describes how VSI-FAX sends, receives and routes faxes.

## Sending Faxes

One of the primary design goals of VSI-FAX is to provide as many reliable ways as possible to send a fax. You can send a fax by logging on to the fax server and entering information in a command shell, by sending an email message to the fax server, by placing a file in the “autosend” directory or via one of our graphical fax clients. This figure shows the various ways you can send faxes with VSI-FAX:



Sending Faxes with VSI-FAX

## Email

VSI-FAX provides an “Email-to-Fax Gateway” feature that allows you send faxes via email messages to the fax server. To do this, you must:

1. Create a new email user account on your corporate mail server (we recommend that you use “autofax” for this user account).
2. Enter the fax recipient information in a specific format (i.e., **fax:<fax\_number>**) in your email message subject line.
3. Send your fax email messages to **autofax@my\_company.com**.

## VSI Web Fax Client

The VSI Web Fax Client (web fax client) provides desktop faxing capabilities via Microsoft Internet Explorer. This is accomplished via a full featured integrated web server inside the fax server.

You can point your browser to the fax server and immediately send a fax. Simply enter the fax server host name in your browser Address or Location field and the VSI-FAX login screen appears. After you log in, various web pages allow you to create and send your fax.

## VSI Universal Fax Client

The VSI Universal Fax Client (universal fax client) is feature-rich, cross-platform java-based desktop faxing application. Incorporating a design that facilitates easy deployment, coupled with performance comparable to a native desktop application, the universal fax client excels in environments where power users demand functionality and the administrator seeks centralized management. Like the web fax client, the universal fax client connects to the fax server via the internet (or your corporate intranet).

## vfx Commands

The simplest way to send a fax is to log on to the VSI-FAX server (fax server), open a command shell and enter a **vfx** command. For example, to fax `my_file.txt` to local fax number 555-1212, enter:

```
vfx -n 555-1212 my_file.txt
```

**vfx** commands are discussed in greater detail elsewhere in this manual.

## xmlf Commands

You can also use **xmlf** commands to send faxes. However, your fax information must be submitted as a conforming XML-F fax submit Document Type Definition (DTD).

XML-F is typically used for fax integrations (i.e., users typically do not send faxes using XML-F). Refer to your *VSI-FAX Integration Manual* for additional information about XML-F.

## VSI Outlook Fax Client

The VSI Outlook Fax Client (Outlook fax client) provides advanced desktop faxing capabilities for Microsoft Outlook and Exchange users.

- The Outlook fax client includes a custom form and fax status applet that tightly integrates with the Microsoft Outlook messaging client
- You use your Outlook Contacts folder or Personal Address Book to store your fax recipient information
- Faxes are sent directly to the fax server via your network (they are not routed thru the Exchange server)

## “autosend” Directory

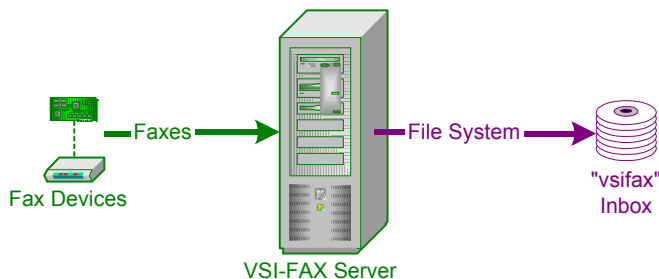
The “autosend” directory is an advanced feature that allows you to send faxes just by placing special files (i.e., VSI-FAX “tag” and “batch” files) in this directory. The autosend directory, tag and batch files are discussed in greater detail elsewhere in this manual and in your *VSI-FAX Integration Manual*.

## Receiving Faxes

Receiving faxes is quite different from sending them. Consider that when you send a fax, you begin with various pieces of information, then you rasterize (image) that information into a document that can be transmitted over a telephone line. However, once the document is imaged, it ceases to be anything other than pixels at various gray-scale color depths (it no longer contains anything that can be understood as data).

Of course, when you receive a fax, the reverse is true. All you know for certain is that a particular fax device (i.e., a modem or channel on a fax board) answered a telephone call and received a fax (i.e, a rasterized file). So while the person sending the fax intends for it to be read by a particular person, in most cases the fax server doesn’t have any idea who that person is.

VSI-FAX handles this situation by creating a default inbox for all incoming faxes. It uses the only user account it is certain exists on all systems (user “vsifax”). Therefore, until you change these settings, the default behavior is that all incoming (received) faxes are placed in user “vsifax’s” inbox as shown in this figure:



Receiving Faxes with VSI-FAX

Incoming faxes are stored as numbered TIFF files in this directory. You can view these files by going to the “vsifax” inbox directory and opening them with a multi-page TIFF file viewer.

---

**IMPORTANT:** You must have a multi-page TIFF viewer installed on your system in order to view received faxes. While most “paint” programs can open a multi-page TIFF file, they only display the first page and are therefore unsuitable for viewing faxes (in most cases, you will only see the fax cover page). Wang Imaging for Windows is a common multi-page TIFF file viewer that is provided free with Windows 95, 98 and NT. Similar programs are also available for Unix and Linux systems.

---

You can customize the way VSI-FAX processes received faxes for each inbox. Depending on your settings, VSI-FAX will automatically perform one or more of the following actions each time a fax is received:

- Print the fax (this emulates a standalone fax machine)
- Notify someone via email that a fax has arrived
- Forward the fax as an email attachment

After performing these actions, you can also configure VSI-FAX to do one of the following:

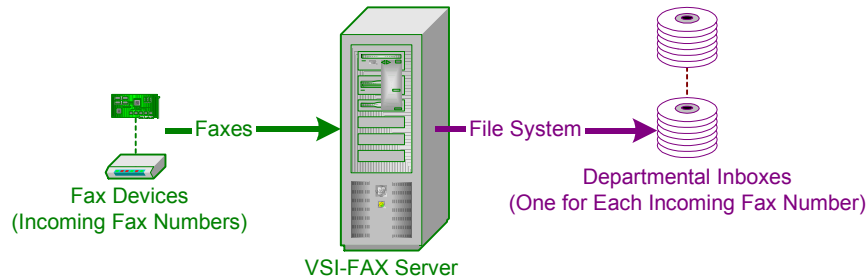
- Delete the received fax
- Archive the received fax (move it from the inbox to another directory)
- Leave the received fax in the inbox

## Simple “Departmental” Fax Routing

You can see that the level of fax routing provided with a “default” VSI-FAX system is very modest. It is really only suitable for small companies with a single fax telephone number.

If your fax server has more than one fax device (modem or fax board) installed, you can easily extend this default routing behavior by creating a “departmental user account” for each of your incoming fax numbers. VSI-FAX will automatically create a new fax inbox for each of these departmental users. Furthermore, one of the settings that VSI-FAX stores for each fax device is the default inbox for received faxes. Simply change each device’s default inbox to one of your new “departmental inboxes”

and VSI-FAX will route faxes received on a particular telephone line to the correct inbox as shown in this figure:



Simplified Departmental Routing Diagram

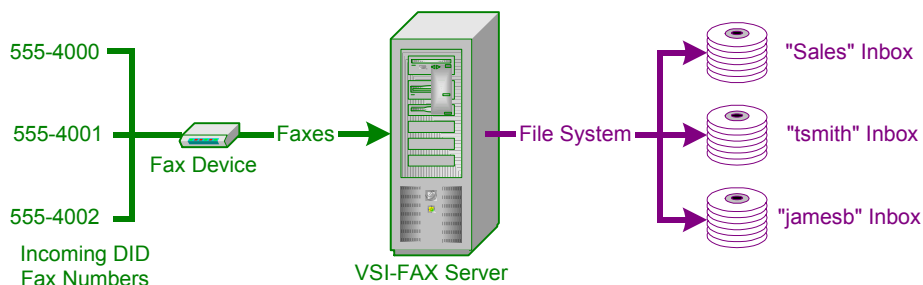
The advantage to this approach is that it is very inexpensive - you do not have to purchase any additional telephone numbers or services from your telephone company.

## DirectFax Routing

DirectFax™ is an advanced fax routing feature that expands the “simplified departmental” routing scheme to cover individual fax users. This is how it works.

Thus far, our discussions have assumed that each fax device can only answer one incoming fax telephone number. That is not precisely true. Contiguous blocks of Direct Inward Dial (DID) telephone numbers can be purchased from most telecom providers. One important feature of these DID numbers is that they are answered from a single “trunk” telephone line. Therefore, if you connect a fax device to a DID trunk line, that single fax device can actually answer more than one incoming fax telephone number.

DID numbers typically comprise a contiguous block of one thousand numbers beginning with “xxx-x000” and ending with “xxx-x999.” If a DID number is assigned to each fax user, then VSI-FAX can strip off the last four digits of the incoming fax number and use that information to route the fax to the appropriate user’s inbox as shown in the following figure:



DirectFax Routing Diagram

# Imaging Overview

This topic explains how files are imaged (i.e., converted to TIFF files) so that they can be faxed.

## Basic Imaging

Multi-page Tagged Image File Format (TIFF) is the basic underlying file format used to send all faxes with VSI-FAX. However, you do not have to restrict your faxing to just TIFF files. VSI-FAX supports conversion of several common file types to TIFF files so that they can be faxed.

VSI-FAX will image these file types on all supported fax server platforms:

- ASCII text files with a `.txt` extension
- PCL 5e files with a `.pcl` extension
- Epson printer files with a `.ep` extension
- PostScript Level 1 files with a `.ps` extension
- TIFF group 3 or group 4 files with a `.tif` extension

### ***A Word About File Extensions***

If you supply a file extension, the fax server will image that file accordingly.

If you do not supply a file extension or supply a file extension that the fax server cannot recognize, the fax server will try to determine what kind of file it is by examining the first 256 bytes of that file:

- If the file server can determine that it is a PostScript, PCL or TIFF file, it will image it accordingly
- If the file server cannot determine that it is a PostScript, PCL or TIFF file, it will image the file as plain ASCII text

**TIP:** The best practice is to ensure that any files you want to fax have the correct file extensions. However, in most cases you can get away with not supplying file extensions for properly constructed PostScript, PCL or TIFF files.

## Extended Imaging

If the fax server is running on Windows NT/2000, you can also image any file types associated with an application in the Windows registry. When the fax is sent, the native application associated with that file extension will be used to image the fax via Windows Dynamic Data Exchange (DDE).

Common file types supported on a Windows fax server are:

- Adobe Acrobat Portable Document Format (PDF) files with a `.pdf` extension
- Microsoft Excel files with a `.xl?` extension (i.e., “.xl” followed by any other character)
- Microsoft PowerPoint files with a `.ppt` extension
- Microsoft Word document files with a `.doc` extension
- Microsoft Word Rich Text Format (RTF) files with a `.rtf` extension

However, your Windows fax server will almost certainly have other file types registered. Launch Windows Explorer and choose **View > Options > File types** to see a complete list of all supported file types on your Windows fax server.

## Imaging Server

An imaging server is a way to provide extended imaging services for a Unix fax server. If you have both a Unix fax server and a Windows fax server on the same network, you can configure them such that the Windows fax server images the additional file types, not normally available on Unix, for the Unix fax server. Refer to *Imaging Server Setup and Configuration* (page 87) for additional information.

## The “vsifax” User Account

Whenever a fax server is installed, a fax administration user account is automatically created. The user ID for this account is “vsifax.” You should log in as user vsifax any time you perform fax server maintenance.

Initially, the vsifax user account is not password protected. You may want to assign a password to the vsifax user account to ensure that unauthorized users cannot perform fax server maintenance.

Because the vsifax user account is intended to be an administrative account, you should not use this account for normal faxing. The reason for this is that the vsifax user account will receive notifications of various system activity. It is important that the person monitoring the vsifax inbox be able to distinguish these notifications from normal send and receive fax activity. Conversely, these system notifications can be distracting to normal fax users. Therefore, it is best to reserve the vsifax user account for strictly administrative purposes.





# BASIC FAX SERVER ADMINISTRATION

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This chapter describes the basic tools, techniques and procedures used to administer a VSI-FAX server.

## Tools and Techniques

This topic describes the various tools and techniques you can use to administer your VSI-FAX server. Many fax administration tasks can be accomplished more than one way (e.g., from the command or via a graphical administration environment such as the Microsoft Management Console).

### Microsoft Management Console (MMC)

VSI MMC Fax Server Administration is a Microsoft Management Console snap-in that allows you to manage your fax server from a common Windows-based Graphical User Interface (GUI).

Before you can use VSI MMC Fax Server Administration, you must install the software from your VSI product CD-ROM and load the snap-in from a Microsoft Management Console (MMC) session.

Refer to your *VSI-FAX Getting Started Manual* for additional information about installing MMC fax server administration software.

Refer to the *VSI MMC Fax Server Administration Online Help* for additional information about loading the snap-in from a Microsoft Management Console (MMC) session.

### Command Line

VSI-FAX administration commands can be entered from any Unix/Linux or Windows command shell. Help for these commands is available by entering the command followed by a question mark argument. For example, to get help for the **vfxadmin license** command, enter:

```
vfxadmin license -?
```

This manual contains an exhaustive command reference. Refer to *Command Reference* (page 115) for additional information about VSI-FAX commands.

## Modifying Configuration Files

Another way you can perform VSI-FAX administration is by directly modifying one of the various configuration files with a text editor. Refer to *Configuration Files* (page 409) for additional information about specific entries in VSI-FAX configuration files.

## Starting and Stopping the Scheduler

Before a fax request can be submitted, the scheduler must be running. Additionally, you must stop the scheduler to perform certain maintenance activities, then restart it to resume normal operation.

---

**NOTE:** You must be logged on as root (Unix/Linux), Administrator (Windows) or user vsifax to start or stop the scheduler.

---

To start the fax scheduler, enter:

```
vsfxsched start
```

```
vsfxsched: Scheduler started at Thu Nov 14 12:45:28 1996  
vsfxsched: Please wait ..... done
```

To stop the fax scheduler, enter:

```
vsfxsched stop
```

```
vsfxsched: Sending shutdown request to scheduler.  
vsfxsched: Please wait .....  
vsfxsched: Scheduler stopped at Thu Nov 14 12:47:31 1996
```

To stop scheduler and restart it with a single command, enter:

```
vsfxsched restart
```

```
vsfxsched: Stopping the fax server  
vsfxsched: Please wait .. done  
vsfxsched: Starting the fax server  
vsfxsched: Please wait ..... done
```

## Getting Scheduler Status

You can also use the **vfxstat** command to return status information from the scheduler. This includes confirmation that the scheduler is running and that a particular device is ready to begin processing fax requests.

When one or more devices have been initialized and the scheduler is waiting to accept fax requests, device states are shown as idle.

To check device status only, enter:

**vfxstat**

```
Server on <host_name> has been up since 03/07 17:59
```

Device	Comments	State
fax1	Fax Queue	Idle
fax2	Fax Queue	Idle
lb	LoopBack	Idle
lcr	LCR hold queue	Not running [Holding queue only]
sm	SendMail	Idle

Although the status of the scheduler is given in the output of almost any option used with **vfxstat**, the **-r** option quickly reports whether the scheduler is running or not.

To check only scheduler status, enter:

**vfxstat -r**

```
vfxstat: Scheduler is running
```

You can also verify that the associated scheduler command processes have been successfully started. You will see at least the following list of processes with the **vfxsched list** command.

To verify that the scheduler is running, enter:

**vfxsched -l**

```
6087: vrsched
6090: vgsched
6092: vxmld
6089: vnetfax
6095: c2-fim (fax1)
6096: c2-fim (fax2)
6097: lb-fim (lb)
6098: sm-fim (sm)
```

Depending on your exact system configuration, you may see additional processes listed. For example, if you set up the email-to-fax gateway during fax server installation, you will also see a **vpopd** process in the list.

To show administrator information (i.e., a complete list of devices, classes and logged-in users), use the **vfxstat -a** command.

```
vfxstat -a
```

```
Server on <host_name> has been up since 11/14 15:28  
Scheduler time is 11/14 16:21
```

```
Default destination: fax1
```

Device	Jobs	Ready	Acc	Ena	Snd	Rcv	FIM	Inbox	Port
fax1	0	0	yes	yes	yes	yes	c2	vsifax	\dev\ttyla
lb	0	0	yes	yes	yes	no	lb	vsifax	\dev\null
lcr	0	0	no	no	no	no	hold	vsifax	<none>
sm	0	0	yes	yes	yes	no	sm	vsifax	<none>

Device	Comments	State
fax1	489-2486	Idle
lb	LoopBack	Idle
lcr	LCR Hold Queue	Not running [Holding queue only]
sm	Sendmail	Idle

Session	User ID	Login Time
1009	vsifax	11/14 15:28

## Sending Faxes

The simplest **vfx** command uses just two parameters: the **-n** (fax number) option followed by the filename. For example, to fax `my_file.txt` to local fax number 555-1212, enter:

```
vfx -n555-1212 my_file.txt
```

While this very simple fax command line will suffice for very simple applications, generally more control is required. Tags allow you to include more information and precisely control various fax settings. Each tag must begin with the **-t** (tag) option, followed by the tag/value pair. To send the same fax as the previous example using tags, enter:

```
vfx -t tfn=555-1212 -t fll=my_file.txt
```

To send this same fax but also include a classic cover page, enter:

```
vfx -t tfn=555-1212 -t fll=my_file.txt -t cvr=classic
```

## Viewing Fax Requests

A request submitted with **vfx** is queued for a fax device or class. The scheduler manages the request until it is completed, canceled or until it expires because the maximum number of retry attempts was reached.

You can view the status of all active fax requests with the **vfxstat** command. Status is displayed in the following format:

Job Num	Fax Request ID Number. This unique ID number is used to identify each fax request.
Dest	Displays the assigned fax device or class queue for each fax request.
User	The fax server user ID of the person who submitted the fax request.
Submitted	The time the fax request was submitted in MM/DD HH:MM format. For example: 03/28 16:36.
Scheduled	The scheduled time for the initial or next fax attempt. For example, if a second (retry) attempt is necessary, you will see the next time that fax request is scheduled to be sent.
Att	The number of attempts the fax request has initiated.
Pri	The priority of the fax request: Urgent, High, Medium or Low.
Result	Result status of the latest fax request attempt. If the fax request has made several unsuccessful attempts, it will reflect the result status of the most recent attempt.
Group	When the fax request is part of a Group Broadcast, a number appears in this column. This number is the Group request ID number associated with that fax request. Both the Group request ID number and the fax request ID number are unique for tracking purposes.

To use the **vfxstat** command to view all fax requests currently in the queue, enter:

**vfxstat**

Server on <host\_name> has been up since 03/07 17:59

Device	Comments	State
fax1	489-2486	Sending (1003) 0/1 pgs sent 25% done
fax2	555-1212	Idle
lb	LoopBack	Idle
lcr	LCR Hold Queue	Not running (Holding Queue only)
sm	SendMail	Idle

Job Num	Dest	User	Submitted	Scheduled	Att	Pri	Result	Group
---------	------	------	-----------	-----------	-----	-----	--------	-------

---

1003	fax1	smith	03/07 18:01	NOW	0	m	QUEUED
1004	fax1	smith	03/07 18:01	NOW	0	m	QUEUED
1005	fax1	smith	03/07 18:01	NOW	0	m	QUEUED
1006	fax1	smith	03/07 18:01	NOW	0	m	QUEUED
1007	fax1	smith	03/07 18:01	NOW	0	m	QUEUED

## Canceling Fax Requests

A request can be canceled using the **vfxcancel** command. You will need to know the fax request ID number. This can be obtained using the **vfxstat** command.

---

**NOTE:** A fax request can only be canceled by the fax administrator or the user who originally sent the fax.

---

To cancel a fax request 1004 using the **vfxcancel** command, enter

```
vfxcancel 1004
```

```
Request 1004 canceled
```

To confirm the **vfxcancel** action using the **vfxstat** command, enter:

```
vfxstat
```

```
Server on <host_name> has been up since 03/07 17:59
```

Device	Comments	State
fax1	489-2486	Sending (1003) 0/1 pgs sent 25% done
fax2	555-1212	Idle
lb	LoopBack	Idle
lcr	LCR Hold Queue	Not running (Holding Queue only)
sm	SendMail	Idle

Job Num	Dest User	Submitted	Scheduled Att	Pri	Result	Group
1003	fax1 smith	03/07 18:01	NOW	0	m	QUEUED
1005	fax1 smith	03/07 18:01	NOW	0	m	QUEUED
1006	fax1 smith	03/07 18:01	NOW	0	m	QUEUED
1007	fax1 smith	03/07 18:01	NOW	0	m	QUEUED

Notice that fax request 1004 is not listed because it has been canceled.

# License Management

A network client (client) is any VSI-FAX application running on a computer with a different IP address than the fax server. Each client must have their own license in order to connect to the fax server. These client licenses must be installed on the fax server before you can register client users. Installing a license only provides the capability of connecting to the fax server.

## Adding Client Licenses

---

**NOTE:** You must also register client users in the VSI-FAX database (i.e., assign their fax server logon name) before they can send faxes. Client licenses are always installed on the fax server, not the client computer or workstation

---

### Command Line

1. Log into the fax server as user vsifax.
2. Add client licenses by entering the following:

```
vfxadmin license
```

You will be prompted for the client serial number and activation key. Once installed, the number of users specified by the license activation key will be added to the license table. If you install another license, the number of users allowed by the new license will be added to those already installed.

3. Restart the fax server by entering the following:  

```
vfxsched restart
```
4. Complete.

# User Administration

You must register each user who will be sending or receiving faxes with VSI-FAX. There must be sufficient licenses installed on the sever for each user to have their own license.

## Registering Users

When a user is registered on the fax server, an account for that user is created in the user database, which is located in the `$VSI_FAX/lib/dbs` directories. Every individual who uses VSI-FAX to send or receive faxes must be registered on the fax server, and each user must have a unique VSI-FAX user ID (i.e., fax server login name). The VSI-FAX user ID does not have to be the same as any other login name used by that individual.

---

**NOTE:** Administrators do not have to explicitly register new VSI-FAX users because new users are automatically registered the first time they connect to the fax server. Outlook and web fax client users are also licensed the first time they connect to the fax server.

---

## Command Line

For example, to register fax user “Bill Franks” with the user ID (i.e., fax server login name) “billf,” enter:

```
vfxadmin user -n “Bill Franks” billf
```

The **vfxadmin user** command can also used to register and license a user at the same time. For example, to register and license user “Bill Franks” (user ID “billf”), enter:

```
vfxadmin user -L -n “Bill Franks” billf
```

## Changing a User’s Name and Password

A user’s VSI-FAX logon information is stored in the fax server user database. Two different command line utilities can be used to change a user’s name or password:

- Use **vreguser** (page 205) if you want to change your name or password
- Use **vfxadmin user** (page 169) if you are a fax administrator and want to change another user’s name or password

## Command Line

If user “billf” wants to change his user name from “Bill Franks” to “William Franks,” he would enter:

```
vreguser -n “William Franks”
```



If the fax administrator wants to change user “billf”s name from “Bill Franks” to “William Franks,” he would enter:

```
vfxadmin user -n “William Franks” billf
```

If user “billf” wants to change his password, he would enter:

```
vreguser -p
```

The system will prompt user “billf” to enter his new password.

If the fax administrator wants to change user “billf”s password, he would enter:

```
vfxadmin user -p billf
```

The system will prompt the fax administrator to enter “billf”s new password.

## Deleting a User

To delete user ID “billf,” enter:

```
vfxadmin user -x billf
```

## Displaying a List of Registered and Licensed Users

### Command Line

```
vfxadmin user -l
```

User-ID	Name	DID-ext	Type	Lic	Last-logon
billf	Bill Franks	4504	user	yes	96/10/07 09:54
joeb	Joe Brown	4523	user	yes	96/10/11 09:55
jimc	Jim Cork	4511	user	no	96/10/12 09:58
vsidemo	VSI-FAX	Demo	user	no	96/04/06 22:21
vsifax	VSI-FAX	Admin	dept	no	96/04/06 15:24

## Assigning a DID Extension to a User

A Direct Inward Dial (DID) extension is primarily used to implement the DirectFax™ automatic routing feature. DirectFax allows each user to have his or her own unique fax number so that faxes can be routed directly to their personal email inbox.

A fax routed to an email inbox arrives as a TIFF formatted attachment to an email message. TIFF files can be opened and viewed with any common imaging editing or viewing software.

### Command Line

To assign a user's DID extension, enter:

```
vfxadmin user -e <ext> <user>
```

For example, to automatically email faxes to user nelson with the email address nelson@vsi.com, enter:

```
vfxadmin user -t aem=true -t mad=nelson@vsi.com nelson
```

## Device Administration

Devices are either single-channel modems or Fax boards, which usually provide several output channels on a single board.

### Adding and Removing Devices

In order for a physical fax device to send fax requests, it must be added to the system, set to accept requests, and enabled. Before incoming faxes can be received, receive capability must also be set and it must be enabled. Typically, a device only needs to be added to the system once.

---

**NOTE:** You must be logged in as root or user vsifax to add or remove devices. When a device is added to the system, it is set to enabled and accepting for both send and receive requests by default.

Before you add or remove a device, you must stop the fax scheduler. After adding or removing a device, you must restart the scheduler in order for these changes to take affect.

If you add or remove devices while the scheduler is running, you will be warned that the changes will not take effect until the scheduler is restarted.

---

## Unix/Linux Command Line

To add device `tty01`, you must stop the fax scheduler, use the **vfxadmin device** command, then restart the schedule by entering the following:

```
vfxsched stop
vfxadmin device -a -v /dev/tty01 -n "<comment>" fax2
vfxsched start
```

---

**NOTE:** If you want the added device to be the default destination, add the **-d** option to the **vfxadmin device** command.

---

At the time a device is added, you must specify the serial port name. Additional options that can be used include:

- Status (enabled, sending, receiving, accepting)
- Receive notify procedure
- Speaker mode

Once the device is configured, you can use **vfxadmin device** to list the device information. To list the parameters for a device `fax2`, enter:

```
vfxadmin device -l fax2

Dest name      : fax2
Comments       : 555-1212
Device         : /dev/tty2A
FIM name       : c2
Speed          : 19200
Speaker mode   : call
Status         : enabled since 11/14 16:20
Send status    : sending since 11/14 16:20
Recv status    : receiving since 11/14 16:20
Inbox          : vsifax
```

Once the scheduler has been started, you can verify that the device has been added by using **vfxstat -a** by entering the following:

```
vfxstat -a

Server on <hostname> has been up since 11/14 15:28
Scheduler time is 11/14 16:21

Default destination: fax1

DeviceJobsReady  Acc  Ena  Snd  Rcv  FIM  Inbox  Port
fax1  0      0      yes yes yes yes  c2    vsifax \dev\ttyla
lb    0      0      yes yes yes no   lb    vsifax \dev\null
lcr   0      0      no  no  no  no   hold  vsifax <none>
```

```
sm      0      0      yes yes yes no  sm      vsifax <none>
```

```
DeviceComments      State
fax1 489-2486        Idle
lb   LoopBack        Idle
lcr  LCR Hold QueueNot running [Holding queue only]
```

```
sm      Sendmail      Idle
```

```
Session User ID      logon Time
1009      vsifax      11/14 15:28
```

---

**IMPORTANT:** Before removing a device, be sure that no requests are scheduled for it. You have to cancel or modify existing requests before removing the device.

---

To remove a device, enter:

```
vfxsched stop
vfxadmin device -x fax2
vfxsched start
```

Once the scheduler has been started, you can use the **vfxstat -a** command to verify that fax2 has been successfully removed by entering the following:

```
vfxstat -a

Server on <hostname> has been up since 11/14 15:28
Scheduler time is 11/14 16:21

Default destination: fax1

DeviceJobsReady  Acc  Ena  Snd  Rcv  FIM  Inbox  Port
fax1 0      0      yes yes yes yes  c2   vsifax  \dev\ttyla
lb   0      0      yes yes yes no   lb   vsifax  \dev\null
lcr  0      0      no  no  no  no   hold vsifax  <none>

sm      0      0      yes yes yes no  sm      vsifax <none>
```

```
DeviceComments      State
fax1 489-2486        Idle
lb   LoopBack        Idle
lcr  LCR Hold QueueNot running [Holding queue only]
```

```
sm      Sendmail      Idle
Session User ID      logon Time
1009      vsifax      11/14 15:28
```

## Setting a Device to Receive or Not Receive Incoming Faxes

By default, all fax devices are configured to answer incoming calls and therefore receive incoming faxes. You may want to selectively turn this feature on and off so that configure some of your fax devices as “send-only.”

To configure a device “fax1” to not answer incoming calls and therefore not to receive incoming faxes, enter:

```
vfxadmin norecv fax1
```

```
Device fax1 now not receiving
```

To configure device “fax1” to receive incoming faxes, enter:

```
vfxadmin recv fax1
```

```
Device fax1 now receiving
```

# Classes

VSI-FAX can use either a single physical device or a group of devices called a class. For example, a class could be a group of devices dedicated to long distance calls, or a group of devices used only for high-volume fax requests. A class can only contain physical devices - it cannot contain other classes. However, any device can be included in one or more classes.

When a fax is sent to a class, the fax will be routed to the first available modem.

---

**NOTE:** You must be logged in as root (Unix/Linux), Administrator (Windows) or user vsifax to change device or class parameters.

---

---

**TIP:** Assign each existing device to a class, then use the class name as the default destination when sending a fax from a program or script. This will allow you to add devices to this class in the future without having to rewrite your program or script. Any new devices will be immediately available to service fax requests as soon as you add it to the existing class.

---

## Creating a New Class

---

**NOTE:** You must be logged on as root (Unix/Linux), Administrator (Windows) or user vsifax to create a class. When creating a class, you must restart the scheduler before the change will take effect.

---

### Command Line

A class is created when the first device is added to it with the **vfxadmin class** command. Use the same command to add new devices to the class.

For example, to create a new class called sales and assign the fax1 device to it, enter:

```
vfxsched stop
vfxadmin class -a fax1 sales

Class sales created
Device fax1 added to class sales

vfxsched start
```

---

**NOTE:** If the created class is not the default destination, you must specify it on the command line whenever you want to use it.

---

To confirm that the new class was properly created, enter:

```
vfxstat -a
```

```
Server on <hostname> has been up since 11/14 15:28
Scheduler time is 11/14 16:24
```

```
Default destination: fax1
```

Device	Jobs	Ready	Acc	Ena	Snd	Rcv	FIM	Inbox	Port
fax1	0	0	yes	yes	yes	yes	c2	vsifax	\dev\ttyla
lb	0	0	yes	yes	yes	no	lb	vsifax	\dev\null
lcr	0	0	no	no	no	no	hold	vsifax	<none>

sm	0	0	yes	yes	yes	no	sm	vsifax	<none>
----	---	---	-----	-----	-----	----	----	--------	--------

Device	Comments	State
fax1	489-2486	Idle
lb	LoopBack	Idle
lcr	LCR Hold Queue	Not running [Holding queue only]

sm	Sendmail	Idle
----	----------	------

Session	User	ID	logon	Time
1009	vsifax		11/14	15:28

## Removing a Device from a Class

---

**NOTE:** When removing a device from a class, you must stop and restart the scheduler for the changes to take effect. If a class has no device assigned to it, it is automatically removed from the database.

---

### Command Line

To remove device fax1 from class sales, enter:

```
vfxsched stop
vfxadmin class -r fax1 sales
vfxsched start
```

To confirm that the device was successfully deleted, enter:

```
vfxstat -a
```

```
Server on <hostname> has been up since 11/14 15:28
```

```
Scheduler time is 11/14 16:24
```

```
Default destination: fax1
```

Device	Jobs	Ready	Acc	Ena	Snd	Rcv	FIM	Inbox	Port
fax1	0	0	yes	yes	yes	yes	c2	vsifax	\dev\ttyla
lb	0	0	yes	yes	yes	no	lb	vsifax	\dev\null
lcr	0	0	no	dwn	no	no	hold	vsifax	<none>
sm	0	0	yes	yes	yes	no	sm	vsifax	<none>

Device	Comments	State
fax1	489-2486	Idle
lb	LoopBack	Idle
lcr	LCR Hold Queue	Not running [Holding queue only]
sm	Sendmail	Idle

Session	User	ID	logon	Time
1009	vsifax			11/14 15:28

## Enabling and Disabling Devices and Classes

Enabling or disabling a device or class is a very high-level decision. When you disable a device or class, you are essentially taking it offline – it cannot send, receive or accept any fax submissions until you re-enable it. This may be required if a phone line is out of service or is needed for a purpose other than faxing.

If the device is accepting requests but the device or class is disabled, a request can be submitted and queued but it will not be sent until the device or class is re-enabled. You do not have to stop and restart the scheduler for the disable command to take effect.

### Command Line

To enable a device or class, enter:

```
vfxadmin enable <device>
```

```
Device <device> now enabled
```

To enable a class, enter:

```
vfxadmin enable <class>
```

```
Device <class> now enabled
```



You can confirm that the change has taken effect with the **vfxstat -a** command. If the device or class has been enabled, the vfxstat -a output will show “yes” in the “Ena” column and “Idle” in the “State” column.

To disable a device, enter:

```
vfxadmin disable <device>
Device <device> now disabled
```

To disable a class, enter:

```
vfxadmin disable <class>
Device <class> now disabled
```

You can confirm that the change has taken effect with the **vfxstat -a** command. If the device has been disabled, the **vfxstat -a** output will show “dwn” in the “Ena” column and “Not Running” in the “State” columns that correspond to the newly disabled device.

## Accepting and Rejecting Fax Requests

Setting a device or class to accept or reject fax jobs is a way to fine tune device operation. The device or class must be enabled for these settings take affect.

---

**IMPORTANT:** You must be logged on as root (Unix/Linux), Administrator (Windows) or user vsifax to change accept status.

When a device or class is added to the system, by default its status is accepting.

When changing a device or class accept status, you are not required to stop and restart the scheduler for the command to take effect.

---

To set device fax2 to accept requests, enter:

```
vfxadmin accept fax2
Destination fax2 now accepting
```

To verify that fax2 is accepting, enter:

```
vfxstat -a
Server on <hostname> has been up since 11/14 15:28
Scheduler time is 11/14 16:21

Default destination: fax1

DeviceJobsReady  Acc  Ena  Snd  Rcv  FIM  Inbox  Port
fax1  0      0      yes  yes  yes  c2    vsifax  \dev\ttyla
```

```
lb    0    0      yes yes yes no    lb    vsifax \dev\null
lcr   0    0      no  dwn no    no    hold vsifax <none>
sm    0    0      yes yes yes no    sm    vsifax <none>
```

```
DeviceComments      State
fax1 489-2486        Idle
lb   LoopBack        Idle
lcr  LCR Hold Queue Not running [Holding queue only]
sm   Sendmail        Idle
```

```
Session User ID    logon Time
1009    vsifax     11/14 15:28
```

The **vfxadmin reject** command is used to set a fax modem so it will reject outgoing fax requests but accept incoming faxes. When changing accept status, you are not required to stop and restart the scheduler for the command to take effect.

To reject fax requests (where the **-r** option specifies a reason), enter:

```
vfxadmin reject -r "inbound only" fax2
```

```
Destination fax2 now rejecting
```

The **-r** option allows you to specify a reason the device is rejecting requests. A device that is not accepting requests does not allow a fax request to be queued.

To verify that the device is rejecting requests, enter:

```
vfxstat -a
```

```
Server on <hostname> has been up since 11/14 15:28
```

```
Scheduler time is 11/14 16:23
```

```
Default destination: fax1
```

```
DeviceJobsReady  Acc  Ena  Snd  Rcv  FIM  Inbox  Port
fax1 0    0      yes yes yes yes  c2    vsifax \dev\ttyla
lb   0    0      yes yes yes no   lb    vsifax \dev\null
lcr  0    0      no  no  no  no   hold vsifax <none>
sm   0    0      yes yes yes no   sm    vsifax <none>
```

```
DeviceComments      State
fax1 489-2486        Idle
lb   LoopBack        Idle
lcr  LCR Hold Queue Not running [Holding queue only]
sm   Sendmail        Idle
```

```
Session User ID    login Time
1009    vsifax     11/14 15:28
```

## **System Parameters**

System parameters allow you to configure SMTP and POP3 connectivity as well as define global default settings for any new devices added to your system.

### **Configuration File**

System parameters are stored in the VGSCHED, VMAIL, VPOPD and VSINET sections of the `$VSIFAX/lib/visisrv.ini` file.

## **Company Information**

Company information provides a simple way to customize the default fax cover page templates so that your company or organization's name and address information automatically appears on your faxes.

### **Configuration File**

Company information is stored in the USERINFO section of the `$VSIFAX/lib/visisrv.ini` file.



# HISTORICAL LOGS

---

Historical logs store detailed information about inbound and outbound faxes.

---

**IMPORTANT:** The exact order of historical log tags is subject to change from release to release. Therefore, if you will be evaluating historical logs via a script, it is best that you explicitly search for a particular tag name rather than use a tag's current position in the log file. This will ensure that your scripts continue to work after product upgrades.

---

## Outbound Historical Logs

Information about how outbound faxes were scheduled, sent and re-sent is stored in the faxreqs database (page 390). You can view this information using the **vfxolog** command line utility (page 176) or the VSI MMC Fax Server Administration plug-in (page 13).

If you use the **vfxolog** command line utility, the following information is displayed for each outbound fax:

Reqid	Unique fax request ID number.
Submitted	Actual transmission time displays in MM/DD HH:MM format. For example: 03/28 16:17
npg/nak	Number of Pages (npg) / Number of Pages Re-sent (nak). Normally, these two numbers should be the same - indicating that all pages were successfully sent the first time. However, if a problem occurred during transmission, VSI-FAX will automatically re-send the affected pages. The number of pages that had to be re-sent is the nak value.
Clientid	VSI-FAX user who submitted the fax request.

Phone number	Destination fax number.
Attmpt	Fax attempt status code. This is real time status for the current fax attempt. Once the fax has been successfully sent, this entry is blank. Entries will be one of the <i>Fax Attempt Codes</i> (page 34).
Result	Final fax request status. Entries will be one of the <i>Fax Request Codes</i> (page 36).
att	Attempt number. The total number of attempts to send each fax request is controlled by the retry strategy (page 39). An asterisk after the number indicates that this fax request is complete.

**TIP:** `vfxolog` typically only displays historical information for your outbound faxes. To view historical information for *all* outbound faxes, log in as a user with fax administration privileges (e.g., user vsifax), then enter your `vfxolog` command.

## Fax Attempt Codes

NUMERIC CODE	STRING CODE	DESCRIPTION
1	NORMAL	Fax attempt successfully completed.
2	CANCEL- IDLE	Fax attempt canceled while queued (idle).
3	CANCEL-WORK	Fax attempt canceled while sending.
4	BUSY	Line busy.
5	LINDRP	Line drop.
6	NOTFAX	Not a fax at other end.
7	NOANSW	No answer.
8	VOICE	Voice answered.
9	NODIAL	No dial tone.
10	REMREJ	Remote fax rejected.
11	FIMERR	FIM failure.

---

NUMERIC CODE	STRING CODE	DESCRIPTION
12	BADREQ	Bad request file.
15	UNDER	Under-run.
16	BADMMDM	Bad modem.
17	TMEOUT	Modem time-out.
18	FIMDIE	FIM died.
19	FIMUNA	FIM not available.
20	SCHERR	Scheduling error.
21	NOFIL	Cannot open file.
22	BADFIL	Bad file format.
23	MODIFY-WORK	Expired while sending.
24	MODIFY-IDLE	Expired while queued (idle).
25	USTRM	User Requested termination.
31	QUEUED	Fax request queued.
32	SENDING	Fax request currently being sent.
33	SUBMIT	Fax request currently being imaged.
34	BADIMG	Imaging failure.
35	LNP-WT	Waiting for Launch Notify Procedure (LNP) to complete.
36	TNP-WT	Waiting for Transmit Notify Procedure (LNP) to complete.
37	NORSP	No response.
38	NOCAR	No carrier.

---

## Fax Request Codes

NUMERIC CODE	STRING CODE	DESCRIPTION
1000	NORMAL	Fax request successfully completed.
1001	RETRY	Fax request rescheduled.
1002	EXPIRE	Expired time exceeded.
1003	MAXTRY	Fax request expired, maximum attempts exceeded.
1004	CANCEL	Fax request canceled.
1005	FAILED	Fax request failed.
1006	MODIFY	Fax request was modified.
1007	QUEUED	Fax request currently queued.
1008	SUBMIT	Fax request currently being imaged.
1009	SENDING	Fax request currently being sent.
1010	USRTRM	User requested termination.
1011	BADIMG	Imaging failure.
1012	EXPIRE	Fax request expired.
1013	FORWRD	Fax request forwarded.
1014	CONNCT	Connecting.
1015	DISCNT	Disconnecting.
1016	UNFWD	Job un-forwarded.



## Inbound Historical Logs

Historical information about received (inbound) faxes is stored in the ilog database (page 395). You can view this information using the **vfxilog** command line utility (page 174) or the VSI MMC Fax Server Administration plug-in (page 13).

If you use the **vfxilog** command line utility, the following information is displayed for each received fax:

Reqid	Received Request ID Number. Each received fax is issued a unique ID.
Stime	Received fax start time.
Etime	Received fax stop time. The time difference between the Stime and the Etime is the total elapsed time it took to receive this fax.
pg.	Number of pages received.
TSI	Transmitting Subscriber Identifier.
Res	Received fax resolution.
DID ext	Direct Inward Dialing (DID) extension. Refer to <i>DirectFax Routing</i> (page 9) for additional information.



# RETRY STRATEGIES

---

A retry strategy defines the number of times the fax server will try to re-send a fax, and how long it will wait between each retry, before the fax request is permanently removed from the active fax queue. Retry strategies are an important tool for managing the fax load on your server.

When you send a fax, the retry strategy used for that fax request is either `default` retry strategy or another predefined retry strategy you explicitly assign to that fax request when you create the fax request or via your user profile.

## Basic Retry Strategies

VSI-FAX provides several basic retry strategies that are optimized for common fax scenarios (e.g., local faxing, international faxing, etc.). You can easily define other custom retry strategies to meet your particular needs. This is accomplished by manually editing the `$VSIFAX/lib/retrys.lst` file (page 442).

The default `retrys.lst` file, installed with your VSI-FAX server, defines the following basic retry strategies:

```
default:5,5,5,5
three-attempts:5,5
four-attempts:5,5,5
international:5,5,10,10,60,60,120
```

The first retry strategy (`default`), is used whenever no retry strategy is explicitly specified. This retry strategy defines four retries, five minutes apart.

The `three-attempts` retry strategy defines two retries, five minutes apart. Notice that although this retry strategy is named “three-attempts” that it contains only two entries. This is because these two retries, combined with the initial send, constitutes three total attempts.

The `four-attempts` retry strategy is nearly identical to the `three-attempts` strategy except that an additional retry is added for a total of four send attempts (i.e., the initial send and three retries) five minutes apart.

Consider the last default retry strategy, “international.” This retry strategy is much more complex because successfully sending an international fax is much more susceptible to failure. Notice that it defines seven total retries and that the intervals between the retries gradually increase.

The assumption is that if the fax cannot be sent within the first 15 minutes (initial send and two retries, five minutes apart) that there may be a problem with the international phone lines.

The next two retries are ten minutes apart. If the fax server gets this far into the international retry strategy a total of 35 minutes has elapsed (15 minutes for the initial send and first two retries and 20 minutes for the third and fourth retries). At this point, it makes sense to let even more time elapse before the fax server retries this fax.

The next two retries are an hour (60 minutes) apart. The final retry is two hours from the previous retry. At this point, the fax server has tried to send the fax a total of eight times in four hours and 35 minutes.

## Custom Retry Strategies

If you find that the basic retry strategies do not meet all your needs, you can easily define new retry strategies by manually editing the `$VSIFAX/lib/retrys.lst` file (page 442).

Each retry strategy is defined on a separate line. The format of a retry strategy entry is:

```
<name>:<minutes>,<minutes>,...
```

Where `<name>` is a user-defined name for this strategy, and each `<minutes>` entry is one retry. The actual number of minutes specified determines how long the fax server will wait before executing that retry.

---

**NOTE:** If a retry strategy is defined without any `<minutes>` entries, the fax server will interpret it as no retries (i.e., initial send only).

---

### Examples

To define a retry strategy called “24-hours” that will re-send a fax nine times during a twenty-four period with successively longer wait times, enter:

```
24-hours:5,10,15,30,60,120,120,360,720
```

To define a retry strategy with no re-sends (i.e., initial send only), enter:

```
no-retries:
```

# DIAL STRING CONVERSION

---

“What you see is what you get” is rarely true for telephone numbers. Almost without thinking we include dashes, spaces and parentheses in typed and written telephone numbers. When we manually dial a telephone number, however, we know that we must remove these extra characters.

When entering a fax telephone number into a VSI-FAX client program, users will often use unneeded characters such as dashes, leave out characters that may be required to access long distance or an outside line, etc. Because of this, the VSI-FAX software must analyze each fax request to determine the exact telephone number the modem needs to dial. The process of analyzing and modifying an entered telephone number by VSI-FAX is called dial string conversion.

Dial string conversion is performed when a fax request is queued. Using information in the `vsisrv.ini` file and the `dialcode.lst` file, or an optional user-defined conversion program, the dial string conversion process evaluates the dial string. Then based on whether it is internal, local, long distance, or international; determines whether extraneous characters exist; decides whether long-distance carrier access code should be used; and adds or subtracts characters as needed. This section explains what dial string conversion options are available in VSI-FAX and how to use each option.

## Preliminary Dial String Conversion

If VSI-FAX is interfaced with another application program that performs the dial string conversion, you can disable the VSI-FAX dial string conversion function by setting `DialConvert` to `off` in the `vsisrv.ini` file. However, steps 2 through 4 will be performed on all dial strings, even if `DialConvert` is set to “off” in the `vsisrv.ini` file.

If the `DialcvtProgram` entry in the `vsisrv.ini` file is set to a program name, the dial string conversion will be performed by that program. None of the other dial string conversions described here

will take place. If the `DialcvtProgram` entry is blank, the following dial string conversion will be performed:

1. Any dial string that contains an “@” followed by an Internet domain name will be passed to the SendMail FIM and be sent by email.
2. All dashes, spaces, periods and left and right parentheses are removed from the dial string.
3. Any dial string that begins with “#” will be stripped of the leading “#” but will not be processed any further by the dial string conversion function.
4. Any characters following an “@” character will be processed as a “post dial string.” When a post dial string is encountered, the modem will wait for five seconds of silence before dialing the characters. Note that this does not affect an email address, which will have been passed to the SendMail FIM and will therefore not reach this stage of processing.
5. Any characters following a comma, “@”, “W”, or “!” will be treated as a separate dial sequence. (As in step 5 above, email addresses are not affected.)
6. Any characters contained within square brackets [ ] will be considered to be a credit card number. No conversion will be performed on these characters and they will not be used by the dial string conversion function to categorize the call as internal, international, etc. The brackets, however, will be removed.
7. If the dial string begins with the value of the `IntlAccess` entry (international access code) in the `vsisrv.ini` file, no further dial string conversion will be performed.

## Intermediate Dial String Conversion

The next part of dial string conversion involves categorizing it as internal, local, long distance, or international based on the dial string variables stored in the `vsisrv.ini` file.

---

**NOTE:** By default, the dial string variables are set to normal U.S. telephone requirements. If your local telephone system does not follow U.S. standards, reset these values.

---

Dial string variables are stored in the **DEVICE** section of the `vsisrv.ini` server configuration file. The fax administrator should determine the appropriate settings for the dial string variables and edit the `vsisrv.ini` file in the `$VSIFAX/lib` directory, as needed.

The dial string variables in the `vsisrv.ini` file are:

ENTRY	DEFAULT	DESCRIPTION
<code>area-code</code>		Area code for the phone line used by this device.
<code>country-code</code>	1	The country code for the phone line used by this device.
<code>dial-convert</code>	ON	Set OFF to disable any dial string conversion.
<code>dial-cvt-program</code>		The name of an external program to be used to convert dial strings instead of the internal algorithm. This program is called with the following arguments:  <div> <p><b>-p</b>   &lt;prefix&gt;   Dial &lt;prefix&gt;, if defined.</p> <p><b>-s</b>   &lt;suffix&gt;   Dial &lt;suffix&gt;, if defined.</p> <p><b>-a</b>   &lt;code&gt;     Area &lt;code&gt;, if defined.</p> <p><b>&lt;number&gt;</b>       Dial string to convert.</p> </div>
<code>dial-prefix</code>		A prefix, such as “9”, or “8,” to be prepended to a dial string before sending. This is usually used to access outside lines.
<code>dial-suffix</code>		Suffix appended to a dial string before sending.
<code>intl-access</code>	011	The dial prefix needed to make international calls.
<code>intl-prefix</code>		An alternate prefix (instead of <code>LongDistPrefix</code> ) for dialing an international call.
<code>intl-suffix</code>		An alternate suffix for dialing an international call.
<code>local-num-len</code>	7	The number of digits in the local number for the phone line used by this device.
<code>long-dist-access</code>	1	Dial string needed to make long distance calls.
<code>long-dist-prefix</code>		Prefix prepended to a dial string (instead of <code>DialPrefix</code> ) if the number is determined to be a long distance number. This is usually used for phone systems that use access codes for long distance calls.
<code>long-dist-suffix</code>		Suffix appended to a dial string (but before <code>DialSuffix</code> ) if the number is determined to be a long distance number. This is usually used for phone systems that use account numbers for toll calls.

Assuming that D is the number of digits in the dial string, the following logic is used to determine whether it represents an internal, local, long distance, or international number:

If  $D < LocalNumLen$ , then the dial string is an internal telephone extension.

If  $D = LocalNumLen$ , then the dial string is a local telephone number.

If  $LocalNumLen < D < LocalNumLen + AreaCode$ , then the dial string is a long distance telephone number.

If  $LocalNumLen + AreaCode < D$ , then the dial string is an international telephone number.

Once it is determined which type of telephone number the dial string represents, dial string variables are prepended or appended to the dial string as shown on this chart.

LONG DIST PREFIX	DIAL PREFI X	INTL PREFI X	INTL ACCESS	LONG DIST ACCESS	DIAL STRING	DIAL SUFFI X	INTL SUFFI X	LONG DIST SUFFIX
					International			
	X				Local	X		
X				X	Long Distance			X
		X	X		International		X	

For example, if the dial string is determined to be a long distance number, the dial string conversion function will prepend the values of LongDistPrefix and LongDistAccess to it and append the value of LongDistSuffix to it.

## Final Dial String Conversion

In addition to the dial string conversion described so far in this manual, supplementary dial string conversion can be performed by using the `dialcode.lst` file. The purpose of the `dialcode.lst` file is to accommodate the dynamic telephone service standards being supplied by providers in the United States. Although these additional dial string conversion features were developed to meet the needs of VSI-FAX users in the United States and the different levels of phone service available from providers in different U.S. states, they may also be appropriate for use by any users in similar environments.

Use of the `dialcode.lst` file is optional. As installed, the `dialcode.lst` file is located in the `$VSI-FAX/lib` directory. It contains sample entries that have been “commented out” and are therefore not active. To make use of the special dial string conversion features that can be implemented with the `dialcode.lst` file, edit this ASCII file with a standard text editor.



## Testing Your Dial String Conversion

VSI provides a dial string conversion testing program called **vdialcvt** (page 137). You can use this program to test your dial string conversion setup and determine whether it is correct.

Once you have configured the variables in `vsisrv.ini` to perform the desired dial string conversion, test the conversion of several sample dial strings with **vdialcvt**.

---

**NOTE:** Your exact and complete dial string conversion setup is emulated by **vdialcvt**, including both the `vsisrv.ini` settings and any entries in the `dialcode.lst` file. If `DialConvert` is set to off in the `vsisrv.ini` file, any dial strings input to **vdialcvt** will remain unconverted. If `DialcvtProgram` is set to a custom program name in the `vsisrv.ini` file, **vdialcvt** will run that program.

---

## Custom Dial String Conversion

All dial string conversion can be disabled by setting the `DialConvert` option off in the `vsisrv.ini` file.

If you prefer not to convert dial strings with any of the functions provided with the VSI-FAX software, you can write your own dial string conversion program. If `DialcvtProgram` is set to this program name in the `vsisrv.ini` file, the dial string conversion function provided by V-Systems will be completely disabled.

Individual users can specify a Prefix and Suffix that will be used in the conversion of any dial strings in any fax request from that user. This prefix and suffix can be used for user-specific information such as a credit card number or account number. The individual Prefix and Suffix can be set either through one of the VSI-FAX user interface programs or by editing the user's `vsifax.ini` file, located in the user's `$HOME/.vsifax` directory on the fax server.

These are sample entries in the `vsifax.ini` file, specifying individual Prefix and Suffix settings:

```
[SENDPARAMS]
Prefix=
Suffix=1234
```



# FAX ROUTING

---

There are three methods for routing received fax transmissions.

- Print received faxes on a centrally located printer and manually hand deliver them to the recipients
- Automatically or manually route received faxes to each user's fax box directory
- Automatically or manually route received faxes to email addresses

---

**NOTE:** By default, received faxes are routed to the VSI-FAX administrator's fax queue, `$VSI-FAX/faxq/vsifax`.

---

## Specifying a Fax Box

A received fax is always placed in a fax box, which is either the default fax box for that device or class, or a user fax box specified by Direct Inward Dial (DID) or Dual Tone Multi-Frequency (DTMF) routing. If a fax box is not specified for a device or class, `vsifax` is the default fax box.

### Command Line

The **`vfxadmin device`** command is used to specify a fax box for a device or class.

To assign a fax box to a fax device or class, enter:

```
vfxadmin device -u -b <user> <device_or_class>
```

For example, to assign device `fax2` to store its received faxes in the sales fax box enter:

```
vfxadmin device -u -b sales fax2
```

To assign a fax box called `legal` to a fax device or class called `fax1`, so that any faxes received on `fax1` will automatically be routed to `legal`, enter:

```
vfxadmin device -u -b legal fax1
```

---

**NOTE:** The previous example assumes that the legal fax box has been previously created and that fax1 is a valid device or class.

---

## Departmental Routing

Often, faxes need to be routed for an entire department rather than for an individual user. To do this, you must create a department in the fax server user database.

### Command Line

To create a department for general fax distribution, enter:

```
vfxadmin user -d -n "<descriptive_name>" <dept_name>
```

For example, to create a department called custs for general fax distribution, with the descriptive name Customer Service, enter:

```
vfxadmin user -d -n "Customer Service" custs
```

---

**NOTE:** If you omit the **-L** option from the **vfxadmin user** command, the department will not use a user license.

---

After adding to the user database you can confirm the addition by entering:

```
vfxadmin user -l
```

Client-ID	Name	DID-ext	PriType	Lic	Last-login
andrew	Andrew Smith	4540	user	yes	1998/03/07 21:15:33
jackson	Greg Jackson	4503	user	yes	never
cross	Sarah Cross	4502	user	yes	never
custs	Customer Serv	4556	dept	no	never
gary	Gary Hyung	4517	user	yes	never
joe	Joseph Gomez	4510	user	yes	never
johnd	John Davison	4544	user	yes	never
judith	Judith Jones	4504	user	yes	never
vsifax	VSI-FAX System		dept	no	1998/03/08 21:56:01
wes	Wes Nakamichi	4522	user	yes	never

# EVENT NOTIFY PROCEDURES

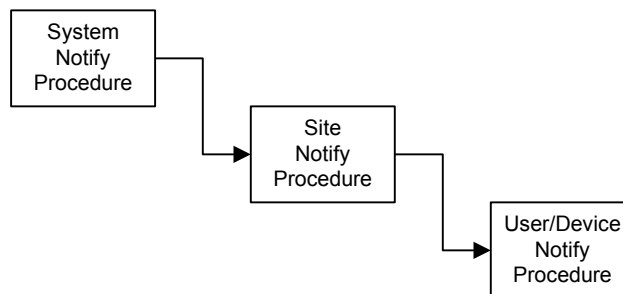
---

Event notify procedures are scripts that trigger various system actions whenever certain events take place. This entire “notification mechanism” is designed to be open and easily customized so that you can optimize each VSI-FAX system to your particular needs.

This chapter begins with a general functional overview of event notify procedures. Flow diagrams show the various notification points in the system and the various notify procedures run at each of these points. Immediately following the functional overview is detailed information about how to write your own custom notify procedures.

## Functional Overview

At each different notification point in the system, VSI-FAX executes a hierarchy of notify procedures as shown in this figure:



Typical Notify Procedure Execution Hierarchy

## System Notify Procedures

System notify procedures are always performed first and without decision (automatically). Furthermore, although these scripts are found in the VSI-FAX directory structure, they are not intended to be modified. In fact, if you do modify these system notify scripts, you will lose your modifications the next time you upgrade your VSI-FAX system.

## Site Notify Procedures

If they exist, site notify procedures are performed after system notify procedures but before any user or device notify procedures. Site notify procedures are used to customize a particular notification point on a site-wide basis.

Site notify procedures are not supplied with the default VSI-FAX system - you must create them if you want to use them (this is done to prevent unnecessary processing by the fax server). Refer to *Custom Notify Procedures* (page 56) for additional information.

## User and Device Notify Procedures

If they exist, user and device notify procedures provide an additional level of granularity and power. Instead of being limited to customizing a particular notification point for an entire site, you can also customize it on a user-by-user or device-by-device basis for sent and received faxes, respectively.

As with site notify procedures, user and device are not supplied with the default VSI-FAX system - you must create them if you want to use them. Refer to *Custom Notify Procedures* (page 56) for additional information.

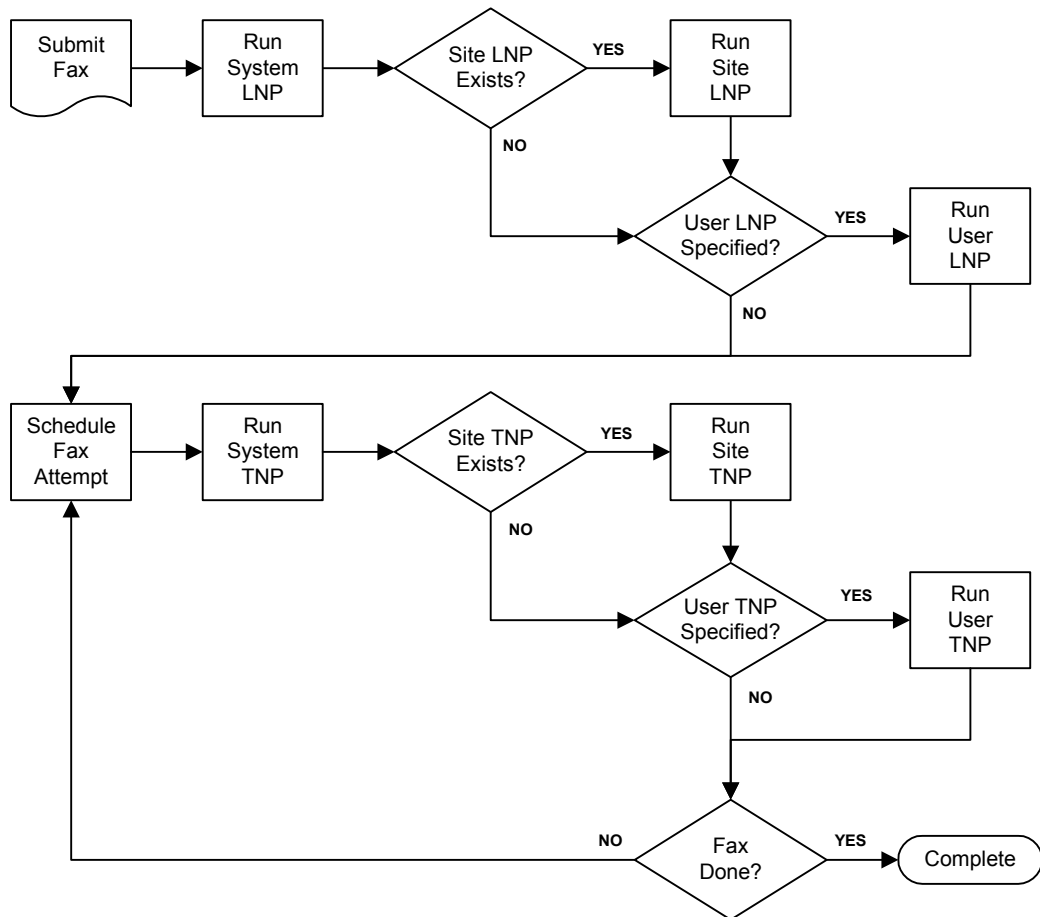
## Send Notification

The send notification mechanism is specialized for two basic scenarios:

- Normal (non-group) faxing
- Group faxing

This specialization is required because each group fax is split up into individual fax requests by the scheduler, one fax request for each recipient in the group. Normal (non-group) faxes use a single fax request for the entire fax job.

This figure shows the notification mechanism for normal sent faxes:



Normal (Non-Group) Send Notification Flow Diagram

## Launch Notify Procedures (LNPs)

Immediately after a fax is submitted to the system, one or more Launch Notify Procedures (LNPs) are run. LNPs run before the fax is sent to the scheduler (before any fax attempts are initiated).

Notice that this area of the *Normal (Non-Group) Send Notification Flow Diagram* (page 51) illustrates the “hierarchical” behavior that is typical of all notify points in the system:

The system LNP is always run without decision (automatically).

Next, the system looks for a site LNP. If it finds one, it runs it.

Similarly, the system checks the fax command for a user LNP. If a user LNP was specified, the system runs it.

---

**NOTE:** User LNPs must be specified on a fax-by-fax basis. This is typically done via the `-t lnp=<LNP_file>` tag. Similar `vfx` tags are also provided for other user notify procedures. Refer to `vfx` (page 140) and *Tag Reference* (page 229) for additional information about using `vfx` tags to run user notify procedures.

---

The LNP notification point is the same for both normal (non-group) and group faxes.

## Transmit Notify Procedures (TNPs)

Transmit Notify Procedures (TNPs) are typically only run for normal (non-group) faxes. As the *Normal (Non-Group) Send Notification Flow Diagram* (page 51) shows, they are run after each fax attempt until the fax job is “done.” Again, note the “hierarchical” behavior: the system TNP is automatically run and if the system finds site or user TNPs, it runs them in that order.

Look at the final decision block, “Fax Done?” This can mean one of two things:

The fax was successfully sent (i.e., fax job *successfully* completed).

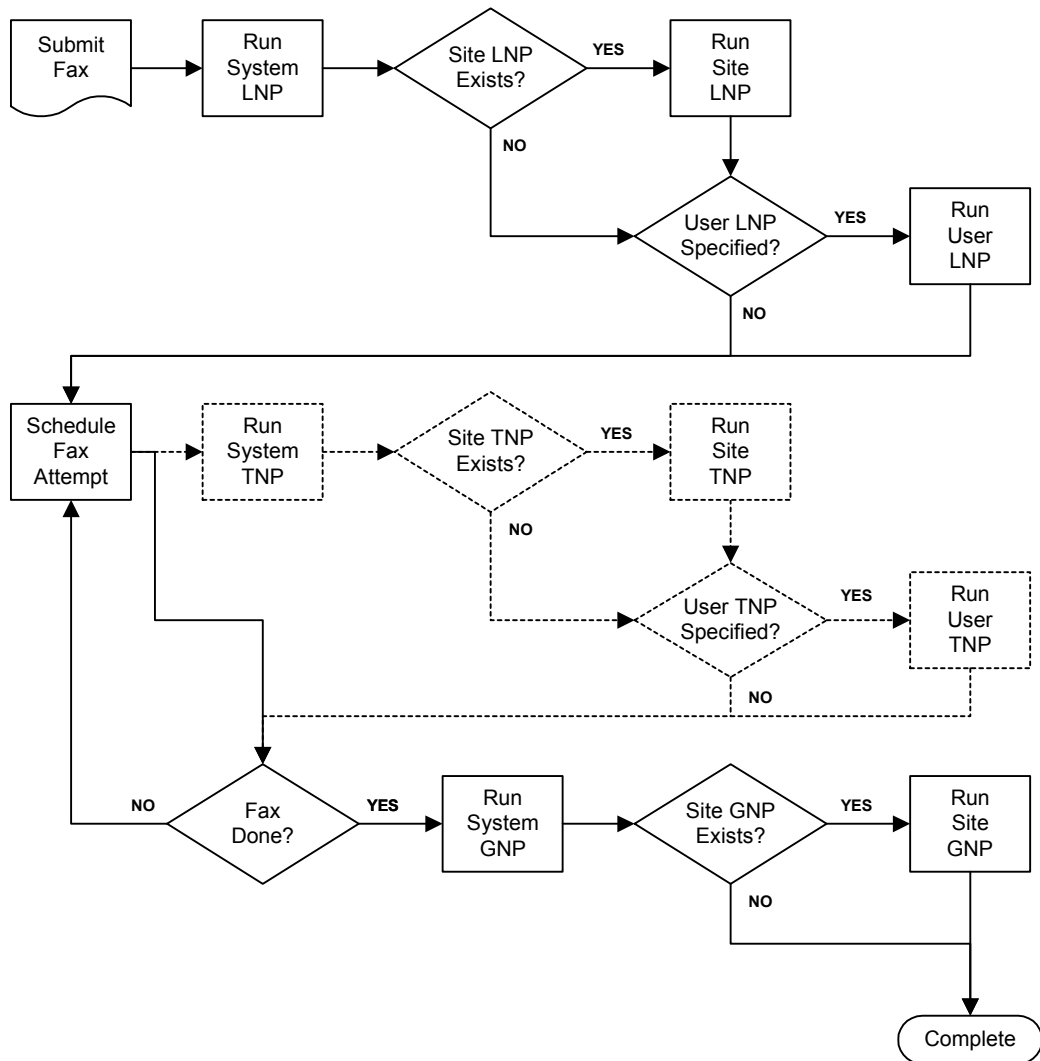
The maximum number of retries was attempted but the fax was not successfully sent (i.e., fax job *unsuccessfully* completed).

Notice also that if the fax job is not “done,” that it returns to the scheduler for a retry. This loop continues until the fax is successfully sent or until the maximum number of retries has been attempted (regardless of outcome).

For this reason, most site and user TNPs contain logic that generates one response for a successful fax attempt (i.e., fax job completes successfully), another response for an unsuccessful fax attempt and yet another response for a fax job completing unsuccessfully.



This figure shows the notification mechanism for group sent faxes:



**Group Send Notification Flow Diagram**

The first part of this flow diagram is identical to the normal (non-group) fax send flow diagram. Immediately after a fax is submitted to the system, the system LNP is automatically run and if the system finds site or user LNPs, it runs them in that order.

When a group fax reaches the “Schedule Fax Attempt” block, it is split into individual fax requests, one for each recipient in the group. From this point forward, the notification mechanism for group faxes is different than the mechanism for normal (non-group) faxes. The criterion for whether the “Fax Done” decision block is whether the entire group fax job is complete (all faxes successfully sent to all recipients or maximum number of retries attempted).

Notice that the TNP blocks are shown in dashed lines. This is because the default behavior is to not run TNPs against group fax jobs. The reason for this is that most TNPs email status for all failed fax attempts and a large group job could generate lots of email. However, you can configure your fax server to run TNPs against group fax jobs by adding the following setting the VFXSCHED section of the `vsisrv.ini` configuration file (page 421):

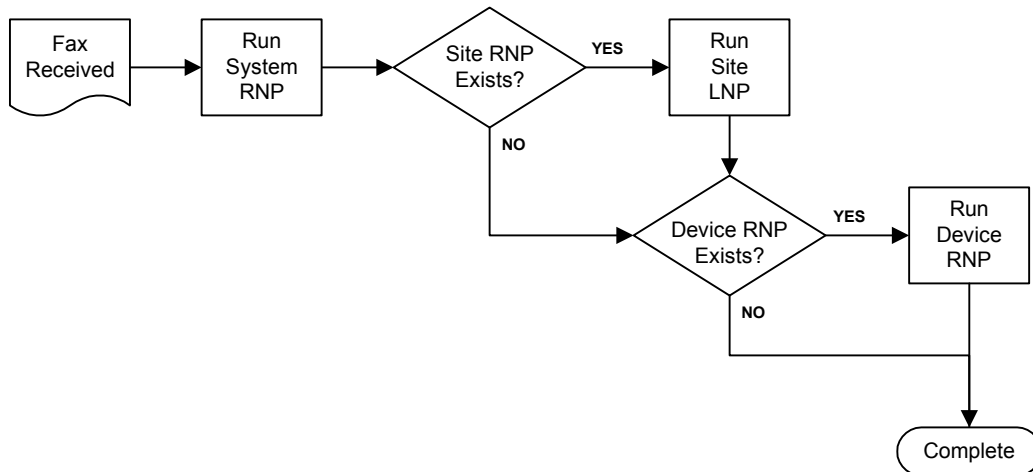
```
group-tnp = YES
```

## Group Notify Procedures (GNPs)

Group Notify Procedures (GNPs) are only run once after the entire fax job is done (not after each fax attempt). In other words, this notification point can only provide notification for the entire group fax job (successful or unsuccessful), it cannot provide notification of each individual fax attempt.

## Receive Notification

This figure shows the notification mechanism for received faxes:



Receive Notification Flow Diagram

As you can see from the flow diagram, the receive notification mechanism is much simpler than either of the send notification mechanisms. The receive notification mechanism features a single notification point and is not iterative (i.e., it does not recursively loop like the send notification mechanisms).

Immediately after a fax is received by the system, the system Receive Notify Procedures (RNP) is automatically run and if the system finds site or device RNPs, it runs them in that order.

## Receive Notify Procedures (RNPs)

Receive Notify Procedures (RNPs) notify procedures are very similar to other notify procedures. The primary difference is that while the send notification mechanism provides a “user” level of execution (for customizing a notification point on a user-by-user basis), the receive notification mechanism implements a “device” level of execution (for customizing a notification point on a device-by-device basis).

This is done because when a fax is received, the system does not necessarily know which VSI-FAX user the fax is intended for. However, the system always knows which device answered the telephone call and received the fax.

Another major difference between “user” notify procedures and device RNPs is that while user notify procedures are embedded in the **vfx** (send fax) command and must be specified for each fax request (they are not permanent), device RNPs are assigned to each device via the **vfxadmin device -P <RNP>** command and this assignment is permanent. Refer to *vfxadmin device* (page 153) for additional information about assigning device RNPs.

## Start, Stop and Fail Notification

Two special notify procedures, **sys-start** and **sys-stop**, provide notification whenever the scheduler is started or stopped, respectively. A third notification procedure, **sys-devfail**, provides notification any time a physical fax device fails.

These notification mechanisms are much simpler than send and receive notifications. Only the system notify procedures, mentioned in the previous paragraph, can be run. Site, user and device notify procedures are not available.

The **sys-start**, **sys-stop** and **sys-devfail** notify procedures are not provided with the default VSI-FAX installation. You must create them according the guidelines described in *Custom Notify Procedures* (page 56) and place them in the `$VSI_FAX/lib/enp` directory.

Refer to these topics for additional information and sample scripts:

- *Custom Notify Procedures* (page 56)
- *Start and Stop Notify Procedures* (page 63)
- *Fail Notify Procedures* (page 65)

## Custom Notify Procedures

Event notify procedures are typically Terminal Control Language (TCL) or shell scripts run by the scheduler at a particular notification point.

All notify procedures must be located in the `$VSIFAX/lib/enp` directory. This directory is the only place the fax server looks for notify procedures. In addition to any site, user or device notify procedures you place there, this directory also contains the system LNP, TNP, GNP and RNP scripts (`lnp-system`, `tnp-system`, `gnp-system` and `rnp-system`).

---

**IMPORTANT:** VSI strongly recommends that you do not modify the system LNP, TNP, GNP and RNP scripts (`lnp-system`, `tnp-system`, `gnp-system` and `rnp-system`). Improper modifications can cause unpredictable system behavior. Furthermore, any modifications to these scripts will be lost the next time you upgrade your VSI-FAX system.

---

VSI-FAX supports two different naming conventions for notify procedures, an “old” and a “new” style:

**Old Style**      `<name>.<type>`

Where `<name>` is the name of the procedure and `<type>` is `lnp`, `tnp`, `gnp` or `rnp`.

**New Style  
(Preferred)**      `<type>-<name>.<ext>`

Where `<type>` is `lnp`, `tnp`, `gnp` or `rnp`; `<name>` is a short descriptive name for the notify procedure and `<ext>` is `tcl`, `sh` or other file extension associated with a command interpreter in the `notify.lst` file.

The new style is preferred because you can explicitly specify the extension of your scripting command interpreter. The following rules apply to `<ext>` in the new style naming convention:

If there is no extension, it is assigned to be a simple executable.

If the extension is `.sh`, the script is run using the shell interpreter.

If the extension is `.tcl`, the script is run using the TCL interpreter.

---

**NOTE:** VSI-FAX installs a TCL interpreter with all fax server installations. Therefore, TCL scripts will run on all supported platforms (Unix, Linux and Windows NT/2000). However, shell scripts normally only run on Unix and Linux. If you want to run shell scripts on Windows NT/2000, you must install a third-party shell interpreter, such as SCO MKS Toolkit.

---

If the extension is anything else, the fax server looks in the `$VSIFAX/lib/notify.lst` file for information about how to process this file.

For example, in order for the fax server to run `tnp-site.zz`, there must be a line in `notify.lst` like:

```
"zz; /<interpreter>/zz"
```

Where `zz` is an alias in the `notify.lst` file that points to the full path and file name of the command `<interpreter>` you want to use for that file extension.

## Launch Notify Procedures (LNPs)

Site or user LNPs can be used to archive faxes, transmit accounting codes or for fax request control.

When an LNP is run, the fax request file will always be available to the procedure. This file is `$VSIFAX/spool/temp/f-$REQID.tif` for a regular request or `$VSIFAX/spool/temp/gf-$GRPID.tif` for a group request.

### Syntax

Site and user LNPs are called directly from the system LNP, which passes the following arguments to the site and user LNPs:

- \$1 Unique request-ID for this fax. Value is zero (0) for group fax requests.
- \$2 VSI-FAX user ID who submitted the fax request.
- \$3 Notification email address specified by the sender. If no email address was specified, it is set to `<login-name>@<login-host>`.
- \$4 Time this fax attempt was made.
- \$5 Notification mode specified by the sender. Values are:
  - `none` Never notify.
  - `ok` Notify on success.
  - `fail` Notify on failure.
  - `both` Always notify.
  - `each` Notify on each attempt.
- \$6 Unique group fax request ID. Value is zero (0) for normal (non-group) fax requests.
- \$7 If a normal (non-group) fax, total number of pages in this fax request (including cover pages). If a group fax, number of recipients in the group.
- \$8 Recipient's fax number. Value is a null string ("" ) for group faxes.
- \$9 Flag indicating whether Least Cost Routing (LCR) is enabled (1) or disabled (0).

## Examples

This shell script archives all regular fax requests to the /usr/fax/archive/reg directory and archives all group requests to the /usr/fax/archive/grp directory:

```
#!/bin/sh

# lnp-site.sh

REG_DIR=/usr/fax/archive/reg
GRP_DIR=/usr/fax/archive/grp

REQID=$1
GRPID=$6

if [ $GRPID -eq 0 ]

then
FILE=$VSIFAX/spool/temp/f-$REQID.tif
cp $FILE $REG_DIR/$REQID.tif

else

FILE=$VSIFAX/spool/temp/gf-$GRPID.tif
cp $FILE $GRP_DIR/$GRPID.tif

fi

exit 0
```

This shell script limits any group request to a maximum of 100 members:

```
#!/bin/sh

# lnp-site.sh
GRPID=$6
NUM=$7
if [ $GRPID -ne 0 ]
then
if [ $NUM -gt 100 ]
then
MAILADDR=$3
echo "Group job GRPID terminated:" \
"too many members" |
mail $MAILADDR
exit 1
fi
```

```
fi  
exit 0
```

## Transmit Notify Procedures (TNPs)

TNPs are often used for accounting or user notification of fax request status. Although the file associated with a request may not be available when a TNP is run, the log file entry for that fax request is available.

### Syntax

Site and user TNPs are called directly from the system TNP, which passes the following arguments to the site and user TNPs:

- \$1 Unique request-ID for this fax.
- \$2 VSI-FAX user ID who submitted the fax request.
- \$3 Notification email address specified by the sender. If no email address was specified, it is set to <login-name>@<login-host>.
- \$4 Time this fax attempt was made.
- \$5 Notification mode specified by the sender. Values are:
  - none Never notify.
  - ok Notify on success.
  - fail Notify on failure.
  - both Always notify.
  - each Notify on each attempt.
- \$6 Unique group fax request ID. Value is zero (0) if this fax request did not originate from a group fax.
- \$7 Total number of pages in this fax request (including cover pages).
- \$8 Recipient's fax number.
- \$9 Fax attempt status code (page 34), in string format.
- \$10 Result status of this request.
- \$11 Attempt number. Zero (0) if fax request was canceled or otherwise failed during submission.
- \$12 Flag indicating whether the fax request is complete (TRUE) or not complete (FALSE).

## Examples

This shell script logs all fax attempts that actually use phone time to an accounting file. The script assumes that all users put an account number in the **tg1** user tag.

```
#!/bin/sh

# tnp-site.sh
REQID=$1
eval `\$VSIFAX/lbin/vfaxreq -F eval $REQID`
if [ $nat -gt 0 ]# nat is 0 if failure
then
ACCFILE=/usr/vsifax/fax.log
# accountno:request-id:time:elapsed:phonenum
echo "$tg1:$req:$stm:$ela:$tfn" >>$ACCFILE
fi
exit 0
```

## Group Notify Procedures (GNPs)

### Syntax

Site and user GNPs are called directly from the system GNP. The system GNP passes the following arguments to the site and user GNPs:

- \$1 Unique group fax request ID. Same as Group-ID.
- \$2 VSI-FAX user ID who submitted the fax request.
- \$3 Notification email address specified by the sender. If no email address was specified, it is set to <login-name>@<login-host>.
- \$4 Time this group fax was completed.
- \$5 Notification mode specified by the sender. Values are:
  - none Never notify.
  - ok Notify on success.
  - fail Notify on failure.
  - both Always notify.
  - each Notify on each attempt.
- \$6 Unique group fax request ID. Same as Request-ID.



- \$7 Total number of recipients (members) in this group.
- \$8 Total number of recipient (member) faxes successfully sent.
- \$9 Total number of recipient (member) faxes that failed.

## Examples

This shell script generates a verbose log file for a group fax job:

```
#!/bin/sh
# gnp-site.sh
#

REQID="$1"
CLIENTID="$2"
MAILADDR="$3"
SENDTIME="$4"
NOTIFY="$5"
GRPID="$6"
NUM_MEMS="$7"
NUM_SENT="$8"
NUM_FAIL="$9"
shift
USER_GNP="$9"

# -----
# generate a status log for the entire group, and write to file

"$VSIFAX/bin/vfxstat" g-$GRPID > /tmp/GroupFax.log
echo "-----"
>> /tmp/GroupFax.log
echo " " >> /tmp/GroupFax.log
"$VSIFAX/bin/vfxolog" -t gse=$GRPID >> /tmp/GroupFax.log

exit 0
```

This is a sample of the log file generated from this GNP:

Status for VSI-FAX group fax job: 1008

Submitted by:vsifax	E-mail	: root@tobago.vsi.com	
Submit time	: 01/05 09:54	Queue	: lb
Result	: done	Status	: 100% done
To	: 2 Recipients	From name	:<none>
From company	: <none>		
From fax #	: <none>		

```
From voice #      : <none>

Subject           : <none>

File 1            : 1 pg    /etc/group
Total pgs         : 0 pg    actual 1)

Members    Pending    Normal    Failed
    2             0         2        0
-----
Req-id  -Submitted-  npg/nak  Clientid  Phone numberAttmpt  Resultatt
1038    01/05 09:54    1/0     vsifax    5551213             NORMAL 1*
1037    01/05 09:54    1/0     vsifax    5551212             NORMAL 1*
```

## Receive Notify Procedures (RNPs)

### Syntax

Site and device RNPs are called directly from the system RNP, which passes the following arguments to the site and user GNPs:

---

**TIP:** If you require additional information not present in these parameters, the **vfxi1og** command (page 174) can be used to access other information about this fax request from the inbound fax log database.

---

- \$1 Full path and file name of the received fax file.
- \$2 Set to vsifax if this was received; set to originating user ID if this fax is being routed to another user.
- \$3 Name of the fax device or class that received this fax.
- \$4 Inbox specified for this device or class or the VSI-FAX user who will receive the routed fax.
- \$5 Status of the fax. This controls RNP behavior. Values are:
  - received Run this RNP as soon as a fax is received (prior to routing).
  - routed Run this RNP whenever a fax is routed to a user.

## Examples

This shell script automatically removes the header line from received faxes:

```
# rnp-clrhdr.sh
FILE=$1
vtifftool clear -c -o $FILE $FILE
exit 0
```

## Start and Stop Notify Procedures

### Syntax

These arguments are passed to `sys-start` and `sys-stop`.

\$1 Numerical Process ID (PID) of the scheduler.

## Examples

This is a sample start TCL script (`sys-start.tcl`) that logs each time the fax server is started and what numerical process ID (PID) is assigned to it:

```
# Filename: sys-start.tcl
# Description: script that is run startup of the fax scheduler.
#-----
global argv argc env

#-----
# Get all arguments and setup environment
set PID [lindex $argv 0 ]
set f [open $VSIFAX/spool/logs/sys-start.log a+]

#-----
# Update log file
puts $f "The VSI fax scheduler was started at: "
puts $f "The process ID is $PID"

exit 0
```

This is a sample start shell script (`sys-start.sh`) that logs each time the fax server is started and what numerical process ID (PID) is assigned to it:

```
#!/bin/sh
#
# Filename: sys-start.sh
# Description: Script that is run at startup of the fax scheduler
```

```
# -----
# Get arguments
PID="$1"
LOG="$VSIFAX/spool/logs/sys-start.log"
# -----
# Update log file
echo "The VSI fax scheduler was started at: `date`" > $LOG
echo "The process ID is $PID" > $LOG
# -----
#
exit 0
```

This is a sample stop TCL script (`sys-stop.tcl`) that sends an email message to “anon@mycompany.com” every time the fax server is stopped:

```
#
# Filename: sys-stop.tcl
# Description: script that is at shutdown of scheduler
#-----
global argv argc env
#-----
# Get all arguments and setup environment
set PID [lindex $argv 0 ]
set VSIFAX $env(VSIFAX)
set EMAIL "anon@mycompany.com"
set SUBJECT "Warning from VSI"
set TMP_DIR "$VSIFAX/spool/temp"
set f [open $VSIFAX/spool/logs/sys-stop.log w]
#-----
#
# Update log file
puts $f "The VSI fax scheduler was stopped"
# Email notification to specified mail address
catch { [ exec "$VSIFAX/lbin/vmime -t \
-o$VSIFAX/spool/temp/stopwarn \
$VSIFAX/spool/logs/sys-stop.log" ] }
catch { [ exec "$VSIFAX/lbin/vmail" "$EMAIL" \
"$VSIFAX/spool/temp/stopwarn" ] }
#
exit 0
```

This is a sample stop shell script (`sys-stop.sh`) that sends an email message to “anon@mycompany.com” every time the fax server is stopped:

```
#!/bin/sh
#
# Filename: sys-stop.sh
```

```
# Description: script that is run at shutdown of scheduler

# -----
# Get arguments
PID="$1"
LOG="$VSIFAX/spool/logs/sys-stop.log"
EMAIL="anon@mycompany.com"
SUBJECT="Warning from VSI"
# -----
# Update log file
echo "The VSI fax scheduler was stopped at: `date`" > $LOG
# Email notification to specified mail address
$VSIFAX/lbin/vmime -t -s "$SUBJECT" \
-o $VSIFAX/spool/temp/stopwarn \
$VSIFAX/spool/logs/sys-stop.log
$VSIFAX/lbin/vmail $EMAIL $VSIFAX/spool/temp/stopwarn
rm $VSIFAX/spool/temp/stopwarn
# -----
#
exit 0
```

## Fail Notify Procedures

### Syntax

These arguments are passed to sys-devfail:

- \$1 Device name.
- \$2 Reason for the failure.

### Examples

This is a sample device fail TCL script (sys-devfail.tcl) that automatically re-enables any failed device and records the incident to a log file:

```
# Tcl script that runs when a fax device has failed.
#-----
global argv argc env
#-----
# Get all arguments and setup environment
set DEVICE [lindex $argv 0 ]
set REASON [lindex $argv 1 ]
set VSIFAX $env(VSIFAX)
set TMP_DIR "$VSIFAX/spool/temp"
```

```
set f [open $VSIFAX/spool/logs/devfail.log a+]
#-----
#
# Issue command to re-enable fax device
catch { [ exec "$VSIFAX/bin/vfxadmin enable" $DEVICE ] }
#
# Update log file
puts $f "Device $DEVICE failed due to $REASON"

exit 0
```

This is a sample device fail shell script (`sys-devfail.sh`) that automatically re-enables any failed device and records the incident to a log file:

```
#!/bin/sh
# Description:
# -----
#exec > $VSIFAX/spool/logs/sysdev.log ; set -x
#-----
# Get arguments
DEST=$1
CAUSE=$2
LOG="$VSIFAX/spool/logs/devfail.log"
#
# Issue the command to re-enable fax device.
$VSIFAX/bin/vfxadmin enable "$DEST"
#
# Update log file
echo "Device $DEST was restarted due to $CAUSE" >> $LOG
#
exit 0
```

---

# Customizing Notification Email Messages

You can easily customize email messages sent at various points in the notification mechanism using template files (page 98).

Simply create a template file, place it in `$VSI/FAX/lib/templates` directory, then associate it with one of the following notification points in a user profile or by directly setting the appropriate tag in the user database (page 400).

The following table shows which notification messages can be customized and which user tags must be set to accomplish that.

NOTIFICATION MESSAGE	USER DATABASE TAG
Receive notification	<b>vtp</b> (page 379)
Routed notification	<b>rtp</b> (page 330)
Successful send notification	<b>sto</b> (page 346)
Failed send notification	<b>stn</b> (page 345)
Group send notification	<b>stg</b> (page 344)





# LDAP SETUP AND CONFIGURATION

---

VSI-FAX supports the use of Lightweight Directory Access Protocol (LDAP) directories to retrieve fax recipient (i.e., “to”) information. However, before you can send a fax using LDAP data, you must configure various VSI-FAX settings that control how to connect to the LDAP server and map the information in the LDAP directory so VSI-FAX knows where to find certain essential fax information (e.g., fax number, recipient name, etc.) at send time.

---

**NOTE:** VSI does not provide LDAP software. VSI-FAX simply has the capability of connecting to your LDAP server and retrieving information from your LDAP directory.

---

## Fundamentals

Lightweight Directory Access Protocol (LDAP) is an open standard protocol for accessing information services. Essentially, LDAP is a directory service that is structured and behaves like a database.

LDAP directories are based on client/server models and use regular TCP/IP networking. LDAP servers typically listen on port 389. Client programs that can access LDAP directories include Microsoft Outlook, Lotus Notes, Netscape Communicator and many others.

### ***LDAP Documentation***

LDAP is an open standard that is documented in various Request For Comments (RFC) white papers. These “RFCs” are available from many sources on the World Wide Web. Currently, the OpenLDAP Foundation ([www.openLDAP.org](http://www.openLDAP.org)) is an excellent source of online LDAP documentation.

## Basic LDAP Structure and Organization

LDAP directories contain records. These records contain various attributes, which are used to store information (values). Consider the following simplified LDAP record:

```
dn: Jim Smith, o=Acme Corp.  
givenName: Jim  
sn: Smith  
mail: jsmith@acme.com  
c: US
```

These are the attributes stored in this record:

ATTRIBUTE	DESCRIPTION
c	Country.
dn	Distinguished name. This attribute always stores a unique identifier for that LDAP record (no two records in the same LDAP directory can have the same “dn” value).
givenName	Given (first name).
mail	Email address.
o	Organization.
sn	Surname (last name).

---

**NOTE:** The attributes shown in this example are common to most LDAP directories.

---

Attribute names (dn, cn, givenName, etc.) are loosely defined in various RFCs. Although attribute names are defined in RFCs, the standard is very informal. Therefore, each LDAP server may use slightly different attribute names to store data.

One of the setup tasks for using an LDAP directory with VSI-FAX will be to map certain essential LDAP attributes (e.g., the attributes for fax number, recipient name, etc.) to VSI-FAX tags so that VSI-FAX can find and use it at send time. This mapping information is stored in the datasource database (page 386).

**IMPORTANT:** Because attribute names may differ among LDAP servers, it is beyond the scope of this manual to provide exact mapping parameters that will work with every LDAP directory. Instead, you must list the attributes in your LDAP directory and determine which ones store essential fax information. Consult your LDAP administrator to obtain a list of attributes used on your LDAP server.

---

## Sample LDAP Attribute Mappings

The following tables shows some sample LDAP attribute mappings. These settings may or may not be compatible with your LDAP directory. They should only be considered as examples and possible initial settings for your LDAP directory.

VSI-FAX INFO	LDAP ATTRIBUTE NAME		
	MICROSOFT EXCHANGE	LOTUS DOMINO	LDAP.VSI.COM
First name	givenName	givenName	givenname
Last name	sn	sn	sn
Company	Company	CompanyName	company
Phone	Phone	telephoneNumber	phone
Fax	facsimileTelephoneNumber	facsimileTelephoneNumber	facsimiletelephonenumber
Email	mail	mail	mail
Address 1	postalAddress	OfficeStreetAddress	postaladdress
Address 2	l	L	l
Address 3	st	st	st
Country	co	c	co

---

**TIP:** VSI provides a sample LDAP directory (ldap.vsi.com) that you can use to test general LDAP connectivity and information retrieval. This directory is already added to the list of external directories visible in MMC fax server administration. However, because it has not been added to any of the profiles, you must be logged in as user vsifax to see it.

---

## General LDAP Notes

- Search Base** LDAP directories are arranged in a tree-like manner. The search base is used to specify which branch of the tree to start searching on.
- For example, using a search base of “c=US” starts searching on the branch for entries in the US.
- If no search base is specified, the search will start looking globally (from the top-most branch), which could take a significant length of long time.
- Scope** The values for scope define whether a search can descend into other branches of the LDAP tree.
- A value of “base” means the search will only search the current branch.
- A value of “one level” allows descending down only one level.
- A value of “subtree” allows the search to descend into any branches that exist below the starting point.
- Authentication** Most LDAP servers allow anonymous read-only access. If an LDAP server requires authentication, your distinguished name (dn) and password can be specified in the Directory Properties User ID and Password fields, respectively. Refer to *Modifying LDAP Directory Settings* (page 77) for additional information.

## Using LDAP Directories with VSI-FAX

The VSI-FAX server provides the necessary programs to allow VSI Universal Fax Client users to access LDAP directories. Essentially, what the VSI-FAX server provides is the link between the LDAP directory and the client program.

Currently, the only way to send faxes using LDAP directories is using the VSI Universal Fax Client. This is because other fax clients either have no need to access LDAP directories (as in the case of the

VSI Outlook Fax Client) or do not currently have the capability of accessing them (as in the case of all Gold Series clients and the current version of the Web Fax Client).

***A Word About  
Administration  
Techniques***

The only way to setup and configure VSI-FAX to use an LDAP directory is via VSI MMC Fax Server Administration (page 13) - these features and functions are not available from the command line.

Ensure that you have the VSI MMC Fax Server Administration software installed on a Windows computer with network access to the fax server before beginning LDAP setup and configuration.

## Adding A New LDAP Directory

1. Start Microsoft Management Console (MMC) and load the VSI MMC Fax Administration snap-in.
2. Connect to the fax server by selecting the desired server node and choosing **Action > Connect** or right mouse button **Connect**.

The Login dialog box appears.

3. Enter your fax administration user ID and password.
4. Click **OK**.

The Login dialog box closes.

5. From the MMC Fax Administration snap-in, select the External Directory node and choose **Action > New > Directory** or right mouse button **New > Directory**.

The New External Directory Wizard appears.

6. Enter the following:
  - (a) A unique identifier for this LDAP directory in the Source ID field.
  - (b) A common name for this LDAP directory in the Source name field.
  - (c) The fully-qualified network node name or IP address in the Data server field.
7. Select LDAP from the Directory type drop-down list.
8. Click **Next** to proceed to the next LDAP configuration screen.
9. Enter one or more attribute name/value pairs in the Search base field.

A common search base entry (page 72) is `c=US`. The search base is dependant upon the entries within the LDAP directory itself. Some LDAP directories can use nothing, others may require multiple attribute name/value pairs.

To enter multiple attribute name/value pairs in this field, separate each name/value pair with a comma.

10. Select a search scope setting (page 72) from the drop-down list.

---

**IMPORTANT:** Most LDAP directories communicate over data port 389. If your's does not, perform step 14. Otherwise, go to step 15.

---

11. Set the Custom Port option and enter your LDAP directory data port.

12. Click **Next** to proceed to the next LDAP configuration screen.

This configuration screen is where you map your LDAP attribute names to VSI tags so that the LDAP data can be properly retrieved at send time.

13. Enter your LDAP attribute names in the appropriate fields.

---

**IMPORTANT:** The only required attribute mappings are First name, Last name and either Fax (number) or Email (address). The first two allow you to locate a specific recipient; either of the remaining two are use to actually send the fax. The remaining mappings are supplied for your convenience - that information will appear on your fax cover pages.

---

14. Click **Finish**.

The New External Directory Wizard closes.

15. Complete.

## Testing Your LDAP Configuration and Setup

The external directory properties dialog box provides a Configuration Test feature that allows an LDAP server to be queried using your current confirmation settings and attribute mappings.

1. From VSI MMC Fax Administration, select the External Directory node.

A list of available external directories appears in the list pane.

2. Select the LDAP directory node and choose **Action > Properties** or right mouse button **Properties**.

The external directory properties dialog box appears.

3. Go to the LDAP tab.

4. Click **Configuration Test**.

The LDAP Directory Search dialog box appears.

The next part of this procedure involves structuring a simple query. For example, searching for a common last name such as “smith” is usually successful provided that the LDAP directory is large enough.

5. Enter a value in one of the available search fields.

6. Select one of the Boolean operators from the drop-down list.

7. Click **Search**.

If successful, a status dialog box notifies you that the search successfully completed and how many records met your search criteria.

If you receive an error, modify your current configuration settings and attribute mappings and try again.

8. Click **Close**.

The LDAP Directory Search dialog box closes.

9. Click **OK**.

The external directory properties dialog box closes.

10. Complete.

## Granting Users Access To LDAP Directories

In order for normal users to be send faxes using and LDAP directory, they must first be granted permission to access that directory in their VSI-FAX user profile (page 2).

1. From VSI MMC Fax Administration, select the user profile and choose **Action > Properties** or right mouse button **Properties**.

The Profile Properties sheet appears.

2. Go to the Directories tab.

3. Set or unset the LDAP directories this user is allowed to access.

---

**TIP:** If you want to use the directory settings in the master profile (page 2), set the **Use parent directories** option.

---

4. Click **OK**.

The Profile Properties sheet closes.

5. Complete.



# Modifying LDAP Directory Settings

LDAP directory configuration settings and attribute name mappings can be modified via the directory properties sheet.

1. From the MMC Fax Administration snap-in, select the External Directory node.  
A list of available external directories appears in the list pane.
2. Select the LDAP directory node and choose **Action > Properties** or right mouse button **Properties**.  
The external directory properties dialog box appears.
3. Make your changes.
4. Click **OK**.  
The external directory properties dialog box closes.
5. Complete.



# LEAST COST ROUTING

---

Least Cost Routing (LCR) provides an economical way of sending faxes to the fax server that is closest to the ultimate destination. When a fax is submitted, the system performs a lookup in the LCR rules file to find a fax destination that handles faxes for a specific area code and or country. If no match is found, the fax is sent out locally.

The LCR function consists of two tables: a LCR rules file and a LCR routes file. The LCR rules file contains information about the routes and the associated country codes and area codes for that route. The LCR routes file contains the routes and their associated email address.

Let's assume you have a fax domain in New York and one in London and your company sends a lot of faxes from New York to Paris. Rather than sending the Paris faxes from the New York fax domain, you can create an LCR entry in the LCR rules file that will route the Paris faxes via the London fax domain. As a result you save on the transatlantic phone costs.

LCR can be turned on or off using the `lcr` tag. The `lcr` tag is defaulted to `true` allowing Least Cost Routing of faxes based on country and area codes. However, you can turn LCR off by setting the `lcr` tag `false`.

## Functional Overview

Once a fax is submitted for transmission, VSI-FAX determines what type of request you are sending. If the request is a simple request, the dial string is converted and subsequently examined by the fax server that the request is entered on. The server takes the request and checks the LCR rules file to see if the fax number qualifies for routing.

If the number matches the LCR rules file, the fax server builds a tag file containing information from the local fax request database to describe the fax request. Items such as, recipient name, recipient company, from hostname and from sequence number are included in this tag file to ensure the remote server's log is as complete as possible.

The **vfxolog** shows information for both local and LCR routed faxes transmitted on behalf of another fax server. It should be noted that, for security reasons, all routed faxes are submitted to a remote fax server with a client ID of vsilcr.

The initiating fax server emails the fax request to the fax server specified in the LCR routes file. The fax servers poll the mail account specified in the [VPOPD] section of the `vsisrv.ini` file and look for messages. When the server receives the email message, it drops it into the `autosend` directory as a tag file and proceeds to send the fax out. The LCR system then generates a response for the fax request and sends it back to the originating server, updates the **vfxolog** status and completes the fax request.

---

**NOTE:** Note that when **vfxolog** output is viewed after the fax is complete, two entries will be added, the first is the original fax request and the second is the LCR fax request. The LCR request will have a client ID of vsilcr. User vsilcr is installed by default and should never be removed.

---

## LCR Cluster

An LCR cluster is two or more LCR-enabled fax servers configured to route faxes among one another in order to minimize telephone charges.

Each server in the LCR Cluster must be identified with a route name. To do this you must edit the `vsisrv.ini` file and add the name of the server. This name can either be the hostname for the server or a descriptive city/location name. Edit the file by making the following entry in the `vsisrv.ini` file:

```
[LCR]
route-name=NewYork
```

## Launch Notify Procedure (LNP)

The LNP is a VSI-FAX script that is run when a fax is queued to the system but before it is transmitted. The LCR operation is accomplished via the standard VSI-FAX LNP procedure. The LCR LNP determines whether the fax request is a group request (containing multiple recipients) or a simple fax (containing a single recipient).

## POP Client

In addition to the LNP, LCR functionality requires each fax server to have the email-to-fax gateway installed and configured in order to retrieve and provide status for routed faxes that are directed to it. It should be noted that the email-to-fax gateway feature is a standard component included with all fax servers and only requires minimal configuration to use.

Additionally, each LCR-enabled fax server requires exclusive access to a POP email account. This account can be shared with the VSI email-to-fax gateway feature, but cannot be used by any other client application or user. For purposes of clarity, this email account will be referred to in the rest of this manual as the `autofax` account.

## Setting Up Routes

This topic describes how the Routes and LCR rules files are used by LCR to determine the routing of faxes. Based on the previous example of two servers, one in New York and one in London, the following explanation shows how the files would be set up.

The LCR function requires that dialing rules be established to match fax numbers. Fax dialing numbers are matched based on the patterns and wildcards used to set up the LCR rules file. In addition to the structure of the LCR rules files the following rules should be considered:

If the dialing digits contains commas, LCR is not performed.

All non-digits such as parentheses, hyphens, etc., are removed from the phone numbers.

Any dialing digits that are within brackets are assumed to be a credit card number and are not used.

Any digits that appear after an '@' sign are assumed to be an extension number.

### LCR Routes File

The LCR routes file (`lcrhosts.lst`) is used to associate each route to the email account and is located in the `$VSI/FAX/lib` directory. The following is an example of a LCR routes file.

```
# Sample LCR routes file
#
# <route_owner>:<transport_account>
#
NewYork:New_York@abc.com
LondonUK:lfaxes@fax.sys.co.uk
```

---

**NOTE:** LCR is designed to allow all fax servers to share the same routing tables. Once these files are set up they must be distributed and copied to all servers in a cluster.

---

Refer to *LCR Routes File (lcrhosts.lst)* (page 439) for additional information.

## LCR Rules File

The LCR rules file (`lcrrules.lst`) is used to associate a country code and area code to a route name and is located in the `vsifax/lib` directory. The following is an example of an LCR rules file.

```
# Sample LCR rules file
#
# <dial_string-skeleton>:<route_owner>
#
# US rules (by area code)
#
[1]212??????:NewYork
019*:LondonUK
```

In the first entry of the previous example, the presence of a digit between brackets [ ] indicates that the digit is optional. That is, any dial string that starts with or without a '1' followed by '212' followed by any seven digits will be sent through the New York server.

The second entry indicates that any fax sent with the number '019' followed by any digits will be sent through the London server.

---

**NOTE:** LCR is designed to allow all fax servers to share the same routing and LCR rules files. Once these files are set up they must be distributed and copied to all servers in a cluster.

---

Refer to *LCR Rules File* (`lcrrules.lst`) (page 440) for additional information.

## Using Wildcards in the LCR Rules File

Entering an asterisk (\*) in the LCR rules file tells the system to match any value(s) in that portion of the dial string. For example, in the file above, the entry `019*:LondonUK` tells the system that any dial string starting with 019 will be routed to London.

---

**NOTE:** We strongly recommended that any entries using the \* be placed at the end of the LCR rules file to eliminate the possibility of routing a fax to the wrong location. For example, if `1*:LosAngeles` were the first entry in the file all the other entries starting with 1 would be ignored. This is because entering the \* after the first digit tells the system that all dial strings starting with a 1 followed by any digits are to be routed to Los Angeles.

---

Question marks (?) can also be used as wild cards to represent exactly one digit. For example, the entry `1714555-5???` would match any number starting with 1714555 and ending with four digits

between 5000 and 5999. Similarly, the entry 1714???????? would match any number starting with 1714 followed by 7 digits.

## Verifying Entries in the Routes and LCR Rules Files

LCR requires that for every route in either of the files, a corresponding setup entry must be in the other file. For example, if you set up an entry in the LCR routes file for the server in New York, you must also have the New York entry in the LCR rules file. After you complete the setup of the Routes and LCR rules files you can use the following command to verify that the two files are consistent. Enter:

```
vlcrchk -cv
```

This command compares the entries in the LCR routes file to the entries in the LCR rules file. If the system finds a route entry that does not have a corresponding route in the other file, it will report it, allowing you to correct the synchronization of the two files.

An additional check you can run is to verify the route name for a specific fax number by entering:

```
vlcrchk -n xxx-xxx-xxxx
```

## Configuring the Email-to-Fax Gateway

1. Edit the `vsisrv.ini` file and add the entries to the [VPOPD] section for the POP3 mail server account.
2. Add a password using the **vfxadmin config** command.
3. Verify the configuration is correct by sending email to the email-to-fax gateway account.
4. Configure the [VMAIL] section of the `vsisrv.ini` file and confirm it is working using the **vmail -D** command to send an email message.
5. Edit the [LCR] section to the `vsisrv.ini` file as follows:
  - (a) Add a `route-name=<name_of_route>` entry.  
Each machine in a group (cluster) must have a unique route name.
  - (b) Add a `debug=on` entry (optional).
6. Add entries to specify route names and email addresses to the `$VSIFAX/lib/lcrhosts.lst` file. For example:

```
AUTOFAX@hostname.company.com
```

---

**IMPORTANT:** Note that the email address must be fully qualified.

---

7. Add entries for rules that will trigger the LCR events to the `$VSIFAX/lib/lcrrules.lst` file. For example,  

```
[1] 714*:lcrsupport
```
8. Copy both the `lcrhosts.lst` and `lcrrules.lst` files to all servers in the cluster.
9. Verify the completeness and correctness of the LCR rules you established using the `vlcrchk -v` command.
10. Restart the VSI-FAX scheduler.
11. Complete.

## Statusing LCR Fax Requests

In order to get status of faxes that have been routed to a remote fax server, LCR provides a pseudo-device (`lcr`) as well as a SMTP message type (`stat_msg`) that are recognized by the VSI POP client process. The `lcr` pseudo device is required to enable the originating fax server to maintain a tracer for fax requests that have been routed to a remote fax server. Working in conjunction with the `stat_msg` SMTP message type, the remote fax server's system transmit notify procedure, faxes that have been routed continue to appear in the `lcr` device queue with current status information until transmitted by the remote server.

The status information of a routed fax is delivered from the remote fax server system transmit notify procedure to the originating fax server using SMTP mail messages. These messages are communicated using the same transport, the email-to-fax gateway.

In order to support this remote status information, the VSI POP client also supports the SMTP message type `stat_msg`. Upon retrieval of a message having the type `stat_msg`, the originating fax server decodes and updates the local databases with the current status of the remotely routed fax.

Status information, while slightly less real-time in nature due to the SMTP transport, is provided by `vfxfstat` in the same way as it is for non-routed faxes.

## Statusing Using the Transmit Notify Procedure

Working in conjunction with the `lcr` pseudo-device, LCR provides status information to the originating fax server of a routed fax request, through the use of the system transmit notify procedure (TNP).

To accomplish this, upon transmission of a fax, an LCR-enabled server determines if the fax was routed. If it was, an SMTP message of type `stat_msg` is constructed and mailed back to the originating fax server's autofax account.



## LCR Tags

LCR uses five tags in the faxreqs database:

<code>fhn</code>	from hostname
<code>thn</code>	to hostname
<code>tsq</code>	to sequence number
<code>fsq</code>	from sequence number
<code>lcr</code>	least cost route

The `lcr` tag determines whether a fax should be considered a candidate for being routed. It can also be used to override the LCR rules and send a fax locally. For example, the following shows how to set the `lcr` tag:

```
vfx -n 949-123-4567 -t lcr=false /etc/group
```

For a fax request, the `fhn`, `thn`, `tsq` and `fsq` tags determine the “to” and “from” hostname and the “to” and “from” sequence number. For a routed fax, these fields indicate the node where the fax originated, where the fax was routed, the originating server’s request ID assigned to the request and the request ID of the remote server assigned to the request. Faxes that are not routed will contain the local fax server’s hostname and the request ID in these tags.



# IMAGING SERVER SETUP AND CONFIGURATION

---

An imaging server is a way to provide extended imaging services (page 10) for a Unix fax server. If you have both a Unix fax server and a Windows fax server on the same network, you can configure them such that the Windows fax server images the additional file types, not normally available on Unix, for the Unix fax server.

In order to implement an imaging server, you must have a full VSI-FAX server installed on both the Unix and Windows NT/2000 hosts.

***A Word About  
Licensing***

You do not need to purchase any additional licensing to implement an imaging server. Your VSI-FAX licensing agreement allows you to install VSI-FAX on Windows NT/2000 in order to implement extended imaging services for your Unix production fax server. During VSI-FAX installation on the Windows NT/2000 computer, simply enter your Unix serial number and activation key.

To setup an imaging server, perform the following:

1. Verify that VSI-FAX is installed on the Windows NT/2000 computer you intend to use as the imaging server.

The remainder of the imaging server setup is performed at the Unix fax server.

2. Stop the scheduler (page 19).
3. Modify the `vsisrv.ini` file by adding the following entry to the `VSINET` section:

```
image-server=<host_name>
```

Where `<host_name>` is the network name of the Windows NT/2000 fax server.

4. Start the scheduler (page 19).
5. Complete.



# SERVER MAINTENANCE

---

After the installation of a fax server and during its normal use, system resources will be allocated for the various storage and log operations. Over time, the allocation of resources can cause various problems ranging from poor performance, running out of disk space and possibly data corruption. In conjunction with your normal system maintenance it is therefore recommended that periodic maintenance be performed on the fax server to ensure smooth and efficient operation. The following information is provided to explain the need for maintenance and some recommended processes for use by experienced system administrators. Note that most maintenance tasks require a user to be logged in as vsifax, root or another administrative user.

## Purging Historical Data and Maintaining the Database Files

Regular purging of incoming and outgoing faxes will increase the responsiveness of the clients, which will load and run slowly if the database files become too large. Regular purging will also speed up processes that create the outbound and inbound log reports (vfxolog and vfxilog, respectively) and will help keep the files from becoming corrupted, which can cause the server to behave incorrectly.

### Maintaining Log Files

The process of maintaining the Outbound and Inbound log files begins with the purging of data from the olog and ilog reports. This is accomplished using the vfxpurge command, which is explained in detail in the Command Line Reference section of this manual. The vfxpurge command will allow you to select the amount of data you want to purge and how much data to retain. It is recommended that a purge process be run nightly using a cron or MS-Schedule job.

## Maintaining Databases

Keeping databases purged can eliminate delays in locating information about sent faxes. If the log files are excessively large, the information can be difficult to find and errors may occur when running the vfxolog command.

The process of purging the files should also include periodic file unloading and rebuilding. This will help ensure that the databases contain accurate information, since excessively large database files tend to be more susceptible to corruption.

The rebuilding of database files can be performed using a series of VSI-FAX commands either individually or written into a script or through other automated task managers such as crontab or MS-Schedule. Sample daily and periodic scripts appear later in this section. The following describes the recommended weekly or monthly process:

1. Stop the VSI-FAX scheduler
2. Purge old data from the databases
3. Unload data to temporary files
4. Delete the databases
5. Recreate the databases from the schema files
6. Reload the information from the temp files into the new database files
7. Delete the temporary files
8. Restart the scheduler
9. Complete.

---

**NOTE:** Note that during the rebuilding process, errors may be displayed that indicate some amount of database corruption. This is particularly likely if rebuilding has not been performed for a long time. Simply ignore these error messages, as the problems they refer to will be repaired during the rebuilding process.

---

---

# Sample Scripts for Maintaining Databases and Files

Scripts can be used nightly, weekly, or once per month depending on the number of faxes being sent and received by your fax server. These scripts are intended for use on Unix servers or with the MKS Toolkit.

---

**TIP:** If you are running VSI-FAX on a Windows NT/2000 server without the MKS Toolkit, the scripts can be modified to run correctly by changing each "\$" to "C:", each "/" to "\" and each "rm" to "del".

---

---

**IMPORTANT:** These scripts are examples. They must be modified according to your specific configuration and needs.

---

## Nightly Purge Script

```
#!/bin/sh
# This example script purges all three logs,
# It retains any information that is 7 days old or less
#
$VSIFAX/bin/vfxsched stop
$VSIFAX/bin/vfxpurge -o 7
$VSIFAX/bin/vfxpurge -e 7
$VSIFAX/bin/vfxpurge -i 7
$VSIFAX/bin/vfxsched start
#
```

## Weekly or Monthly Purge/Rebuild Script

```
#!/bin/sh
#
# Stop the VSI-FAX Scheduler
$VSIFAX/bin/vfxsched stop

# Purge the data from the database
$VSIFAX/bin/vfxpurge -o 7

# Unload data to temporary files
$VSIFAX/bin/vdbtool unload $VSIFAX/spool/dbs/faxtags >
$VSIFAX/spool/temp/faxt.tmp
$VSIFAX/bin/vdbtool unload $VSIFAX/spool/dbs/faxreqs >
```

```
$VSIFAX/spool/temp/faxr.tmp
$VSIFAX/bin/vdbtool unload $VSIFAX/spool/dbs/faxofns >
$VSIFAX/spool/temp/faxo.tmp

# Delete the databases
$VSIFAX/bin/vdbtool delete $VSIFAX/spool/dbs/faxtags
$VSIFAX/bin/vdbtool delete $VSIFAX/spool/dbs/faxregs
$VSIFAX/bin/vdbtool delete $VSIFAX/spool/dbs/faxofns

# Create databases from the proper schema files
$VSIFAX/bin/vdbtool create -d $VSIFAX/spool/dbs
$VSIFAX/lib/dbs/faxtags.sch
$VSIFAX/bin/vdbtool create -d $VSIFAX/spool/dbs
$VSIFAX/lib/dbs/faxregs.sch
$VSIFAX/bin/vdbtool create -d $VSIFAX/spool/dbs
$VSIFAX/lib/dbs/faxofns.sch

# Load data from the temp files into the new database
$VSIFAX/bin/vdbtool load $VSIFAX/spool/dbs/faxtags <
$VSIFAX/spool/temp/faxt.tmp
$VSIFAX/bin/vdbtool load $VSIFAX/spool/dbs/faxregs <
$VSIFAX/spool/temp/faxr.tmp
$VSIFAX/bin/vdbtool load $VSIFAX/spool/dbs/faxregs <
$VSIFAX/spool/temp/faxo.tmp

# Clean up temporary files
rm $VSIFAX/spool/temp/faxt.tmp
rm $VSIFAX/spool/temp/faxr.tmp
rm $VSIFAX/spool/temp/faxo.tmp

# Restart the Fax Scheduler
$VSIFAX/bin/vfxsched start

# End
```



## Maintaining VSI-FAX Directories

The fax server uses directories to store inbound and outbound faxes. These directories are `$VSI/FAX/spool/dbs` and `$VSI/FAX/spool/temp`. Over time, faxes left in these directories will eventually consume excessive amounts of space.

VSI-FAX uses the `spool/temp` directory for various operations, such as storage of pending tiff files. The `$VSI/FAX/spool/temp` directory should be empty when the scheduler is idle (no jobs pending). If this directory is not empty, use `vfxfstat` to determine if the scheduler is idle, then remove any files in the directory.

When the scheduler is idle, the `$VSI/FAX/spool/in` directory should also be empty. If tiff files are found in this directory, a problem occurred while routing an inbound fax to a specified inbox and caused the fax to remain in the “in” folder. Use `vfxfstat` to determine if the scheduler is idle, then remove any files in the directory.

## Debug Log Files

Debug files are created each time the scheduler is restarted. These files are self-maintaining and they will not become unreasonably large if the scheduler is restarted periodically. VSI recommends that the scheduler be restarted about once a day. Restarting the scheduler once a day, or however often you decide, will ensure that along with maintaining the debug log files, any defunct/runaway processes can be managed. It also ensures that the shared memory segments and resources used by VSI-FAX are reset and cleaned which will help to ensure smooth VSI-FAX operation.

The log file names are numerically incremented each time the scheduler is started, up to the number of files set in the `vsisrv.ini` file, using the `max-debug-log` entry. The current debug files do not have a number designation (fax1) however, as new debug files are created they will be incremented (fax1-0, fax1-1, fax1-2, etc.) until the maximum number of files are reached.

Along with database files, the debug log files will grow in size over time until the scheduler is restarted. If the “debug” option is turned “on,” the amount of information written to the debug logs files will be extensive.

## Archiving Faxes and Maintaining Users' Inboxes

If you are using VSI-FAX to receive and route inbound faxes, each client user will have an inbox identified by their user name or user ID. All faxes received for a particular user will be routed to that user's inbox, located in the `$VSIFAX/faxq/<user ID>` directory. Every user can save, copy or delete faxes from their inbox. Faxes that are not routed to individual inboxes are routed to the inbox of user "vsifax."

Users should try to maintain manageable levels of faxes in their inboxes. A VSI-FAX administrator should set up a monthly maintenance cycle or script that checks each user's directory, including user vsifax, and deletes any files older than a specified date.

## Resetting Sequence Numbers

Sequence numbers are assigned to inbound and outbound faxes for tracking purposes. The fax sequence number can be changed and or reset to a specific value based on the organization's needs. The fax sequence number is stored in the seqno database file in the `$VSIFAX/spool/dbs` directory. Some organizations like to reset the fax sequence number at the beginning of a month or a new year. The process for changing or resetting the sequence number is as follows.

1. Stop the VSI-FAX scheduler.
2. Change to the `$VSIFAX/spool/dbs` directory.
3. Using the `vdbservice` command, unload the seqno database file with the `-x` option. For example:

```
vdbservice unload -x seqno > seqno.txt
```

4. Edit the `seqno.txt` file and change the sequence numbers to the desired values.
5. Load the updated `seqno.txt` file back into the seqno database file. For example:

```
vdbservice load -f typ,seq seqno < seqno.txt
```

6. Restart the VSI-FAX scheduler.
7. Delete the `seqno.txt` file.
8. Complete.

# CUSTOMIZATION TECHNIQUES

---

This chapter describes various ways to customize VSI-FAX to meet your particular needs.

## Customizing the Fax Header

You can permanently override the default fax header string by changing the `ad-string` entry in the `vsisrv.ini` file. That way you can have your organization's name or other information appear in the header. To change the `ad-string`, edit the `vsisrv.ini` file changing the 'ad-string' to the new value. For example:

```
ad-string="From: New Company Name"
```

Using the `pgh` tag (page 309) overrides the page header string for a single fax request. For example, to override the TSI string using the `tti` tag, enter:

The `tti` tag (page 358) overrides the `tsi` tag (page 357) for a single fax request.

## Date and Time Format

The default VSI-FAX date and time formats are:

**Date**                    YYYYMMDD

Where YYYY is a four-digit year, MM is the two digit numerical month of the year (e.g., January is "01") and DD is the two-digit day of the month.

**Time**                    YYYYMMDDHHMMSS

Where YYYY is a four-digit year, MM is the two digit numerical month of the year (e.g., January is "01"), DD is the two-digit day of the month, HH is a two-digit hour of the day in 24-hour format (e.g., 1:00 P.M. is "13"), MM is minutes and SS is seconds.

---

**NOTE:** VSI-FAX generally uses the “date” to mean a shortened version of the “time,” which is both the calendar date and time of day.

---

You can change the default date and time formats and include custom date and time formats in the fax header string (page 95). This is done using various tokens that represent various date and time formats. These tokens are interpolated at run time to derive the actual date or time in the proper format. All tokens comprise the percent sign (%) followed by a token character.

TOKEN	DESCRIPTION
%a	Abbreviated weekday name.
%A	Full weekday name.
%b	Abbreviated month name.
%B	Full month name.
%c	Date and time representation for your locale.
%d	Day of month as a two-digit number (01-31).
%e	Day of month as a number (1-31: single digits preceded by a blank).
%H	Hour (24-hour clock) as a number (00-23).
%I	Hour (12-hour clock) as a number (01-12).
%j	Day of year as a number (001-366).
%m	Month as a number (01-12).
%M	Minute as a number (00-59).
%p	AM or PM associated with a 12-hour clock.
%S	Seconds as a number (00-59).
%U	Week number of the year using Sunday as first day of week 1 (00-51).
%w	Day of week as a number (0 - 6 beginning with Sunday).
%W	Week number of the year using Monday as first day of week 1 (00-51).
%x	Appropriate date representation.
%X	Appropriate time representation.
%Y	Year as number without century (00-99).

TOKEN	DESCRIPTION
%Y	Year as full four-digit number.
%Z	Time zone name or no characters if unknown.
%D	Date code representing the month, day and year as two-digit numbers. Same as %m%d%y.
%r	12 hour time code representing hours, minutes and seconds as three series of two-digit numbers, separated by colons and appended with AM or PM. Same as %I:%M:%S %p.
%R	24 hour time code representing hours and minutes as two series of two-digit numbers, separated by a colon. Same as %H:%M.
%T	24 hour time code representing hours, minutes and seconds as three series of two-digit numbers, separated by colons. Same as %H:%M:%S.

## Examples

A `vsisrv.ini` section entry to set the date format to European style of day/month/year would be:

```
[VSIFAX]
DateFormat = "%d/%m/%y"
```

A `vsisrv.ini` section entry to set a page-header string with the date, time, and company name would be:

```
[DEVICE]
PagehdrString = "%m/%d/%y %H:%M Universal Exports"
```

# Template Files

Template files are a powerful integration and site customization tool. They allow you to:

- Customize email transport (routing) messages sent by the fax server
- Customize various notification email messages sent by the fax server
- Customize the way fax status is displayed with **vfxstat** (page 195)
- Retrieve fax envelope information from the fax server and use it as part of a group faxing strategy

This topic discusses how to use template files to customize fax server email transport (routing) messages and **vfxstat** fax status reports.

Refer to *Customizing Notification Email Messages* (page 67) for additional information about customizing notification email messages. Also refer to your *VSI-FAX Integration Manual* for information about using template files as part of a group faxing strategy.

## File Structure and Syntax

Template files can be plain ASCII text, PostScript or PCL files. They generally contain a mixture of plain text and tags. When the fax server process a template file, it populates any tags it finds in the template file with either the current value for tag or the default value defined in the template file.

The default value is only used if a current value for that tag is not defined via some other method (e.g., specified on the command line, in a tag file or by embedded tag).

It is this conditional behavior (i.e., use the current value or use the default value) this makes template files especially powerful and flexible. Once they are created, they can be easily shared and re-used throughout your site.

The syntax for defining a tag inside a template file is:

```
${<tag>[, [<max>] . [<length>]] [:<default>]}
```

Where:

<code>&lt;tag&gt;</code>	Tag name.
<code>, [&lt;max&gt;] . [&lt;length&gt;]</code>	Optional length statement. Tag values exceeding <code>&lt;max&gt;</code> are truncated to that value by removing characters from the left of the value; tag values shorter than <code>&lt;length&gt;</code> are made that length by appending trailing spaces to the right of the value
<code>&lt;default&gt;</code>	Optional default value for the tag.

Consider the following example send-notify template:

```
Your fax request ${seq} to ${tnm:<unknown>} at ${tfn}
was sent at ${sti} with a result of ${rrs}.
```

Fax info:

```
# pages      : ${npg}
memo         : ${ntf}}
```

The first line contains a short synopsis of the fax request status, comprising the fax request ID (**seq**) tag, the recipient name (**tnm**) tag, recipient fax number (**tfn**) tag, send time (**sti**) tag and the fax request result code description (**rrs**) tag. If the name (**tnm**) tag has a current value, it is used. However, if the **tnm** tag has not been defined, it uses the default value “unknown.”

The remainder of the message includes the total number of pages (**npg**) tag and contents of the note file as defined by the **ntf** tag.

## Special Capabilities and Limitations

When working with template files, be aware of the following special capabilities and limitations:

1. Template files must reside in the `$VSIFAX/lib/templates` directory. Template files in other directories cannot be used by the system.
2. The note file (**ntf**) tag is special. If specified in a template file, the contents of that file is inserted into lines immediately following the **ntf** reference.
3. If a tag is specified without a default value and that tag is empty (i.e., it has no associated value), an empty string is output.
4. If the `<max>` value is greater than the `<length>` value, it is set to `<length>`.
5. If a template file is specified and cannot be found, the default message will be silently used.
6. The **vinfo templates** command (page 200) lists all template files in the `$VSIFAX/lib/templates` directory.

## Customizing Email Transport (Routing) Messages

When the fax server routes a fax to a user's email inbox, it does so by creating a short email message and including the fax as a TIFF file attachment.

The default email transport message shows the sender as "VSI-FAX Server." The subject line shows the total number of pages in the fax and the originating fax number (i.e., TSI string). The body of the message looks like this:

```
ID           : 16175
clientid    : jsmith
TSI         : 408 270 9330
rcvd at     : 2000/04/13 10:22:59
# pages     : 1
```

To customize all email transport messages sent by the fax server:

1. Create your template file.
2. Place the template file in the `$VSIFAX/lib/templates` directory.
3. Add this entry to the `$VSIFAX/lib/vsisrv.ini` (page 411) configuration file:

```
[DEVICE:sendmail]
template=<my_template.tpl>
```

Where `<my_template.tpl>` is the template file you want to use for your email transport messages.

4. Complete.

## Customizing vfxstat Output

You can use template files to customize **vfxstat** (page 195) status reports. Simply specify a valid template using the **-T** option as follows:

```
vfxstat -T <template_file> <req_ID>
```

Consider the following sample template file that could be used to customize **vfxstat** reports:

```
Fax request  : ${seq}
Num pages    : ${npg}
Result       : ${rrs}

To name      : ${tnm,20.20}      From name      : ${fnm,20}
To company   : ${tco,20.20}      From company   : ${fco,20}
To fax number : ${tfn,20.20}      From fax number: ${ffn,20}
```

Notice the extensive use of length statements to ensure a pleasing tabular report layout.



# TROUBLESHOOTING

---

This chapter describes common problems that you may encounter while installing, configuring or using VSI-FAX. If you do not find your problem described in this section, try to pinpoint it before you contact V-Systems for help.

## Before Calling Support

Write down a complete description of your problem, including the precise series of commands or steps that led to the problem.

Include any error messages displayed. Write each error message down exactly as it appears, complete with any punctuation and uppercase or lowercase characters.

List all the hardware components, including brand names and model numbers of the host system and equipment associated with the fax modem. Knowing the hardware and software configuration of your system is vital to a correct and timely diagnosis of your problem.

List all applications and third party device drivers associated with the system.

Please have the following information ready when you call VSI Support:

- Make and model of computer system
- Modem type
- Serial port (internal, serial card, etc.)
- Cabling
- Operating system
- VSI-FAX release, serial number and build number (enter `vfxsched -v`)
- Application program that caused the error
- Complete description of problem
- Steps to recreate the problem
- Any error messages

## Putting the Scheduler in Debug Mode

Putting the scheduler in debug mode is one of the first things you should do when you encounter any problem.

1. Stop the scheduler
2. Edit the [VFXSCHED] section of the `$VSI\FAX\lib\vsisrv.ini` file by making the following change:

```
enter - Debug=On
```

3. Restart Scheduler in 'debug' mode by entering:

```
vfxsched -D
```

4. Complete.

The data is written to the `vsinet` file in the `$VSI\FAX\spool\logs` directory. The log files are:

<code>fax1</code>	Default fax log
<code>lb</code>	Loopback FIM log
<code>vsinet</code>	Networking, TCP/IP errors
<code>vfxsched</code>	Scheduler errors

These log files are incremented each time the scheduler is restarted. For example, these files may be used if you are dialing but the faxes fail. You can then put the scheduler in debug mode, then try to re-send the fax and view the default fax log (i.e., `fax1`).

When you no longer need debug on, edit the `vsisrv.ini` file and change the `Debug=` setting to `off`.

## Device Problems

To keep the fax server working properly, it is important to know when the system has stopped working properly and the best way to recover from an error. Common errors are `Modem Server Keeps Dying` and `Max NoDials Reached`. This error may be caused when a phone line fails, when problems occur with a PBX, and/or when a modem fails to respond.

VSI-FAX has the ability to send an email message or other notification when a modem has stopped working. A stop-notify script can be added to the system that will notify a user or system administrator that a modem has stopped working. The fax server can also be set up with a start and stop notification script showing when the server is started or stopped. This can be used to notify a user or system administrator that the server is running or, in case of an error, how long the server has been down.

If a reference to it is added to the `vsisrv.ini` file, the following sample script will run automatically when a modem server dies.

```
#!/bin/sh
#
# Specify User mail address to send messages to
MAILTO=user@vsi.com
DEST=$1
CAUSE=$2

if [ -f /tmp/fail1 ]
then
# restart fim
elif [ -f /tmp/fail2 ]
then
# restart fim
elif [ -f /tmp/fail3 ]
then
#mail fatal fim message to specified user
fi
```

When the script runs, it will check to see if a `tmp` file exists. This `tmp` file will contain a value that corresponds to the number of times the software has attempted to restart the FIM. If the value is three, the script will send a fatal mail message to the specified user. If the value in the `tmp` file is less than three, the script will restart the FIM.

## DID Fax Modem Support

To determine the version number of a modem that is currently being used by VSI-FAX, examine the log file located in the `$VSI/FAX/spool/logs` directory. The file is normally called `fax1` for the first device or class, `fax2` for the second device or class, etc. The log file will contain entries like these:

```
MTYPE      : 7.000      : Modem manufacturer      : MULTI-TECH
MTYPE      : 8.000      : Modem model             : MT1932ZDX
MTYPE      : 8.000      : Firmware version        : 0115
```

## Runaway Processes

VSI-FAX uses several processes that run during normal VSI-FAX operation. These processes should be self-maintaining and will only need attention if the server begins to exhibit abnormal behavior, such as failing to restart, after it is stopped.

Runaway processes frequently cause this type of behavior. To determine whether there are any runaway VSI-FAX processes, stop the scheduler and use the **`vfxsched -l`** command to list any running processes. Runaway or defunct processes can be caused by various reasons. Some may be caused by other software and OS applications, incorrect shutdowns of systems, corruption of File systems, or running out of hard drive space.

Since no processes should be running once the scheduler has been stopped, **`vfxsched -l`** should show no processes. If there are runaway processes, the output of **`vfxsched -l`** will look something like this:

```
19007: vrsched
19010: vgsched
19011: vxmld
19012: vnetlgn
19008: vnetcmd
19019: vnetfax
19015: lb-fim
19009: sm-fim
```

Use the **`kill`** command to terminate `vrsched`. This will probably cause the other runaway processes to terminate. If not, kill them individually. They will restart themselves when the VSI-FAX server is restarted and they will not require any additional attention.

# Loading Media Error

## Problem

Error reading floppy disk.

## Solution

When installing from diskette, verify that you are using the proper device. Watch the light on the disk drive while loading to be sure that you have picked the correct device. It is easy to select the "other" floppy disk on a two-drive system.

Confirm that the distribution media was loaded in the proper sequential order.

If you receive a "seek error," try reading the diskette on another system if possible. If the error persists, contact V-Systems to arrange for replacement media.

On systems which use a volume manager, such as Solaris, make sure that the floppy drive is not being controlled by the volume manager (vold).

## Problem

mount could not mount /cdrom: no such file or directory(error 2)

## Solution

The /cdrom directory is the mount point for the mount command. This error message will occur if the /cdrom directory does not exist. Use the Unix **mkdir** command to make the directory and try the mount command again. An alternate mount point could be the /mnt directory which should exist.

# Installation Errors

## Problem

Fax device or class is shown as “Initializing” or is set to “Not Running.”

## Solution

The VSI-FAX scheduler executes one Fax Interface Module (FIM) process for each fax device or class on the system. The “Initializing” or “Not Running” state reported most often is due to the failure of the FIM to successfully initialize the modem. It essentially was unable to communicate with the modem.

Some of the items to check are:

- Make sure the fax modem is powered on.

- Confirm that the serial modem cable you are using is correct for the specific system.

- Confirm that the FIM process has exclusive use of the serial port and that no other processes are currently running on the serial port. This also includes disabling the port on systems using a serial port manager.

- Confirm that the serial port permissions are rw-rw-rw-(666).

- For Ethernet terminal servers, make sure the terminal server serial port is set to support full modem control signals, software flow control, and is set up to accept host system stty configuration.

VSI-FAX includes a utility program that allows you to open the serial port and establish communication with the fax modem. The program is called **vtalk** and is located in the `$VSI_FAX/bin` directory.

For example:

```
vtalk -c -v /dev/tty1A
```

This program will allow you to troubleshoot serial communication with the fax modem. Once connected, you will not see a prompt or any other indications that you have successfully opened the serial port. You have to begin by entering the **AT&F** modem reset command. You should then receive a response of **OK** assuming that you are successfully communicating with the fax modem. Next, you want to try dialing out using the fax modem in order to determine if the modem is actually responding to commands:

```
ATDT17144892486
```

To exit the program, just press **CTRL \**.

## Problem

Error message “Cannot Login to Server”

## Solution

This message is displayed when you execute any command that requires a response with information from the fax server.

The fax scheduler may not be running. You can confirm this with the following command:

```
vfxstat -r
```

```
Scheduler is not running
```

One of the scheduler’s Unix server processes may have stopped servicing requests. Stop and restart the fax scheduler to resolve this problem.

```
vfxsched stop
```

```
vfxsched start
```

# Communications and Modem Problems

## Problem

Permissions on the port keep changing.

## Solution

This is due to another process attempting to use the port, and this virtually guarantees failures as the two programs contend for access to the device. VSI-FAX demands exclusive access to the serial device used to communicate with the fax modem.

Most commonly, this is due to a **getty** command attempting to start a login on the port. This must be disabled permanently. Although methods for doing this vary from machine to machine, we will detail a few common mechanisms here.

---

**NOTE:** You must be root to complete these procedures and you usually have to edit the ownership and permissions on the port one final time once you've disabled the **getty**.

---

### SCO UNIX

Disable the getty on the port ttyXX by entering **disable ttyXX**. This permanently turns off **getty** access to the port, leaving it free for VSI-FAX.

**System V Release 2 and 3** The `/etc/inittab` file contains a list of all programs that are run automatically, and this includes all the `getty` entries. One line in this file mentions the `tty` that is of interest to you. This line must have its third field changed from `respawn` to `off`. Once this file is saved, run `init q` to make the changes take effect.

**System V Release 4** These machines use a `ttymon` process that monitors each port and automatically runs a login when a connection is established. You must use your system administration facilities to ensure that no activity is undertaken on your fax device port.

---

**NOTE:** Intel-based machines usually store their per-port `getty` information in two places. This means that changes `/etc/inittab` are lost when the kernel is rebuilt. Look for the `getty` line in the file, `/etc/conf/cf.d/init.base`, or in all the files in the `/etc/conf/init.d/` directory. Make the change in `/etc/inittab` plus the appropriate `/etc/conf` file, and run the `init q` command. A kernel rebuild is not necessary.

---

A rogue process may be running on the port. Recall that VSI-FAX must have exclusive control of the port to which the modem is connected. One way of detecting rogue processes is by the use of the `ps` and `grep` commands:

```
# ps -ef | grep ttyXX
```

Many operating systems provide a program that helps you track down processes that are using any given file, and you can use it to find which process is using the device. The `/etc/fuser` (file-user) command takes a list of filenames and searches through kernel memory and reports the process ID of any program that is using that file in any way. Once the PID is given, run `ps -ef <PID>` to identify what the process is.

## Problem

The fax modem answers calls but terminates during negotiation.

## Solution

Could be a compatibility issue with the sending fax machine and the fax modem's firmware. Try isolating the problem to a specific fax machine, which may then require an upgrade of the modem's firmware.

## Problem

Log files display time-out errors even though the full document was received at the remote site.



**Solution**

The fax modem will attempt to send the same page up to a total of three times. If the remote site has a thermal fax machine, then the portions of the page that were successfully received at the remote fax machine will appear, but unless the remote fax machine responds with a positive acknowledgment, the local fax modem will reject the fax attempt up to a total of three times. This condition could be caused by transmission errors, firmware incompatibility between the fax modem and the remote fax machine. It could also mean that the Unix serial port's software flow control is not functioning correctly and data is being lost between the FIM software and the fax modem. The acknowledgments from the remote fax machine received by the fax modem are not making it back to the fax software.

**Problem**

The received fax transmission speed is no greater than 4800bps.

**Solution**

The dial line may be contributing to a high degree of errors.

The transmitting fax machine may be limited to or manually configured to transmit at a rate lower than 9600 BPS.

**Problem**

Every call terminates with "NO ANSWER."

**Solution**

Be sure you are calling a fax machine. Do your initial fax testing in the same room as the modem so you can hear the call progress yourself. An answer of "hello" usually means a human has picked up the line.

Verify that the proper dialing codes are used (e.g., some telephone systems require the prefix of "9," to reach an outside line). To check, turn debug on, then view fax1 (or your default) to see what the dialed number is being converted to.

**Problem**

A loud beep is heard about every two seconds on a fax call.

**Solution**

This is normal. Outgoing fax modems always emit a "CNG" tone about every two seconds to tell the recipient that the caller is a fax machine and not a person. This cannot be disabled, but you can turn down the volume using the adjustment screw on the back of the modem.

## Problem

Modem server keeps dying

## Solution

This problem could be due to serial port problems, serial port configuration issues, cable problems, unsupported modem issues or modem problems.

VSI-FAX only supports fax Class 2 or Fax Class 2.0 modems. Fax Class 1 modems are not supported.

VSI-FAX provides the **vtalk** utility for assisting in troubleshooting modem problems. VSI-FAX for NT administrators can use the Windows HyperTerminal application.

The **vtalk** utility is located in the `$VSI-FAX/lbin` directory.

```
vtalk -c -v /dev/tty1A
```

After the port opens successfully you can enter modem AT commands

<b>ATE1</b>	This enables echo responses from the modem. The modem should return OK.
<b>ATZ</b>	This is the modem reset command. The modem should return OK.
<b>AT&amp;F&amp;W</b>	This is the modem load factory defaults and write to the profile. The modem should return OK.
<b>AT+FCLASS=?</b>	This is the modem command to query the supported fax classes. The modem will return 2 for Class 2 support, <code>Class 2.0</code> for Class 2.0 support and 1 for Class 1 support. Other values are 0, which is data mode, and 8 which is voice mode.

Press **CTRL \** to exit.

If the modem did not respond check the serial port configuration, serial port cable and power cycle the modem then try the **vtalk** utility again. If the modem does not appear to support Class 2 or Class 2.0, visit our web site [www.vsi.com](http://www.vsi.com) for the list of supported modems.

---

## Printing Problems

### Problem

The **vfxprint** output to an HP LaserJet printer is unreadable.

### Solution

The PCL output from **vfxprint** requires an eight-bit binary interface with no translation of any kind by the printer driver. This is usually controlled by the **stty** command, and features such as parity, tab expansion, or NL-to-CRLF translation will play havoc with the binary data. A completely "raw" mode must be selected. Tracking this down usually requires a bit of system administration experience, but there are some steps you can take to fix this problem.

The line printer spooler system provides a shell script, specifically an "interface script," that is responsible for routing the data to the printer. The **lp** command has the **-o** argument that permits the passing of arbitrary options to this script, and many standard interfaces support some way of selecting this "raw" mode.

While debugging the **lp** spooler interface scripts is well beyond the scope of this document, users with administrative experience can usually look at the script and find the way to do it. Look for "raw" or "graphics" options that directly or indirectly set the **-opost stty** option.

The normal interface scripts are stored under the **/usr/spool/lp** directory, in a sub directory that depends on the operating system version. Before System V Release 3.2, the **interface** sub-directory contained the scripts, and at 3.2 and beyond they are kept in the **admins/lp/interfaces** subdirectory.

Some systems support the use of the **lp -oraw** command to indicate raw data being sent to the printer.

## Miscellaneous Problems

### Problem

A received fax appears stretched or expanded.

### Solution

The original fax was probably sent in standard resolution mode and should be resent in fine resolution mode. For example:

```
vfx -n555-1212 -E fine file.tif
```

# Formatter Errors

## Problem

PostScript documents will not fax.

## Solution

The PostScript language is highly standardized, but there is just enough deviation from the norm that compatibility problems still arise. The first test is always to send the document to a real PostScript printer, with an Adobe interpreter if possible. If the document fails to print there, the VSI-FAX PostScript formatter will normally not process it properly.

The most common cause of these problems is an improperly configured or invalid PostScript driver in the application software, or the use of Level 2 options. The VSI-FAX PostScript formatter only supports PostScript Level 1 files.

Most new printers support the more recent Level 2 language as defined by Adobe, and their drivers often use these additional features. Some drivers can have Level 2-specific features disabled, so select this if available. We have seen the least amount of compatibility problems with the Apple LaserWriter driver.

Before calling technical support, please have the exact name and version of the application that generated the PostScript code. You may be asked to send a copy of the file that produces the error so we can reproduce the problem in-house. Be sure not to discard your test programs.

## Problem

The quality of gray scale is poor.

## Solution

Halftones that are tuned for one kind of PostScript engine, such as a 300 dpi write-white engine, usually require adjustment when moving to a different engine, and this is certainly the case with VSI-FAX. These adjustments can require a great deal of trial-and-error, but it usually involves reducing the halftone frequency.

## Problem

Lines vary in size.

## Solution

This is almost always caused by the PostScript driver not rounding to device space coordinates properly. At 300 dots per inch, it is hard to see the difference between a 2-pixel-wide line and one that is 3 pixels wide. However, at 200 dpi, a 1-pixel-wide line definitely looks different. There are common

programming techniques that completely eliminate these resolution-dependent artifacts, but some drivers choose not to use them. Report this to your application vendor.

## Problem

Fax fails with the reason for failure BADIMG

## Solution

This is error condition indicates that the file submitted for faxing could not be imaged properly. This could be caused by a corrupt input file or submitting an input file that is not in a supported file format.

VSI-FAX supports ASCII, TIFF, PostScript (Level 1 only), and PCL5e input files.

VSI-FAX uses the following conversion applications for submitting input files to the appropriate formatter. All of the conversion applications are located in the `$VSI-FAX/sbin` directory.

**pcltotif**      This application converts PCL or ASCII files into TIFF files.

**pstotif**      This application converts PostScript files into TIFF files.

**eptotif**      This application converts Epson format files into TIFF files.

The following example shows a method of using the conversion application directly to image the input file rather than submitting the input file from the `vfx` command line or from one of the other fax submittal methods in VSI-FAX. The example filename `file.*` should be replaced with your input file.

### For PCL or ASCII Files

```
pcltotif -o /tmp/test.tif -E fine file.pcl
```

If successful, this will create the `/tmp/test.tif` output file or return error messages if unsuccessful.

### For PostScript Files

```
pstotif -o /tmp/test.tif -E fine file.ps
```

If successful, this will create the `/tmp/test.tif` output file or return error messages if unsuccessful.

### For Epson Format Files

```
eptotif -o /tmp/test.tif -E fine file.ep
```

If successful, this will create the `/tmp/test.tif` output file or return error messages if unsuccessful.

## For TIFF Files

```
vtifftool -o /tmp/test.tif -E fine file.tif
```

If successful, this will create the `/tmp/test.tif` output file or return error messages if unsuccessful.

## Problem

Fax fails with the reason for failure SCHERR

## Solution

This is error condition indicates that the VSI-FAX scheduler processes have a error condition causing this error. The error could be a permission problem or other scheduler problems.

To resolve SCHERR conditions, the VSI-FAX scheduler should be restarted in debug mode and then, after recreating the problem, you go to the `$VSIFAX/spool/logs` directory and look for error messages in the `vrsched` and `vsinet` debug logs. Submit the debug logs to VSI Technical Support if required.

# Web Server Debug Logging

If you are experiencing problems with the web fax client, turning on additional web server debug logging can often help you locate the source of the problem. To troubleshoot using extended web server debug logging information, perform the following:

1. Edit the `$VSIFAX/webserver/conf/httpd.conf` and change the `LogLevel` setting from `warn` to `debug`.
2. Edit the `$VSIFAX/webserver/conf/jserv.conf` and change the `ApJServLogLevel` setting from `notice` to `debug`.
3. Edit the `$VSIFAX/webserver/servlets/WebClientServlet.initArgs` and change the `global.debug-mode` setting from `OFF` or `unset` to `ON`.
4. Restart the scheduler (page 14).
5. Duplicate your previous problem, then check these files for troubleshooting information:

```
$VSIFAX/spool/logs/vhttpd  
$VSIFAX/spool/logs/jserv  
$VSIFAX/spool/logs/webclientservlet.log  
$VSIFAX/spool/logs/vrsched
```

6. Complete.

# COMMAND REFERENCE

---

This quick reference table briefly describes each VSI-FAX command and provides the starting page number for the detailed documentation.

COMMAND	DESCRIPTION	PG
<b>fontcomp</b>	Roxbury font (page 455) compiler.	117
<b>vadmin</b>	Client/server version of <b>vfxadmin</b> (page 145).	119
<b>vdbtool</b>	Used to perform various database maintenance functions.	120
<b>vdialcvt</b>	Pre-tests your dial strings to ensure proper conversion.	137
<b>vdnload</b>	Download TIFF files from the fax server.	139
<b>vfx</b>	A full-featured command-line interface for sending faxes.	140
<b>vfxadmin</b>	Used to perform various fax administration functions.	145
<b>vfxcancel</b>	Removes a pending fax request from a fax queue.	172
<b>vfxilog</b>	Creates a report of received faxes.	174
<b>vfxolog</b>	Creates a report of all fax requests submitted to the server.	176
<b>vfxpb</b>	Used to create and maintain user and system directories (phone books).	179
<b>vfxprint</b>	Prints a fax.	187
<b>vfxpurge</b>	Purges expired fax requests.	190
<b>vfxsched</b>	Used to start, stop and restart fax server scheduler processes.	192
<b>vfxstat</b>	Reports fax server and/or fax request status.	195
<b>vfxtry</b>	Used to initiate or re-initiate a fax request attempt.	198

COMMAND	DESCRIPTION	PG
<b>vinfo</b>	Lists various resources on the fax server.	200
<b>vlbchk</b>	Checks the integrity of your VSI-FAX cluster settings.	202
<b>vlcrchk</b>	Checks the integrity of your Least Cost Routing (LCR) settings.	203
<b>vpkgchk</b>	Returns a list of installed packages and associated files.	204
<b>vreguser</b>	Manages your fax account user information.	205
<b>vtalk</b>	Establishes a simple terminal session with a fax device.	207
<b>vtifftool</b>	Used to edit and manipulate TIFF files.	208
<b>vupload</b>	Uploads new image and overlay files to the fax server.	226
<b>xmlf</b>	Transport mechanism for sending a file to the fax server for transmission	228



# fontcomp

## Synopsis

```
$VSIFAX/lib/fonts/fontcomp [-i] [-l] [-p] [-v] <font_name>
```

## Description

**fontcomp** compiles the various Roxbury fonts (page 455) and installs them into the proper directories.

---

**IMPORTANT:** This utility must only be used to compile Roxbury fonts. Do not use it to compile any other font families.

---

## Options

<b>-i</b>	Install compiled fonts.
<b>-l</b>	List fonts (all if no font specified).
<b>-p</b>	Print only.
<b>-v</b>	Verbose mode.
<b>&lt;font_name&gt;</b>	Specific Roxbury font you want to compile.

## Examples

Typically, you would modify the font files to contain the special you need, then enter the following commands:

```
cd $VSIFAX/lib/fonts
fontcomp -v -i roxypica
fontcomp -v -i roxyital
fontcomp -v -i roxycom
```

This compiles the various fonts and installs them into the proper directories.

The **eptotif** program automatically loads these fonts from the fonts directory, unless it is invoked with the **-Z noloadfonts** option, in which case it will use internal linked-in versions of these fonts.

When the **pcltotif** program is invoked with the **-e** option (which is done when a file-type of **.txt** is used), it will load the corresponding soft (**.sft**) font for the various font selections.

By default, all FIMs image the page header using an internal linked-in version of the roxybdt font (Roxbury italic bold). However, you can choose a different font for the page header by changing the `DEVICE:font-name=<font>` entry in the `vsisrv.ini` file (page 411).

---

**TIP:** If you choose the Roxbury compressed font for your page headers (i.e., by setting `vsisrv.ini` `DEVICE:font-name=roxycomp`), you will be able to display up to 120 chars of user data in the header, as compared with 62 chars using other fonts.

---

# vadmin

## Synopsis

```
$VSIFAX/bin/vadmin <command> [<options>]
```

## Description

The **vadmin** utility is a client/server companion utility to **vfxadmin** (page 145). It provides all the same features and functions except that you can perform remote fax server administration without having to initiate a separate remote login or telnet session.

## Options

In order to implement remote fax administration features and functions, two additional options, not used with **vfxadmin**, must be supplied:

- H**    **<host>**    Connect to this fax server host name.
- U**    **<user>**    Fax account user ID.

## Notes

This utility is probably best used in scripts, where a single administration script could be used to maintain several (local and remote) fax servers.

# vdbtool

## Synopsis

```
$VSIFAX/bin/vdbtool <command> [<options>] {<file> | <db>}
```

## Description

**vdbtool** performs various database management functions.

## Command

<b>create</b>	Create a database.
<b>delete</b>	Delete a database.
<b>exists</b>	Check if a database exists.
<b>info</b>	Get information about a database.
<b>load</b>	Load data into a database.
<b>rebuild</b>	Rebuild a database.
<b>restore</b>	Restore a saved database.
<b>save</b>	Make a saved copy of a database.
<b>schema</b>	Extract the schema of a database.
<b>unload</b>	Unload data from a database.

## Notes

We strongly recommend that you stop the scheduler before performing these commands, then restart the scheduler when you are finished.

# vdbtool create

## Synopsis

```
$VSIFAX/bin/vdbtool create [-d <dir>] [-g <group>] [-u <user>] [-v]
<file>
```

## Description

This command creates a database from a schema file. The created database is a VSI-FAX specific database, which contains the data structure embedded in the database for portability and ease of upgrading. Although the database is in a VSI-FAX specific form, a user can create a database for any purpose desired.

## Options

- d**    **<dir>**        Directory to put database in. Default is the current directory.
- g**    **<group>**      Specify group ownership of database.
- u**    **<user>**      Specify user ownership of database.
- v**                Verbose mode.
- <file>**            Schema **<file>** to read. If **<file>** is not supplied or “\_” is entered, stdin is used.

## Notes

Databases are always created with mode 664 on Unix/Linux.

The schema file contains the base name of the database to be created. The database name is not specified on the command line.

---

**NOTE:** The schema file can contain the description of more than one database, in which case all specified databases will be built.

---

## Unix/Linux Examples

To create the faxreqs database in the \$VSIFAX/spool/dbs directory, enter:

```
cd $VSIFAX/spool/dbs
vdbtool create $VSIFAX/lib/dbs/faxreqs.sch
```

To create a new database called `old_db` located in the `/tmp` directory using the same format as an existing database (MyDB), enter:

```
vdbtool MyDB.sch old_db | vdbtool create -d /tmp -
```

To create the faxreqs database while in the `$VSIFAX/spool/dbs` directory, enter:

```
vdbtool create $VSIFAX/faxreqs.sch
```

## **Windows Examples**

To create a faxlist database from the `faxlist.sch` schema file, enter:

```
vdbtool create faxlist.sch
```

To create a new database called `old_db` located in `\temp` directory in the same format as an existing database, enter:

```
vdbtool schema old_db | vdbtool create -d \temp -
```

To create the faxreqs database while in the `C:\Program Files\VSI\Fax Server\spool\dbs` directory, enter:

```
vdbtool create C:\Program Files\VSI\Fax Server\faxreqs.sch
```

# vdbtool delete

## Synopsis

```
$VSIFAX/bin/vdbtool delete [-d <dir>] [-v] <db>
```

## Description

This command deletes a database from a directory. It deletes both the data and index files.

## Options

<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to put database in.
<b>-v</b>		Verbose mode.
	<b>&lt;db&gt;</b>	Database to delete.

## Examples

To delete the faxlist database, enter:

```
vdbtool delete faxlist
```

# vdbtool exists

## Synopsis

```
$VSIFAX/bin/vdbtool exists [-d <dir>] [-v] <db>
```

## Description

This command will check if a given database exists. For a database to exist, both the data and the index files must exist.

## Options

<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to find database in. Default is current directory.
<b>-v</b>		Verbose mode.
	<b>&lt;db&gt;</b>	Database to check.

## Notes

Regardless of the setting of the verbose switch, the exit code from this command will be 0 if the database exists, and 1 if the database does not exist.

## Examples

To check if the faxlist database exists, enter:

```
vdbtool exists -v faxlist
```



# vdbtool info

## Synopsis

```
$VSIFAX/bin/vdbtool info [-d <dir>] [-o <file>] <db>
```

## Description

This command will output informational statistics about a database, including the record size and number of records in it.

## Options

<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to find database in. Default is current directory.
<b>-o</b>	<b>&lt;file&gt;</b>	Output file.
	<b>&lt;db&gt;</b>	Database.

## Examples

To get information about the faxlist database, enter:

```
vdbtool info faxlist
```

# vdbtool load

## Synopsis

```
$VSIFAX/bin/vdbtool load [-c] [-d <dir>] [-f {all | <list>}]  
  [-F {csv | eval | pipe | tab}] [-h {on | off}] [-i] [-m <num>] [-u]  
  [-v] <db>
```

## Description

This command will load records in a user-specified format into an existing database. Optionally, **vdbtool load** can update existing records (using the **-u** option). The default behavior is to add records with duplicate entries flagged as errors.

All indexes in the database are updated appropriately.

Records are always in ASCII format, with numeric data represented as strings, but the order of fields and field delimiters are user-defined. Record data can be continued to a another line by ending a line with a backslash character (\).

## Options

<b>-c</b>	Check entries only.
<b>-d</b> <dir>	Directory to use. Default is current directory.
<b>-f</b> {all   <list>}	Comma delimited field <list> or <b>all</b> fields (default).
<b>-F</b> <format>	Load in one of the following formats:  <b>csv</b> Comma “,” delimiter (default).  <b>eval</b> Eval (tag=value) format.  <b>pipe</b> Pipe “ ” delimiter.  <b>tab</b> Tab delimited format (tag=value).
<b>-h</b> {on   off}	First line of input contains field list. Default is off.
<b>-i</b>	Ignore invalid fields.
<b>-m</b> <num>	Maximum number (<num>) errors before aborting.
<b>-v</b>	Verbose mode.
<b>-u</b>	Allow updates.
<db>	Database.

## Notes

Errors typically can occur if:

- The field list contains fields that are not listed in the database (and the **-i** option was not specified)
- Insufficient fields are provided to create all specified indexes
- A data field is too long
- A numeric field contains invalid digits
- A date field is not in proper format of [{yy | yyyy}] [mm] [dd] hhmmss [{am | pm}] or contains invalid values (such as a month number of 13)

---

**IMPORTANT:** The database is saved before the load is attempted, and if errors are encountered or if the user aborts the load with a SIGINT, the original database is restored

---

The **-h on** option specifies that the first line of the input contains the field list describing the rest of the file. This enables a data file to be self-descriptive, without the user having to know separately the order of the fields. The field list contained in the data is delimited with the same delimiters as the data, whereas the field list specified with the **-f** option is always delimited with commas.

Two special field tags that are recognized for any database:

**all**     Use all fields in their default order.

**ign**     Ignore this field.

The default field list is **all**. The **ign** tag is useful if you are loading data that has been unloaded from another application and this data contains fields you do not need.

When a field contains the delimiter character, quotes (either single or double) are allowed to enclose the field. Any enclosing quotes are stripped off before the field is used.

The **-c** (check) option can be used to check a file for errors before actually attempting to add the file to a database.

The **-i** option is used if the data contains fields which are not in the current database. This option will treat any such field as if it were specified as **ign**.

The **-m max** (maximum errors) option is useful when the user wants to abort the load if errors occur without trying to load all records, which can be time-consuming.

**vdbtool load** reads the records to be added from stdin. If a user has a file containing the records to be added, he can either pipe the file into **vdbtool load** or redirect input from the file.

## Examples

Assume a database called `fil`, has the following fields:

```
nam  char(40)user name
adr  char(60)address
age  word user's age
eid  char(12)employer ID number
```

With the following keys:

```
nodup:  eid
dup:    nam
```

And the following data file (called `names.txt`):

```
123-45-5678 | J. Random User | 8 Maple St., Mytown, CA | 32...
666-555-4444 | Joe Last | 123 Main St., New York, NY | 45
```

To add the records in `names.txt` to the `fil` database, enter:

```
vdbtool load -f eid,nam,adr,age -F pipe fil < names.txt
```

You can also add records to the database as follows:

```
cat <<EOF
John Doe,,555-55-5555
EOF |
> vdbtool load -f nam,add,ssn -F csv fil
```

To update `fil` using the `-h on` option, enter:

```
vdbtool load -u -h on fil <<EOF
ssn,age
555-55-5555,60
EOF
```

# vdbtool rebuild

## Synopsis

```
$VSIFAX/bin/vdbtool rebuild [-d <dir>] [-f] [-g <group>] [-u <user>]  
[-v] <file>
```

## Description

This command will rebuild a database specified by a schema file with the information contained in the schema file. All data in the database is preserved.

## Options

<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to find the database. Default is the current directory.
<b>-f</b>		Force rebuild even if same. Default is to not do a rebuild if schema did not change.
<b>-g</b>	<b>&lt;group&gt;</b>	Specify group ownership of new database.
<b>-u</b>	<b>&lt;user&gt;</b>	Specify user ownership of new database.
<b>-v</b>		Verbose mode.
	<b>&lt;file&gt;</b>	Schema <b>&lt;file&gt;</b> to read. If <b>&lt;file&gt;</b> is not supplied or “-” is entered, stdin is used.

## Notes

This command is used when a user makes a change to a **<file>** and then wants to apply those changes to the database. This is typically done when a user wants to add custom tags to the faxtags database.

## Unix/Linux Examples

To add a tag to the faxtags database, enter:

```
vdbtool <file> -d $VSIFAX/spool/dbs faxtags >faxtags.sch
```

Edit the file using any editor that will preserve text format (e.g., Notepad).

```
vdbtool rebuild -d $VSIFAX/spool/dbs faxtags.sch
```

## **Windows Examples**

To add a tag to the faxtags database, enter the following on a single line:

```
vdbtool schema -d C:\Program Files\VSI\Fax Server\spool\dbs faxtags  
>faxtags.sch
```

Edit the file using any editor that will preserve text format (e.g., Notepad).

```
vdbtool rebuild -d C:\Program Files\VSI\Fax Server\spool\dbs  
faxtags.sch
```

# vdbtool restore

## Synopsis

```
$VSIFAX/bin/vdbtool restore [-d <dir>] [-v] <db>
```

## Description

This command restores a database that has been previously saved with the **vdbtool save** command.

## Options

<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to find database in. Default is current database.
<b>-v</b>		Verbose mode
	<b>&lt;db&gt;</b>	Database to restore

## Examples

To restore the saved copy of the faxlist database, enter:

```
vdbtool restore faxlist
```

# vdbtool save

## Synopsis

```
$VSIFAX/bin/vdbtool save [-c] [-d <dir>] [-v] <db>
```

## Description

This command creates a “saved” copy of the database. This enables a user to manipulate a database, and if any problems occur, restore the database back to its original state.

## Options

<b>-c</b>	Copy the database.
<b>-d</b> <b>&lt;dir&gt;</b>	Directory to find database in. Default is current directory.
<b>-v</b>	Verbose mode.
<b>&lt;db&gt;</b>	Database to save.

## Examples

To create a saved copy of the faxlist database, enter:

```
vdbtool save -c faxlist
```



# vdbtool schema

## Synopsis

```
$VSIFAX/bin/vdbtool schema [-d <dir>] [-o <file>] [-v] <db>
```

## Description

This command will output the **schemas** for all specified databases to stdout. The format of this output is suitable for input into **vdbtool create**.

A schema file is an ASCII text file describing the data layout and indexes of a database.

## Options

<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to find database in. Default is current directory.
<b>-o</b>	<b>&lt;file&gt;</b>	Output file.
<b>-v</b>		Verbose mode.
	<b>&lt;db&gt;</b>	Database to extract schema from.

## Notes

More than one database can be specified, in which case the schema file output will contain descriptions for all the databases specified.

## Unix/Linux Examples

To create a schema file of the user directory (phone book) (which later could be used to build a user directory (phone book) using **vdbtool create**):

```
vdbtool <file> -d ~/.vsifax/lib/dbs/ pbper pbgrp pbmem > phbook.sch
```

## Windows Examples

To create a schema file of the user directory (phone book) (which later could be used to build a user directory (phone book) using **vdbtool create**):

```
vdbtool schema -d C:\Program Files\VSI\Fax Server\lib\dbs\ pbper  
pbgrp -pbmem > phbook.txt
```

# vdbtool unload

## Synopsis

```
$VSIFAX/bin/vdbtool unload [-d <dir>] [-f {all | <list>}]  
  [-F {csv | eval | pipe | tab}] [-h {on | off}] -o <file>  
  [-s {0 | <num>}] [-t <tag><op><value>] [-x] <db>
```

## Description

This command will “unload” database records into ASCII format according to the user’s specifications. Selected fields or all fields can be specified, and in any order. Optionally, the user can specify which records are to be unloaded, and whether the record should be deleted after unloading.

## Options

<b>-d</b> <b>&lt;dir&gt;</b>	Directory to use. Default is current directory.
<b>-f</b> <b>{all   &lt;list&gt;}</b>	Comma delimited field <b>&lt;list&gt;</b> or <b>all</b> fields (default).
<b>-F</b>	Unload in one of the following formats:  <b>csv</b> Comma “,” delimiter (default).  <b>eval</b> Eval (tag=value) format.  <b>pipe</b> Pipe “ ” delimiter.  <b>tab</b> Tab delimited format (tag=value).
<b>-h</b> <b>{on   off}</b>	Output field list as first line. Default is <b>off</b> .
<b>-o</b> <b>&lt;file&gt;</b>	Output file to create.
<b>-s</b> <b>{0   &lt;num&gt;}</b>	Output records according to sort order. Valid values are <b>0</b> or the number ( <b>&lt;num&gt;</b> ) of indexes in the database. Default is <b>0</b> (physical order).

<b>-t</b>	<b>&lt;tag&gt;&lt;op&gt;&lt;value&gt;</b>	Match records matching this criterion. More than one <b>-t</b> option can be supplied to specify AND conditions. Valid operators are:
	<b>=</b>	Equal to.
	<b>!=</b>	Not equal to.
	<b>&gt;</b>	Greater than.
	<b>&lt;</b>	Less than.
	<b>&gt;=</b>	Less than or equal to.
	<b>&lt;=</b>	Greater than or equal to.
<b>-x</b>		Delete records after unloading.
<b>&lt;db&gt;</b>		Database to unload.

## Notes

The **-h on** option is used to store the specified field list as the first line of output. This file can then be used as input to **vdbtool load -h on**. This is useful to contain the field information with the data. The field list is always delimited with the same delimiter used for the data. Note that this option is ignored if **-F eval** is specified.

Two special field tags that are recognized for any database:

- all**     Use all fields in their default order.
- ign**     Ignore this field.

The **ign** tag can be used to output an empty field in the corresponding position in the record line. This is useful if the data is to be loaded into another program which expects other fields to be present in the input.

The **-F csv** option specifies that data is to be delimited with a comma ("Data1","Data2") and that each field will be enclosed in quotes.

The **-F pipe** option specifies that the data is to be delimited with the pipe character (Data1 | Data2) and that each field will not be enclosed in quotes unless a particular field item contains a pipe character.

The **-F eval** option will output all lines in the form:

```
aaa="xxxx" bbb="yyy" . . .
```

This is useful if the user is unloading one record from the database and then wants to use that data in a shell script, in which he can "eval" the output line.

The **-F tag** option will output all lines in the form:

```
aaa="xxxx"  
bbb="yyy"  
...
```

There is no end-of-record indicator between successive records in the output. This is typically only useful when outputting one record from a database.

The **-t tag<op>=value** can be used to qualify which records are to be unloaded. More than one **-t** option can be specified, in which case they are treated as an “and.”

The unloaded records are written to stdout unless the **-o <file>** is used.

## Examples

Assume a database file has the following fields:

```
1.namchar(40)user name  
2.addchar(60)address  
3.ageworduser's age  
4.eidchar(12)employer ID number
```

With the following keys:

```
1.nodup:eid  
2.dup:nam
```

Unload all records, but only the name and ID fields:

```
vdbtool unload -f nam,eid fil > records.txt
```

Do the same unload but in ID order:

```
vdbtool unload -f nam,eid -s 1 fil > ssn.txt
```

# vdialcvt

## Synopsis

```
$VSIFAX/sbin/vdialcvt [-a <area_code>] [-d {<device> | <class>}]
  [-p <prefix>] [-s <suffix>] <fax_num>
```

## Description

This command is provided for a user to test what a fax phone number would be converted to. The **vdialcvt** command uses the same conversion algorithms used by the FIMs.

This **vdialcvt** utility will convert a phone number to the actual string which will be used when dialing the number. Conversion can consist of any combination of the following:

- Adding or removing country codes
- Adding or removing area codes
- Adding prefixes or suffixes
- Removing extraneous characters (i.e., dashes, parentheses, periods, plus signs and spaces)

Actual conversion of a dial string is done by the selected FIM and is not performed by the **vdialcvt** program.

## Options

<b>-a</b> <area_code>	Assumed area code.
<b>-d</b> {<device>   <class>}	Fax device or class to use for this test.
<b>-p</b> <prefix>	Prefix to prepend to number.
<b>-s</b> <suffix>	Suffix to append to number.
<fax_num>	Dial string to test.

## Notes

The **-p** (prefix) and **-s** (suffix) options add a prefix or suffix to the dial string. These options are not used to provide dialing access to an outside or international lines, those dialing characters are added by the FIM. These prefixes and suffixes are typically used to add departmental cost and accounting codes to the dial string when they are required by the local site telephony. If a prefix or suffix are provided, they do not override the system prefix and suffix strings that the FIM would normally use. Any prefix specified will be added after the system prefix, and any suffix specified will be added before the system suffix.

The **-a** (area code) option is used to specify the area code in which the user is located. The FIM will compare this area code with the area code of the phone line it is using to determine whether substitution is needed.

Therefore, if a user's area code is "714" and the FIM phone line is in area code "619", then the following conversions would happen (assuming a long distance access code of "1"):

ORIGINAL DIAL STRING	CONVERTED DIAL STRING	REMARKS
714-555-1212	17145551212	Long distance access added.
619-555-1212	5551212	Area code stripped since local.
555-1212	17145551212	Long distance access and area code added.

FIM dial string conversion parameters are found in the [DEVICE] section of the `$VSIFAX/lib/vsisrv.ini` file.

Output from **vdialcvt** is written to stdout.

US telephone service providers have introduced several new services and realigned service districts that created unique dialing requirements for specific regions. The dial string conversion function uses a configuration file called `dialcode.lst` located in the `$VSIFAX/lib` directory in order to specify these requirements. Refer to *Dial String Rules File (dialcode.lst)* (page 431) for additional information.

# vdnload

## Synopsis

```
$VSIFAX/bin/vdnload [-a] [-d <dir>] [-l] [-H <host>] [-u <user>]  
  [-U <user>] [-v] [-x] [-X] <file>
```

## Description

The **vdnload** command is used to copy a TIFF file from the fax server to your client computer or workstation.

## Options

<b>-a</b>		Access archived files.
<b>-d</b>	<b>&lt;dir&gt;</b>	Directory to put files in.
<b>-l</b>		List files.
<b>-H</b>	<b>&lt;host&gt;</b>	Connect to this fax server host name.
<b>-u</b>	<b>&lt;user&gt;</b>	Access files for <b>&lt;user&gt;</b> .
<b>-U</b>	<b>&lt;user&gt;</b>	Run this utility as <b>&lt;user&gt;</b> .
<b>-v</b>		Verbose mode.
<b>-x</b>		Delete file when downloaded.
<b>-X</b>		Delete file only.
<b>&lt;file&gt;</b>		File name to download.

## Examples

To download a TIFF file from the server enter:

```
vdnload 1001.tif
```

To download a TIFF file 1026.tif to the current directory using the **-v** option:

```
vdnload -v 1026.tif  
1026.tif retrieved
```

# vfx

## Synopsis

```
$VSIFAX/bin/vfx [-A <alias>] [-B <file>] [-c <file>] [-C <cover>]
  [-d {<device> | <class>}] [-E {std | fine}]
  [-F {ep | fax | pcl | ps | tif | txt}] [-g <srvr_grp_file>]
  [-G <local_grp_file>] [-H <host>] [-i] [-l {letter | a4 | legal}]
  [-L {attachments | covers | dests | folders | images | overlays
  | retrys}] [-m {both | each | fail | none | ok}] [-M <email>]
  -n <fax_num> [-N] [-o <file>] [-p {l | m | h | u}] [-r <retry>]
  [-R] [-s] [-S {on | off}] [-t <tag>=<value>] [-T <time>] [-U <user>]
  [-x] <file>
```

## Description

**vfx** provides a full-featured command-line interface for sending faxes. You can include many different kinds of file attachments with your fax. However, the exact types supported by any given fax server is highly dependent on that particular operating system and environment. Refer to *Imaging Overview* (page 10) for a detailed discussion of various files types and how they are imaged on various platforms.

**vfx** submits a fax envelope to the fax server, which comprises the following:

- Zero or more files or folders to be imaged (a fax can consist of a cover page only)
- Zero or more forms to be overlaid on selected pages of the resultant fax file
- One or more recipients to send the faxes to
- A set of cover page parameters
- A set of send parameters (e.g., priority, send time, etc.)

**vfx** verifies all parameters given to it, in order to find as many errors as possible before actually submitting the request to the server. Therefore, if **vfx** is successful in submitting the request to the server, it is likely that the request will actually be faxed.

One design parameter of **vfx** is that the user is guaranteed to be able to delete any files passed to it immediately after the **vfx** command returns. **vfx** will copy a file if necessary to avoid requiring any reference to the file after it returns.

The output of the **vfx** command is a fax request ID, which can be used to track the status of the fax request.

## Options

- |           |                      |   |
|-----------|----------------------|---|
| <b>-A</b> | <b>&lt;alias&gt;</b> | Directory (phone book) person alias to send to. |
| <b>-B</b> | <b>&lt;file&gt;</b>  | Batch <b>&lt;file&gt;</b> to process.           |
| <b>-c</b> | <b>&lt;file&gt;</b>  | Tag <b>&lt;file&gt;</b> to process.             |



-C	<cover>	Cover page to include with this fax.
-d	{<device>   <class>}	Device or class used to send this fax. Default is system default fax device or class.
-E	{std   fine}	Send resolution. Valid values are:  std                      Standard (204 x 98)  fine                      Fine (204 x 196) (default).
-F	<extension>	File type <extension>. Valid values are:  txt                      Text file (default).  tif                      TIFF file.  fax                      VSI 2.x fax file.  pcl                      PCL file.  ps                      PostScript file.  ep                      Epson file.
-g	<srvr_grp_file>	Group file in the \$VSIFAX/lib/groups directory.
-G	<local_grp_file>	Directory (phone book) group or local group file to send to.
-H	<host>	Connect to this fax server host name.
-i		Interactive cover page tag entry.
-l	<length>	Page <length>. Valid values are:  letter                      11 inches (default).  a4                      11.69 inches.  legal                      14 inches.
-L		List resources. Valid resource types are:  attachments              List of system and user attachments.  covers                      List of system and user cover pages.  dests                      List of fax devices and classes.  folders                      List of folders.  images                      List of images.  groups                      List of groups.

	<b>overlays</b>	List of overlays.
	<b>retrys</b>	List of retry methods.
<b>-m</b>	<b>&lt;mode&gt;</b>	Email notify <b>&lt;mode&gt;</b> . Valid mode values are:
	<b>both</b>	Email always sent.
	<b>each</b>	Email sent for each attempt.
	<b>fail</b>	Email sent if failed (default).
	<b>none</b>	Email never sent.
	<b>ok</b>	Email sent if successful.
<b>-M</b>	<b>&lt;email&gt;</b>	<b>&lt;email&gt;</b> address to send notifications to. If not supplied, default is to retrieve the email address from the user profile.
<b>-n</b>	<b>&lt;fax_num&gt;</b>	Phone number to send to.
<b>-N</b>		Scan file for phone number.
<b>-o</b>	<b>&lt;file&gt;</b>	Image request and output to <b>&lt;file&gt;</b> .
<b>-O</b>		Send cover page only.
<b>-p</b>	<b>{l   m   h   u}</b>	Priority. Valid values are:
	<b>l</b>	Low.
	<b>m</b>	Medium (default).
	<b>h</b>	High.
	<b>u</b>	Urgent.
<b>-r</b>	<b>&lt;retry&gt;</b>	Retry method. Default is <b>default</b> .
<b>-R</b>		Recover saved jobs.
<b>-s</b>		Silent mode.
<b>-S</b>	<b>{on   off}</b>	Enable scanning of stdin for tags. Default is <b>on</b> .
<b>-t</b>	<b>&lt;tag&gt;=&lt;value&gt;</b>	Include this <b>&lt;tag&gt;</b> set to this <b>&lt;value&gt;</b> with this fax. <b>TIP:</b> Enter <b>vfx -help tags</b> or refer to <i>Tag Reference</i> (page 229) for a list of valid fax envelope tags.
<b>-T</b>	<b>&lt;time&gt;</b>	Send <b>&lt;time&gt;</b> in [{yy   YYYY}] [mm] [dd] hhmm [{am   pm}] format. Default is send immediately.

<b>-U</b> <b>&lt;user&gt;</b>	User name to login as when sending this fax.
<b>-x</b>	Process XML <b>&lt;file&gt;</b> .
<b>&lt;file&gt;</b>	File to process (fax).

## Notes

You can enter overrides for the default values for **<user>** and **<host>**. These can be set in the shell environment, which will then override the values in `$HOME/.vsifax/vsifax.ini`.

The system will give you a `Permission Denied` error if you attempt to send a file that you do not have permission to read.

The **-F** option can be used to include other file types. For example, Windows fax servers can recognize any file extension with a Dynamic Data Exchange (DDE) print entry in the registration database. Refer to *Imaging Overview* (page 10) for a detailed discussion of various files types and how they are imaged on various platforms.

---

**TIP:** You can quickly find out which file types are recognized by your fax server using the **vinfo filetypes** command (page 200).

---

The **-i** (interactive) option is used in conjunction with a cover page. This option will then prompt the user interactively for all tags which the cover page uses, such as “to name,” “to company,” etc. If more than one recipient is specified on the command line, the tags for each recipient will be prompted for in sequence.

The **-L** option tells **vfx** to output to stdout a list of all available resources of the type requested. This list will contain the name and description of each resource available.

If the **-L covers** option is used with the option **-t tags=list**, then a list of available cover pages containing the specified list of tags will be output. Therefore, the following command will give a list of all available cover pages:

```
vfx -L covers
```

The following command lists all available cover pages containing the **fnm** (from name) and **fvn** (from voice number) tags:

```
vfx -L covers -t tags=fnm, fvn
```

The **-n** option is unique in that it can be used to specify more than one tag value. The full string used is:

```
-n <fax_num>:<name>:<company>:<voice_num>:<info>
```

For example, consider the following **vfx** command:

```
vfx -n "555-1212:Joe Smith:Ace Financial Services"...
```

- is equivalent to -

```
vfx -n 555-1212 -t tnm="Joe Smith"  
-t tco="Ace Financial Services"...
```

- or -

```
vfx -t tfn="555-1212" -t tnm="Joe Smith"  
-t tco="Ace Financial Services"...
```

The **-O** (cover page only) option specifies that the fax submittal will consist of a cover page only. If this option is not specified, then at least one file must be sent, and **vfx** will read stdin for input if no files are specified. Usually this option is used with a cover page that supports a note file to supply the message the user wants to send.

The **-o <file>** tells **vfx** to not submit the envelope for faxing, but to convert it to an image file and return that file to the user. When using this mode, a recipient is not required. (A recipient is obviously needed if you are faxing.) If a cover page is specified, it will be the first page of the image. If more than one recipient is specified, the first recipient will be used to create the cover page. The returned file will be a standard VSI TIFF file. If the file name is "-", the file is written to stdout.

The **-S** (scan) option enables or disables the scanning of stdin for embedded tags. Note that embedded tags are only used if the file comes from stdin. Default is to scan.

The **-s** (silent) option tells **vfx** not to output the Request ID for the job. This option is typically used when the call to **vfx** is embedded in user's application. This will result in a "blind" submittal, since this is the only method of getting the Request ID of the job submitted.

Times, entered with the **-T** option, can be entered with either two-digit or four-digit year values.

The **-u** (use user configuration file) option tells **vfx** to load any specified options in the user's home `vsifax.ini` file. This is not done by default in order that a user's own send options can not interfere with the options used in a fax-integrated application.

# vfxadmin

## Synopsis

`$VSIFAX/bin/vfxadmin <command> [<options>]`

## Description

**vfxadmin** performs all administration functions related to devices and queues.

## Commands

<b>accept</b>   <b>reject</b>	Set a fax device or class to accept or reject fax requests.
<b>class</b>	Add, update, delete or list a class.
<b>config</b>	Set, list or delete a configuration file entry.
<b>default</b>	Set fax device or class as the default.
<b>delegate</b>	Delegate your privileges to another user.
<b>device</b>	Add, update, delete or list a device.
<b>directory</b>	Add, an external directory (i.e., data source).
<b>enable</b>   <b>disable</b>	Enable or disable a device.
<b>license</b>	Add, update, delete or list a device.
<b>list</b>   <b>listfims</b>	List all devices and classes or FIMs.
<b>port</b>	Port query commands.
<b>recv</b>   <b>norecv</b>	Set a device to receive or not receive faxes.
<b>server</b>	Server control.
<b>send</b>   <b>nosend</b>	Set a device to send not send faxes.
<b>user</b>	Add, update, delete or list a user.

## Notes

This utility must be run on the fax server and can only be used to perform local fax administration. Use the **vadmin** utility (page 119) to perform fax administration on remote fax servers.

All fax devices in a class have to be of the same type such as all “bl” or all “lb.” You cannot mix device types in the same class.

# vfxadmin accept | reject

## Synopsis

```
$VSIFAX/bin/vfxadmin accept {<device> | <class>}
```

```
$VSIFAX/bin/vfxadmin reject [-r "<reason>"] {<device> | <class>}
```

## Description

This command will set a fax device or class to either accept requests or to reject requests. The fax device or class can be either a device or a class.

---

**IMPORTANT:** This command does not require that the fax server be stopped and restarted for the command to take effect.

---

## Options

**-r**     "**<reason>**"             Reason for not receiving (specified within quotation marks).  
**{<device> | <class>}**     Device or class set to accept or reject fax requests.

## Notes

A fax device or class can be set to accept requests and not be enabled. This would allow requests to be queued to it, but they would not be sent until the device is enabled.

Attempts to accept a fax device or class that is already accepting or to reject a fax device or class that is already rejecting will result in a warning message.

If a fax device or class is rejecting requests, **vfx** will not allow a request to be queued to it.

By default, a fax device or class is set to accept when it is created.

## Examples

To set the fax device or class fax1 to accept requests, enter:

```
vfxadmin accept fax1
```

To set the fax device or class fax2 to reject requests, enter:

```
vfxadmin reject -r "incoming only" fax2
```

# vfxadmin class

## Synopsis

```
$VSIFAX/bin/vfxadmin class {-a <device> | -l | -r <device> | -u | -x}
[-A {on | off}] [-d] [-n <comment>] <class>
```

## Description

This command is used to list or remove a class, add a device to a class or remove a device from a class.

---

**IMPORTANT:** Except for the list option, this command requires the fax server to be stopped and restarted for the command to take effect. Except for the list option, this command must be executed by the fax administrator.

---

## Subcommands

Specify one of the following:

- a**    **<device>**    Add **<device>** to class.
- l**                    List devices in class.
- r**    **<device>**    Remove **<device>** from class.
- u**                    Update class.
- x**                    Delete class.

## Options

- A**    {on | off}    Set accepting mode. Default is on when creating.
- d**                    Set as default.
- n**    **<comment>**    Comments.
- <class>**                Class.

## Notes

You must specify only one of the **-a**, **-r**, **-x**, **-u** or **-l** options.

The **-d** option (similar to the **vfxadmin default** command) is used to specify a class as the default when creating it.

A class is automatically created the first time a device is added to it, and it is automatically deleted when the last device is removed from it.

## Examples

To create class outgoing and add device fax1 to it, enter:

```
vfxadmin class -a fax1 outgoing  
  
Class outgoing created  
Device fax1 added to class outgoing
```

To list the status of class outgoing, enter:

```
vfxstat -t  
  
Class      Jobs    Ready  Acc  Members  
outgoing  0 0      yes    fax1
```

And/or (depending on the information needed), enter:

```
vfxadmin class -l outgoing  
  
Dest name : outgoing  
Comments : <none>  
default : no  
Status : accepting since 09/23 11:21  
members : fax1
```

To remove device fax1 from class outgoing, enter:

```
vfxadmin class -r fax1 outgoing
```



# vfxadmin config

## Synopsis

```
$VSIFAX/bin/vfxadmin config {-a | -c | -l | -x} [-e] [-I <name>] [-p]  
[-R] [-s] [-u] [<section>] <entry> [<value>]
```

## Description

This command is used to add, list or delete values in the server or client configuration files.

## Subcommands

- a Add this entry
- c Add this entry only if not there
- l List this entry
- x Delete this entry

## Options

- e Encrypt the entry.
- I <name> Specify instance <name>.
- p Prompt for entry value.
- R Reload configuration settings from `vsisrv.ini` and continue running.
- s Process `vsisrv.ini` server configuration file (default).
- u Process client configuration file.
- <section> Section name in `vsisrv.ini`.
- <entry> Entry name in `vsisrv.ini`.
- <value> Set <entry> to this <value>.

## Examples

To determine if debug is in the `vsisrv.ini` server configuration file, enter:

```
vfxadmin config -l -s VFXSCHED debug on
```

To add debug=on entry to the [VNOTIFY] section of the vsisrv.ini file, enter:

```
vfxadmin config -a -p VNOTIFY debug on
```

Enter value for debug: on

To enter an encrypted password (<MyPassword>) on the command line for your use with VPOPD you would enter:

```
vfxadmin config -e VPOPD Password <MyPassword>
```

To have the system prompt you for an encrypted password for your use with VPOPD you would enter:

```
vfxadmin config -e -p VPOPD Password
```

---

**IMPORTANT:** When you are prompted for or entering a password on the command line, you are limited to eight characters.

---

# vfxadmin default

## Synopsis

```
$VSIFAX/bin/vfxadmin default {<device> | <class>}
```

## Description

This command will set a particular fax device or class to be the default fax device or class for queuing outgoing requests. The fax device or class can be either a device or a class.

## Options

None

## Notes

When the VSI-FAX system is first installed, the administrator is asked which device to set as the default fax device or class if more than one device is created.

---

**IMPORTANT:** The fax server will fail to start if a default fax device or class has not been specified. **vfx** will fail on queuing a fax request if no default fax device or class is set and no fax device or class is specified on the command line

---

It is possible to remove a fax device or class, which is currently the default fax device or class. If a user does this, vfxadmin will warn the user that the default fax device or class is being removed, and it is the user's responsibility to set a new default fax device or class. If a default fax device or class is not specified, fax server will fail to start.

## Examples

To set the fax device or class fax1 as the default:

```
vfxadmin default_fax1
```

To return the default modem or class, enter:

```
vfxadmin default
```

# vfxadmin delegate

## Synopsis

```
$VSIFAX/bin/vfxadmin delegate [-a] [-l] [-t {login | fax | pb}] [-u]  
[-x] <user>
```

## Description

**vfxadmin delegate** assigns certain privileges to another VSI-FAX user account.

## Options

- |                        |  |
|------------------------|--|
| <b>-a</b>              | Add delegation entry for <b>&lt;user&gt;</b> .   |
| <b>-l</b>              | List all delegation entries for <b>&lt;user&gt;</b> .  |
| <b>-t &lt;type&gt;</b> | Type of delegation entry. Valid types are:<br><br><b>login</b> <b>&lt;user&gt;</b> can login to fax server as you.<br><br><b>fax</b> <b>&lt;user&gt;</b> can send and receive faxes as you.<br><br><b>pb</b> <b>&lt;user&gt;</b> can access your directory (phone book). |
| <b>-u</b>              | Update delegation entry for <b>&lt;user&gt;</b> .  |
| <b>-x</b>              | Delete entry for <b>&lt;user&gt;</b> .   |
| <b>&lt;user&gt;</b>    |  |

# vfxadmin device

## Synopsis

```
$VSIFAX/bin/vfxadmin device {-a | -l | -u | -x} [-A {on | off}]
[-b <inbox>] [-C] [-d] [-E {on | off}]
[-i {b1 | bt | c2 | lb | lcr | sm}] [-k {on | off | call}]
[-n <comment>] [-P <RNP>] [-R {on | off}] [-S {on | off}] [-v <tty>]
<device>
```

## Description

This command is used to add, delete, update or list a device.

---

**IMPORTANT:** Except for the list option, this command requires the fax server to be stopped and restarted for the command to take effect. Furthermore, this command must be executed by the fax administrator.

---

## Subcommands

- a     Add device.
- l     List device.
- u     Update device.
- x     Delete device.

## Options

- |                     |   |            |  |                     |  |
|---------------------|---|------------|--|---------------------|--|
| -A    {on   off}    | Set accepting mode. Default is <b>on</b> when creating a new device.  |            |  |                     |  |
| -b    <inbox>       | VSI-FAX inbox to use. Default is vsifax.  |            |  |                     |  |
| -C                  | Used when adding (-a option) or updating (-u option) a device, perform these checks:  |            |  |                     |  |
|                     | <table border="0"> <tbody> <tr> <td style="padding-right: 20px;">Unix/Linux</td> <td>Verify device can be opened as a tty device.</td> </tr> <tr> <td>Windows NT/<br/>2000</td> <td>Check if device is under RAS control and verify that it can be opened.</td> </tr> </tbody> </table> | Unix/Linux | Verify device can be opened as a tty device. | Windows NT/<br>2000 | Check if device is under RAS control and verify that it can be opened. |
| Unix/Linux          | Verify device can be opened as a tty device.  |            |  |                     |  |
| Windows NT/<br>2000 | Check if device is under RAS control and verify that it can be opened.  |            |  |                     |  |
| -d                  | Set as default device.  |            |  |                     |  |

<b>-E</b>	<b>{on   off}</b>	Set enabled mode. Default is <b>on</b> when creating a new device.
<b>-i</b>	<b>&lt;FIM&gt;</b>	FIM name. Valid values are:  <b>b1</b> Class 1/2/2.0 FIM.  <b>bt</b> Brooktrout.  <b>c2</b> Class 2/2.0 FIM (default).  <b>lb</b> LoopBack FIM.  <b>lcr</b> Least Cost Routing.  <b>sm</b> SendMail FIM.
<b>-k</b>	<b>{on   off   call}</b>	Speaker mode: always <b>on</b> , always <b>off</b> or on during initialization and off during transmission ( <b>call</b> ).
<b>-n</b>	<b>&lt;comment&gt;</b>	Comments (typically the phone number the modem is attached to).
<b>-P</b>	<b>&lt;RNP&gt;</b>	Receive Notify Procedure ( <b>&lt;RNP&gt;</b> ) to use or double quotes for none.
<b>-R</b>	<b>{on   off}</b>	Set receiving mode. Default is on when creating.
<b>-S</b>	<b>{on   off}</b>	Set sending mode. Default is on when creating.
<b>-v</b>	<b>&lt;tty&gt;</b>	Name of the <b>tty</b> device (required if adding a device that uses a port).
	<b>&lt;device&gt;</b>	Device to add, delete, update or list.

## Notes

You must specify only one of the **-a**, **-u**, **-x** or **-l** options.

The **-d** option is the same as the **vfxadmin default** command, but can be used to specify a device as the default when creating it.

The **-P** option specifies the Receive Notify Procedure (RNP) to be used.

## Unix/Linux Examples

To add a device fax1 using /dev/tty00, enter:

```
vfxadmin device -a -v /dev/tty00 -n "555-1212" fax1
```

To delete a device fax1 fax device or class, enter:

```
vfxadmin device -x fax1
```

To change the port the device fax2 is using to /dev/tty01, enter:

```
vfxadmin device -u -v /dev/tty01 fax2
```

To remove a RNP from a device, enter:

```
vfxadmin device -u -p " " <fax device>
```

To turn the modem speaker on, enter:

```
vfxadmin device -k on
```

## **Windows Examples**

To add a device fax1 using com1, enter:

```
vfxadmin device -a -v com1 -n "555-1212" fax1
```

To delete a device fax1 fax device or class, enter:

```
vfxadmin device -x fax1
```

To change the port the device fax2 is using to com2, enter:

```
vfxadmin device -u -v com2 fax2
```

To remove a RNP from a device, enter:

```
vfxadmin device -u -p " " <fax device>
```

# vfxadmin directory

## Synopsis

```
$VSIFAX/bin/vfxadmin directory [-d {db | ldap | sync}] [-l] [-p]  
    [-t <tag>=<value>] [-u <user_ID>] [-x] <source_ID>
```

## Description

This command is used to add, modify, delete or list an external directory.

## Options

<b>-d</b> <type>	Data type. Valid values are:  db        External directory is a database (e.g., DB2, Informix, Oracle, SQLServer, Sybase, Tandem, etc.)  ldap      External directory is a Lightweight Directory Access Protocol (LDAP) directory.  sync      This option is provided for future growth and is reserved for VSI internal use only at this time.
<b>-l</b>	List this external directory.
<b>-p</b>	Prompt user for password.
<b>-t</b> <tag>=<value>	Set this <tag> to this <value>.
<b>-u</b> <user_ID>	User ID with sufficient privileges for accessing this external directory.
<b>-x</b>	Delete this external directory.
<b>&lt;source_ID&gt;</b>	Unique identifier for this external directory (i.e., data source).

## Notes

If the **-l** or **-x** options are not supplied, external directory is opened for modification. Use one or more **-t <tag>=<value>** statements to make your changes.



---

# vfxadmin enable | disable

## Synopsis

```
$VSIFAX/bin/vfxadmin enable <device>
```

```
$VSIFAX/bin/vfxadmin disable [-g <secs>] [-r "<reason>"] <device>
```

## Description

This command will enable or disable the FIM for a particular device.

---

**IMPORTANT:** `vfxadmin enable/disable` only works on devices; classes cannot be enabled or disabled. This command does not require that the fax server be stopped and restarted for the command to take effect.

---

## Options

- |           |                         |   |
|-----------|-------------------------|---|
| <b>-g</b> | <b>&lt;secs&gt;</b>     | Grace period in seconds ( <b>&lt;secs&gt;</b> ) before a device is forcibly disabled. If not supplied, device is immediately disabled. If <b>&lt;secs&gt;</b> is set to zero (0), device is not disabled until it becomes idle. |
| <b>-r</b> | <b>"&lt;reason&gt;"</b> | Reason for disabling. Enclose reason in double quotes.  |
|           | <b>&lt;device&gt;</b>   | Device to enable or disable.  |

## Notes

A device can be automatically disabled by the fax server if it encounters trouble establishing communication with the device. If this happens, the device is marked as temporarily disabled (indicated by “down” rather than “disabled”). When the fax server is restarted, any devices marked as “down” will be tried again, and marked as enabled if it comes up successfully.

Attempting to enable a device which is already enabled will give a warning message, as will attempting to disable a device that is already disabled. However, a request to disable a “down” device will completely disable it.

## Examples

To enable the device fax1:

```
vfxadmin enable fax1
```

To immediately disable the device fax2:

```
vfxadmin disable -r "Forgot to pay phone bill" fax2
```

To disable device fax2 with a grace period of 10 seconds:

```
vfxadmin disable -g 10 fax2
```

# vfxadmin license

## Synopsis

```
$VSIFAX/bin/vfxadmin license [-D] [-l]
[-p {fxserver | fxsystem | fxclient | fxvrtsrv | fxvsiweb | fxentprs
| vxmodems}] [-s]
```

## Description

This command is used to add licenses to the VSI-FAX license table. It can also list all licenses in the license table. It is typically used by a user who has purchased additional network licenses from V-Systems, Inc.

## Options

<b>-D</b>	Dump licenses.
<b>-l</b>	List licenses.
<b>-p</b> <b>&lt;code&gt;</b>	Program <b>&lt;code&gt;</b> that allows the selection of the type of license to be entered. Valid values are:
<b>fxserver</b>	Fax server.
<b>fxsystem</b>	Server and clients.
<b>fxclient</b>	Remote clients.
<b>fxvrtsrv</b>	Virtual fax server.
<b>fxvsiweb</b>	Web fax client.
<b>fxentprs</b>	Enterprise.
<b>vxmodems</b>	Modems.
<b>-s</b>	Silent mode.

## Notes

The **-l** and **-D** options can be used by anyone to list/dump the licenses, all other options require that the user be the fax administrator.

When a new license is added the fax scheduler is notified and causes the scheduler to reload the license without having to restart the fax scheduler.

## Examples

To add a license, enter:

```
vfxadmin license
```

```
Enter your serial number : xxxxx
```

```
Enter your activation key: aaa-bbb-ccc-ddd
```

```
Enter your IP address : 123-45-67-89 (for virtual fax and vsi-web  
licenses)
```

To list all licenses that are currently installed; enter:

```
vfxadmin license -l
```

# vfxadmin list | listfims

## Synopsis

```
$VSIFAX/bin/vfxadmin list
```

```
$VSIFAX/bin/vfxadmin listfims
```

## Description

**vfxadmin list** outputs an abbreviated list of all fax device or class currently installed.

**vfxadmin listfims** outputs a list of all available FIMs.

## Notes

These commands are not normally useful to the user, but they are used by various VSI-FAX installation scripts.

## Examples

To get a list of all fax device or class currently installed, enter:

```
vfxadmin list
```

```
default=fax1
```

```
dest=fax1 fim=c2 device=/dev/ttya08 status=ena,snd,rcv
```

```
dest=lb fim=lb device=/dev/null status=ena,snd,norcv
```

To get a list of all available FIMs, enter:

```
vfxadmin listfims
```

<u>FIM</u>	<u>Description</u>
bl	Black Ice class 1/2/2.0 modems
Bt	Brooktrout
lb	LoopBack
sm	SendMail
lcr	Least Cost Routing

# vfxadmin port

## Synopsis

```
$VSIFAX/bin/vfxadmin port  
{-a | -A | -d <port> | -s | -v | -X [<device>]}
```

## Description

This command will perform various device functions.

---

**NOTE:** This command does not require that the fax server be stopped and restarted for the command to take effect. The **-A** and **-X** subcommands must be executed by the fax administrator.

---

## Subcommands

- a** Test if **<device>** is accepting requests.
- A** Signal **<device>** to answer.
- d** Check if **<port>** is being used.
- s** Get status of **<device>**.
- v** List all fax device or class using **<device>** as a device.
- X** Signal **<device>** to stop answering.

## Notes

The **-v** option is used to get a list of all fax device or class using a particular device. This can be used to check if a particular device has already been assigned to a fax device or class.

The **-a** option is used to check if a particular device (or class) is accepting requests.

The **-d** option checks if a device is being used. This is different from the **-a** option in that a device can be assigned to a fax device or class, but if that fax device or class is not currently enabled then it is not in use.

The **-s** option will output the current status of a device.

The **-A** and **-X** options are used in situations when the phone line will present an incoming call without a ring (which signals the FIM to answer the line).

## Examples

To check the status of device fax1:

```
vfxadmin port -s fax1
```

```
fax1: idle
```

To check if com2 is currently being used:

```
vfxadmin port -d com2
```

```
com2: in use by fax2
```

# vfxadmin recv | norecv

## Synopsis

```
$VSIFAX/bin/vfxadmin recv <device>
```

```
$VSIFAX/bin/vfxadmin norecv [-r "<reason>"] <device>
```

## Description

This command will set a device to either receive incoming calls or to ignore incoming calls.

---

**IMPORTANT:** `vfxadmin recv` / `norecv` works only on devices. Classes cannot be set to receive or not receive. This command does not require that the fax server be stopped and restarted for the command to take effect. This command must be executed by the fax administrator..

---

## Options

`-r "<reason>"` Reason for not receiving (specified within quote marks).

`<device>` Device to receive incoming calls or to ignore incoming calls.

## Notes

A device need not be set to accept requests to be set to receive incoming calls, but it must be enabled or the FIM will not be executed for that device.

If you attempt to set a device to receive that is already receiving, you get a warning message. If you attempt to set a device to not receive if it is already not receiving you will get an error message.

Attempts to set a send-only FIM (such as loopback) to receive will result in an error message.

---

**IMPORTANT:** If a FIM is set to not receive calls, it will still process rings from the modem, but it will not answer the call.

---

A received fax is stored in the `$VSIFAX/spool/in` directory as a standard TIFF (Group 3 CCITT) file under the name `<nnnn>.tif`, where `<nnnn>` is a unique sequence number. The received fax will then be processed by the fax server's Receive Notify Procedure.

A device, by default, is set to receive when it is created unless the device is for a send-only FIM such as `1b` (LoopBack FIM) or `sm` (SendMail FIM).



## Examples

To set the device fax1 to receive incoming calls:

```
vfxadmin recv fax1
```

To set the device fax2 to ignore incoming calls:

```
vfxadmin norecv -r "outgoing only" fax2
```

# vfxadmin send | nosend

## Synopsis

```
$VSIFAX/bin/vfxadmin send <device>
```

```
$VSIFAX/bin/vfxadmin nosend [-r "<reason>"] <device>
```

## Description

This command will set a device either to send queued requests or not to send requests.

---

**NOTE:** This command only works on devices; classes cannot be set to send or to not send. This command does not require that the fax server be stopped and restarted for the command to take effect. This command must be executed by the fax administrator.

---

## Options

<b>-r</b> " <b>&lt;reason&gt;</b> "	Reason for not sending (specified within quote marks).
<b>&lt;device&gt;</b>	Device set to send or not to send queued fax requests.

## Notes

The main use of this command is to allow a device to receive incoming calls and queue outgoing requests but not send them. This can be useful if you only have one modem that is sending outbound faxes (which have been queued); however, you need the modem to remain unoccupied to receive faxes. Otherwise, as soon as the current fax being sent is finished, the FIM will start sending out the next fax.

## Examples

To set the device fax1 to send requests:

```
vfxadmin send fax1
```

To set the device fax2 to not send requests:

```
vfxadmin nosend -r "incoming only" fax2
```

# vfxadmin server

## Synopsis

```
$VSIFAX/bin/vfxadmin server  
{build | check | halt | info | list | restart [secs] | start [secs]  
 | stop [secs] | version}
```

## Description

This command is similar to the **vfxsched** command. It can be used to start, stop or halt the scheduler requests.

## Subcommands

<b>build</b>		Output server build number.
<b>check</b>		Check if the server is running.
<b>halt</b>		Hard shutdown the server.
<b>info</b>		Displays information about the server.
<b>list</b>		List processes.
<b>restart</b>	<b>[secs]</b>	Restart the server.
<b>start</b>	<b>[secs]</b>	Start the server.
<b>stop</b>	<b>[secs]</b>	Stop the server.
<b>version</b>		Return server release number.

## Examples

Start the scheduler:

```
vfxadmin server start
```

Stop the scheduler using a soft shutdown:

```
vfxadmin server stop
```

Stop the scheduler using a hard shutdown:

```
vfxadmin server halt
```

Verify that the scheduler is running:

```
vfxadmin server check
```

To get a detailed information about the server:

**vfxadmin server info**

```
server state : running
server startup time : 2009/12/09 07:52:15
server current time : 2009/12/09 09:42:10
server Host name : vsifax
server version : 3.5.0
server buildno : 211
server serial num : gs99999
```

# vfxadmin user

## Synopsis

```
$VSIFAX/bin/vfxadmin user [-C <num>] [-d] [-e <ext>] [-E <ext>] [-l]
[-L] [-n <name>] [-p] [-P] [-t <tag>=<value>] [-x] <user>
```

## Description

This command allows the system administrator to add, remove, modify or list entries from the user table. When a user is added, a user fax inbox directory is created for that user. When a user is removed, it deletes both the user's entry in the user table and the user fax inbox directory. **vfxadmin user** can also be used to create departments.

## Options

<b>-C</b> <b>&lt;num&gt;</b>	Remove licenses for users who have not logged in for the past number ( <b>&lt;num&gt;</b> ) days.
<b>-d</b>	<b>&lt;user&gt;</b> is a department.
<b>-e</b> <b>&lt;ext&gt;</b>	DID or DTMF extension ( <b>&lt;ext&gt;</b> ).
<b>-E</b> <b>&lt;ext&gt;</b>	List name for given DID extension ( <b>&lt;ext&gt;</b> ).
<b>-l</b>	List users or <b>&lt;user&gt;</b> entries. If <b>&lt;user&gt;</b> is supplied, output is detailed information about that user. If <b>&lt;user&gt;</b> is not supplied, output is a list of users.
<b>-L</b>	Add license for this <b>&lt;user&gt;</b> .
<b>-n</b> <b>&lt;user&gt;</b>	<b>&lt;user&gt;</b> name (e.g., John Smith).
<b>-p</b>	Prompt for a password.
<b>-P</b>	Include profile information for this <b>&lt;user&gt;</b> or user list.
<b>-t</b> <b>&lt;tag&gt;=&lt;value&gt;</b>	Set <b>&lt;tag&gt;</b> to this <b>&lt;value&gt;</b> .
<b>-x</b>	Delete <b>&lt;user&gt;</b> .
<b>&lt;user&gt;</b>	User ID.

## Notes

**vfxadmin user** will operate whether the fax server is up or down. **vfxadmin user** automatically notifies any login processes that are running of any additions or deletions to the user list, so the fax server does not have to be brought down and back up for changes to take effect.

The **-C** option is useful in installations with a limited number of remote client licenses, and the administrator needs to monitor who is not using his license so it can be given to someone else. If the **-C** option is used with the **-x** option, the users will be deleted instead of just having their licenses taken away.

---

**IMPORTANT:** When using the **-C** option, the system does not recognize a **<user>** argument even if one is supplied. This option will remove *all* licenses for *all* users who have not logged on for the specified number of days.

---

If a user is installed without a password, there is no protection that keeps anyone from logging in as that person.

We strongly recommend that the fax administrator assign a password to the user vsifax after installing the system. Note that the user vsifax is not required to have a license, even to log in from a remote site, and that the user vsifax has administration privileges.

If a user is installed as a department, that user is automatically set to allow any other user to monitor the department's fax list.

The **-t** option can be used either to set or to get any individual field in a user entry. If **-t tag** is specified in conjunction with the **-l** option, that field will be displayed on stdout. Otherwise, if **-t <tag>=<value>** is specified, that field will be set to the specified value.

A user can specify special processing to be done when a fax is either received or routed to him/her. These include:

- print**      A incoming or outgoing fax can be automatically printed to a selected fax device or class specified with the **apr** and **aps** tags.
- mail**      A fax can be emailed as a MIME attachment to the user specified with the **aem** tag.
- delete**     A user can request inbound faxes to be deleted after all other processing is done.

When listing a users' profile by supplying the **-l** and **-P** options together, tags with inherited values are denoted with an asterisk.

## Examples

To add a non-licensed user, called bobd, to the user table, enter:

```
vfxadmin user -n "Bob Davis" bobd
```

To grant a license to the user bobd for distributed network access, enter:

```
vfxadmin user -L bobd
```

To remove the user bobd, enter:

```
vfxadmin user -x bobd
```

To display the full name of bobd, enter:

```
vfxadmin user -t <user> -l bobd
```

To set a user, bobd, to automatically email this faxes, enter:

```
vfxadmin user -t aem=on bobd
```

To create a department for general fax distribution (called Customer Service, whose user ID is custs), enter:

```
vfxadmin user -d -n "Customer Service" custs
```

To specify that all incoming faxes to user "vsifax" be routed to the printer, enter:

```
vfxadmin user -t apr=on vsifax
```

To refer to the configuration setting for user bobd, enter:

```
vfxadmin user -l bobd
```

To automatically email the faxes of user bobd to an email address of bobd@vsi.com, enter:

```
vfxadmin user -t aem=on -t mad=bobd@vsi.com
```

To automatically print incoming faxes for user bobd, enter:

```
vfxadmin user -t apr=on -n bobd
```

To automatically print outgoing faxes for user bobd, enter:

```
vfxadmin user -t aps=on -n bobd
```

# vfxcancel

## Synopsis

```
$VSIFAX/bin/vfxcancel [-g] [-H <host>] [-U <user>] [-x] <fax_req>
```

## Description

**vfxcancel** removes a fax request from either the active or expired fax queue. If the request is currently being transmitted, the fax request is terminated immediately.

## Options

<b>-g</b>	<fax_req> is a group fax.
<b>-H</b> <host>	Connect to this fax server host name.
<b>-U</b> <user>	User name.
<b>-x</b>	Expire the job.
<fax_req>	Fax request ID.

## Notes

A user can only cancel a fax request that he submitted, but the fax administrator can cancel any fax request.

If the fax request to be canceled is currently expired, the result code for that job is changed from “expired” to “canceled,” and the fax files for that request are deleted.

An attempt to cancel a request which is already finished (but not expired) will result in a warning message.

## Examples

To cancel an individual fax request, enter:

```
vfxcancel 1055
```

To cancel several individual fax requests, enter:

```
vfxcancel 1055 1056 1067 1088
```

To cancel a group fax request, enter:

```
vfxcancel -g 3001
```



To cancel a member of a group fax request, enter:

```
vfxcancel -g 3001-3
```

# vfxilog

## Synopsis

```
$VSIFAX/bin/vfxilog [-A <dir>] [-f {all | <list>}]  
  [-F {csv | eval | pipe | tab | tag | tcl}] [-h {on | off}]  
  [-H <host>] [-l <num>] [-r] [-t <tag><op><value>] [-U <user>]  
  <fax_req>
```

## Description

**vfxilog** outputs a report on received faxes. The format of the report can either be a standard tabulated layout or it can be a dump of the fields in the database, in any order and format desired.

## Options

<b>-A</b>	<b>&lt;dir&gt;</b>	Alternate <b>&lt;dir&gt;</b> for ILOG database.
<b>-f</b>	<b>{all   &lt;list&gt;}</b>	Comma delimited field <b>&lt;list&gt;</b> or <b>all</b> fields (default).
<b>-F</b>	<b>&lt;format&gt;</b>	Format report in one of the following formats:  <b>csv</b> Comma “,” delimiter (default).  <b>eval</b> Eval (tag=value) format.  <b>pipe</b> Pipe “ ” delimiter format.  <b>tab</b> Tab delimited format (tag=value).  <b>tag</b> Tag format.  <b>tcl</b> TCL eval format.
<b>-h</b>	<b>{on   off}</b>	Set header to display ( <b>on</b> ) or not display ( <b>off</b> ).
<b>-H</b>	<b>&lt;host&gt;</b>	Connect to this fax server host name.
<b>-l</b>	<b>&lt;num&gt;</b>	Output this number ( <b>&lt;num&gt;</b> ) lines per page.
<b>-r</b>		Display entries in reverse order.

<b>-t</b>	<b>&lt;tag&gt;&lt;op&gt;&lt;value&gt;</b>	Match records matching this criterion. More than one <b>-t</b> option can be supplied to specify AND conditions. Valid operators are:
	<b>=</b>	Equal to.
	<b>!=</b>	Not equal to.
	<b>&gt;</b>	Greater than.
	<b>&lt;</b>	Less than.
	<b>&gt;=</b>	Less than or equal to.
	<b>&lt;=</b>	Greater than or equal to.
<b>-U</b>	<b>&lt;user&gt;</b>	Fax account user ID.
	<b>&lt;fax_req&gt;</b>	If specified, list for Fax Request ID only.

## Notes

Default is that information will be returned for the user making the request. If you want to return information for another user you must use the **-U** option.

The default value for the **-h** option is on for the standard report and is off for outputting in database format. The **-h** option is ignored if **-F eval** was specified.

Specifying a field list with the **-f** option sets the default for the **-F** option to pipe.

## Examples

To produce a normal report of the input log, enter:

```
vfxilog
```

To report all faxes received after 10:30 am today, enter:

```
vfxilog -t "sti>103000"
```

To produce a report for a specific ID (1017), enter:

```
vfxilog 1017
```

Reqid	---Stime---	---Etime---	pgs	TSI	Res	DID	ext
1017	01/29 15:22	01/29 15:22	1	yoda	fine	robj	

To produce a report for a specific id (1017) in eval format, enter:

```
vfxilog -F eval 1017
```

```
seq="1017" tsi="yoda tsi" sti="19990129152235" eti="19990129152235"
npg="1" did="robj" res="fine" que="lb" ela="0"
```

# vfolog

## Synopsis

```
$VSIFAX/bin/vfolog [-a] [-A <dir>] [-d] [-f {all | <list>}]  
  [-F {csv | eval | fmt=<str> | pipe | tab | tag | tcl}]  
  [-h {on | off}] [-g] [-G <group>] [-H <host>] [-l <num>] [-N] [-O]  
  [-r] [-t <tag><op><value>] [-u <user>] [-U <user>] [-v] [-x] [-X]  
  <fax_req>
```

## Description

**vfolog** outputs a report on all fax requests submitted to the server. The default mode is to report only the final status of each request in request order, but the user can ask for the output in reverse order, and/or can ask for the records for each attempt.

The report is for either regular fax jobs or for group jobs. If the report is requested for regular jobs, a record is listed for each regular job and for each member of a group job. If the report is requested for group jobs, a summary record for each group is given.

The normal output is one line per record of selected fields in a tabular form. You has the option to ask for the records to be dumped according to the format desired and the fields that are to be included.

You can also include an optional header using the **-h** option. This header is the first line of the report. It lists the tag names, separated by the specified delimiter. Each record in the report will list the tag values in this order.

## Options

<b>-a</b>		Show all entries.
<b>-A</b>	<b>&lt;dir&gt;</b>	Alternate <b>&lt;dir&gt;</b> for ILOG database.
<b>-d</b>		Show detailed entries.
<b>-f</b>	<b>{all   &lt;list&gt;}</b>	Comma delimited field <b>&lt;list&gt;</b> or <b>all</b> fields (default).

<b>-F</b>	<b>&lt;format&gt;</b>	Format report in one of the following formats:
	<b>csv</b>	Comma “,” delimiter (default).
	<b>eval</b>	Eval (tag=value) format.
	<b>fmt=&lt;char&gt;</b>	Custom delimiter character (<char>).
	<b>pipe</b>	Pipe “ ” delimiter format.
	<b>tab</b>	Tab delimited format (tag=value).
	<b>tag</b>	Tag format.
	<b>tcl</b>	TCL eval format.
<b>-g</b>		Show group entries.
<b>-G</b>	<b>&lt;group_ID&gt;</b>	Show members of this <group_ID>.
<b>-h</b>	<b>{on   off}</b>	Set header to display ( <b>on</b> ) or not display ( <b>off</b> ).
<b>-H</b>	<b>&lt;host&gt;</b>	Connect to this fax server host name.
<b>-l</b>	<b>&lt;num&gt;</b>	Output this number (<num>) lines per page.
<b>-N</b>		Add file names and pages to output.
<b>-O</b>		Add file names output.
<b>-r</b>		Display entries in reverse order.
<b>-t</b>	<b>&lt;tag&gt;&lt;op&gt;&lt;value&gt;</b>	Match records matching this criterion. More than one <b>-t</b> option can be supplied to specify AND conditions. Valid operators are:
	<b>=</b>	Equal to.
	<b>!=</b>	Not equal to.
	<b>&gt;</b>	Greater than.
	<b>&lt;</b>	Less than.
	<b>&gt;=</b>	Less than or equal to.
	<b>&lt;=</b>	Greater than or equal to.
<b>-u</b>	<b>&lt;user&gt;</b>	Show jobs for this user only.
<b>-U</b>	<b>&lt;user&gt;</b>	Fax account user ID.
<b>-v</b>		Verify. Show entries as they are deleted.
<b>-x</b>		Show expired jobs.

<b>-x</b>	Mark entry as deleted.
<b>&lt;fax_req&gt;</b>	If specified, list for Fax Request ID only.

## Notes

Default is that information will be returned for the user making the request. If you want to return information for another user you must use the **-U** option.

The default value for the **-h** option is on for the standard report and is off for outputting in database format. The **-h** option is ignored if **-F eval** was specified.

Specifying a field list with the **-f** option sets the default for the **-F** option to pipe.

## Examples

To search for a specific member of a group by entering:

```
vfxolog g-5003-1
```

To get the log for all group jobs in the system, enter:

```
vfxolog -g
```

To report on all jobs for all users, enter:

```
vfxolog -U vsifax
```

To report on all jobs submitted today, enter:

```
vfxolog -t "sbt>000000"
```

# vfxpb

## Synopsis

```
$VSIFAX/bin/vfxpb [<options>] command [<options>]
```

## Description

**vfxpb** is used to create and maintain user and system directories (phone books).

## Options

**-H**    **<host>**    Host name.

**-U**    **<user>**    User name.

## Commands

**create**    Create a directory (phone book).

**delete**    Delete a directory (phone book).

**info**      Get information about a directory (phone book).

**load**      Load records into a directory (phone book).

**unload**    Unload records from a directory (phone book).

# vfxpb create

## Synopsis

```
$VSI-FAX/bin/vfxpb create [{-au | -as}]
```

## Description

**vfxpb create** creates a set of databases comprising a directory (phone book). It can create either the system directory or a user directory. Since a system directory is automatically created during installation, the usual use of this program is to enable a user to create his own local directory.

## Options

- au**     Access user directory (phone book) (default).
- as**     Access system directory (phone book).

## Notes

A VSI-FAX directory (phone book) can contain both entries describing persons and group associations of persons. A directory comprises three databases:

- pbper.\***     The person database.
- pbgrp.\***     The group database.
- pbmemb.\***     The member (user:group) database.



# vfxpb delete

## Synopsis

```
$VSIFAX/bin/vfxpb delete [{-au | -as}]
```

## Description

**vfxpb delete** deletes a set of databases comprising a directory (phone book). It can delete either the system directory or a user directory.

## Options

- au**    Access user directory (phone book) (default).
- as**    Access system directory (phone book).

## Notes

A VSI-FAX directory (phone book) can contain both entries describing persons and group associations of persons. A directory (phone book) comprises three databases:

- `pbper.*`    The person database.
- `pbgrp.*`    The group database.
- `pbmem.*`    The member (user:group) database.

# vfxpb info

## Synopsis

```
$VSIFAX/bin/vfxpb info [{-au | -as}]
```

## Description

**vfxpb info** reports on a set of databases comprising a directory (phone book). It can report on either the system directory or a user directory.

## Options

- au**    Access user directory (phone book) (default).
- as**    Access system directory (phone book).

# vfxpb load

## Synopsis

```
$VSIFAX/bin/vfxpb load [{-au | -as}] [-c] [-f {all | <list>}]
  [-F {csv | eval | pipe}] [-h {on | off}] [{-pg | -pm | -pp}] [-u]
  [-v] [-x] [<alias>]
```

## Description

**vfxpb load** loads entries to the selected directory (phone book). This utility is typically used to load all records into a directory from an unloaded file for the purposes of restoring a directory from a backup.

Note that a directory (phone book) comprises three databases, the person database, the group database, and the member database. **vfxpb load** will access only one of these databases at a time, so to load the entire directory will entail invoking **vfxpb load** three times, once for each database.

**vfxpb load** can access either the system directory (phone book) or the user's local directory (phone book).

## Options

<b>-au</b>	Access user directory (phone book) (default).
<b>-as</b>	Access system directory (phone book).
<b>-c</b>	Check entries only.
<b>-f</b> {all   <list>}	Comma delimited field <list> or all fields (default).
<b>-F</b> <format>	Format report in one of the following formats:
	<b>csv</b> Comma “,” delimiter (default).
	<b>eval</b> Eval (tag=value) format.
	<b>pipe</b> Pipe “ ” delimiter format.
<b>-h</b> {on   off}	First line of input contains field list.
<b>-pg</b>	Process groups database.
<b>-pm</b>	Process member database.
<b>-pp</b>	Process person database (default).
<b>-u</b>	Allow update of duplicate entry.
<b>-v</b>	Verbose mode.

<b>-x</b>	Delete specified entries.
<b>&lt;alias&gt;</b>	List of person or group aliases ("- " to get list from stdin).

## Notes

The default access is to the user directory (phone book). The default database to access is the person database.

The default behavior of **vfxpb load** is to add new records. The **-u** option will allow the updating of existing entries.

In all modes, **vfxpb load** will read its input from stdin.

## Examples

To add some persons to the user directory (phone book), enter:

```
vfxpb load -F pipe -f pal,nam,fax <<EOF
joes | Joe Smith | 1-800-555-1212
fred | Fred Jones | 456-1234
EOF
```

To create groups for engineering and sales, enter:

```
vfxpb load -pg <<EOF
engr,Engineering
sales,Sales
EOF
```

To add Joe to both groups and Fred to Engineering, enter:

```
vfxpb load -pm <<EOF
engr,joes
sales,joes
engr,fred
EOF
```

To load all databases in a user directory (phone book) from the backup files created in example #1 of **vfxpb unload**:

```
vfxpb load -pp -h on -F pipe <person.sav
vfxpb load -pg -h on -F pipe <groups.sav
vfxpb load -pm -h on -F pipe <member.sav
```

# vfxpb unload

## Synopsis

```
$VSIFAX/bin/vfxpb unload [{-au | -as}] [-f {all | <list>}]
[-F {csv | eval | pipe | tag}] [-h {on | off}] [-H <host>]
[{-pg | -pm | -pp}] [-t <tag><op><value>] [-U <user>] [<alias>]
```

## Description

**vfxpb unload** will unload entries from the selected directory (phone book). This utility is typically used to unload all records from a directory for the purposes of backing the data up in an ASCII form or to transfer the data to another system in a portable way.

A directory (phone book) comprises three databases:

- pbper.\*     The person database.
- pbgrp.\*     The group database.
- pbmemb.\*     The member (user:group) database.

**vfxpb unload** will access only one of these databases at a time, so to unload the entire directory (phone book) will entail invoking **vfxpb unload** three times, once for each database.

**vfxpb unload** can access either the system directory (phone book) or the user's local directory (phone book).

## Options

- |                          |   |
|--------------------------|---|
| <b>-au</b>               | Unload user directory (phone book) (default).         |
| <b>-as</b>               | Unload system directory (phone book).                 |
| <b>-f</b> {all   <list>} | Comma delimited field <list> or all fields (default). |
| <b>-F</b> <format>       | Format report in one of the following formats:        |
|                          | <b>csv</b> Comma “,” delimiter (default).             |
|                          | <b>eval</b> Eval (tag=value) format.                  |
|                          | <b>pipe</b> Pipe “ ” delimiter format.                |
|                          | <b>tag</b> Tag format.                                |
| <b>-h</b> {on   off}     | Include field list on first line of output file.      |

<b>-H</b>	<b>&lt;host&gt;</b>	Connect to this fax server host name.
<b>-pg</b>		Process groups database.
<b>-pm</b>		Process member database.
<b>-pp</b>		Process person database (default).
<b>-t</b>	<b>&lt;tag&gt;&lt;op&gt;&lt;value&gt;</b>	Unload records matching this criterion. More than one <b>-t</b> option can be supplied to specify AND conditions. Valid operators are:  = Equal to.  != Not equal to.  > Greater than.  < Less than.  >= Less than or equal to.  <= Greater than or equal to.
<b>-U</b>	<b>&lt;user&gt;</b>	Fax account user ID.
<b>&lt;alias&gt;</b>		List of. person/group aliases ("- " to get list from stdin).

## Notes

The default access is to the user directory (phone book).

The default database to access is the person database.

If no aliases are listed on the command line (or read from stdin). Default is to process all entries.

## Examples

Unload all databases in a client's directory (phone book):

```
vfxpb unload -pp -h on -F pipe >person.sav  
vfxpb unload -pg -h on -F pipe >groups.sav  
vfxpb unload -pm -h on -F pipe >member.sav
```

To get a list of all persons in the corporate directory (phone book) who work at Ace Financial Services, enter:

```
vfxpb unload -as -t com="Ace Financial Services"
```

To get the names of all persons who are a member of the sales group, enter:

```
vfxpb unload -pm -f pal sales | > vfxpb unload -pp -f nam -
```

# vfxprint

## Synopsis

```
$VSI-FAX/bin/vfxprint [-d {pcl | Epson | gdi | imagex | pcl-sf | ps}]
  [-H] [-l] [-o <options>] [-p <range>] [-S] [-SS] <TIFF_file>
```

## Description

**vfxprint** prints a fax by sending the underlying TIFF file to the specified printer.

The output is sent to stdout, which can be piped to the standard lp spooler.

The default print image is approximately two-thirds the size of the original image unless the scaling options (**-S** or **-SS**) are used.

## Options

<b>-d</b>	<b>&lt;driver&gt;</b>	Output printer driver. Valid drivers are:
	<b>pcl</b>	PCL raster (default).
	<b>Epson</b>	Epson LQ Dot matrix.
	<b>gdi</b>	Windows GDI.
	<b>imagex</b>	VSI image export mode (cannot output to pipe).
	<b>pcl-sf</b>	PCL soft-font.
	<b>ps</b>	PostScript.
<b>-H</b>		No header box information when not scaled.
<b>-l</b>		Page Size (PCL only).
<b>-o</b>	<b>&lt;options&gt;</b>	Driver-specific <b>&lt;options&gt;</b> .
<b>-p</b>	<b>&lt;range&gt;</b>	Select page range to be printed.
<b>-S</b>		Scale output to full page.
<b>-SS</b>		Scale output to full page, edge-to-edge.
	<b>&lt;TIFF_file&gt;</b>	Print this TIFF file.

## Notes

The PCL soft-font option **-d pcl-sf** will expedite printing to a PCL printer. This mode significantly reduces the time to print a document. Both HP-clones and the HP4M printer can support this option. However, this option cannot be used on a HP III due to insufficient CPU.

**vfxprint** with either PCL driver options (**pcl** or **pcl-sf**) accepts **-o no-PCL-reset** to disable our sending of ESC-E and other related reset strings at the start of each job. Users who have smart LP interface scripts can now rely on their own setups to select output bins and the like.

**vfxprint** can print legal as well as letter size documents received by VSI-FAX. legal and letter documents can be printed scaled or original size. The **-l** option, which applies only to PCL, establishes the paper size of the document to be printed so that continuation pages can be generated properly. The **-l** option can be interpreted either as a parsed measurement or as a keyword. For example, the following are all valid page-lengths:

```
letter
legal
10i
25mm
60pt
A4
```

---

**NOTE:** **vfxprint** does not automatically determine the type of paper required for a given file. It defaults to letter size.

---

The PostScript driver will automatically adjust for 300, 600, 900 or 1200 DPI PostScript printers, where no operator intervention is necessary.

**vfxprint** will not work properly unless output processing on the port is turned off (via **stty -opost** or by **lp -o raw**).

If you are using the PCL driver, the printer requires at least 1MB of RAM to print faxes scaled to full page.

**-S** will scale the fax to print at the actual size of the paper (allowing for shrinking according to the threshold) and then shrink that to fit within the printer's printable area.

**-SS** will scale the fax to print at the actual size of the paper (allowing for shrinking according to the threshold) and then print at that size. This will normally result in the edges of the fax not being printed since most printers cannot print edge-to-edge.

If neither **-S** or **-SS** is supplied, then the fax is printed without scaling, which means one-to-one from fax pixels (at fine resolution) to printer pixels. This looks good at 300dpi, but on a 600dpi printer is much too small.



## Windows Printing with a Network Print Server

To print to a printer connected via a network print server, you must first configure the connection to the printer via the **Settings > Printers** menu. Choose **Add Printer > Network printer server**. Select the server and printer from the list, installing the printer driver as needed (some network print servers are configured to automatically download the correct printer driver, some are not). You should print a test page (available in the printer's Properties window).

The name of the printer to use is shown when you are connected to the printer (it looks like `\\<servername>\<printsharename>`) and is also displayed in the printers Properties dialog box Ports tab (it is the one with the check mark).

```
vfxprint -S -o printer="\\bigmac\foo" bar.tif
```

If the printer name is in the form of a network printer and the printer is not properly configured, the error may be "Incorrect function" (instead of "The printer name is invalid"):

```
Can't open printer [\\admin1\admin]!  
Error 1 [Incorrect function.]
```

## Examples

To print a received fax, `5134.tif`, to a LaserJet printer scaled to a full page, enter:

```
vfxprint -d pcl -SS 5134.tif | lp -d ljet -o raw
```

To print a TIFF file, `fil.tif`, to a PostScript printer, enter:

```
vfxprint -d ps fil.tif | lp -d pspnt
```

# vfxpurge

## Synopsis

```
$VSIFAX/bin/vfxpurge [-a] [-d <dir>]  
  {-e <days> | -i <days> | -o <days>} [-E] [-P] [-r <days>] [-v]
```

## Description

**vfxpurge** purges expired fax requests older than a specified time or that are older than a specified time from the input or output log.

This command must be executed by the fax administrator.

---

**NOTE:** The fax server does not have to be stopped to purge the databases

---

## Options

- |                               |  |
|-------------------------------|--|
| <b>-a</b>                     | Archive all attempt entries when archiving the output log.               |
| <b>-d</b> <b>&lt;dir&gt;</b>  | Archive the purged records to this directory.                            |
| <b>-e</b> <b>&lt;days&gt;</b> | Remove expired requests older than the specified <b>&lt;days&gt;</b> .   |
| <b>-i</b> <b>&lt;days&gt;</b> | Remove input log entries older than the specified <b>&lt;days&gt;</b> .  |
| <b>-o</b> <b>&lt;days&gt;</b> | Remove output log entries older than the specified <b>&lt;days&gt;</b> . |
| <b>-E</b>                     | Keep expired jobs.   |
| <b>-p</b>                     | Run TNP or GNP for all expired jobs when they are cancelled.             |
| <b>-r</b> <b>&lt;days&gt;</b> | Remove all received faxes older than the specified <b>&lt;days&gt;</b> . |
| <b>-v</b>                     | Verbose mode.  |

## Notes

Either the **-e**, **-o** or **-i** option must be specified, and only one can be specified at a time.

---

**IMPORTANT:** The entry for the number of days does not recognize numbers with decimal points. For example you cannot enter .5 for a half a day or 1.5 for a day and a half.

---

You should periodically purge all accumulated expired requests since they will impact the size of available free disk space.

The **-d <dir>** option, if specified, indicates the directory to store a database containing all the purged records, which are named as follows:

If purging the input log, the **<dir>/ilog.\*** database is created

If purging the output database, the **<dir>/faxreqs.\*** and **<dir>/faxtags.\*** databases are created.

The **-a** option specifies that when archiving records from the output log that all attempt records are to be saved. Default is to save only the final attempt records.

Entries in the output log are purged based on their submit-time. In other words, if a user specified the option **-o 4**, then all jobs submitted prior to four days ago will be purged.

An entry will not be purged from the input log even if it meets the date criterion if it is still considered a pending job. A group entry is purged only if all members of that group have completed.

If an entry is removed from a database, any corresponding files for that entry are deleted. For example, if the user requests that all expired requests be purged, the files for those requests (located in the **\$VSI-FAX/spool/expired** directory) will be deleted. Purging expired requests will result in those entries in the log as being flagged as canceled.

The **vfxpurge** command does not delete debug logs and we strongly recommend that these be deleted as needed to free up space.

## Examples

To purge all expired requests older than 4 days, enter:

```
vfxpurge -e 4
```

To purge all entries in the output log older than 30 days, enter:

```
vfxpurge -o 30
```

To purge the output log of all entries older than 10 days and save to an archive file, enter:

```
vfxpurge -o 10 -d /tmp/archive
```

# vfxsched

## Synopsis

```
$VSIFAX/bin/vfxsched [-D] [-s] {check | halt | list | restart [<secs>]  
| start [<secs>] | stop [<secs>] | version}
```

## Description

**vfxsched** is used to start, stop and restart fax server scheduler processes required for processing fax requests.

---

**NOTE:** Only root or the fax administrator can run this command to start the server. A user can run this command with the check, list or version commands.

---

## Options

- D    Enable debug mode.
- s    Used in conjunction with ‘vfxsched start’ to start the scheduler in silent mode.

## Commands

<b>check</b>	Check if running.
<b>halt</b>	Begins the scheduler shutdown immediately regardless of the current fax transmission state.
<b>list</b>	List processes.
<b>restart</b> <secs>	Cycle (restart) the server.
<b>start</b> <secs>	Start the server (default).
<b>stop</b> <secs>	Waits until the fax requests in transmission terminate their call before shutting down the scheduler.
<b>version</b>	Output server version.

## Notes

If no command is supplied, **start** is assumed.

A ‘grace periods’ option has been added to the start, stop and restart options. If the fax server has not responded to the command entered, within the specified time, the process terminates and an error message will be written to the console.

The **-D** option will enable verbose entries in the **vfxsched** log file. In addition, this debug flag is passed to all processes and FIMs spawned by **vfxsched**.

The **-s** option will suppress any output to stdout. Note that any errors will still be reported to stderr.

The **start** command will start up the fax server. Note that **vfxsched** simply starts all processes and then terminates.

The **stop** command performs a “soft shutdown,” in that no further work or commands are processed, but the system does not terminate until all FIMs and processes are idle.

The **halt** command performs a “hard shutdown,” in that all processes and FIMs are stopped immediately, regardless of any work in progress. Note that if a FIM is in the process of sending a fax when a **halt** command is received, that fax will be restarted when the system comes back up, but any faxes being received will be lost.

Note that when either the **stop** or **halt** command is given, the server will checkpoint any work in progress (such as any queued submittals or notifies) and restart them when the server comes back up.

The **restart** command will stop (via a “soft shutdown”) and start the server back up.

The **check** command performs a check to verify whether the **vfxsched** process is currently running. Note that the exit status of executing **vfxsched check** is set, allowing users to discard the screen output if desired (when integrating with scripts, etc.).

The **list** command lists the **vfxsched** and supporting processes currently running, including those spawned to fulfill client fax requests. Typical output will include entries for the following processes:

<b>vrsched</b>	Server process responsible for spawning all supporting processes
<b>vgsched</b>	Group scheduler process
<b>vnetlgn</b>	Login/logout process responsible for authenticating clients
<b>vnetcmd</b>	Command process responsible for fulfilling all short-term client requests
<b>vnetfax</b>	Command process responsible for fulfilling all mid- to long-term client requests
<b>*-fim</b>	Various Fax Interface Modules (FIMs) which do the interfacing to the modems.

The **version** command will display the version information for the **vfxsched** program.

## Examples

To check if the server is running, enter:

```
vfxsched check
```

To start the server in debug mode, enter:

```
vfxsched -D start
```

To stop the server, enter:

```
vfxsched stop
```

To list server processes currently running, enter:

```
vfxsched list
```

# vfxstat

## Synopsis

```
$VSIFAX/bin/vfxstat [-A] [-a] [-c <secs>] [-g [<group_req_ID>]]
  [-H <host>] [-h] [-l] [-q <queue>] [-r] [-s <secs>] [-T <template>]
  [-t] [-u <user>] [-U <user>] <fax_req_ID>
```

## Description

When entered without a fax request ID number, **vfxstat** reports on the status of the fax server and all active fax requests in the fax queue. When used with a fax request ID number, it reports status for that single fax request.

## Options

<b>-A</b>	Show actual device in class being used to send a fax.
<b>-a</b>	Show administration information.
<b>-c</b> <secs>	Continuous display every “secs”.
<b>-g</b> <group_req_ID>	Show only group request statistics. If <group_req_ID> is supplied, show status for that single group fax request.
<b>-H</b> <host>	Connect to this fax server host name.
<b>-h</b>	Display full-screen help.
<b>-l</b>	Show local job only.
<b>-q</b> <queue>	Show count of jobs in <queue> (“all” for all).
<b>-r</b>	Show only whether the scheduler is up.
<b>-s</b> <secs>	Continuous display every <secs> (full-screen mode).
<b>-T</b> <template>	Show status in the format specified by this <template> file (page 98).
<b>-t</b>	Show full listing.
<b>-u</b> <user>	Show jobs for this user only.
<b>-U</b> <user>	Fax account user ID.
<fax_req_ID>	Fax Request ID.

**Notes**

Upon using the appropriate option, **vfxstat** outputs:

INFORMATION	OPTIONS DISPLAYING THIS INFORMATION
Class list	<b>-t, -a</b>
Device list	<b>-t, -a</b>
Device status	All options except <b>-r</b>
Fax queue	No option, <b>-t</b>
Group queue	No option, <b>-t, -g</b>
Server status	All options
Sessions	<b>-a</b>

The previous options are ignored if a fax request ID number (<**fax\_req\_ID**>) is specified on the command line. In that case, status is only provided for that single fax request ID.

The group **-g** option allows you to specify a specific member of a group for example,

```
vfxstat g-5001-1
```

This will display only information for the first member of the group.

The **-c <secs>** option causes **vfxstat** to continuously update at the specified interval.

The **-r** option only reports whether the fax server is running or not. Since this is a client program, it determines whether the fax server is running by whether is it able to log in to the server. Therefore, if the network is down, **vfxstat -r** will erroneously report that the fax server is not running. A user could interpret the output of **vfxstat -r** as “server is reachable.”

Also, if bsmith is not a registered user, the command **vfxstat -r -U bsmith** will output as follows:

If the fax server is running:

```
"vfxstat: Cannot login to server on <<host>>: User bsmith does not exist"
```

If the fax server is not running:

```
"Server on <<host>> is not running"
```

**Examples**

To display a full listing of the fax server status and all active fax requests in the fax queue, enter:

```
vfxstat -t
```



To display only the status and unique details from a single fax request ID number (<**fax\_req**>), enter:

```
vfxstat <fax_req>
```

To display status and unique details from a single fax request ID number (<**fax\_req**>) in a special format defined by a template file, enter:

```
vfxstat -T <template_file> <fax_req>
```

To display only Group request statistical information for a particular Group request ID number (<**group\_req\_ID**>), enter:

```
vfxstat g <group_req_ID>
```

To display the status of a particular member (<**member**>) of a Group request ID number (<**group\_req\_ID**>), enter:

```
vfxstat g <group_req_ID>-<member>
```

# vfxtry

## Synopsis

```
$VSIFAX/bin/vfxtry [-d {<device> | <class>}] [-H <host>] [-n <num>]  
  [-p <priority>] [-T <time>] [-U <user>] <fax_req>
```

## Description

**vfxtry** initiates an attempt of an expired request. When executed without any options, this command causes the specified queued fax request to advance its “next-attempt-time” to “now.” If no other fax requests are ahead of this job in the fax queue, **vfxtry** will cause this request to be retried “now.”

In addition, you can impose new parameters on a queued fax request from the available options below. **vfxtry** works on both active and expired fax requests, which are then placed in the active fax queue for processing.

## Options

<b>-d</b>	{<device>   <class>}	New fax device or class.
<b>-H</b>	<host>	Connect to this fax server host name.
<b>-n</b>	<num>	New fax number (<num>).
<b>-p</b>	<priority>	New <priority>.
<b>-T</b>	<time>	New <time> in [yy] [mdd] hhmm [am   pm] format.
<b>-U</b>	<user>	User ID.
	<fax_req>	Fax Request ID.

## Notes

If an active fax job is reactivated (by **retry** command), the attempt count is not modified.

For example, if a job uses the retry strategy **default** (which gives 5 attempts 5 minutes apart), and it already had completed 2 attempts, then the reactivated job will still have 3 attempts left.

If an expired job is rejuvenated, then the effective attempt count is reset to 0 (meaning it has yet to try any attempt).

## Examples

To reactivate a rescheduled or expired fax request 1055, enter:

```
vfxtry 1055
```

To modify a fax request 1055 to the fax number “555-1212,” enter:

```
vfxtry -n 555-1212 1055
```

To modify the fax request’s (1055) fax number, send-time, and fax device or class to fax4, enter:

```
vfxtry -n 489-2486 -T 130pm -d fax4 1055
```

# vinfo

## Synopsis

```
$VSIFAX/bin/vinfo [-H <host>] [-o <file>] [-u <user>] [-v]
{all | arcfiles | covers | envtags | faxfiles | filetypes | folders
 | forms | gnps | groups | images | lnps | pglengths | printers
 | priorities | queues | resolutions | retries | rnps | routes
 | srvfiles | tnps | templates}
```

## Description

**vinfo** lists all resources for a specified type. It can be used by integrators to get lists of resources such as available cover pages or fax device or class from which to choose.

## Options

- H**    **<host>**    Connect to this fax server host name.
- o**    **<file>**    Output to **<file>**. Default is stdout.
- u**    **<user>**    Get resource list for this user only.
- v**                Verbose (readable) output.

## Notes

RESOURCE TYPE	DESCRIPTION
<b>all</b>	All resources.
<b>arcfiles</b>	Lists archived faxes.
<b>covers</b>	Lists available cover pages.
<b>envtags</b>	Lists valid fax envelope tags.
<b>faxfiles</b>	Lists received faxes.
<b>filetypes</b>	Lists valid file types.
<b>folders</b>	Lists available folders.
<b>forms</b>	Lists available overlay forms.
<b>gnps</b>	Lists available Group Notify Procedures (GNPs).

---

RESOURCE TYPE	DESCRIPTION
<b>groups</b>	Lists available groups.
<b>images</b>	Lists server images.
<b>lnps</b>	Lists available Launch Notify Procedures (LNPs).
<b>pglengths</b>	Lists valid page lengths.
<b>printers</b>	Lists valid printer names.
<b>priorities</b>	Lists valid priorities.
<b>queues</b>	Lists available fax devices and classes.
<b>resolutions</b>	Lists valid resolutions.
<b>retries</b>	Lists valid retry methods.
<b>rnps</b>	Lists available Receive Notify Procedures (RNPs).
<b>routes</b>	Lists registered users.
<b>srvfiles</b>	Lists available server files.
<b>tnps</b>	Lists available Transmit Notify Procedures (TNPs).
<b>templates</b>	Lists available template files (page 98).

---

## Examples

To get a list of available cover pages, enter:

```
vinfo covers
```

# vlbchk

## Synopsis

```
$VSI-FAX/lbin/vlbchk [-c] [-p <host>] [-v]
```

## Description

This utility compares the `cluster.lst` and `lcrhosts.lst` configuration files to ensure that entries are compatible with one another.

If **vlbchk** is run without supplying any options, it returns the VSI-FAX server that will be used to process faxes when the load balancing algorithm detects an excessive Time-To-Fax (TTF).

## Options

- |                               |   |
|-------------------------------|---|
| <b>-c</b>                     | Check VSI-FAX cluster tables.                   |
| <b>-p</b> <b>&lt;host&gt;</b> | Ping this VSI-FAX cluster <b>&lt;host&gt;</b> . |
| <b>-v</b>                     | Verbose mode.                                   |

# vlcrchk

## Synopsis

```
$VSIFAX/sbin/vlcrchk [-a] [-C] [-c] [-e <route>] [-l] [-n <fax_num>]
[-v]
```

## Description

This utility compares the `lcrrules.lst` and `lcrhosts.lst` configuration files to ensure that entries are compatible with one another

## Options

<b>-a</b>	Check VSI-FAX cluster tables.
<b>-C</b>	Check both LCR (page 79) and VSI-FAX cluster tables.
<b>-c</b>	Check LCR (page 79) tables.
<b>-e &lt;route&gt;</b>	Output email address for this <b>&lt;route&gt;</b> .
<b>-l</b>	Output local host name.
<b>-n &lt;fax_num&gt;</b>	Output route for <b>&lt;fax_num&gt;</b> .
<b>-v</b>	Verbose check.

## Examples

After you complete the set up of the routes and rules files, you can use the following command to verify that the two files are consistent:

```
$VSIFAX/sbin/vlcrchk -cv
```

This command will compare the entries in the routes file to the entries in the rules file. If the system finds a route entry in one that does not have a corresponding route in the other file it will report it, allowing you to correct the synchronization of the two files.

An additional check you can run is to verify the route name for a specific fax number by entering:

```
$VSIFAX/sbin/vlcrchk -n xxx-xxx-xxxx
```

# vpkgchk

## Synopsis

```
$VSIFAX/lbin/vpkgchk [-v] <package>
```

## Description

**vpkgchk** is used to display a list of installed packages and, when specified, the associated files. When executed without any command line options it produces a list of all installed packages and their respective version numbers.

## Options

**-v** Lists a detailed summary of all installed files associated to a specific package.

## Examples

To produce a list of all installed packages and their respective version numbers

```
$VSIFAX/lbin/vpkgchk
```

```
VSI-FAX Client System      version 4.0.0  
VSI-FAX Application macros version 4.0.0  
VSI-FAX Server System     version 4.0.0  
VSI-FAX Virtual server    version 4.0.0
```

To select a specific package by specifying the package as a command line argument

```
$VSIFAX/lbin/vpkgchk fxserver
```

```
VSI-FAX Server System      version 4.0.0
```



# vreguser

## Synopsis

```
$VSIFAX/bin/vreguser [-H <host>] [-n <name>] [-p] [-S] [-U <user>]  
[-x]
```

## Description

**vreguser** is used to create and manage your user information.

---

**IMPORTANT:** You must be logged on as the user you are modifying.

---

## Options

- |           |                     |  |
|-----------|---------------------|--|
| <b>-H</b> | <b>&lt;host&gt;</b> | Connect to this fax server host name. Default is the local host. |
| <b>-n</b> | <b>&lt;name&gt;</b> | User's full-name.  |
| <b>-p</b> |                     | Prompt for new password.   |
| <b>-S</b> |                     | Display server version.  |
| <b>-U</b> | <b>&lt;user&gt;</b> | Fax account user ID; default is operating system login name.     |
| <b>-x</b> |                     | Delete user from server.   |

## Notes

The user ID processed is the login name (`$LOGNAME`) unless the **-U user** option is used.

The difference between **vreguser** and **vfxadmin user** is that **vreguser** is a client program and **vfxadmin user** is a server program that is only available to the fax administrator.

A user who is on the same machine as the server will be automatically registered as a user the first time they run any client program (**vfx**, **vfxstat**, etc.). However, the advantage of separately running **vreguser** is that the user's VSI-FAX home directory (`$HOME/.vsifax`) will also be created and populated with a `vsifax.ini` file.

**vreguser** can be run at any time, although a user only has to execute it once to register as a user. However, it can be run later to change the password.

## Examples

To create a user with a license called “James Bond” whose login name is jamesb, enter:

```
vreguser -n “James Bond” -U jamesb
```

To delete the user jamesb, enter:

```
vreguser -x -U jamesb
```

# vtalk

## Synopsis

```
$VSIFAX/sbin/vtalk [-c] [-s <baud>] -v {<port> | <device>}
```

## Description

**vtalk** is a utility, similar in function to **cu**, that establishes a simple terminal session with a fax device. **vtalk** does not access the UUCP systems and devices files, therefore enabling a user to simply connect to a device. Connection mode can be local or modem.

## Options

<b>-c</b>	Open port in local mode
<b>-s</b> <b>&lt;baud&gt;</b>	Port BAUD rate. Default is 19200.
<b>-v</b> <b>&lt;port&gt;</b>	Port address
<b>&lt;device&gt;</b>	fax device or class name to access

## Notes

Either a **dest** argument or the **-v device** option is required. Access to the port is done in full duplex mode.

**vtalk** will ignore a **sigint** signal, and is terminated by issuing a **sigquit** signal. You can determine what will generate a **sigquit** signal from your keyboard by using the command **stty -a** and looking at the **quit** entry.

## Unix/Linux Examples

To communicate with a device called `/dev/tty1A` at a baud rate of 9600, enter:

```
$VSIFAX/sbin/vtalk -s 9600 -v /dev/tty1A
```

To communicate with the device associated with `fax1`, enter:

```
$VSIFAX/sbin/vtalk fax1
```

To obtain the revision level information, enter:

```
at+frev
```

# vtifftool

## Synopsis

```
$VSI-FAX/bin/vtifftool <command> [<options>] <TIFF_file>[:<pages>]
```

## Description

**vtifftool** is a utility used for manipulating TIFF files.

VSI-FAX uses TIFF files as the underlying file format for its faxes. These files are standard TIFF Group 3 files with additional tags used by various VSI-FAX programs. By using this command, a user can convert TIFF files to/from the VSI-FAX enhanced TIFF format, as well as perform manipulation of the files such as cutting out pages, etc.

## Commands

<b>clear</b>	Clear or cut an area on image page(s).
<b>convert</b>	Convert a fax or TIFF file.
<b>copy</b>	Copy a file to an output file.
<b>cut</b>	Cut pages from an image file.
<b>cvtgif</b>	Convert to GIF files.
<b>header</b>	Add a header.
<b>info</b>	Display or set information in a file.
<b>merge</b>	Merge file(s) to an output file.
<b>mksig</b>	Make a signature file.
<b>overlay</b>	Overlay two files to an output file.
<b>thumb</b>	Add a thumbnail for specified pages in a file.

## Notes

The **-C** option specifies output compression type. Valid values are:

- a** Aldus G3 RLE.
- c** CCITT G3 RLE (default).

- m** Mac PacBits.
- u** Uncompressed.

The **-E** option specifies output resolution. Valid values are:

- std** 204 x 98 resolution.
- fine** 204 x 196 resolution.

If not specified, the default is to use the output resolution the input file.

The **-m <meas>** option specifies a measurement in **<num><units>** format. For example:

- 34** 34 pixels.
- 1.5i** 1.5 inches.
- 2.2cm** 2.2 centimeters.
- 45mm** 4.5 millimeters.
- .005m** .005 meters.
- 6pt** 6 points.

The default behavior of **vtifftool** is to automatically add VSI proprietary tags to a TIFF file. Most **vtifftool** provide a **-s** option for turning off this feature. The VSI proprietary TIFF tags are:

TAG NUMBER	DESCRIPTION	SIZE (BYTES)	OCCURRENCE
33949	VSI file information	1024	First page only.
33950	VSI page information	1024	Each page.
33951	VSI thumbnail	2176	Each page.

The **<TIFF\_file>[:<pages>]** option specifies the input file name and optional page ranges to process. For example:

- file1.tif** Process all pages.
- one.tif:1** Process first page.
- two.tif:1-5,8** Process pages 1-5, and page 8.
- three.tif:2-** Process page 2 through end of file.

# vtifftool clear

## Synopsis

```
$VSIFAX/bin/vtifftool clear [-b] [-c] [-C {a | c | m | u}]  
  [-E {std | fine}] [-m <meas>] -o <file> [-s] <TIFF_file>[:<pages>]
```

## Description

This command is used to clear or cut out areas of an image on specified pages of a TIFF file. The main use of this command is to remove the fax header that a fax machine or fax software adds to a page when it sends the fax.

The fax header typically comprises approximately 0.5 inches at the top of a page and contains information such as the TSI of the sender, the date and time of transmission, page number, etc. Some fax machines and software add the header to the page, resulting in an 8.5 inch page being sent as 9.0 inches, while others overlay the header (retaining the original page length).

A user who receives a fax and wants to re-send that fax to someone, can remove the old fax header from the file in order to eliminate having two headers on the page.

## Options.

<b>-b</b>	Cut or clear from bottom.
<b>-c</b>	Cut image instead of clear.
<b>-C</b> {a   c   m   u}	Output compression type (page 208).
<b>-E</b> {std   fine}	Output resolution (page 209).
<b>-m</b> <meas>	Measurement string (page 209).
<b>-o</b> <file>	Output file name. Use dash (-) for stdout.
<b>-s</b>	Remove VSI proprietary tags (page 209).
<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Notes

The **-b** (cut/clear from bottom) is useful when the fax page was sent upside-down, so the header is on the bottom of the page.

The **outfile** can be the same as the input file, in which case it will replace the original file.

## Examples

To clear the header from all pages in `file1.tif` (replacing the same file), enter:

```
vtifftool clear -o file1.tif file1.tif
```

To cut the header from page 1 of `test.tif` and output to `result.tif`, enter:

```
vtifftool clear -c -o result.tif test.tif:1
```

To cut .3 inches from the bottom of all pages of `file.tif`, enter:

```
vtifftool clear -c -m.3i -b -o file.tif file.tif
```

# vtifftool convert

## Synopsis

```
$VSI_FAX/bin/vtifftool convert [-C {a | c | m | u}]  
  [-E {std | fine}] -o <file> <TIFF_file>[:<pages>]
```

## Description

This command is used either to convert a TIFF file to a TIFF file of another type or to convert a VSI .fax file to a TIFF file. The .fax files were used by previous versions of VSI-FAX, but are not currently used. This enables a user to convert any old .fax files to the new format.

## Options.

<b>-C</b>	<b>{a   c   m   u}</b>	Output compression type (page 208).
<b>-E</b>	<b>{std   fine}</b>	Output resolution (page 209).
<b>-o</b>	<b>&lt;file&gt;</b>	Output file name. Use dash (-) for stdout.
	<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Notes

Although the input file can be a TIFF file, conversion is automatically done by any command. Therefore converting a TIFF file is the same as copying a TIFF file.

This command replaces the **faxtotiff** command in previous versions of VSI-FAX.

## Examples

To convert file1.fax to file1.tif, enter:

```
vtifftool convert -o file1.tif file1.fax
```



# vtifftool copy

## Synopsis

```
$VSIFAX/bin/vtifftool copy [-C {a | c | m | u}]
  [-E {std | fine}] -o <file> [-r] [-s] [-S] <TIFF_file>[:<pages>]
```

## Description

This command will copy a TIFF file to another TIFF file. The difference between using this command and simply copying a file is that this command can also select certain pages, change the resolution or change the compression as it copies the file.

## Options

<b>-C</b>	<b>{a   c   m   u}</b>	Output compression type (page 208).
<b>-E</b>	<b>{std   fine}</b>	Output resolution (page 209).
<b>-o</b>	<b>&lt;file&gt;</b>	Output file name. Use dash (-) for stdout.
<b>-r</b>		Reverse photometric-interpretation tag in file.
<b>-s</b>		Remove VSI proprietary tags (page 209).
<b>-S</b>		Scale image to fit.
	<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Notes

This command will also automatically add VSI-FAX proprietary tags to the TIFF file as it copies. It does not automatically add the thumbnails.

## Examples

To copy pages 2-6 of input.tif to result.tif, enter:

```
vtifftool copy -o result.tif input.tif:2-6
```

To copy input.tif to result.tif and set the compression to Aldus, enter:

```
vtifftool copy -C a -o result.tif input.tif
```

Consider that you received a five-page fax transmission and you want to send pages 4 and 5 to another recipient. The original received fax file is 4010.tif and the output file will be called forecast.tif as follows:

```
vtifftool copy -E fine -o forecast.tif 4010.tif:4-5
```

# vtifftool cut

## Synopsis

```
$VSIFAX/bin/vtifftool cut [-C {a | c | m | u}] [-E {std | fine}]  
-h <height> -o <file> [-s] -w <width> -x <xpos> -y <ypos>  
<TIFF_file>[:<pages>]
```

## Description

This command is used to cut an area from a specified page from a TIFF file. This is typically used to cut out a signature or a logo so that it can be included in other documents.

The **-x** and **-y** options specify the starting pixel coordinates (horizontally and vertically, respectively) and the **-h** and **-w** options specify the size of the cut (height and width, respectively) in pixels.

## Options.

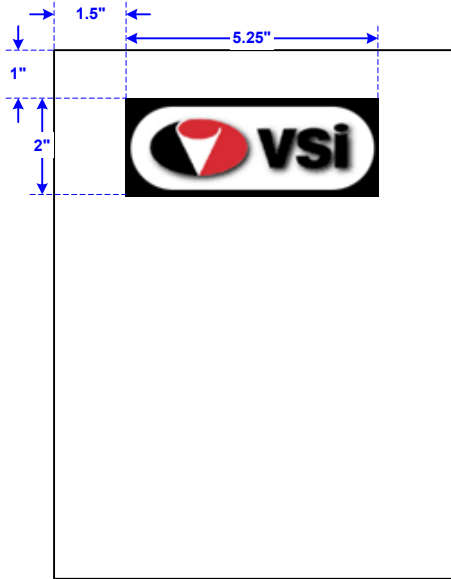
<b>-C</b>	<b>{a   c   m   u}</b>	Output compression type (page 208).
<b>-E</b>	<b>{std   fine}</b>	Output resolution (page 209).
<b>-h</b>	<b>&lt;height&gt;</b>	Height of the cut in pixels.
<b>-o</b>	<b>&lt;file&gt;</b>	Output file name. Use dash (-) for stdout.
<b>-s</b>		Remove VSI proprietary tags (page 209).
<b>-w</b>	<b>&lt;width&gt;</b>	Width of the cut in pixels.
<b>-x</b>	<b>&lt;xpos&gt;</b>	Starting horizontal (x-axis) coordinate.
<b>-y</b>	<b>&lt;ypos&gt;</b>	Starting vertical (y-axis) coordinate.
	<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Notes

The cut area will be padded on the right with spaces to create an output TIFF file of standard width (1728 pixels).

## Examples

Consider the following scanned image file (`rawlogo.tif`) containing a company logo:



Notice that the actual company logo is 5.25" wide and 2" high. The logo image area is offset 1.5" horizontally (i.e., x-axis) and 1" vertically (i.e., y-axis) from the upper left hand corner of the page.

To create a faxable logo file (`logo.tif`) by cropping all unused white space, enter the following on a single line:

```
vtiff tool cut -E fine -x 1.5i -y 1.0i -w 5.25i -h 2.0i -o logo.tif  
rawlogo.tif
```

# vtifftool cvtgif

## Synopsis

```
$VSIFAX/bin/vtifftool cvtgif [-i {0 | 1}] [-m {0 | 1 | 2}] -o <file>  
[-r {0 | 90 | 180 | 270}] [-s {0-6}] [-v] <TIFF_file>[:<pages>]
```

## Description

This command converts a TIFF file to a series of GIF files, one per page.

## Options.

<b>-i</b> {0   1}	Invert image. Valid values are:  0 Don't invert image (default).  1 Invert image.
<b>-m</b> {0   1   2}	Mirror image. Valid values are:  0 No mirroring (default).  1 Mirror horizontally.  2 Mirror vertically.
<b>-o</b> <file>	Output file name. Use dash (-) for stdout.
<b>-r</b> {0   90   180   270}	Rotate image. Valid values are 0 (default - no rotation), 90, 180, and 270 degrees.
<b>-s</b>	Scale image. Valid values are 0 (default - no scaling) thru 6 (maximum scaling).
<b>-v</b>	Verbose mode.
<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Notes

Each page of the original file will be stored as a separate file with the name

<file>-<page\_num>.gif.

Therefore, the command **vtifftool cvtgif file.tif** for a two-page TIFF file will produce the following files:

```
file-1.gif  
file-2.gif
```

## Examples

To create a GIF file scaled in half of a file, enter:

```
vtifftool cvtgif -s2 file.tif
```

# vtifftool header

## Synopsis

```
$VSIFAX/bin/vtifftool header [-b] [-C {a | c | m | u}]  
  [-E {std | fine}] [-f <format>] -h <header> [-i] -o <file>  
  [-p <page_range>] [-r] [-u] [-v] <TIFF_file>[:<pages>]
```

## Description

This command is used to add a fax header to a TIFF file. The header can also be overlaid onto an existing header.

## Options.

<b>-b</b>	Place header on bottom.
<b>-C</b> {a   c   m   u}	Output compression type (page 208).
<b>-E</b> {std   fine}	Output resolution (page 209).
<b>-f</b> <format>	Custom date and time <format> string (page 95).
<b>-h</b> <header>	<header> string to add to the file.
<b>-i</b>	Italicize entire <header> string.
<b>-o</b> <file>	Output file name. Use dash (-) for stdout.
<b>-p</b> <page_range>	Range of pages to add the header to.
<b>-r</b>	Align header to right of page.
<b>-s</b>	Remove VSI proprietary tags (page 209).
<b>-u</b>	Underline entire <header> string.
<b>-v</b>	Overlay <header> string.
<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Examples

Add a header of “From: VSI Technical Support” into a TIFF file.

```
vtifftool header -E fine -o 1111.tif -h "From:VSI Technical Support"  
1110.tiff
```

# vtifftool info

## Synopsis

```
$VSIFAX/bin/vtifftool info [-F {dump | eval | std | tcl}] -o <file>
  [-t <tag[=<value>]>] <TIFF_file>[:<pages>]
```

## Description

This command is used to either display tag values in a TIFF file or to set a tag value in a TIFF file.

## Options

- F

<format>

Print format:

dump

Full dump on all tag.s

eval

eval format (VSI files only).

std

Standard format (VSI files only).

tcl

TCL eval format (VSI files only).
- o

<file>

Output file name. Use dash (-) for stdout.
- t

<tag[=<value>]>

If specified, the specified tag value is stored in the TIFF file.
- <TIFF\_file>[:<pages>]

Input file name and optional page ranges (page 209).

## Notes

The **-F dump** option will dump all tags of any TIFF file. The **-F eval** or **-F std** option will dump the contents of the VSI specific tags in an appropriate manner. The tag name in the **-t** option must be a VSI-specific tag name. Valid VSI tags are:

TAG	DESCRIPTION
cli	Client ID
did	DID extension
sti	Start time of fax reception
eti	End time of fax reception
fst	File status
npg	Number of pages in file

TAG	DESCRIPTION
<b>res</b>	Resolution
<b>seq</b>	Fax sequence number
<b>que</b>	Queue
<b>rtf</b>	Routed from
<b>rtt</b>	Route time
<b>tsi</b>	TSI of sending fax machine

To display the tags to stdout, If a tag is specified, the tag value by itself is displayed on.

## Examples

To display all tags in the TIFF file, called file1.tif, enter:

```
vtifftool info -F dump file1.tif
```

To extract the DID extension in the TIFF file, file1.tif, enter:

```
didext=`vtifftool info -t did file1.tif`
```

---

**NOTE:** The use of the single quote marks (') is required when entering this command.

---



# vtifftool merge

## Synopsis

```
$VSIFAX/bin/vtifftool merge [-C {a | c | m | u}] [-E {std | fine}]  
-o <file> [-s] <TIFF_file1>[:<pages>] <TIFF_file2>[:<pages>]...
```

## Description

This command will merge one or more TIFF files into a single TIFF file. It can optionally select specified pages from any of the specified input files.

## Options.

<b>-C</b>	<b>{a   c   m   u}</b>	Output compression type (page 208).
<b>-E</b>	<b>{std   fine}</b>	Output resolution (page 209).
<b>-o</b>	<b>&lt;file&gt;</b>	Output file name. Use dash (-) for stdout.
<b>-s</b>		Remove VSI proprietary tags (page 209).
	<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

## Notes

If only one input file is specified, this command is identical to the command **vtifftool copy**.

## Examples

To merge files `one.tif` and `two.tif` into `result.tif`, enter:

```
vtifftool merge -o result.tif one.tif two.tif
```

To combine the first page of file `one.tif` with pages 2 through last page of file `two.tif` into `result.tif`, enter:

```
vtifftool merge -o result.tif one.tif:1 two.tif:2-
```

# vtifftool mksig

## Synopsis

```
$VSIFAX/bin/vtifftool mksig [-C {a | c | m | u}] [-E {std | fine}]  
  [-m <margin>] -o <file> <TIFF_file>[:<pages>]
```

## Description

This command can be use to make a signature file from an existing TIFF file.

## Options.

<b>-C</b>	<b>{a   c   m   u}</b>	Output compression type (page 208).
<b>-E</b>	<b>{std   fine}</b>	Output resolution (page 209).
<b>-m</b>	<b>&lt;margin&gt;</b>	Margin size using standard measurement format (page 209).
<b>-o</b>	<b>&lt;file&gt;</b>	Output file name. Use dash (-) for stdout.
<b>-s</b>		Remove VSI proprietary tags (page 209).
	<b>&lt;TIFF_file&gt;[:&lt;pages&gt;]</b>	Input file name and optional page ranges (page 209).

# vtifftool overlay

## Synopsis

```
$VSIFAX/bin/vtifftool overlay [-C {a | c | m | u}] [-E {std | fine}]
-o <file> [-s] -x <xpos> -y <ypos> <overlay>[:<pages>]
<target>[:<pages>]
```

## Description

This command will overlay one page from the overlay file to all specified pages in the target file. The output is written to a new file.

## Options.

- C** {a | c | m | u} Output compression type (page 208).
- E** {std | fine} Output resolution (page 209).
- m** <meas> Measurement string (page 209).
- o** <file> Output file name. Use dash (-) for stdout.
- s** Remove VSI proprietary tags (page 209).
- x** <xpos> Starting horizontal (x axis) coordinate.
- y** <ypos> Starting vertical (y axis) coordinate.
- <overlay>[:<pages>]** Overlay file name and optional page ranges (page 209).
- <target>[:<pages>]** Target file name and optional page ranges (page 209).

## Notes

The default page in the overlay file is page one, and the default pages in the target file is all pages.

The x and y values are measured from the top left of the page.

Part of the overlay image can be off the page on the target page, in which case the image is truncated to the output page size.

This command can be used to overlay a signature or logo onto a page or to overlay a form on top of text data that has been imaged.

---

**NOTE:** You cannot append an image to the end of a page.

---

## Examples

To overlay `logo.tif` onto the first page of `letter.tif` (outputting to `result.tif`), enter:

```
vtifftool overlay -x 4i -o result.tif logo.tif letter.tif:1
```

To overlay page 2 of `form.tif` onto pages 2 through the last page of `invoice.tif` (outputting to `result.tif`), enter:

```
vtifftool overlay -o result.tif form.tif:2 invoice.tif:2-
```

To overlay page 1 of `form1.tif` and page 2 of `form2.tif` onto `invoice.tif` (the second command outputs to `result.tif`), enter:

```
vtifftool overlay -o - form1.tif invoice.tif:1 |  
> vtifftool overlay -o result.tif form2.tif-:2
```

To overlay each page of file `forms.tif` onto the corresponding page of `input.tif` to create a new `output.tif`, enter:

```
OVLFILE=forms.tif  
INPFILE=input.tif  
OUTFILE=output.tif  
NPAGES=`vtifftool info -t npg $OVLFILE`  
i=1  
while [ $i -lt $NPAGES ]  
> do  
>vtifftool overlay -o tmp.tif \  
$OVLFILE:$i $INPFILE:$i  
>mv tmp.tif $OUTFILE  
>INPFILE=$OUTFILE  
>i=`expr $i + 1`  
done
```

# vtifftool thumb

## Synopsis

```
$VSIFAX/bin/vtifftool thumb -o <file> <TIFF_file>[:<pages>]
```

## Description

This command will add a thumbnail to all specified pages of a TIFF file. The thumbnail is a V-Systems specific tag that is a 112 x 136 bit image of the page.

---

**NOTE:** This command is not intended to be used by users, but it is used internally by various VSI scripts.

---

A thumbnail is automatically added to received faxes by the `system.rnp` procedure.

## Options.

<code>-o</code>	<code>&lt;file&gt;</code>	Output file name. Use dash (-) for stdout.
	<code>&lt;TIFF_file&gt;[:&lt;pages&gt;]</code>	Input file name and optional page ranges (page 209).

## Notes

The `<file>` can be the same as the `<TIFF_file>`, in which case the original file is replaced.

## Examples

Add a thumbnail to all pages of a file and replacing the original file name:

```
vtifftool thumb -o file1.tif file1.tif
```

# vupload

## Synopsis

```
$VSIFAX/bin/vupload [-d <desc>] [-l] [-n <alias>] [-u] [-H <host>]  
[-U <user>] [-x] {attachment | image | folder | overlay} <file>
```

## Description

**vupload** adds new file attachment, folder, image and overlay files to the fax server. An image file is one that can be referenced by the **@+IMAGE [<file>]** command in a text file. An overlay file is one that can be referenced with the **ovs** (server overlay) tag to **vfx**.

When a file is stored on the server, it has both an **alias** and a **description**. The **description** is a verbose description of the file, and the **alias** is the name by which the file is referenced. If an **alias** is not specified, the file name is used. The forms and image directories are created when the overlay and image options are first used.

---

**IMPORTANT:** An image or overlay file must be a TIFF file.

---

## Options

<b>-d</b>	<b>&lt;desc&gt;</b>	Description associated with this file.
<b>-l</b>		List files.
<b>-n</b>	<b>&lt;alias&gt;</b>	Alias associated with this file. If not specified, the file name is used.
<b>-u</b>		Update the entry.
<b>-H</b>	<b>&lt;host&gt;</b>	Connect to this fax server host name.
<b>-U</b>	<b>&lt;user&gt;</b>	User ID.
<b>-x</b>		Delete the file.
<b>attachment</b>		Store this file as a file attachment.
<b>folder</b>		Store this file as a folder.
<b>image</b>		Store this file as an image file.
<b>overlay</b>		Store this file as an overlay file.
<b>&lt;file&gt;</b>		Uploaded this <b>&lt;file&gt;</b> .

## Notes

One of the **attachment**, **folder**, **image** or **overlay** options must be supplied.

## Examples

Upload an overlay file `invoice1.tif` to the server.

```
vupload -d "mfg invoice" -n mfg overlay invoice1.tif
```

To view the list of available overlays:

```
vfx -L overlays
```

# xmlf

## Synopsis

```
$VSIFAX/bin/xmlf [-h <URL>] [-o <file>] [-t {html | text | xml}]  
  <file> [<attachment>]
```

## Description

**xmlf** is the transport that sends a fax file to the server for transmission.

## Options

<b>-h</b> <b>&lt;URL&gt;</b>	Fax server Universal Resource Locator (URL). Default is local host.
<b>-o</b> <b>&lt;file&gt;</b>	The name of the file to put the response from the send operation. Default is displaying the response on the screen.
<b>-t</b> <b>{html   text   xml}</b>	Response format.
<b>&lt;file&gt;</b>	The name of the XML file you are sending to the server.
<b>&lt;attachment&gt;</b>	The name of a file you want to add.

## Notes

When entering a URL, the following format is required:

```
[transport://] <host> [:port number]
```

Where:

<b>transport:</b>	Defaults to <b>vxml</b> d.
<b>&lt;host&gt;</b>	Name of the fax server.
<b>port number</b>	Port number that the fax server uses to send faxes.



# TAG REFERENCE

---

Tags are the underlying technology used to tie various pieces of the VSI-FAX engine together. Tags use simple three character mnemonics for their name. Typically, these mnemonics represent what the tag does (e.g., the **cli** tag is the client ID, the **flf** tag is a local file you can attach to a fax, etc.).

Each tag stores a single value. Some tags persistently store their values in databases and on cover pages so that they can be re-used; still others only store values for a single fax request.

## Legend

This legend explains the basic information provided for each tag in the remainder of this chapter.

### Data Types

Each tag stores a single value of a particular data type. The data type is important because certain data types can only store certain kinds of information.

DATA TYPE	DESCRIPTION
Boolean	<p>Boolean data types store one of two values used to indicate opposite states (e.g., true and false, on and off, yes and no, etc.).</p> <p>The entry for each Boolean tag lists the allowable values in braces, the choices are separated by vertical bar. For example, an entry for a Boolean data type that can store either a true or false value would be “Boolean {<b>true</b>   <b>false</b>}.”</p>

DATA TYPE	DESCRIPTION
Char	<p>Character string data types store text entries up to a maximum size. The maximum size of each character string is shown in parentheses. For example, an entry for a character string data type that can store up to 64 characters would be “Char(64).”</p> <p><b>IMPORTANT:</b> Do not include any of the special characters listed in <i>Appendix A – Avoid These Special Characters</i> (page 443) in your character string entries. These special characters can cause unpredictable application behavior.</p>
Date	<p>Calendar date only (no time of day) in <b>YYYYMMDD</b> format, where:</p> <ul style="list-style-type: none"> <li>• <b>YYYY</b> is a four-digit year</li> <li>• <b>MM</b> is a two-digit month</li> <li>• <b>DD</b> is a two-digit day of the month</li> </ul>
Enumeration	An enumeration data type can only store a value found in a pre-defined list of allowable values. Documentation for enumeration data types always lists the allowable values.
Long	Signed four-byte integer. This data type can store any whole number between 2,147,483,648 and -2,147,483,648.
LongVarChar	Character string of variable length. The only tags that can store this data type are <b>vf</b> x command line tags.
Time	<p>Full date and time in <b>YYYYMMDDHHMMSS</b> format, where:</p> <ul style="list-style-type: none"> <li>• <b>YYYY</b> is a four-digit year</li> <li>• <b>MM</b> is a two-digit month</li> <li>• <b>DD</b> is a two-digit day of the month</li> <li>• <b>HH</b> is a two-digit hour in twenty-four hour format (i.e., 1:00 P.M is “13”)</li> <li>• <b>MM</b> is minutes</li> <li>• <b>SS</b> is seconds</li> </ul>
Word	Unsigned two-byte integer. This data type can store any whole number between 0 and 65, 535.

## Default Value

This entry shows any default values set in a default (i.e., un-customized) VSI-FAX environment.

If a tag is read-only, it usually won’t have a default value - the value will be populated at run time or it is a persistent value set and controlled by the system.

If a tag is modifiable, it still may not have an explicit default setting. This is because most of the modifiable tags have their values set when new classes, devices, users or profiles are added to the system. These values are often user-defined. Therefore, there is no meaningful default value.

Still other tags are deliberately left in an unset state so that values can be inherited at run time. Unset tags usually have one of the following values:

- None**      No default value is supplied; the tag is set equal to null (i.e., **""**). In most cases, the system will ignore any “null tags” when sending, receiving or routing faxes.
- 1**        Minus one is a special setting that is most often set in the user database to control which user preferences will be inherited from the master profile (page 2).

## Databases

All VSI-FAX databases that store this tag.

## Read Only?

One of three conditions is possible:

- Yes**                      Tag read-only is read-only. Read-only tags are set by VSI-FAX and cannot be modified. However, these values can be retrieved from databases using scripts.
- No**                        Tag is directly modifiable. This is typically done via the command line or MMC Fax Administration.
- “Yes” With An Explanation**      Another situation that often occurs is that a “read-only” tag is reporting an underlying system condition that *can* be modified. Modifying the underlying system condition, will change the tag value.  
  
For example, consider the **ena** tag (page 257). This tag is set **true** whenever a particular device is enabled. While this tag cannot be directly modified, the device can be disabled, which will cause the tag to be set **false**.  
  
In order to provide the most useful information, documentation for these “quasi” read-only tags show various ways you can change the underlying system condition, which will in turn set a different tag value.

## vfx Tag?

Can this tag be used with the **vfx -t** command? “Yes” if it can; “no” if it cannot. Refer to *vfx* (page 140) for additional information.

## Cover Page Tag?

Can this tag be included on fax cover pages? “Yes” if it can; “no” if it cannot. Refer to the *CoverMaker Online Help* for additional information about including tags on cover pages.

## How Do I Set This Tag?

If this is a modifiable tag, examples show various ways you can set this tag.

## acc (Device Accepting Jobs)

This tag controls whether or not a particular fax device or class will accept fax jobs from the scheduler. This setting is persistent - the fax device or class will retain the setting until it is explicitly changed even if the fax server is restarted.

<b>Data Type</b>	Boolean. { <b>on</b>   <b>off</b> }.
<b>Default Value</b>	Default value is set when the fax device is created.
<b>Database(s)</b>	qstat (page 399).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Devices > Properties > General tab > Accept jobs option.
• <b>Command Line</b>	To set a device to accept fax jobs, enter: <code>vfxadmin device -u -A on &lt;device_name&gt;</code> To set a device to not accept fax jobs, enter: <code>vfxadmin device -u -A off &lt;device_name&gt;</code>

## aco (From Area Code)

This tag stores the sender's local area code and is used during dial string conversion to determine if the recipient fax number is local or long distance.

<b>Data Type</b>	Char(8).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxreqs (page 390)</li><li>• user (page 400)</li></ul>

<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Telephony tab > Area code field.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Telephony tab > Area code field.
• <b>Universal Fax Client</b>	Edit > Preferences > Telephony tab > My area code field.
• <b>Command Line</b>	To set this value in the user database, enter: <pre>vfxadmin user -t aco="&lt;area_code&gt;" &lt;user_ID&gt;</pre> To set this value for a single fax request, include this on your <b>vfx</b> command line: <pre>vfx ... -t aco="&lt;area_code&gt;"</pre>

## act (Fax Request Status Code)

This read-only tag always stores one of the predefined numeric fax request status codes (page 36).

<b>Data Type</b>	Enumeration. Valid values are any of the predefined numeric fax request codes (page 36).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## ad1 - ad3 (To Address Lines 1 thru 3)

These three tags store the fax recipient's street address so that it can be shown on fax cover pages. The tags are completely user-definable.

The first address line typically includes the street address, suite number, etc. This tag could also be used for an attention line if the street address is included elsewhere.

The second address line often includes the department, mail station or post office box, if applicable.

The third address line typically includes the city, state, postal zip code and country.

If you are using an external (e.g., LDAP) directory, these tags also store the attribute names used to store the fax recipient's street address in the external directory.

**Data Type** Char(40).

**Default Value** None.

**Database(s)**

- datasource (page 386)
- pbper (page 397)

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > Address tab > Address 1 thru Address3 fields.
- **Command Line** To set this value for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t ad1="<address_line_1>"  
vfx ... -t ad2="<address_line_2>"  
vfx ... -t ad3="<address_line_3>"
```

## adl (Automatically Delete Routed Faxes)

This tag is a user preference that controls whether or not to automatically delete routed faxes.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Inbound tab > Delete routed fax option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Inbound tab > Delete routed fax option.
- **Command Line** To make deleting routed faxes the user preference, enter:  
`vfxadmin user -t adl="true" <user_ID>`  
 To make not deleting routed faxes the user preference, enter:  
`vfxadmin user -t adl="false" <user_ID>`

## aem (Automatically Email Routed Faxes)

This tag is a user preference that controls whether or not to automatically email routed faxes.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Inbound tab > Email routed faxes option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Inbound tab > Email routed faxes option.
- **Universal Fax Client** Edit > Preferences > Inbound tab > Routing > Email received faxes option.

- **Command Line**      To make emailing routed faxes the user preference, enter:  
                              **vfxadmin user -t aem="true" <user\_ID>**  
To make not emailing routed faxes the user preference, enter:  
                              **vfxadmin user -t aem="false" <user\_ID>**

## aln (To Fax Area Code Length)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the **far** (recipient fax area code) tag (page 261).

## apr (Automatically Print Routed Faxes)

This tag is a user preference that controls whether or not to automatically print routed faxes after they are received.

- |                        |   |
|------------------------|---|
| <b>Data Type</b>       | Boolean { <b>true</b>   <b>false</b> }. |
| <b>Default Value</b>   | -1.                                     |
| <b>Database(s)</b>     | user (page 400).                        |
| <b>Read Only?</b>      | No.                                     |
| <b>vfx Tag?</b>        | No.                                     |
| <b>Cover Page Tag?</b> | No.                                     |

**How Do I Set This Tag?**

- **MMC**      Profiles > Properties > Inbound tab > Print routed faxes option.
- **Outlook Fax Client**      Actions > Fax Profile Settings > Inbound tab > Print routed faxes option.
- **Universal Fax Client**      Edit > Preferences > Inbound tab > Printing > Print received faxes option.
- **Command Line**      To make printing routed faxes the user preference, enter:  
                              **vfxadmin user -t apr="true" <user\_ID>**  
To make not printing routed faxes the user preference, enter:  
                              **vfxadmin user -t apr="false" <user\_ID>**



## arc (Automatically Archive Sent Faxes)

This tag is a user preference that controls whether or not to automatically archive faxes after they are sent.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Outbound tab > Archive sent faxes option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Outbound tab > Archive sent faxes option.
- **Command Line** To make archiving sent faxes the user preference, enter:  

```
vfxadmin user -t arc="true" <user_ID>
```

 To make not archiving sent faxes the user preference, enter:  

```
vfxadmin user -t arc="false" <user_ID>
```

 To archive a single fax request after it is sent, include this on your **vfx** command line:  

```
vfx ... -t arc="true"
```

 To not archive a single fax request after it is sent, include this on your **vfx** command line:  

```
vfx ... -t arc="false"
```

## are (Numeric Fax Attempt Status Code)

This read-only tag always stores one of the predefined numeric fax attempt status codes (page 34).

**Data Type** Enumeration. Valid values are any of the predefined numeric fax attempt codes (page 34).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## arf (Application Reference)

This tag stores the value for an XML-F application-reference element. Refer to your *VSI-FAX Integration Manual* for additional information about XML-F.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** Yes.

### **How Do I Set This Tag?**

- **Command Line** First, set a value for the application-reference element in a fax submit document.

Next, submit this document to the fax server using this command:

```
xmlf <my_document>
```

## arn (Reject Reason)

This tag stores a comment string that will be shown whenever a fax device or class is set to reject (not accept) new fax jobs and fax server status is requested.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** qstat (page 399).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Classes > Properties > Reject reason or Devices > Properties > General tab > Reject reason.

## ars (Fax Attempt Status Code Description)

This is a read-only tag in the faxreqs database (page 390). It stores the text description of an **are** tag (page 237).

## asi (Accept Time)

Date and time the fax device or class was last set to accept fax jobs.

**Data Type** Time.

**Default Value** None.

**Database(s)** qstat (page 399).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## asq (Assigned Fax Queue)

This read-only tag stores the fax device or class to which this fax request was originally assigned. If least cost routing (page 79) or load balancing is used, the actual fax device or class used to send this fax request may be different.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## atq (Actual Fax Queue)

This read-only tag stores the actual fax device or class that sent or is sending this fax request. If least cost routing (page 79) or load balancing is used, the original assigned fax device or class used to send this fax request may be different

**Data Type** Char(32).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## att (Attempt Number)

This read-only tag stores the current fax attempt number if the fax request is still being sent, the last fax attempt number if the fax request has expired due to successful send or the maximum number or retries attempted unsuccessfully.

**Data Type** Long.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## car (To Cellular Area Code)

This tag stores the fax recipient's cellular telephone area code.

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Cellular phone field updates the entire cellular number (not just the area code).

## cat (Current Attempt)

If sending, this read-only tag stores the current attempt number. If waiting for next retry, this read-only tag stores the number of next retry attempt.

**Data Type** Long.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## ccn (To Cellular Country Code)

This tag stores the numerical county code for fax recipient's cellular telephone.

**Data Type** Char(8).

**Default Value**           None.

**Database(s)**           pbper (page 397).

**Read Only?**           No.

**vfx Tag?**           No.

**Cover Page Tag?**   No.

**How Do I Set This Tag?**

- **MMC**                   Directories > People > Properties > General tab > Cellular phone field updates the entire cellular number (not just the country code).

## cdd (Calculate DID)

Used with *DirectFax Routing* (page 9). Controls whether or not to calculate a Direct Inward Dial (DID) routing number by stripping the last four digits from the sender's (from) fax number. The from fax number is stored via the **ffn** tag (page 268).

**Data Type**           Boolean {**true** | **false**}.

**Default Value**       -1.

**Database(s)**       user (page 400).

**Read Only?**       No.

**vfx Tag?**       No.

**Cover Page Tag?**   No.

**How Do I Set This Tag?**

- **Command Line**       To make calculating the DID extension the user preference, enter:  
                          **vfxadmin user -t cdd="true" <user\_ID>**  
                          To make not calculating the DID extension the user preference, enter:  
                          **vfxadmin user -t cdd="false" <user\_ID>**

## cel (To Full Cellular Number)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the recipient cellular country code, area code, number and extension tags; **ccn** (page 241), **car** (page 241), **c1o** (page 244) and **cex** (page 243), respectively.

## cex (To Cellular Extension)

This tag stores the fax recipient's cellular telephone extension number.

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Cellular phone field updates the entire cellular number (not just the extension).

## cli (Client ID)

This tag stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.

**Data Type** Char(32).

**Default Value** Default value set in user database when VSI-FAX user account is created.

**Database(s)**

- dslookup (page 387)
- faxreqs (page 390)
- ilog (page 395)
- pbgrp (page 396)
- pbmem (page 396)
- pbper (page 397)
- user (page 400)

**Read Only?** Modifiable on **vfx** command line; read-only elsewhere.

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

#### **How Do I Set This Tag?**

- **Command Line** To send a fax as another user, include this on your **vfx** command line:  
`vfx ... -t cli="<user_ID>"`

## clo (To Cellular Number)

This tag stores the fax recipient's base cellular telephone number sans country code, area code and extension. For example, in the US this is a seven-digit telephone number.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Cellular phone field updates the entire cellular number (not just the basic seven-digit number).

## cmp (To Company Name)

This read-only tag stores the fax recipient's company name. This tag is read only; the value is retrieved from the **com** tag (page 245) when the fax request is created.

If you are using an external (e.g., LDAP) directory, this tag also stores the attribute name used to store the fax recipient's company in the external directory.

**Data Type** Char(32).

**Default Value** None.



<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• datasource (page 386)</li> <li>• faxreqs (page 390)</li> </ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## cnt (Data Source Country Name Field Identifier)

This read-only tag stores an external data source country name field identifier.

<b>Data Type</b>	Char(24).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## com (To Company Name)

This tag stores the fax recipient's company name.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Company field.

## cos (Clear On Send)

This is a legacy tag that formerly controlled whether or not the VSI-Win and VSI-X send fax forms should be cleared following each sent fax. This tag is not used with current VSI-FAX clients.

---

**IMPORTANT:** Directly modifying this tag may cause unpredictable application behavior.

---

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## cou (To Country Name)

This tag stores the fax recipient's country name.

<b>Data Type</b>	Char(24).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > Address tab > Country field.

## csi (Called Subscriber ID)

This read-only tag stores the Called Subscriber ID (CSI) string. This is typically your outgoing fax number.

<b>Data Type</b>	Char(24).
<b>Default Value</b>	Default value is set during installation.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## cst (Cost Code)

This tag stores an optional sender cost code. Cost codes are typically used in large enterprises for cost accounting purposes (e.g., billing fax server usage to a particular division or department).

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxreqs (page 390)</li><li>• ilog (page 395)</li><li>• user (page 400)</li></ul>
<b>Read Only?</b>	Read-only in faxreqs and ilog databases; modifiable in user database (sets persistent user preference).
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > General tab > Cost code field.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > General tab > Cost code field.
• <b>Universal Fax Client</b>	Edit > Preferences > Cover page tab > User-defined fields > Cost code field.

• **Command Line**

To enter a cost code for a particular user, enter:

```
vfxadmin user -t cst="<cost_code>" <user_ID>
```

## cvr (Cover Page)

This tag controls which cover page to use when sending faxes.

**Data Type**

Enumeration. Valid values are cover pages defined for use with this fax server by the fax administrator. The default VSI-FAX installation provides these cover pages:

- **bold**
- **centered**
- **classic**
- **contemporary**
- **default**
- **hdronbottom**
- **largehdr**
- **leftaligned**
- **ltrhead**
- **modern**
- **outlook**

**Default Value**

None.

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?**

Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?**

Yes.

**Cover Page Tag?**

No.

**How Do I Set This Tag?**• **MMC**

Profiles > Properties > Cover Page tab > Cover page field.

• **Outlook Fax Client**

Actions > Fax Profile Settings > Cover Page tab > Cover page field.

• **Universal Fax Client**

Edit > Preferences > Cover page tab > Cover page drop-down list.

• **Command Line**

To set a default cover page for a particular user, enter:

```
vfxadmin user -t cvr="<cover_page>" <user_ID>
```

## dat (External Data Source Type)

This read-only tag stores an external data source type designation. Currently, **ldap** is the only supported data type. Future versions of VSI-FAX may support other data types (e.g., databases).

<b>Data Type</b>	Enumeration. Valid values are: <ul style="list-style-type: none"> <li><b>db</b> This type designation is provided for future growth and is reserved for VSI internal use only at this time.</li> <li><b>ldap</b> External data source is a Lightweight Directory Access Protocol (LDAP) directory.</li> <li><b>sync</b> This type designation is provided for future growth and is reserved for VSI internal use only at this time.</li> </ul>
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## dbt (External Database Type)

If the external data source type designation is a database, this tag stores which type of database it is. The external data source type is set by the **dat** tag (page 249).

---

**IMPORTANT:** This tag is provided for future growth and is reserved for VSI internal use only at this time.

---

<b>Data Type</b>	Enumeration.
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.

**Cover Page Tag?** No.

## ddl (DID Length)

Direct Inward Dial (DID) extensions are used to implement DirectFax routing (page 9) of incoming faxes to the appropriate user's fax inbox. DID extension length is calculated based on the value stored in the **did** (DID Extension) tag (page 252).

<b>Data Type</b>	Long.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## dev (Device Port)

This tag stores the fax device serial port assignment. Each fax device must be assigned to a unique and dedicated serial port. An initial port assignment is always made when the device is created; you can change that initial port assignment later to support changes to your system configuration.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### **How Do I Set This Tag?**

- **MMC** Devices > Properties > General tab > Device port field.

## df1 (Default Fax Device)

One fax device on the fax server can be designated as the default device. If this default device was used to send a fax, that record in the qstat database will have the **df1** tag value set **true**.

**Data Type** Boolean {**true** | **false**}.

**Default Value** None.

**Database(s)** qstat (page 399).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Devices > Properties > General tab > Default device option.
- **Command Line** To make a particular device the default device (set the **df1** tag **true**), enter:  

```
vfxadmin device -u -d <device_name>
```

## dia (Dial String)

This read-only tag stores the actual dial string (i.e., post dial string processing) used to send the fax.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## did (DID Extension)

Direct Inward Dial (DID) extensions are used to implement DirectFax routing (page 9) of incoming faxes to the appropriate user's fax inbox.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• ilog (page 395)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in ilog database; modifiable in user database (sets persistent user preference).
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Advanced Inbound tab > DID number field.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Advanced Inbound tab > DID number field.
• <b>Command Line</b>	To enter a DID extension for a particular user, enter: <code>vfxadmin user -t did="&lt;DID_extension&gt;" &lt;user_ID&gt;</code>

## dnm (Class Name)

Class name specified when the class was created. Classes cannot be renamed (you must delete the old class and create a new one with the new name).

<b>Data Type</b>	Char(32).
<b>Default Value</b>	Default value is set when the class is created.
<b>Database(s)</b>	class (page 385).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.



## don (Done)

This read-only tag is a status flag that is set **true** when the fax request is complete.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## dsc (Device Description)

This tag stores a short description or comments about this fax device.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Devices > Properties > Comment field.
• <b>Command Line</b>	<code>vfxadmin device -u -n "&lt;description&gt;" &lt;device_name&gt;</code>

## dsp (Display Fax Status Dialog Box)

This tag is a user preference that controls whether or not to show fax status dialog box when sending faxes.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
------------------	---

<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > General tab > Show fax status option.
- **Outlook Fax Client** Actions > Fax Profile Settings > General tab > Show fax status option.
- **Command Line** To make showing the fax status dialog box the user preference, enter:  
`vfxadmin user -t dsp="true" <user_ID>`  
To make not showing the fax status dialog box the user preference, enter:  
`vfxadmin user -t dsp="false" <user_ID>`

## dst (Device Name)

This tag stores the device name specified when the device was created. Devices cannot be renamed (you must delete the old device and create a new one with the new name).

<b>Data Type</b>	Char(32).
<b>Default Value</b>	Default value is set when the device is created.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## dsv (Data Source Host Name)

This read-only tag stores an external data source host name or IP address.

<b>Data Type</b>	Char(64).
------------------	-----------

<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## dtf (Custom Date Format)

This tag stores a custom date format that is used in place of the default date format. Refer to *Date and Time Format* (page 95) for additional information.

---

**NOTE:** VSI-FAX generally uses the “date” to mean a shortened version of the “time,” which is both the calendar date and time of day.

---

<b>Data Type</b>	Char(32). The character string can contain plain text or any of the date and time tokens (page 95).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To set the default date format to full European style (i.e., day/month/four-digit year) for a particular user, enter:  

```
vfxadmin user -t dtf="%d/%m/%Y" <user_ID>
```

To set the date format to short American style (i.e., two-digit year, month and day) for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t dtf="%y/%m/%d"
```

## dwn (Device Down)

This tag is a read-only status flag that is set **true** when the device is disabled (page 28). It is always the opposite state of the **ena** tag (page 257).

**Data Type** Boolean {**true** | **false**} or {**on** | **off**}.  
**NOTE:** Any of these values will work from the command line but **true** or **false** is always stored in the database.

**Default Value** **false**.

**Database(s)** dstat (page 388).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

### *How Do I Set This Tag?*

- **MMC** Devices > Properties > General tab > Enabled option.
- **Command Line** To enable a particular device (set the **dwn** tag **false**), enter:  
`vfxadmin device -u -E on <device_name>`  
To disable a particular device (set the **dwn** tag **true**), enter:  
`vfxadmin device -u -E off <device_name>`

## ela (Fax Request Elapsed Time)

This is a read-only tag in the faxreqs database (page 390). It stores the numerical difference between the start time and end time tags; **sti** (page 344) and **eti** (page 259), respectively.

## ema (To Email Address)

This tag stores the fax recipient's email address.

If you are using an external (e.g., LDAP) directory, this tag also stores the attribute name used to store the fax recipient's email address in the external directory.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• datasource (page 386)</li> <li>• pbper (page 397)</li> </ul>
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Directories > People > Properties > Address tab > Email field.

## ena (Device Enabled)

This tag is a read-only status flag that is set **true** when the device is enabled (page 28). It is always the opposite state of the **dwn** tag (page 256).

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> } or { <b>on</b>   <b>off</b> }.
	<b>NOTE:</b> Any of these values will work from the command line but <b>true</b> or <b>false</b> is always stored in the dstat database.
<b>Default Value</b>	<b>true</b> .
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	Yes.
	<b>NOTE:</b> Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The <i>How Do I Set This Tag?</i> examples show how to modify the underlying system condition.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

*How Do I Set This Tag?*

- **MMC** Devices > Properties > General tab > Enabled option.
- **Command Line** To enable a particular device (set the **ena** tag **true**), enter:  
`vfxadmin device -u -E on <device_name>`  
To disable a particular device (set the **ena** tag **false**), enter:  
`vfxadmin device -u -E off <device_name>`

# ern (Device Disabled Reason)

This tag stores a comment string that will be shown whenever the device is disabled and fax server status is requested.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

*How Do I Set This Tag?*

- **MMC** Devices > Properties > General tab. Unset the Enabled option, then enter a short comment in the Disabled reason field.

# err (Error Message)

This read-only tag stores a system error message if an error was detected. In most cases, this tag will be empty.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## esi (Device Enable Time)

This tag stores the full date and time this device was last enabled.

**Data Type** Time.

**Default Value** Value is set each time the device is enabled.

**Database(s)** dstat (page 388).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

### *How Do I Set This Tag?*

- **MMC** Devices > Properties > General tab > Enabled option.
- **Command Line** To enable a particular device (set the **esi** tag to current time), enter:  

```
vfxadmin device -u -E on <device_name>
```

## eti (Fax Request End Time)

This read-only tag stores full date and time a fax request was successfully sent or the last retry was attempted and failed.

**Data Type** Time.

**Default Value** None.

**Database(s)**

- faxreqs (page 390)
- ilog (page 395)

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## **fa1 - fa3 (From Address Lines 1 thru 3)**

These tags are used to store the sender's street address in the user profile and display it on cover pages. The tags are completely user-definable.

The first address line typically includes the street address, suite number, etc. This tag could also be used for an attention line if the street address is included elsewhere.

The second address line often includes the department, mail station or post office box, if applicable.

The third address line typically includes the city, state, postal zip code and country.

**Data Type** Char(40).

**Default Value** None.

**Database(s)**

- faxtags (page 394)
- user (page 400)

**Read Only?** Read-only in faxtags database; modifiable in user database (sets persistent user preference).

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

### **How Do I Set This Tag?**

• **MMC** Profiles > Properties > Cover Page tab > Address 1 thru Address 3 fields.

• **Outlook Fax Client** Actions > Fax Profile Settings > Cover Page tab > Address 1 thru Address 3 fields.

• **Universal Fax Client** Edit > Preferences > Cover page tab > From > Address 1 thru Address 3 fields.



- **Command Line**

To enter address lines 1 thru 3 for a particular user, enter:

```
vfxadmin user -t fa1="<address_line_1>"
<user_ID>
vfxadmin user -t fa2="<address_line_2>"
<user_ID>
vfxadmin user -t fa3="<address_line_3>"
<user_ID>
```

To enter address lines 1 thru 3 for a single fax request, include this on your **vfx** command line:

```
vfx ... -t fa1="<address_line_1>"
vfx ... -t fa2="<address_line_2>"
vfx ... -t fa3="<address_line_3>"
```

## far (To Fax Number Area Code)

This tag stores the fax recipient's fax number area code.

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Directories > People > Properties > General tab > Fax number field updates the entire fax number (not just the area code).

## fax (To Full Fax Number)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the recipient fax country code, area code, number and extension tags; **fcn** (page 262), **far** (page 261), **f1o** (page 271) and **fex** (page 267), respectively.

If you are using an external (e.g., LDAP) directory, this tag also stores the attribute name used to store the fax recipient's email address in the external directory. This value is stored in the in the datasource database (page 386).

## fcn (To Fax Number Country Code)

This tag stores numerical county code for the recipient's fax number.

**Data Type** Char(24).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Fax number field updates the entire fax number (not just the country code).

## fcn (From Country Name)

This tag stores the sender's country name so that it can be shown on fax cover pages.

**Data Type** Char(24).

**Default Value** None.

**Database(s)**

- faxtags (page 394)
- user (page 400)

**Read Only?** Read-only in faxtags database; modifiable in user database (sets persistent user preference).

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

#### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Cover Page tab > Country field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Cover Page tab > Country field.
- **Universal Fax Client** Edit > Preferences > Cover page tab > Company > Country field.
- **Command Line** To enter a country name in a particular user profile, enter:  

```
vfxadmin user -t fcn="<country_name>" <user_ID>
```

## fco (From Company Name)

This tag stores the sender's company name so that it can be shown on fax cover pages.

**Data Type** Char(64).

**Default Value** None.

**Database(s)**

- faxtags (page 394)
- user (page 400)

**Read Only?** Read-only in faxtags database; modifiable in user database (sets persistent user preference).

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

#### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Cover Page tab > Company field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Cover Page tab > Company field.
- **Universal Fax Client** Edit > Preferences > Cover page tab > Company > Name field.
- **Command Line** To enter a company name in a particular user profile, enter:  

```
vfxadmin user -t fco="<company_name>" <user_ID>
```

## fcv (File Conversion Options)

This tag specifies various options for converting various kinds of files to fax-able TIFF files.

<b>Data Type</b>	Enumeration. Valid values are:
<b>dde</b>	Use Windows Dynamic Data Exchange (DDE) to convert supported Windows file types to TIFF files. Imaging will be accomplished by opening the actual application associated with each file type in Windows.
<b>nodde</b>	Use the built-in VSI-FAX TIFF converter for supported Windows file types (mstotif).
<b>tags</b>	Enable special tag processing. Look for and process any tags found inside file attachments.

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **Command Line** To use the built-in VSI-FAX TIFF converter to convert supported Windows file types to TIFF files for a single fax request, include this on your **vfx** command line:

```
vfx ... -t fcv="nodde"
```

To use Windows DDE to convert supported Windows file types to TIFF files for a single fax request, include this on your **vfx** command line:

```
vfx ... -t fcv="nodde"
```

To enable Enable special tag processing of file attachments for a single fax request, include this on your **vfx** command line:

```
vfx ... -t fcv="tags"
```

## fdl (Local Folder)

This tag specifies a local (i.e., non-server) folder (directory) to include with your fax. If you use this tag, the entire contents of this folder (directory) are faxed. This tag must include the full path and file name of this folder (directory).

**A Word About File Types** Because a directory can contain more than one file type, each file must be using the standard extension for that file type. You cannot use the **ftp** tag (page 277) to assert the file type because you would need to specify multiple **ftp** tags (one for each file type in the directory) and the fax server would have no way of knowing which file type you were asserting. Refer to *Imaging Overview* (page 10) for additional information about supported files types and how they are imaged.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To include the entire contents of a local (i.e., non-server) folder (directory) with a single fax request, include this on your **vfx** command line:  

```
vfx ... -t fdl="<full_path_and_folder_name>"
```

## fds (Server Folder)

This tag specifies a folder (directory) to include with your fax. If you use this tag, the entire contents of this folder (directory) are faxed.

**A Word About Server Resources** Server resources (e.g., attachments, overlays, folders) must be uploaded using the **vupload** command (page 226) or added via MMC fax administration before they can be used. Following the upload, these resources are stored in the `$VSI_FAX/lib` directory and managed by VSI-FAX. Therefore, you only need to include the resource name (not the full path) with this tag.

<b>Data Type</b>	LongVarChar.
------------------	--------------

**Default Value**           None.

**Database(s)**           None. **vfx** tag only.

**Read Only?**           No.

**vfx Tag?**           Yes.

**Cover Page Tag?**   No.

**How Do I Set This Tag?**

- **Command Line**       To include a server file attachment with a single fax request, include this on your **vfx** command line:

```
vfx ... -t fds="<folder_name>"
```

## fem (From Email Address)

This tag stores the sender's email address so that it can be shown on fax cover pages.

**Data Type**           Char(64).

**Default Value**       None.

**Database(s)**

- faxtags (page 394)
- user (page 400)

**Read Only?**       Read-only in faxtags database; modifiable in user database (sets persistent user preference).

**vfx Tag?**       Yes.

**Cover Page Tag?**   Yes.

**How Do I Set This Tag?**

- **MMC**           Profiles > Properties > Cover Page tab > Email field.
- **Outlook Fax Client**   Actions > Fax Profile Settings > Cover Page tab > Email field.
- **Universal Fax Client**   Edit > Preferences > Cover page tab > From > Email field.
- **Command Line**       To enter an email address in a particular user profile, enter:  

```
vfxadmin user -t fem="<email_address>" <user_ID>
```

## fex (To Fax Extension)

This tag stores the recipient's fax extension number.

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Fax number field updates the entire fax number (not just the extension).

## ffl (FIM Flags)

This read-only tag stores Fax Interface Module (FIM) diagnostics and status. It is also used by **vfxadmin** (page 145) to ensure that all members of a class are of the same type (i.e., their FIM flags must match).

**Data Type** Enumeration of numeric values; each corresponds to a short string description. Valid values are:

VALUE	STRING	DESCRIPTION
0001	DSTAT_CAN_SEND	FIM can send faxes.
0002	DSTAT_CAN_RECV	FIM can receive faxes.
0004	DSTAT_USES_DEV	FIM uses a physical fax device (e.g., modem or fax board).
0008	DSTAT_USES_PNUM	FIM needs a phone number in job.
0010	DSTAT_USES_EMAIL	FIM uses email (e.g., sendmail FIM).
0020	DSTAT_NO_DEFAULT	FIM may not be default FIM (e.g., sendmail FIM).
0040	DSTAT_LOCAL_OK	FIM can run in demo mode.

	0080	DSTAT_IS_DUMMY	Dummy entry (e.g., LCR hold queue).
	0100	DSTAT_IS_DEFAULT	Default FIM.
	0200	DSTAT_NEEDS_LIC	FIM will not run if Small Business Edition (SBE) license is present.
	0400	DSTAT_NO_CHECK	Do not check device.
<b>Default Value</b>	None.		
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• dstat (page 388)</li> <li>• qstat (page 399)</li> </ul>		
<b>Read Only?</b>	Yes.		
<b>vfx Tag?</b>	No.		
<b>Cover Page Tag?</b>	No.		

## ffn (From Fax Number)

This tag stores the sender's base fax telephone number sans country code, area code and extension. For example, in the US this is a seven-digit telephone number.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxtags (page 394)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxtags database; modifiable in user database (sets persistent user preference).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Cover Page tab > Fax field.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Cover Page tab > Fax field.
• <b>Universal Fax Client</b>	Edit > Preferences > Cover page tab > From > Fax field.



• **Command Line**

To enter a fax number in a particular user profile, enter:

```
vfxadmin user -t ffn="<fax_number>" <user_ID>
```

## fhn (From Host Name)

When a fax request is routed to another fax server via least cost routing (page 79), this read-only tag stores the originating (i.e., forwarded from) fax server host name or IP address.

The **lcr** tag (page 287) controls whether or not to use least cost routing; the **thn** tag (page 351) stores the destination (i.e., forwarded to) fax server host name or IP address.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## fim (FIM)

This tag stores the Fax Interface Module (FIM) assigned to this device. An initial FIM assignment is always made when the device is created; you can change that initial FIM assignment later to support changes to your system configuration.

<b>Data Type</b>	Enumeration. Valid values are:
<b>b1</b>	Class 1/2/2.0 fax modem. Interfaces to virtually any supported fax modem. Use this FIM if <b>c2</b> does not work properly.
<b>bt</b>	Brooktrout fax board. Used exclusively to interface with multi-channel fax boards manufactured by Brooktrout Technologies.
<b>c2</b>	Class 2/2.0 fax modem. Preferred FIM for interfacing to true class 2 fax modems.
<b>1b</b>	Loopback. Primarily used for testing. Sent faxes are automatically routed to sender's fax inbox.

	<b>lcr</b>	Least Cost Routing (LCR). Refer to <i>Least Cost Routing</i> (page 79) for additional information.
	<b>sm</b>	Send mail. Routes faxes to user's email box.
<b>Default Value</b>	<b>c2.</b>	
<b>Database(s)</b>	dstat (page 388).	
<b>Read Only?</b>	No.	
<b>vfx Tag?</b>	No.	
<b>Cover Page Tag?</b>	No.	
<b>How Do I Set This Tag?</b>		
• <b>MMC</b>	Devices > Properties > General tab > Fax interface drop-down list.	
• <b>Command Line</b>	To set the Class 2 FIM as the interface module for a particular device, enter: <code>vfxadmin device -u -i c2 &lt;device_name&gt;</code>	

## fir (To First Name)

This tag stores the fax recipient's first name.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Directories > People > Properties > General tab > First name field.

## fll (Local File Attachment)

This tag specifies a local (i.e., non-server) file attachment to include with your fax. This tag must include the full path and file name of this attachment.

**Data Type** LongVarChar.

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **Command Line** To include a local (i.e., non-server) file attachment with a single fax request, include this on your **vfx** command line:

```
vfx ... -t fll="<full_path_and_file_name>"
```

## flo (To Fax Number)

This tag stores the fax recipient's base fax telephone number sans country code, area code and extension. For example, in the US this is a seven-digit telephone number.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Directories > People > Properties > General tab > Fax number field updates the entire fax number (not just the basic seven-digit number).

## fls (Server File Attachment)

This tag specifies a server file attachment to include with your fax.

### ***A Word About Server Resources***

Server resources (e.g., attachments, overlays, folders) must be uploaded using the **vupload** command (page 226) or added via MMC fax administration before they can be used. Following the upload, these resources are stored in the `$VSI-FAX/lib` directory and managed by VSI-FAX. Therefore, you only need to include the resource name (not the full path) with this tag.

<b><i>Data Type</i></b>	LongVarChar.
<b><i>Default Value</i></b>	None.
<b><i>Database(s)</i></b>	None. <b>vfx</b> tag only.
<b><i>Read Only?</i></b>	No.
<b><i>vfx Tag?</i></b>	Yes.
<b><i>Cover Page Tag?</i></b>	No.

### ***How Do I Set This Tag?***

- **Command Line** To include a server file attachment with a single fax request, include this on your **vfx** command line:

```
vfx ... -t fls="<file_name>"
```

## flw (Flow Control Mode)

This is a read-only status flag that shows the device flow control mode.

<b><i>Data Type</i></b>	Long.
<b><i>Default Value</i></b>	None.
<b><i>Database(s)</i></b>	dstat (page 388).
<b><i>Read Only?</i></b>	Yes.
<b><i>vfx Tag?</i></b>	No.
<b><i>Cover Page Tag?</i></b>	No.

## fnm (Custom From Name)

When sending faxes, VSI-FAX uses the user name stored in the **usr** tag (page 369) as the “from name” unless a custom “from name” is defined using this tag.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxtags (page 394)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxtags database; modifiable in user database (sets persistent user preference).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.
<b>How Do I Set This Tag?</b>	

- **Command Line** To set a custom “from name” for a particular user, enter:  

```
vfxadmin user -t fnm="<from_name>" <user_ID>
```

To use a custom “from name” for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t fnm="<from_name>"
```

## fnm (Data Source First Name Field Identifier)

This read-only tag stores an external data source first name field identifier.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## fno (File Number)

This read-only tag stores an incremental file attachment identifier that is used to identify multiple file attachments in the same fax request. The first faxofns database (page 389) entry for a specific fax request is always 1; subsequent entries for additional file attachments increment accordingly.

<b>Data Type</b>	Long.
<b>Default Value</b>	1.
<b>Database(s)</b>	faxofns (page 389)
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## fpg (TIFF File Attachment Page Range)

This tag stores a rang of pages within a multi-page TIFF file fax attachment. If a single number is supplied, only that page is faxed. To specify a range of pages within the TIFF file, supply a start and an end page separated by a hyphen (-) .

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To fax page 2 of a multi-page TIFF file, supply this on your **VFX** command line:  

```
vfx -t fl="my_file.tif" -t fpg="2"
```

To fax pages 3 thru 5 of a multi-page TIFF file, supply this on your **VFX** command line:  

```
vfx -t fl="my_file.tif" -t fpg="3-5"
```

## fpl (File Attachment Page Size)

This tag controls the file attachment page size. Supported page sizes are:

- Letter (8.5 x 11 inches)
- Legal (8.5 x 14 inches)
- A4 (210 x 297 mm)

**Data Type** Enumeration. Valid values are:

**letter** Letter size.

**legal** Legal size.

**a4** A4 size.

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **Command Line** To assert the file attachment pages size to letter, include this on your **vfx** command line:

```
vfx ... -t fpl="letter"
```

To assert the file attachment pages size to A4, include this on your **vfx** command line:

```
vfx ... -t fpl="a4"
```

## frs (File Attachment Send Resolution)

This tag controls the file attachment send resolution. Choices are:

- Standard
- Fine

Fine resolution creates larger image files and takes longer to send but is generally preferred because it promotes maximum legibility.

**Data Type** Enumeration. Valid values are:

- **standard**
- **fine**

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **Command Line** To send your file attachment using “fine” resolution, include this on your **vfx** command line:

```
vfx ... -t frs="fine"
```

To send your file attachment using “standard” resolution, include this on your **vfx** command line:

```
vfx ... -t frs="standard"
```

## **fsq (Previous Request ID)**

This read-only tag is intended for VSI internal use only. It stores the original fax sequence number when it is forwarded to another fax server for least cost routing (page 79). This tag is used in conjunction with the **fh**n tag (page 269) to specify the a full originating job ID (i.e., originating fax server and original sequence number) so that the sender can get fax status.

**Data Type** Long.

**Default Value** 0.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.



## ftp (File Attachment Type)

If your local file attachment, specified with the **f11** tag (page 271), does not have a file extension or uses an extension other than the expected extension for that type (e.g., a PostScript file with an extension other than .ps), this tag allows you to assert which file type it is so that it can be correctly imaged by the fax server. Refer to *Imaging Overview* (page 10) for additional information about supported files types and how they are imaged.

### Data Type

Enumeration. Valid values on all supported platforms are:

<b>ep</b>	Epson printer file.
<b>pcl</b>	PCL 5e file.
<b>ps</b>	PostScript Level 1 file.
<b>tif</b>	TIFF group 3 or group 4 file.
<b>txt</b>	ASCII text file.

These values are also valid for Windows fax servers:

<b>doc</b>	Microsoft Word document file.
<b>pdf</b>	Adobe Acrobat Portable Document Format (PDF) file.
<b>ppt</b>	Microsoft PowerPoint file.
<b>rtf</b>	Microsoft Word Rich Text Format (RTF) files.
<b>x1?</b>	Microsoft Excel files with a .x1? extension (i.e., “.x1” followed by any other character).

### Default Value

**txt.**

### Database(s)

None. **vfx** tag only.

### Read Only?

No.

### vfx Tag?

Yes.

### Cover Page Tag?

No.

### How Do I Set This Tag?

#### • Command Line

To include a local (i.e., non-server) file attachment with a single fax request and assert that it is a PostScript file, regardless of the extension, include this on your **vfx** command line:

```
vfx ... -t f11="<file_name>" -t ftp="ps"
```

## fvl (Local Overlay)

This tag specifies a local overlay file to be place on top of your fax. This tag must include the full path and file name of a Tagged Image File Format (TIFF) file. Refer to your *VSI-FAX Integration Manual* for additional information about building fax forms using overlays.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To specify a local overlay to use with a single fax request, include this on your **vfx** command line:

```
vfx ... -t fvl="<full_path_and_file_name>"
```

## fvn (From Voice Number)

This tag stores the sender's base voice telephone number sans country code, area code and extension. For example, in the US this is a seven-digit telephone number.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxtags (page 394)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxtags database; modifiable in user database (sets persistent user preference).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Cover Page tab > Phone field.

- **Outlook Fax Client**      Actions > Fax Profile Settings > Cover Page tab > Phone field.
- **Universal Fax Client**      Edit > Preferences > Cover page tab > From > Phone field.
- **Command Line**      To enter a voice number for a particular user, enter:  
                                  **vfxadmin user -t fvn="<voice\_number>" <user\_ID>**  
                                  To enter a voice number for a single fax request, include this on your **vfx**  
                                  command line:  
                                  **vfx ... -t fvn="<voice\_number>"**

## fvs (Server Overlay)

This tag specifies a server overlay file to include with your fax. Refer to your *VSI-FAX Integration Manual* for additional information about building fax forms using overlays.

- A Word About Server Resources**      Server resources (e.g., attachments, overlays, folders) must be uploaded using the **vupload** command (page 226) or added via MMC fax administration before they can be used. Following the upload, these resources are stored in the `$VSI-FAX/lib` directory and managed by VSI-FAX. Therefore, you only need to include the resource name (not the full path) with this tag.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line**      To include a server overlay file with a single fax request, include this on your **vfx** command line:  
                                  **vfx ... -t fvs="<file\_name>"**

## gal (Group Name)

This tag stores the group name specified when the group was created. Groups cannot be renamed (you must delete the old group and create a new one with the new name).

<b>Data Type</b>	Char(16).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• pbgrp (page 396)</li><li>• pbmem (page 396)</li></ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

## gde (Group Description)

This tags stores a short description or comments about this group.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbgrp (page 396).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### **How Do I Set This Tag?**

- **MMC** Directories > Groups > Properties > General tab > Description field.

## gnp (Group Notify Procedure)

This tag sets which user Group Notify Procedure (GNP) to run. Refer to *User and Device Notify Procedures* (page 50) and *Group Notify Procedures (GNPs)* (page 54) for additional information about the group notification mechanism.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxreqs (page 390)</li><li>• user (page 400)</li></ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Notify tab > Group notify program field.
- **Command Line** To set a user GNP for a particular user, enter:  

```
vfxadmin user -t gnp="<gnp_name>" <user_ID>
```

To specify a user GNP for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t gnp="<gnp_name>"
```

## grp (Group File)

This tag specifies a group file. Group files store lists of recipients that will all receive the same fax. Refer to your *VSI-FAX Integration Manual* for additional information about group files.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **Command Line** To send a group fax using a group file, include this on your **vfx** command line:

```
vfx ... -t grp="<group_file>"
```

## **gse (Group Request ID)**

This read-only tag stores a unique identifier for group fax requests. If this fax request is not a group fax, the value is zero.

**Data Type** Long.

**Default Value** None.

**Database(s)**

- faxofns (page 389)
- faxreqs (page 390)

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## **hst (Host Name Sent From)**

This read-only tag stores the network node name or IP address that originally submitted this fax request.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## icc (Internal CC With Cover Page)

This tag accepts a valid VSI-FAX user account name (user ID). If supplied on the command line, a copy of the sent fax and a special cover page is placed in that inbox. The **ncc** tag (page 296) performs the same function but does not include the cover page.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To send an internal carbon copy of a sent fax with a special cover page, include this on your **vfx** command line:  
vfx ... -t icc=<user\_ID>

## ifd (Inherit Fields)

This tag stores a sequence of characters representing which fields are inherited from the master profile and is intended for VSI internal use only.

---

**IMPORTANT:** Directly modifying this tag may cause unpredictable application behavior.

---

<b>Data Type</b>	Char(256).
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## inb (Fax Inbox)

This tag stores the default fax inbox assigned to this device. The default inbox is used to receive inbound faxes and system notifications.

An initial inbox assignment is always made when the device is created; you can change that initial inbox assignment later to support changes to your system configuration.

**Data Type** Char(32). The inbox must be an existing VSI-FAX user account.

**Default Value** None.

**Database(s)** dstat (page 388).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Devices > Properties > General tab > Inbox drop-down list.
- **Command Line** To set the “vsifax” as the default inbox for a particular device, enter:  

```
vfxadmin device -u -b vsifax <device_name>
```

## inf (User Information)

This tag is primarily provided for expansion and customization of person directories. It typically used to store recipient information not found in other VSI-FAX tags.

In order to use this tag, you must populate them with the desired information, then upload the directory using the **vdbtool upload** command (page 126).

**Data Type** Char(64).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.



## inh (Inherit Mode)

This tag is a user preference that controls the profile inheritance mode (page 2) for a particular user.

While this feature could be implemented using a Boolean data type, implementing it as an enumeration allows for future expansion (i.e., future versions of VSI-FAX may incorporate additional inheritance modes). At this time, only two settings are possible.

<b>Data Type</b>	Enumeration. Valid values are:  <b>inh-dynamic</b> Dynamic inheritance (user settings are inherited from the master profile).  <b>inh-none</b> No inheritance (user settings are never inherited from the master profile).
<b>Default Value</b>	<b>inh-dynamic</b> .
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Creation tab > Inherit changes option.
• <b>Command Line</b>	To define dynamic inheritance for a particular user, enter: <b>vfxadmin user -t inh="inh-dynamic" &lt;user_ID&gt;</b> To define no inheritance for a particular user, enter: <b>vfxadmin user -t inh="inh-none" &lt;user_ID&gt;</b>

## isp (Is Profile)

This tag identifies a user account as having a profile associated with it. When you create a new user account, this tag is initially set **false**. When you create a user profile for that VSI-FAX user account, this tag is set **true**. Refer to *Profiles* (page 2) for additional information.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	<b>false</b> .
<b>Database(s)</b>	user (page 400).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** To associate a profile with an existing VSI-FAX user account, choose Profiles > New. The New Profile Wizard appears. Select the user account from the User ID drop-down list.

## las (To Last Name)

This tag stores the fax recipient's last name.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Last name field.

## lcl (From Locale)

This tag is currently not operational and is intended for VSI internal use only at this time. Future versions of VSI-FAX may use this tag to implement fax server localization (internationalization).

---

**IMPORTANT:** Directly modifying this tag may cause unpredictable application behavior.

---

**Data Type** Char(32).

<b>Default Value</b>	None.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## lcr (Allow Least Cost Routing)

This tag controls whether or not faxes sent by this user are eligible for least cost routing (page 79) to other fax servers in order to minimize long distance phone charges.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > General tab > Least cost routing option.
- **Outlook Fax Client** Actions > Fax Profile Settings > General tab > Least cost routing option.
- **Universal Fax Client** Edit > Preferences > Send Options tab > Delivery options > Least cost routing option.

• **Command Line**

To make allowing least cost routing the user preference, enter:

```
vfxadmin user -t lcr="true" <user_ID>
```

To make not allowing least cost routing the user preference, enter:

```
vfxadmin user -t lcr="false" <user_ID>
```

To allow least cost routing of a single fax request, include this on your **vfx** command line:

```
vfx ... -t lcr="true"
```

To not allow least cost routing of a single fax request, include this on your **vfx** command line:

```
vfx ... -t lcr="false"
```

# Ign (Last Login)

This tag stores the full date and time this user last logged into the fax server.

<b>Data Type</b>	Time.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

# lic (Licensed)

VSI-FAX requires that all users sending faxes from a different IP address than the fax server must have a client license assigned to their user account. This tag controls that behavior and the default setting (**true**) is to automatically assign a license whenever a new fax user account is created. However, if you are creating a user account that will only be accessed directly from the fax server, then a client license is not required. Setting this tag to **false** releases that client license for use by other users.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	<b>true</b> .
<b>Database(s)</b>	user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Users > Properties > General tab > Licensed option.
- **Command Line** To add a license to a particular user profile, enter:  
`vfxadmin user -t lic="true" <user_ID>`  
 To remove a license to a particular user profile, enter:  
`vfxadmin user -t lic="false" <user_ID>`

## lIn (To Local Number Length)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the **flo** (recipient fax number) tag (page 271).

## Ind (Sent Fax Page Orientation)

This tag controls sent fax page orientation. If not set or set **false**, portrait page orientation (height is greater than width) is used; if set true, landscape page orientation (width greater than height) is used.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?** Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Send Options tab > Paper options > Orientation drop-down list.

- **Outlook Fax Client**      Actions > Fax Profile Settings > Send Options tab > Orientation: Portrait and Landscape options.
- **Universal Fax Client**      Edit > Preferences > Send Options tab > Paper options > Page orientation drop-down list.
- **Command Line**      To make landscape page orientation the user preference, enter:  
                                 `vfxadmin user -t lnd="true" <user_ID>`  
                                 To make portrait page orientation (i.e., not landscape orientation) the user preference, enter:  
                                 `vfxadmin user -t lnd="false" <user_ID>`  
                                 To use landscape page orientation for a single fax request, include this on your `vfx` command line:  
                                 `vfx ... -t lnd="true"`  
                                 To use portrait page orientation (i.e., not use landscape orientation) for a single fax request, include this on your `vfx` command line:  
                                 `vfx ... -t lnd="false"`

## Ing (Language)

This tag is currently not operational and is intended for VSI internal use only at this time. Future versions of VSI-FAX may use this tag to implement fax server localization (internationalization).

---

**IMPORTANT:** Directly modifying this tag may cause unpredictable application behavior.

---

<i>Data Type</i>	Char(32).
<i>Default Value</i>	None.
<i>Database(s)</i>	user (page 400).
<i>Read Only?</i>	No.
<i>vfx Tag?</i>	No.
<i>Cover Page Tag?</i>	No.

## Inm (Data Source Last Name Field Identifier)

This read-only tag stores an external data source last name field identifier.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## Inp (Launch Notify Procedure)

This tag controls which user Launch Notify Procedure (LNP) to run. Refer to *User and Device Notify Procedures* (page 50) and *Launch Notify Procedures (LNPs)* (page 57) for additional information about the launch notification mechanism.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Notify tab > Launch notify program field.

- **Command Line**

To set a user LNP for a particular user, enter:

```
vfxadmin user -t lnp="<lnp_name>" <user_ID>
```

To specify a user LNP for a single fax request, include this on your **vfx** command line:

```
vfx ... -t lnp="<lnp_name>"
```

## Ipt (LDAP Port)

This read-only tag stores the external LDAP directory port assignment.

<b>Data Type</b>	Word.
<b>Default Value</b>	389.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## Isc (LDAP Scope)

This read-only tag stores how an LDAP database search will be performed relative to the LDAP search base, which is defined by the **lsr** tag (page 292).

<b>Data Type</b>	Enumeration. Valid values are:  0    Search only the base.  1    Search the base and one level down.  2    Search entire sub-tree.
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## Isr (LDAP Search Base)

This read-only tag stores the entry point in the LDAP hierarchy to begin a database search.

<b>Data Type</b>	Char(256).
------------------	------------



<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## mad (From Email Address)

This tag stores an alternative from email address that overrides the **sfe** tag (page 333) if it is set.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To specify an alternative from email address for a single fax request, include this on your **vfx** command line:

```
vfx ... -t mad="<email_address>"
```

## mem (Number of Group Members)

This read-only tag stores the number of individual recipients receiving faxes from a group fax request. If this fax request is not a group fax, the value is zero.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.

<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## mkp (Make Child A Profile)

This tag is currently not operational. It is provided for future growth. Currently, all user profiles are created from a single master profile; future versions of VSI-FAX may support additional parent profiles. Therefore, this tag is intended for VSI internal use only at this time.

---

**IMPORTANT:** Directly modifying this tag may cause unpredictable application behavior.

---

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	<b>false</b> .
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## mvp (Maximum Priority Allowed)

This tag is a user preference that controls the maximum send priority a user is allowed to assign to a sent fax. This preference is useful because the fax server processes fax requests according to their priority (e.g., high priority faxes are sent ahead of medium priority faxes).

Occasionally, some users may routinely designate all their faxes as “high priority.” In a low volume environment, this won’t cause many problems. However, in a high-volume environment this can cause

significant send delays for other users. Therefore, fax administrators may want to consider limiting the maximum priority available to certain users.

<b>Data Type</b>	Enumeration. Valid values are: <ul style="list-style-type: none"> <li>• <b>Low</b></li> <li>• <b>Medium</b></li> <li>• <b>High</b></li> </ul>
<b>Default Value</b>	None.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Send Options tab > Priority > Max allowed drop-down list.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Send Options tab > Priority > Max allowed drop-down list.
• <b>Universal Fax Client</b>	Edit > Preferences > Send Options tab > Delivery options > Max allowed drop-down list.
• <b>Command Line</b>	To define “low” as the maximum send priority allowed for a particular user, enter: <pre>vfxadmin user -t mxp="low" &lt;user_ID&gt;</pre> To define “medium” as the maximum send priority allowed for a particular user, enter: <pre>vfxadmin user -t mxp="medium" &lt;user_ID&gt;</pre>

## nak (Number of Bad Pages)

This read-only tag stores the number of pages not successfully sent by this fax request.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## nam (To Full Name)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the recipient first and last name tags; **fir** (page 270) and **las** (page 286), respectively.

## nat (Number of Attempts)

This read-only tag stores the total number of attempts (original attempt and all retries) for this fax request.

**Data Type** Long.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## ncc (Internal CC Without Cover Page)

This tag accepts a valid VSI-FAX user account name (user ID). If supplied on the command line, a copy of the sent fax and a special cover page is placed in that inbox. The **icc** tag (page 283) performs the same function except that it adds a special cover page.

**Data Type** LongVarChar.

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **Command Line** To send an internal carbon copy of a sent fax (sans cover page), include this on your **vfx** command line:  
vfx ... -t ncc=<user\_ID>

## **nfl (Number of Files)**

This read-only tag stores the total number of files sent with this fax request.

**Data Type** Long.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## **nmf (Number of Failed Attempts)**

If a fax request is not successfully sent on the first attempt, this read-only tag stores the total number of failed attempts. If the fax request is successfully sent on the first attempt, the value is zero.

**Data Type** Long.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## **nmm (Number Members)**

This read-only tag stores the total number of individual “member” faxes created from a group fax request.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## **nmq (Number Queued)**

This read-only tag stores the total number of individual “member” faxes queued from a group fax request.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## **nms (Number Sent)**

This read-only tag stores the total number of individual “member” faxes successfully sent from a group fax request.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.

<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## not (To Notes)

General notes or comments about this fax recipient.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Directories > People > Properties > Address tab > Notes field.

## not (Send Notify Mode)

This tag controls the sent fax notification mode.

<b>Data Type</b>	Enumeration. Valid values are:	
<b>nty-each</b>	Notify each fax attempt. Notify sender of each attempt to send this fax.	
<b>nty-fail</b>	Notify on failure. Notify sender if fax was not sent after maximum number of retries was attempted.	
<b>nty-none</b>	No notification. Do not notify sender.	
<b>nty-ok</b>	Notify on success. Notify sender if fax was successfully sent.	

	<b>nty-okfail</b> Notify on success or failure.
<b>Default Value</b>	-1.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Send Options tab > Notification > Email when drop-down list.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Send Options tab > Notification > Email when drop-down list.
• <b>Universal Fax Client</b>	Edit > Preferences > Send Options tab > Notification > Email when drop-down list.
• <b>Command Line</b>	<p>To define “notify each fax attempt” as the notification mode for a particular user, enter:</p> <pre><b>vfxadmin user -t not="nty-each" &lt;user_ID&gt;</b></pre> <p>To define “notify on failure” as the notification mode for a particular user, enter:</p> <pre><b>vfxadmin user -t not="nty-fail" &lt;user_ID&gt;</b></pre> <p>To turn off send notification for a single fax request, include this on your <b>vfx</b> command line:</p> <pre><b>vfx ... -t not="nty-none"</b></pre>

## npg (Number of Pages)

This read-only tag stores the total number of pages (fax body pages and cover page) this fax request comprises. If all fax pages were successfully sent, the **npg** tag is equal to the **nps** tag (page 301).

<b>Data Type</b>	Long.
<b>Default Value</b>	None.



<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxofns (page 389)</li> <li>• faxreqs (page 390)</li> <li>• ilog (page 395)</li> </ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## nps (Number of Pages Sent)

This read-only tag stores the total number of pages (fax body pages and cover page) successfully sent with this fax request. If all fax pages were successfully sent, the **nps** tag (page 300) is equal to the **npg** tag.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## ntf (Note File)

This tag specifies a local text file used to populate the fax cover page memo field. This tag must include the full path and file name

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

**How Do I Set This Tag?**

- **Command Line** To include a cover page memo with a single fax request, include this on your **vfx** command line:

```
vfx ... -t ntf="<full_path_and_file_name>"  
-t cvr="<cover_page>"
```

## **ntm (Notification Email Address)**

This read-only tag stores the email address that was used to send a notification when this incoming fax arrived.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	ilog (page 395).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## **ntx (Note Text)**

This tag stores a short message used to populate the fax cover page memo field.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

**How Do I Set This Tag?**

- **Command Line** To include a message in the memo field on a fax cover page, include this on your **vfx** command line:  

```
vfx ... -t cvr="<cover_page>"
-t ntx="<my_message>"
```

## nxt (Next Available Member)

This read-only tag stores the next individual (member) fax that will be sent as part of a group fax request. This tag is intended for VSI internal use only.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## ofn (File Attachment Original Path)

This tag stores the full path of each file attachment. The path is always relative to the sender's client PC or workstation.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxofns (page 389)
<b>Read Only?</b>	Read-only in faxofns database; modifiable on <b>vfx</b> command line.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

# osl (Use Operating System Login ID)

Controls whether or not to use the operating system login ID instead of the VSI-FAX user ID when this user accesses the fax server. If you create the VSI-FAX user account with the same name as the operating system login, this tag has no affect.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- Command Line** To use a particular user’s operating system login ID (instead of their VSI-FAX user ID), enter:  
`vfxadmin user -t osl="true" <user_ID>`  
To not use a particular user’s operating system login ID (i.e., use their VSI-FAX user ID), enter:  
`vfxadmin user -t osl="false" <user_ID>`

# oui (Override USERINFO)

This tag is provided to ensure compatibility with old (pre-4.x) cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the vsisrv.ini file (page 411). Cover pages supported this mechanism via several “USERINFO” tags. These tags would retrieve and show sender information in vsisrv.ini when the fax was sent.

VSI-FAX now stores sender information in the user database via an entirely different set of “sender” tags. If oui is set **true**, values from the newer “sender” tags override the USERINFO settings in vsisrv.ini. This table lists the equivalent "sender" and "USERINFO" tags:

FROM TAG	USERINFO TAG	DESCRIPTION
fa1 - fa3 (page 260)	ua1 - ua3 (page 360)	Address lines 1 thru 3.
fcn (page 262)	uct (page 361)	Country name.
fco (page 263)	ucp (page 361)	Company name.

FROM TAG	USERINFO TAG	DESCRIPTION
<b>fem</b> (page 266)	<b>uem</b> (page 365)	Email address.
<b>ffn</b> (page 268)	<b>ufp</b> (page 366)	Fax number.
<b>fvn</b> (page 278)	<b>uvp</b> (page 371)	Voice number.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?** Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

• **Command Line** To make using "sender" information instead of `vsisrv.ini` USERINFO the default for a particular user, enter:

```
vfxadmin user -t oui=true <user_ID>
```

To use "sender" information instead of `vsisrv.ini` USERINFO for a single fax request, include this on your **vfx** command line:

```
vfx ... -t oui=true
```

## ovl (Local Overlay)

This tag specifies a local overlay file to be placed on top of your fax. This tag must include the full path and file name of a Tagged Image File Format (TIFF) file. Refer to your *VSI-FAX Integration Manual* for additional information about building fax forms using overlays.

**Data Type** LongVarChar.

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

#### How Do I Set This Tag?

- **Command Line** To specify a local overlay to use with a single fax request, include this on your **vfx** command line:

```
vfx ... -t ovl="<full_path_and_file_name>"
```

## ovs (Server Overlay)

This tag specifies a server overlay file to include with your fax. Refer to your *VSI-FAX Integration Manual* for additional information about building fax forms using overlays.

**A Word About Server Resources** Server resources (e.g., attachments, overlays, folders) must be uploaded using the **vupload** command (page 226) or added via MMC fax administration before they can be used. Following the upload, these resources are stored in the `$VSI-FAX/lib` directory and managed by VSI-FAX. Therefore, you only need to include the resource name (not the full path) with this tag.

**Data Type** LongVarChar.

**Default Value** None.

**Database(s)** None. **vfx** tag only.

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

#### How Do I Set This Tag?

- **Command Line** To include a server overlay file with a single fax request, include this on your **vfx** command line:

```
vfx ... -t ovs="<file_name>"
```

## pag (Full To Pager Number)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the recipient pager country, area code, number and extension tags; **pcn** (page 308), **par** (page 307), **plo** (page 312) and **pex** (page 308), respectively.

## pal (Person Alias)

This read-only tag stores a unique identifier for each person record. The person alias is important because it allows you to create two person records with the same name. For example, you may know two different “john smiths.” Without some sort of unique identifier, you could not create two directory entries for these different individuals.

In previous versions of VSI-FAX, you could define your own person aliases using the VSI-WIN or VSI-X fax clients. VSI-FAX now automatically generates the person alias when you create a new person record in the public or your private directory. This ensures that each person alias is truly unique to that system.

<b>Data Type</b>	Char(16).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• pbmem (page 396)</li> <li>• pbper (page 397)</li> </ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

## par (To Pager Area Code)

This tag stores the fax recipient’s pager area code

<b>Data Type</b>	Char(8).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).
<b>Read Only?</b>	No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Pager field updates the entire pager number (not just the area code).

## **pcn (To Pager Country Code)**

This tag stores the numerical country code for fax recipient's pager

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Pager field updates the entire pager number (not just the country code).

## **pex (To Pager Extension)**

This tag stores the fax recipient's pager extension number

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.



**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Pager field updates the entire pager number (not just the extension).

## pgh (Custom Page Header)

This tag stores the custom fax page header, which is used instead of the default fax page header defined for each fax device if the **upg** tag (page 368) is set **true**. Refer to *Customizing the Fax Header* (page 95) for additional information.

<b>Data Type</b>	Char(64). The character string can contain plain text or any of the date and time tokens (page 95).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Send Options tab. Set Use custom page header option, then enter the custom page header string in the Header field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Send Options tab. Set Use custom page header option, then enter the custom page header string in the Header field.
- **Universal Fax Client** Edit > Preferences > Send Options tab > Page header. Set Use custom page header option, then enter the custom page header string in the Header field.
- **Command Line** To set a custom page header for a particular user, enter:  

```
vfxadmin user -t pgh="<header_string>" <user_ID>
```

To set a custom page header for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t upg="true" -t pgh="<header_string>"
```

## phn (Data Source Phone Number Field Identifier)

This read-only tag stores an external data source (voice) phone number field identifier.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## pgl (Sent Fax Page Size)

This tag controls the sent fax page size. Supported page sizes are:

- Letter (8.5 x 11 inches)
- Legal (8.5 x 14 inches)
- A4 (210 x 297 mm)

<b>Data Type</b>	Enumeration. Valid values are:  <b>letter</b> Letter size.  <b>legal</b> Legal size.  <b>a4</b> A4 size.
<b>Default Value</b>	<b>letter</b> .
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxreqs (page 390)</li><li>• user (page 400)</li></ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Send Options tab > Paper options > Page size drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Send Options tab > Page size drop-down list.
- **Universal Fax Client** Edit > Preferences > Send Options tab > Paper options > Page size drop-down list.
- **Command Line** To make “letter” the default page size for a particular user, enter:  
`vfxadmin user -t pgl="letter" <user_ID>`  
 To make “legal” the default page size for a particular user, enter:  
`vfxadmin user -t pgl="legal" <user_ID>`  
 To use A4 size pages for a single fax request, include this on your **vfx** command line:  
`vfx ... -t pgl="a4"`

## pid (Parent Profile ID)

This tag controls the parent profile used to create this user profile. Currently, all user profiles are created from a single master profile. Therefore, the only allowable value is **-master-**. This value is read-only and is set programmatically when each user profile is created. Future versions of VSI-FAX may support additional parent profiles.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	<b>-master-</b> .
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## **plo (To Pager Number)**

This tag stores the fax recipient's base pager number sans country code, area code and extension. For example, in the US this is a seven-digit telephone number.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Pager field updates the entire pager number (not just the basic seven-digit number).

## **pre (From Fax Number Prefix)**

This tag stores the sender's fax number prefix. This is typically a departmental billing code prefixed to fax numbers to ensure accurate billing of fax costs.

**Data Type** Char(24).

**Default Value** None.

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?** Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Telephony tab > Phone prefix field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Telephony tab > Phone prefix field.

- **Universal Fax Client** Edit > Preferences > Telephony tab > Dial prefix field.
- **Command Line** To set a fax number prefix for a particular user, enter:  

```
vfxadmin user -t pre="<prefix>" <user_ID>
```

To set a fax number prefix for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t pre="<prefix>"
```

## pri (Send Priority)

This tag controls the priority of sent faxes.

**Data Type** Enumeration. Valid values are:

- **Low**
- **Medium**
- **High**

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Send Options tab > Send priority drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Send Options tab > Send priority drop-down list.
- **Universal Fax Client** Edit > Preferences > Send Options tab > Delivery options > Priority drop-down list.

• **Command Line**

To define “low” as the default send priority for a particular user, enter:

```
vfxadmin user -t pri="low" <user_ID>
```

To set send priority to “medium” for a single fax request, include this on your **vfx** command line:

```
vfx ... -t pri="medium"
```

To set send priority to “high” for a single fax request, include this on your **vfx** command line:

```
vfx ... -t pri="high"
```

## prl (Priority Level)

This read-only tag stores a numeric send priority for this fax request. The send priority is read from the **pri** tag (page 313) when the fax is sent. The numerical code translates as follows:

- 20    Low priority.
- 40    Medium priority.
- 60    High priority.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390)
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## prt (Routed Fax Printer)

This tag is a user preference that controls the printer used to print routed faxes if the **apr** tag (page 236) is set **true**.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	<b>default</b> .

<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Inbound tab. Set Print routed faxes option, then select a printer from the drop-down list.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Inbound tab. Set Print routed faxes option, then select a printer from the drop-down list.
• <b>Universal Fax Client</b>	Edit > Preferences > Inbound tab > Printing. Set Print received faxes option, then select a printer from the drop-down list.
• <b>Command Line</b>	To set which printer will be used to print all faxes routed to a particular user, enter the following on a single line: <pre>vfxadmin user -t apr="true" -t prt="&lt;printer&gt;" &lt;user_ID&gt;</pre>

## pst (Sent Fax Printer)

This tag is a user preference that controls the printer used to print sent faxes or sent notifications. In order to use this feature, either the print sent fax or print sent notification tags, **spf** (page 339) or **spn** (page 341) respectively, must be set to any value other than **nty-none**.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Outbound tab. Set Print status when or Print fax selections to something other than “never”, then select a printer from the drop-down list.

- ```
vfxadmin user -t pst="<printer>" <user ID>
```

This tag is a user preference that controls the printer used to print received faxes if the **vpr** tag (page 378) is set **true**

### How Do I Set This Tag?

- ```
vfxadmin user -t vpr="true" -t pvt="<printer>"
<user ID>
```



## pwd (Password)

This tag stores the encrypted password string.

<b>Data Type</b>	Char(16).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>datasource (page 386)</li> <li>user (page 400)</li> </ul>
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Users > Properties > General tab > Password field.
- **Outlook Fax Client** Actions > Fax Profile Settings > General tab > Password field.
- **Command Line** To set the password for a particular user, enter:  
`vfxadmin user -t pwd=<password>`

## qds (Queue Description)

This tag stores the queue description.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	Default value is the fax device or class name appended with “queue.”
<b>Database(s)</b>	qstat (page 399).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Devices or Classes > Properties > General tab > Comment field.

## qnm (Queue Name)

This read-only tag stores the queue name. The queue name is derived from the fax device or class name and cannot be modified.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	Default value is the fax device or class name.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• class (page 385)</li> <li>• qstat (page 399)</li> </ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## qtp (Queue Type)

This read-only tag stores the queue type. Currently, VSI-FAX only supports one queue type. Future versions of VSI-FAX may support other queue types.

<b>Data Type</b>	Enumeration. Valid values are:  <b>que-device</b> This is currently the only allowable value.
<b>Default Value</b>	<b>que-device.</b>
<b>Database(s)</b>	qstat (page 399).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## que (Fax Queue)

This stores the fax queue used to send or receive a fax. Refer to *Queues* (page 1) for additional information.

<b>Data Type</b>	Char(32).
------------------	-----------

<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• ilog (page 395)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs and ilog databases; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > General tab > Default device field.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > General tab > Default device field.
• <b>Universal Fax Client</b>	Edit > Preferences > Send Options tab > Delivery options > Default queue drop-down list.
• <b>Command Line</b>	<p>To set a default fax device or class for a particular user, enter the following on a single line:</p> <pre><b>vfxadmin user -t que="&lt;queue&gt;" &lt;user_ID&gt;</b></pre> <p>To set a default fax device or class for a single fax request, include this on your <b>vfx</b> command line:</p> <pre><b>vfx ... -t que="&lt;queue&gt;"</b></pre>

## rar (Received Fax Archived)

This read-only tag is set true when an inbound (received) fax is auto-archived. Automatically archive behavior is controlled by the **var** tag (page 371).

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	None.
<b>Database(s)</b>	ilog (page 395).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## rcv (Device Receiving)

This tag is a read-only status flag that is set **true** when the device is set to receive inbound faxes.

**Data Type** Boolean {**true** | **false**} or {**on** | **off**}.

**NOTE:** Any of these values will work from the command line but **true** or **false** is always stored in the dstat database.

**Default Value** **true**.

**Database(s)** dstat (page 388).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Devices > Properties > Receive faxes option.
- **Command Line** To set a particular device to receive inbound faxes (set **rcv** tag **true**), enter:  

```
vfxadmin device -u -R on <device_name>
```

 To set a particular device to not receive inbound faxes (set **rcv** tag **false**), enter:  

```
vfxadmin device -u -R off <device_name>
```

## ref (Command Reference Number)

This read-only tag is intended for VSI internal use only. It is primarily used for debugging. All commands processed by the fax server comprise a unique session ID (page 333) and command reference number.

**Data Type** Long.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## res (Send Resolution)

This tag controls the send resolution. Choices are:

- Standard
- Fine

Fine resolution creates larger image files and takes longer to send but is generally preferred because it promotes maximum legibility.

**Data Type** Enumeration. Valid values are:

- **standard**
- **fine**

**Default Value** None.

**Database(s)**

- faxreqs (page 390)
- ilog (page 395)
- user (page 400)

**Read Only?** Read-only in faxreqs and ilog databases; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Send Options tab > Paper Options > Resolution drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Send Options tab > Paper Options > Resolution drop-down list.
- **Universal Fax Client** Edit > Preferences > Send Options tab > Paper Options > Resolution drop-down list.

• **Command Line**

To set “fine” as the default fax resolution for a particular user, enter the following on a single line:

```
vfxadmin user -t res="fine" <user_ID>
```

To send a single fax request using “standard” resolution, include this on your **vfx** command line:

```
vfx ... -t res="standard"
```

## ret (Retry Strategy)

If a fax request is not successfully sent on the first attempt, this tag controls which retry strategy will be used for all subsequent attempts. Refer to *Retry Strategies* (page 39) for additional information.

**Data Type**

Enumeration. Valid values are retry strategies defined for use with this fax server by the fax administrator. The default VSI-FAX installation provides these retry strategies:

- **default**
- **three-attempts**
- **four-attempts**
- **international**

**Default Value**

**default.**

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?**

Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?**

Yes.

**Cover Page Tag?**

No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Send Options > Retry strategy drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Send Options > Retry strategy drop-down list.
- **Universal Fax Client** Edit > Preferences > Send Options > Delivery options > Retry strategy drop-down list.

- **Command Line**

To set “default” as the retry strategy for a particular user, enter:

```
vfxadmin user -t ret="default" <user_ID>
```

To send a single fax request using the “three-attempts” retry strategy, include this on your **vfx** command line:

```
vfx ... -t ret="three-attempts"
```

## rfe (Routed Fax Email Address)

This tag stores the email address used to email routed faxes if the **aem** tag (page 235) is set **true**.

**Data Type** Char(256).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Inbound tab. Set the Email routed faxes option, then enter a valid email address.
- **Outlook Fax Client** Actions > Fax Profile Settings > Inbound tab. Set Email routed faxes option, then enter a valid email address.
- **Universal Fax Client** Edit > Preferences > Inbound tab > Routing. Set Email received faxes option, then enter a valid email address.
- **Command line** To enter a routed fax email address for a particular user, enter the following on a single line:  

```
vfxadmin user -t aem="true"
-t rfe="<email_address>" <user_ID>
```

# rfm (Routed Fax Format)

This tag is a user preference that controls the email attachment format of routed faxes if the **aem** tag (page 235) is set **true**. Available formats are:

- Single multi-page TIFF file (comprising cover page and all fax body pages)
- Cover page and all fax body pages as two separate multi-page TIFF files
- Cover page and each fax body page as separate TIFF files
- Cover page and each fax body page as separate GIF files

<b>Data Type</b>	Enumeration. Valid values are:
<b>fmt-norm</b>	Single multi-page TIFF file (comprising cover page and all fax body pages).
<b>fmt-cvrfax</b>	Cover page and all fax body pages as two separate multi-page TIFF files.
<b>fmt-pages</b>	Cover page and each fax body page as separate TIFF files.
<b>fmt-gif</b>	Cover page and each fax body page as separate GIF files.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Inbound tab. Set Email routed faxes option, then select a format from the Attachment format drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Inbound tab. Set Email routed faxes option, then select a format from the Attachment format drop-down list.
- **Universal Fax Client** Edit > Preferences > Inbound tab > Routing. Set Email routed faxes option, then select a format from the Attachment format drop-down list.



- **Command Line**

To email all routed faxes for a particular user as single multi-page TIFF files, enter the following on a single line:

```
vfxadmin user -t aem="true" -t rfm="fmt-norm"
<user_ID>
```

To email all routed faxes for a particular user multiple GIF files, enter the following on a single line:

```
vfxadmin user -t aem="true" -t rfm="fmt-gif"
<user_ID>
```

## rne (Routed Fax Notification Address)

This tag is a user preference that stores the email address used to send routed fax notifications if the **rnt** tag (page 326) is set **true**.

**Data Type** Char(256).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Inbound tab. Set Email notifications option, then enter a valid email address.
- **Outlook Fax Client** Actions > Fax Profile Settings > Inbound tab. Set Email notifications option, then enter a valid email address.
- **Universal Fax Client** Edit > Preferences > Inbound tab > Notification. Set Notify by email option, then enter a valid email address.
- **Command Line** To enter a routed notification email address for a particular user, enter the following on a single line:  

```
vfxadmin user -t rnt="true"
-t rne="<email_address>" <user_ID>
```

## rnp (Receive Notify Procedure)

This tag is a user preference that controls which user or device Receive Notify Procedure (RNP) to run. Refer to *User and Device Notify Procedures* (page 50) and *Receive Notify Procedures (RNPs)* (page 62) for additional information about the receive notification mechanism.

**Data Type** Char(32).

**Default Value** None.

**Database(s)**

- dstat (page 388)
- user (page 400)

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

• **MMC** Profiles > Properties > Notify tab > Receive notify program field changes the user preference in the user database.

• **Command Line** To set a user RNP, enter:

```
vfxadmin user -t lnp="<RNP_name>" <user_ID>
```

To set a device RNP, enter:

```
vfxadmin device -u -P "<RNP_name>" <device_name>
```

## rnt (Email Routed Notification)

This tag is a user preference that controls whether or not to automatically email routed fax notifications

**Data Type** Boolean {true | false}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Inbound tab > Email notifications option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Inbound tab > Email notifications option.
- **Universal Fax Client** Edit > Preferences > Inbound tab > Notification > Notify by email option.
- **Command Line** To make emailing routed fax notifications the user preference, enter:  
`vfxadmin user -t rnt="true" <user_ID>`  
 To make not emailing routed fax notifications the user preference, enter:  
`vfxadmin user -t rnt="false" <user_ID>`

## row (Maximum Number of Rows)

Maximum number of rows to return on an external data source search..

<b>Data Type</b>	Word.
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## rpt (Report Fax Status)

This read-only tag is used to implement “soft” delete of faxreqs database entries. When set **true**, status requests for this fax record are sent back to the user. When set **false**, this record does not appear to be in the faxreqs database when normal users request status (i.e., it appears to be deleted from the faxreqs database but still exists in case the fax administrator needs it).

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	<b>true</b> .
<b>Database(s)</b>	faxreqs (page 390).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **Command Line** To “soft” delete a fax request (i.e., set the **rpt** tag **false** but keep the record in the faxreqs database), enter:

```
vfxolog -X <fax_req>
```

To view all fax requests (including “soft” deleted ones), enter:

```
vfxolog -A <fax_req>
```

## **rre (Fax Request Result Code)**

This read-only tag always stores one of the predefined numeric fax request result codes (page 36).

**Data Type** Enumeration. Valid values are any of the predefined numeric fax request result codes (page 36).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## **rrn (Device Not Receiving Reason)**

This tag stores a comment string that will be shown whenever the device is set to not receive incoming faxes and fax server status is requested.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** dstat (page 388).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Devices > Properties > General tab. Unset the Receive faxes option, then enter a short comment in the No receive reason field.

## rrs (Fax Request Result Code Description)

This is a read-only tag in the faxreqs database (page 390). It stores the text description of an **rre** tag (page 328).

## rsi (Device Receive Time)

This tag stores the full date and time this device was last set to receive inbound faxes.

**Data Type** Time.

**Default Value** Value is set each time the device is set to receive inbound faxes.

**Database(s)** dstat (page 388).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Devices > Properties > General tab > Enabled option.

- **Command Line** To set a particular device to receive inbound faxes (set **rsi** tag to current time), enter:  

```
vfxadmin device -u -R on <device_name>
```

## rtm (Routed Email Address)

This read-only tag stores the email address to which an incoming fax was routed.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	ilog (page 395).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## rtp (Routed Notification Template)

This tag is a user preference that controls which template file (page 98) to use for the routed email notification.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **Command Line** To set a routed notification template file for a particular user, enter:  

```
vfxadmin user -t rtp="<template_file>" <user_ID>
```

## sar (Automatically Archive Sent Fax)

This tag is a user preference that controls whether or not to automatically archive sent faxes.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference).
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Outbound tab > Archive sent faxes option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Outbound tab > Archive sent faxes option.
- **Command Line** To make archiving sent faxes the user preference, enter:  
`vfxadmin user -t sar="true" <user_ID>`  
 To make not archiving sent faxes the user preference, enter:  
`vfxadmin user -t sar="false" <user_ID>`

## sat (Status Time)

This read-only tag stores the full date and time this fax request was last updated.

<b>Data Type</b>	Time.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## **sbt (Submit Time)**

This read-only tag stores the full date and time this fax request was submitted to the fax server.

<b>Data Type</b>	Time.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## **seq (Fax Request Sequence Number)**

This read-only tag stores a unique identifier for normal (non-group) fax requests. If this is a group fax job, the value is zero because the group request ID, stored in the **gse** tag (page 282), is the unique identifier for group fax jobs.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxofns (page 389)</li><li>• faxreqs (page 390)</li><li>• faxtags (page 394)</li><li>• ilog (page 395)</li><li>• seqno (page 399)</li></ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.



## ses (Session ID)

This read-only tag is intended for VSI internal use only. It is primarily used for debugging. All commands processed by the fax server comprise a unique session ID and command reference number (page 320).

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## sfe (Sent Fax Email Address)

This tag is a user preference that stores the email address used to email copies of sent faxes if the **sfx** tag (page 335) is set to any value other than **nty-none**.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Outbound tab > Email faxes. Set Email faxes when option to something other than “never”, then enter a valid email address.
- **Outlook Fax Client** Actions > Fax Profile Settings > Outbound tab > Email faxes. Set Email faxes when option to something other than “never”, then enter a valid email address.
- **Universal Fax Client** Edit > Preferences > Outbound tab > Email faxes. Set Email faxes when option to something other than “never”, then enter a valid email address.

- **Command Line** To specify a sent fax email address for a particular user, enter the following on a single line:  

```
vfxadmin user -t sfx="nty-ok"  
-t sfe="<email_address>" <user_ID>
```

## sfm (Sent Fax Back Format)

This tag is a user preference that controls the email attachment format of sent faxes if the **sfx** tag (page 335) is set to any value other than **nty-none**. Available formats are:

- Single multi-page TIFF file (comprising cover page and all fax body pages)
- Cover page and all fax body pages as two separate multi-page TIFF files
- Cover page and each fax body page as separate TIFF files
- Cover page and each fax body page as separate GIF files

<b>Data Type</b>	Enumeration. Valid values are:
<b>fmt-norm</b>	Single multi-page TIFF file (comprising cover page and all fax body pages).
<b>fmt-cvrfax</b>	Cover page and all fax body pages as two separate multi-page TIFF files.
<b>fmt-pages</b>	Cover page and each fax body page as separate TIFF files.
<b>fmt-gif</b>	Cover page and each fax body page as separate GIF files.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Outbound tab > Email faxes. Set Email faxes when option to something other than “never”, then select a format from the Attachment format drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Outbound tab > Email faxes. Set Email faxes when option to something other than “never”, then select a format from the Attachment format drop-down list.
- **Universal Fax Client** Edit > Preferences > Outbound tab > Email faxes. Set Email faxes when option to something other than “never”, then select a format from the Attachment format drop-down list.
- **Command Line** To email copies of all sent faxes for a particular user as single multi-page TIFF files, enter the following on a single line:  

```
vfxadmin user -t sfx="nty-ok" -t sfm="fmt-norm"
<user_ID>
```

## sfx (Email Copy of Sent Faxes to Sender)

This tag is a user preference that controls whether or not to email a copy of each sent fax back to the sender for archival or status purposes.

<b>Data Type</b>	Enumeration. Valid values are:
<b>nty-each</b>	Email each fax attempt. Email copy of fax to sender after each attempt to send this fax.
<b>nty-fail</b>	Email on failure. Email copy of fax to sender if fax was not sent after maximum number of retries was attempted.
<b>nty-none</b>	None. Do not email copy of fax to sender.
<b>nty-ok</b>	Email on success. Email copy of fax to sender if fax was successfully sent.
<b>nty-okfail</b>	Email on success or failure.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Outbound tab > Email faxes > Email faxes when drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Outbound tab > Email faxes > Email faxes when drop-down list.
- **Universal Fax Client** Edit > Preferences > Outbound tab > Email faxes > Email faxes when drop-down list.
- **Command Line** To define emailing sent faxes for a particular user, enter the following on a single line:  

```
vfxadmin user -t sfx="nty-ok"
-t sfe="<email_address>" <user_ID>
```

## sid (From ID)

This read-only tag stores the IP address from which this fax request was sent.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## sid (Data Source ID)

This read-only tag stores a unique data source identifier for each external data source used by the system.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.

<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• datasource (page 386)</li> <li>• dslookup (page 387)</li> </ul>
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## sig (Signature File)

This tag specifies a local image file used to place a signature on a fax cover page. This tag must include the full path and file name of a Tagged Image File Format (TIFF) file.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

### How Do I Set This Tag?

- **Command Line** To specify a local image to use for a cover page signature with a single fax request, include this on your **vfx** command line:  

```
vfx ... -t sig="<full_path_and_file_name>"
```

## snd (Device Sending)

This tag is a read-only status flag that is set **true** when the device is set to send faxes.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> } or { <b>on</b>   <b>off</b> }.
	<b>NOTE:</b> Any of these values will work from the command line but <b>true</b> or <b>false</b> is always stored in the dstat database.
<b>Default Value</b>	<b>true</b> .
<b>Database(s)</b>	dstat (page 388).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Devices > Properties > Send faxes option.
- **Command Line** To set a particular device to send faxes (set **snd** tag **true**), enter:  
`vfxadmin device -u -S on <device_name>`  
 To set a particular device to not send faxes (set **snd** tag **false**), enter:  
`vfxadmin device -u -S off <device_name>`

## snm (Data Source Name)

This read-only tag stores a descriptive name for each external data source.

**Data Type** Char(256).

**Default Value** None.

**Database(s)** datasource (page 386).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## spd (Serial Port Speed)

This read-only tag stores the fax modem serial port speed. It is programmatically set to 19200 bits per second and cannot be changed.

**Data Type** Long.

<b>Default Value</b>	19200.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## spf (Automatically Print Sent Fax)

This tag is a user preference that controls whether or not to automatically print all faxes sent by a particular user. The **pst** tag (page 315) controls which printer is used.

<b>Data Type</b>	Enumeration. Valid values are:
<b>nty-each</b>	Print each fax attempt. Print fax after each attempt to send it.
<b>nty-fail</b>	Print on failure. Print if fax was not sent after maximum number of retries was attempted.
<b>nty-none</b>	None. Do not print sent faxes.
<b>nty-ok</b>	Print on success. Print if fax was successfully sent.
<b>nty-okfail</b>	Print on success or failure.

<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Outbound tab > Printing > Print fax when drop-down list.
- **Outlook Fax Client** Actions > Fax Profile Settings > Outbound tab > Printing > Print fax when drop-down list.

- **Universal Fax Client** Edit > Preferences > Outbound tab > Printing > Print fax when drop-down list.
- **Command Line**

To print all faxes sent by a particular user after the fax is successfully sent, enter the following on a single line:

```
vfxadmin user -t spf="nty-ok" -t pst="<printer>" <user_ID>
```

To print all faxes sent by a particular user only if the fax was not successfully sent, enter the following on a single line:

```
vfxadmin user -t spf="nty-fail" -t pst="<printer>" <user_ID>
```

To turn-off printing of sent faxes, enter:

```
vfxadmin user -t spf="nty-none" <user_ID>
```

## spk (Speaker Mode)

This tag stores the speaker mode setting for the device.

<b>Data Type</b>	Enumeration. Valid values are:  {0   off}      Speaker is always off.  {1   call}     Speaker is only on during fax transmission.  {2   on}       Speaker is always on.  <b>NOTE:</b> off, call or on can be used on the command line but 0, 1 or 2 is always stored in the dstat database.
<b>Default Value</b>	1.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Devices > Properties > General tab > Speaker mode drop-down list.



- **Command Line** To set speaker mode to call for a particular device, enter:  
`vfxadmin device -u -k call <device_name>`  
 To set speaker mode always on for a particular device, enter:  
`vfxadmin device -u -k on <device_name>`  
 To set speaker mode always off for a particular device, enter:  
`vfxadmin device -u -k off <device_name>`

## spn (Print Sent Notification)

This tag is a user preference that controls whether or not to automatically notifications for all faxes sent by a particular user. The **pst** tag (page 315) controls which printer is used.

<b>Data Type</b>	Enumeration. Valid values are:
<b>nty-each</b>	Print a notification after each fax attempt.
<b>nty-fail</b>	Print on failure. Print a notification if fax was not sent after maximum number of retries was attempted.
<b>nty-none</b>	None. Do not print sent fax notifications.
<b>nty-ok</b>	Print on success. Print notification if fax was successfully sent.
<b>nty-okfail</b>	Print on success or failure.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>MMC</b>	Profiles > Properties > Outbound tab > Printing > Print status when option.
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > Outbound tab > Printing > Print status when option.
• <b>Universal Fax Client</b>	Edit > Preferences > Outbound tab > Printing > Print status when drop-down list.

**• Command Line**

To print a notification for all faxes sent by a particular user after the fax is successfully sent, enter the following on a single line:

```
vfxadmin user -t spn="nty-ok" -t pst="<printer>"  
<user_ID>
```

To print a notification for all faxes sent by a particular user only if the fax was not successfully sent, enter the following on a single line:

```
vfxadmin user -t spn="nty-fail" -t  
pst="<printer>"  
<user_ID>
```

To turn-off printing of sent fax notifications, enter:

```
vfxadmin user -t spn="nty-none" <user_ID>
```

## spn (External Data Source Procedure Name)

This tag stores a procedure name for an external data source. This tag is provided for future growth and is intended for VSI internal use only at this time.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

## srn (Device Not Sending Reason)

This tag stores a comment string that will be shown whenever the device is set to not send faxes and fax server status is requested.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	dstat (page 388).
<b>Read Only?</b>	No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Devices > Properties > General tab. Unset the Send faxes option, then enter a short comment in the No send reason field.

## ssi (Device Sending Time)

This tag stores the full date and time this device was last set to send faxes.

**Data Type** Time.

**Default Value** Value is set each time the device is set to send faxes.

**Database(s)** dstat (page 388).

**Read Only?** Yes.

**NOTE:** Although this tag is read-only (you cannot directly modify it), you can change the underlying system condition this tag is reporting. The *How Do I Set This Tag?* examples show how to modify the underlying system condition.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Devices > Properties > General tab > Enabled option.
- **Command Line** To set a particular device to send faxes (set **ssi** tag to current time), enter:  

```
vfxadmin device -u -S on <device_name>
```

## std (Cover Page Send Date)

This tag is used to place a send date on a fax cover page.

Refer to the *CoverMaker Online Help* for additional information about using tags on cover pages.

**Data Type** Char(64).

<b>Default Value</b>	None.
<b>Database(s)</b>	None. Cover page tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## stg (Group Send Notification Template)

This tag is a user preference that controls which template file (page 98) to use for notifications that a group fax was successfully sent.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### **How Do I Set This Tag?**

- **Command Line** To define an successful group send template file for a particular user, enter:  
`vfxadmin user -t stg="<template_file>" <user_ID>`

## sti (Fax Request Start Time)

This read-only tag stores full date and time a fax request was queued for send.

<b>Data Type</b>	Time.
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxreqs (page 390)</li><li>• ilog (page 395)</li></ul>
<b>Read Only?</b>	Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## stm (Send Time)

When provided on the **vfx** command line, this tag controls when a fax request is actually sent. It is typically used to implement “delayed” sends. In the faxreqs database, this tag stores the actual time this fax request was sent.

**Data Type** Time.

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Read-only in faxreqs database; modifiable on **vfx** command line.

**vfx Tag?** Yes.

**Cover Page Tag?** No.

## stn (Failed Send Notification Template)

This tag is a user preference that controls which template file (page 98) to use for notifications that a fax was not successfully sent.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **Command Line** To define a failed send notification template file for a particular user, enter:  

```
vfxadmin user -t stn="<template_file>" <user_ID>
```

## sto (Successful Send Notification Template)

This tag is a user preference that controls which template file to use for notifications that a fax was successfully sent.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **Command Line** To define an successful send notification template file for a particular user, enter:

```
vfxadmin user -t sto="<template_file>" <user_ID>
```

## stt (Cover Page Send Time)

This tag is used to place a custom send time on a fax cover page.

Typically, the **stm** tag (page 345) would be used to place the actual send time on the cover page. The **stt** tag is useful when the sender wants to use a different send time on a fax cover page.

Refer to the *CoverMaker Online Help* for additional information about using tags on cover pages.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** None. Cover page tag only.

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** Yes.

## sub (Subject)

This tag stores the fax subject line. Subject lines are optional. They are typically used on fax cover pages and when faxes are routed to recipient's email inboxes.

**Data Type** Char(64).

**Default Value** None.

**Database(s)** faxreqs (page 390).

**Read Only?** Read-only in faxreqs database; modifiable on **vfx** command line.

**vfx Tag?** Yes.

**Cover Page Tag?** Yes.

### *How Do I Set This Tag?*

- **Command Line** To include a fax subject line for a single fax request, include this on your **vfx** command line:

```
vfx ... -t sub="<subject_line>"
```

## suf (From Fax Number Suffix)

This tag stores the sender's fax number suffix. This is typically a departmental billing code appended to fax numbers to ensure accurate billing of fax costs.

**Data Type** Char(24).

**Default Value** None.

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?** Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

***How Do I Set This Tag?***

- **MMC** Profiles > Properties > Telephony tab > Phone suffix field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Telephony tab > Phone suffix field.
- **Universal Fax Client** Actions > Fax Profile Settings > Telephony tab > Dial suffix field.
- **Command Line** To set a fax number suffix for a particular user, enter:  

```
vfxadmin user -t suf="<suffix>" <user_ID>
```

 To set a fax number suffix for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t suf="<suffix>"
```

## **tco (To Company Name)**

This tag is used to specify a recipient's company name for a single fax request so that it can be included on the fax cover page.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Read-only in faxreqs database; modifiable on <b>vfx</b> command line.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

***How Do I Set This Tag?***

- **Command Line** To specify the recipient company for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t tco="<company_name>"
```



## tfn (To Fax Number)

This tag is used to specify a recipient's fax number for a single fax request so that it can be included on the fax cover page.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Read-only in faxreqs database; modifiable on <b>vfx</b> command line.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

### How Do I Set This Tag?

- **Command Line** To specify the recipient fax number for a single fax request, include this on your **vfx** command line:

```
vfx ... -t tfn="<fax_number>"
```

## tg1 - tg4 (Custom From Tags 1 thru 4)

These tags are primarily provided for expansion and customization of the user database. They are typically used to store sender information not found in other VSI-FAX tags. This information can also be shown on fax cover pages.

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxtags (page 394)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxtags database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Cover Page tab > User defined fields > Field 1 - Field 4.
- **Outlook Fax Client** Actions > Fax Profile Settings > Cover Page tab > User defined fields > Field 1 - Field 4.
- **Universal Fax Client** Edit > Preferences > Cover page tab > User-defined fields > Field 1 - Field 4.
- **Command Line** To set custom sender tags 1 thru 4 in a particular user profile (user database), enter:  

```
vfxadmin user -t tg1="<my_information>"  
<user_ID>  
vfxadmin user -t tg2="<my_information>"  
<user_ID>  
vfxadmin user -t tg3="<my_information>"  
<user_ID>  
vfxadmin user -t tg4="<my_information>"  
<user_ID>
```

To set custom sender tags 1 thru 4 for a single fax request, include this on your **vfx** command line:

```
vfx ... -t tg1="<my_information>"  
vfx ... -t tg2="<my_information>"  
vfx ... -t tg3="<my_information>"  
vfx ... -t tg4="<my_information>"
```

## tgf (Tag File)

This tag specifies a tag file. Tag files contain tag/value statements that will be processed as if they were included on the **vfx** command line. Refer to your *VSI-FAX Integration Manual* for additional information about tag files.

<b>Data Type</b>	LongVarChar.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **Command Line** To send a fax using a tag file, include this on your **vfx** command line:  
**vfx ... -t tgf="<tag\_file>"**

## thn (Host Name Forwarded To)

When a fax request is routed to another fax server via least cost routing (page 79), this read-only tag stores the destination (i.e., forwarded to) fax server host name or IP address.

The **lcr** tag (page 287) controls whether or not to use least cost routing; the **fhn** tag (page 269) stores the originating (i.e., forwarded from) fax server host name or IP address.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## tim (External Data Source Timeout)

Maximum number of seconds to wait on an external data source query before timing out.

<b>Data Type</b>	Word.
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## tin (Custom To Information)

This tag is used to include custom “to information” for a single fax request.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxtags (page 394)</li> <li>• faxreqs (page 390)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable on <b>vfx</b> command line.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	
• <b>Command Line</b>	<p>To include “to information” for a single fax request, include this on your <b>vfx</b> command line:</p> <pre>vfx ... -t tin="&lt;to_information&gt;"</pre>

## tmf (Custom Time Format)

This tag stores a custom time format that can be used in place of the default time format. Refer to *Date and Time Format* (page 95) for additional information.

---

**NOTE:** VSI-FAX generally uses the “date” to mean a shortened version of the “time,” which is both the calendar date and time of day.

---

<b>Data Type</b>	Char(32). The character string can contain plain text or any of the date and time tokens (page 95).
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

#### • Command Line

To set the default time format to full European style (i.e., day/month/four-digit year, two-digit hour, minutes and seconds) for a particular user, enter:

```
vfxadmin user -t tmf="%d/%m/%Y %H:%M:%S" <user_ID>
```

To set the date format to short North American style (i.e., two-digit year, month and day, two-digit hour, minutes and no seconds) for a single fax request, include this on your **vfx** command line:

```
vfx ... -t tmf="%y/%m/%d %H:%M"
```

## tmz (Time Zone)

This tag is a user preference that stores the time zone.

#### Data Type

Enumeration. Valid values are:

**DST+12DST** (GMT-12:00) Eniwetok, Kwajalein.

**SST+11SST** (GMT-11:00) Midway Island, Samoa.

**HST+10HST** (GMT-10:00) Hawaii.

**AST+9ADT** (GMT-09:00) Alaska.

**PST+8PDT** (GMT-08:00) Pacific Time (US & Canada); Tijuana.

**MST+7MDT** (GMT-07:00) Arizona.

**MST+7MST** (GMT-07:00) Mountain Time (US & Canada).

**CST+6CDT** (GMT-06:00) Central Time (US & Canada).

**CST+6CST** (GMT-06:00) Saskatchewan, Mexico City.

**EST+5EDT** (GMT-05:00) Eastern Time (US & Canada).

**EST+5EST** (GMT-05:00) Indiana (East), South America Pacific Time.

**AST+4ADT** (GMT-04:00) Atlantic Time (Canada).

**ST+4ST** (GMT-04:00) Caracas, La Paz.

**NST+3:30NDT** (GMT-03:30) Newfoundland.

<b>ST+3DT</b>	(GMT-03:00) Brasilia.
<b>ST+3ST</b>	(GMT-03:00) Buenos Aires, Georgetown.
<b>ST+2DT</b>	(GMT-02:00) Mid-Atlantic.
<b>AST+1ADT</b>	(GMT-01:00) Azores, Cape Verde Is.
<b>GST0GDT</b>	(GMT) Casablanca, Monrovia.
<b>0</b>	(GMT) Greenwich Mean Time.
<b>ST-1DT</b>	(GMT+01:00) Western and Central Europe.
<b>ST-2DT</b>	(GMT+02:00) Eastern Europe, Egypt.
<b>ST-2ST</b>	(GMT+02:00) Israel, South Africa.
<b>ST-3DT</b>	(GMT+03:00) Baghdad, Kuwait, Riyadh, Nairobi.
<b>ST-3ST</b>	(GMT+03:00) Moscow, St. Petersburg, Volgograd.
<b>ST-3:30DT</b>	(GMT+03:30) Tehran.
<b>ST-4ST</b>	(GMT+04:00) Abu Dhabi, Muscat, Baku, Tbilisi.
<b>ST-4:30ST</b>	(GMT+04:30) Kabul.
<b>ST-5DT</b>	(GMT+05:00) Ekaterinburg.
<b>ST-5ST</b>	(GMT+05:00) Islamabad, Karachi, Tashkent.
<b>ST-5:30ST</b>	(GMT+05:30) Bombay, Calcutta, Madras, New Delhi.
<b>ST-6ST</b>	(GMT+06:00) Almaty, Dhaka, Colombo.
<b>ST-7ST</b>	(GMT+07:00) Bangkok, Hanoi, Jakarta.
<b>ST-8ST</b>	(GMT+08:00) Beijing, Singapore, Western Australia.
<b>ST-9DT</b>	(GMT+09:00) Osaka, Sapporo, Tokyo, Seoul.
<b>ST-9ST</b>	(GMT+09:00) Yakutsk.
<b>ST-9:30DT</b>	(GMT+09:30) Adelaide.
<b>ST-9:30ST</b>	(GMT+09:30) Darwin.
<b>ST-10DT</b>	(GMT+10:00) Brisbane, Guam, Port Moresby.
<b>ST-10ST</b>	(GMT+10:00) Canberra, Melbourne, Sydney.
<b>ST-11ST</b>	(GMT+11:00) Magadan, Solomon Is., New Caledonia.

	<b>ST-12DT</b>	(GMT+12:00) Auckland, Wellington.
	<b>ST-12ST</b>	(GMT+12:00) Fiji, Kamchatka, Marshall Is.
<b>Default Value</b>	None.	
<b>Database(s)</b>	user (page 400).	
<b>Read Only?</b>	No.	
<b>vfx Tag?</b>	No.	
<b>Cover Page Tag?</b>	No.	
<b>How Do I Set This Tag?</b>		
• <b>MMC</b>	Profiles > Properties > General tab > Time zone drop-down list.	
• <b>Outlook Fax Client</b>	Actions > Fax Profile Settings > General tab > Time zone drop-down list.	
• <b>Command Line</b>	To set the time zone to Pacific Standard Time (PST) for a particular user, enter:  <code>vfxadmin user -t tmz="PST+8PDT" &lt;user ID&gt;</code>	

## tnm (To Name)

This tag is used to specify a recipient's name (e.g., John Smith) for a single fax request so that it can be included on the fax cover page.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Read-only in faxreqs database; modifiable on <b>vfx</b> command line.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.
<b>How Do I Set This Tag?</b>	
• <b>Command Line</b>	To specify the recipient name for a single fax request, include this on your <b>vfx</b> command line:  <code>vfx ... -t tnm="&lt;to_name&gt;"</code>

## tnp (Transmit Notify Procedure)

This tag controls which user Transmit Notify Procedure (TNP) to run. Refer to *User and Device Notify Procedures* (page 50) and *Transmit Notify Procedures (TNPs)* (page 59) for additional information about the transmit notification mechanism.

**Data Type** Char(32).

**Default Value** None.

**Database(s)**

- faxreqs (page 390)
- user (page 400)

**Read Only?** Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and **vfx** command line (setting is only valid for that fax request).

**vfx Tag?** Yes.

**Cover Page Tag?** No.

### How Do I Set This Tag?

• **MMC** Profiles > Properties > Notify tab > Transmit notify program field.

• **Command Line** To set a user TNP for a particular user, enter:

```
vfxadmin user -t tnp="<TNP_name>" <user_ID>
```

To specify a user TNP for a single fax request, include this on your **vfx** command line:

```
vfx ... -t tnp="<TNP_name>"
```



# tsi (Transmitting Station ID)

This tag stores the Transmitting Station ID (TSI) string. This is typically your outgoing fax number. The TSI string is used to negotiate with other fax devices and normally appears in the fax header at the top of each faxed page.

---

**TIP:** Because the TSI will appear on the header even if the rest of the fax doesn't get sent, it is an especially good practice to make the TSI string your fax number. That way, people can fax you back in the event of problems.

---

<b>Data Type</b>	Char(24). The character string can also contain plain text or any of the date and time tokens (page 95). For best compatibility, restrict your TSI string to numerals, plus signs, spaces and date/time tokens.
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• ilog (page 395)</li> <li>• user (page 400)</li> </ul>
<b>Read Only?</b>	Read-only in faxreqs and ilog databases; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

## How Do I Set This Tag?

- **MMC** Profiles > Properties > Telephony tab > Transmitting station identifier (TSI) field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Telephony tab > Transmitting station identifier (TSI) field.
- **Command Line** To set the TSI string for a particular user, enter:  

```
vfxadmin user -t tsi="<TSI_string>" <user_ID>
```

To specify a TSI string for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t tsi="<TSI_string>"
```

## tsq (Forwarded Request ID)

When a fax request is routed to another fax server via least cost routing (page 79), the server receiving the fax request assigns a new fax request ID from its pool of fax request numbers. This tag stores the new (forwarded) fax request ID so that the fax request can be tracked and statused.

The **lcr** tag (page 287) controls whether or not to use least cost routing; the **thn** tag (page 351) stores the destination (i.e., forwarded to) fax server host name or IP address.

<b>Data Type</b>	Long.
<b>Default Value</b>	None.
<b>Database(s)</b>	faxreqs (page 390).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## tti (Transmitting Terminal ID)

This tag stores an alternative identifier that overrides the TSI string (page 357) if it is set.

<b>Data Type</b>	Char(24). The character string can contain plain text or any of the date and time tokens (page 95). For best compatibility, restrict your TTI string to numerals, plus signs, spaces and date/time tokens.
<b>Default Value</b>	None.
<b>Database(s)</b>	<ul style="list-style-type: none"><li>• faxreqs (page 390)</li><li>• user (page 400)</li></ul>
<b>Read Only?</b>	Read-only in faxreqs database; modifiable in user database (sets persistent user preference) and <b>vfx</b> command line (setting is only valid for that fax request).
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Telephony tab > Transmitting terminal identifier (TTI) field.
- **Outlook Fax Client** Actions > Fax Profile Settings > Telephony tab > Transmitting terminal identifier (TTI) field.
- **Command Line** To set the TTI string for a particular user, enter:  

```
vfxadmin user -t tti="<TTI_string>" <user_ID>
```

To specify a TTI string for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t tti="<TTI_string>"
```

## tvn (To Voice Number)

This tag is used to specify a recipient's voice telephone number for a single fax request so that it can be included on the fax cover page.

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	faxtags (page 394).
<b>Read Only?</b>	Read-only in faxreqs database; modifiable on <b>vfx</b> command line.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

**How Do I Set This Tag?**

- **Command Line** To specify the recipient voice telephone number for a single fax request, include this on your **vfx** command line:  

```
vfx ... -t tvn="<voice_number>"
```

## typ (Fax Request Type)

This read-only tag stores whether this fax request as a group or regular (single-recipient) fax request.

<b>Data Type</b>	Enumeration. Valid values are:
------------------	--------------------------------

	<b>req-regular</b>	Regular (single-recipient) fax request.
	<b>req-group</b>	Group fax request.
<b>Default Value</b>		None.
<b>Database(s)</b>		<ul style="list-style-type: none"> <li>• faxreqs (page 390)</li> <li>• seqno (page 399)</li> </ul>
<b>Read Only?</b>		Yes.
<b>vfx Tag?</b>		No.
<b>Cover Page Tag?</b>		No.

## ua1 - ua3 (USERINFO Address Lines 1 thru 3)

These tags are provided to ensure compatibility with older cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the `vsisrv.ini` file (page 411). The **ua1** - **ua3** tags were placed on fax cover pages to retrieve and display sender address information at send time.

---

**TIP:** VSI-FAX now stores sender information in the user database (page 400) via an entirely different set of “sender” tags. If the **oui** (override USERINFO) tag is set **true**, values from the newer “sender” tags override the USERINFO settings in `vsisrv.ini`, so that older fax cover pages can be used without modification with newer VSI-FAX servers. Refer to *oui (Override USERINFO)* (page 304) for complete information about using “sender” tags to override USERINFO settings in `vsisrv.ini`.

---

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	None. Cover page tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## ucp (USERINFO Company Name)

This tag is provided to ensure compatibility with older cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the `vsisrv.ini` file (page 411). The **ucp** tag was placed on fax cover pages to retrieve and display the sender company name at send time.

---

**TIP:** VSI-FAX now stores sender information in the user database (page 400) via an entirely different set of “sender” tags. If the **oui** (override USERINFO) tag is set **true**, values from the newer “sender” tags override the USERINFO settings in `vsisrv.ini`, so that older fax cover pages can be used without modification with newer VSI-FAX servers. Refer to *oui (Override USERINFO)* (page 304) for complete information about using “sender” tags to override USERINFO settings in `vsisrv.ini`.

---

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	None. Cover page tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## uct (USERINFO Country Name)

This tag is provided to ensure compatibility with older cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the `vsisrv.ini` file (page 411). The **uct** tag was placed on fax cover pages to retrieve and display the sender country name at send time.

---

**TIP:** VSI-FAX now stores sender information in the user database (page 400) via an entirely different set of “sender” tags. If the **oui** (override USERINFO) tag is set **true**, values from the newer “sender” tags override the USERINFO settings in `vsisrv.ini`, so that older fax cover pages can be used without modification with newer VSI-FAX servers. Refer to *oui (Override USERINFO)* (page 304) for complete information about using “sender” tags to override USERINFO settings in `vsisrv.ini`.

---

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	None. Cover page tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## ucv (Use Cover Page)

This tag is a user preference that controls whether or not to include a fax cover page with each sent fax.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Cover Page tab > User cover page option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Cover Page tab > User cover page option.
- **Universal Fax Client** Edit > Preferences > Cover page tab > Include cover page option.

- **Command Line**

To make including a cover page the user preference, enter:

```
vfxadmin user -t ucv="true" <user_ID>
```

To make not including a cover page the user preference, enter:

```
vfxadmin user -t ucv="false" <user_ID>
```

## ud1 - ud2 (Data Source User-Defined 1 thru 2 Descriptions)

This read-only tag stores text descriptions for the external data source user-defined 1 thru 2 field indentifiers, which are defined by the **us1** - **us2** tags (page 369).

<b>Data Type</b>	Char(256).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

## udf (User Defaults)

This tag controls whether or not to use your profile settings (page 2) when sending a fax from the command line.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> } or { <b>yes</b>   <b>no</b> }.
<b>Default Value</b>	None.
<b>Database(s)</b>	None. <b>vfx</b> tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	Yes.

*How Do I Set This Tag?*

- **Command Line** To send a single fax request using your profile settings, include this on your **vfx** command line:

```
vfx ... -t udf="yes"
```

To send a single fax request without using your profile settings, include this on your **vfx** command line:

```
vfx ... -t udf="no"
```

**NOTE:** If you do not want to use your profile settings to send a fax, you can also omit the **udf** tag from your fax envelope. Not including it is the same as setting it to **false** or **no**.

## ued (User-Editable)

This tag controls whether or not a user can edit their personal user profile after it has been created by the fax administrator.

**Data Type** Boolean {**true** | **false**}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

*How Do I Set This Tag?*

- **MMC** Profiles > Properties > Creation tab > User can edit profile option.

- **Command Line** To allow a particular user to edit their user profile, enter:

```
vfxadmin user -t ued="true" <user_ID>
```

To not allow a particular user to edit their user profile, enter:

```
vfxadmin user -t ued="false" <user_ID>
```



## uem (USERINFO Email Address)

This tag is provided to ensure compatibility with older cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the `vsisrv.ini` file (page 411). The **uem** tag was placed on fax cover pages to retrieve and display the sender email address at send time.

---

**TIP:** VSI-FAX now stores sender information in the user database (page 400) via an entirely different set of “sender” tags. If the **oui** (override USERINFO) tag is set **true**, values from the newer “sender” tags override the USERINFO settings in `vsisrv.ini`, so that older fax cover pages can be used without modification with newer VSI-FAX servers. Refer to *oui (Override USERINFO)* (page 304) for complete information about using “sender” tags to override USERINFO settings in `vsisrv.ini`.

---

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	None. Cover page tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## ufd (User Edit Fields)

This tag stores a sequence of characters representing which fields a user is allowed to override when they send a fax and is intended for VSI internal use only.

---

**IMPORTANT:** Directly modifying this tag may cause unpredictable application behavior.

---

<b>Data Type</b>	Char(256).
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

## ufp (USERINFO Fax Number)

This tag is provided to ensure compatibility with older cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the `vsisrv.ini` file (page 411). The **ufp** tag was placed on fax cover pages to retrieve and display the sender fax number at send time.

---

**TIP:** VSI-FAX now stores sender information in the user database (page 400) via an entirely different set of “sender” tags. If the **oui** (override USERINFO) tag is set **true**, values from the newer “sender” tags override the USERINFO settings in `vsisrv.ini`, so that older fax cover pages can be used without modification with newer VSI-FAX servers. Refer to *oui (Override USERINFO)* (page 304) for complete information about using “sender” tags to override USERINFO settings in `vsisrv.ini`.

---

**Data Type** Char(64).

**Default Value** None.

**Database(s)** None. Cover page tag only.

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** Yes.

## uid (External Data Source User ID)

This tag stores a unique user ID retrieved from an external data source.

**Data Type** Char(256).

**Default Value** None.

<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

## umd (User Mode)

Controls whether or not a particular user has administration privileges.

---

**IMPORTANT:** You must have administrator privileges in order to grant administration privileges to another user.

---

<b>Data Type</b>	Enumeration. Valid values are:  <div> <b>user-admin</b>    User has administration privileges.  <b>user-reg</b>      User does not have administration privileges. </div>
<b>Default Value</b>	<b>user-reg</b> .
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	<ul style="list-style-type: none"> <li>• <b>MMC</b>                    Users &gt; Properties &gt; General tab &gt; Administrator option.</li> <li>• <b>Command Line</b>        To grant administrator privileges to a particular user, enter:  <div><b>vfxadmin user -t umd="user-admin" &lt;user_ID&gt;</b></div> To not grant administrator privileges to a particular user, enter:  <div><b>vfxadmin user -t umd="user-reg" &lt;user_ID&gt;</b></div> </li> </ul>

## upg (Use Custom Page Header)

This tag is a user preference that controls whether or not a custom fax page header should be used instead of the default fax header. The actual custom fax header string is stored in the **pgh** tag (page 309).

**Data Type** Boolean {**true** | **false**}

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Send Options tab > Use custom page header option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Send Options tab > Page header > Use custom page header option.
- **Universal Fax Client** Edit > Preferences > Send Options tab > Use custom page header option.
- **Command Line** To grant administration privileges for a particular user, enter:  

```
vfxadmin user -t upg="true" <user_ID>
```

 To not grant administration privileges for a particular user, enter:  

```
vfxadmin user -t upg="false" <user_ID>
```

## us1 - us2 (Custom To Information 1 and 2)

These tags are primarily provided for expansion and customization of person directories. They are typically used to store recipient information not found in other VSI-FAX tags.

In order to use these tags, you must populate them with the desired information, then upload the directory using the **vdbtool upload** command (page 126).

**Data Type** Char(32).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

## us1 - us2 (Data Source User-Defined 1 thru 2 Field Identifiers)

This read-only tag stores external data source user-defined 1 thru 2 field identifiers.

**Data Type** Char(256).

**Default Value** None.

**Database(s)** datasource (page 386).

**Read Only?** Yes.

**vfx Tag?** No.

**Cover Page Tag?** No.

## usr (User Name)

This tag typically stores the real-world person name (e.g., “John Smith”) for a VSI-FAX user/client ID, which is typically a short log-in name (e.g., “jsmith”).

**Data Type** Char(64).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Users > Properties > General tab > User name field.

- **Command Line** To change a particular user’s name, enter:  
`vfxadmin user -t usr="<user_name>" <user_ID>`

## utp (User Type)

VSI-FAX supports three different kinds of user accounts: individual and departmental.

Individual accounts are the most common.

Departmental user accounts are typically used to implement departmental fax routing. Refer to *Simple “Departmental” Fax Routing* (page 8) for additional information

System accounts are special accounts reserved for internal VSI-FAX use.

<b>Data Type</b>	Enumeration. Valid values are:  <code>usr_ind</code> Individual account. <code>usr_dpt</code> Departmental account. <code>usr_system</code> System account. Special accounts reserved for internal VSI-FAX use.
<b>Default Value</b>	<code>usr_ind</code> .
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Users > Properties > General tab > User type drop-down list.
- **Command Line** To set a user account type as “individual”, enter:  
`vfxadmin user -t usr="usr_ind" <user_ID>`  
To set a user account type as “departmental”, enter:  
`vfxadmin user -t usr="usr_dpt" <user_ID>`

## uvp (USERINFO Voice Number)

This tag is provided to ensure compatibility with older cover pages. Previous versions of VSI-FAX stored sender information in the USERINFO section of the `vsisrv.ini` file (page 411). The **uvp** tag was placed on fax cover pages to retrieve and display the sender voice number at send time.

---

**TIP:** VSI-FAX now stores sender information in the user database (page 400) via an entirely different set of “sender” tags. If the **oui** (override USERINFO) tag is set **true**, values from the newer “sender” tags override the USERINFO settings in `vsisrv.ini`, so that older fax cover pages can be used without modification with newer VSI-FAX servers. Refer to *oui (Override USERINFO)* (page 304) for complete information about using “sender” tags to override USERINFO settings in `vsisrv.ini`.

---

<b>Data Type</b>	Char(64).
<b>Default Value</b>	None.
<b>Database(s)</b>	None. Cover page tag only.
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	Yes.

## var (Automatically Archive Received Fax)

This tag is a user preference that controls whether or not to automatically archive received faxes.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Advanced Inbound tab > Archive received faxes option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Advanced Inbound tab > Archive received faxes option.
- **Command Line** To make archiving received faxes the user preference, enter:  

```
vfxadmin user -t var="true" <user_ID>
```

 To make not archiving received faxes the user preference, enter:  

```
vfxadmin user -t var="false" <user_ID>
```

## var (To Voice Area Code)

This tag stores the fax recipient's voice telephone number area code

<b>Data Type</b>	Char(8).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Voice number field updates the entire voice number (not just the area code).

## vcn (To Voice Country Code)

This tag stores the numerical country code for a fax recipient's voice telephone number.

<b>Data Type</b>	Char(8).
<b>Default Value</b>	None.
<b>Database(s)</b>	pbper (page 397).



**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Voice number field updates the entire voice number (not just the country code).

## **vex (To Voice Extension)**

This tag stores the fax recipient's voice telephone extension number

**Data Type** Char(8).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

#### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Voice number field updates the entire voice number (not just the extension).

## **vfe (Email Received Fax Address)**

This tag is a user preference that stores the email address used to deliver incoming faxes as email attachments if the **vfx** tag (page 375) is set **true**.

**Data Type** Char(256).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Advanced Inbound tab. Set Email faxes option, then enter a valid email address.
- **Command Line** To enter a received fax email address for a particular user, enter the following on a single line:  

```
vfxadmin user -t vfx="true"  
-t vfe="<email_address>" <user_ID>
```

# vfm (Email Received Fax Format)

This tag is a user preference that controls the email attachment format of received faxes if the **vfx** tag (page 375) is set **true**. Available formats are:

- Single multi-page TIFF file (comprising cover page and all fax body pages)
- Cover page and all fax body pages as two separate multi-page TIFF files
- Cover page and each fax body page as separate TIFF files
- Cover page and each fax body page as separate GIF files

<b>Data Type</b>	Enumeration. Valid values are:  <b>fmt-norm</b> Single multi-page TIFF file (comprising cover page and all fax body pages).  <b>fmt-cvrfax</b> Cover page and all fax body pages as two separate multi-page TIFF files.  <b>fmt-pages</b> Cover page and each fax body page as separate TIFF files.  <b>fmt-gif</b> Cover page and each fax body page as separate GIF files.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.
<b>How Do I Set This Tag?</b>	

- **MMC** Profiles > Properties > Advanced Inbound tab > Set the Email faxes option, then select a format from the Attachment format drop-down list.
- **Command Line** To deliver all received faxes for a particular user as single multi-page TIFF files, enter the following on a single line:
 

```
vfxadmin user -t vfx="true" -t vfm="fmt-norm"
<user_ID>
```

 To deliver all received faxes for a particular user as multiple GIF files, enter the following on a single line:
 

```
vfxadmin user -t vfx="true" -t vfm="fmt-gif"
<user_ID>
```

## vfx (Email Received Fax)

This tag is a user preference that controls whether or not to deliver received faxes as email attachments.

**Data Type** Boolean {true | false}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Advanced Inbound tab > Email faxes option.
- **Command Line** To make emailing received faxes the user preference, enter:
 

```
vfxadmin user -t vfx="true" <user_ID>
```

 To make not emailing received faxes the user preference, enter:
 

```
vfxadmin user -t vfx="false" <user_ID>
```

## vlo (To Voice Number)

This tag stores the fax recipient's base voice telephone number sans country code, area code and extension. For example, in the US this is a seven-digit telephone number.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** pbper (page 397).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Directories > People > Properties > General tab > Voice number field updates the entire voice number (not just the basic seven-digit number).

## vne (Received Notification Email Address)

This tag is a user preference that stores the email address used to deliver incoming fax notification if the **vnt** tag (page 377) is set **true**.

**Data Type** Char(256).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

### **How Do I Set This Tag?**

- **MMC** Profiles > Properties > Advanced Inbound tab. Set Email notifications option, then enter a valid email address.

- **Command Line** To enter a received fax email address for a particular user, enter the following on a single line:

```
vfxadmin user -t vnt="true"
-t vne="<email_address>" <user_ID>
```

## vnm (External Data Source View Name)

This tag stores a view name for an external data source. This tag is provided for future growth and is intended for VSI internal use only at this time.

<b>Data Type</b>	Char(32).
<b>Default Value</b>	None.
<b>Database(s)</b>	datasource (page 386).
<b>Read Only?</b>	Yes.
<b>vfx Tag?</b>	Yes.
<b>Cover Page Tag?</b>	No.

## vnt (Email Received Notification)

This tag is a user preference that controls whether or not to send notifications when faxes are received.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

### How Do I Set This Tag?

- **MMC** Profiles > Properties > Advanced Inbound tab > Email notifications option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Advanced Inbound tab > Email notifications option.

- **Command Line** To make emailing notifications of received faxes the user preference, enter:  

```
vfxadmin user -t vnt="true" <user_ID>
```

  
To make not emailing notifications of received faxes the user preference, enter:  

```
vfxadmin user -t vnt="false" <user_ID>
```

## voi (Voice Number)

This is a read-only tag in the pbper (page 397) database. It is programmatically generated from the recipient voice country, area code, number and extension tags; **vcn** (page 372), **var** (page 372), **vlo** (page 376) and **vex** (page 373), respectively.

## vpr (Automatically Print Received Faxes)

This tag is a user preference that controls whether or not to automatically print all faxes received by a particular user. The **pvt** tag (page 316) controls which printer is used.

<b>Data Type</b>	Boolean { <b>true</b>   <b>false</b> }.
<b>Default Value</b>	-1.
<b>Database(s)</b>	user (page 400).
<b>Read Only?</b>	No.
<b>vfx Tag?</b>	No.
<b>Cover Page Tag?</b>	No.

**How Do I Set This Tag?**

- **MMC** Profiles > Properties > Advanced Inbound tab > Print faxes option.
- **Outlook Fax Client** Actions > Fax Profile Settings > Advanced Inbound tab > Print faxes option.
- **Command Line** To make printing received faxes the user preference, enter:  

```
vfxadmin user -t vpr="true" <user_ID>
```

  
To make not printing received faxes the user preference, enter:  

```
vfxadmin user -t vpr="false" <user_ID>
```

## vtp (Receive Notification Template)

This tag is a user preference that controls which template file (page 98) to use for notifications that a fax was received.

**Data Type** Char(32).

**Default Value** None.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **Command Line** To define an received notification template file for a particular user, enter:  
`vfxadmin user -t stn="<template_file>" <user_ID>`

## wbi (Allow Web Install)

This tag is a user preference that controls whether or not the web fax client printer driver can be downloaded directly from a web browser. Some fax administrators may want to limit deployment of the web fax printer driver in their enterprise. Setting this tag false prevents that user from directly downloading the web fax client printer driver.

**Data Type** Boolean {true | false}.

**Default Value** -1.

**Database(s)** user (page 400).

**Read Only?** No.

**vfx Tag?** No.

**Cover Page Tag?** No.

**How Do I Set This Tag?**

- **Command Line**

To allow a particular user to directly download the web fax client printer driver from their web browser, enter:

```
vfxadmin user -t wbi="true" <user_ID>
```

To not allow a particular user to directly download the web fax client printer driver from their web browser, enter:

```
vfxadmin user -t wbi="false" <user_ID>
```



# DATABASE REFERENCE

---

The fax server stores and maintains information such as fax request historical logs, registered users and server configuration options in a set of databases.

The VSI fax administrator and users have access to a set of common tools for creating new databases, loading data into existing databases, extracting data and extracting the structure of a database. This makes the databases easy to update and maintain and also means that future versions of VSI-FAX will be able to access historical data from your current system.

---

**IMPORTANT:** We strongly recommend that any changes or updates to the databases be done after you stop the fax scheduler. Concurrent updates to the databases from different sources could lead to total database corruption.

---

The databases used by the fax server are stored in the `$VSIFAX/spool/dbs`.

Descriptions of the various database schemas are kept in the directory `$VSIFAX/lib/dbs` directory. The schema for each database is in a file named `<database_name>.sch`. For example, the schema file for the user database is `user.sch`. A schema file contains the database name, a description of each field in the database and a list of the fields (or field aggregates) on which the database is indexed.

# Database Schema Format

The schema for each database is stored in an ASCII text file. Any blank lines and comment lines (lines starting with '#') are ignored. Any white space is ignored except in the field: description entry.

There are three entry types in a schema file:

<code>dbname</code>	database name
<code>field</code>	field description
<code>index</code>	index specification

## dbname Entry

The `dbname` entry is in the following format:

```
dbname = <database_name>
```

This entry must be the first entry in the section. When a `dbname` entry is found, it indicates a new database description. Note that a schema file can contain the descriptions of more than one database and the `dbname` entry separates the different database sections.

## Field Entry

Each field entry in the database schema defines a particular tag (page 229) that will be used to store one value in the database.

The `field` entry is in the following format:

```
field = type : field-code : tag-name : description
```

Where:

<code>type</code>	Data type. Refer to <i>Data Types</i> (page 229) for additional information.
<code>field-code</code>	VSI internal field name. For user-defined fields, this entry must be <code>userdefined</code> .
<code>tag-name</code>	Three-character tag name associated with this field.
<code>description</code>	Description of the contents of this field.

There is one `field` entry for each field in the database. Data is stored in the database in the order in which the `field` entries appear in the schema index entry.

## Index Entry

The index entry is in the following format:

```
index = type : tag,tag,...
```

Where:

**type**      Type. Valid values are:

**dup**          Duplicate indexes are allowed

**nodup**      Index is unique

**tags**      A comma-separated list of tag names used in this index.

---

**NOTE:** A database can have any number of indexes, but it should have at least one unique (**nodup**) index.

---

## Database Tools

VSI-FAX provides the following tools (utilities) for creating and managing the various fax server databases.

UTILITY	DESCRIPTION	SEE
<b>vdbtool create</b>	Used to create a database from a schema file.	page 121
<b>vdbtool delete</b>	Used to delete a database.	page 123
<b>vdbtool exists</b>	Used to check if a database exists.	page 124
<b>vdbtool info</b>	Used to get information about a database.	page 125
<b>vdbtool load</b>	Used to load data into a database.	page 126
<b>vdbtool rebuild</b>	Used to rebuild a database from a schema file.	page 129
<b>vdbtool restore</b>	Used to restore a saved copy of a database.	page 131
<b>vdbtool save</b>	Used to make a saved copy of a database.	page 132
<b>vdbtool schema</b>	Used to create a schema file from a database.	page 133
<b>vdbtool unload</b>	Used to unload data from a database.	page 134

The following examples show how to use these database tools. All examples assume that the active directory is the `$VSI/FAX/spool/dbs` directory.

### Example 1: Extract All Person Information

To extract and save to file all phonebook person records from the phonebook database into a file called `file1.txt`, enter:

```
vdbtool unload pbper > /tmp/file1.txt
```

### Example 2: Extract Selected Information

Many times, only selected fields or tags are desired from a database. To extract and save only selected fields to a file called `file2.txt`, enter:

```
vdbtool unload -f pal,las,fir,far,flo pbper > /tmp/file2.txt
```

In this example five fields are extracted from the phonebook database. These fields are person alias, last name, first name, fax area code and fax local number.

### Example 3: Create a Backup of the User Database

To create a backup of the user database, you must save a copy of the schema and the data for the database. These files can then be used to recreate the file on another machine.

```
vdbtool schema user > /tmp/user.sch  
vdbtool unload -h on user > /tmp/user.txt
```

### Example 4: Recover the User Database From Backup Files

To recover the user database in directory `/usr/local` using the saved files from example 3, you must first create an empty database, then load the data into it.

```
vdbtool create -d /usr/local < /tmp/user.sch  
vdbtool load -d /usr/local -h on user < /tmp/user.txt
```

---

**NOTE:** In examples 3 and 4, the `-h on` option was used to show that field information should be stored with the data.

---

<b>Database Tags</b>	Each database consists of fixed-length records containing fixed-length data fields. Each field is referenced by a tag that identifies that data field. Each tag consists of a three-character case-insensitive name.
----------------------	--

## class Database

This database stores all classes (page 1) defined on this fax server. You can modify class database entries via the MMC fax administration (page 13) class properties or the **vfxadmin class** command line utility (page 147).

The class database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>dnm</b>	Class name.	page 252
<b>qnm</b>	Queue name.	page 318

## config Database

This database was used in VSI-FAX Gold Series to store VSI-WEB user preferences. The config database is now obsolete because all user preferences are now stored in the user database (page 400).

## delegate Database

This database stores privileges delegated from one user to another. Delegates functionality is not currently available but is expected to be implemented in a future version of VSI-FAX. Therefore, you cannot use this database at this time.

## datasource Database

This database stores data source identification and mapping information that allows VSI-FAX to access fax recipient data stored in external directories (page 3). Currently, Lightweight Directory Access Protocol (LDAP) directories are the only supported external data sources.

The datasource database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>ad1 - ad3</b>	External data source attributes that store recipient address line 1 thru 3 information.	page 234
<b>cmp</b>	External data source attribute that stores the recipient company name.	page 244
<b>cnt</b>	External data source attribute that stores the recipient country name.	page 245
<b>dat</b>	External data source type designation. Currently, LDAP is the only supported data type. Future versions of VSI-FAX may support other data types (e.g., databases).	page 249
<b>dbt</b>	If the external data source type designation, defined by the <b>dat</b> tag, is a database, this tag stores which type of database it is.  <b>IMPORTANT:</b> This tag is provided for future growth and is reserved for VSI internal use only at this time.	page 249
<b>dsv</b>	External data source host name or IP address.	page 254
<b>ema</b>	External data source attribute that stores the recipient email address.	page 257
<b>fax</b>	External data source attribute that stores the recipient fax number.	page 262
<b>fnm</b>	External data source attribute that stores the recipient first name.	page 273
<b>lnm</b>	External data source attribute that stores the recipient last name.	page 291
<b>lpt</b>	External LDAP directory port assignment.	page 292
<b>lsc</b>	How an LDAP database search will be performed relative to the LDAP search base, which is defined by the <b>lsr</b> tag (page 292).	page 292
<b>lsr</b>	Entry point in the LDAP hierarchy to begin a database search.	page 292
<b>phn</b>	External data source attribute that stores the recipient (voice) phone number.	page 310
<b>pwd</b>	Encrypted password for the user ID ( <b>uid</b> ) tag (page 387).	page 317
<b>row</b>	Maximum number of rows to return on an external data source search.	page 327
<b>sid</b>	Unique identifier for each external data source.	page 336

<b>TAG</b>	<b>DESCRIPTION</b>	<b>SEE</b>
<b>snm</b>	Descriptive name for each external data source.	page 338
<b>spn</b>	Procedure name for an external data source. This tag is provided for future growth and is intended for VSI internal use only at this time.	page 342
<b>tim</b>	Maximum number of seconds to wait on an external data source query before timing out.	page 351
<b>ud1 - ud2</b>	Text descriptions for the external data source user-defined 1 thru 2 field indentifiers, which are defined by the <b>us1 -us2</b> tags (page 369).	page 363
<b>uid</b>	Unique user ID retrieved from an external data source.	page 366
<b>us1 - us2</b>	External data source attribute that stores the recipient user-defined fields 1 thru 2.	page 369
<b>vnm</b>	View name for an external data source. This tag is provided for future growth and is intended for VSI internal use only at this time.	page 377

## dslookup Database

This database stores a list of external directories (page 3) each VSI-FAX user (i.e., client ID) is allowed to access (i.e., look up).

The dslookup database schema comprises these tags:

<b>TAG</b>	<b>DESCRIPTION</b>	<b>SEE</b>
<b>cli</b>	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
<b>sid</b>	Unique data source identifier for each external directory (page 3) used by the system.	page 336

## dstat Database

This database stores fax device configuration information (statistics). You can modify dstat database entries via the MMC fax administration (page 13) device properties or the **vfxadmin device** command line utility (page 153).

The dstat database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>dev</b>	Device serial port assignment.	page 250
<b>dsc</b>	Device description.	page 253
<b>dst</b>	Device name.	page 254
<b>dwn</b>	Device down. Status flag that is set <b>true</b> when the device is disabled (page 28). It is always the opposite state of the <b>ena</b> tag (page 257).	page 256
<b>ena</b>	Device enabled. Status flag that is set <b>true</b> when the device is enabled (page 28). It is always the opposite state of the <b>dwn</b> tag (page 256).	page 257
<b>ern</b>	Device disabled reason.	page 258
<b>esi</b>	Device enable time.	page 259
<b>ffl</b>	Fax Interface Module (FIM) diagnostics. Intended for VSI internal use only.	page 267
<b>fim</b>	FIM assigned to this device.	page 269
<b>flw</b>	Flow control mode.	page 272
<b>inb</b>	Default fax inbox assigned to this device. The default inbox is used to receive inbound faxes and system notifications.	page 284
<b>rcv</b>	Device receiving.	page 320
<b>rnp</b>	Receive Notify Procedure (RNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Receive Notify Procedures (RNPs)</i> (page 62) for additional information about the receive notification mechanism.	page 326
<b>rrn</b>	Device not receiving reason.	page 328
<b>rsi</b>	Device receiving time. Full date and time this device was last set to receive inbound faxes.	page 329
<b>snd</b>	Device sending.	page 337
<b>spd</b>	Serial port speed.	page 338
<b>spk</b>	Speaker mode (on, off or call).	page 340



TAG	DESCRIPTION	SEE
<b>srn</b>	Device not sending reason.	page 342
<b>ssi</b>	Device sending time. Full date and time this device was last set to send faxes.	page 343

## faxofns Database

This database stores original filenames of files submitted for faxing. Entries in the faxofns database are read-only. You can view them via the MMC fax administration (page 13) Outbound Log feature or the **vfxolog** command line utility (page 176).

The faxofns database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>fno</b>	File number. An incremental file attachment identifier that is used to identify multiple file attachments in the same fax request. The first entry for a specific fax request is always <b>1</b> ; subsequent entries for additional file attachments increment accordingly.	page 274
<b>gse</b>	Group request ID.	page 282
<b>npg</b>	Total number of pages (fax body pages and cover page) this fax request comprises.	page 300
<b>ofn</b>	File attachment original path.	page 303
<b>seq</b>	Fax request sequence number. Unique identifier for normal (non-group) fax requests.	page 332

## faxreqs Database

Outbound fax log (scheduling information). Entries in the faxreqs database are read-only. You can view them via the MMC fax administration (page 13) Outbound Log feature or the **vfxolog** command line utility (page 176).

The faxreqs database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>aco</b>	Sender's local area code.	page 232
<b>act</b>	Fax request status code. Stores one of the predefined numeric fax request status codes (page 36).	page 233
<b>are</b>	Numeric fax attempt status code. Stores one of the predefined numeric fax attempt status codes (page 34)	page 237
<b>arf</b>	Application reference. Stores the value for an XM-F application-reference element.	page 238
<b>ars</b>	Fax attempt status code description. Stores the text description of an <b>are</b> tag (page 237).	page 239
<b>asq</b>	Assigned fax queue. Stores the fax device or class to which this fax request was originally assigned. If least cost routing (page 79) or load balancing is used, the actual fax device or class used to send this fax request may be different.	page 239
<b>atq</b>	Actual fax queue. Stores the actual fax device or class that sent or is sending this fax request. If least cost routing (page 79) or load balancing is used, the original assigned fax device or class used to send this fax request may be different.	page 240
<b>att</b>	Attempt number. Stores the current fax attempt number if the fax request is still being sent, the last fax attempt number if the fax request has expired due to successful send or the maximum number of retries attempted unsuccessfully.	page 240
<b>cat</b>	Current attempt. Stores the current attempt number. If waiting for next retry, this tag stores the number of next retry attempt.	page 241
<b>cli</b>	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
<b>cmp</b>	Recipient company name.	page 244
<b>csi</b>	Called Subscriber ID (CSI). This is typically your outgoing fax number.	page 247

TAG	DESCRIPTION	SEE
<b>cst</b>	Optional sender cost code. Cost codes are typically used in large enterprises for cost accounting purposes (e.g., billing fax server usage to a particular division or department).	page 247
<b>cvr</b>	Cover page. Controls which cover page to use when sending faxes.	page 248
<b>dia</b>	Dial string. Stores the actual dial string (i.e., post dial string processing) used to send the fax.	page 251
<b>don</b>	Done. Status flag that is set <b>true</b> when the fax request is complete.	page 253
<b>dtf</b>	Custom date format used in place of the default date format. Refer to <i>Date and Time Format</i> (page 95) for additional information.	page 255
<b>ela</b>	Fax request elapsed time. This read-only tag stores the numerical difference between the start time and end time tags; <b>sti</b> (page 344) and <b>eti</b> (page 259), respectively.	page 256
<b>err</b>	Error message.	page 258
<b>eti</b>	Fax request end time.	page 259
<b>fhn</b>	Host name submitted from. When a fax request is routed to another fax server via least cost routing (page 79), this read-only tag stores the originating (i.e., forwarded from) fax server host name or IP address.	page 269
<b>fsq</b>	Previous request ID. Intended for VSI internal use only.	page 276
<b>gnp</b>	Group Notify Procedure (GNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Group Notify Procedures (GNPs)</i> (page 54) for additional information about the group notification mechanism.	page 281
<b>gse</b>	Group request ID.	page 282
<b>hst</b>	Network node name or IP address that originally submitted this fax request.	page 282
<b>lcr</b>	Allow least cost routing (page 79).	page 287
<b>lnd</b>	Sent fax page orientation (portrait or landscape).	page 289
<b>lnp</b>	Launch Notify Procedure (LNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Launch Notify Procedures (LNPs)</i> (page 57) for additional information about the launch notification mechanism.	page 291
<b>mad</b>	Alternative sender email address.	page 293
<b>mem</b>	Total number of individual recipients (members) receiving faxes from a group fax request.	page 293
<b>nak</b>	Total number of number of pages not successfully sent by this fax request.	page 295

TAG	DESCRIPTION	SEE
<b>nat</b>	Total number of attempts (original attempt and all retries) for this fax request.	page 296
<b>nfl</b>	Total number of files sent with this fax request.	page 297
<b>nmf</b>	Total number of failed attempts.	page 297
<b>nmm</b>	Total number of individual “member” faxes created from a group fax request.	page 298
<b>nmq</b>	Total number of individual “member” faxes queued from a group fax request.	page 298
<b>nms</b>	Total number of individual “member” faxes successfully sent from a group fax request.	page 298
<b>not</b>	Send notify mode.	page 299
<b>npq</b>	Total number of pages (fax body pages and cover page) this fax request comprises.	page 300
<b>nps</b>	Total number of pages (fax body pages and cover page) successfully sent with this fax request.	page 301
<b>nxt</b>	Next available member. Intended for VSI internal use only.	page 303
<b>oui</b>	Override user interface. Intended for VSI internal use only.	page 304
<b>pgh</b>	Custom fax page header, which is used instead of the default fax page header defined for each fax device if the <b>upg</b> tag (page 368) is set <b>true</b> . Refer to <i>Customizing the Fax Header</i> (page 95) for additional information.	page 309
<b>ppl</b>	Sent fax page size (letter, legal or A4).	page 310
<b>pre</b>	Sender fax number prefix. This is typically a departmental billing code prefixed to fax numbers to ensure accurate billing of fax costs.	page 312
<b>pri</b>	Send priority.	page 313
<b>prl</b>	Priority level.	page 314
<b>que</b>	Fax queue (page 1) used to send or receive a fax.	page 318
<b>ref</b>	Reference number. Intended for VSI internal use only.	page 320
<b>res</b>	Send resolution (standard or fine).	page 321
<b>ret</b>	Retry strategy.	page 322
<b>rpt</b>	Report. Intended for VSI internal use only.	page 327
<b>rre</b>	One of the predefined numeric fax request result codes (page 36).	page 328

TAG	DESCRIPTION	SEE
<b>rrs</b>	Fax request result code description. This read-only tag stores the text description of an <b>rre</b> tag (page 328).	page 329
<b>sar</b>	Automatically archive sent fax.	page 331
<b>sat</b>	Status time. Full date and time this fax request was last updated.	page 331
<b>sbt</b>	Submit time. full date and time this fax request was submitted to the fax server.	page 332
<b>seq</b>	Fax request sequence number. Unique identifier for normal (non-group) fax requests.	page 332
<b>ses</b>	Session ID. Unique identifier for each connection a fax client makes to the fax server.	page 333
<b>sid</b>	Sender ID. IP address from which this fax request was sent.	page 336
<b>sti</b>	Fax request start time. Full date and time a fax request was queued for send.	page 344
<b>stm</b>	Send time.	page 345
<b>sub</b>	Fax subject line.	page 347
<b>suf</b>	Sender fax number suffix. This is typically a departmental billing code appended to fax numbers to ensure accurate billing of fax costs.	page 347
<b>tco</b>	To company name.	page 348
<b>tfn</b>	To fax number.	page 349
<b>thn</b>	Host name forwarded to. When a fax request is routed to another fax server via least cost routing (page 79), this read-only tag stores the destination (i.e., forwarded to) fax server host name or IP address.	page 351
<b>tin</b>	Custom “to information.”	page 352
<b>tmf</b>	Custom time format that can be used in place of the default time format. Refer to <i>Date and Time Format</i> (page 95) for additional information.	page 352
<b>tnm</b>	To name.	page 355
<b>tnp</b>	Transmit Notify Procedure (TNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Transmit Notify Procedures (TNPs)</i> (page 59) for additional information about the transmit notification mechanism.	page 356
<b>tsi</b>	Transmitting Station ID (TSI) string. This is typically your outgoing fax number.	page 357

TAG	DESCRIPTION	SEE
<b>tsq</b>	Forwarded Request ID. When a fax request is routed to another fax server via least cost routing (page 79), the server receiving the fax request assigns a new fax request ID from its pool of fax request numbers. This tag stores the new (forwarded) fax request ID so that the fax request can be tracked and statused.	page 358
<b>tti</b>	Transmitting Terminal ID (TTI). Alternative identifier that overrides the TSI string.	page 358
<b>typ</b>	Fax request type (group or regular).	page 359

## faxtags Database

Outbound fax log cover page information. You can add new fields to the faxtags database by manually editing the schema file. Refer to *Adding Custom Tags to the faxtags Database* (page 405) for additional information.

The faxtags database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>fa1 - fa3</b>	Sender address lines 1 - 3.	page 260
<b>fcn</b>	Sender country name.	page 262
<b>fco</b>	Sender company name.	page 263
<b>fem</b>	Sender email address.	page 266
<b>ffn</b>	Sender fax number.	page 268
<b>fnm</b>	Custom from name. Overrides the <b>usr</b> tag (page 369).	page 273
<b>fvn</b>	Sender voice number.	page 278
<b>seq</b>	Fax request sequence number. Unique identifier for normal (non-group) fax requests.	page 332
<b>tg1 - tg4</b>	Primarily provided for expansion and customization of the user database. They are typically used to store sender information not found in other VSI-FAX tags.	page 349
<b>tin</b>	Custom “to information.”	page 352
<b>tvn</b>	To voice number.	page 359

## ilog Database

Inbound fax log. You can modify ilog database entries via the MMC fax administration (page 13) Inbound Log feature or the **vfxiolog** command line utility (page 174).

The ilog database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>cli</b>	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
<b>cst</b>	Optional sender cost code. Cost codes are typically used in large enterprises for cost accounting purposes (e.g., billing fax server usage to a particular division or department).	page 247
<b>did</b>	Direct Inward Dial (DID) extension. DID extensions are used to implement DirectFax routing (page 9) of incoming faxes to the appropriate user's fax inbox.	page 252
<b>eti</b>	Fax request end time.	page 259
<b>ngp</b>	Total number of pages (fax body pages and cover page) this fax request comprises.	page 300
<b>ntm</b>	Notification email address.	page 302
<b>que</b>	Fax queue (page 1) used to send or receive a fax.	page 318
<b>rar</b>	Received fax archived.	page 319
<b>res</b>	Send resolution (standard or fine).	page 321
<b>rtm</b>	Routed email address.	page 330
<b>seq</b>	Fax request sequence number. Unique identifier for normal (non-group) fax requests.	page 332
<b>sti</b>	Fax request start time. Full date and time a fax request was queued for send.	page 344
<b>tsi</b>		

## monitors Database

This database was used in VSI-FAX Gold Series to store VSI-WIN alternate queue assignments. The monitors database is now obsolete because this feature is no longer supported.

## pbgrp Database

Group directories (phonebooks). You can modify pbgrp database entries via the MMC fax administration (page 13) Group feature or the **vf~~x~~pb** command line utilities (page 179).

The pbgrp database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>cli</b>	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
<b>gal</b>	Group name.	page 280
<b>gde</b>	Group description.	page 280

## pbmem Database

Persons included in each group directory (phonebook). You can modify pbmem database entries via the MMC fax administration (page 13) Group feature or the **vf~~x~~pb** command line utilities (page 179).

The pbmem database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>cli</b>	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
<b>gal</b>	Group name.	page 280
<b>pal</b>	Person Alias. A unique identifier for each person record.	page 307



# pbper Database

Person directory (phonebook) entries. You can modify pbper database entries via the MMC fax administration (page 13) Person feature or the **vfxb** command line utilities (page 179).

The pbper database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>ad1-ad3</b>	Recipient address lines 1 - 3.	page 234
<b>aln</b>	Recipient fax area code length. This read-only tag is programmatically generated from the <b>far</b> (recipient fax area code) tag (page 261).	page 236
<b>car</b>	Recipient cellular area code.	page 241
<b>ccn</b>	Recipient cellular country code.	page 241
<b>cel</b>	Recipient full cellular number. This read-only tag is programmatically generated from the recipient cellular country code, area code, number and extension tags; <b>ccn</b> (page 241), <b>car</b> (page 241), <b>clo</b> (page 244) and <b>cex</b> (page 243), respectively.	page 243
<b>cex</b>	Recipient cellular extension.	page 243
<b>cli</b>	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
<b>clo</b>	Recipient cellular number.	page 244
<b>com</b>	Recipient company name.	page 245
<b>cou</b>	Recipient country name.	page 246
<b>ema</b>	Recipient email address.	page 257
<b>far</b>	Recipient fax number area code.	page 261
<b>fax</b>	Recipient full fax number. This read-only tag is programmatically generated from the recipient fax country code, area code, number and extension tags; <b>fcn</b> (page 262), <b>far</b> (page 261), <b>flo</b> (page 271) and <b>fex</b> (page 267), respectively.	page 262
<b>fcn</b>	Recipient fax number country code.	page 262
<b>fex</b>	Recipient fax extension.	page 267
<b>fir</b>	Recipient first name.	page 270

<b>TAG</b>	<b>DESCRIPTION</b>	<b>SEE</b>
<b>flo</b>	Recipient fax number.	page 271
<b>inf</b>	User information. This tag is primarily provided for expansion and customization of person directories. It typically used to store recipient information not found in other VSI-FAX tags.	page 284
<b>las</b>	Recipient last name.	page 286
<b>lln</b>	Recipient local number length. This read-only tag is programmatically generated from the <b>flo</b> (recipient fax number) tag (page 271).	page 289
<b>nam</b>	Recipient full name. This read-only tag is programmatically generated from the recipient first and last name tags; <b>fir</b> (page 270) and <b>las</b> (page 286), respectively.	page 296
<b>not</b>	General notes or comments about this fax recipient.	page 299
<b>pag</b>	Full Recipient Pager Number. This read-only tag is programmatically generated from the recipient pager country, area code, number and extension tags; <b>pcn</b> (page 308), <b>par</b> (page 307), <b>plo</b> (page 312) and <b>pex</b> (page 308), respectively.	page 307
<b>pal</b>	Person Alias. A unique identifier for each person record.	page 307
<b>par</b>	Recipient pager area code.	page 307
<b>pcn</b>	Recipient pager country code.	page 308
<b>pex</b>	Recipient pager extension.	page 308
<b>plo</b>	Recipient pager number.	page 312
<b>us1- us2</b>	Custom recipient information 1 and 2. Primarily provided for expansion and customization of person directories. They are typically used to store recipient information not found in other VSI-FAX tags.	page 368
<b>var</b>	Recipient voice area code.	page 372
<b>vcn</b>	Recipient voice country code.	page 372
<b>vex</b>	Recipient voice extension.	page 373
<b>vlo</b>	Recipient voice telephone number.	page 376
<b>voi</b>	Voice number. This read-only tag is programmatically generated from the recipient voice country, area code, number and extension tags; <b>vcn</b> (page 372), <b>var</b> (page 372), <b>vlo</b> (page 376) and <b>vex</b> (page 373), respectively.	page 378

## qstat Database

Fax device and class queues. Entries in the qstat database are read-only (some information is inherited from the dstat database (page 388), other information is written directly by the fax server). You can view them via the MMC fax administration (page 13) Queues feature or the **vfxstat** command line utility (page 195).

The qstat database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>acc</b>	Device accepting jobs. Controls whether or not a particular fax device or class will accept fax jobs from the scheduler.	page 232
<b>arn</b>	Reject reason.	page 238
<b>asi</b>	Accept time. Date and time the fax device or class was last set to accept fax jobs.	page 239
<b>df1</b>	Default fax device.	page 251
<b>ff1</b>	Fax Interface Module (FIM) diagnostics. Intended for VSI internal use only.	page 267
<b>qds</b>	Queue description.	page 317
<b>qnm</b>	Queue name.	page 318
<b>qtp</b>	Queue type.	page 318

## seqno Database

Sequence numbers that can be assigned to fax requests. This information is automatically generated and maintained by the fax server. However, you should periodically reset the seqno database so that you don't run out of available sequence numbers. Refer to *Resetting Sequence Numbers* (page 94) for additional information.

The seqno database schema comprises these tags:

TAG	DESCRIPTION	SEE
<b>seq</b>	Fax request sequence number. Unique identifier for normal (non-group) fax requests.	page 332
<b>typ</b>	Fax request type (group or regular).	page 359

# sessions Database

This database was used in VSI-FAX Gold Series to store VSI-X and VSI-WIN active sessions (log-ins). The sessions database is now obsolete because all current VSI-FAX clients do not use this database to store session information.

## user Database

VSI-FAX users (page 2) and user profile settings (page 2). You can modify user database entries via the MMC fax administration (page 13) user and profile properties or the **vfxadmin user** command line utility (page 169).

The user database schema comprises these tags:

TAG	DESCRIPTION	SEE
aco	Sender local area code.	page 232
adl	Automatically delete routed faxes.	page 234
aem	Automatically email routed faxes.	page 235
apr	Automatically print routed faxes.	page 236
arc	Automatically archive sent faxes.	page 237
cdd	Calculate DID. Used with <i>DirectFax Routing</i> (page 9). Controls whether or not to calculate a Direct Inward Dial (DID) routing number by stripping the last four digits from the sender (from) fax number.	page 242
cli	Client ID. Stores a unique VSI-FAX user account identifier. In most cases (i.e., individual user and departmental fax accounts), this is the user ID entered when the VSI-FAX user account is created.	page 243
cos	Clear on send. This is a legacy tag that formerly controlled whether or not the VSI-Win and VSI-X send fax forms should be cleared following each sent fax. This tag is not used with current VSI-FAX clients.  <b>IMPORTANT:</b> Directly modifying this tag may cause unpredictable application behavior.	page 246
cst	Optional sender cost code. Cost codes are typically used in large enterprises for cost accounting purposes (e.g., billing fax server usage to a particular division or department).	page 247
cvr	Cover page to use when sending faxes.	page 248

TAG	DESCRIPTION	SEE
<b>ddl</b>	DID length. DID extensions are used to implement DirectFax routing (page 9) of incoming faxes to the appropriate user's fax inbox. DID extension length is calculated based on the value stored in the <b>did</b> (DID Extension) tag (page 252).	page 250
<b>did</b>	DID extension. DID extensions are used to implement DirectFax routing (page 9) of incoming faxes to the appropriate user's fax inbox.	page 252
<b>dsp</b>	Display Fax Status dialog box. Controls whether or not to show fax status dialog box when sending faxes.	page 253
<b>dtf</b>	Custom date format used in place of the default date format. Refer to <i>Date and Time Format</i> (page 95) for additional information.	page 255
<b>fa1</b> - <b>fa3</b>	Sender Address Lines 1 - 3. Stores the sender's street address so that it can be shown on fax cover pages.	page 260
<b>fcn</b>	Sender country name.	page 262
<b>fco</b>	Sender company name.	page 263
<b>fem</b>	Sender email address.	page 266
<b>ffn</b>	Sender fax number.	page 268
<b>fnm</b>	Custom from name. Overrides the <b>usr</b> tag (page 369).	page 273
<b>fvn</b>	Sender voice number.	page 278
<b>gnp</b>	Group Notify Procedure (GNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Group Notify Procedures (GNPs)</i> (page 54) for additional information about the group notification mechanism.	page 281
<b>ifd</b>	Inherit fields. Stores a sequence of characters representing which fields are inherited from the master profile and is intended for VSI internal use only. <b>IMPORTANT:</b> Directly modifying this tag may cause unpredictable application behavior.	page 283
<b>inh</b>	Inherit mode. Controls the profile inheritance mode (page 2) for a particular user.	page 285
<b>isp</b>	Is profile. Identifies a user account as having a profile (page 2) associated with it.	page 285
<b>lcl</b>	Sender locale. Intended for VSI internal use only. <b>IMPORTANT:</b> Directly modifying this tag may cause unpredictable application behavior.	page 286

TAG	DESCRIPTION	SEE
<b>lcr</b>	Allow least cost routing (page 79).	page 287
<b>lgn</b>	Last login.	page 288
<b>lic</b>	Licensed. Controls whether or not to automatically assign a license whenever a new fax user account is created.	page 288
<b>lnd</b>	Sent fax page orientation (portrait or landscape).	page 289
<b>lng</b>	Language. Intended for VSI internal use only.	page 290
	<b>IMPORTANT:</b> Directly modifying this tag may cause unpredictable application behavior.	
<b>lnp</b>	Launch Notify Procedure (LNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Launch Notify Procedures (LNPs)</i> (page 57) for additional information about the launch notification mechanism.	page 291
<b>mad</b>	Sender alternative email address. Overrides the <b>sfe</b> tag (page 333).	page 293
<b>mkp</b>	Make child a profile. Intended for VSI internal use only.	page 294
	<b>IMPORTANT:</b> Directly modifying this tag may cause unpredictable application behavior.	
<b>mxp</b>	Maximum send priority allowed.	page 294
<b>not</b>	Send notify mode.	page 299
<b>osl</b>	Use operating system login ID instead of VSI-FAX user ID when accessing the fax server.	page 304
<b>oui</b>	Override USERINFO settings.	page 304
<b>pgh</b>	Custom fax page header, which is used instead of the default fax page header defined for each fax device if the <b>upg</b> tag (page 368) is set <b>true</b> . Refer to <i>Customizing the Fax Header</i> (page 95) for additional information.	page 309
<b>pgl</b>	Sent fax page size (letter, legal or A4).	page 310
<b>pid</b>	Parent profile ID.	page 311
<b>pre</b>	Sender fax number prefix. This is typically a departmental billing code prefixed to fax numbers to ensure accurate billing of fax costs.	page 312
<b>pri</b>	Send priority.	page 313
<b>prt</b>	Routed fax printer.	page 314
<b>pst</b>	Sent fax printer.	page 315

TAG	DESCRIPTION	SEE
<b>pvt</b>	Received fax printer.	page 316
<b>pwd</b>	Password.	page 317
<b>que</b>	Fax queue (page 1) used to send or receive a fax.	page 318
<b>res</b>	Send resolution (standard or fine).	page 321
<b>ret</b>	Retry strategy.	page 322
<b>rfe</b>	Routed fax email address.	page 323
<b>rfm</b>	Routed fax format.	page 324
<b>rne</b>	Routed fax notification address.	page 325
<b>rnp</b>	Receive Notify Procedure (RNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Receive Notify Procedures (RNPs)</i> (page 62) for additional information about the receive notification mechanism.	page 326
<b>rnt</b>	Email routed notification. Controls whether or not to automatically email routed fax notifications.	page 326
<b>rtp</b>	Template file (page 98) to use for routed notifications.	page 330
<b>sar</b>	Automatically archive sent fax.	page 331
<b>sfe</b>	Sent fax email address.	page 333
<b>sfm</b>	Sent fax back format. Controls the email attachment format of sent faxes if the <b>sfx</b> tag (page 335) is set to any value other than <b>nty-none</b> .	page 334
<b>sfx</b>	Email copy of sent faxes to sender.	page 335
<b>spf</b>	Automatically print sent faxes.	page 339
<b>spn</b>	Print sent notification.	page 341
<b>stg</b>	Template file (page 98) to use for group fax notifications.	page 344
<b>stn</b>	Template file (page 98) to use for failed fax notifications.	page 345
<b>sto</b>	Template file (page 98) to use for successful send notifications.	page 346
<b>suf</b>	Sender fax number suffix. This is typically a departmental billing code appended to fax numbers to ensure accurate billing of fax costs.	page 347
<b>tg1- tg4</b>	Primarily provided for expansion and customization of the user database. They are typically used to store sender information not found in other VSI-FAX tags.	page 349

TAG	DESCRIPTION	SEE
<b>tmf</b>	Custom time format that can be used in place of the default time format. Refer to <i>Date and Time Format</i> (page 95) for additional information.	page 352
<b>tmz</b>	Time zone.	page 353
<b>tnp</b>	Transmit Notify Procedure (TNP). Refer to <i>User and Device Notify Procedures</i> (page 50) and <i>Transmit Notify Procedures (TNPs)</i> (page 59) for additional information about the transmit notification mechanism.	page 356
<b>tsi</b>	Transmitting Station ID (TSI) string. This is typically your outgoing fax number.	page 357
<b>tti</b>	Transmitting Terminal ID (TTI). Alternative identifier that overrides the TSI string.	page 358
<b>ucv</b>	Include a fax cover page with each sent fax.	page 362
<b>ued</b>	User-editable. Controls whether or not a user can edit their personal user profile after it has been created by the fax administrator.	page 364
<b>ufd</b>	User edit fields. Intended for VSI internal use only.  <b>IMPORTANT:</b> Directly modifying this tag may cause unpredictable application behavior.	page 365
<b>umd</b>	User mode. Controls whether or not a particular user has administration privileges.	page 367
<b>upg</b>	Use custom page header. Controls whether or not a custom fax page header should be used instead of the default fax header. The actual custom fax header string is stored in the <b>pgh</b> tag (page 309).	page 368
<b>usr</b>	Typically the real-world person name (e.g., “John Smith”) for a VSI-FAX user/client ID, which is typically a short log-in name (e.g., “jsmith”).	page 369
<b>utp</b>	User type (individual, department, system).	page 370
<b>var</b>	Automatically archive received fax.	page 371
<b>vfe</b>	Email received fax address.	page 373
<b>vfmm</b>	Email received fax format.	page 374
<b>vfx</b>	Email received fax.	page 375
<b>vne</b>	Received notification email address.	page 376
<b>vnt</b>	Email received notification.	page 377
<b>vpr</b>	Automatically print received faxes.	page 378



TAG	DESCRIPTION	SEE
<b>vtp</b>	Template file (page 98) to use for receive notifications.	page 379
<b>wbi</b>	Allow web install. Controls whether or not the web fax client printer driver can be downloaded directly from a web browser.	page 379

## Adding Custom Tags to the faxtags Database

One of the advanced features of the fax server is the ability to add user-definable tags to the faxtags database. This database contains one record for each fax request submitted and is designed to be extendable by users. The tags in this database are data values associated with a fax request that do not change over the life of the fax request and only represent data that is not needed when actually sending the fax.

Administrators can extend this database to include information such as account numbers. Note that as delivered, the database already contains five tags (tin, tg1, tg2, tg3 and tg4) that are reserved for user data. These tags are kept only for the user's reference, as VSI-FAX merely keeps the data and reports on it. However, an administrator may need more than these tags or may want to define a tag with a specific tag name for his/her use.

The five user tags delivered with the faxtags database are common tags that are the same for each member of a group. Since they are not destination-specific, default values for these fields can be specified ahead of any destinations. They can even be specified in the user's `vsifax.ini` file.

### Rules for Custom Tags

1. Each field is treated as a text string. Any numeric data must be represented as its string equivalent. These fields cannot contain any binary data.
2. The maximum field length of a user-defined tag is 64 characters (counting the NULL character at the end of a string).
3. A tag name must be assigned to each tag and this tag name must not be duplicated in either the faxtags or the faxreqs database.
4. A tag name is limited to 15 characters, but we strongly recommend that the new tag name be 3 characters long to match all the standard VSI-FAX tags.
5. Tags already in the database (especially the seq tag) must not be removed from the database.
6. Custom tags must appear at the end of the FIELD list.
7. The field-code entry in the field list must be set to the name `userdefined`. This is necessary to enable VSI-FAX to recognize these tags when an update is performed.
8. We strongly recommend that the field length of a user-defined tag be a multiple of four.
9. The total field length of all user-defined tags cannot exceed 756 bytes.

## Basic Procedure for Adding Custom Tags

The basic procedure for adding user-defined tags to the faxtags database is:

1. Log in as **root** or **vsifax**.
2. Stop the scheduler.
3. Change directory to `$VSIFAX/spool/dbs`.
4. Backup the original database.
5. Extract the schema for the database.
6. Unload the data in the database.
7. Modify the faxtags schema file with any text editor (e.g., vi).
8. Rebuild the database using the modified schema.
9. Load the saved data back into the database.
10. Remove the backup database if everything was successful.
11. Restart the scheduler.
12. Complete.

## Example

In this example, a custom tag **inv** (invoice number) will be added to the faxtags database. Its field length will be set at 16 characters long.

1. Log in as user **vsifax**.
2. Stop the scheduler by entering the following:

```
vfxsched stop
```

3. Change directory to the database directory by entering the following:

```
cd $VSIFAX/spool/dbs
```

4. Extract the schema file for the faxtags database by entering the following:

```
vdbtool schema faxtags > faxtags.sch
```

The schema file for the faxtags database is displayed as follows:

```
# schema for database faxtags
dbname = faxtags
field = long      : seqno      : seq : request id
field = char(64)  : tovnum     : tvn  : to voice number
field = char(64)  : frname     : fnm  : from name
field = char(64)  : frcomp     : fco  : from company
field = char(64)  : frfnum     : ffn  : from fax number
field = char(64)  : frvnum     : fvn  : from voice number
```

```
field = char(64) : usrtag1      : tg1 : user tag 1
field = char(64) : usrtag2      : tg2 : user tag 2
field = char(64) : usrtag3      : tg3 : user tag 3
field = char(64) : usrtag4      : tg4 : user tag 4
index = nodup    : seq
```

5. Modify the schema file, using a text editor, by adding the following entry for the **inv** tag at the end of the field listing (immediately before the **index** entry):

```
field = char(16) : userdefined : inv : invoice number
```

6. Save your changes and close the file.
7. Rebuild the faxtags schema by entering the following:

```
vdbtool rebuild -v faxtags.sch
```

8. Restart the fax server by entering the following:

```
vfxsched start
```

9. Complete.



# CONFIGURATION FILES

---

VSI-FAX uses configuration files to store settings for various parts of the system. Most of these files are located in the `$VSIFAX/lib` directory. The only file that is not located there is the `vsifax.ini` file; `.vsifax.ini` is found in the `.vsifax` subdirectory in each user's home directory.

These are the configuration files:

FILE	DESCRIPTION	SEE
<code>vsisrv.ini</code>	Server configuration file.	page 411
<code>vsifax.ini</code>	User configuration file.	page 426
<code>dialcode.lst</code>	Dial string conversion rules file.	page 431
<code>formatters.lst</code>	External (User-Defined) Formatters.	page 453
<code>lcrhosts.lst</code>	LCR routes file.	page 439
<code>lcrrules.lst</code>	LCR Rules file.	page 440
<code>notify.lst</code>	Third-party command interpreters for event notify procedures.	page 56
<code>printers.lst</code>	Printers definition file.	page 441
<code>retrys.lst</code>	Retry strategies file.	page 442

## Sample .ini Files

Each VSI-FAX installation comes with a sample `vsisrv.ini` and `vsifax.ini` file. They are installed in the `$VSI_FAX/lib/samples` directory. Each file contains all of the possible entries you can use to set up and configure your VSI-FAX installation.

## .ini File Syntax

The server and client configuration files (`vsisrv.ini` and `vsifax.ini`) use the following syntax:

1. Files are ASCII text.
2. Blank lines and comment lines (beginning with a #) are ignored.
3. All entries are case-insensitive.
4. Files are organized into sections. Section names are inside square brackets.
5. All entries must be made in the proper section.

---

**IMPORTANT:** Any entry made prior to the first section entry in a file or any entry that is made in the wrong section is ignored.

---

6. Entries use `<name>=<value>` syntax.
7. White-space, dashes (-), and underscores (\_) are ignored in both `<name>` and `<value>` entries.

---

**TIP:** In other words, `MAXNODIALS`, `MaxNodials`, `max_nodials`, `max_no_dials`, `maxnodials` and `max-nodials` are all equivalent entries.

---

8. The following entries are special conditions:

`name =`            Value is not defined (unset).

`name = ""`        Sets value to NULL string.

9. Except for the preceding example, enclosing a `<value>` in quotes is optional unless it contains special characters.

# Server Configuration File (vsisrv.ini)

The `vsisrv.ini` file provides configuration information that establishes some of the behavior of the fax scheduler, debug logs, various server processes and dial string handling routines. On the server, it contains entries for the various processes, whereas on the client, it contains only those basic directory (phone book) entries needed for converting free-form dial strings to a structured format that is used by the directory routines.

## DEVICE Section

Entries used by the various FIMs and by directory (phone book) routines.

The **DEVICE** section is unique in that more than one section can be defined using this format:

[**DEVICE**: <NAME>]

Where <NAME> is a valid fax device name.

Entries in a **DEVICE**: <NAME> section are specific to that particular device.

## General Settings

ENTRY	DEFAULT	DESCRIPTION
ad-string		Advertisement (ad) string appended to the fax header.
answer-rings	1	Number of rings before device answers the phone call.
auto-answer	ON	Set OFF to answer calls manually, rather than having the device do it automatically. <b>IMPORTANT:</b> Set OFF if the device supports DID (page 9).
CSI-string		Called Subscriber ID (CSI) string. This is typically your outgoing fax number. This string can be a maximum of 20 characters long. For best compatibility, restrict your CSI string to numerals, plus signs and spaces. Default value is set during installation.
dial-type	T	Tone (T) or pulse (P) dialing.
disable-FCC		Disables the use of the FCC command, which corrects compatibility problems between US Robotics fax modems and Sharp fax machines.

ENTRY	DEFAULT	DESCRIPTION
enable-alt-prog	OFF	<p>Allows FIM switching. If the FIM dies repeatedly the alternate FIM program is used. The alternate FIM program for the c2 FIM is bl-FIM. The alternate FIM program for the b1 FIM is the c2FIM.</p> <p>When the fax scheduler realizes that a device is idle, it determines whether the FIM is running the alternate FIM program. If it is running the alternate FIM program, the scheduler updates its tables and the dstat database to make the change to alternate FIM program permanent.</p>
enable-did	OFF	<p>Turns on or turns off Dual Tone Multi-Frequency (DTMF) detection. When set OFF, the c2 FIMs do not listen for DTMF detection before answering an incoming call.</p>
enable-headers	ON	<p>Set OFF to disable generation of a page header at the top of each page.</p> <p><b>NOTE:</b> CCITT specifications state that a fax device should always put a header on each transmitted page.</p>
font-name		<p>Font to use for page header. By default, all FIMs image the page header using an internal linked-in version of the Roxbury italic bold font.</p> <p><b>TIP:</b> If you use the Roxbury compressed font for your page headers (i.e., by setting <code>font-name=roxycomp</code>), you will be able to display up to 120 chars of user data in the header, as compared with 62 chars using other fonts</p>
fulltime-clocal	ON	<p>Turns on or turns off device control of serial port (i.e., forces carrier detect on by sending "&amp;C0").</p>
mail-as-gifs	OFF	<p>When set ON, faxes sent via the SendMail FIM are converted from multi-page TIFF format to individual GIF files (one per page).</p>
max-no-dials	3	<p>Specifies number of "NO DIAL" errors allowed before the device is set to not running.</p>



ENTRY	DEFAULT	DESCRIPTION
no-&c-commands	OFF	Turns on or turns off sending “&C0” and “&C3” commands to the device. These commands are not normally required. However, some devices (e.g., Multi-Tech Systems rack mount modems) do require them.
page-hdr-line	ON	Set OFF to remove black horizontal line after the page header.
page-hdr-string		String to use for the page header.  <b>NOTE:</b> This string is limited to 63 characters after expansion, and will be silently truncated if required.  <b>NOTE:</b> This string is internally set to “Evaluation Only,” when running an evaluation version of VSI-FAX. It can only be changed when a permanent license is obtained and the scheduler is restarted.
TSI-string		Transmitting Station ID (TSI) string. This is typically your outgoing fax number. This string can be a maximum of 20 characters long. For best compatibility, restrict your TSI string to numerals, plus signs and spaces. Default value is set during installation.  <b>TIP:</b> The TSI string is used to negotiate with other fax devices and normally appears in the fax header at the top of each faxed page. Because the TSI will appear on the header even if the rest of the fax doesn't get sent, it is an especially good practice to make the TSI string your fax number. That way, people can fax you back in the event of problems.
template		<b>IMPORTANT:</b> This setting is only valid for the sendmail device.  Template file (page 98) to use when routing faxes via email.

## Fax Number (Dial String) Conversion Settings

ENTRY	DEFAULT	DESCRIPTION
area-code		Area code for the phone line used by this device.
country-code	1	The country code for the phone line used by this device.
dial-convert	ON	Set OFF to disable any dial string conversion.
dial-cvt-program		The name of an external program to be used to convert dial strings instead of the internal algorithm. This program is called with the following arguments:  <p><b>-p</b>    &lt;prefix&gt;    Dial &lt;prefix&gt;, if defined.</p> <p><b>-s</b>    &lt;suffix&gt;    Dial &lt;suffix&gt;, if defined.</p> <p><b>-a</b>    &lt;code&gt;      Area &lt;code&gt;, if defined.</p> <p><b>&lt;number&gt;</b>          Dial string to convert.</p>
dial-prefix		A prefix, such as “9”, or “8,” to be prepended to a dial string before sending. This is usually used to access outside lines.
dial-suffix		Suffix appended to a dial string before sending.
intl-access	011	The dial prefix needed to make international calls.
intl-prefix		An alternate prefix (instead of LongDistPrefix) for dialing an international call.
intl-suffix		An alternate suffix for dialing an international call.
local-num-len	7	The number of digits in the local number for the phone line used by this device.
long-dist-access	1	Dial string needed to make long distance calls.
long-dist-prefix		Prefix prepended to a dial string (instead of DialPrefix) if the number is determined to be a long distance number. This is usually used for phone systems that use access codes for long distance calls.
long-dist-suffix		Suffix appended to a dial string (but before DialSuffix) if the number is determined to be a long distance number. This is usually used for phone systems that use account numbers for toll calls.

## Timing, Delay and Reset Settings

ENTRY	DEFAULT	DESCRIPTION
at-timeout	60	Number of seconds FIM waits for a response from the device.
carrier-timeout	60	Number of seconds before device times out when connecting to the phone line. If connection is not made within this time, the device reports "NO CONN."
close-delay	0	Number of seconds to wait before closing a device.
init-delay	0	Number of seconds to wait after performing a device initialization sequence.
open-delay	0	Number of seconds to wait before opening a new device.
page-delay	10	When using loopback FIM, number of seconds to wait between pages.
recv-connect-timeout	60	Number of seconds before device times out when making phone line connection to receive faxes.
reset-delay	0	Number of seconds to wait between opening a device and initializing it.
reset0-string	ATZ	First reset string sent to device.
reset0-timeout	60	Number of seconds FIM waits for a response from the device after a reset0-string is sent.
reset1-string	AT&FS0=0E0Q0V1	Second reset string sent to device. This command usually asserts the lowest level of firmware initialization.
reset1-timeout	60	Number of seconds FIM waits for a response from the device after a reset1-string is sent.
reset2-string		Third reset string sent to device.
reset2-timeout	60	Number of seconds FIM waits for a response from the device after a reset2-string is sent.
send-delay	10	When using loopback FIM, number of seconds to wait before processing a fax request.

## Debug Settings

ENTRY	DEFAULT	DESCRIPTION
debug	OFF	Set ON the enable verbose debug entries in the log. Debug logs are written to the \$VSI/FAX/spool/logs directory.
data-debug	OFF	When set ON, FIM records data-mode messages to the debug log. These are initiated in response to an incoming call.
dial-debug	ON	When set ON, logs initial and converted dial strings for a fax request.
dis-debug	OFF	When set ON, the FIM parses +FDIS and +FDCS messages from the device and records them in the FIM log file.
event-debug	OFF	When set ON, FIM records each device event in the debug logs.  <b>IMPORTANT:</b> Setting this debug option creates large debug log files.
fifo-debug	OFF	When set ON, FIM records command-FIFO debug messages to the log file.
getc-debug	OFF	When set ON, FIM logs all the get-character activity in the readline code.  <b>IMPORTANT:</b> This debug option is only intended for detailed debugging of the internal cache as it produces tremendous amounts of output to the FIM log file.
hdlc-debug	OFF	When set ON, the FIM sets the +FBUG parameter in the device to enable HDLC frame reporting.
mtype-debug	ON	When set ON, writes device information to the debug log.
nsf-debug	OFF	When set ON, the FIM examines +FNSF responses from the device received during T.30 handshaking and records the country code and manufacturer code in the FIM log file.
query-debug	OFF	When set ON, outputs query information used in getting device information during initialization.

ENTRY	DEFAULT	DESCRIPTION
raster-debug	OFF	When set ON, FIM records information about received T.4 encoded raster image data into the FIM log file.  <b>IMPORTANT:</b> Setting this debug option creates large debug log files.
readline-debug	OFF	When set ON, FIM records each response line from an AT command read from the device into the FIM log file.
reset-debug	OFF	When set ON, FIM records messages related to the device reset mechanism into the FIM log file.
t30-debug	ON	When set ON, FIM records information about the status of the T.30 protocol during send into the FIM log file. The messages report phase transitions plus the post-message commands and responses from the device.
termio-debug	ON	When set ON, FIM records all class2 commands written to the device in the FIM log file. This debug option helps debugging device problems.
waitfor-debug	OFF	When set ON, FIM records debug information from the wait-for-event module into the FIM log file.
xstate-debug	OFF	When set ON, records any changes in state by the FIM (e.g., initializing, sending, receiving, etc.).

## LCR Section

These setting are used by the Least Cost Routing (CR) feature (page 79).

ENTRY	DEFAULT	DESCRIPTION
debug	OFF	Set ON to enable verbose debug entries in the log file. Debug logs are written to the \$VSIFAX/spool/logs directory.
route-name		Route name associated with this fax server. This name must also appear in the \$VSIFAX/lib/lcrhosts.lst file (page 439).

## MSTOTIF Section

Controls how files are imaged on Windows NT/2000.

ENTRY	DEFAULT	DESCRIPTION
debug	OFF	When set ON, verbose debug logging is enabled.
dde-only	OFF	<p>If set ON, fax server will use the Windows file association/ Dynamic Data Exchange (DDE) mechanism to image various file types instead of using the normal “viewer-based” mechanism.</p> <p>The advantage to using the DDE method, is that it is more accurate (files are imaged with the actual application that reads and writes them). It avoids many version mismatches and errors that can occur when you rely on a common file viewer.</p> <p>The disadvantage is that some applications take longer to load than a simple file viewer. However, fax imaging always occurs in the background and sending a fax takes minutes rather than seconds. In most cases, this additional imaging time should not adversely impact fax server performance.</p>
hide-window	ON	Specifies whether or not to hide the document viewer when creating a TIFF file.
save-files	OFF	Saves source files used to create the TIFF file in \$VSI\FAX/spool/temp.
timeout	180	Maximum time in seconds for the document viewer to create a TIFF file.

## USERINFO Section

Cover page information. Default values are set during installation.

ENTRY	DESCRIPTION
company	Company name.
v-phone	Voice phone number.
f-phone	Fax phone number.
email	Email address.
addr1	Address information.
addr2	Address information.

ENTRY	DESCRIPTION
addr3	Address information.
country	Country information.

## VFXSCHED Section

Entries used by the **vfxsched** (fax scheduler) process.

ENTRY	DEFAULT	DESCRIPTION
accel-notfax-expire	ON	If a fax attempt fails because it is not a fax number, subsequent attempts are also likely to fail. Set on to accelerate expiration of subsequent fax attempts.
check-dup-num	ON	If set OFF, turns off checking for duplicate phone numbers when scheduling fax requests. Set ON to prevent getting a busy signal when sending more than one fax to the same number.
debug	OFF	Set ON to enable system-level verbose debug entries in the log file. If debug is set ON here, debug is enabled for all sub-processes. Debug logs are written to the \$VSIFAX/spool/logs directory.
debug-diskspace	OFF	Set ON to enable disk space debugging.
diskspace-min	51200	Minimum number of 1KB blocks that must be free on the local fax server file system. The fax server will check this periodically and immediately shut down if the available disk space falls below this value. A value of 0 disables this check.
grace-period	0	After a shutdown command is received, wait this number of seconds to wait before actually shutting down.
group-tnp	OFF	Set on to run Transmit Notify Procedures (page 52) against group fax jobs.

ENTRY	DEFAULT	DESCRIPTION
holdq-timeout	7200	<p>When Least Cost Routing (page 79) is being used, fax jobs are placed in a local hold queue until they can be handed off to the remote fax server for processing. If the remote fax server is offline, these jobs could remain in the local hold queue indefinitely.</p> <p>This setting controls the amount of time a fax job is allowed to remain in the local hold queue before it is transferred to a local device queue (sent locally).</p>
load-balance	OFF	Enables the load balancing feature.
load-bias	0	Sets a numeric value (in minutes) that is added to the Time-To-Fax (TTF) calculation by the load balancing algorithm.
load-diff-bias	5	Sets a numerical differential (in minutes) used by the load balancing algorithm.
max-fim-idle	300	Maximum number of seconds a FIM is allowed can go without changing states before it is automatically reset by the fax server.
max-log-files	5	Maximum number of historical log files to keep. Each time the scheduler is restarted, new “current” log files are started for each process. This setting specifies how many “old” log files (not including the current log file) should be kept for historical reference.
max-no-dials	3	Maximum number of no dial tone failures allowed before the scheduler disables the FIM.
max-spawn-count	3	Maximum number of event notify procedures (page 49) that will be run concurrently.
resend-from-start	OFF	If set ON, fax jobs halted in the middle of a send are re-sent in their entirety (all pages). If set OFF, each halted fax job is resumed at the point it was halted (pages successfully sent the previous time are not re-sent).



ENTRY	DEFAULT	DESCRIPTION
run-vpopd	ON	If set ON, automatically starts the <b>vpopd</b> process.  <b>IMPORTANT:</b> The <b>xmlf</b> process is required in order to use the email-to-fax gateway. Do not set this OFF or the email-to-fax gateway will not work
run-vsinet	OFF	If set ON, automatically starts the <b>vnetlg</b> process.  <b>NOTE:</b> Default is OFF because the VSI-NET transport mechanism has been obsoleted. However, the entry is provided because some legacy integrations may still require it.

## VGSCHEM Section

Entries used by the **vgsched** (group fax scheduler) process.

ENTRY	DEFAULT	DESCRIPTION
debug	OFF	Set ON to enable verbose debug entries in the scheduler log. Debug logs are written to the \$VSI-FAX/spool/logs directory.
max-members-queued	16	Maximum number of members of a group request that will be queued at any given time.

## VMAIL Section

The **vmail** process uses the SendMail FIM to send a fax to an email address instead of a fax telephone phone number. These settings are also used by the RNP mechanism to route a received or routed fax to an email address, and by the TNP mechanism to send notifications.

ENTRY	DEFAULT	DESCRIPTION
debug	OFF	Set ON to enable verbose debug entries in the mailer log. Debug logs are written to the \$VSI-FAX/spool/logs directory.
from-name	VSI-FAX Server	This is the name that is shown in the fax recipient's email in box.

ENTRY	DEFAULT	DESCRIPTION
sender	vsifax	SMTP user name. Default is vsifax.
server		IP address or fully qualified host name of the SMTP server. Default value is set during installation.

## VNOTIFY Section

The **vnotify** process controls the event notification mechanism (page 49).

ENTRY	DEFAULT	DESCRIPTION
debug	OFF	Set ON to enable verbose debug entries in the mailer log. Debug logs are written to the \$VSIFAX/spool/logs directory.

## VPOPD Section

Entries used by the **vpopd** process for the email-to-fax gateway.

ENTRY	DEFAULT	DESCRIPTION
auth-id	LICENSED	Security option that prevents unauthorized internet users from sending faxes via the email-to fax gateway. Valid values are:
		LICENSED      A <b>cli</b> tag referencing a licensed user must be present in the tag file or the fax will not be sent. This setting provides the most security.
		REGISTERED    A <b>cli</b> tag referencing a registered user must be present in the tag file or the fax will not be sent.
		NONE           No action. This setting provides the least security.
host-name		Network host name, fully qualified internet domain name or IP address of your incoming (POP3) internet mail server.
user-name		Email account name that will be monitored by the fax server. You must have previously set this account up on your incoming (POP3) internet mail server. The default user name for this account is "autofax".

ENTRY	DEFAULT	DESCRIPTION
password		Password assigned to the Username account.
sleep-time	300	Polling interval in seconds that the <b>vpopd</b> process checks the fax email account.

## VSIFAX Section

Entries used by all processes.

ENTRY	DESCRIPTION
date-format	Date format used for formatting the date on cover pages and on the fax header.
time-format	Time format used for formatting date on cover pages and the fax header.

Refer to *Date and Time Format* (page 95) for additional information about date and time entries.

## VSINET Section

Entries used by the **vnetlgn**, **vnetcmd** and **vnetfax** network processes.

ENTRY	DEFAULT	DESCRIPTION
auto-reg	OFF	When set ON, if the fax server finds an unknown client ID inside a tag or batch file in the /autosend directory, it automatically creates a new user account and allocates a license to it.
autosend-delay	60	Number of seconds a tag or batch file must remain static before it is sent. This delay interval ensures that the tag or batch file is fully copied into the /autosend directory before the fax server tries to send it.
clear-at-exit	OFF	If set ON, atomically logs off all users when the fax server shuts down.
cmd-port	0	TCP/IP port number used by the command processes. This is usually a random port chosen by the system but can be set to enable getting through firewalls. A setting of zero (0) lets the system choose the port address.
debug	OFF	Set ON to enable verbose debug entries in the log. Debug logs are written to the \$VSIFAX/spool/logs directory.

ENTRY	DEFAULT	DESCRIPTION
login-port	0	TCP/IP port number used by the login process to read login requests. This can be changed to get through the system's firewalls. If this entry is changed, the corresponding entries in all <code>vsifax.ini</code> files must be changed to agree. A setting of zero (0) uses the VSI default login port (port 996).
out-port	0	TCP/IP port number used by the <b>vnetlgn</b> and <b>vnetcmd</b> processes for communicating with various fax clients. If not specified or if set to zero (0), a random port is used.  If specified, this represents the first port in a range controlled by the <code>out-port-range</code> entry.
out-port-range	100	Number of contiguous range of TCP/IP port numbers used by the <b>vnetlgn</b> and <b>vnetcmd</b> processes for communicating with various fax clients. This is used to restrict the fax server to a specific range of ports for firewall purposes.  The beginning port in the range is set via the <code>out-port</code> entry. If <code>out-port</code> is not set, the entry is ignored.
remote-reg-ok	ON	If set ON, new user accounts are created (and licensed) the first time an unknown user sends a fax. If set OFF, the fax administrator must manually create new user accounts and allocate licenses.
image-server		Network host name of the Windows NT/2000 imaging server.  Refer to <i>Imaging Server Setup and Configuration</i> (page 87) for additional information.
xml-port	0	TCP/IP port number used by the <b>vxmld</b> process. A setting of zero (0) uses the VSI default communication port (port 2996).

## VXMLD Section

Entries used by any XML documents.

## Overriding host-name and user-name Entries

When you want to connect to a different fax server or logon on as a different user than the one specified in your local `vsifax.ini` file, you must override the `vsifax.ini` `host-name` and `user-name` entries at the command line.

Note that all command line client programs support the following arguments to override any entries in the `vsifax.ini` file:

- H <host-name>**      Networked fax server **<host-name>** you want to connect to. **<host-name>** can be in the form **<host-name>:<port>** to specify both the host name and the port number to use.
- U <user-name>**      VSI-FAX user name to use when logging on to the fax server.  
**NOTE:** Although this option changes the logon **<user-name>**, your local configuration files will be used rather than the configuration files for **<user-name>** for all other configuration settings.

You can also override the `hostname` entry in the `vsifax.ini` file by setting the environment variable `VSIHOST`, and you can override the `Username` entry in the `vsifax.ini` file by setting the environment variable `VSIUSER`. The procedure for determining both the runtime host name and user name values is as follows:

- Extract the value from `vsifax.ini`, using the global file first, then the user's local file
- Override the value with the contents of the `VSIHOST` or `VSIUSER` environment variable if set
- Override the value with the **-H** or **-U** command line option if specified

## Examples

To send a fax as user "martinez" via the "international" fax server, enter:

```
vfx -H international -U martinez -n 818-555-4321 file1.tif
```

# Client Configuration File (vsifax.ini)

The `vsifax.ini` file provides configuration information to the various client programs. The client programs that use the client `vsifax.ini` file are CoverMaker and **vfx** when the **-u** option is used.

**NOTE:** The `vsifax.ini` file is not accessed by the Outlook fax client or the **xmlf** command line client.

There is a global `vsifax.ini` file in the `$VSIFAX/lib` directory, which is used by all clients. Each user also has a personal `vsifax.ini` file in their `$HOME/.vsifax` directory, which is referenced by all clients for that individual user. If both files exist, the global file is loaded first then the personal file is loaded, thus allowing a user to override any of the global defaults.

The global `vsifax.ini` file is used to specify parameters that affect all clients run on that computer, such as default server host name, country code and area code, logon port, etc. The personal `vsifax.ini` file can contain a person's name, phone number, fax sending options, etc.

The user can set certain tag values in a `vsifax.ini` file, which **vfx** will process before processing any command-line arguments. This enables a user to set his name, company, phone number, etc., only once, rather than specifying it each time he invokes **vfx**. Since these values are processed before any command-line arguments, arguments on the command-line can override these defaults.

The user configuration file is only processed if the **-u** option is specified when using the **vfx** command.

Note that if the **-u** option is specified, any configuration parameters stored on the server for a user via the web client are also loaded.

## LOGIN Section

Parameters pertaining to logging on to the server.

ENTRY	DEFAULT	DESCRIPTION
client-port	0	The port number used by a client to receive responses from the server. This is usually a random port chosen by the system, but can be set to provide a known port to get through firewalls. A setting of zero (0) lets the system choose the port address.
host-name		Host name of the fax server.

ENTRY	DEFAULT	DESCRIPTION
login-port	0	TCP/IP port number used by the login process to read login requests. This can be changed to get through the system's firewalls. It must match the entry found in the <code>vsisrv.ini</code> file on the server. A setting of zero (0) uses the VSI default login port (port 996).
user-id		The user ID used when logging into the server.
xml-port	0	TCP/IP port number used by the <b>vxmld</b> process. A setting of zero (0) uses the VSI default communication port (port 2996).

## COVERSHEET Section

Parameters pertaining to cover page generation.

ENTRY	DESCRIPTION
coversheet	Name of cover page to use.
from-company	Your company name.
from-fax-num	Your fax number.
from-name	Your full name.
from-voice-num	Your voice number.
user-tag1	User-defined tag 1.
user-tag2	User-defined tag 2.
user-tag3	User-defined tag 3.
user-tag4	User-defined tag 4.

## SENDPARAMS Section

Parameters pertaining to sending a fax.

ENTRY	DEFAULT	DESCRIPTION
area-code		Area code that is assumed if no area code is supplied. Used if your area code is different from the area code of the server. Default is none (use area code of server).
gnp		Group Notify Procedure to use. This will be run by the system GNP.
fax-dest		Default fax device or class to use when sending faxes.
lnp		Launch Notify Procedure to use. This will be run by the system LNP.
mail-address	logname@host	Email address to send notifications to.
notify-mode	FAIL	Email notification mode. Values are:  BOTH      Always send.  EACH      Send after each attempt.  FAIL      Send if fax failef.  NONE      Never notify.  OK        Send if fax successfully sent.
prefix		Prefix to be prepended to a dial string after the server's prefix.
priority	M	Priority of the fax request. Values are:  L        Low.  M        Medium (default).  H        High.  U        Urgent.
resolution	STD	Resolution to use in sending the fax. Values are:  FINE     Fine (196 X 204) (default).  STD      Standard (98 X 204).



ENTRY	DEFAULT	DESCRIPTION
retry-method	DEFAULT	Retry method to use.
send-time	NOW	Time to send the fax. Format is [yy   yyyy] [mmd] hhmm [am   pm]. Default is send immediately.  <b>NOTE:</b> Send time can be entered with either two-digit or four-digit year values. If a two-digit year is supplied, values less than 70 are internally prefixed with “20” (e.g., 2069); values of 70 or greater are internally prefixed with “19” (e.g., 1970).
suffix		Suffix to be appended to a dial string before the server’s suffix.
tnp		Transmit Notify Procedure to use. This will be run by the system TNP.
tsi		The TSI (Transmitting Subscriber Identifier) to use instead of the server’s TSI.

## FILEPARAMS Section

Parameters pertaining to fax file imaging.

ENTRY	DEFAULT	DESCRIPTION
file-res	FINE	Resolution to image the file at. If not specified, the file will be imaged at the send resolution.
file-type		The file-type of the file to be sent. If specified, it will override any auto-recognition based on file extension.
page-length		The page length to image the file at. Values are:  LETTER Letter size (11 inches).  LEGAL Legal size (14 inches) (default).  A4 A4 size (11.7 inches).

## **Examples**

A `vsifax.ini` entry to specify a user's "from" information is:

```
[COVERSHEET]
from-name = Ernst Stavro Blofeld
from-company = SPECTRE
from-fax-num = (800) 555-5555
from-voice-num = (800) 555-6666
```

To specify that all faxes should go out after 5 PM, use:

```
[SENDPARAMS]
send-time = 1700
```

To specify that the server to connect to is "starfleet", use:

```
[LOGIN]
host-name = starfleet
```

## Dial String Rules File (*dialcode.lst*)

The *dialcode.lst* file is used to accommodate the dynamic telephone service standards being supplied by providers in the United States. For example, when placing a call to another area code, it is usually necessary to dial the area code of the number to which you are calling. There are exceptions to this requirement, however, such as with overlapping or neighboring area codes.

You can use the *dialcode.lst* file to specify special dial string conversion requirements that cannot be implemented with the *vsisrv.ini* variables alone. These requirements are usually unique for a particular area code or locale or for a particular long distance carrier.

Use of the *dialcode.lst* file is optional. As installed, the *dialcode.lst* file is located in the *\$VSI-FAX/lib* directory. It contains sample entries that have been “commented out” and are therefore not active. To make use of the special dial string conversion features that can be implemented with the *dialcode.lst* file, edit this ASCII file with a standard text editor.

The format of an entry in the *dialcode.lst* file is:

```
code : field-1 : field-2 : field-3
```

Some action codes do not need or use all three fields. If a field is empty or contains an asterisk, that field is a “wildcard” that matches any value.

### Action Codes

There are seven action codes available. You can use the action codes to:

- Remove the area code from a dial string in certain situations.

- Remove the long distance access string (*LongDistAccess*, from the *vsisrv.ini* file) from a dial string in certain situations.

- Remove both the long distance access string (*LongDistAccess*, from the *vsisrv.ini* file) and the area code from a dial string in certain situations.

- Add a long distance carrier string to a dial string in certain situations.

- Keep both the long distance access string (*LongDistAccess*, from the *vsisrv.ini* file) and the area code in the dial string in certain situations.

- Use the local dialing prefix (*DialPrefix*, from the *vsisrv.ini* file) instead of the long distance dialing prefix (*LongDistPrefix*, from the *vsisrv.ini* file, from the *vsisrv.ini* file) in certain situations.

- Add an international carrier code to a dial string for all international calls.

## Action Code p – Remove Area Code

If your telephone service provider requires that you dial certain non-local numbers using only your long distance access string, without the area code, you can use action code p to perform this dial string conversion.

Action code p will remove area code *ttt* from the dial string and prepend *LongDistAccess* to the dial string whenever a call is made from area code *fff* to area code *ttt* and prefix *ppp*.

Syntax: `<code>:<fff>:<ttt>:<ppp>`

---

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
p:714:714:555	If the call is from area code 714 to prefix 555 of area code 714, remove the area code and prepend LongDistAccess.	714-555-1212	1-555-1212
p:714:616:489	If the call is from area code 714 to prefix 489 of area code 616, remove the area code and prepend LongDistAccess.	616-489-1212	1-489-1212
p:714:818:*	If the call is from area code 714 to any prefix of area code 818, remove the area code and prepend LongDistAccess.	818-569-1212 818-234-1212	1-569-1212 1-234-1212

---

## Action Code a – Remove Long Distance Access String

If your telephone service provider requires that you dial certain non-local numbers using only the area code, without your long distance access string, you can use action code a to perform this dial string conversion.

Action code a will remove LongDistAccess from the dial string without removing the area code whenever a call is made from area code `fff` to area code `ttt` and prefix `ppp`.

Syntax: `<code>:<fff>:<ttt>:<ppp>`

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
<code>a:714:310:*</code>	If the call is from area code 714 to any prefix of area code 310, remove LongDistAccess.	1-310-555-1212	310-555-1212
<code>a:*:213:*</code>	If the call is from any area code to any prefix of area code 213, remove LongDistAccess.	1-213-752-1212	213-752-1212
<code>a:*:619:*</code>	If the call is from any area code to any prefix of area code 619, remove LongDistAccess.	1-619-489-1212	619-489-1212

## Action Code I – Remove Long Distance Access String and Area Code

If your telephone service provider requires that you dial certain non-local numbers using neither the area code nor the long distance access string (that is, treat them as local calls), you can use action code I to perform this dial string conversion.

Action Code I will remove both the area code and `LongDistAccess` from the dial string whenever a call is made from area code `fff` to area code `ttt` and prefix `ppp`.

Syntax: `<code>:<fff>:<ttt>:<ppp>`

---

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
1:714:714:555	If the call is from area code 714 to prefix 555 of area code 714, remove <code>LongDistAccess</code> and the area code.	1-714-555-1212	555-1212
1:714:616:*	If the call is from area code 714 to any prefix of area code 616, remove <code>LongDistAccess</code> and the area code.	1-616-489-1212	489-1212
1:714:818:233	If the call is from area code 714 to prefix 233 of area code 818, remove <code>LongDistAccess</code> and the area code.	1-818-233-1212	233-1212

---

## Action Code c – Add Long Distance Carrier String

When placing a call to another area code, it is sometimes necessary or desirable to use a particular long distance carrier in order to obtain better or less expensive service.

If you want to prepend an access code for a particular long distance carrier to some of your long distance calls, you can use action code c to perform this dial string conversion.

Action code c will prepend long distance access code ccccc to the dial string whenever a call is made from area code fff to area code ttt.

Recognized long distance access codes are:

ATT	10228
Sprint	10333
MCI	10222
Wiltel	10555
Frontier	10444

Syntax: c:<fff>:<ttt>:<ccccc>

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
c:714:619:10222	If the call is from area code 714 to area code 619, prepend DialPrefix and "10222".	619-555-1212	9,10222-619-555-1212
c*:514:10288	If the call is from any area code to area code 514, prepend DialPrefix and "10288".	514-489-1212	9,10288-514-489-1212
c:714:213:10222	If the call is from area code 714 to area code 213, prepend DialPrefix and "10222".	213-233-1212	9,10222-213-233-1212

## Action Code f – Keep Long Distance Access String and Area Code

When placing a call to another area code, it is usually necessary to dial both the long distance access string and the area code of the number to which you are calling. To ensure that dial strings contain both the long distance access string and the area code when required, use action code f. Action code f will retain or prepend the area code and LongDistAccess with the dial string whenever a call is made from area code `fff` to area code `ttt` and prefix `ppp`.

Syntax: `f:<fff>:<ttt>:<ppp>`

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
<code>f:714:714:555</code>	If the call is from area code 714 to prefix 555 of area code 714, keep the area code and keep or prepend LongDistAccess.	714-555-1212	1-714-555-1212
		714-777-1212	777-1212
<code>f:714:714:666</code>	If the call is from area code 714 to prefix 666 of area code 714, keep the area code and keep or prepend LongDistAccess.	714-666-1212	1-714-666-1212
		714-777-1212	777-1212



## Action Code d – Use Local Prefix Instead of Long Distance Prefix

The `vsisrv.ini` file allows you to define two kinds of prefixes for accessing outside telephone lines. If the dial string conversion process determines that a call is local, the `DialPrefix` string can be prepended to the dial string. If the dial string conversion process determines that a call is long distance, the `LongDistPrefix` string can be prepended to the dial string.

In certain situations, such as with overlapping or neighboring area codes, a dial string that appears to be long distance can need to be dialed with the `DialPrefix` string prepended rather than the `LongDistPrefix` string. You can use action code `d` to perform this dial string conversion.

Action code `d` will prepend `DialPrefix` and `LongDistAccess` to the dial string whenever a call is made from area code `fff` to area code `ttt` and prefix `ppp`.

Syntax: `d:<fff>:<ttt>:<ppp>`

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
<code>d:714:818:555</code>	If the call is from area code 714 to prefix 555 of area code 818, prepend <code>DialPrefix</code> and <code>LongDistAccess</code> , otherwise prepend <code>LongDistPrefix</code> and <code>LongDistAccess</code> .	818-555-1212	9,1-818-555-1212
		606-666-1212	8,1-606-666-1212
<code>d:714:818:666</code>	If the call is from area code 714 to prefix 666 of area code 818, prepend <code>DialPrefix</code> and <code>LongDistAccess</code> , otherwise prepend <code>LongDistPrefix</code> and <code>LongDistAccess</code> .	818-666-1212	9,1-818-666-1212
		606-666-1212	8,1-606-666-1212

Action Code i – Add International Carrier Code for International Calls

When placing an international call, it is sometimes necessary or desirable to use a particular long distance carrier in order to obtain better or less expensive service. If you want to prepend an access code for a particular long distance carrier to all your international calls, you can use action code i to perform this dial string conversion.

Action code i will prepend DialPrefix, long distance access code ccccc, and IntlAccess to the dial string whenever the dial string conversion process determines that a call is to an international number.

Syntax: i:<cccc>

ENTRY	DESCRIPTION	INITIAL DIAL STRING	CONVERTED DIAL STRING
i:10222	For international numbers, prepend DialPrefix, “10222”, and IntlAccess.	44-12345-224	9,10222-011-44-12345-244

Examples

The following examples assume that the server’s area code is 714 [DEVICE] AreaCode entry in the vsisrv.ini file. Line numbers are provided for reference only.

```
Line 1p:714:714:555
line 2p:714:616:489
line 3p:714:818:*
line 4a:714:310
line 5a*:213:*
line 6a*:619:*
line 7l:714:909:555
line 8l:714:217:*
line 9c:714:212:10222

line 10c:714:303:10288
line 11i:10288
```

Then the following conversions are done.

ORIGINAL NUMBER	CONVERTED NUMBER	REASON
1-714-555-1212	1-555-1212	line 1
1-616-489-6666	1-489-6666	line 2
1-717-777-7777	1-717-777-7777	

ORIGINAL NUMBER	CONVERTED NUMBER	REASON
1-818-310-7777	1-310-7777	line 3
1-310-777-7777	310-777-7777	line 4
1-213-555-1212	213-555-1212	line 5
1-619-555-1212	619-555-1212	line 6
1-416-555-1212	1-416-555-1212	
1-909-555-1212	555-1212	line 7
1-909-666-1212	1-909-666-1212	
1-217-123-4567	123-4567	line 8
1-212-555-1212	10222-1-212-555-1212	line 9
1-303-555-1212	10288-1-303-555-1212	line 10
011-48-12-5678	10288-011-48-12-5678	line 11

---

**NOTE:** V-Systems provides a dial string conversion testing function, called **vdialcvt**, with your VSI-FAX software. You can use this program to test your complete dial string conversion setup and determine whether it is correct.

---

## LCR Routes File (lcrhosts.lst)

The LCR routes file associates a route owner with an autofax account.

The format of an entry in the `lcrhosts.lst` file is:

```
<route_owner>:<transport_account>
```

For example:

```
NewYork:New_York@abc.com
LondonUK:lfaxes@fax.sys.co.uk
```

These entries establish LCR hosts in New York and London at `New_York@abc.com` and `lfaxes@fax.sys.co.uk` transport accounts, respectively.

## LCR Rules File (lcrrules.lst)

The LCR configuration file associates one or more international/area code(s) with a route owner. Together with the LCR routes file, the LCR rules file specifies which fax account the fax will be routed to.

The format of an entry in the `lcrrules.lst` file is:

```
<dial_string-skeleton>:<route_owner>
```

For example:

```
# US rules (by area code)
#
[1]212??????? :NewYork
019*:LondonUK
```

These entries route all faxes sent to the 212 area code to the New York LCR host and all faxes being sent to the 019 country code to the London LCR host.

### Wildcards

Entering an asterisk (\*) in the rules file tells the system to match any value(s) in that portion of the dial string. For example, in the file above, the entry `019*:LondonUK` tells the system that any dial string starting with 019 will be routed to London.

---

**TIP:** VSI strongly recommends that any entries using \* be placed at the end of the rules file to eliminate the possibility of routing a fax to the wrong location. Consider that in the previous examples that if `1*:LosAngeles` were the first entry in the rules file, all other entries starting with 1 would be ignored. This is because entering \* after the first digit tells the system that all dial strings starting with a 1 followed by any digits are to be routed to Los Angeles.

---

Question marks (?) can also be used as wild cards to represent exactly one digit. For example, the entry `1714555-5????` would match any number starting with 1714555 and ending with four digits between 5000 and 5999. Similarly, the entry `1714???????` would match any number starting with 1714 followed by 7 digits.

# Printers Definition File (printers.lst)

The `printers.lst` file is used to define printers are used for automatic printing of received or routed faxes. The fax administrator can set up alternate entries in this file for different printers and/or different print options (e.g., PCL or PostScript). The default entry, which is also used if no printer definition is specified, is `Default`.

This file's entries are referenced with the `prt` tag in the user database. Therefore, a printer definition of 2nd-floor is referenced by a user joeb with the command:

```
vfxfadmin user -t prt=2nd-floor -t apr=on joeb
```

The format of an entry is:

```
<name> : <command>
```

Where `<name>` is a user-defined name for this printer and `<command>` is the command string passed to that printer each time a fax is printed.

---

**IMPORTANT:** If you want to use a networked printer, you must define the full printer name using the `vfxfprint -o` option as described in *Windows Printing with a Network Print Server* (page 189).

---

Prior to executing the `<command>`, any of these variables found in the command string are expanded:

<code>%v</code>	Value of the <code>\$VSI_FAX</code> environment variable .
<code>%p</code>	Full pathname of the file to be printed.
<code>%b</code>	Base name of the file.
<code>%f</code>	From user name. This is the user name of the person who routed the fax to the user. It will be set to "vsifax" if it is a received fax.
<code>%n</code>	Full name of <code>%f</code> .
<code>%t</code>	To user name. This is the user name of the person who received the fax.
<code>%u</code>	Full name of <code>%t</code> .
<code>%m</code>	Email address of the user who received the fax.
<code>%a</code>	Action being performed. This will be:
<code>received</code>	If the fax was received.
<code>routed</code>	If the fax was routed.

## Examples

Default printer entry is:

```
Default:vfxprint -SS %p | lp -oraw
```

This indicates that the file is to be imaged for a PCL printer, using the program **vfxprint** using edge-to-edge scaling, and passed to the **lp** spooler as a raw data stream.

To set up a 2nd-floor entry, which uses PostScript printer ps2fl, create the following entry:

```
2nd-floor:vfxprint -d ps -SS %p | lp -d ps2fl
```

# Retry Strategy File (retrys.lst)

The `retrys.lst` file is used to define the various retry strategies (page 39) used at your site.

Each retry strategy is defined on a separate line. The format of a retry strategy entry is:

```
<name>:<minutes>,<minutes>,...
```

Where `<name>` is a user-defined name for this strategy and each `<minutes>` entry is one retry. The actual number of minutes specified determines how the fax server will wait before executing that retry.

---

**NOTE:** If a retry strategy is defined without any `<minutes>` entries, the fax server will interpret it as no retries (i.e., initial send only).

---

## Examples

Consider the default retry strategy defined in the default `retrys.lst` file, installed with your VSI-FAX server:

```
default:5,5,5,5
```

This retry strategy is used whenever no other retry strategy is explicitly specified. It defines four retries, five minutes apart.

Consider the default retry strategy, which is also defined in the default `retrys.lst` file:

```
three-attempts:5,5
```

This retry strategy defines two retries, five minutes apart. Notice that although this retry strategy is named “three-attempts” that it contains only two entries. This is because these two retries, combined with the initial send, constitutes three total attempts.

Refer to *Retry Strategies* (page 39) for additional information.

# APPENDIX A – AVOID THESE SPECIAL CHARACTERS

---

Do not use these special characters in VSI-FAX text entries or values:

- Single quote ( ' )
- Double quote ( " )
- Forward slash ( / )
- Backward slash ( \ )
- Left bracket ( [ )
- Right bracket ( ] )
- Semi-colon ( ; )
- Colon ( : )
- Vertical bar ( | )
- Equal sign ( = )
- Plus sign ( + )
- Asterisk ( \* )
- Question mark ( ? )
- Less-than sign ( < )
- Greater-than sign ( > )





## APPENDIX B – DIRECTORY STRUCTURE

---

VSI-FAX is contained within its own directory structure. The directory at the top of this “tree” is pointed to by the `VSI_FAX` environment variable. The `$VSI_FAX` directory contains only subdirectories.

DIRECTORY	DESCRIPTION
<code>autosend</code>	Directory for placing tag or batch files for automatic fax submission.
<code>autosend/failed</code>	Contains tag and batch files for failed fax transmissions.
<code>bin</code>	Contains all public programs.
<code>faxq</code>	Fax queue directory, which retains each user’s home fax directory.
<code>faxq/&lt;user_ID&gt;</code>	User directory.
<code>lbin</code>	Internal system programs.
<code>lib</code>	Contains server configuration files and sub-directories.
<code>lib/attach</code>	System folders.
<code>lib/covers</code>	System cover pages.
<code>lib/dbs</code>	Server database schema files.
<code>lib/enp</code>	Notify Procedures: <code>*.lnp</code> , <code>*.tnp</code> , <code>*.gnp</code> and <code>*.rnp</code> files.
<code>lib/faxtcl</code>	TCL and TK files used by event notify procedures (page 49).
<code>lib/forms</code>	Overlays.
<code>lib/fxpcl</code>	PCL font files.
<code>lib/fxscript</code>	PS font files.

DIRECTORY	DESCRIPTION
lib/groups	Server groups.
lib/icons	Windows NT/2000 only. Various icon files.
lib/images	Common storage area for shared image files, such as logo files.
lib/samples	Samples provided by VSI.
lib/technote	Technical bulletins.
lib/templates	Template files (page 98).
lib/viewers	Windows NT/2000 only. Third-party programs for imaging Windows file types (e.g., MS-Word, Excel, etc.).
lib/xmlf	Contains documents, DTDs and sample files for XML-F.
spool	Contains the active databases and temporary files.
spool/archive	Contains archived faxes.
spool/dbs	Active server based databases.
spool/expired	Expired fax storage.
spool/fifos	Unix and Linux only. FIFOs for inter-process communication.
spool/in	Temporary incoming fax storage.
spool/logs	Log files for the fax server.
spool/mail	Contains mail files that have not been successfully delivered.
spool/temp	Temporary outgoing fax storage.
vsinet	Contains the sub-directories that support process communication.
vsinet/clients	Contains client update files.
vsinet/filspool	Temporary storage for NFS-based client communication.
vsinet/netspool	Temporary storage for TCP/IP-based client communication.
vsinet/netspool/queued	Temporary storage for internal communication.
vsinet/xmlspool	Temporary storage for XML based communication.

## APPENDIX C – FORMATTERS

---

VSI-FAX formatters are used to convert PostScript Level 1 and PCL5e (HP LaserJet 4) documents into Tagged Image File Format (TIFF) files, the format used by the fax server.

---

**NOTE:** While the VSI-FAX client programs make the formatting or imaging requests, the formatting is actually performed by the fax server.

---

VSI-FAX fax files are standard TIFF files with added tags that are used specifically by VSI-FAX. Most popular TIFF image viewers or application programs that import TIFF will ignore these additional tags and process such files normally.

---

**NOTE:** PostScript Levels 2 and 3 are not currently supported.

---

## Automatic File Conversion

The fax server supports several options for formatting input files submitted in a fax request. By default, the fax command **vfx** assumes that any input file is an ASCII text file and will process it accordingly.

If **vfx** recognizes the extension of an input file, it will treat it as that type of file. The file extensions recognized by **vfx** are:

txt	ASCII text.
ps	PostScript Level 1.
pcl	PCL5e (HP LaserJet 4/5).
tif	TIFF Group III and Group IV.

fax      VSI-FAX 2.1 fax format (must comply with VSI-FAX version 2.1 file formatting).

---

**NOTE:** The **vfx** command will accept either Group 3 or Group 4 TIFF files; however, they will always be imaged as a Group 3.

---

When a file has no recognized extension or when reading from stdin, the **vfx** command supports an option to specify the file type. You can do this by passing the **-F** option to the **vfx** command and then specifying either **ep**, **ps**, **pcl** or **tif**.

---

**NOTE:** For documents formatted with embedded Epson printer codes, the **-F ep** option must be used.

---

For example:

```
vfx -n 5551212 -F pcl <filename>
```

Alternatively, a user can specify a file type after a filename by appending a filetype. For example:

```
vfx -n 5551212 filename:pcl
```

- or -

```
vfx -n 555-1212 filename:ps
```

You can image a file without transmitting it by using the **vfx** command:

---

**NOTE:** You can image a file without transmitting it by using **vfx -o <output\_file\_name> <input\_file\_name>**. When the **-o** option is used, the file will not be faxed.

---

## Resolution

Although most PostScript-generating applications are not dependent on the resolution of the output device, some of these applications will perform better if aware of the output resolution. Since “fine” fax resolution of 200 x 200 dpi is lower than the typical laser printer's resolution of 300 x 300 dpi or 600 x 600 dpi, some documents will look different when printed by different devices. If your application offers a choice of resolutions, select 200 x 200 dots per inch.

## **PCL5e (Enhanced) Fonts**

The fax server supports full PCL5e (HP LaserJet III and LaserJet IIIsi) and PCL5e (HP LaserJet 4/5) features including:

Bitmaps

ORIENTATION	SPACING	PTSIZE	PITCH	STYLE	STROKE TYPEFACE
Portrait	Fixed	16.67	8.5	Upright	Medium Line-Printer (0)
Landscape	Fixed	16.67	8.5	Upright	Medium Line-Printer (0)

Symbol Sets

Roman-8 (8U)	Latin-5 (5N)
PC-8 (10U)	Spanish-1 (2S)
PC-8-DN (11U)	German (1G)
US-ASCII 90U)	French (1F)
PC-850 (12U) and ECMA-94 (0N)	Norwegian (0D)
UK (1E, Swedish (0S), Italian (0I), Latin-2 (2N))	

Scaleable Typeface

TYPEFACE	STROKE	STYLE	TYPEFACE	STROKE	STYLE
Courier (4099)	Medium	Regular	CG-Times (4101)	Medium	Regular
	Medium	Italic		Medium	Italic
	Bold	Regular		Bold	Regular
	Bold	Italic		Bold	Italic
Letter Gothic (4102)	Medium	Regular	Antique Olive (4168)	Medium	Regular
	Medium	Italic		Medium	Italic
	Bold	Regular		Bold	Regular
Univers (4148)	Medium	Regular	Univers Condensed (4148)	Medium	Regular
	Medium	Italic		Medium	Italic
	Bold	Regular		Bold	Regular
	Bold	Italic		Bold	Italic
CG-Omega (4113)	Medium	Regular	Garamond (4197)	Medium	Regular
	Medium	Italic		Medium	Italic
	Bold	Regular		Bold	Regular
	Bold	Italic		Bold	Italic
Albertus (4362)	Bold	Regular	Coronet (4116)	Medium	Italic
	Extra Bold	Regular			

TYPEFACE	STROKE	STYLE	TYPEFACE	STROKE	STYLE
Marigold (4297)	Medium	Regular	Clarindon Condensed (4140)	Bold	Regular
Symbol (16686)	Medium	Regular	Wingdings (31402)	Medium	Regular
Arial (16602)	Medium	Regular	Times New Roman (16901)	Medium	Regular
	Medium	Italic		Medium	Italic
	Bold	Regular		Bold	Regular
	Bold	Italic		Bold	Italic
Prestige (4104)	Medium	Regular			

**NOTE:** Courier and Letter Gothic are the only mono-spaced (i.e., fixed-width) fonts available. Integrations that require compressed print may find the output more readable if the Letter Gothic font is used.

## PostScript Fonts

The fax server supports all Adobe Type 1 fonts, including those provided in a PostScript document. The following is a list of built-in fonts that are available:

AvantGarde Book	Proportional	Bookman Light	Proportional
AvantGarde Demi		Bookman Demi	
AvantGarde		Bookman LightItalic	
BookOblique		Bookman DemiItalic	
AvantGarde DemiOblique			
Courier	Fixed-width	Courier Oblique	Fixed-width
Courier Bold		Courier BoldOblique	
Helvetica	Proportional	Helvetica Bold	Proportional
		Helvetica Oblique	
		Helvetica Narrow Oblique	
		Helvetica Narrow BoldOblique	
		Helvetica BoldOblique	
Helvetica Narrow	Proportional	Helvetica Narrow Bold	Proportional
NewCenturySchlbk Roman	Proportional	NewCenturySchlbk Bold	Proportional
		NewCenturySchlbk Italic	
		NewCenturySchlbk Bold Italic	
Palatino Roman	Proportional	Symbol	Proportional
Palatino Bold			
Palatino Italic			
Palatino BoldItalic			
Times Roman	Proportional	ZapfChancery MediumItalic	Proportional
Times Bold			
Times Italic			
Times BoldItalic			
ZapfDingbatsTimes Roman	Proportional		



# External (User-Defined) Formatters

Users can now specify their own formatters to be included in the list of valid file types and formatters. This is done via the `formatters.lst` file.

---

**IMPORTANT:** A formatter specified in the `formatters.lst` file will override an internal formatter.

---

## Synopsis

An external formatter is expected to use the following syntax:

```
<program> [options] <filename>
```

## Options

<b>-E</b>	<b>{std   fine}</b>	Resolution. Valid values are:  <b>std</b> Standard (204 x 98) <b>fine</b> Fine (204 x 196) (default).
<b>-l</b>	<b>&lt;length&gt;</b>	Page <b>&lt;length&gt;</b> . Valid values are:  <b>letter</b> 11 inches (default). <b>a4</b> 11.69 inches. <b>legal</b> 14 inches.
<b>-o</b>	<b>&lt;file&gt;</b>	Output <b>&lt;file&gt;</b> .
<b>-p</b>	<b>&lt;pages&gt;</b>	Page range. Contiguous ranges can be defined using a dash (-); non-contiguous ranges can be defined using commas.
<b>-U</b>	<b>&lt;user&gt;</b>	User name to login as when sending this fax.
<b>-Z</b>	<b>&lt;options&gt;</b>	File conversion options.

## Notes

The following special processing is done for missing options:

<b>-U &lt;user&gt;</b>	Ignored.
------------------------	----------

<b>-E &lt;resolution&gt;</b>	Done by our TIFF conversion.
<b>-l &lt;length&gt;</b>	Ignored.
<b>-p &lt;pages&gt;</b>	Done by our TIFF conversion.
<b>-Z &lt;options&gt;</b>	Ignored.
<b>-o output</b>	Expect output on stdout.

It is expected that the output file will be a TIFF file. However, it will internally converted to a VSI-compliant file (i.e., force compression type, add tags, etc.) if it is not already.

## APPENDIX D – ROXBURY FONTS

---

VSI-FAX now provides a new mechanism for using and managing the Roxbury family of fonts. VSI-FAX provides the following Roxbury fonts:

- Roxbury pica (regular) 10 cpi
- Roxbury bold 10 cpi
- Roxbury italic 10 cpi
- Roxbury italic bold 10 cpi
- Roxbury compressed 16.7 cpi

These are fixed-width bit-mapped fonts that are designed specially to look good at either std or fine resolution. These fonts are used in the following places:

**eptotif** uses them to image text files.

**pcltotif** uses them for text mode conversion. In this mode, the Roxbury fonts are compiled into PCL soft-fonts, which can be selected with the appropriate PCL font-selection command.

**vtifftool** (page 208) uses them in the header command to add a header to pages of a TIFF file.

FIMs use them to create the header at the top of sent fax pages. The Roxbury fonts, as we currently have them, are a mixture of character sets.

The low-order half (chars 0x20 through 0x7f) are the same as the standard ASCII character set. The top-half (chars 0x80 through 0xff), is a mixture of the PC line-drawing characters (chars 0xb0 through 0xdf) and various non-standard characters.

These non-standard characters are not the same as the standard PC character set or the standard ISO multi-lingual character set (ISO8859).

VSI provides these fonts as both the original text files describing these fonts and as compiled font files (**.fnt** files) usable by **eptotif** and the FIMs, as well as compiled PCL soft-fonts (**.sft** files). We also provide a font compiler program, which will compile the text font descriptions into new **.fnt** and **.sft** files.

These various fonts and source files allow you modify the Roxbury font to support special international symbols they need (e.g., Spanish cedilla, the German es-set, etc.) and have these characters used commonly in all places where text-imaging is performed

The compiled Roxbury fonts, source files and font compiler are located in the `$VSIFAX/lib/fonts` directory:

<b>fontcomp</b>	Font compiler. Refer to <i>fontcomp</i> (page 117) for additional information.
<code>roxypica.txt</code>	Roxbury pica font description file
<code>roxyital.txt</code>	Roxbury italic font description file
<code>roxycomp.txt</code>	Roxbury compressed font description file
<code>roxypica.fnt</code>	Compiled Roxbury pica font
<code>roxybold.fnt</code>	Compiled Roxbury bold font
<code>roxyital.fnt</code>	Compiled Roxbury italic font
<code>roxybdit.fnt</code>	Compiled Roxbury italic bold font
<code>roxycomp.fnt</code>	Compiled Roxbury compressed font

The compiled PCL soft-fonts files are located in the `$VSIFAX/lib/fixpcl` directory:

<code>roxypica.sft</code>	Roxbury pica soft-font
<code>roxybold.sft</code>	Roxbury bold soft-font
<code>roxyital.sft</code>	Roxbury italic soft-font
<code>roxybdit.sft</code>	Roxbury italic bold soft-font
<code>roxycomp.sft</code>	Roxbury compressed soft-font

Note that the bold and italic bold fonts are generated from the corresponding non-bold font descriptions.

## Compiling Roxbury Fonts

Typically, you would modify the font files to contain the special you need, then enter the following commands:

```
cd $VSIFAX/lib/fonts
fontcomp -v -i roxypica
fontcomp -v -i roxyital
fontcomp -v -i roxycom
```

This compiles the various fonts and installs them into the proper directories.

The **eptotif** program automatically loads these fonts from the fonts directory, unless it is invoked with the **-Z noloadfonts** option, in which case it will use internal linked-in versions of these fonts.

When the **pcltotif** program is invoked with the **-e** option (which is done when a file-type of **.txt** is used), it will load the corresponding soft (**.sft**) font for the various font selections.

By default, all FIMs image the page header using an internal linked-in version of the roxybdt font (Roxbury italic bold). However, you can choose a different font for the page header by changing the **DEVICE:font-name=<font>** entry in the **vsisrv.ini** file (page 411).

---

**TIP:** If you choose the Roxbury compressed font for your page headers (i.e., by setting **vsisrv.ini DEVICE:font-name=roxycomp**), you will be able to display up to 120 chars of user data in the header, as compared with 62 chars using other fonts.

---



# APPENDIX E – SUPPORTED FAX DEVICES AND ACCESSORIES

---

This appendix provides important information about the supported capabilities and limitations of certain fax hardware devices (e.g., fax boards, modems) and accessories (e.g., port expanders, terminal servers).

---

**NOTE:** The VSI web site always provides the most current fax device compatibility information. Point your browser to [www.vsi.com/support](http://www.vsi.com/support), then follow the “supported fax modems” hyperlink for additional information.

---

## Fax Modems

The VSI-FAX class 2/2.0 Fax Interface Module (C2 FIM) is designed to function reliably with modems that support extensive error-checking. A class 2 or 2.0 modem is mandatory on Unix and Linux platforms and highly recommended on Windows NT/2000 platforms.

### Recommended Fax Modems for Unix/Linux and Windows NT/2000

These fax modems are known to work consistently and reliably with VSI-FAX on all supported platforms. Although other modems are certified and supported, these have proven to be the most

reliable. For a complete and up-to-date list of supported fax modems, point your web browser to [www.vsi.com/support](http://www.vsi.com/support), then follow the “supported fax modems” hyperlink.

MANUFACTURER	MODEL	FIRMWARE TESTED	DID/DTMF?
Multi-Tech	MT1932ZDX	Minimum Firmware Rev. 116	YES
Multi-Tech	MT2834ZDX	Minimum Firmware Rev. 3.16A	YES
Multi-Tech	MT2834ZDXb-u	LT 33.6 MT5634ZDX serial data/fax modem version 1.01	NO
ZyXEL	U-1496S Plus	Firmware Rev. 6.14P only	NO
ZyXEL	Elite 2864	Firmware Rev. 1.12 only	NO

## Fax Boards

VSI recommends and supports TR114, TRNIC and PRI series fax boards manufactured by Brooktrout Technology. These analog, digital and ISDN boards provide advanced faxing features, as well as superior reliability and scalability.

VSI enjoys a close strategic relationship with Brooktrout Technology. This ensures that when you buy a Brooktrout fax board, our networked fax server technology will leverage all the power that these fax boards have to offer. We do not recommend, nor do we support, fax boards from other manufacturers.

Brooktrout Technology provides detailed technical information about their fax boards at their web site:

<http://www.brooktrout.com>

This web site also presents excellent information about the advantages of fax boards over fax modems, the relative merits of analog and digital fax boards, as well as guidelines and recommendations for ordering various telephony services (e.g., T1, DID) for use with your networked fax solution.

Supported fax boards can be purchased from Brooktrout Technology, VSI or your authorized Value Added Reseller (VAR). For a complete and up-to-date list of supported Brooktrout fax boards, point your web browser to [www.vsi.com/support](http://www.vsi.com/support), then follow the “supported fax boards” hyperlink.

## Verifying Proper Fax Board Operation

It is extremely important that you install your fax board and verify that it works at the hardware level before installing the VSI-FAX Server software. A good way to ensure basic fax board operation is to use the Brooktrout diagnostics software to send a test fax before any other fax software is installed.

Refer to the documentation included with your fax board for additional information about installing and using Brooktrout diagnostic software.



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**IMPORTANT:** After verifying proper fax board operation, you must uninstall the Brooktrout diagnostics software and the associated virtual test devices before you can proceed with the fax server installation.

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## Uninstalling Brooktrout Diagnostic Software

Uninstalling the Brooktrout diagnostics software is somewhat complicated by the fact that the Brooktrout uninstall program will remove an important configuration file (`faxinit.cfg`) from your system. Therefore, VSI strongly recommends that you uninstall your Brooktrout diagnostics software using this procedure:

1. Start Windows Explorer and browse to the Brooktrout driver directory. The default location is `C:\WINNT\bfax`.
2. Copy `faxinit.cfg` to a safe location (e.g., your Desktop).
3. Open an MS-DOS window and enter:

```
ntinstal -r
```

The Brooktrout diagnostic software and virtual test devices are removed from your system.

4. Close the MS-DOS Window.
5. Switch to NT Explorer and move `faxinit.cfg` from your Desktop to the Brooktrout driver directory (default location is `C:\WINNT\bfax`).
6. Complete.

## Serial Port Expanders

The VSI-FAX class 2/2.0 fax interface module (C2 FIM) will work reliably with serial ports that provide full modem control. The following list of port expanders has been functionally tested with VSI-FAX. However, while the manufacturer may provide device drivers for various operating systems, not all operating systems have been tested by VSI.

MANUFACTURER	MODEL	OS DRIVER SUPPORT
Control	RocketPort	Linux, NT, SCO
Computone	IntelliPort II EX	NT, SCO, UnixWare
Digi International (Central Data)	SCSI Terminal Server	AIX, Digital Unix, HP-UX, NT, SCO, Solaris

MANUFACTURER	MODEL	OS DRIVER SUPPORT
Digi International	AccelePort Xem	AIX, DG/UX, Digital Unix, HP-UX, Linux, NCR MPRAS, SCO, Solaris, Unixware
Digi International	AccelePort Xe	DG/UX, Linux, NCR MPRAS, SCO, Solaris, UnixWare
Equinox	SST-8P	Linux, NT, SCO, Solaris X86, UnixWare
Multi-Tech Systems	ISI552PC	Operating system independent
Multi-Tech Systems	ISI4608	Linux, NT, SCO
Stallion	EasyIO	NT, Linux, SCO, Solaris X86, UnixWare

## Ethernet Terminal Servers

While some VSI customers have had success using Ethernet terminal servers, VSI does not recommend this practice nor do we support it in any way. Fax modems should always be connected to local serial ports. If you want to use more modems than can be connected to open serial ports on your system, use a local serial port expander.

## APPENDIX F – ORDERING DID SERVICE

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To order DID Service in the United States:

Determine what your DID requirements are and how many simultaneous calls you are going to support.

How many phone numbers will you need to reserve? The minimum block of phone numbers offered by most major regional DID service providers is 20.

How many simultaneous inbound calls do you want to support? This will determine the number of DID trunk lines you need to order. You have the option of picking a block of numbers that will be serviced by a specific number of DID trunk lines. These DID trunk lines will work in a rollover process whereby if someone dials one of the numbers in your block and the first trunk line is busy, it will roll over to the next trunk line and so on until it finds an idle trunk line. This is automatically supported by your DID service provider and does not require that you purchase any additional equipment.

Before you place your DID service order with your service provider, you need to know how to request the following options:

### **2-Wire DID interface**

This specifies the physical connection from the DID service provider and your local terminating point.

### **DTMF Signaling**

This specifies the type of signaling that your local equipment is expecting. Choices are rotary, pulse and multi-frequency.

### **Wink Start**

This is a signal from the DID service provider to the DID interface unit that tells it a DID call is ready to be received.

### Number of DTMF Digits to Outpoll

This specifies the number of DTMF digits that you want to receive prior to accepting the call and is used by the fax software to identify the number being called and resolve a name or department from the DID table. Although you can specify how many digits you want to receive, the maximum number is 7. The actual number will be based on your particular environment.

Contact your service provider and specify that you are ordering a DID trunk line.

If your current PBX phone switch does not have provisions for supporting DID service, you need to contact a DID interface equipment manufacturer to purchase an interface unit. DID trunk lines are dedicated lines from the service provider that require a special interface at the customer's site. The interface equipment is available in models that support from one to sixteen individual DID trunk lines. Some models also come with an out-dial transfer port that allows you to connect a standard dial line for outbound dialing using the same modem.

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