

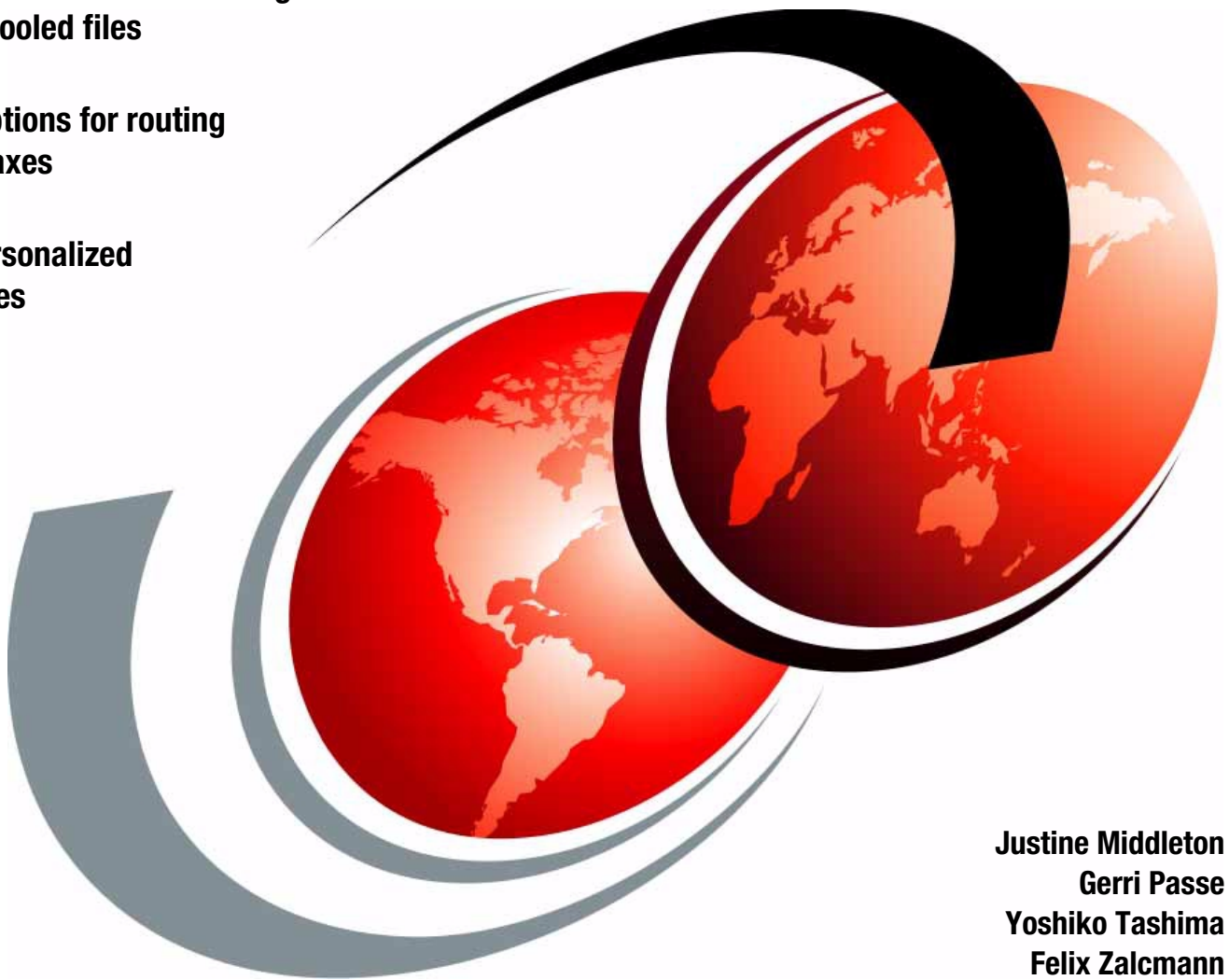
Lotus Fax for Domino for AS/400

Getting the Straight Facts

Discover alternatives for faxing
AS/400 spooled files

Explore options for routing
inbound faxes

Create personalized
cover pages



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International Technical Support Organization

SG24-5941-00

**Lotus Fax for Domino for AS/400:
Getting the Straight Facts**

May 2000

Take Note!

Before using this information and the product it supports, be sure to read the general information in Appendix F, "Special notices" on page 241.

First Edition (May 2000)

This edition applies to Release 4.1 of Lotus Fax for Domino for AS/400 for use with Operating System/400.

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Preface

Using Lotus Fax for Domino for AS/400 Release 4.1, you can now send faxes directly from your Lotus Notes desktop. You can save time by not having to get up from your desk to go to the printer and the fax machine to send faxes. You can save money by scheduling long distance faxes to be sent at lower-priced calling times. Even attachments from PC applications, such as Lotus Word Pro and Microsoft Word, can be sent. Incoming faxes can be delivered automatically to a fax administrator for redelivery to your inbox, or depending on your installation, they can be delivered directly to the final recipient.

This redbook shows you how to set up, configure, use, and manage this exciting new add-on product from Lotus. We show you how Domino applications can take advantage of integrating faxing into their processing. In addition, we show you how you can fax spooled files from the AS/400 system and provide a sample command to assist you in integrating Fax for Domino with AS/400 line-of-business applications.

The team that wrote this redbook

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Chapter 1. Introduction to Fax for Domino 4.1 for AS/400

Lotus Fax for Domino for AS/400 is a fax solution that is totally integrated with both Domino and the AS/400 system and benefits from the proven reliability of the AS/400 platform. It uniquely offers native integration with the AS/400 fax hardware. And, unlike many other fax solutions, Fax for Domino doesn't require an additional Domino server. Fax for Domino for AS/400 allows you to run your fax server on the same AS/400 system that handles your mail. All you need is a stand-alone Windows NT workstation with a Notes client to handle format conversions. This avoids the additional cost and administrative headaches of an extra server. If you prefer a single box solution, you can use the Integrated Netfinity Server instead of the stand-alone workstation. Either way, a user simply makes a request to send a fax and Fax for Domino for AS/400 handles the rest.

1.1 About Fax for Domino 4.1 for AS/400

The Fax for Domino solution from Lotus enables Notes users to send and receive faxes directly from their Notes client or send faxes directly from within any Microsoft Windows application. This increases convenience and reliability while lowering overall fax-related costs. Fax for Domino makes fax communication as easy as e-mail, whether you're in the office or on the road. Fax for Domino uses your current telephone system and Domino infrastructure to route inbound faxes to the recipient's inbox.

1.1.1 Availability

Fax for Domino (FxD) Release 4.1 for the AS/400 system is available in three versions, therefore giving you a wide choice of options to meet your fax server needs:

- **Fax for Domino Pro Server:** Allows you to use Fax for Domino with a maximum of two fax ports. FxD Pro customers can use all the features of Fax for Domino except the load balancing feature.
- **Fax for Domino Team Server:** Allows you to use up to four fax ports and all the features available with Fax for Domino.
- **Fax for Domino Enterprise Server:** Allows you to use five or more fax ports. Fax for Domino Enterprise customers can use all the features available with Fax for Domino.

Note

The number of fax ports is equal to the number of telephone lines that are plugged into modems or intelligent fax cards (#2761 PCI Integrated Analog Modem) that are connected to the Fax for Domino for AS/400 server.

Your support options for FxD vary depending upon where you live. In the United States, support is from Lotus. In other countries, you may have an IBM Support option. Please contact your IBM or Lotus representative for the options in your country.

1.1.2 Summary of features

The capabilities of the Fax for Domino for AS/400 product are numerous. The following list contains the major features of Fax for Domino:

- **Faxing from the Notes Desktop:** Send and receive faxes from the Notes Desktop. Sending a fax becomes just like sending an e-mail. All you do is compose a memo, specify a recipient in the Fax to: field, and send it. In addition, the e-mail being faxed can include attachments.
- **Print to Fax driver:** Send faxes from within any Windows-based application with the Print to Fax driver. A Lotus Notes client is required to use the Print to Fax driver.
- **Dynamic load balancing:** Multiple Fax for Domino servers can work together for maximum efficiency. Outbound faxes can be automatically routed to a central fax server, which routes each fax to the shortest queue based on throughput capabilities and the total size of the queue in bytes.
- **Flexible inbound routing:** Fax for Domino can automatically route inbound faxes to recipients through: Dual Tone Multi-Frequency (DTMF), Customer Subscriber Identification (CSID), fax port addressing, and manual routing. In addition, support for Integrated Services Digital Network (ISDN) and Direct Inward Dial (DID) routing is planned for the future.
- **Schedule of transmission:** Users can automatically delay fax transmission until telephone rates drop.
- **Full mobile support:** Fax for Domino allows Notes users to send and receive faxes right from their laptop when on the road, with full Domino security.
- **Fax prioritization:** Outbound faxes are automatically prioritized based on a sender's default priority levels, administrator-defined rules, and the time a fax has waited in the queue.
- **Full integration with Notes:** Faxes are composed using the standard Notes memo form. Faxes can be addressed using just the recipients' names. Cover pages can be edited and modified using the fax options button right from within the Notes Mail template.
- **Domino-based administration:** Fax for Domino uses familiar Domino administration tools to configure and manage Fax for Domino, both locally and remotely. System administrators can maintain user profile information in the Domino directory or in a separate database.
- **Convenient group settings:** System administrators can assign outbound fax priorities, default or custom cover sheets, and other configurable settings to groups of Domino users automatically.

1.1.3 System requirements

Figure 1 shows the components of Fax for Domino for AS/400, including the standard Notes administrator workstation that you use to manage your Domino server and Fax for Domino for AS/400 installation.

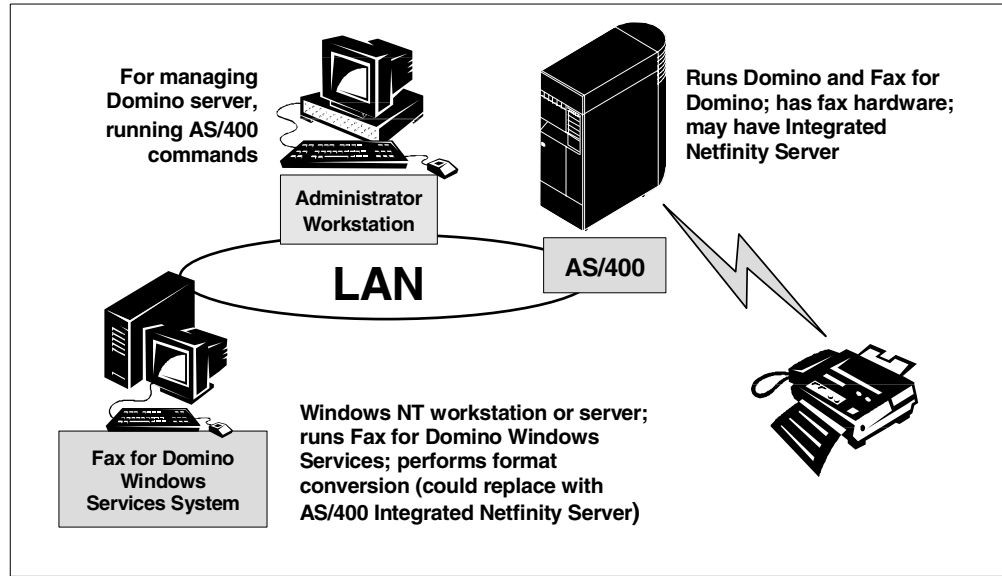


Figure 1. Fax for Domino for AS/400 system setup

Before installing Lotus Fax for Domino Release 4.1, ensure that your AS/400 system meets the following hardware and software requirements:

- OS/400 Version 4 Release 4 or later
- Domino for AS/400 Release 4.6.6b or 5.0.2a or higher
- A supported AS/400 fax device, such as IBM 7852 Model 400 Modem, or Feature #2761 PCI Integrated Analog Modem, which supports up to eight telephone lines. Support for the previously announced #2750 and #2751 PCI ISDN cards may be available at a later date. Support will be announced at: <http://www.as400.ibm.com/domino/related/fxd>

In addition, one or more analog telephone lines are required.

Note

The majority of Fax for Domino for AS/400 runs natively on your Domino for AS/400 server. A small portion of the product that performs format conversions must be installed on a Windows NT workstation or server.

The required Windows NT workstation or server can be a separate stand-alone workstation, a separate stand-alone server, or an AS/400 Integrated Netfinity Server. It must meet the following hardware and software requirements:

- Windows NT Workstation or Server software Version 4.0 with SP4 or later (Microsoft Windows 2000 is not supported)
- Pentium or equivalent 166 MHz processor or higher
- At least 80 MB of memory (96 MB recommended)
- At least 150 MB of hard disk space available
- Notes client software that corresponds to the level of the Domino server *must* be installed on the FxD Windows Services System. The Notes client software provides the communication between the FxD server application and the

Windows Services application. The FxD Windows Services System must be dedicated to FxD and is not available for other Notes functions. However, the Windows NT system can be used concurrently with non-Notes applications.

Because an extra Windows NT server isn't required, you don't need to worry about extra server administration. No persistent customer data resides on the Windows NT workstation, so there's nothing to back up. Other facts about the Windows NT workstation that converts memos to image format include:

- Multiple Fax for Domino servers can use the same Windows NT workstation. You don't need multiple Windows NT workstations just because you have multiple fax servers.
- If you install your workstation applications on the Windows NT system, FxD can create and fax an image of file attachments that use those applications.
- Because CPU-intensive image conversions are off-loaded to the Windows NT workstation, normal fax workloads have a relatively low impact on your Domino for AS/400 server.

Note

If you choose to use an Integrated Netfinity Server to perform the image conversions rather than a stand-alone workstation, remember that the Integrated Netfinity Server only supports installation of Windows NT Server (not Windows NT Workstation).

1.1.4 Client requirements

Lotus Notes clients earlier than R4.6 have not been tested. When using mail templates mail45.ntf, mail46.ntf, mailc46.ntf, mail50ex.ntf or higher, a Fax to: option is found on the Notes memo. If using other templates, users can use the To: field to address faxes.

Web mail clients and POP3 clients are also supported by Fax for Domino. A summary of the functions available for each client type is found in Table 3 on page 81.

How to use each of these clients is described in detail in Chapter 6, "Using Fax for Domino: A user's perspective" on page 81.

It is also possible for a PC to use the Lotus Print to Fax driver to fax PC application output directly. The PC must have a Lotus Notes client installed for this function to be available. Further information can be found in 6.1.2, "Sending a fax directly from a PC application" on page 90.

1.2 Before installing Fax for Domino for AS/400

Prior to installing FxD, you should read through the Release Notes for Fax for Domino for AS/400 4.1, which are available at the Web site:

<http://www.as400.ibm.com/domino/related/fxd/>

Ensure that you obtain the PTFs as described. For example, you should download and install the latest Domino for AS/400 Quarterly Maintenance Update from the Web at: <http://www.as400.ibm.com/domino/QMUList.htm>

Note

The *Fax for Domino for AS/400 Installation Guide* is shipped with the FxD product and is also available online at the following Web site:

<http://www.as400.ibm.com./domino/related/fxd/FXDINSTL.PDF>

The installation guide takes you through the process necessary to set up and configure Fax for Domino in a step-by-step style, with less explanation than this redbook and no figures. You can use either document to guide your setup. You may decide to use the installation guide and then return to this redbook for additional information.

Additional information on planning and installing FxD for AS/400 can be found in Chapter 3, "Planning and preparation" on page 23, and Chapter 4, "Installation" on page 35.

1.3 Fax for Domino flow overview

As mentioned earlier, FxD allows Lotus Notes users to send and receive faxes directly from their Notes client or send faxes directly from within any Microsoft Windows application. When FxD is installed, user profile settings define how FxD handles each individual user's outgoing and incoming faxes. The user profile settings include:

- The class of service
- Cost code
- Cover page settings
- Settings for receiving incoming faxes

The installation process creates one Person (DefaultFxDUser) document, which supplies default user profile settings to the server when individual user profile settings have not been created for a user. The administrator may edit the document to change these default values. Also, the fax settings for individual users can be changed if they need values other than those specified in DefaultFxDUser. The individual user fax settings are set in the Fax section of the Person document (if using combined administration) or in a user profile in nfxadmin.nsf (if using separate administration). See 3.2, "Planning for separate versus combined administration" on page 24, for more information.

We recommend that you modify the DefaultFxDUser Person or User Profile document so that it contains settings that meet the needs of most of the people in your organization. Additional information on setting up your users' environment can be found in the database *FxD for AS/400 Administrator's Guide* (nfxa400.nsf). We now provide an introduction to the flow of inbound and outbound faxes using FxD.

Note

Information on separate and combined administration is included in 3.2, "Planning for separate versus combined administration" on page 24. Also, an example of changing user settings is contained in 7.1.4, "Assigning a cover page to individual users" on page 121.

1.3.1 Outbound fax flow using Fax for Domino

One of the advantages of using FxD is that end users can directly send a fax from their Lotus Notes client (or Web mail client) or from a Microsoft Windows based application. In Figure 2, the general flow of an outbound fax sent using FxD to a receiving fax machine is illustrated. Additional details on sending a fax from a user's perspective is included in Chapter 6, "Using Fax for Domino: A user's perspective" on page 81. Figure 2 is further explained in the list that follows.

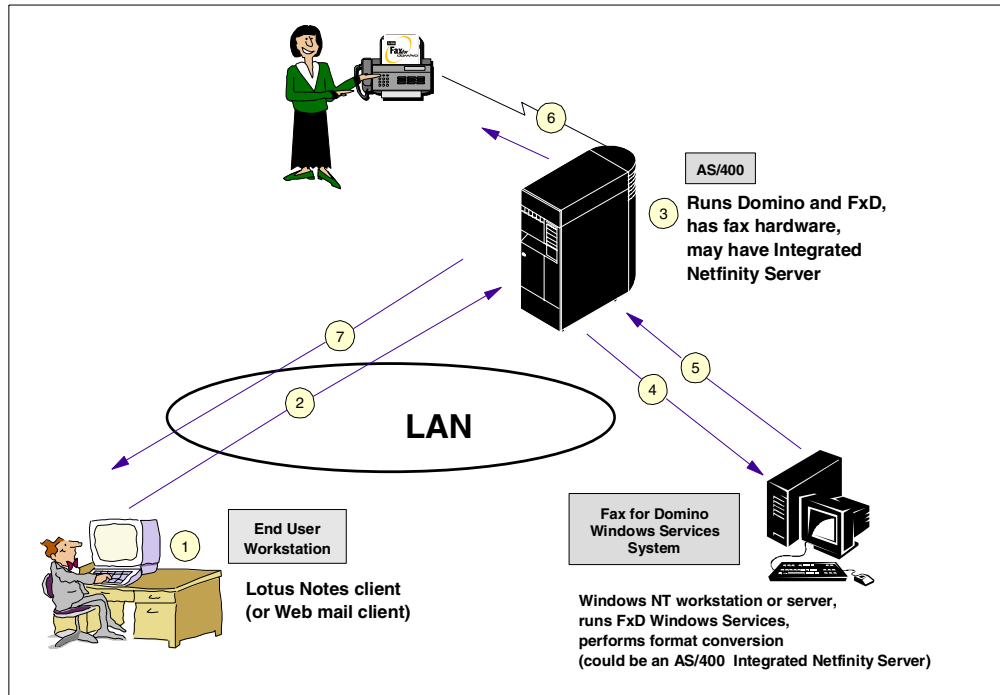


Figure 2. Outbound fax flow using FxD

1. Pete, a Lotus Notes user at the central office, is creating an e-mail with a Lotus Word Pro attachment, which needs to be sent to other Lotus Notes users and also to Jane. However, the remote office where Jane works only has a fax machine.
2. To send a fax to Jane, Pete completes the Fax to: field in his e-mail to indicate that the fax needs to be routed to Jane's fax machine. Pete also enters the e-mail addresses of the Notes users in the To:, cc or bcc: fields. As shown in step 2 in Figure 2, Pete then sends (and saves) his "e-mail fax" which is routed to the AS/400 Domino server.

Note

This "e-mail fax" could also have been sent to a fax machine by using an address in the To:, cc: or bcc: fields, which include the fax phone number and fax domain.

3. The Domino for AS/400 mail server passes Pete's "fax e-mail" to the Fax for Domino for AS/400 server.

4. The FxD AS400 server passes the fax request to the FxD Windows Services System, which then handles converting the document, cover page (if requested), and Lotus Word Pro attachment to the TIFF format.
5. The FxD Windows Services System routes the TIFF files back to the FxD for the AS/400 server after the conversion is complete.
6. The FxD for AS/400 server then takes the converted TIFF files and sends them as a fax to Jane's fax machine. Jane now has the fax that Pete sent.
7. Unless Pete's default settings have been changed, he receives notification in his mail indicating that a "Fax has been transmitted".

1.3.2 Inbound fax flow using Fax for Domino

In addition to users being able to send an outbound fax from their Lotus Notes client (or Web mail client), or from a Microsoft Windows based application, inbound faxes can be received using FxD. Figure 3 illustrates the general flow of an inbound fax from a fax machine to FxD and then to a Domino user using manual routing. Additional details on receiving faxes from a user's perspective is in 6.1.3, "Receiving a fax" on page 95. The numbered diagram in Figure 3 is discussed further in the list that follows.

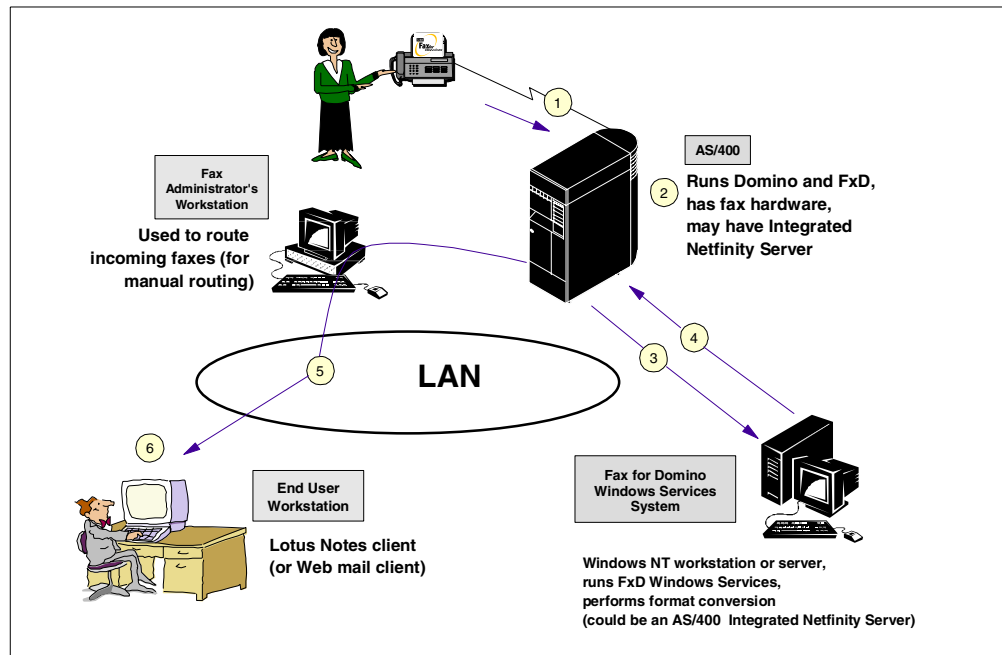


Figure 3. FxD Inbound fax flow using manual routing

1. Jane, a manager in the remote office, needs to send a fax to Pete in the central office. Jane uses her fax machine as usual, except that the phone number she enters is the number of a phone line connected to a "fax port" on the AS/400 system. The physical interface for this "fax port" is provided by the IBM 7852 Model 400 Modem or the 2761 PCI Analog device.
2. The fax Jane sent comes through the fax port on the AS/400 system and is received by the FxD for AS/400 server.
3. The Fax for Domino for AS/400 server then routes the inbound fax to the FxD Windows Services System for conversion as needed.

4. After completing any conversion, the FxD Windows Services System routes the incoming fax back to the FxD for AS/400 server. In this case, since no special inbound routing was used, manual routing is used and the fax will be received into the designated “fax administrator’s” mailbox first.
5. Since manual routing is used in our example, a “fax administrator” has been designated in FxD to handle incoming faxes. This user looks at the cover pages of faxes waiting in a Lotus Notes mailbox to determine to whom they should be routed. In this case, Jane had written Pete’s name on the cover sheet, so the “fax administrator” forwards the fax to Pete. Additional ways to handle inbound faxes are described in 7.4, “Routing” on page 131.
6. Pete checks his mailbox in his Lotus Notes client and can view and print the fax that Jane sent to him.

1.4 Facsimile Support/400

Many customers use Facsimile Support for AS/400 (5798-TBY) to fax both AS/400 spooled files and PC documents from their AS/400 system. This section explains the positioning of Facsimile Support for AS/400 and FxD.

Both products can use the 2761 PCI Analog device and the IBM 7852 Model 400 Modem to send and receive faxes. In addition, it is planned that both will support the PCI ISDN card. Facsimile Support for AS/400 can also be used with the older SPD-based Fax Adapter (no longer marketed) as well as the external PC-based solution using GammaFax cards.

Facsimile Support for AS/400 and FxD can co-exist on the same AS/400 system. You simply define some of the eight analog lines on the 2761 to be for Facsimile Support for AS/400 and some of them to be for FxD.

Consider the following points when making your choice of product:

- If you have implemented Lotus Domino for AS/400 and are now looking for a fax solution, you should install FxD. Features of FxD have been described in 1.1.2, “Summary of features” on page 2. FxD allows you to fax directly from your Lotus Notes desktop using ad-hoc fax numbers as well as numbers stored in Person documents in your Personal Address Book or the Domino Directory (Public Address Book).

The administrative interface is Notes based and, therefore, graphical. It is possible to fax AS/400 spooled files and OfficeVision documents using FxD. We describe how in Chapter 9, “Faxing from the AS/400 system” on page 153. If you find that the options for faxing spooled files do not meet your requirements, look at Facsimile Support for AS/400 as an additional part of your implementation.

- If you have already installed Facsimile Support for AS/400 and are now implementing a Domino solution, you should consider installing FxD to complement and enhance your faxing capabilities. You may have already programmatically integrated Facsimile Support for AS/400 with your line-of-business applications, and you will want to maintain that functionality. If you are using a 2761 card for your faxing, you can easily allocate one or more lines to your new FxD solution. Your Notes users will be able to send faxes as an integrated part of their regular e-mail sending activity.

- If you have no plans to use Domino for AS/400 in your installation, you should install Facsimile Support for AS/400. It uses a familiar AS/400 interface for managing inbound and outbound faxes. Facsimile Support for AS/400 can also be used for faxing Windows-based output by using the AFP printer driver provided with Client Access Express and Client Access for Windows 95/NT.

Although it is possible to fax a single Notes document using the Client Access AFP printer driver, it is not possible to automatically fax attachments that are associated with the document. However, you can use each application used for creating the attachments and perform the faxing manually. Font fidelity is maintained when faxing using the AFP printer driver.

It is possible to use AnyMail/400 Integration to fax using Facsimile Support/400 from Domino mail to people who have appropriate fax information (fax numbers) defined in the AS/400 system distribution directory, but you lose font fidelity in the process. This means that all fonts on the received fax will be the same. Note that the system distribution directory may, in turn, use information in the Fax Master List which is part of Facsimile Support/400. The Lotus Memo may include attachments, but separate telephone calls are made for each attachment. Only image attachments, such as GIF, BMP, JPEG, and some TIFF images are supported. Some variations of these may not work, so you should consider testing the faxing of attachments.

For more information on Facsimile Support for AS/400, see the Web site at:

<http://www.as400.ibm.com/fax400/fax400.htm>

This Web site provides links to additional resources, such as manuals.

1.5 The future

FxD R4.1 will enhance your company's faxing ability by enabling you to fax directly from your Notes desktop and from Windows applications. You can also incorporate AS/400 spooled files into your faxing options as is described in 9.1, "Prerequisites for faxing spooled file attachments" on page 153. You will see as you read through this redbook that you can use FxD R4.1 with Release 4.6 and Release 5 Domino servers and with Release 4.6 and Release 5 Domino clients. As with any software, there will continue to be new releases with enhancements. Future planned enhancements to FxD for AS/400 include support for ISDN, Direct Inward Dialing (DID) routing, and FxD 5.0 function. FxD 5.0 includes improvements to queue management, least cost routing, the ability to send inbound faxes directly to printers, and usability enhancements. No dates have been announced for the enhancements to FxD for AS/400.

Note

Throughout this book, any reference to Direct Inward Dialing (DID) support also includes support for Dialed Number Identification Service (DNIS) and Multiple Subscriber Numbering (MSN).

Chapter 2. The design of Fax for Domino for AS/400

In this chapter, we explain the design of the Fax for Domino for AS/400 product on the AS/400 system. Even if you are not interested in detailed information about how FxD works, we suggest you look through 2.2, “The detailed processing of a fax” on page 16, which shows you how the Spool Mailbox entries change as faxes flow through.

2.1 Fax for Domino for AS/400 architecture overview

In this section, we describe the framework (Figure 4) of Fax for Domino.

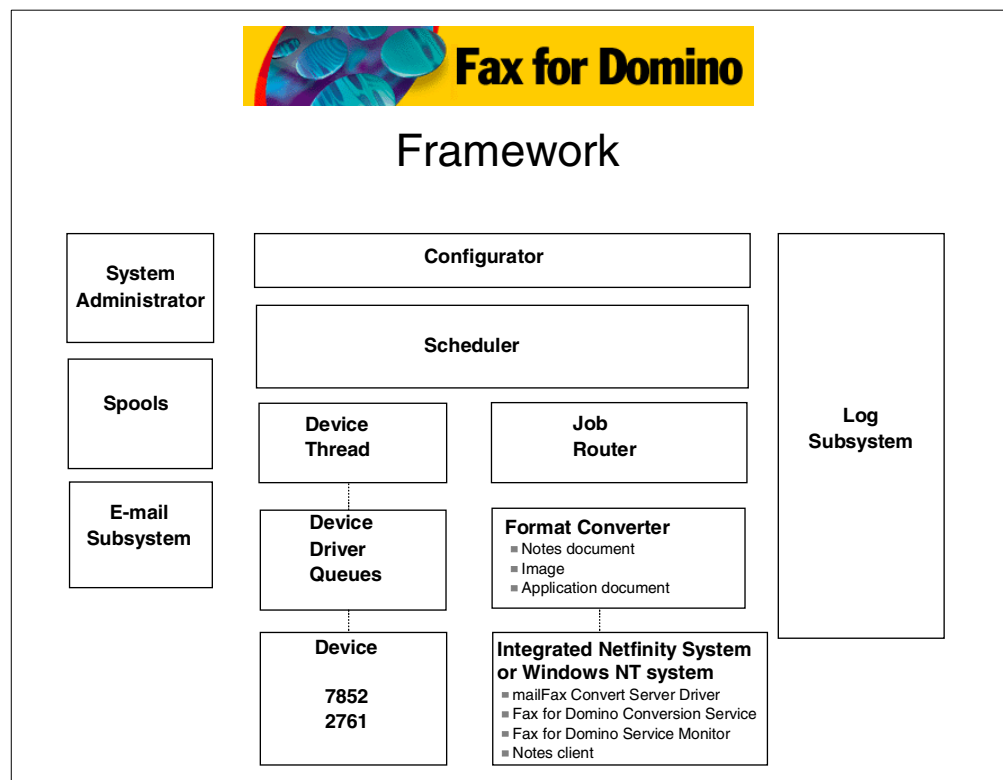


Figure 4. Fax for Domino for AS/400 Framework

2.1.1 Configurator

The Fax for Domino configurator is the component that manages the configuration for the server. The configurator is also the component that allows Fax for Domino to be a Notes add-in task.

2.1.2 Scheduler

The Fax for Domino scheduler is the component that manages the Fax for Domino system. The scheduler loads and initializes the rest of the core components. It uses the configurator module to determine the configuration to use. And, it is responsible for terminating all components and for shutting down the server.

The FxD scheduler loads the configuration database and initializes internal configuration data structures. It uses the system administration module to retrieve the configuration. The scheduler is responsible for loading and initializing configurable components.

The FxD scheduler is responsible for the scheduling of received fax requests for processing by Fax for Domino and the flow of a fax through the various Fax for Domino subsystems as it gets processed. There is a basic data structure within Fax for Domino that is used to represent a fax. This data structure is passed to the various subsystems by the scheduler as a fax is being processed. At any time, only one subsystem has primary control of the fax job and is allowed to modify it.

2.1.3 System administration manager

The Fax for Domino system administration manager is the component that reads the Notes documents containing the Fax for Domino configuration. Configuration information is requested by the scheduler at system startup and during periodic maintenance. Other configuration information, such as user-specific configuration, is requested only when needed.

2.1.4 Job spool

A Fax for Domino job spool is a persistent repository for fax jobs. A fax job is either an outgoing or an incoming fax that must be delivered to a final destination. A job spool may hold incoming jobs, outgoing jobs, or both. Every Fax for Domino server must have a local job spool for incoming and outgoing faxes.

A Fax for Domino server may also be configured to use other Fax for Domino servers in the same Notes domain for processing outgoing fax jobs. A Fax for Domino server configured in this way is called a “parent”, and the other Fax for Domino servers that it uses are called “children”. Jobs in the outgoing spool of a parent may be assigned to a child's local spool to balance the processing load. A job placed in a child's spool is essentially a copy of the same job in the local spool. The job spool subsystem maintains the status of all copies of each job. When a parent places a job in the child's spool, the child takes responsibility for processing the job and has primary control of the fax job. The parent and children are “tightly coupled,” in that direct connectivity via Notes networking between the parent and each child is required.

The job spool subsystem, therefore, manages two types of spools: The local spool and children spools. The local spool is a local Notes mail database, and users can view the status of their outgoing faxes by viewing this database. The children spools are in-memory class instances of spools that exist on other servers. There is no local database representing these spools.

The use of load balancing with multiple Fax for Domino servers is described in Chapter 11, “FxD in action” on page 177.

2.1.5 E-mail subsystem

The Fax for Domino e-mail subsystem provides the mechanism for Fax for Domino to send e-mail. E-mails are sent for notification of incoming and outgoing faxes, delivery of incoming faxes, non-delivery of outgoing fax requests, and

alarms to administrators. The FxD e-mail subsystem is used only by the FxD scheduler.

2.1.6 Job router

The Fax for Domino job router is responsible for all the processing associated with the destination address of both outgoing and incoming fax jobs.

For outgoing fax jobs to multiple fax destinations, it creates multiple fax jobs from the original fax job. The job router determines the destination address for an outgoing fax job by parsing the original address and using user profiles when necessary. The FxD job router is responsible for determining which server will be used to process an outgoing fax job, for example, the local server or a child server. It also fixes up the destination phone number for outgoing jobs using the phone number translation database when necessary.

For incoming faxes, the job router determines the destination address using user profiles.

The FxD job router is closely coupled with the FxD scheduler and is part of the Fax for Domino engine consisting of the scheduler, configurator, and job router.

2.1.7 Device thread

The Fax for Domino device thread is the component that interfaces with fax devices. There is one FxD device thread per fax device port. The device thread allows a device to execute independently of the main Fax for Domino thread as a separate thread of execution in OS/400.

2.1.8 Fax devices

The Fax for Domino fax device subsystem supports hardware devices that can process faxes. Fax devices are the components that deliver faxes. When a fax job has been successfully processed by a fax device, the job is considered complete. There is a Fax for Domino device class instance for each device that can process a fax, for example, a fax modem (7852 Model 400), or a port on an intelligent fax board (2761 PCI Analog device). A device may be associated with either incoming or outgoing faxes or both.

Fax devices are dynamically bound to a particular fax server according to the configuration set up in Notes. There are three configuration settings that allow a fax device to be used by Fax for Domino:

- A device configuration document in the Fax for Domino administration database.
- An administration module entry in the notes.ini environment file for the admin module that can read the configuration document
- A device module entry in notes.ini for the device module that implements the interface to the device hardware.

Each fax device module supports the defined API that allows the Fax for Domino components to work with it.

After setting up Fax for Domino for AS/400, you find the following settings in the notes.ini file for the AS/400 device plug-in:

- \$FAXAdminMods=/QSYS.LIB/QDOMFXD.LIB/NFXADMIN.SRVPGM (administration module interface)
- \$FAXDeviceMods=/QSYS.LIB/QDOMFXD.LIB/NFXIBM.SRVPGM (device module interface)

2.1.9 Format converter

The Fax for Domino format converter is the component that converts documents from one format to another. For example, the FxD format converter converts a Notes document to TIFF format. The format converter is responsible for three basic types of conversions:

- Notes documents to TIFF
- Image format conversions, such as JPEG to TIFF
- Application documents to TIFF, such as Microsoft Word to TIFF. Application document conversions are done via a mailFax Convert Server driver.

The Fax for Domino format converter has its own threads of execution so that multiple documents can be converted concurrently.

In Fax for Domino for AS/400, the format converter program has its logic split across the AS/400 and a Windows NT system:

- **OS/400 Format Converter** provides:
 - All the error and event logging
 - Management of thread/process states
 - Start up of format converting threads
- **Windows NT FxD Conversion Service** will:
 - Handle multiple format conversion requests from multiple Domino servers, potentially residing on multiple AS/400 systems, by creating threads corresponding to each thread created by an OS/400 format converter.
 - Receive, convert, and return fax documents, images, and Notes attachments that are sent to it from an OS/400 format converter.
 - Return meaningful return codes and additional information to the OS/400 format converter whenever errors or meaningful events occur that need to be logged into the fax logging database.

How exactly do these two processes work and communicate?

First of all, when the Windows NT FxD Conversion Service process (qfxddaemonrtr.exe) is installed, it is installed as a Windows NT service that is automatically started whenever the Windows NT server or workstation is started.

Therefore, whenever an Integrated Netfinity Server Network Server Description (NWSD) is varied on, or an external Windows NT system is started, the Windows NT FxD Conversion Service process is started during the Windows NT startup. This is necessary since this Windows NT FxD Conversion Service must be active all the time to handle conversion requests from OS/400 format converters. Consequently, the best solution for this 24/7 requirement is to ensure that:

- It is started whenever the Windows NT server or workstation, on which it is installed, is started. The installation process sets this up by default.
- There is a “watchdog” service that is also started whenever the Windows NT server or workstation is started that monitors the Windows NT FxD Conversion Service making sure that it remains active. If it ever ends (without an administrator ending it), this “watchdog” service restarts the Windows NT FxD Conversion Service.

During the startup process, the Windows NT FxD Conversion Service registers itself first with the Windows NT Service Control Manager. Besides setting itself up as a service at startup time, the Windows NT FxD Conversion Service needs to create one more item, the socket, so that it can communicate with the OS/400 format converter.

When the OS/400 format converter service program begins executing, it determines whether it will communicate with a Windows NT FxD Conversion Service running on a local Integrated Netfinity Server or an external Windows NT server or workstation. It first checks the Domino server's notes.ini file for the \$FAXFMTCVTNWSD environment string. If this exists, the OS/400 Format Converter determines that the Windows NT FxD Conversion Service is running on a local Integrated Netfinity Server associated with the NWSD name set to this \$FAXFMTCVTNWSD variable. It extracts the IP address from the Network Server Description so that it can communicate with the Windows NT FxD Conversion Service service via the internal AS/400 bus.

If the Domino server's notes.ini file does not contain the \$FAXFMTCVTNWSD environment string, (or if it contains a \$FAXFMTCVTNWSD environment string with no value), it then searches for \$FAXFMTCVTHOST. If this exists and has a value associated with it, the OS/400 format converter can determine that the Windows NT FxD Conversion Service is running on an external Windows NT server or workstation. This includes an Integrated Netfinity Server located on a different AS/400. Therefore, using the Windows NT TCP/IP host name to which \$FAXFMTCVTHOST is set, the OS/400 Format Converter can determine the IP address that it should use.

Once the correct IP address has been determined, the correct port number must be obtained. The OS/400 format converter does this by searching the Domino server's notes.ini file for the \$FAXFMTCVTPORT environment string. If it doesn't exist, port 19700 is the default port. If it does exist, the value returned is the port that is to be used. You should not change this variable unless instructed to by Support. At this point, all the information needed to communicate with the Windows NT FxD Conversion Service has been obtained. Therefore, the OS/400 format converter continues by starting up to handle fax conversion requests.

Now, whenever a conversion request is signalled to the OS/400 Format Converter, it passes the necessary information to the FxD Windows Services System. Once the files have been successfully created as TIFF or JPEG files by the Windows NT FxD Conversion Service, they are read and their contents are sent back to the OS/400 format converter thread that receives the data and creates identical files in the /QIBM/UserData/LOTUS/FAX/TMP/servername IFS directory.

2.1.10 Log subsystem

The Fax for Domino log subsystem is the component that records events and errors for the Fax for Domino server. The level of event and error logging is configured by the administrator. Error and events are categorized as major or minor. An example of a major event is when a fax has been received by the Fax for Domino server. An example of a minor event is when a device has dialed a destination fax number and is waiting for an answer. An example of a major error is when a fax transmission by a device fails. An example of a minor error is when fax transmission fails and must be retried. The Fax for Domino log is a Notes database (nfxlog.nsf). It is also possible to configure Fax for Domino so that errors and events are logged in the Notes log (log.nsf) as well as the Fax for Domino log (nfxlog.nsf).

2.2 The detailed processing of a fax

The following sections illustrate how the various components are involved in processing a fax. The changing status of the fax in the spool mailbox database (nfxspook.nsf) is tracked. If you are interested in a higher level overview, see 1.3, “Fax for Domino flow overview” on page 5.

2.2.1 Outgoing fax

When a fax is sent using FxD, the following steps occur:

1. A Notes user sends a fax, as shown in Figure 5, which is delivered to the local spool for the Fax for Domino server.

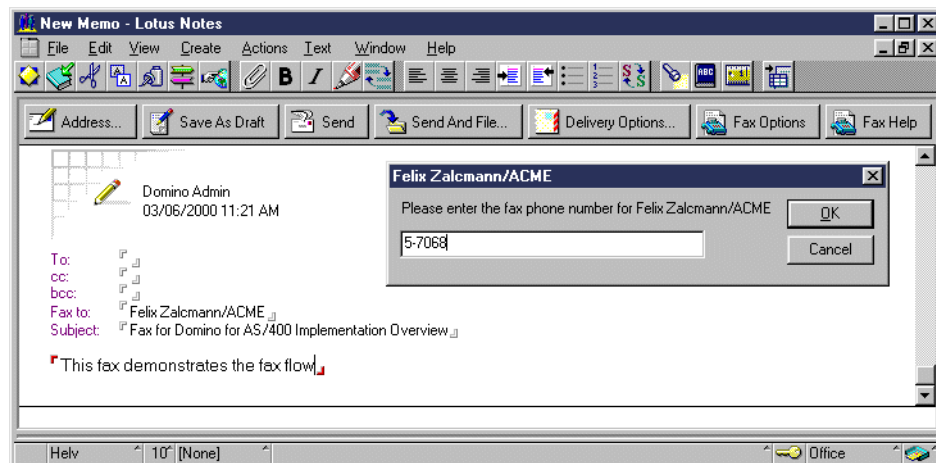


Figure 5. A Notes user sends a fax

2. The Fax for Domino scheduler polls the job spool, discovers a new outgoing fax job (see Figure 6), and reads it from the spool. The fax job state is now *New Request*.

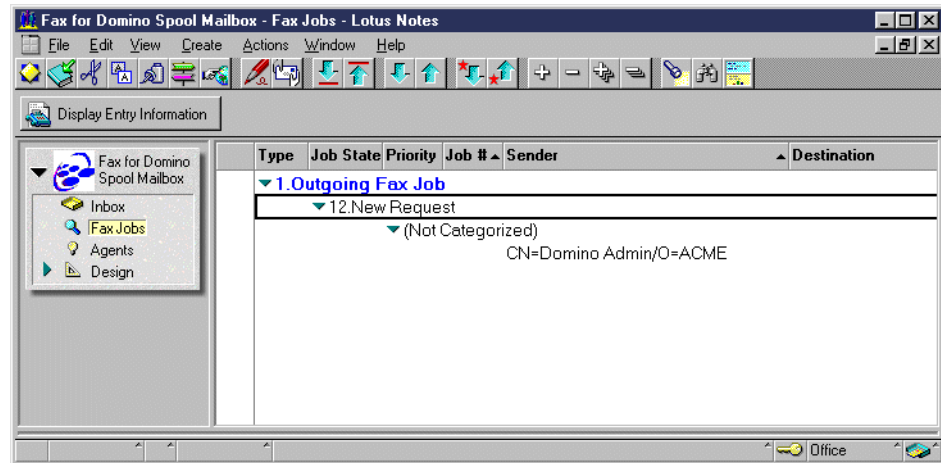


Figure 6. The scheduler polls job spool

3. The Fax for Domino scheduler passes the fax job to the Fax for Domino job router. The job router then determines which local spool should process the fax job. The fax job state is now *queued*.
4. The Fax for Domino scheduler passes the fax job to the format converter (Figure 7) to convert the cover page, the Notes document, and any attachments to TIFF format. The state of the fax job is now *Fax job conversion is occurring*. The conversion takes place on the FxD Windows Services System.

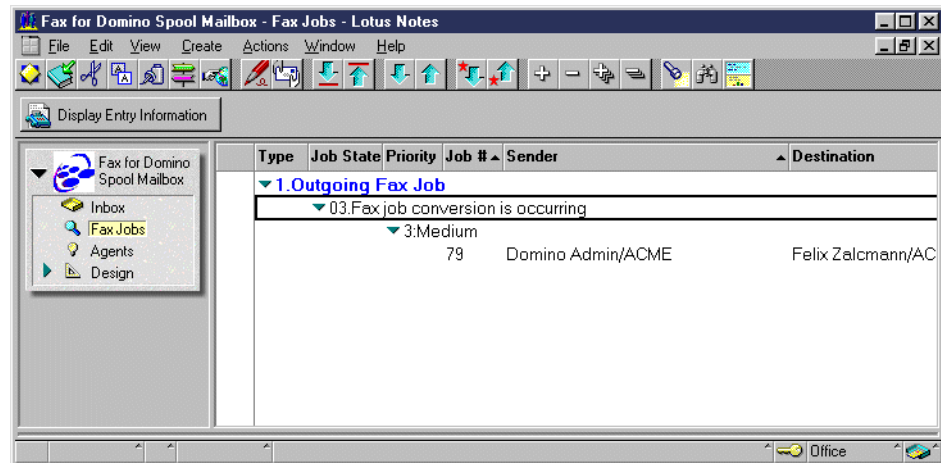


Figure 7. The scheduler passes the fax job to format converter

5. The Fax for Domino format converter passes the fax job back to the scheduler after the conversion. The fax TIFF files are now stored on the AS/400 system in an IFS directory. The fax job state is now *ready for delivery*.
6. The Fax for Domino scheduler checks if there is an idle device and assigns the fax job to the Fax for Domino device thread for delivery (see Figure 8 on page 18). The fax job state is now *Fax device is processing job*.

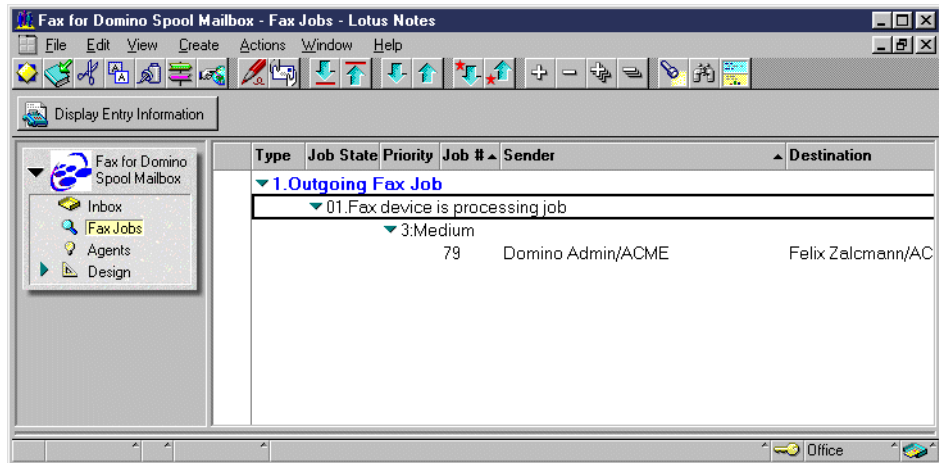


Figure 8. The fax device is processing the job

7. The Fax for Domino device thread passes the fax job to the fax device for delivery.
8. The device notifies the Fax for Domino device thread when the delivery is completed.
9. The Fax for Domino device thread passes the fax job back to the Fax for Domino scheduler after the fax has been transmitted (Figure 9). The fax job state is now *Fax processing completed*.

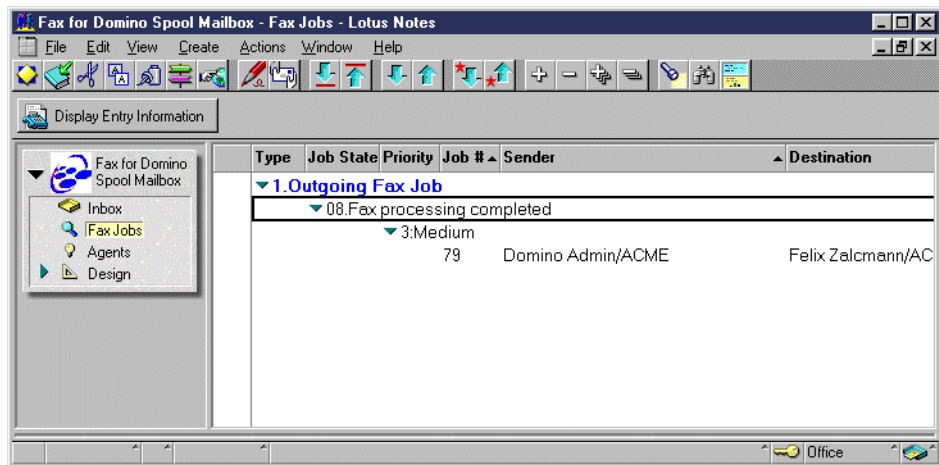


Figure 9. The fax processing is completed

- 10.If requested, the Fax for Domino scheduler passes the fax job to the e-mail subsystem and requests a notification e-mail to be sent saying that the fax job has completed successfully (Figure 10).

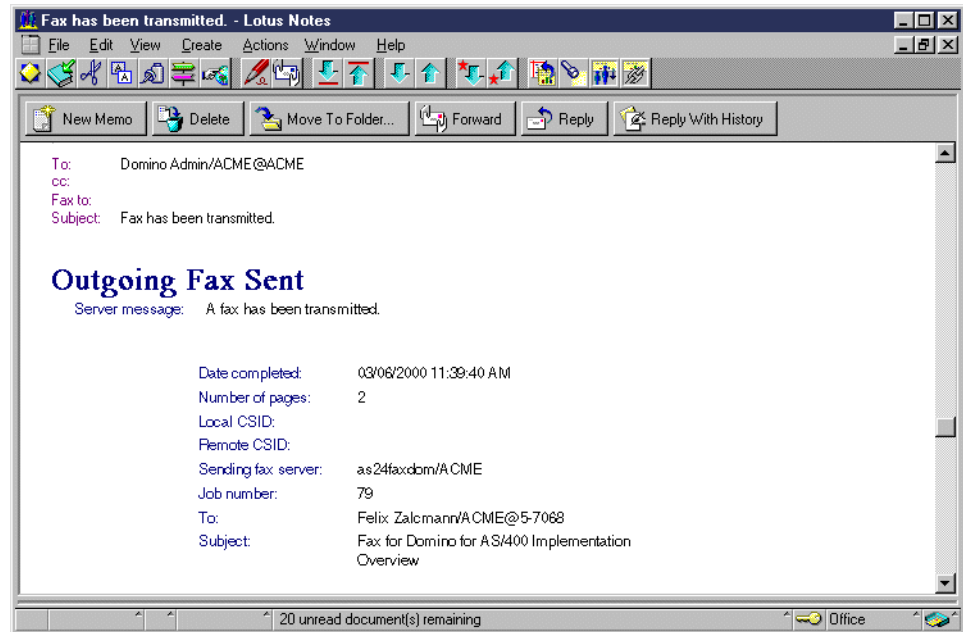


Figure 10. The scheduler passes the fax job to the e-mail subsystem

11. The Fax for Domino scheduler deletes the fax job from spool.

2.2.2 Incoming fax

When a fax is received by FxD, the following steps occur:

1. The Fax for Domino device thread receives an incoming fax and passes it to the scheduler.
2. The Fax for Domino scheduler adds a fax job to the local spool (Figure 11). The fax job state is *New*.

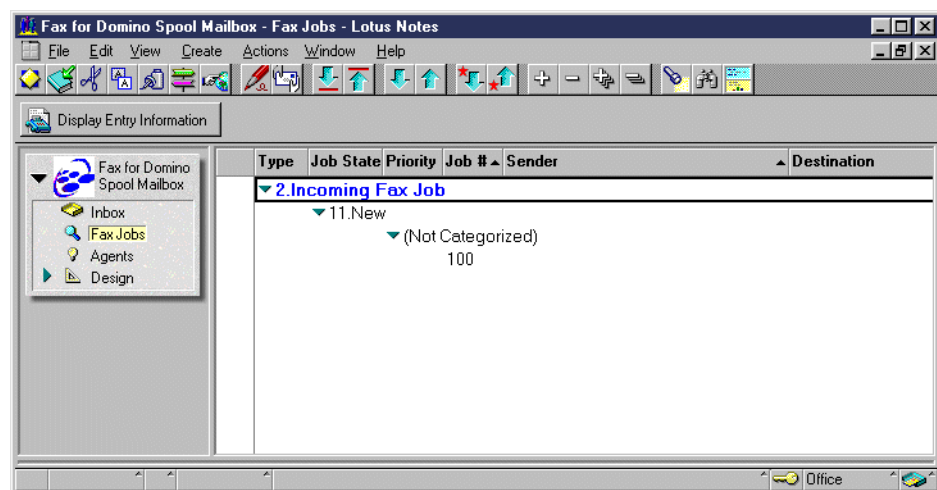


Figure 11. The scheduler adds a fax job to the local spool

3. The Fax for Domino scheduler polls the incoming fax spool and discovers a new incoming fax job and reads it from the spool.

4. The scheduler passes the fax job to the Fax for Domino job router. The fax job state is now *Queued*.
5. The Fax for Domino scheduler passes the fax job to the format converter. Some extraneous TIFF information needs to be parsed out so that the TIFFs are viewable and can be converted to another image format if necessary (Figure 12). The fax job state is now *Fax job conversion is occurring*. The conversion takes place on the FxD Windows Services System.

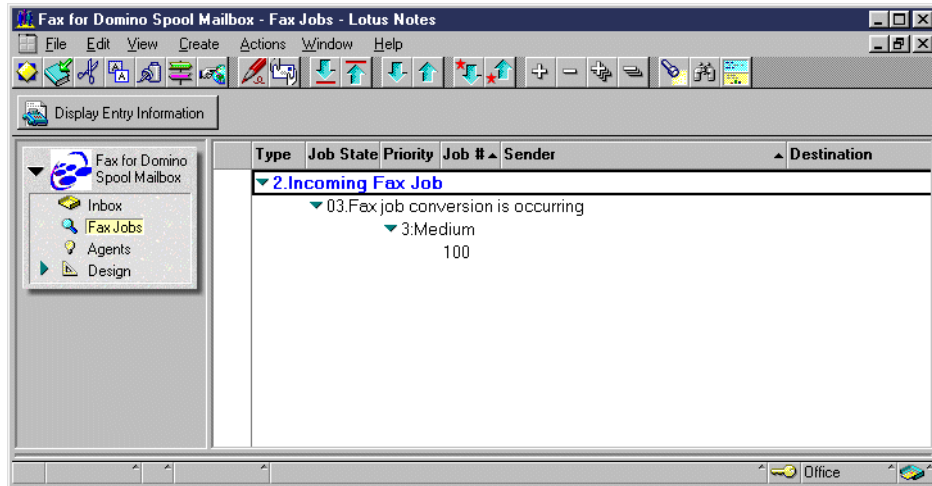


Figure 12. The scheduler passes the fax job to the format converter

6. The Fax for Domino format converter passes the fax job back to the scheduler after conversion (Figure 13). The fax TIFF files are stored on the AS/400 system in an IFS directory. The fax job state is now *Fax is ready for delivery*.

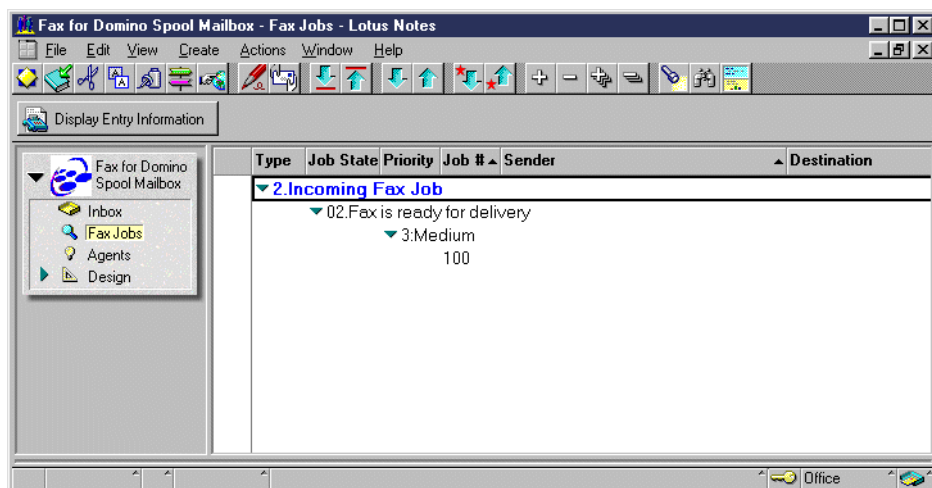


Figure 13. The format converter passes the fax job back

7. The Fax for Domino scheduler passes the fax to the e-mail subsystem for delivery (Figure 14).

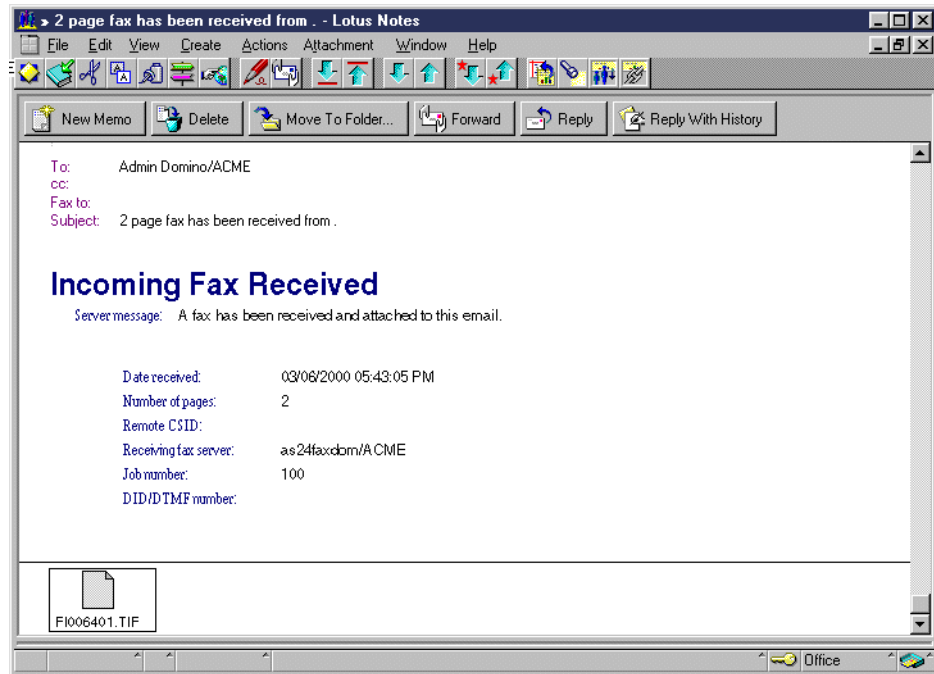


Figure 14. Incoming fax received

8. The Fax for Domino scheduler passes the fax job to the e-mail subsystem. If configured, the scheduler also requests a notification e-mail be sent saying that an incoming fax has been received.
9. The Fax for Domino scheduler deletes the fax job from the spool.

2.2.3 Print to Fax driver

The Lotus Print to Fax driver allows users with Notes clients to send faxes directly from a PC application, such as Lotus Word Pro. How to use this driver is described in detail in 6.1.2.1, "Using the Lotus Print to Fax driver" on page 91.

From the fax processing perspective, the main difference between sending a fax using the Print to Fax driver and faxing from within Notes is that the conversion of the PC document being faxed takes place on the workstation PC and not on the FxD Windows Services System. This means that an application can be used on the PC when that application is not on the FxD Windows Services System at all.

Chapter 3. Planning and preparation

In this chapter, we discuss a number of items that you must consider before you install and configure Fax for Domino for AS/400.

Note: We do not cover FxD performance in this redbook. You can find a link to some performance data at: <http://www.as400.ibm.com/domino/related/fxd>

3.1 Domino server considerations

First, you have to think about the Domino server on which you want the Fax for Domino server to be installed. Do you want a server that is only responsible for Fax for Domino, or do you want to add Fax for Domino to an existing Domino server?

3.1.1 Using an existing Domino server for Fax for Domino

You can use an existing Domino for AS/400 server to handle your Fax for Domino requests, and you can install and configure Fax for Domino on any additional Domino for AS/400 server. Using an existing Domino server as your Fax for Domino server, you can restart the Fax for Domino task in case of problems without interfering with your existing mail users.

Under most circumstances, you should consider running Fax for Domino on an existing server. Fax for Domino is so robust that it will not cause the server to crash and is economical in its use of resources.

3.1.2 Using a specific Domino server for Fax for Domino

You can also use a Domino for AS/400 server that is dedicated to Fax for Domino requests. One advantage of using a specific Fax for Domino server is that if there are problems, it is possible for you to restart the Fax for Domino task, or even the whole server, without interfering with your existing mail users. You may decide to use this in a more complex environment as shown in Figure 15 on page 24.

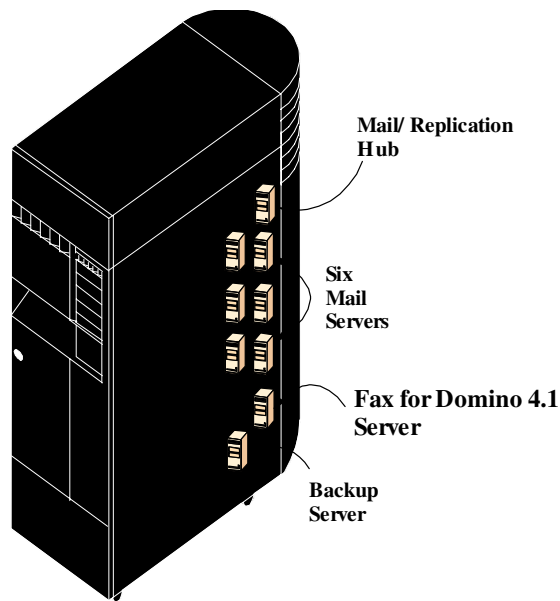


Figure 15. Specific fax server in complex environment

If you want to set up a Domino for AS/400 server only for serving fax requests, follow the installation steps described in *Lotus Domino for AS/400 - Installation, Customization, Administration*, SG24-5181 (Domino Release 4.6.x) or *Lotus Domino for AS/400 R5: Implementation*, SG24-5592 (Domino R5).

3.2 Planning for separate versus combined administration

There are two ways you can configure your Fax for Domino. The difference between them relates to how administration of your fax users is managed.

- Separate administration where you use a separate administration database (nfxadmin.nsf) for Fax for Domino.
- Combined administration where the server's Domino Directory (names.nsf) is used to hold fax related configuration information.

Whether you are using combined or separate administration, the cover page forms and the sample cover page documents are stored in the Fax for Domino cover page database (nfxcover.nsf).

3.2.1 Separate administration

When using separate administration, configuration documents related to the following items are stored in the Fax for Domino administration database (Figure 16):

- Fax for Domino servers
- Classes of Service
- User Profiles
- Fax Devices
- Telephone Number Translation

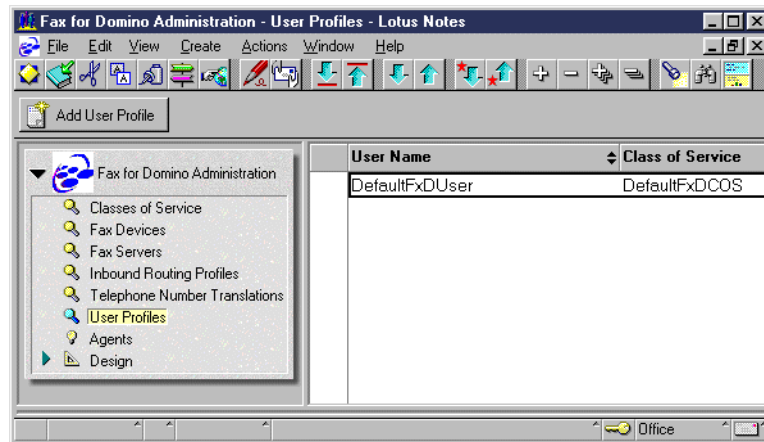


Figure 16. Using separate administration

A reason to use separate administration is when you have different Domino Domains in your organization. This means that you probably have different Domino Directories replicated across servers in your organization to assist in addressing mail. With the use of separate administration, you still have control over who can perform fax administration. The setup of FxD for separate administration creates a separate Fax for Domino administration database where the database's Access Control List (ACL) can be set up.

Another advantage of separate administration is that you can set up individual user profiles for SMTP users of FxD. See 5.2, "User profiles" on page 64, for information on this.

In addition, some organizations may decide that they do not want the Domino Directory (names.nsf) to be used for any function other than standard Domino server activities.

In the Notes.ini file, you find an entry, \$FaxAdmin=nfxadmin.nsf. This indicates that separate administration is being used because the name of the administration database is specified.

3.2.2 Combined administration

When using combined administration, configuration documents related to the following items are stored in the primary Domino Directory of your organization (Figure 17 on page 26):

- Fax for Domino servers
- Classes of Service
- User Profiles
- Fax Devices
- Telephone Number Translation

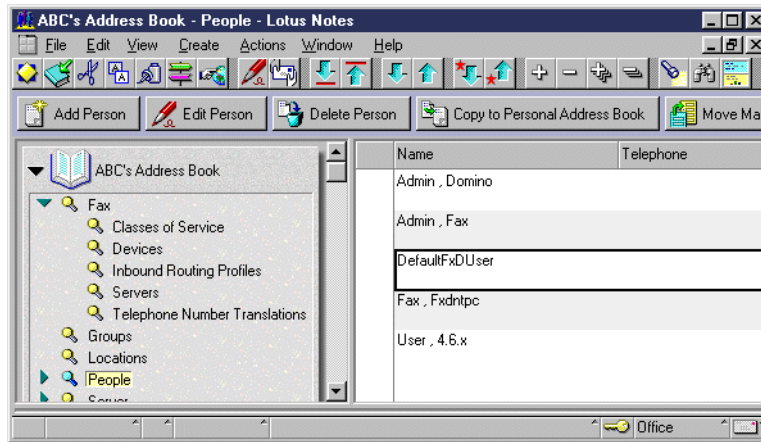


Figure 17. Using combined administration

A reason to use combined administration is that the user profile information is simply an extension of the Person document in the Domino Directory. This makes the management of routing codes and other user profile-relevant information easier since there is only one place to update this information. Using combined administration, all fax servers can be administered from a centralized database, the Domino Directory.

Note

If you install Fax for Domino with combined administration and then uninstall the product, the Fax for Domino subforms will remain in the Domino Directory. The only way to remove them is manually. See 5.11.1, “Moving from combined to separate administration” on page 78, for information on the subform names.

In the Notes.ini file, you find an entry, \$FaxAdmin=. This indicates that combined administration is being used because the name of the administration database is blank.

3.3 Planning for the FxD Windows Services System

Before installing Fax for Domino, you have to plan your FxD Windows Services System. You have two options when setting up your FxD Windows Services System, which are:

- AS/400 Integrated Netfinity Server
- External Windows NT server or workstation

3.3.1 Using an Integrated Netfinity Server

You can use a Windows NT server running on an Integrated Netfinity Server as your FxD Windows Services System. Using an Integrated Netfinity Server on the same AS/400 system as Fax for Domino gives you the opportunity to use the internal system bus to communicate between the AS/400 system and Windows NT. This means that all requests that are passed from the AS/400 part of Fax for Domino to the Windows NT part (the Windows NT FxD Conversion Service) will use the internal TCP/IP address and the internal LAN. To set up Windows NT on

the Integrated Netfinity Server, please see *AS/400 - Implementing Windows NT on the Integrated Netfinity Server*, SG24-2164.

Note

On the Integrated Netfinity Server, it is only possible to install the server version of Windows NT not the workstation version.

You can also use an Integrated Netfinity Server on a different AS/400 system to be your FxD Windows Services System. In this case, the internal system bus will not be used for communication between the AS/400 system and Windows NT. Instead, Fax for Domino for AS/400 communicates with an Integrated Netfinity Server on a different AS/400 system in exactly the same way as it does with an external Windows NT server.

3.3.2 Using an external Windows NT server or workstation

You can use an external Windows NT server or workstation as your FxD Windows Services System. The minimum hardware system configuration for this external solution is:

- Pentium or equivalent 166 MHz processor or higher
- At least 80 MB of memory (96 MB recommended)
- At least 150 MB of hard disk space available

You need to install and configure TCP/IP correctly on your external FxD Windows Services System so that communication between the AS/400 system and your external Windows NT server or workstation, using the TCP/IP protocol, is possible.

For both options, you need the following software on your FxD Windows Services System:

- Windows NT Server or Workstation software version 4.0 with Service Pack (SP) 4 or later.
- Notes client software that corresponds to the level of the Domino server you are using for Fax for Domino for AS/400. We discuss installing the Notes client software in 4.3.2, “Installing the Notes client on the FxD Windows Services System” on page 41.
- All software programs that will be used by users to send attachments; they are needed to complete the format conversion process so that you get fax pages and not only the icon of the faxed attachment.

3.4 Information you need

To configure Fax for Domino, you need to gather some information. We provide you with Table 1 on page 34, which you can use to record this information.

3.4.1 CSID for your fax lines

The Called Subscriber Identification (CSID) is usually the telephone number or numbers you use for your fax lines. However, you can use a CSID code that includes alphabetic characters. It is a string of characters that is sent with the fax

and appears on the fax header that most fax machines print on incoming faxes. You need to find out this information, since it will be used in the configuration. The CSIDs can be changed after the setup, but you have to restart FxD for the change to take effect.

3.4.2 TCP/IP host name of your AS/400 system

You can find the TCP/IP host name of your AS/400 system by selecting option 12 on the Configure TCP/IP (CFGTCP) menu.

3.4.3 TCP/IP host name of your external FxD Windows Services System

You must provide the TCP/IP host name of your FxD Windows Services System if you are using an Integrated Netfinity Server located in a different AS/400 system from Fax for Domino, or if you are using a stand-alone Windows NT server or Workstation PC. Your network administrator may provide this information. Skip this step and move to 3.4.4, "Network server description name" on page 29, if you are using an Integrated Netfinity Server on the same AS/400 system on which you are installing FxD.

If you are using a Domain Name Server (DNS) for TCP/IP name resolution, add the host name and TCP/IP address of your FxD Windows Services System to your DNS server.

If you do not use DNS for name resolution, add the host name and TCP/IP address of your FxD Windows Services System to the AS/400 host table using the Add TCP/IP Host Table Entry (ADDTCPHTE) command (Figure 18).

Add TCP/IP Host Table Entry (ADDTCPHTE)

Type choices, press Enter.

Internet address 10.1.1.10_____

Host names:

 Name fxdnhttpc_____

+ for more values _

Text 'description' _____

Bottom

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display

F24=More keys

Figure 18. ADDTCPHTE command

Using the Packet Internet Groper (PING) command on the AS/400 system you want to install Fax for Domino, verify that you get a response from your FxD Windows Services System (Figure 19).


```
Display All Messages
System: AS26
Job . . : QPADEV0001 User . . : ZALCMANN Number . . . : 008549

3>> ping fxdntpc
Verifying connection to host system FXDNTPC at address 10.1.1.10.
PING reply 1 from 10.1.1.10 took 55 ms. 256 bytes. TTL 126.
PING reply 2 from 10.1.1.10 took 47 ms. 256 bytes. TTL 126.
PING reply 3 from 10.1.1.10 took 59 ms. 256 bytes. TTL 126.
PING reply 4 from 10.1.1.10 took 97 ms. 256 bytes. TTL 126.
PING reply 5 from 10.1.1.10 took 94 ms. 256 bytes. TTL 126.
Round-trip (in milliseconds) min/avg/max = 47/70/97
Connection verification statistics: 5 of 5 successful (100 %).

Bottom

Press Enter to continue.

F3=Exit F5=Refresh F12=Cancel F17=Top F18=Bottom
```

Figure 19. Using PING to verify connection

Since you are using an external FxD Windows Services System or an Integrated Netfinity Server on a different AS/400 system, skip the next section and go to 3.4.5, “Determining which fax hardware is installed on the AS/400 system” on page 29.

3.4.4 Network server description name

If you will run Fax for Domino Windows Services on an Integrated Netfinity Server on the same AS/400 system where you will install Fax for Domino, you need to find out the name of your network server description. Your AS/400 administrator can provide this information.

3.4.5 Determining which fax hardware is installed on the AS/400 system

To configure your fax devices during the setup of Fax for Domino for AS/400, you must first be sure that you have the supported hardware available and installed on your AS/400 system.

3.4.5.1 IBM Analog device

The IBM Analog device that is supported is the analog modem 7852 model 400.

Note

Your system must have an RS-232 serial interface, which is provided by the communications adapter, which includes an Enhanced EIA 232/V.24 connection.

You probably have this on your system for ECS and data usage.

This modem is a high-performance, high-function modem designed for commercial and server applications. It is also designed and tested for use as a AS/400 Electronic Customer Support (ECS) modem and with Fax for Domino for AS/400 as a fax modem.

The features and benefits include:

- Full V.25bis Synchronous Support.
- Two-wire Leased Line Support with Switched Network Back-Up: Automatically guides you to another line if your initial connection fails.
- Data/Fax speeds: Data transmission speeds up to 33.6 Kbps, fax speeds up to 14.4 Kbps.
- Two-level password protection: Two-level password protection regulates access to the modem remote configuration utility through a datacom link.
- Flash Memory: Flash Memory for firmware updates.
- Caller ID (CSID) support.
- Maximum throughput of 115.2 Kbps: Uses V.42bis 4:1 data compression.

There are some restrictions with the 7852-400 modem. It does not support a banner (where people often put their CSID), Error Correction Mode, 2D (a form of compression), and Dual Tone Multi Frequency (DTMF). It supports CSID-based inbound faxing. We recommend that you use this modem only in relatively light faxing environments. You can use several of these modems to allow the use of dedicated modems for inbound and outbound faxes.

Note

If a modem has dip switch settings for autoanswer, do not enable autoanswer via the dip switch setting. Fax for Domino automatically answers incoming calls to fax modems that have been enabled for receiving via the Fax for Domino modem configuration document. Setting autoanswer with the modem dip switch may interfere with Fax for Domino's ability to answer incoming calls. For the IBM analog 7852 model 400 modem, we recommend that dip switch settings 3, 4, 8, 9, and 11 be set in the down position.

3.4.5.2 IBM PCI Analog

The IBM PCI Analog device that is supported is the 8 port analog modem card, feature code 2761.

Note

The AS/400 models 640/650/S30/S40 and 730/740 have only the SPD bus in their base support. If you want to use the IBM PCI Analog device 2761 on these systems, the Storage/PCI Expansion Tower 5065 is required, because this expansion tower allows the connection of PCI cards into the SPD bus systems.

The 2761 PCI Integrated Analog Modem contains eight ports. The 2761 PCI Integrated Analog Modem also provides connections, by using V.34, for remote sites with an analog connection to the network.

The features and benefits:

- Analog-to-analog connections
- Analog-to-digital connections

- PPP (synchronous and asynchronous)
- Fax over asynchronous communications (used by Fax for Domino)
- Synchronous data link control (SDLC)

Use the Work with Hardware Resources (WRKHDWRSC) type *CMN command to determine if this card is installed on your AS/400 system (Figure 20).

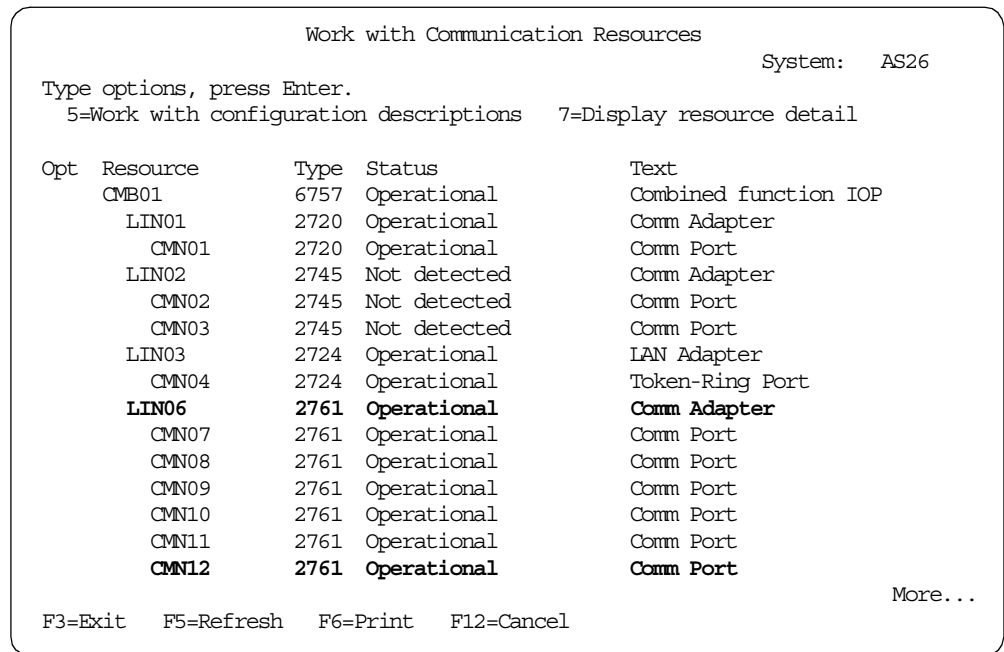


Figure 20. WRKCDWRSC *CMN

3.4.5.3 ISDN devices

For information about supported ISDN devices, please refer to Appendix D, "ISDN" on page 223.

3.5 Registering a Notes user for the FxD Windows Services System

This section describes how to register a Notes user to be used by the Notes client on the FxD Windows Services System.

Note

Consider using the following values when you register the user:

- **First name:** The TCP/IP host name of your FxD Windows Services System
- **Last name:** Fax

When you register the user, you can choose to store the new user ID as an attachment to the Person document in the Domino Directory, in a file on the disk drive of your workstation, or both.

If the ID file is stored in the Domino Directory, the setup process (see 4.3.3, "Configuring the Notes client on the FxD Windows Services System" on page 41) accesses the Directory database directly and detaches the ID file onto the FxD Windows Services System. In this case, it is mandatory to specify a password,

even if you selected a minimum password length of 0. How to remove the password after set up is described in 4.3.3.1, “Removing the password” on page 43. Note that to remove the password later, you must set the minimum password length to 0. If you did not, you have to recertify your user or create another user.

If you choose to store the ID in a file, it is saved to the selected drive on your workstation. It can be put on a diskette and used for the FxD Windows Services System setup. If you are using an Integrated Netfinity Server and, therefore, do not have a diskette drive, follow the instructions in the Installation Guide to use FTP to access the file.

3.6 Advanced planning considerations

There are some more advanced configurations that you may want to consider, either now or in the future.

3.6.1 One FxD Windows Services System serving multiple FxD servers

With FxD, it is possible to use one FxD Windows Services System to serve multiple FxD servers. These servers can reside on the same AS/400 system or on multiple AS/400 systems. They all need to be connected via the same LAN.

If the Domino servers are in the same Domino Domain, you can take advantage of load balancing to maximize the use of your hardware.

3.6.2 One FxD Windows Services System serving different organizations

You may want to use one FxD Windows Services System to serve more than one Notes organization (see a possible scenario in Figure 21). In this case, you have to cross certify the Notes user ID that you are using for the FxD Windows Services System with the cert.id file of this additional Notes organization.

With this type of cross certification, this single Notes user (the FxD user registered for ACME) can authenticate with all Domino servers within both organizations and, therefore, can receive fax requests. However, because this is a cross certification only for a single Notes user ID file and not for an organization, the first organization (ACME) cannot authenticate with any other Domino server within the second organization (ABC). This means that no end-user from one organization can gain access to Domino servers in the other organization and vice versa.

The method for setting this up is described in A.2, “Cross certifying the user ID file” on page 202.

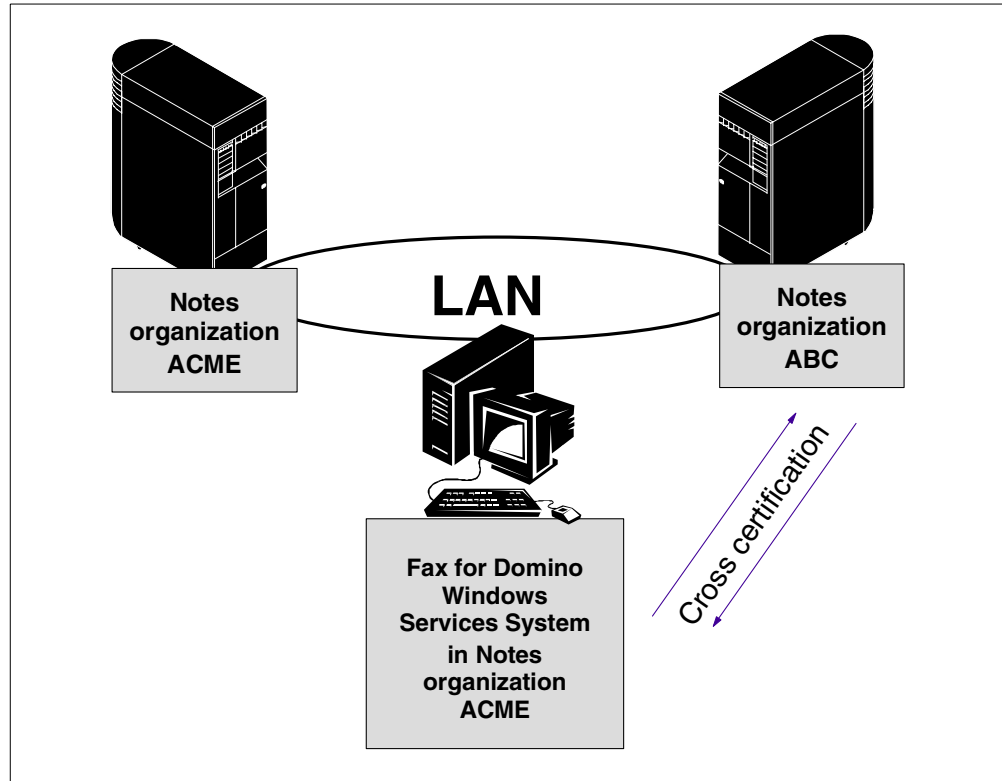


Figure 21. Two FxD servers share one FxD Windows Services System

3.7 Before installing Fax for Domino for AS/400

Prior to installing Fax for Domino for AS/400, you should read through the latest Release Notes for Fax for Domino for AS/400 4.1, which are available at the Web site: <http://www.as400.ibm.com/domino/related/fxd/>

Ensure that you obtain the PTFs as described. For example, you should download and install the latest Domino for AS/400 Quarterly Maintenance Update from the Web at: <http://www.as400.ibm.com/domino/QMUList.htm>

Verify that your AS/400 system uses OS/400 Version 4 Release 4 or later.

In addition, we recommend that you install the latest AS/400 cumulative fix package and check the latest Domino for AS/400 related PTFs appropriate for your OS/400 release from: <http://www.as400.ibm.com/domino/DomSupport.htm>

Verify that the Administrator workstation for Domino Server has the Notes Client with Administrative components installed.

If you are using the PCI Integrated Analog Modem (#2761) card, please check Informational APAR II12188 for the latest umbrella PTF. Informational APARs can be found online at: <http://as400service.ibm.com>

You must use the `CHGNETA MDMCNTRYID(xx)` command (where `xx` is your corresponding modem country ID) to get the card to work properly. This parameter is shipped blank.

Note

The *Fax for Domino for AS/400 Installation Guide* is shipped with the FxD product and is also available online at the web site:

<http://www.as400.ibm.com./domino/related/fxd/FXDINSTL.PDF>

The Installation Guide takes you through the steps necessary to set up and configure Fax for Domino in a step-by-step style with less explanation than this redbook and no figures. You can use either document to guide your setup. You may decide to use the Installation Guide and then return to this redbook for additional information.

3.8 The Fax for Domino for AS/400 planning table

Use Table 1 to gather all information necessary prior to installing Fax for Domino for AS/400.

Table 1. *Fax for Domino for AS/400 planning table*

Item	Sample value
CSID (refer 3.4.1, "CSID for your fax lines" on page 27).	555-1212
TCP/IP host name of your AS/400 (refer 3.4.2, "TCP/IP host name of your AS/400 system" on page 28).	ACME1
TCP/IP host name of your external FxD Windows Services System (refer 3.4.3, "TCP/IP host name of your external FxD Windows Services System" on page 28). Only required if <i>not</i> using a local Integrated Netfinity Server. OR Network server description name (refer 3.4.4, "Network server description name" on page 29). Only required if using a local Integrated Netfinity Server.	FXDNTPC
Fax hardware installed on your AS/400 system (refer 3.4.5, "Determining which fax hardware is installed on the AS/400 system" on page 29).	X_ IBM PCI Analog (2761 (8-port)) __ IBM Analog (7852 model 400)
Fax hardware resource name or names (refer 3.4.5, "Determining which fax hardware is installed on the AS/400 system" on page 29).	CMN10
Notes user and password on FxD Windows Services System (refer 3.5, "Registering a Notes user for the FxD Windows Services System" on page 31). You may prefer to remember the password and not write it down.	FXDNTPC FAX lotusnotes

Chapter 4. Installation

This chapter describes the installation and configuration of Fax for Domino. We assume that you have:

- Made your decision as to whether you are going to run Fax for Domino on an existing Domino server or if you are going to allocate a dedicated server to this function. See 3.2, “Planning for separate versus combined administration” on page 24, if this is not the case.
- Decided if you are going to use combined or separate administration for Fax for Domino.
- Configured and started the AS/400 Domino server.

There are now several distinct steps to be completed before you can use Fax for Domino:

1. Install the Fax for Domino software on the AS/400 system
2. Add the Fax for Domino server to a Domino server
3. Set up the FxD Windows Services System
4. Set up the Fax for Domino for AS/400 server
5. Configure Fax for Domino for AS/400
6. Set up Fax for Domino users
7. Start Fax for Domino for AS/400

4.1 Installing the Fax for Domino software on the AS/400 system

To install the Fax for Domino for AS/400 software, follow these steps

1. Sign on to your AS/400 system with a user profile that has the *ALLOBJ and *SECADM special authorities.
2. Insert the Fax for Domino CD into the CD-ROM drive on your AS/400 system.
3. Enter the Load Run (LODRUN) command from any AS/400 command line and press F4.
4. On the LODRUN panel, enter *OPT for Device. Press Enter and specify /OS400 for the Directory as shown in Figure 22.

Load and Run (LODRUN)

Type choices, press Enter.

Device > *OPT _____ Name, *TAP, *DKT, *OPT

Directory /OS400 _____

Bottom

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display

F24=More keys

RESTORING FAX FOR DOMINO LICENSED PROGRAM, PLEASE WAIT.

Figure 22. LODRUN

Press Enter to run the command and wait for it to complete. You see the message: Fax for Domino successfully installed as shown in Figure 23.

MAIN

AS/400 Main Menu

System: AS24

Select one of the following:

- 1. User tasks
- 2. Office tasks
- 3. General system tasks
- 4. Files, libraries, and folders
- 5. Programming
- 6. Communications
- 7. Define or change the system
- 8. Problem handling
- 9. Display a menu
- 10. Information Assistant options
- 11. Client Access/400 tasks

90. Sign off

Selection or command
====> _____

F3=Exit

F4=Prompt

F9=Retrieve

F12=Cancel

F13=Information Assistant

F23=Set initial menu

Fax for Domino successfully installed.

Figure 23. Fax for Domino successfully installed

This step copies the code to the AS/400 system. From there, it can be installed on your specific server.

You can tell if Fax for Domino is on the AS/400 system by typing `GO LICPGM` on any command line and selecting option **10**. Scroll down until you see:

5733FXD *INSTALLED Lotus Fax for Domino

4.2 Adding the Fax for Domino server to an existing Domino server

Before you can add a Fax for Domino server to an existing Domino server, you must end the Domino for AS/400 server where you plan to add it.

Note

It is *not* necessary that you shut down all your Domino servers on your AS/400 system.

4.2.1 Shutting down the Domino server if it is active

To shut down the Domino server where you want to add Fax for Domino, complete the following steps:

1. On any AS/400 command line, enter the Work Domino Server (`WRKDOMSVR`) command.
2. If the Domino server where you want to add Fax for Domino is not in `*ENDED` status, type a `6` beside the server name and press Enter (see Figure 24).


```

Work with Domino Servers
System: AS24

Type options, press Enter.
1=Start server      2=Change server    5=Display console  6=End server
7=Submit command   8=Work console    9=Work server jobs
11=Change current  12=Work object links 13=edit NOTES.INI
directory

Domino
Opt Server          Subsystem Status
6_ AS24FAXDOM       AS24FAXDOM *STARTED

Parameters or command
====>
F3=Exit    F4=Prompt  F5=Refresh  F9=Retrieve  F11=Display path
F12=Cancel F17=Top    F18=Bottom  F22=Display entire field F24=More keys
Bottom

```

Figure 24. WRKDOMSVR

Wait a few minutes for the server to end. Press F5 periodically to refresh the status on the display until the Domino server status shows *ENDED.

Note

For details about managing a Domino for AS/400 server, see *Lotus Domino for AS/400 - Installation, Customization, Administration*, SG24-5181 (Domino Version 4.6.x), or *Lotus Domino for AS/400 R5: Implementation*, SG24-5592 (Domino R5).

4.2.2 Adding the Fax for Domino software to the Domino server

To add the Fax for Domino software, follow these steps:

1. On any AS/400 command line, type the Add Domino Application (ADDDOMAPP) command and press F4 (see Figure 25).

```

Add Domino Application (ADDDOMAPP)

Type choices, press Enter.

Server path:
Server name . . . . .
_____

Data subdirectory . . . . . *NONE
_____

+ for more values _
Product . . . . . 5733FXD
Optional part to be added . . . *BASE *BASE, 0, 1, 2, 3, 4, 5, 6...

Bottom
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

```

Figure 25. ADDDOMAPP

2. On the Add Domino Application panel, enter values for the following fields:

- **Server name:** Specify the name of the Domino server where you want to run FxD. While the cursor is on this field, you can press F4 to list the Domino servers on this AS/400 system.

Note

To add Fax for Domino to more than one server, you can run the `ADDDOMAPP` command once for all servers by using a + for more values. Do not specify *ALL.

- **Data sub directory:** Specify *None, which is the default.
- **Product:** Specify 5733FXD
- **Optional part to be added:** Specify *BASE, which is the default.

Press Enter to run the command and wait for it to complete. You see the display as shown in Figure 26.

```
MAIN                               AS/400 Main Menu                               System:  AS24

Select one of the following:

    1. User tasks
    2. Office tasks
    3. General system tasks
    4. Files, libraries, and folders
    5. Programming
    6. Communications
    7. Define or change the system
    8. Problem handling
    9. Display a menu
   10. Information Assistant options
   11. Client Access/400 tasks

    90. Sign off

Selection or command
===> _____

F3=Exit  F4=Prompt  F9=Retrieve  F12=Cancel  F13=Information Assistant
F23=Set initial menu
Request to add application for licensed product 5733FXD option *BASE comp... +
```

Figure 26. Request to add application for licensed product 5733FXD option *base completed

When you run the `ADDDOMAPP` command a number of actions occur. Several databases are created on your Domino server, and the FaxAdmins group is created in the Domino Directory.

4.2.3 Restarting the Domino server

To restart the Domino server perform these steps:

1. On any AS/400 command line, enter the Work Domino Server (`WRKDOMSVR`) command and press Enter.

2. Type a 1 beside the Domino server where you installed Fax for Domino and press Enter (Figure 27). The server is active when its status changes to *STARTED. Press F5 periodically to refresh the status.

Work with Domino Servers

System: AS24

Type options, press Enter.

1=Start server 2=Change server 5=Display console 6=End server
 7=Submit command 8=Work console 9=Work server jobs
 11=Change current directory 12=Work object links 13=edit NOTES.INI

Domino	Domino
Opt Server	Subsystem Status
1_ AS24FAXDOM	AS24FAXDOM *ENDED

Bottom

Parameters or command
 ===>

F3=Exit F4=Prompt F5=Refresh F9=Retrieve F11=Display path
 F12=Cancel F17=Top F18=Bottom F22=Display entire field F24=More keys

Figure 27. WRKDOMSVR

4.2.4 Updating the FaxAdmins group

During the Add Domino Application (ADDDOMAPP) step, a group called FaxAdmins is created in the Domino Directory. Initially, it contains only the Domino server administrator's ID. At this time, you should update the group to include any other Notes users who will be responsible for configuring or managing Fax for Domino (Figure 28).

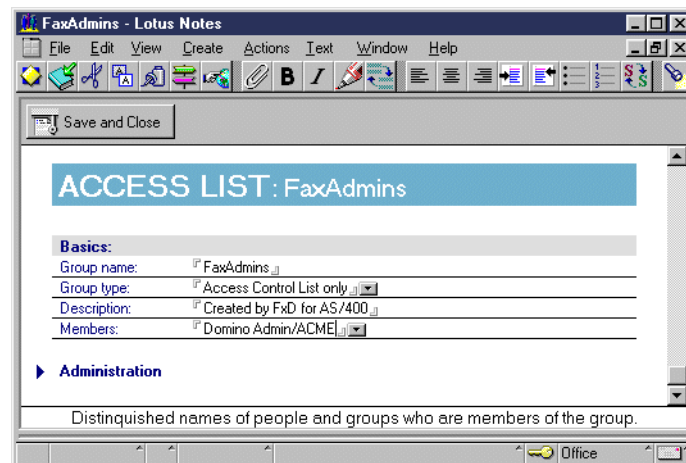


Figure 28. FaxAdmins group

Note

If you are planning to use combined administration, and you set up multiple Fax for Domino servers in your domain, you may have multiple FaxAdmins groups defined after replicating the Domino Directory between your servers. This occurs because the Add Domino Application (ADDDOMAPP) command creates the FaxAdmins group in the Domino Directory of each server. There are several ways to avoid this. After running the ADDDOMAPP command, you can replicate the Domino Directory before running the ADDDOMAPP command on another server.

As an alternative, you can manually update one of the FaxAdmins groups so that it contains the appropriate Fax for Domino administrators for each of the servers. Then, you delete the extra FaxAdmins groups and replicate the Domino Directory after that.

4.2.5 Finishing the installation of Fax for Domino on the AS/400 system

You have finished installing the Fax for Domino software on your AS/400 system. In the next step, you install and set up the necessary software on the Windows NT server or workstation that you selected to be the FxD Windows Services System.

At this time, you should leave the Administrator workstation and go to the console of the system that acts as the FxD Windows Services System. In a later step, you will return to the Notes administrator workstation to finish setting up and configuring the Fax for Domino for AS/400 server.

4.3 Setting up the FxD Windows Services System

The following sections guide you through steps that must be performed on the FxD Windows Services System:

1. Register a Notes user for the FxD Windows Services System (if not done already)
2. Install the Notes client software
3. Set up the Notes client
4. Install the FxD Windows Services software
5. Install applications of your choice to process attachments your users might fax

To install and set up the FxD Windows Services System, you must be a member of the Windows NT Administrators group of your Windows NT server or workstation. You must use this same identity to perform all of the steps.

Note

If you do not use the appropriate privileges when installing an application, you may experience problems converting attachments for that application.

4.3.1 Registering a Notes user for the FxD Windows Services System

See 3.5, “Registering a Notes user for the FxD Windows Services System” on page 31, if you have not done this before.

4.3.2 Installing the Notes client on the FxD Windows Services System

To install the Notes client on your FxD Windows Services System, follow these steps:

1. Insert the Notes client CD (Release 4.6.6b or 5.0.2a or higher, according to your Domino for AS/400 release) in the CD-ROM drive of the Windows NT system you want to use as your FxD Windows Services System.

Note

If you are using an Integrated Netfinity Server, insert the CD in the AS/400 CD-ROM drive.

2. Install the “Standard” components of the Notes Client. You do not need to install any of the Designer or Administrator components.

Note

You should only install one version of the Notes client. This Notes client must only be used for FxD Windows Services.

4.3.3 Configuring the Notes client on the FxD Windows Services System

You have registered the user ID you want to use on your FxD Windows Services System in 3.5, “Registering a Notes user for the FxD Windows Services System” on page 31. You can now configure the Notes client using this user ID as described in the following steps:

Note: For R5 client instructions, refer to A.1, “Configuring the Notes client on the FxD Windows Services System” on page 197.

1. Start the Lotus Notes client application.
2. When you are prompted for the Notes Workstation Setup screen, enter the values as shown in Figure 29 and click **OK**.

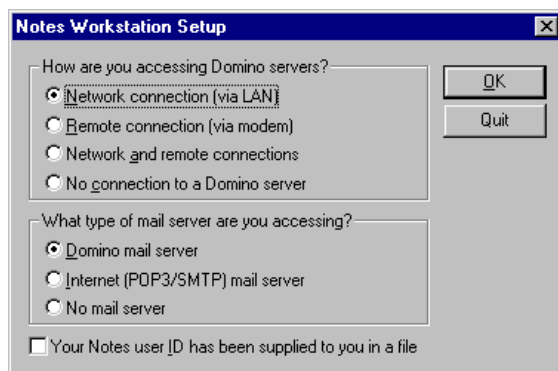


Figure 29. Notes Workstation Setup

3. You see the Network Workstation Setup display. For the Your user name field, enter the name of the user ID you created in 3.5, “Registering a Notes user for the FxD Windows Services System” on page 31. For the Home server name field, enter the name of the Domino for AS/400 server where you registered the user ID. Click **OK**. Refer to our example in Figure 30.

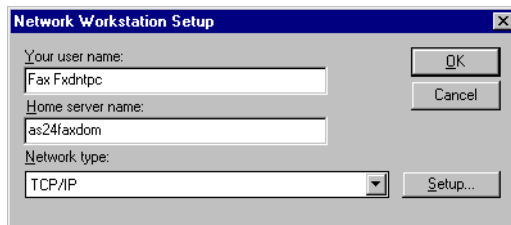


Figure 30. Network Workstation Setup

4. Your client now connects to your Domino for AS/400 server and prompts you to enter the password for the user ID you entered in the last step. Enter the password and click **OK** (Figure 31).

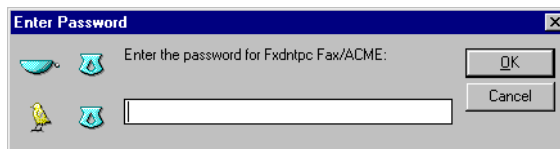


Figure 31. Enter Password

5. Your client retrieves the user ID file from your Domino for AS/400 server and stores it in the Notes data directory of your client. When the configuration process has ended, you see the Notes client window as shown in Figure 32.

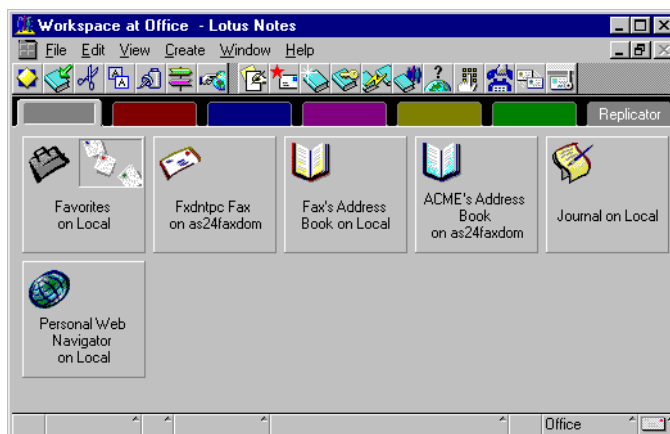


Figure 32. Workstation configuration completed

6. After the set up is completed, shut down the Notes client unless you want to remove the password from the ID file, in which case, read the next section first.

4.3.3.1 Removing the password

This step is optional. If your ID file has a password, but the minimum length specified for the password is 0, you may decide to remove it by completing the following steps:

1. From the Notes client, select **File->Tools->User ID** and press Enter.
2. Enter the password of your user.
3. Click **Clear Password**.
4. You are prompted for the user password again.
5. Click **OK**.

The password is now removed.

4.3.4 Installing FxD Windows Services System software

We now describe the installation of the FxD Windows Services System software:

1. Insert the Fax for Domino for AS/400 CD in the CD-ROM drive of the Windows NT system you want to use as your FxD Windows Services System. If your system is configured to use the autorun function, the installation wizard automatically starts the installation.

Note

If you are using an Integrated Netfinity Server, insert the CD in the AS/400 CD-ROM drive.

2. If your system is not configured for autorun, execute the setup.exe program in the \WINNT subdirectory of your Fax for Domino for AS/400 CD.
3. Click the **Install Fax for Domino** (Windows Services) button, as shown in Figure 33, and click **Next**.

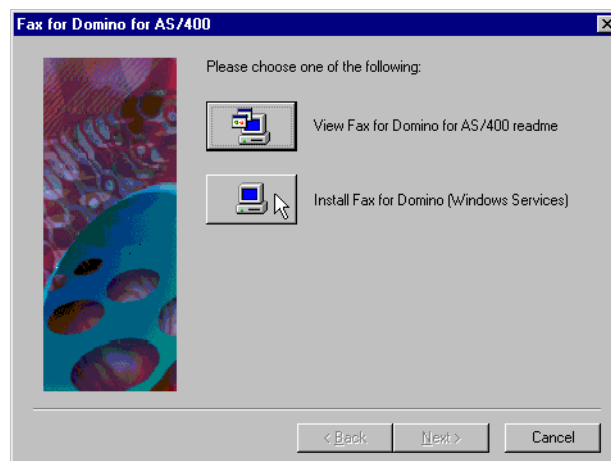


Figure 33. Install Fax for Domino (Windows Services)

4. When the installation procedure ends, you see the display shown in Figure 34 on page 44. Click **Finish** to complete the setup.

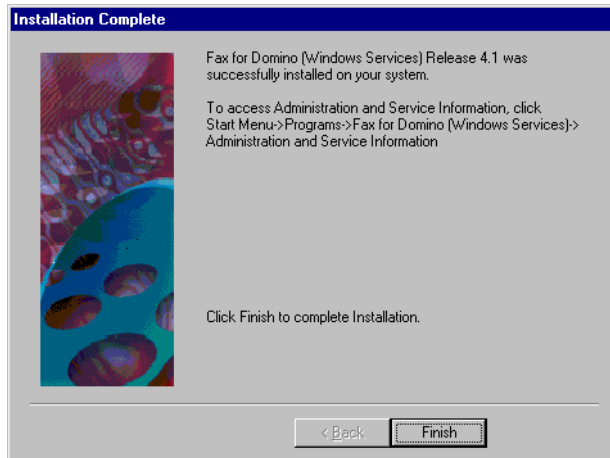


Figure 34. Installation complete

5. In Figure 35, you see that you have to restart the FxD Windows Services System to activate the service. Select **Yes, I want to restart my computer now** and click **Finish**.

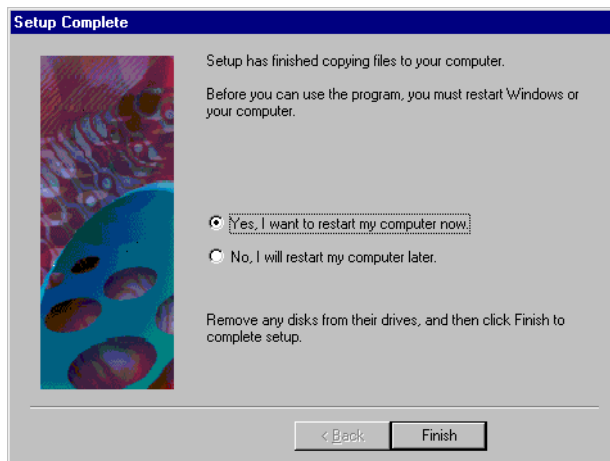


Figure 35. Setup complete

6. When the restart completes, and you have logged on to the Windows NT system, if the Notes ID file is password protected, you have to enter the password for the user ID used to set up the Notes client in 4.3.2, "Installing the Notes client on the FxD Windows Services System" on page 41. The password prompt is shown in Figure 36. After you have entered the password, click **OK**.

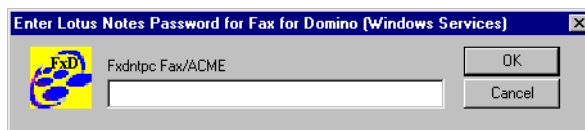


Figure 36. Enter Lotus Notes Password for Fax for Domino

Note

You only have to enter this password once. It will be encrypted and stored on the FxD Windows Services System so that the FxD Windows Services System can start up without user intervention. You are not prompted for the password on subsequent system restarts unless you change the password or switch to a different user ID prior to the restart.

The dialog box is closed, and you can access the Windows NT desktop.

Note

Before you enter the password, or when you are changing the password for this user ID, you may receive a message from the Windows NT Services Control Manager saying that not all services could be started. This is normal because after the installation of the FxD Windows Services System, the services are waiting for the password of the user ID and are, therefore, not able to start up.

7. Two new Windows services are running on the FxD Windows Services System. To verify that these services are started, complete the following steps:

- a. Click **Start->Settings->Control Panel**.
- b. Select the **Services** icon. A window appears, as shown in Figure 37.

The Fax for Domino Conversion Service and the Fax for Domino Service Monitor are started.

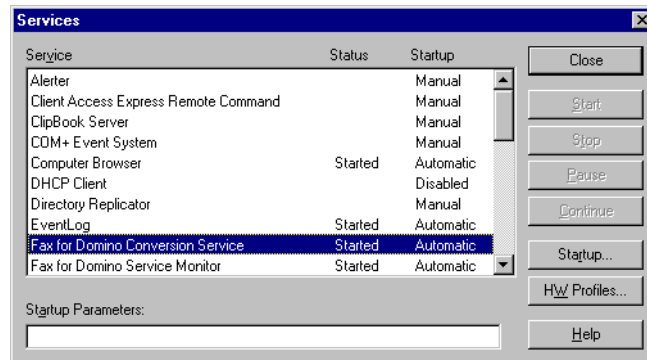


Figure 37. Services

4.3.5 Installing the required applications

You should install the applications that your users most commonly use for document attachments so that the attachments can be converted to a TIFF file format for faxing. See the specific application's instructions for installing the software. See 7.2, "Sending a fax with attachments" on page 122, for more information about installing non-standard applications.

Whenever you install an application on the FxD Windows Services System, make sure that you are a member of the Windows NT Administrators group for the system.

Note

Be aware that you have to buy the appropriate licenses for the applications you install on your FxD Windows Services System.

You have now finished setting up the FxD Windows Services System. Go back to the Notes administrator workstation to finish setting up the Fax for Domino for AS/400 Server.

4.4 Setting up the Fax for Domino for AS/400 server

Next you need to set up the Fax for Domino for AS/400 server. This process includes a number of tasks, including modifying the Notes.ini file, creating an Administration database if you are using separate administration, and modifying mail templates. The following sections guide you through performing the process at the Notes administrator workstation.

4.4.1 Modifying the agent restrictions on your server

First, you must modify the agent restrictions on the Domino for AS/400 server.

Note

The change to the agent restrictions is necessary only for the Fax for Domino setup because the setup task is running as a server side agent. You can restore the original agent restriction settings after you finish setting up the Fax for Domino for AS/400 server.

1. Open the Domino Directory (names.nsf) on your server.
2. In the left pane of the address book window, click **Server** and open the view called **Servers**.
3. Select the Domino for AS/400 server where you added Fax for Domino and click **Edit Server**.
4. Locate the **Agent Manager** tab and click it.

Notes

If you are managing a Domino for AS/400 R5 server, click the **Security** tab.

5. In the Run unrestricted LotusScript/Java agents field, click the drop-down list and select the Domino for AS/400 server name that you use for Fax for Domino. You see a display similar to the example in Figure 38.

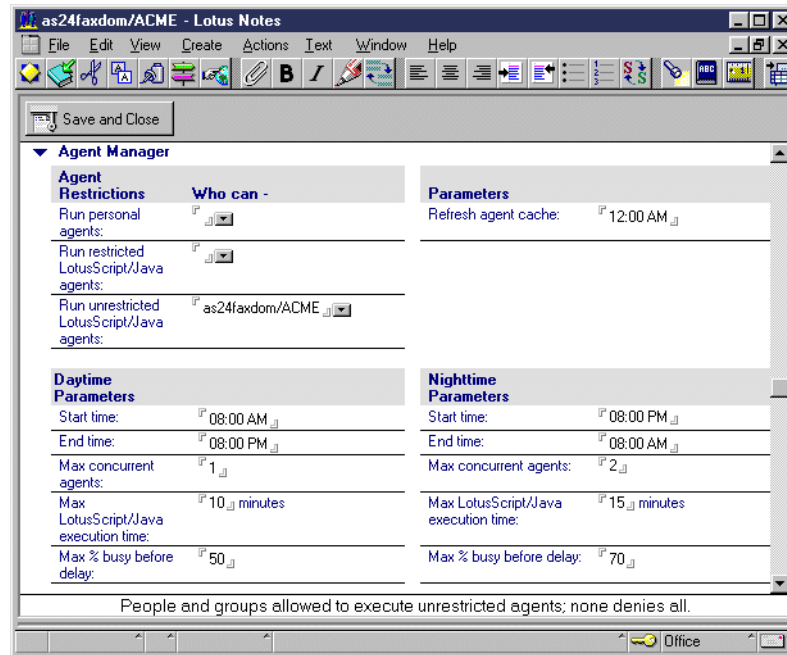


Figure 38. Agent Manager

Notes

Verify you have modified the **Unrestricted** LotusScript/Java agents field.

6. Click **Save and Close**.

4.4.2 Running the Fax for Domino setup

To run the Fax for Domino setup, follow these steps:

1. Open the Fax for Domino setup database (setupfxd.nsf), which is located on the Domino for AS/400 server where you have added Fax for Domino.

Note

Do not replicate this database to your local workstation. The Fax for Domino Setup database is designed to be used only on the Domino server.

2. You are prompted with a display like the example in Figure 39 on page 48. Enter the following information:
 - **Fax Foreign Domain:** Specify a unique domain name for the fax server. This name must be different from every other Domino domain, foreign domain, or existing fax foreign domain defined in your Domino Directory or Public Address Book. The default Fax Foreign Domain name is Fax.
 - **Administration:** Select either **Separate** or **Combined** as the method you will use to administer Fax for Domino. See 3.2, "Planning for separate versus combined administration" on page 24, for more information.

- **Notes User for FxD Windows Services:** Select the Notes user that you created for the FxD Windows Services System in 3.5, “Registering a Notes user for the FxD Windows Services System” on page 31.
- **FxD Windows Services System:** Specify the type of system where you installed the FxD Windows Services software:
 - Select **Local Integrated Netfinity Server** if you installed FxD Windows Services on an Integrated Netfinity Server and the Integrated Netfinity Server is located on the *same* AS/400 system where you installed Fax for Domino.
 - If you installed FxD Windows Conversion Services on any other Windows NT server or workstation (including an Integrated Netfinity Server located on a different AS/400 system), select **Other Windows System**.

Note

To view the help text for a field in the Fax for Domino setup database, click on the title to the left of the field.

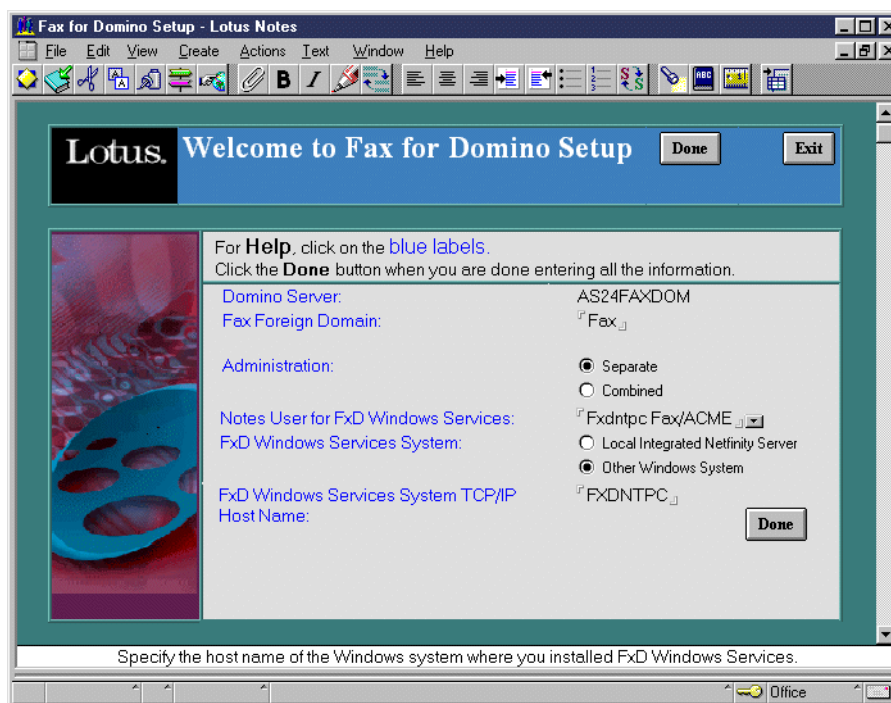


Figure 39. Fax for Domino Setup database

You see one of the following fields depending on whether you specified Local Integrated Netfinity Server or Other Windows System:

- **Network Server Description:** If you installed FxD Windows Services on an Integrated Netfinity Server located on the same AS/400 system as Fax for Domino, specify the name of the Network Server Description for the Integrated Netfinity Server.
- **FxD Windows Services System TCP/IP Host Name:** If you installed FxD Windows Services on any other Windows NT server or workstation

(including an Integrated Netfinity Server located on a different AS/400 system), specify the TCP/IP host name of the FxD Windows Services System.

Note

Do not specify the IP address of your FxD Windows Services System. During startup, Fax for Domino needs to resolve the IP address on its own.

3. Click **Done** and wait for the setup process to complete. You see a display similar to the example in Figure 40.

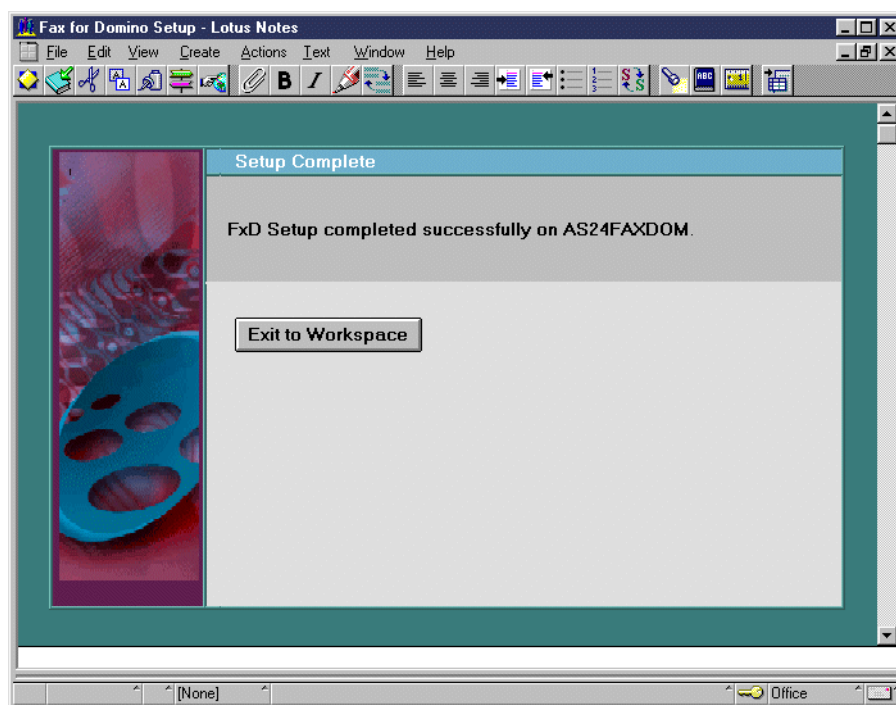


Figure 40. Fax for Domino Setup complete

4.4.3 Restoring the agent restrictions on your server

Restore the agent restrictions on your Domino for AS/400 server. To restore the original values in the Run unrestricted LotusScript/Java agents field, see 4.4.1, "Modifying the agent restrictions on your server" on page 46, and reverse the process described there. If when you did this step, the server was already set up to Run unrestricted LotusScript/Java agents, do not change it back. Your administrator must have a reason for having it set this way. If you did need to change it for the FXD installation, now change it back. Don't forget that if you need to run the setup again, you have to modify the agent restrictions again.

4.4.4 Notes.ini entries

After the setup, if you look in your Notes.ini, you see something like the following example:

```
$FAXAdminMods=/QSYS.LIB/QDOMFXD.LIB/NFXADMIN.SRVPGM
$FAXDeviceMods=/QSYS.LIB/QDOMFXD.LIB/NFXIBM.SRVPGM
$FAXCoverPages=nfxcover.nsf
$FAXLog=nfxlog.nsf
$FaxAdmin=nfxadmin.nsf
$FAXFMTCVTPORT=19700
$FaxShutdownRcvWait=0
$FAXFMTCVTHOST=FXDNTPC
```

The above example is for separate administration. The only difference for combined administration is that the entry for \$FaxAdmin is blank.

Do not try to change the port number entry for \$FAXFMTCVTPORT unless directed to do so by support.

If FaxRCVShutdownWait = 0 and you run `tell fax quit` while a fax is being received, it will shut down as soon as it is done with the current page.

If FaxRCVShutdownWait = 1 and you run `tell fax quit` while a fax is being received, it will wait until the entire fax has been received before shutting down.

4.5 Configuring Fax for Domino for AS/400

This section guides you through the process of configuring Fax for Domino for AS/400 and the AS/400 fax hardware. You should perform these steps at your Notes administrator workstation. Use the server administrator ID or any other Notes user ID that you added to the FaxAdmins group. This process creates objects, such as fax devices, and defines the Server administrator.

How you configure Fax for Domino after the installation depends on whether you chose combined administration or separate administration. See 3.2, "Planning for separate versus combined administration" on page 24.

1. Open the server database that you will use to administer your Fax for Domino server.
 - If you chose **combined administration**, open the Domino Directory (names.nsf) database. In the left-hand pane, you see a new category of views called Fax. Expand this category to display the new views.
 - If you chose **separate administration**, open the Fax for Domino administration database (nfxadmin.nsf).
2. Update the fax server information. See Figure 41 for the form when separate administration is selected.
 - If you chose **combined administration**, select the **Fax/Servers** view in the Domino Directory and open the appropriate Server document. Expand the Fax section of the document and make sure there are valid entries in all mandatory fields. Although these fields are not indicated in the form, you will not be able to Save and Close successfully if the necessary fields are not complete. You *must* enter a name in the Server administrator field.
 - If you chose **separate administration**, select the **Fax Servers** view in the Fax for Domino administration database and open the default Fax Server document. Make sure the document includes valid entries in all mandatory fields. These are indicated by check marks on the form. You *must* enter a name in the Server administrator field.

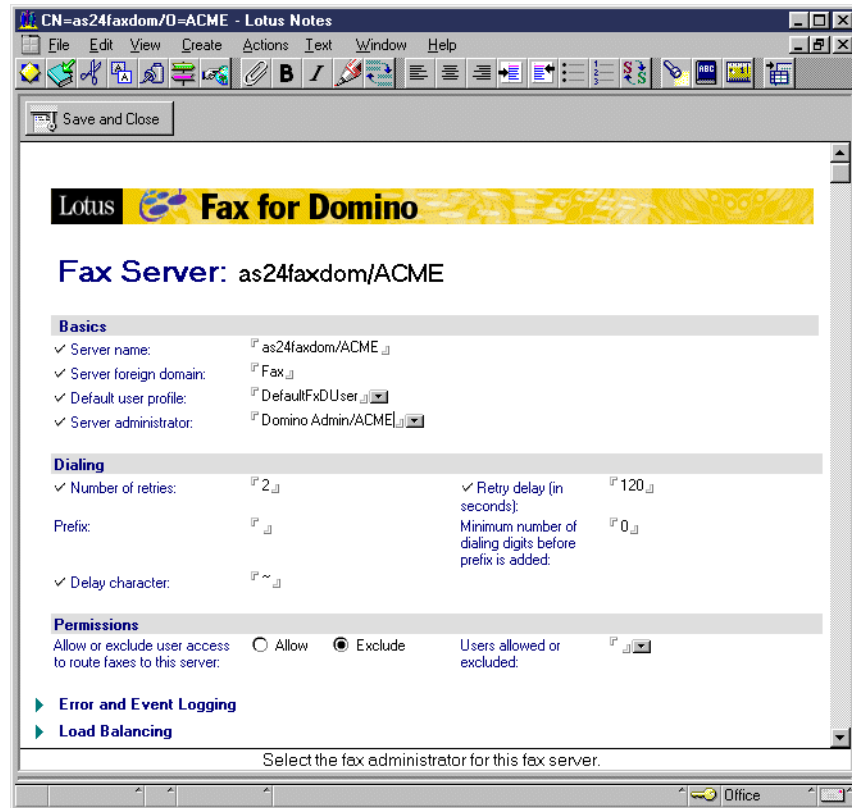


Figure 41. Update fax server information using separate administration

3. Verify the fax person information.

- If you chose combined administration, select the **People** view in the Domino Directory. Open the **DefaultFxDUser Person** document and make sure the Fax section includes valid entries in all required fields (see Figure 42 on page 52). Make sure that the Deliver faxes to: is filled in. Otherwise, faxes received will not be accessible. It is optional to complete the Send fax notification to: field. See 7.4, “Routing” on page 131, for more information on this. We recommend that you use the Fax Administrator’s name for this field until you decide that there is a more suitable recipient.

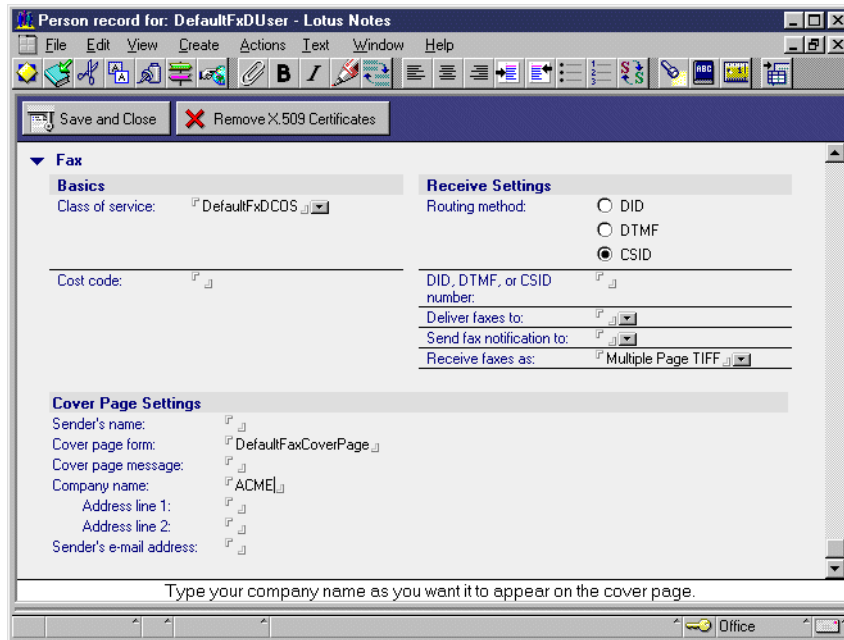


Figure 42. DefaultFxDUser using combined administration

- If you chose separate administration, select the **User Profiles** view in the Fax for Domino Administration database. Then open the **DefaultFxDUser User Profile** document and make sure it includes valid entries in all required fields (see Figure 43). Make sure that the Deliver faxes to: is filled in. Otherwise, faxes received will not be accessible. It is optional to complete the Send fax notification to: field. See 7.4, “Routing” on page 131, for more information. We recommend that you use the Fax Administrator’s name for this field until you decide that there is a more suitable recipient.

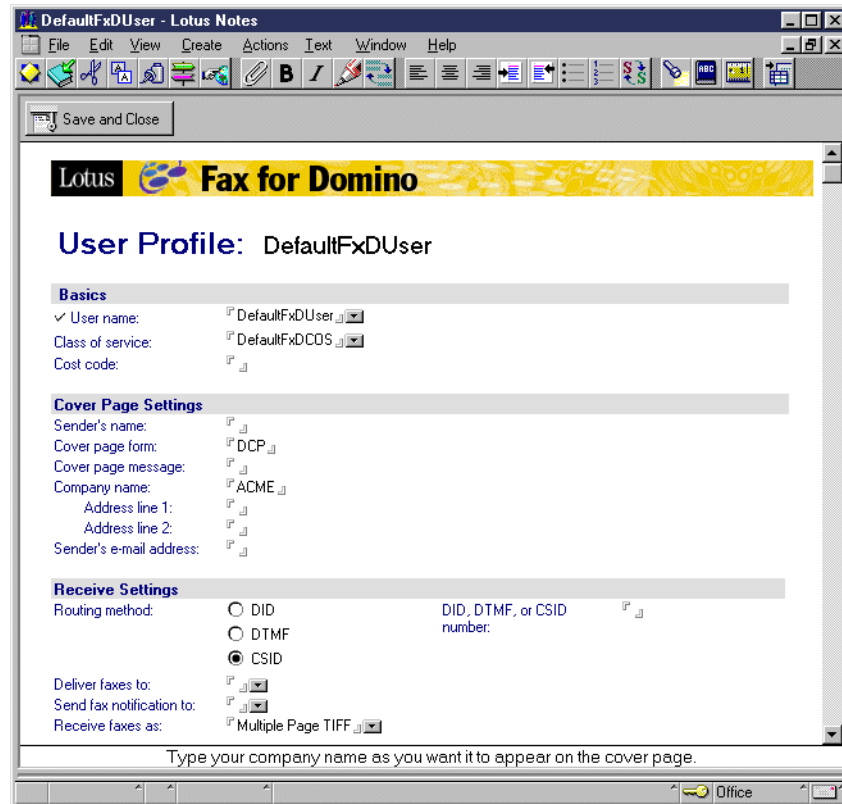


Figure 43. DefaultFxDUser using separate administration

Note

The remaining steps do not distinguish between combined or separate administration. These steps are the same, regardless of which administration type you are using.

4. Create a fax device document for each fax line or modem you are using by clicking on the **Fax Devices** view in the left-hand pane. Complete the following steps for each fax line or modem:
 - a. In the menu bar, select **Create**. Then, select your fax device from the pull-down menu (**IBM Analog** or **IBM PCI Analog**). For more information about which device to select, refer to 3.4.5, "Determining which fax hardware is installed on the AS/400 system" on page 29.
 - b. Enter the device and general settings information for your fax device using the form shown in Figure 44 on page 54.

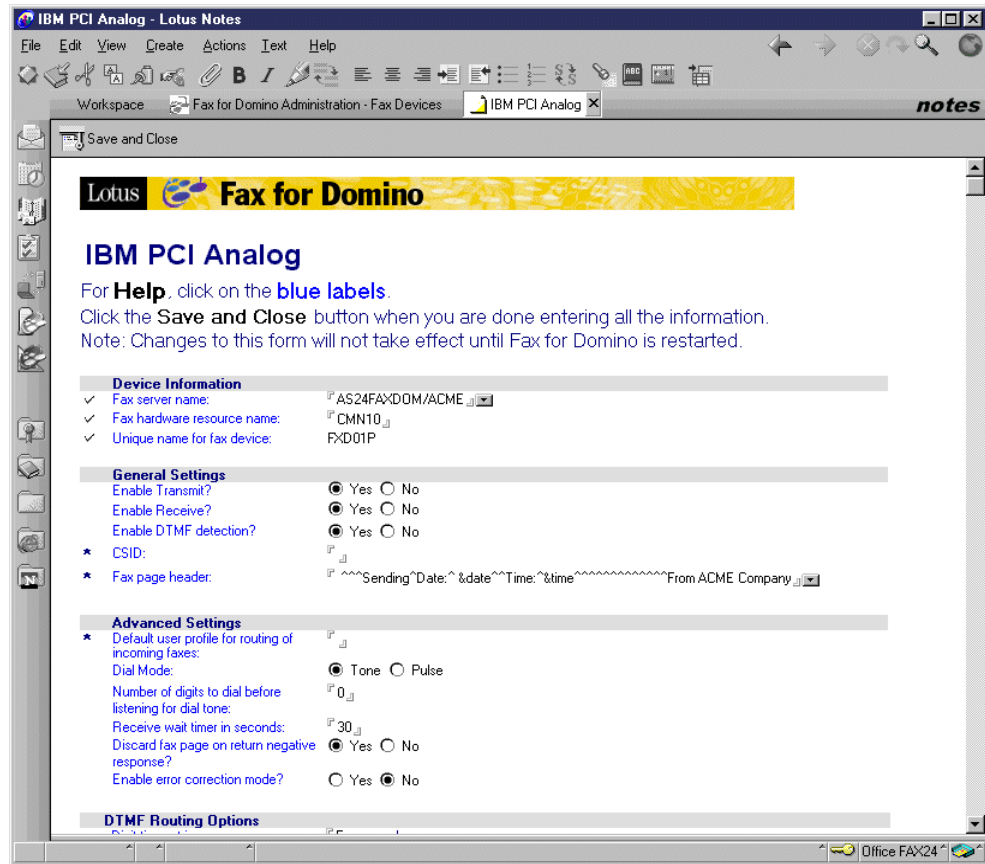


Figure 44. Device configuration

- c. The necessary information for each type of device is described here:
 - **Fax server name:** The name of the Domino for AS/400 server that will manage the fax device.
 - **Fax hardware resource name:** The AS/400 resource name that identifies the fax port.
 - **Unique name for fax device:** A unique name to describe the fax port. This name must be one to eight characters. You can make this name whatever you want. The line, controller, and device descriptions are automatically created for you and are named whatever you enter in this field. A sample display of the results of typing WRKCFGSTS *LIN is shown in Figure 48 on page 59.
- d. If desired, enter information in the General and Advanced settings fields.

Note

For more information on each field within these sections, click the **blue** field labels.

5. When you are finished configuring the fax hardware, click **Save and Close**.

Note

If you are using the 2761 8-port adapter, make sure that you have followed the planning instructions in 3.7, “Before installing Fax for Domino for AS/400” on page 33, to use the Change Network Attributes (CHGNETA) command to specify the Modem country ID (MDMCNTRYID) value corresponding to your country ID. If you don’t, the modem port initialization will fail.

6. Set up the default Class of Service document (DefaultFxDCOS) to meet the needs of most people in your organization (see Figure 45). You can create additional Class of Service documents if needed. These documents define the characteristics of faxes and how faxes are sent.

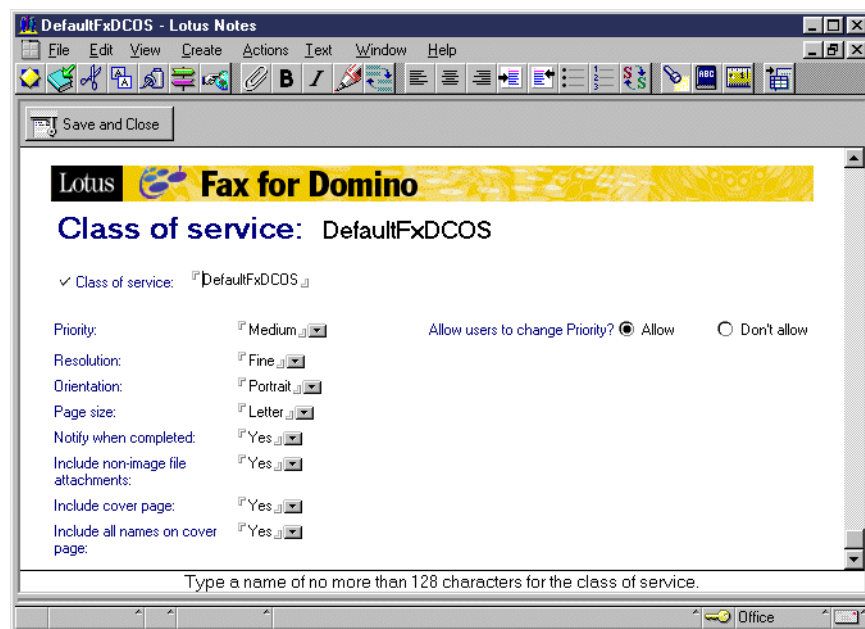


Figure 45. Default Class of Service document

7. Create user profile settings for individual users as needed.
See 5.2, “User profiles” on page 64, for more information on this topic.
8. Create Telephone Number Translation documents as needed.
See 7.5, “Telephone number translation” on page 137, for more information on this topic.

4.6 Setting up Fax for Domino users

To use all available functions of Fax for Domino, you need to modify the environment of your Notes users.

4.6.1 Updating user Personal Address Books with fax domain information

You must provide your fax users with the necessary instructions to perform the following steps:

1. Update the design of their Personal Address Books so that the fax domain field appears in their Location documents.
 - If your users do not keep a copy of pernames.ntf on their client workstation, they should refresh the design of their Personal Address Book (names.nsf) using the updated template on the server. Use **File->Database->Refresh Design** to do this.
 - If your users keep a copy of pernames.ntf on their client workstation, you may want to mail them a copy of the updated pernames.ntf file from the Domino for AS/400 server along with instructions for detaching it to the Notes data directory of their client workstation. This replaces the user's pernames.ntf file. They now have the \$LotusFaxLocationSubform from the Design/Subforms view in their own copy of pernames.ntf. Once the template is updated, users must refresh the design of their Personal Address Book (names.nsf). Now, the Fax domain field appears in the Location documents in their Personal Address Books.
2. Enter the name of the fax domain in the Fax domain field in their Location documents (Figure 46). You defined this name in 4.4.2, "Running the Fax for Domino setup" on page 47.

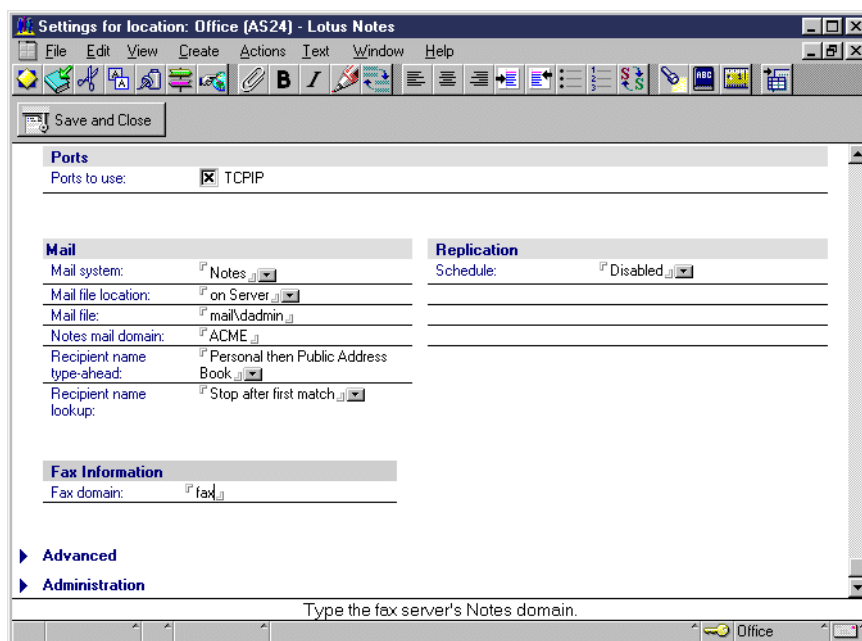


Figure 46. Fax domain in location document

Another way to add the fax domain to your users' Location documents is to send them a note with a button that executes the following simple LotusScript agent:

```
Sub Click(Source As Button)
'This function updates the location documents in the local address book
with your fax domain information'
Dim session As New NotesSession
Dim personDB As New NotesDatabase("", "names.nsf")
Dim faxdomain As String
faxdomain = "fax" 'specify your fax domain'
Dim view As NotesView
Set view = personDB.getView("Locations")
Dim locationDoc As NotesDocument
Set locationDoc = view.getFirstDocument
```

```

While Not locationDoc Is Nothing
    locationDoc.FaxDomain = faxdomain
    Call locationDoc.save(True,True)
    Set locationDoc= view.getNextDocument(locationDoc)
Wend
Messagebox("Your domain information for the "+faxdomain+" fax domain has
been updated in your location documents.")

End Sub

```

Note

Using this method, you can be sure that all location documents of your fax users are changed correctly.

We are providing this code as part of the Web downloadable additional material. See G.3, “Other resources” on page 243, for more information on how to obtain the required files.

4.6.2 Updating a user’s mail template with fax options

To include the Fax to: field and Fax Options button into a user’s Notes Memo form, you have to perform the following steps:

1. Copy the \$LotusFaxMemoSubform and the \$LotusFaxOptionsSubform, which the Add Domino Application (ADDDOMAPP) command placed in the mail template on the fax server (mail45.ntf, mail46.ntf, mailc46.ntf, and mail50ex.ntf) to the mail templates on all your mail servers.

You need this step only if your mail templates are not automatically replicated among all of your Domino mail servers.

2. Refresh the design of each user’s mail databases on your Domino mail servers.

If a user's mail database inherits its design from the updated mail template on a server, the new features will be made available to that user automatically when the server's design task runs. This usually occurs at 1:00 a.m. You can also refresh the design manually using the `LOAD DESIGN` command from the Domino console.

Note

The Fax to: field is only seen when using mail templates mail45.ntf, mail46.ntf, mailc46.ntf, and mail50ex.ntf. In the future, it may be included in mail50.ntf. Mail50ex.ntf was released with Domino R5.0.3.

Table 2 summarizes what needs to be done to modify the environment depending on your situation.

Table 2. Additional administration steps

	Environment	Setup	Additional Admin Steps
A	One Domino server used for mail and Fax for Domino.	Setup updates your mail templates and the pernames.ntf file on your FxD server with additional subforms for your whole environment.	<p>If your users have a copy of pernames.ntf on their client, you have to send them the updated copy to replace the client version.</p> <p>Send a mail memo with a button agent to update the fax domain in the Location documents, or tell them to do it manually.</p> <p>Run the DESIGN process on Domino mail server to update your users' mail files with the changed templates.</p>
B	One Domino mail server used for Fax for Domino. Additional mail servers are in the environment.	Setup updates your mail templates and the pernames.ntf file with the additional subforms only on the Domino mail server to which it was added.	<p>Replicate your mail templates and pernames.ntf to your other mail servers. Then, follow the additional admin steps in A.</p> <p>Replicate the help database if your users will use it from a server copy.</p>
C	Fax for Domino is installed on a server without mail users.	Setup updates your mail templates and the pernames.ntf file with the additional subforms only on the Domino server to which it was added.	Follow additional admin steps in B and then A.

4.6.3 Making the Fax for Domino help information available to users

Make the Fax for Domino Help database (nfxuhelp.nsf) available to your users by copying it to the Domino data directory on your mail servers or by sending it to users and having them copy it to their Notes data directories. Once this is done, they can access FxD Help from within the Notes application.

4.7 Starting Fax for Domino for AS/400

During the setup of Fax for Domino, described in 4.4.2, "Running the Fax for Domino setup" on page 47, the fax task was added to the end of the ServerTasks environment variable in the Notes.ini file. The Fax for Domino server is, therefore, automatically started when you start your Domino for AS/400 server using the Start Domino Server (STRDOMSVR) command.

To start the Fax for Domino server manually, use the Work Domino Console (WRKDOMCSL) command to submit the LOAD FAX command (Figure 47).

```

Work with Domino Console
Server: AS24FAXDOM

Previous subcommands and messages:
03/10/2000 06:11:11 PM Database Server started

> LOAD FAX

> LOAD FAX

03/10/2000 06:12:15 PM Fax (Release 4.1) initialization begun.
03/10/2000 06:12:15 PM Fax: Logging subsystem has been started.
03/10/2000 06:12:15 PM Fax: Fax class of service configuration records read
successfully.
03/10/2000 06:12:15 PM Fax: Fax server configuration record read
successfully.
Enter a Domino subcommand.
====>
F3=Exit F5=Refresh F6=Print F9=Retrieve
F17=Top F18=Bottom F21=Command line

```

Figure 47. Load Fax

After you have started Fax for Domino, you can also see that your fax devices are active. To verify this, use the Work with Configuration Status (WRKCFGSTS) command (Figure 48).

```

Work with Configuration Status
AS24
03/10/00 10:20:25
Position to . . . . . Starting characters

Type options, press Enter.
1=Vary on 2=Vary off 5=Work with job 8=Work with description
9=Display mode status 13=Work with APPN status...

Opt Description Status -----Job-----
FXPORT01 ACTIVE
FXPORT01 ACTIVE
FXPORT01 ACTIVE QFAXDD QNOTES 009206
FXPORT02 ACTIVE
FXPORT02 ACTIVE
FXPORT02 ACTIVE QFAXDD QNOTES 009209
FXPORT03 ACTIVE
FXPORT03 ACTIVE
FXPORT03 ACTIVE QFAXDD QNOTES 009211
More...

Parameters or command
====>
F3=Exit F4=Prompt F12=Cancel F23=More options F24=More keys

```

Figure 48. Status of fax devices

In the Domino subsystem, you can find new tasks after successfully starting Fax for Domino. You see the FAX job and one or more QFAXDD (Fax device) jobs. Using the Work with Active Jobs (WRKACTJOB) command, you see a display like the example in Figure 49 on page 60.

```

Work with Active Jobs
AS24
03/10/00 10:31:38
CPU %: 1.4 Elapsed time: 00:00:01 Active jobs: 177

Type options, press Enter.
2=Change 3=Hold 4=End 5=Work with 6=Release 7=Display message
8=Work with spooled files 13=Disconnect ...

Opt Subsystem/Job User Type CPU % Function Status
--- AS24FAXDOM QSYS SBS .0 DEQW
--- ADMINP QNOTES BCI .0 SELW
--- AMGR QNOTES BCI .0 SELW
--- AMGR QNOTES BCI .0 CNDW
--- DECS QNOTES BCI .0 SELW
--- EVENT QNOTES BCI .1 SELW
--- FAX QNOTES BCI .0 SELW
--- QFAXDD QNOTES BCI .0 ICFW
--- QFAXDD QNOTES BCI .0 ICFW
More...

Parameters or command
====>
F3=Exit F5=Refresh F7=Find F10=Restart statistics
F11=Display elapsed data F12=Cancel F23=More options F24=More keys

```

Figure 49. Fax jobs in Domino subsystem

4.8 Stopping Fax for Domino for AS/400

If you want to end your Fax for Domino server manually, use the Work Domino Console (WRKDOMCSL) command to enter the TELL FAX QUIT command (Figure 50).

```

Work with Domino Console
Server: AS24FAXDOM

Previous subcommands and messages:

> TELL FAX QUIT

> TELL FAX QUIT

03/10/2000 06:19:26 PM Exiting Fax addin task.

03/10/2000 06:19:51 PM Fax addin task has exited.
Enter a Domino subcommand.
====>

F3=Exit F5=Refresh F6=Print F9=Retrieve
F17=Top F18=Bottom F21=Command line

```

Figure 50. Tell fax quit

The Fax for Domino server will be automatically stopped when you shut down your Domino for AS/400 server by using the End Domino Server (ENDDOMSVR) command.

Note

For details about managing a Domino for AS/400 server, see *Lotus Domino for AS/400 - Installation, Customization, Administration*, SG24-5181 (for Domino Release 4.6.x), or *Lotus Domino for AS/400 R5: Implementation*, SG24-5592 (for Domino R5).

Important

If you stop and restart the Fax for Domino Conversion Service on the FxD Windows Services System, you have to restart Fax for Domino to re-establish the communication between the two systems. If you reboot the FxD Windows Services System, you must also restart Fax for Domino.

For more details on starting and stopping services, see 5.7, “Starting and stopping services” on page 72.

Chapter 5. Administration

For general monitoring of ongoing activity in FxD, the two databases to use are the Spool Mailbox (nfxspool.nsf) and the FxD Log database (nfxlog.nsf). We recommend that if you are the administrator, you add these databases to your workspace.

This chapter covers some specific topics of interest to the system administrator:

- Administering from a Web browser
- User profiles
- Housekeeping
- Removing fax requests
- Backup and recovery
- Priorities
- Starting and stopping services
- Enabling and disabling ports
- Miscellaneous tips
- Domino for AS/400 QMUs and QMRs
- Changing type of Administration (combined to separate or separate to combined)
- Maintaining the FxD Windows Services System

5.1 Administering from a Web browser

Whether you are using combined or separate database administration, you can perform the following FxD administrative tasks through a Web browser:

- Edit server settings, user profile settings, class of service settings, and telephone number translation rules
- View the Fax for Domino Log
- View the Fax for Domino Spool Mailbox

You can't set up Fax for Domino using the Web browser client. If you try to, you'll get the message shown in Figure 51 on page 64.

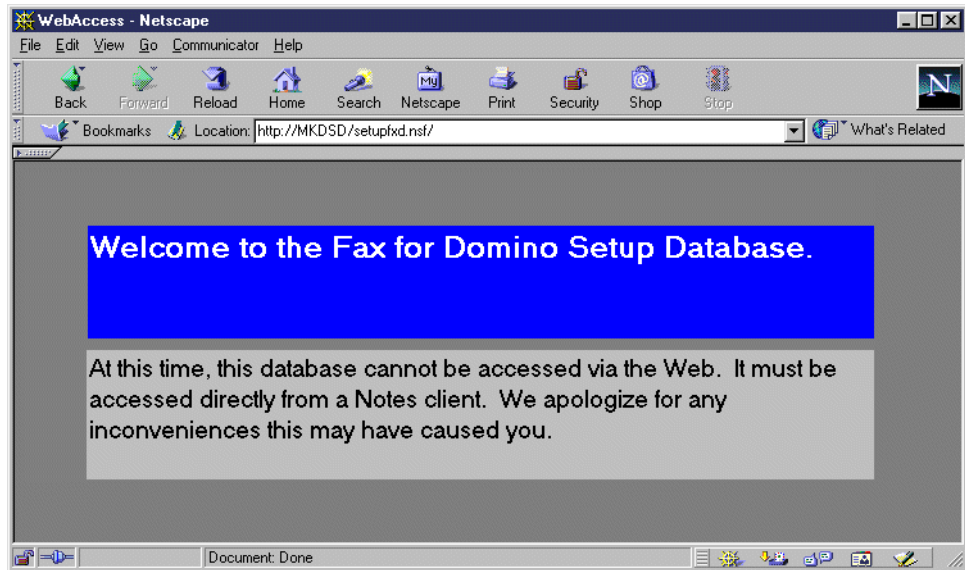


Figure 51. Setup from a Web browser

To access a database from a Web browser, follow these steps:

1. Configure the fax server for HTTP access. Refer to Domino for AS/400 documentation for instructions.
2. In your Web browser, type the name of the fax server and HTTP port used in the Location bar and press Enter. The page shown in Figure 52 appears.
3. Choose the database you want to work with and open it.

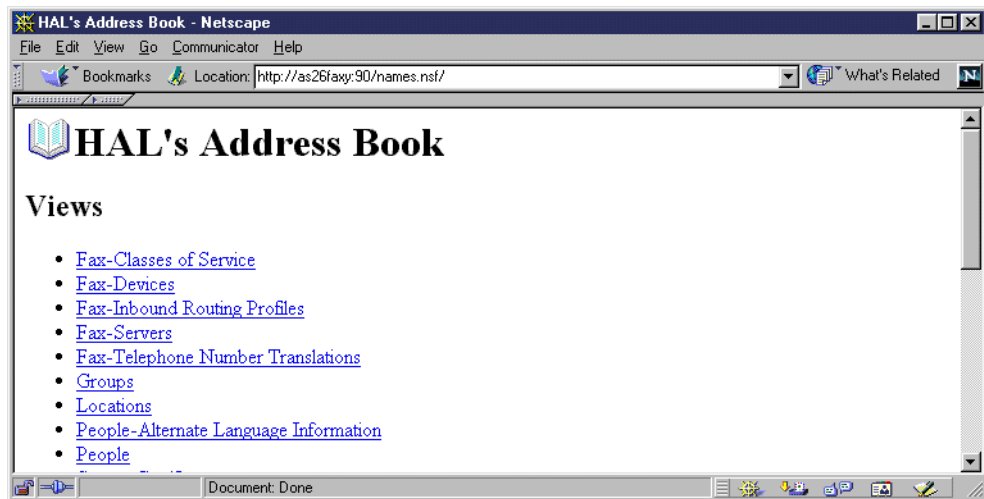


Figure 52. Address Book from Web browser

5.2 User profiles

Every user may have their individual fax settings defined. If you are using combined administration, this is kept in the Person document in the Domino Directory. If you are using separate administration, it is in a User Profile document in the FxD administration database. If you are using separate

administration, you do not have to create a user profile for a user to be able to use Fax for Domino. Default settings from a default user profile can be used instead.

User profile (or Person) settings define how FxD handles each individual user's outgoing and incoming faxes. The user profile settings consist of the class of service, cost code, cover page settings, and settings for receiving incoming faxes.

When you install FxD with combined administration, a Person document, called DefaultFxDUser, is created in the Public Address Book (Figure 53). When you install FxD with separate database administration, the user profile for DefaultFxDUser is created in the Fax for Domino Administration database. A new user is not registered in your Domino server, because the DefaultFxDUser doesn't have a mail file or an ID file.

DefaultFxDUser supplies default user profile settings to the server when no individual user profile settings have been created for a user. You can edit the document to change these default values. Remember that you must set the value for Deliver faxes to: to ensure that inbound faxes will be delivered to someone. They cannot be delivered to DefaultFxDUser, since this user does not have a mail file.

Figure 53. Default user

Note

The display in Figure 53 is from a combined administration implementation. The same information in a separate administration implementation is presented in a different form but includes the same fields.

For any user who needs values other than those in DefaultFxDUser, you can specify the same fields shown in Figure 53 but in individual Person or User Profile documents. The values for Default FxDUser will be used when individual users don't override the values, either by having values in their individual Person documents or user profiles or by setting fax options by using the Fax Options button.

Users listed in the Owners field of the Person document or the User Profile document may edit all their user profile settings except the class of service, cost code, routing method, routing number, and whom FxD notifies when an inbound fax was routed to the user.

The user name in an individual User Profile document should match a person name in the Public Address Book. One exception to this rule is a user profile used to route incoming faxes from a remote CSID number, since you may use a company name for this. You cannot use a group name for a User Profile document.

Note

While writing this redbook, we found that local POP3, AS/400, and remote SMTP users can use the FxD server to send faxes. These users will use the settings for DefaultFxDUser settings because, by default, there is no user profile for this user. You will see an error in the FxD log indicating a minor error, such as: Admin reported error when getting user profile document for JMIDDLE?AS26@as26.itsoroch.ibm.com.

When using separate administration, you can use this log information to identify what user profile FxD is looking for and provide that information in a User Profile document. For example, if the POP3 user's address is mjones@acompany.com, you create a user profile document called mjones@acompany.com. If the POP3 user's address is Mary Jones <mjones@acompany.com>, you create a user profile document called Mary Jones <mjones@acompany.com>.

We could not determine how to provide the same information for combined administration. Be aware that the support of SMTP by FxD is not an official use of the product. More information about SMTP faxing is in 9.7, "Broadening the reach" on page 160.

Specify the DefaultFxDUser settings so that it meets the needs of most of the people in your organization. You can edit the user profile settings in the users' Person documents if their requirements are different from the majority of users. For example, you can assign a particular user a class of service that will send faxes at a higher priority than is allowed to other people in your organization.

The user profile settings consist of the class of service, cost code, cover page settings, and settings for receiving incoming faxes:

- **Class of service:** In the user profile, you can define the name of the class of service to be used by this user. Classes of service are separate documents that define the characteristics of faxes being sent, such as resolution, whether a cover page should be sent, and so on.

- **Cost code:** For information on the use of cost codes, see 7.6, “Cost codes” on page 139.
 - **Cover page settings:** The following items are included:
 - Name of the sender as it should appear on the cover page.
 - Name of the cover page form used for faxes sent by this user.
For information on how to tailor this form, see 7.1, “Fax cover page” on page 115.
 - Any cover page message.
 - Company name and address.
 - Sender's e-mail addresses.
 - **Receive settings:** How the user receives faxes are defined by the following criteria:
 - Phone number format for routing faxes to the user.
 - Mail address to which FxD sends incoming faxes.
 - Mail address to which FxD sends notification when incoming faxes are routed to the user.
 - File format in which FxD presents incoming faxes.
- Information about inbound fax routing is found in 7.4, “Routing” on page 131.

There can only be one default user for each fax server.

5.3 Housekeeping

The faxing process first detaches any attachments to temporary files in the integrated file system (IFS) on the AS/400 system. Then, the fax requests are sent to the FxD Windows Services System. Once on the FxD Windows Services System, the attachments are detached to temporary files. The cover sheet, fax body, and attachments are now all converted to TIFF format and sent back to the AS/400 system for the actual faxing.

When this process works correctly, all temporary files disappear after the fax has been sent. Occasionally, in error situations, some or all temporary files may remain in the FxD Windows Services System and AS/400 IFS temporary directory. They may have to be deleted manually.

In addition, FxD continually updates the Fax for Domino Log database (nfxlog.nsf) and creates new records as it processes a fax request. Fax for Domino can record all errors and events that occur or record only major errors and events depending on the logging configuration you select in the fax server configuration document. All entries remain in the Log database until you remove them. In addition, it is possible to log FxD entries in the Notes Log database of your Domino for AS/400 server. The size of the Fax for Domino Log and the Notes Log database grow as FxD operates.

To free up hard disk space on the AS/400 system, you should periodically delete old entries from the databases you configured for Fax for Domino logging.

5.3.1 AS/400

Fax for Domino for AS/400 uses the following AS/400 IFS directories for temporary files:

- /QIBM/UserData/LOTUS/FAX/TMP
- /QIBM/UserData/LOTUS/FAX/TMP/servername

Here, *servername* is replaced by your FxD server name.

The /QIBM/UserData/LOTUS/FAX/TMP directory is used for all FxD servers running on the same AS/400 system. Therefore, you should not delete any files other than those associated with the fax job you are going to delete.

Note

Before you delete any files from the AS/400 IFS, you should stop FxD from running on the AS/400 system. For details about stopping FxD, see 5.7.1.2, “Stopping” on page 73.

You may see files in the /QIBM/UserData/LOTUS/FAX/TMP directory with names, such as nxxxxxxx.TIF and zxxxxxxx.flx. These are temporary files used by Fax for Domino and normally should not be deleted.

You may also see files in this directory with names that start with NFX, and files in /QIBM/UserData/Lotus/FAX/TMP/servername with names similar to FCxxxxxx.TIF and Flxxxxxx.TIF. FC files are cover pages, and FI files are the fax body. This group of files are associated with fax conversions and in the normal course of events, should be automatically deleted when the fax is sent or when the request fails.

In 5.4, “Removing fax requests” on page 70, we explain how to remove a fax request from the Spool Mailbox database. This involves deleting the specific files that you know are associated with a particular fax being sent. If you have removed a request and not performed the correct associated cleanup, these files will remain in the directory. If you don’t know what fax these files are associated with, you should only delete them if FxD is stopped on all Domino servers using this FxD Windows Services System and if there are no outstanding requests in the Spool Mailbox database.

5.3.2 Windows NT

The following directories are used by the FxD Windows Services System. They are under the Notes directory where you installed the Notes Client (C:\notes\data\ is the default for R4.6):

- C:\notes\data\Nfxtemp\servername\
- C:\notes\data\work

Here, *servername* is replaced by your FxD server name.

The temporary files located on the FxD Windows Services System will eventually be deleted by the system when the Fax for Domino Conversion Service is restarted. Since this may not occur very often, you can choose to manually delete the temporary files located on the FxD Windows Services System as well. See

5.4, “Removing fax requests” on page 70, for information on doing this when removing a fax being processed.

If you receive an error message about “unknown popup window”, an image of the “unknown popup window” is stored in C:\notes\data\work. Therefore, you should check this directory too.

5.3.3 Log database (nfxlog.nsf)

With Domino databases, you can select two ways to clean them up:

- Select documents and delete them manually

The benefit is that you can keep error records but delete request records if you prefer.

- Set the Replica option to delete old documents by date

The benefit is that you can delete them automatically.

After you delete documents from Domino databases, you should compact the database because the database is still using disk space where you deleted the records. If you use an R4.6x server, you have to stop the Fax for Domino server before compacting the database.

The log consists of two views: Requests and Errors.

5.3.3.1 Deleting log documents manually

You may have to update the database Access Control List (ACL) first to allow documents to be deleted:

- To delete a request from the Log, follow this process:
 1. Open the Fax for Domino Log database.
 2. Choose **View->Requests->(name of view)**.
 3. Select the fax record or records you want to delete.
 4. Choose **Edit->Clear** or press Delete.
 5. Choose **View-> Refresh** or press F9 to update the view.
- To delete an error from the Log, complete these steps:
 1. Open the Fax for Domino Log database.
 2. Choose **View-> Errors->(name of view)**.
 3. Select the error you want to delete.
 4. Choose **Edit->Clear** or press Delete.
 5. Choose **View->Refresh** or press F9 to update the view.

5.3.3.2 Deleting log documents automatically

Perform the following to delete log documents automatically:

1. Select the **Fax for Domino Log** database.
2. If you use an R5 Notes client, right-click and select **Replication->Settings....**
If you use an R4.6 Notes client, right-click and select **Replication** and then **Settings....**
3. Select **Remove documents not modified in the last:** and specify xx days (Figure 54 on page 70).
4. Click **OK**.

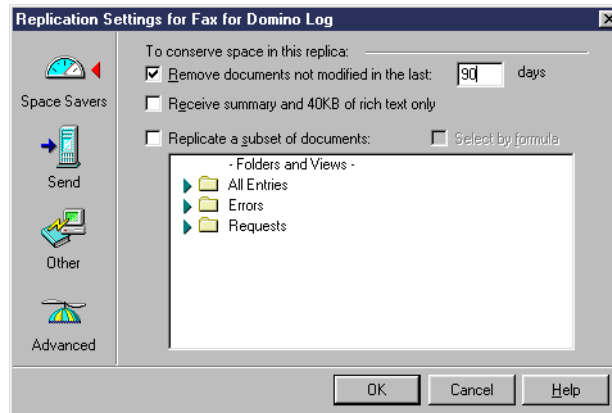


Figure 54. Replication Settings

5.4 Removing fax requests

If a user has submitted a fax request and has decided that it should not have been sent, the user has to ask the administrator to remove it. It is not a good idea for the administrator to just delete the request from the Spool Mailbox because there are a number of temporary files that need to be deleted as well.

You may need to update the ACL of the database to allow deletion of documents.

To delete a fax request, perform these steps:

1. Shutdown FxD.
2. Open the Fax for Domino Spool Mailbox (nfxspool.nsf) database.
3. In the Fax Jobs view, open the fax job document of the fax job you want to delete.
4. Write down the names of the temporary files associated with the fax job or print the screen.

Some of the temporary files are located on the FxD Windows Services System and have names similar to

c:\notes\data\NFXTEMP\server_name\NFXxxxxx.txt.

Other temporary files are located on the AS/400 system and have names similar to:

- /QIBM/USERDATA/LOTUS/FAX/TMP/NFXxxxxx.txt
- /QIBM/USERDATA/LOTUS/FAX/TMP/server_name/Flxxxxxx.TIF
- /QIBM/USERDATA/LOTUS/FAX/TMP/server_name/FCxxxxxx.TIF

Some of the temporary file names are separated with a semi-colon (;). Sometimes there is no separator between the names.

5. In the Fax Jobs view of the Fax for Domino Spool Mailbox database, select the job you want to delete.
6. Choose **Edit->Clear** or press Delete.
7. Choose **View->Refresh** or press F9 to update the view.

8. Check the AS/400 system for the temporary files associated with the fax job and delete them if they exist.
9. Restart FxD.

The temporary files located on the AS/400 system are never deleted by the system when you manually delete a fax job. Therefore, you must delete them manually. The temporary files located on the FxD Windows Services System will eventually be deleted by the system when the Fax for Domino Conversion Service is restarted. Since this may not occur often, you can choose to manually delete the temporary files located on the FxD Windows Services System as well.

5.5 Backup and recovery

You don't need to do a full backup of the FxD Windows Services System because there are mostly only temporary files involved. The configuration information on the AS/400 will be saved together with your regular Domino server backup.

There are two databases that FxD Windows Services System uses on the Windows NT local hard drive: the Convert Server Config (nfxconv.nsf) and Convert Server Log (nfxcnvlg.nsf). You should back up the Convert Server Config database when you change it. You may choose to do this by replicating it to the AS/400 Domino server. You should also consider saving a copy of the ID file for the Notes user on the FxD Windows Services System.

You can back up the Fax for Domino for AS/400 code by using the Save Licensed Program (SAVLICPGM) command to save the Program 5733-FXD. It will also be saved as part of any total system save that you do.

Remember that your Domino server must be up and Fax for Domino active for faxes to be sent or received. This means that if your AS/400 system is put into a restricted state every night for your system backups, you will not be able to send or receive faxes during that time. For other ways to do AS/400 backups, see *OS/400 Backup and Recovery*, SC41-5304.

For information about alternatives for backing up Domino for AS/400 servers, see *Lotus Domino for AS/400 R5: Implementation*, SG24-5592 (Domino R5). For information about the new online backups for Domino for AS/400, see the Web site at: <http://www.as400.ibm.com/service/brms/domino.htm>

5.6 Priorities

Fax prioritization enables both you and users to determine how quickly a fax is routed through FxD. You define the user's default fax priority and whether the user can change that default priority as part of the class of service you designate in the User Profile document assigned to the user. When users send a fax, they can specify its priority in the Notes Memo Fax Options if you have granted them permission to change their default fax priority.

The following priorities are available in FxD:

- **IMMEDIATE:** This priority can only be assigned in a Class of Service document by you, the administrator. Users cannot assign this priority to a fax

with the Fax Options on the Notes Memo. Faxes at Immediate priority go to the front of all fax queues and are routed as soon as a fax port is available.

- HIGH
- MEDIUM: This is the default priority when no other priority is specified.
- LOW

Faxes are routed in first in, first out order within each of these priority queues. If a fax is waiting in any queue for more than four hours, FxD bumps the fax up one priority level in order to move it out of the queue and then logs a minor event. The four-hour aging value cannot be modified.

Once a fax has been submitted, the priority cannot be changed by a user.

If the user schedules a transmission date and time for the fax, the fax does not enter the queue at its assigned priority until the scheduled time.

5.7 Starting and stopping services

As you know, there are two major components in your FxD implementation:

- FxD server on the Domino for AS/400 server
- FxD Windows Services System

Both need to be active for faxes to be sent and received. There are times when you need to stop one or the other, and in this section, we describe when that might be and how you should do it to minimize disruption.

Starting FxD was briefly described in 4.7, “Starting Fax for Domino for AS/400” on page 58, and stopping in 4.8, “Stopping Fax for Domino for AS/400” on page 60. Here, we go into more detail on the circumstances that might require the restarting of Fax for Domino Windows Services and Fax for Domino.

5.7.1 FxD server on the Domino for AS/400 server

To start and stop Fax for Domino, complete the procedures in the following sections.

5.7.1.1 Starting

When you install and configure FxD for AS/400, the server notes.ini file is updated so that FxD will start automatically whenever you start the Domino server. If you need to start FxD manually, complete the following steps:

1. Start a Domino console session by entering the following from any AS/400 command line:

```
WRKDOMCSL ACME1
```

Here, *ACME1* is the name of your Domino server.

When the console session is active, enter the following command:

```
load fax
```

2. Close the console session.

5.7.1.2 Stopping

When it is necessary to stop FxD, you can stop the Fax server by following these steps:

1. Start a Domino console session by entering the following command from any AS/400 command line:

```
WRKDOMCSL ACME1
```

Here, *ACME1* is the name of your Domino server.

2. When the console session is active, enter the following command:

```
tell fax quit
```

3. Close the console session.

Whether you stop FxD by using `tell fax quit` or whether the Domino server is ended, the effect on faxes in progress is the same:

- Outbound faxes will complete the transmission of the current page. If that is not the complete fax, the recipient's fax machine should indicate incomplete transmission. When FxD starts up again, the entire fax will be transmitted, including pages already sent.
- For inbound faxes, the action will depend on the `FaxRCVShutdownWait` entry in `Notes.ini`. If it is 0, and if a fax is being received when FxD is shut down, it will shut down as soon as it is done with the current page. If it is 1, it will wait until the entire fax has been received before shutting down.

5.7.2 FxD Windows Services

To start and stop FxD Windows Services, perform the procedures in the following sections.

5.7.2.1 Starting

When the FxD Windows Services System is booted up, the FxD Windows Services will start automatically as shown in Figure 55. If you have manually stopped them for problem determination or administration reasons, you can start the services by following these steps:

1. Open the Windows Control Panel (**Start->Settings->Control Panel**).
2. Double-click the **Services** icon.
3. Select **Fax for Domino Conversion Service**.
4. Click **Start**.

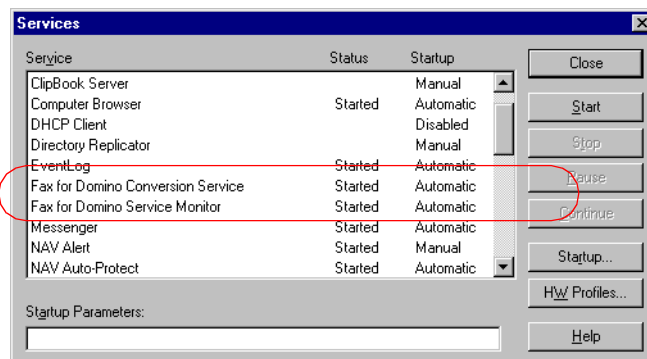


Figure 55. Services on FxD Windows Services System

5.7.2.2 Stopping

Ideally, you should stop Fax for Domino on the Domino server before stopping FxD Windows Services. You are going to have to restart Fax for Domino to re-establish the communication between the two systems anyway.

To stop the Fax for Domino Windows Services, follow these steps:

1. Open the Windows Control Panel (**Start->Settings->Control Panel**).
2. Double-click the **Services** icon.
3. Select **Fax for Domino Conversion Service**.
4. Click **Stop**.

Note

You should stop the FxD server on the Domino server before stopping FxD Windows Services to prevent new requests from starting.

5.7.3 Why you may need to restart services

The following lists some situations where you need to consider whether to restart one or both of these services:

- The AS/400 with FxD installed is IPLed or taken down to a restricted state and brought back up. This could happen as part of a complete system save.

In this situation, your Domino for AS/400 server will also be restarted. Your notes.ini file will probably have the task Fax included in the ServerTasks line so that FxD will start automatically when the server starts. You will not have to do anything special.

You do not have to touch the FxD Windows Services System.

- The Domino server with FxD is stopped and restarted.

This will be the same as the previous situation.

- Something is changed in your fax device configuration. For example, you changed the fax banner (header) or turned DTMF on or off.

You need to stop and restart Fax for Domino for AS/400.

- You edit the Convert Server Config database on the FxD Windows Services System to tailor an application.

You need to restart the FxD Windows Services. Therefore, you also need to first stop and restart FxD on each Domino for AS/400 server (the Fax server not the complete Domino server) that uses this FxD Windows Services System. The correct order to perform this is as follows:

1. Stop FxD for AS/400 on each Domino fax server that uses this Fax for Domino Conversion Service.
2. Stop the Fax for Domino Conversion Service.
3. Start Fax for Domino Conversion Service.
4. Start FxD for AS/400 for each Domino fax server that you had previously ended.

- You need to apply a fix to the FxD Windows Services software. To do this, follow these steps:

1. Stop FxD for AS/400 on each Domino fax server that uses this Fax for Domino Conversion Service.

2. Stop the Fax for Domino Conversion Service.

3. Apply the fix.

4. Start Fax for Domino Conversion Service.

5. Start FxD for AS/400 for each Domino fax server that you had previously ended.

- Fax settings are changed in a Person document (for combined administration) or the Administration database (for separate administration).

You don't need to do anything. FxD automatically checks for, and incorporates, changes to fax server settings, user profile settings, Telephone Number Translation documents, and Class of Service documents every 15 minutes. You can stop and restart FxD if you want the changes to take effect immediately.

- The FxD Windows Services System is rebooted or powered down and then powered on.

This may occur for many reasons. If this is a planned occurrence, you should end all FxD for AS/400 servers that use this FxD Windows Services System, as well as the Fax for Domino Conversion Service, before the reboot or power down.

After the FxD Windows Services System has been rebooted or powered on, and the Fax for Domino Conversion Service has been restarted, you need to restart all FxD for AS/400 servers that use this FxD Windows Services System for fax conversions.

- You want to log Fax for Domino Conversion Service debug information.

1. Stop FxD for AS/400 on each Domino fax server that uses this Fax for Domino Conversion Service.

2. Stop the Fax for Domino Conversion Service.

3. Start Fax for Domino Conversion Service with the `-debug` option specified in the Startup Parameters: field.

4. Start FxD for AS/400 on each Domino fax server that you had previously ended.

The debug information is located in C:\QFXrouter.log.

To turn debug logging off, follow these steps:

1. Stop FxD for AS/400 on each Domino fax server that uses this Fax for Domino Conversion Service.

2. Stop the Fax for Domino Conversion Service.

3. Start Fax for Domino Conversion Service without specifying the `-debug` option in the Startup Parameters: field.

4. Start FxD for AS/400 on each Domino fax server that you had previously ended.

- The Fax for Domino Conversion Service encountered an error that caused it to end prematurely.

The Fax for Domino Conversion Service is automatically restarted. However, any FxD for AS/400 that uses this service for fax conversions must be restarted.

5.8 Enabling and disabling ports

You may define all 8-ports on your 2761, but then decide that you don't have the telephone lines to support them. You can either remove the configuration for that port by deleting the entry, or you can disable it by editing the fax device settings to disable Transmit and Receive.

As you see in Figure 56, you can define ports to be enabled or disabled for sending and receiving separately.

You have to restart Fax for Domino on your AS/400 system to change any setting you make in fax device settings. This includes deleting them.

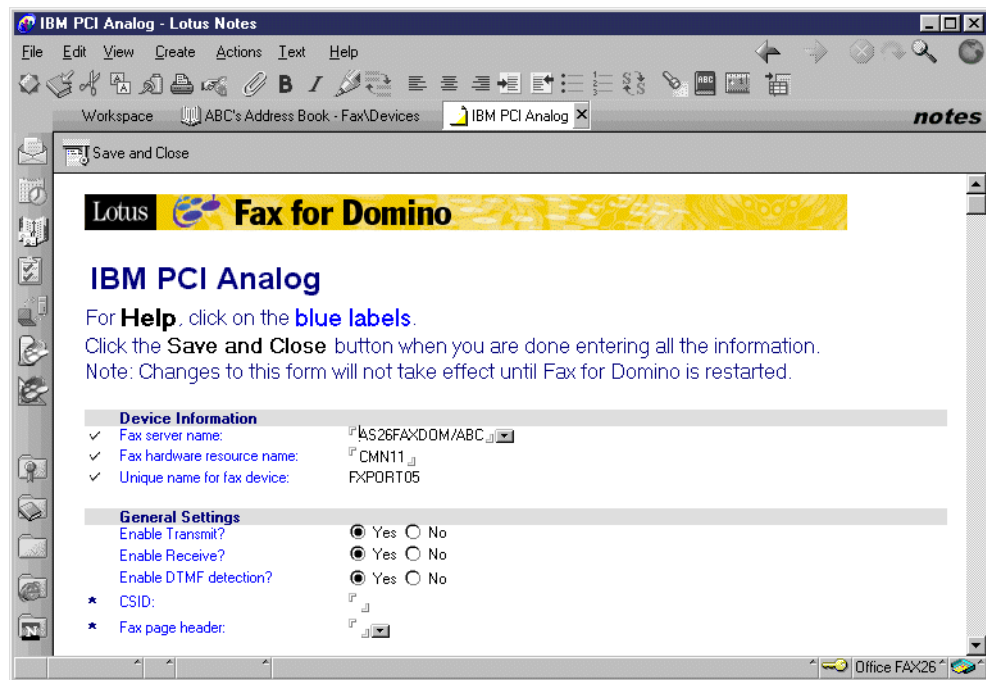


Figure 56. Fax device settings for PCI Analog

After you first create fax device settings and start Fax for Domino on your AS/400, Fax for Domino creates line descriptions, controller descriptions, and device descriptions automatically. However, Fax for Domino does not delete them automatically if you delete the fax device settings. The line description remains in Connect Pending status.

5.9 Miscellaneous tips

This section covers some miscellaneous tips for FxD.

5.9.1 Time

When FxD logs the completed transactions, it records the time that the transaction was received in the Fax for Domino Spool database. Since the mail database resides on a Notes server, FxD records the time on that server's clock. If the clock on the server and the clock on the FxD workstation are not synchronized, then an inaccurate duration of processing time will be calculated. For example, the processing time field will be blank when the "Received by FxD at" field has a later time than the "Transmission Start Time".

5.9.2 Drafts of stationery

If you are using stationery to send e-mail with an R4.6 client, do not use the Fax To: field to send a fax. Use the To: field to address your Fax recipients and Send and File button to send your fax. If you use the Fax to: field or To: field and Send button, your stationery may be deleted when you send a fax.

5.9.3 Delayed sending

If you have users in different time zones, they can perform delayed sending using their own time zone information. However, if the reason for delayed sending is to take advantage of lower priced long-distance rates, they will have to make mental adjustments to any delayed sending they want to do. You may want to provide some guidance as to the appropriate times to use.

Suppose the client is set to Pacific Time, and the server is on Central Time (two hours ahead of Pacific Time). If cheaper long distance rates start at 6 p.m. CST, then you should enter 4 p.m. as the delayed time when sending from the Pacific Time client.

If you are authorized to look at the Fax Entry Information in the Spool Mailbox from the Pacific Time client, the scheduled time for the fax to be sent will display as 4 p.m. A colleague with authority in Chicago looking at the same information will see it as 6 p.m.

5.10 Considerations when installing Domino for AS/400 QMUs and QMRs

When installing a new Domino for AS/400 QMU or QMR, please read the release notes. It is possible that these QMUs or QMRs replace your existing Notes templates with new templates.

Why is this important for Fax for Domino? Fax for Domino adds additional subforms to the pernames.ntf, pubnames.ntf, and to the mail template files. When they are replaced, and the design process refreshes the databases based on these templates, the additional subforms are removed from the databases.

This means, for example, that the Fax to: field and the Fax options button are no longer visible in a Notes memo. Also, if you are using combined administration, you will not see your Fax configuration view.

To update your new templates with the Fax for Domino subforms, open the Fax for Domino Setup database and run setup with the values that are displayed. After that, use the `LOAD DESIGN` command on the Domino console to add the subforms back to your databases.

Note

When you upgrade to a new Notes client version, the `pernames.ntf` file (the base for the local `names.nsf` file) can also be replaced. Be aware that you have to send a `pernames.ntf` file that includes the Fax for Domino subforms to your users after upgrading so that your users can refresh the design of their local `names.nsf` file without losing the `$LotusFaxLocation` subform.

5.11 Changing the type of administration

In the following sections, we describe how you can change your administration type after having configured Fax for Domino. In either case (combined to separate, or separate to combined), there is a great deal of manual re-entry of data required. For that reason, we urge you to plan your original decision carefully.

5.11.1 Moving from combined to separate administration

To change from combined administration (using the Domino Directory) to separate administration (using the database `nfxadmin.nsf`), perform the following steps:

1. End FxD.
2. Make a copy of `names.nsf` so that you have access to the data in it later, if necessary. If you use the Notes client to make the copy, you can do it while the server is active.
3. Remove the following subforms, views, and forms related to FxD from `names.nsf` (these steps require Designer Client):
 - Remove the following views:
 - Fax\Classes of Service
 - Fax\Devices
 - Fax\Inbound Routing Profiles
 - Fax\Telephone Number Translations
 - Remove the following forms:
 - Class of Service
 - IBM Analog
 - IBM PCI Analog
 - Telephone Number Translation
 - Remove the following subforms:
 - `$LotusFaxBanner`
 - `$LotusFaxCommonDeviceInfoAS400`
 - `$LotusFaxDTMFRouting400`
 - `$LotusFaxLocationSubform`
 - `$LotusFaxRetryInfoAS400`

- \$LotusFaxSingleHWSettingsAS400
- \$OptionalMessage400

- Change the following subforms:
 - \$LotusFaxPersonSubform
 - \$LotusFaxServerSubform

To change subforms, follow these steps:

- a. Open the subform.
- b. Select the twistie and delete it.
- c. Save and close it.

These subforms, views, and forms are not deleted as part of rerunning FxD setup.

4. Rerun FxD setup selecting separate administration. This updates notes.ini to change the entry \$FaxAdmin=nfxadmin.nsf and creates the necessary Administration database. It also re-adds the subforms to your mail templates, pubnames.ntf, and pernames.ntf.
5. Manually re-enter the fax user profile information, redefine the fax devices, classes of service, and so on, unless you can write a program to copy information from the original names.nsf.
6. Start FxD.

5.11.2 Moving from separate to combined administration

To change from to separate administration using the database nfxadmin.nsf to combined administration using the Domino Directory, perform the following steps:

1. End FxD.
2. Rerun FxD setup selecting combined administration. This modifies the \$FaxAdmin= entry in notes.ini.
3. Make sure you enter the Fax Administrator name in the server configuration.
4. Manually re-enter the data and redefine the Fax devices unless you can write a program to copy information from the original NFXADMIN.NSF.
5. Start FxD.

5.12 Maintaining the FxD Windows Services System

Once the FxD Windows Services software is installed and active on the Windows NT server or workstation, you may need to perform maintenance on the Windows NT server or workstation.

Before upgrading or reinstalling the Notes client, stop the FxD Windows Services.

If you reinstall the Notes client and choose to install it in a different directory, you must un-install and then reinstall FxD Windows Services.

Before applying any fixes to the FxD Windows Services software, stop the FxD Windows Services. If fixes are made available, information will be posted at the FxD for AS/400 Web site: <http://www.as400.ibm.com/domino/related/fxd/index.htm>

Potentially, a fix to the FxD Windows Services software could require a companion fix to the FxD software running on the Domino server. If the version

level of the FxD Windows Services software becomes incompatible with Fax for Domino for AS/400, a message is logged to the Fax for Domino Log database (nfxlog.nsf).

Remember, after you start the FxD Windows Services after successfully applying a fix, you need to restart any FxD for AS/400 servers that use this service for fax conversions.

Chapter 6. Using Fax for Domino: A user's perspective

As described in Chapter 1, "Introduction to Fax for Domino 4.1 for AS/400" on page 1, Fax for Domino for AS/400 from Lotus enables Notes users to send and receive faxes directly from their Notes client or to send faxes directly from within any Microsoft Windows application. When reading this chapter, put yourself in the chair of an end-user, wanting to know how to use FxD. We discuss the use of a Lotus Notes client, a Web mail browser, and a browser POP3 client. The following topics are covered:

- Sending faxes
- Sending attachments
- Using the Lotus Print to Fax driver (Lotus Notes client only)
- Receiving faxes
- Printing faxes

Table 3 quickly summarizes the major fax-related functions available to a Lotus Notes user, a Web mail user, and a POP3 user. Additional information regarding each type of user and the various functions available are discussed throughout this chapter.

Table 3. Comparison of key functions for different users

Function	Lotus Notes client	Web mail user	POP3 user
Send fax	yes	yes	yes
Receive fax	yes	yes	yes
Print fax	yes	yes	yes
Fax to: field available	yes ¹	no	no
Fax options button	yes	no	no
Lotus Print to Fax available	yes	no	no
1. Fax to: field is available if you are using mail45.ntf, mail46.ntf, mailc46.ntf, or mail50ex.ntf templates.			

6.1 Using FxD with the Lotus Notes client

Users can easily send a fax from their Lotus Notes client. It is merely a matter of the user entering the appropriate address when completing either a Fax to: field or entering an address comprised of the fax number and domain when completing the To:, cc:, or bcc: fields. The Fax to: field is available if you are using mail45.ntf, mail46.ntf, mailc46.ntf, or mail50ex.ntf mail templates.

If the Fax to: field is not available to users, the To:, cc:, or bcc: fields can be used as long as the address format used is name@faxnumber@faxdomain. The address format of name@faxdomain may also be used if the recipient's fax number is listed in the Domino Directory or in your Personal Address Book. This also applies both when you send a Notes (fax) memo from the Web interface and when you are using an R5 mail template prior to mail50ex.ntf. This template was released with Domino R5.0.3.

Note

The Lotus Notes client version 5.0.2b International, with the mail50ex.ntf Mail template, was used for this chapter.

There are several steps that a user must do before sending a fax using FxD.

1. Set up the “Fax domain” in your Location document. Normally, your Domino administrator notifies you on how this is done in your environment. This could involve adding a subform to your Personal Address Book template (pernames.ntf) or refreshing the design of your Personal Address Book using the updated template on the server. As a result, a Fax tab with a Fax domain field is added to your Location document. Each user must ensure that the Fax domain field contains their site’s appropriate fax domain name. In our example, the Fax domain name is “Fax” as shown in Figure 57. Additional details for the Domino Administrator on how to automate this process for users are included in 4.6.1, “Updating user Personal Address Books with fax domain information” on page 55.

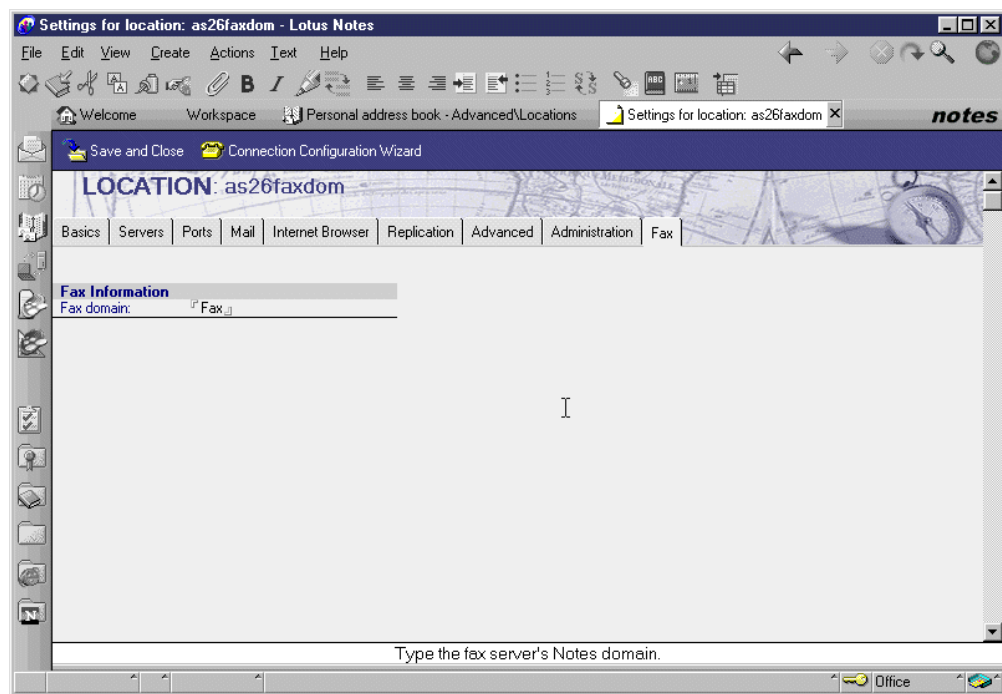


Figure 57. Fax tab in Location document of R5 Lotus Notes client

2. Ensure that the office and home fax phone numbers are present on all fax recipients’ entries in your Personal Address Book or in their Person documents in the Domino Directory (Public Address Book). Otherwise, you have to include their fax phone number when you send the fax memo. To add an entry in your Personal Address Book, click the **New Contact** icon on the desktop as shown in Figure 58.

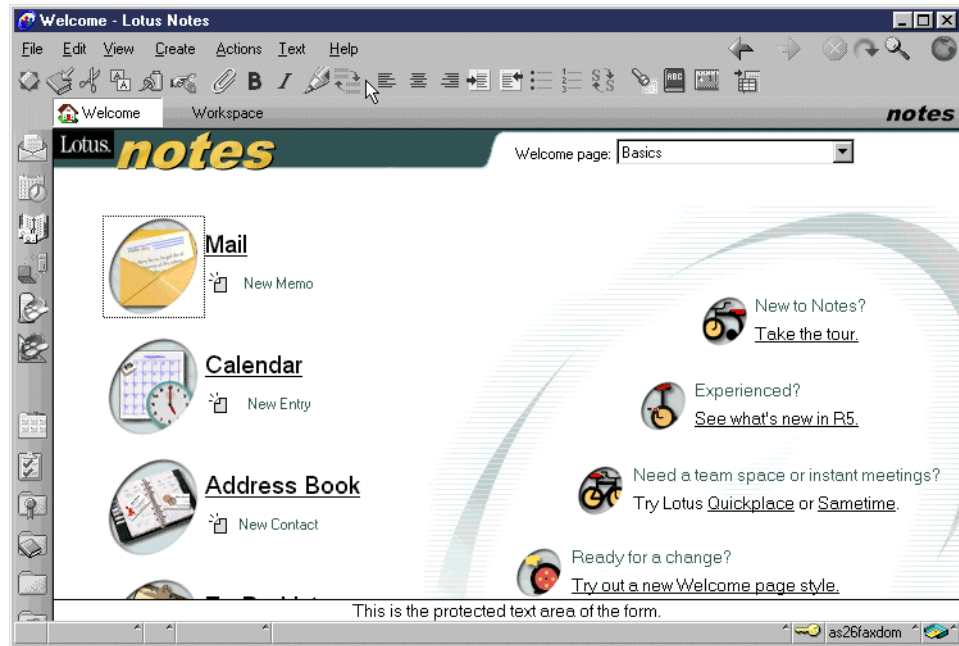


Figure 58. New contact icon on desktop

Enter Jane Doe's contact information, including her fax number, as depicted in Figure 59. Click the tabs along the top to complete any other desired fields such as a business or home address. Click **Save and Close** when finished.

Name		Phones	
First name:	Jane	Office phone:	507-123-4567
Middle name:		Office fax:	5-7068
Last name:	Doe	Cell phone:	
Title:	Ms.	Home phone:	
Suffix:		Home fax:	
		Pager:	
Business		Email and Web Page	
Company:	ABC	eMail address:	
Job title:	Remote Office Manager	Web page:	

Figure 59. Personal address book entry for Jane Doe

Figure 60 on page 84 shows Pete's personal address book entry for Jane Doe, the remote office manager at ABC.

Note

In our examples, the format of the fax number is five digits due to our lab environment. A more likely number for an external fax machine would contain more digits, such as 9-1-507-123-5555 or 9-01144-898-123456.

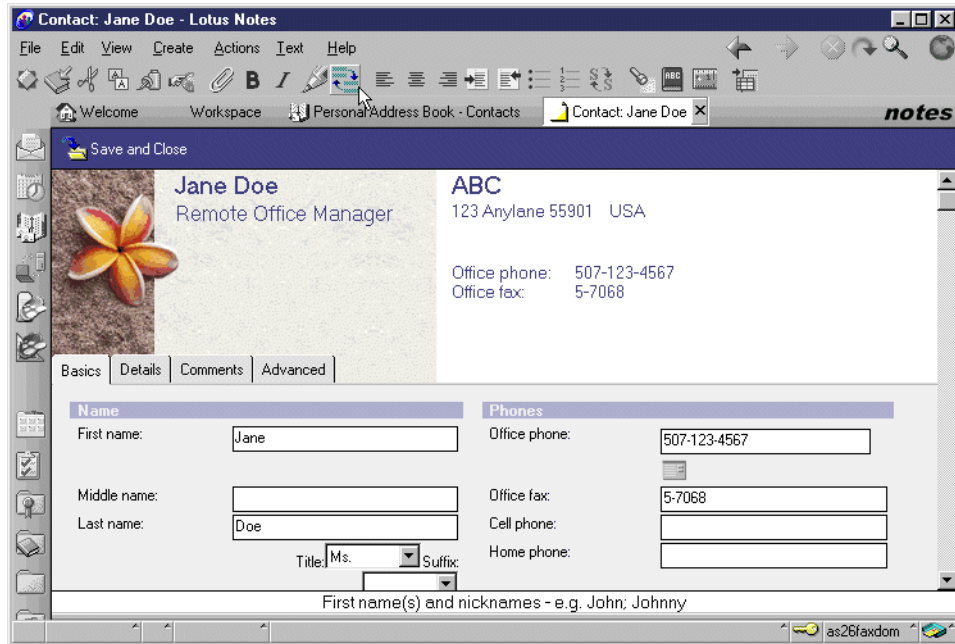


Figure 60. Personal Address Book (R5) entry

3. If your Lotus Notes client mail preference is not set to automatically save a copy of any memo you send, you may have to take action to save a copy of your fax memo before sending it.

For example, you may be using a 4.6 template and your mail preference is set to "Don't keep a copy". If you use the Fax to: field and press the Esc key (and select send only) or click on the Send button, you receive the error message No names found to send mail. However, you may be using the mail50ex.ntf mail template and are using the Fax to: field. If you press the Send button, the fax is sent. The only time a mail50ex.ntf template user receives the No names found to send mail message is if the user presses the Esc key and chooses send only.

There are several ways of ensuring that your fax memo is saved prior to sending it. The first way is to edit your Lotus Notes user preferences so that mail is always saved or that you are prompted each time you send mail. In your Lotus Notes (R5) client, select **File->Preferences>User Preferences**. Click the **Mail and News** icon and a window, as shown in Figure 61, appears. Select **Always keep a copy** or **Always prompt**. A second way is to save an individual memo by pressing the Esc key when finished, choosing **send and save a copy** and then clicking on the **OK** button. You can also select **Send and File** (to the Trash folder) if you don't want to keep it.

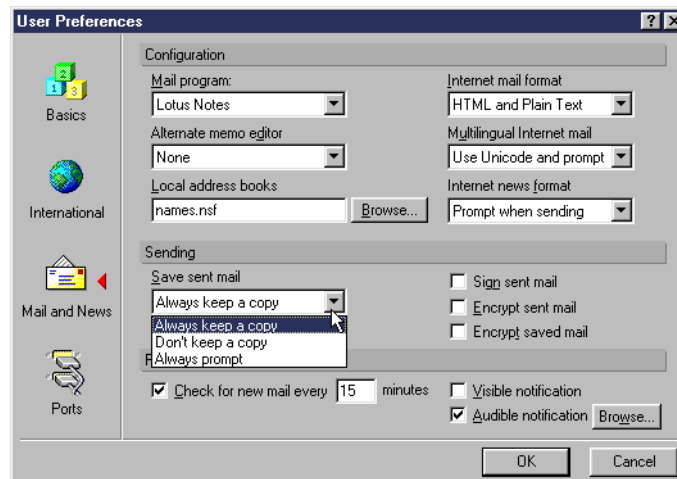


Figure 61. Setting default 'Save sent mail' preference (Lotus Notes R5)

If your mail preferences indicate “Don’t keep a copy of sent mail”, you can save each message individually when you send it by selecting the **Send and File** button or by pressing the Esc key and then selecting **Send and save a copy** as shown in Figure 62.

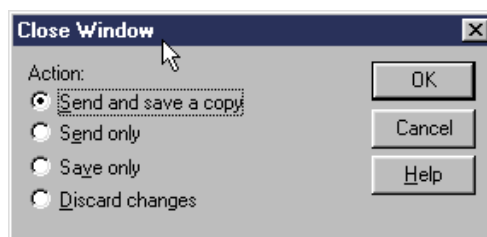


Figure 62. Saving an individual fax memo

6.1.1 Sending a fax using Lotus Notes

Note that the word Fax in the following examples (Table 4) refers to the name of the fax domain defined by our administrator. You should substitute this with the name provided to you.

Table 4. Fax addressing options

Address field	Sample value	Information
Fax to: (if available) Fax domain retrieved from Location document.	Jane Doe	Office fax number retrieved from Personal then Public Address Book else prompted. Home number will not be used.
	Jane Doe@12345	Fax sent to 12345.
	Jane Doe@home	Home fax number used from Personal then Public Address Book else prompted.
To: or cc: or bcc: Home fax option is not available	Jane Doe@Fax	Number retrieved from Personal then Public Address Book .
	Jane Doe@12345@Fax	Fax sent to 12345.

To send a fax using your Lotus Notes client, open the Notes memo form by selecting the **New Memo** button. If the Fax to: field is available, enter the name of the person or persons who should receive this memo as a fax. Remember, if a person's associated fax number has already been defined, as described in 6.1, "Using FxD with the Lotus Notes client" on page 81, a shorter address format, such as Jane Doe in the Fax to: field, or Jane Doe@Fax in the To:, cc:, or bcc: fields can be used. Otherwise, you are prompted to enter the phone number if using the Fax to: field, or you have to enter the actual phone number, such as Jane Doe@5-7068@Fax, if using the To:, cc:, or bcc: fields to send a fax. Since we are using a Lotus Notes 5.0.2b client with a mail50ex.ntf mail template, the Fax to: field is available as illustrated in Figure 63. Also shown in the cc: field in Figure 63, is the name of a Domino user (Jill Jones) who will receive this fax as an e-mail in her mailbox. In addition, an attachment has been included as shown in Figure 63.

Note

If you are using a Lotus Notes R5 mail template prior to mail50ex.ntf, the Fax to: field is *not* available, and the address for the fax recipient is entered in the To:, cc:, or bcc: fields. If you are using an mail45.ntf, mail46.ntf, mailc46.ntf, or mail50ex.ntf mail template, the Fax to: field is available regardless of the level of the Domino server.

If a fax recipient's home fax number is listed in your Personal Address book or in their Person document in the Domino Directory, the Fax to: address format is name@home. For example, if Jane's home fax number were specified in our address book, or in her Person document, then we could send a fax to her home by entering Jane Doe@home in the Fax to: field.

FxD substitutes the home number for the characters home.

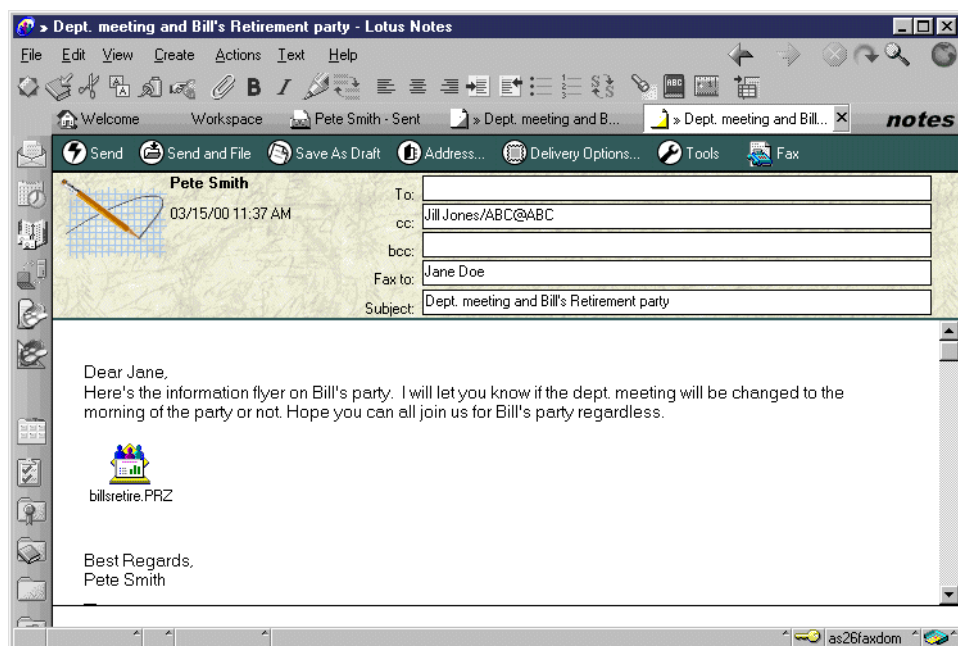


Figure 63. Sending a fax (with an attachment)

Note

When creating a new Lotus Notes memo that will be sent to a fax recipient, you may want to enlarge the font of the text being sent since the font sizes are slightly reduced when the fax is rendered.

If the new memo you are creating contains sections (twisties), prior to sending the fax, you must expand those sections or change the section properties to indicate “Auto expand when opened for reading”. If neither of these steps is taken, the sections remain collapsed on the sent fax.

In Figure 63, there is also a Fax button above the addressing area. Click the **Fax** button, and several choices are presented: Help and Options. If you were using a 4.6 client, there would be a Fax Help button and a Fax Options button instead.

Click on **Help**, and a window containing user related FxD information, like the one shown in Figure 64, appears.

Note

If you see a Security Execution Alert pop-up window regarding Lotus Fax Development when clicking the **Fax Help** option, click the **Trust Signer** button.

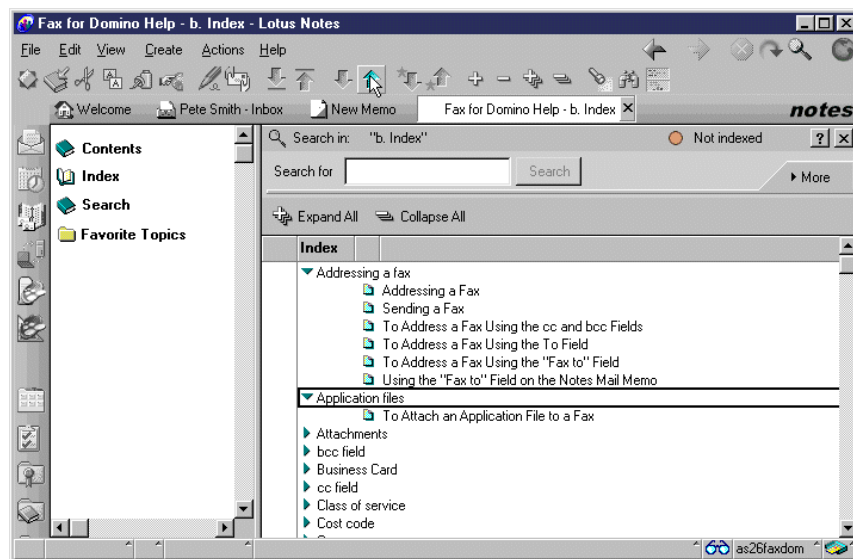


Figure 64. Fax user help information

Although you can use the default fax options as set by your administrator, you can also change Fax options for this fax by clicking the **Fax** button that you can see in Figure 63. Then, click on **Options**, and a window, as shown in Figure 65 on page 88, displays. If *no* entries are changed in the Fax Options window, FxD looks for the following settings in your personal fax settings first (refer to “User settings” on page 88) and then in the default Fax for Domino settings:

- Send a cover page
- Sender’s name
- Include all names

- Cover page form
- Cover page message
- Company name
- Address line 1
- Address line 2
- Sender's e-mail address

The sender's fax and phone numbers are obtained directly from the sender's Person document in the Domino Directory. The sender's name will be obtained from the From field of the Notes Memo if it is not found *first* in the Fax Options window, your fax settings, or the default fax settings (set by the FxD system administrator).

User settings

Depending on whether the administrator chose combined or separate administration for the Fax for Domino server, your fax settings are either stored in your Person document in the Domino Directory or in your user profile in the Fax for Domino Administration database respectively. Remember that you may not have your own user profile, as you could be using the default settings. Users listed in the Owner's field in a Person document or user profile may edit their fax settings except for the class of service, cost code, routing method, routing number, and whom FxD notifies when an inbound fax has been routed to the user. Also, your site's Domino Administrator may have taken measures to prevent users from directly accessing their Person document.

There may not be any fax settings set up for you personally. You may be using the default FxD options. Contact your administrator if you need to have personalized fax settings, and you cannot access the information yourself.

In our example, we are not making any changes to the Fax Options, so click the **Cancel** button. Any changes made in the Fax Options window apply for that fax transmission only. Changes entered here are not saved.

Figure 65. Fax options

Although we've automatically set the sent mail to be saved (as discussed in step 3 on page 84), we want to save this fax to a special folder called janedoe, so click on the **Send and File** button. A pop-up window, as shown in Figure 66, appears. Also, note that the Jane Doe entered in the Fax to: field has been translated for

you into a full address and moved to the To: field. After selecting the desired folder, click **Add** to send the fax e-mail. Figure 66 shows a grayed-out Move button because the New Memo button was used from the Sent mail folder.

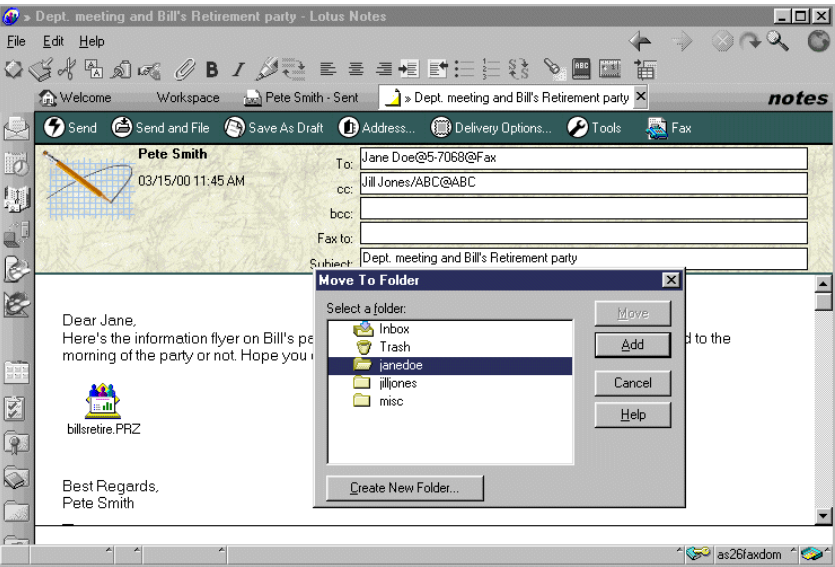


Figure 66. Send and File fax into designated folder

A notification message, like the example in Figure 67, is delivered to the sender's (Pete Smith) mail box after FxD handles the fax.

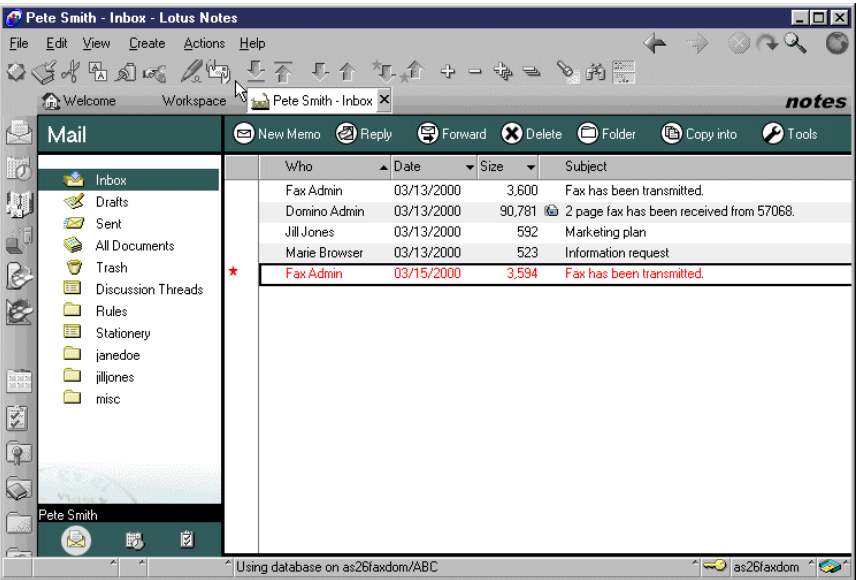


Figure 67. Notification message

The content of the notification message sent to Pete is shown in Figure 68 on page 90.

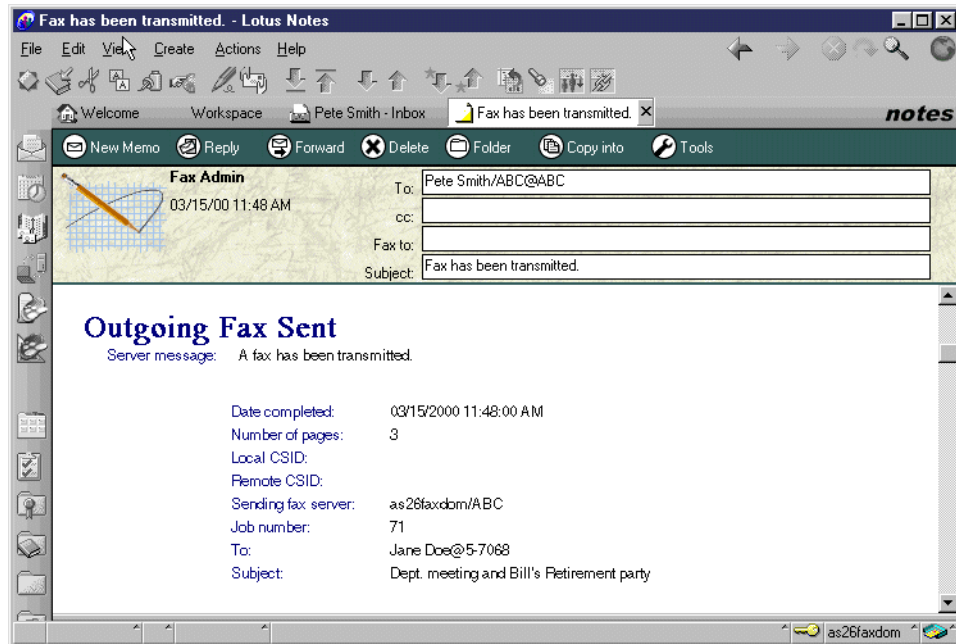


Figure 68. Content of notification message

Note

Faxes may also be sent to a group. If you are using the *Fax to:* field, the group may exist in either your Personal Address Book or in the Domino Directory (Public Address Book). Members of groups defined in your Personal Address Book may be individuals or other groups from either your Personal Address Book or the Domino Directory.

Members of groups defined in the Domino Directory *must* be individuals or groups from the Domino Directory. If you are using the *To:*, *cc:* or *bcc:* fields, then the group must exist in the Domino Directory. Group members must be individuals or groups from the Domino Directory only. Also, individual members of the group must be defined as name@faxnumber@faxdomain or name@domain.

6.1.2 Sending a fax directly from a PC application

In addition to being able to send a fax directly from Lotus Notes, the Lotus Print to Fax driver enables Notes client users to send a fax directly from Windows-based applications that support printing, including Lotus 123, Lotus Word Pro, and Microsoft Word. The Print to Fax driver works by creating a fax image of your document and then displaying a dialog prompting you for the destination and other fax transmission options before the fax is sent.

Note

The Lotus Notes client *must* be installed on your PC in order to use the Lotus Print to Fax driver.

If the Lotus Print to Fax driver is not already installed on your workstation, details on how to install it are included in B.1, “Installing the Lotus Print to Fax driver” on page 207.

6.1.2.1 Using the Lotus Print to Fax driver

After installing this driver on the Lotus Notes client PC, faxes can be sent through FxD by simply selecting the Print to Fax driver from the application’s File->Print menu. Print to Fax is fully integrated with Lotus Notes. When prompted for the fax destination address, your Notes Address Book and the Domino Directory can be searched. In addition, as with e-mail messages, there is an option to save the transmitted fax as a Sent message in Lotus Notes as shown *later* in Figure 76 on page 95. The Print to Fax driver also enables you to schedule the transmission of the fax, select a cover page, and convert the document into faxable format.

Follow these steps:

1. Open a Windows-based application, such as Lotus Word Pro, and create a document. Click **File->Print**. In the printer selection window, as shown in Figure 69, choose **Lotus Print to Fax**.

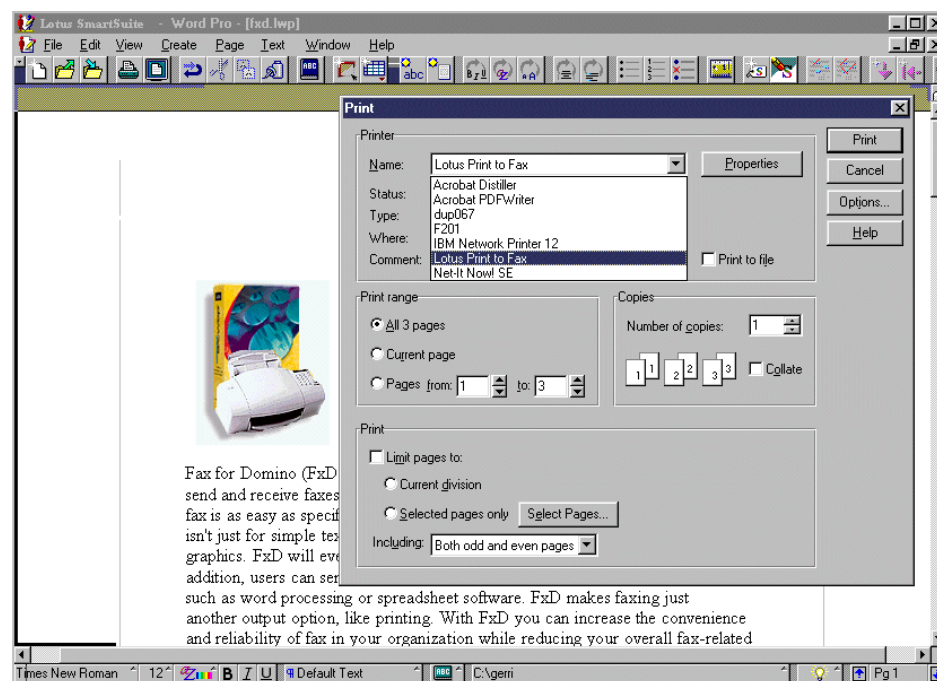


Figure 69. Selecting Print to Fax

2. Click on the **Print** button. A window is displayed, as shown in Figure 70 on page 92.

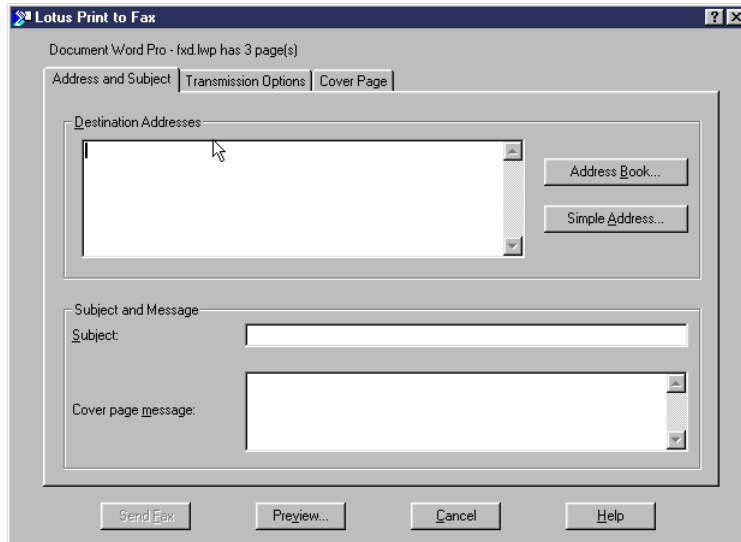


Figure 70. Print to Fax options window

3. Click the **Address Book** to select an address from the Domino Directory (Public Address Book) as shown or from your Personal Address Book.
4. If prompted, as shown in Figure 71, enter your Lotus Notes password.

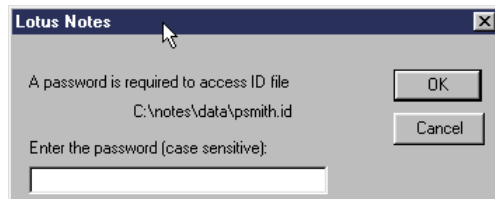


Figure 71. Print to Fax: Enter user ID and password

5. After selecting Jane Doe, as shown in Figure 72, click the **Add** button.

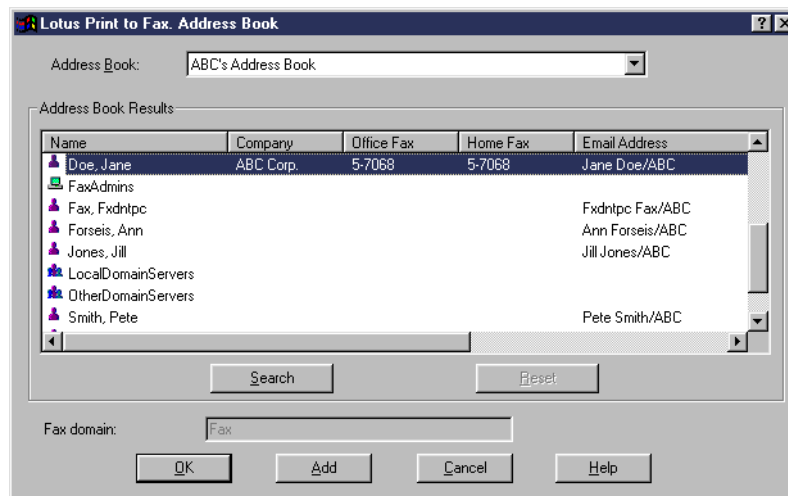


Figure 72. Selecting a fax recipient from Domino Directory (Public Address Book)

No destination address message

If you receive the pop-up window indicating No destination address found for recipient, ensure that the person being selected from the Public Address Book (Domino Directory) has a completed Email Address field.

6. In the resulting display shown in Figure 73, select the **Office Fax** option since we are sending a fax to Jane's fax machine. In fact, she does not even have a Domino mail box. The e-mail address appears since her address in the Domino Directory had to include an e-mail address as mentioned in the note box "No destination address message". Click **OK**, and Jane Doe appears in the Destination Addresses area.

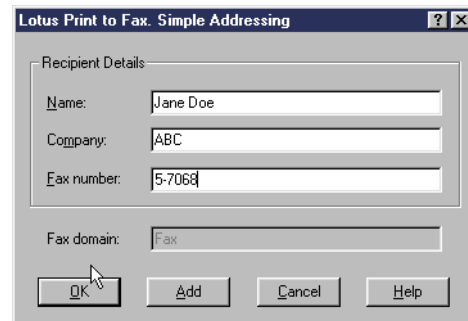


Figure 73. Select Destination for Recipient

7. In this example, select **Jill Jones** and click **Add**. Since Jill's Person document in the Domino Directory does not contain any fax phone numbers, you were not prompted to select a destination. She will receive this fax in her mail box.
8. Click **Cancel** to close the Address Book window.

Note

Alternatively, simple addressing may be used by pressing the Simple Address button shown in Figure 70. In the pop-up window, shown in Figure 74, the sender then enters the fax recipient's address instead of looking in an address book. When using simple addressing, the recipient name and fax number and fax domain are required fields. This enables a fax to be sent to someone who is not listed in the Domino Directory or Personal Address Book. The fax domain will already be entered if you set it in your Location document.



Lotus Print to Fax. Simple Addressing

Recipient Details:

Name: Jane Doe

Company: ABC

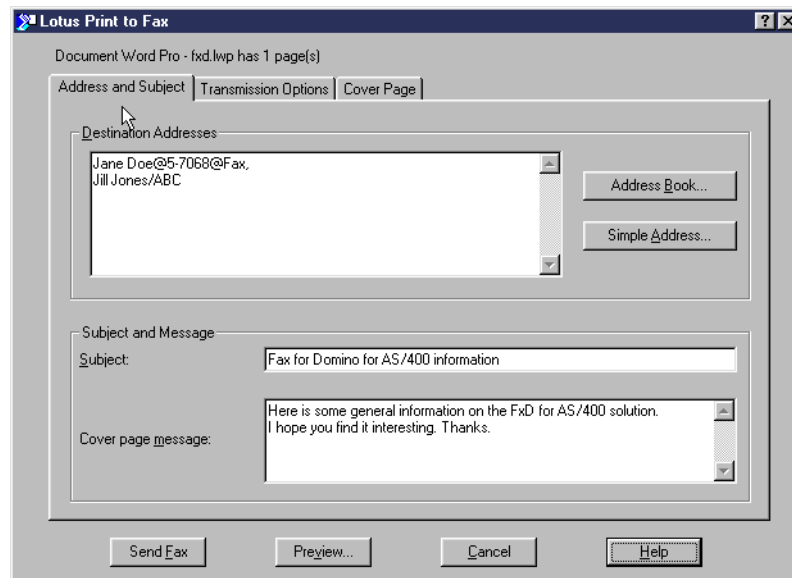
Fax number: 5-7068

Fax domain: Fax

OK Add Cancel Help

Figure 74. Print to Fax driver: Using simple addressing

9. Enter a subject and cover page message as shown in Figure 75.



Lotus Print to Fax

Document Word Pro - fxd.lwp has 1 page(s)

Address and Subject Transmission Options Cover Page

Destination Addresses:

Jane Doe@5-7068@Fax,
Jill Jones/ABC

Address Book... Simple Address...

Subject and Message

Subject: Fax for Domino for AS/400 information

Cover page message: Here is some general information on the FxD for AS/400 solution. I hope you find it interesting. Thanks.

Send Fax Preview... Cancel Help

Figure 75. Print to Fax options: Address and subject

10. Click the **Transmissions Options** tab. A window appears that is similar to the example in Figure 76. Make any desired changes. In our case, select **Save Cover Page options**, and leave the rest at their default settings. Selecting **Save Cover Pages** results in the changes being used as the default options the next time you use Print to Fax.

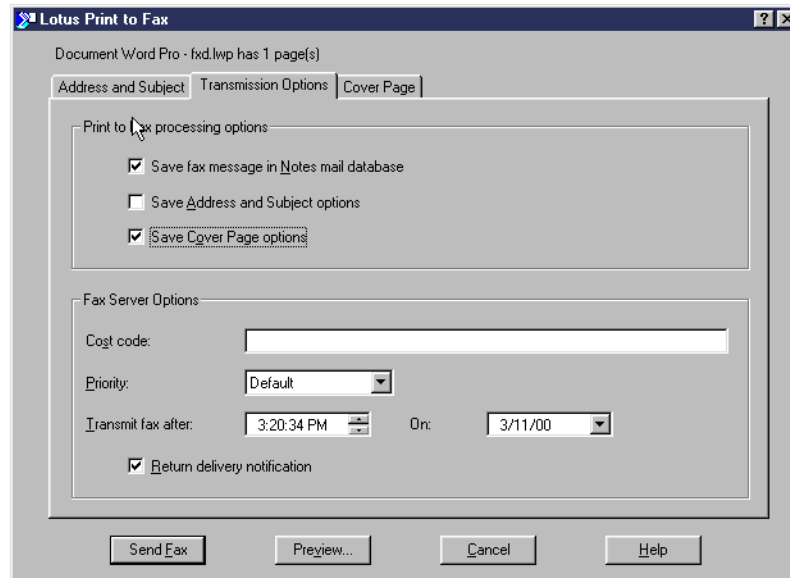


Figure 76. Print to Fax: Transmission options

11. Click the **Cover Page** tab, and make the changes as shown in Figure 77. If the sender fields of Name, Company, Address, or Email address are not entered here, the sender's Person document (or user profile if using separate administration) provides the fax settings. Otherwise, the FxD default settings are used.

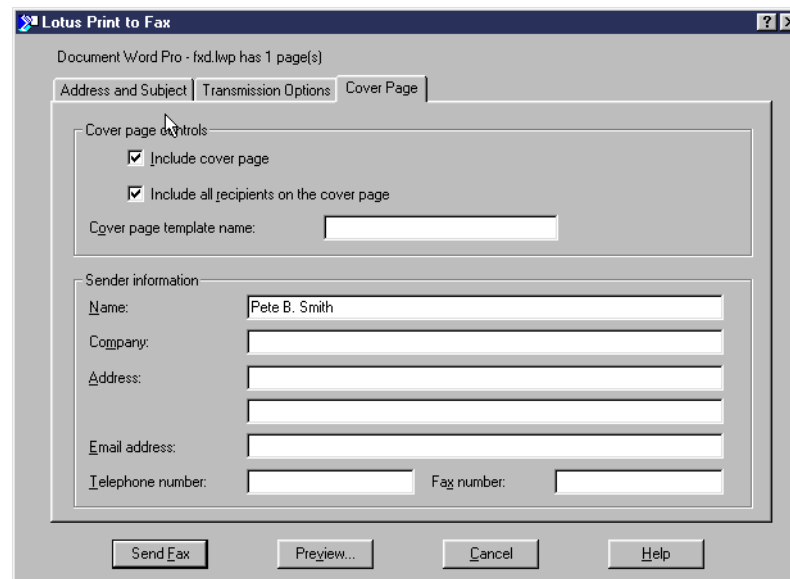


Figure 77. Print to Fax: Cover page options

12. Click the **Send Fax** button.

6.1.3 Receiving a fax

As a Domino user with a Lotus Notes client, incoming faxes are viewed from within your Domino mailbox. For your information, the actual method by which the inbound fax e-mail arrives in your mailbox varies depending on the inbound

routing method set by the Fax for Domino administrator. Additional details on the various inbound routing methods are discussed in 7.4, “Routing” on page 131.

As shown in Figure 78, Pete has a new fax e-mail in his mail box. Double-click it to open this e-mail. For your information, since we are using manual routing in this example, this fax was routed to Pete by the “administrator” designated to handle the routing of inbound faxes.

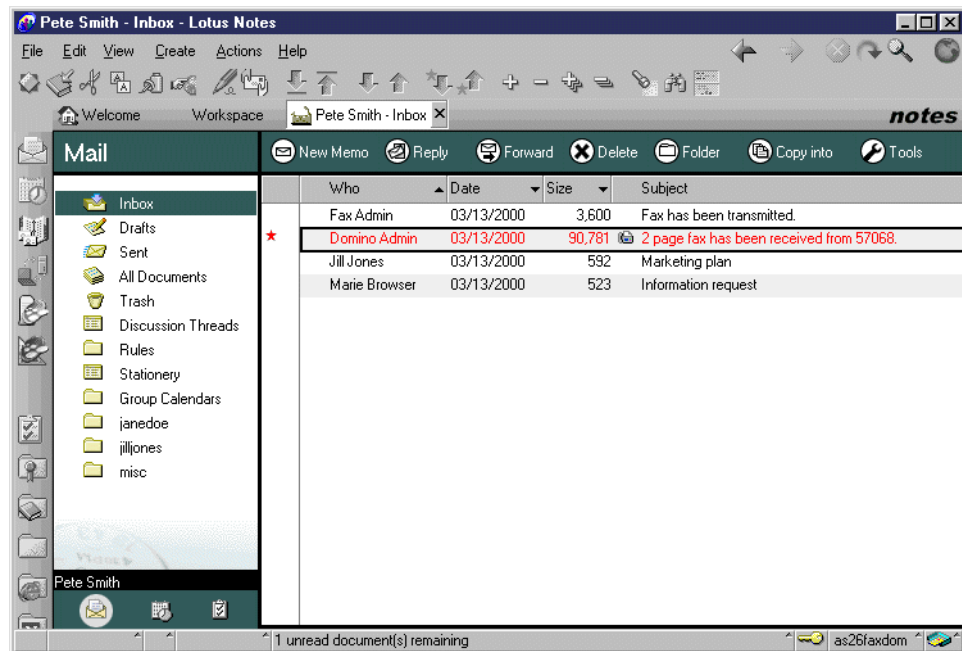


Figure 78. Receiving a fax

To view the fax, double-click the attached TIFF (fax) file as shown in Figure 79. Then, click on the **View** button in the Attachment pop up window to start the File Viewer.

Note

Another way to view the attached fax (TIFF) file is to right-click it and then select **View** from the pop-up window. For your information, we could have selected Launch instead of View and viewed the fax image using the Imaging for Windows 95 application installed on our PC as described in 6.1.4, “Printing a fax” on page 98. Windows NT has an imaging application available also.

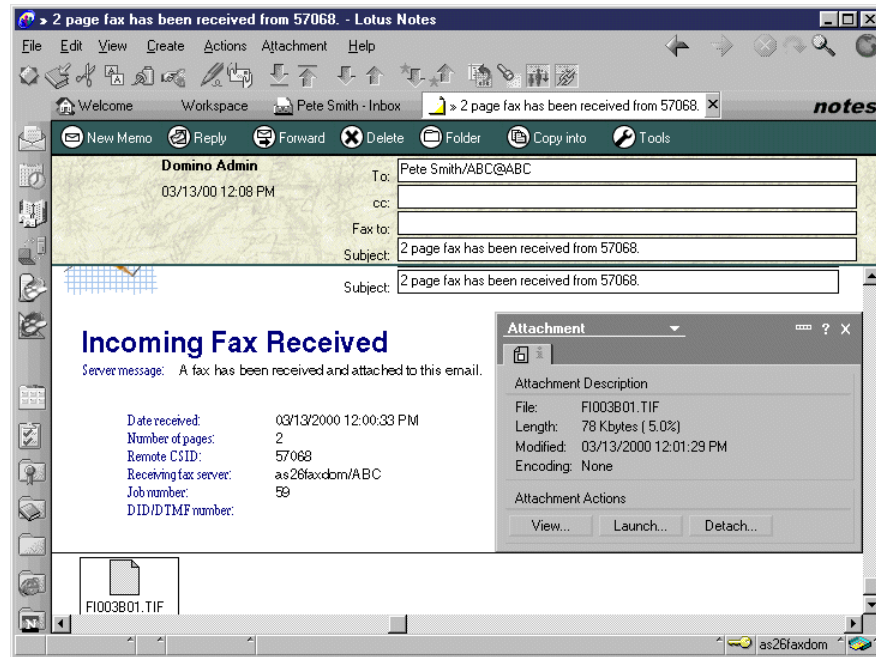


Figure 79. Viewing fax e-mail in mail box

In the File Viewer window, shown in Figure 80, close the **Attachment** pop-up window.

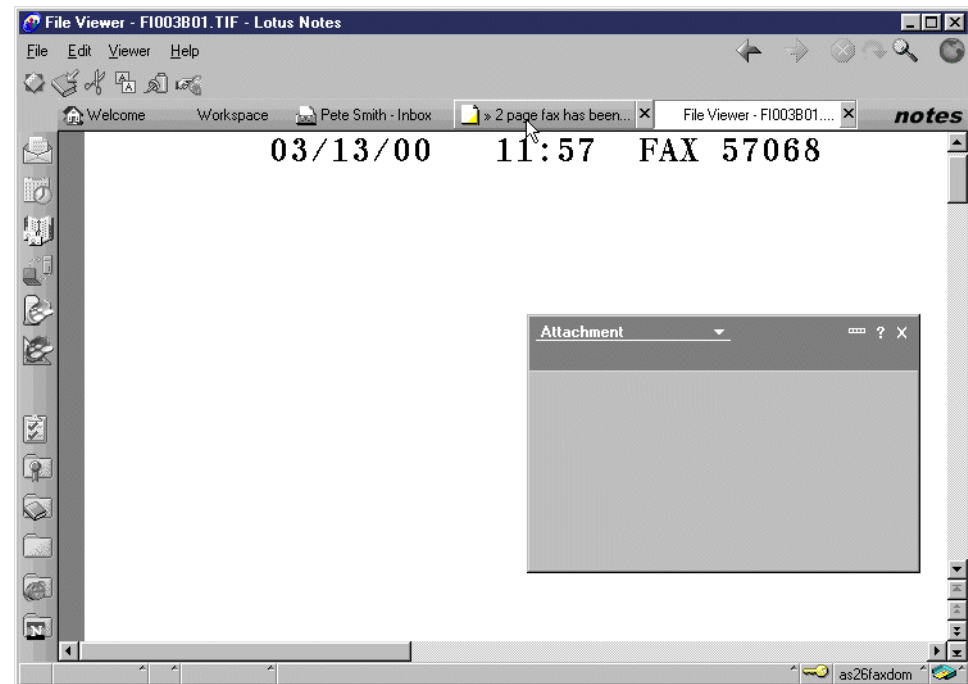


Figure 80. Viewing a received fax

To zoom in on the fax image, click **Viewer->Magnify->Fit to Width** as shown in Figure 81 on page 98. Alternatively, you could select another magnify setting, such as 50 percent.

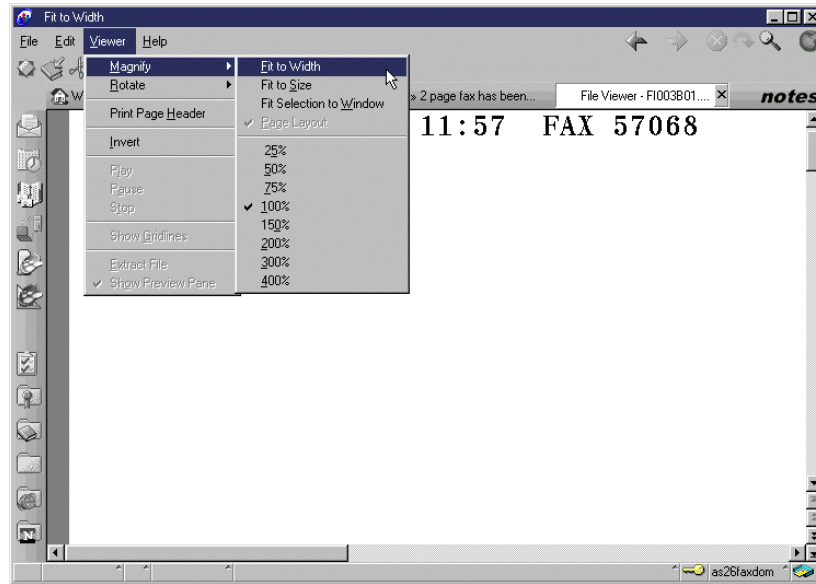


Figure 81. Magnify option

The fax image is resized to fit the width of your window as shown in Figure 82. The entire fax can be seen by using the scroll bar on the right side of the window.

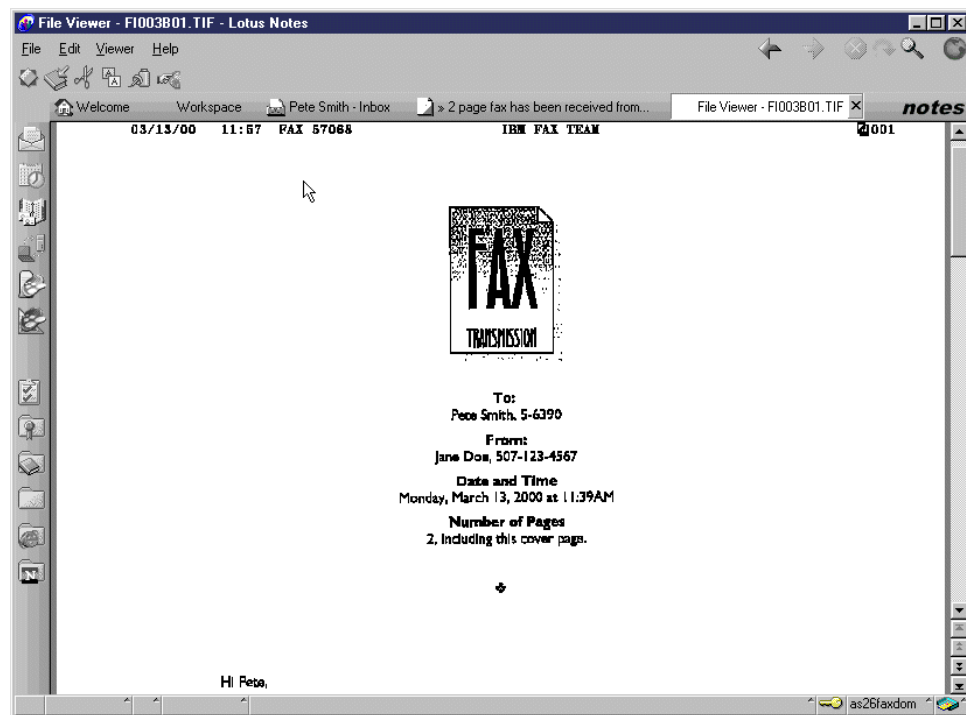


Figure 82. Reading a received fax

6.1.4 Printing a fax

As discussed in 6.1.3, “Receiving a fax” on page 95, a received fax can be viewed online using the Lotus Notes File Viewer. However, there may be times when you want to print a received fax. As shown earlier in Figure 79 on page 97,

double-click the attached TIFF file in your fax e-mail. Click the **Launch** button in the Attachment pop-up window. Click **File->Print** as shown in Figure 83.

In our example, the application launched is Imaging for Windows 95 because it is the application associated with TIFF files in Windows 95, and we have a Windows 95 PC. Imaging for Windows NT is shipped with Microsoft Windows NT.

Note

Applications associated with specific file types can be checked in Windows 95 or NT by double-clicking the **My Computer** icon and then clicking **View->Options**. Then, select the **File Types** tab.

It is possible that you have a different application associated with TIFF files on your PC. In that case, a different application may be launched. For your information, the Imaging for Windows 95 accessory can be used to create, annotate, view, and print TIFF and other images. It can be downloaded from the Web site: <http://www.microsoft.com/downloads/search.asp>

Imaging for Windows NT is shipped with Microsoft Windows NT.

Note

Printing files from the Lotus Notes File Viewer may give unexpected results. If possible, print files from their native applications. For example, in our case, we used an image viewing application.

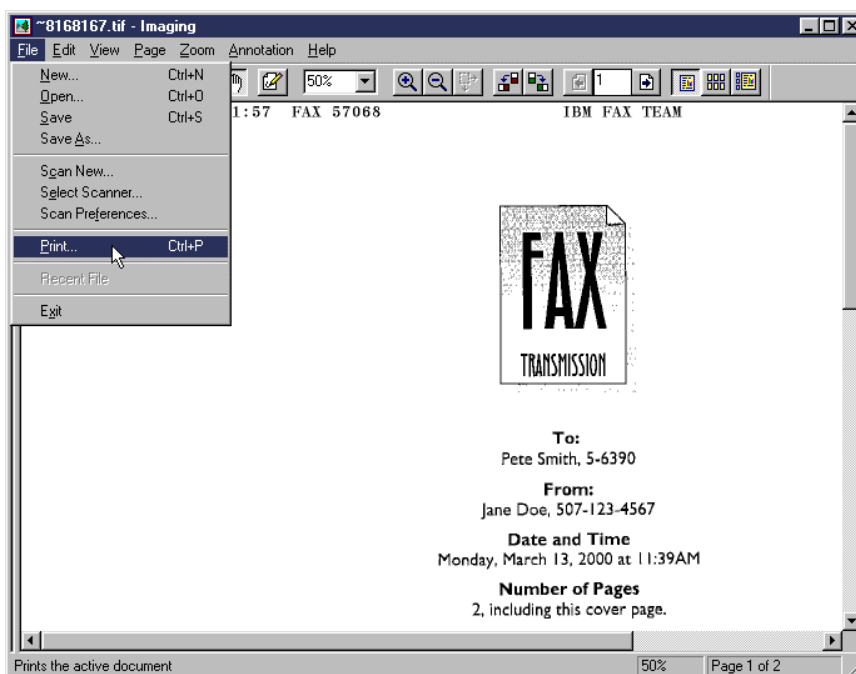


Figure 83. Printing a fax

A Print options window, like the one in Figure 84 on page 100, appears. Select the desired printer and any other required options, such as the number of copies.

Click the **OK** button to send the fax image to your printer. Assuming that the selected printer is operational, the fax image will be printed on it.

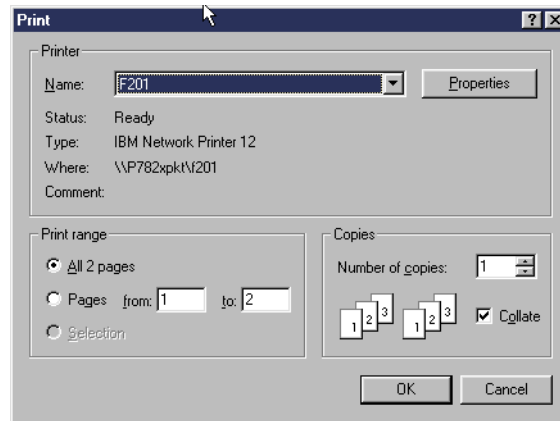


Figure 84. Print options window

6.2 Using FxD from a Web mail client

Lotus Domino can be accessed using a Web browser; this is often referred to as using a “Web mail template”. In Domino 4.6, the mail template for such a user can be a combined mail template or a Web only template. In Domino R5, the Mail 5.0 template handles both Lotus Notes clients and Web mail clients.

Note

When registering a Web mail user with the Domino server, the Internet password field must be checked as shown in Figure 85.

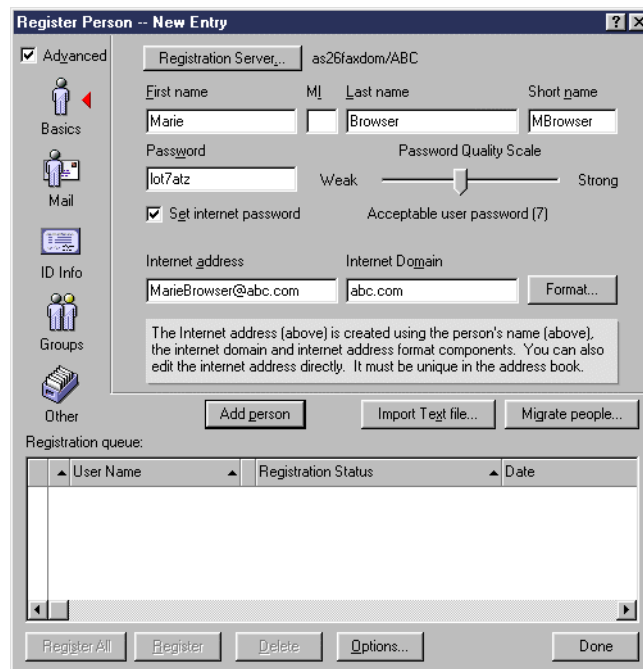


Figure 85. Registering a Web mail Domino user

6.2.1 Sending a fax using a Web mail client

As a Web mail client, open your browser and enter the appropriate Uniform Resource Locator (URL) for your mailbox on the Domino for AS/400 server. In our example, we use Netscape 4.7, and enter the URL:

`http://as26faxdom:4444/mail/mbrowser.nsf`

When prompted, as shown in Figure 86, enter the Domino user name (mbrowser in our example) and password.

Note

In the above URL, *as26faxdom* should be replaced by the name or IP address of your Domino for AS/400 server, and *mbrowser.nsf* should be replaced by your mail box file name. Although you will most likely not need to issue a port number, we had to specify the port number *4444* because our Domino administrator had changed the Domino Web server port from the default of 80 to 4444. For convenience, set a bookmark for this URL.

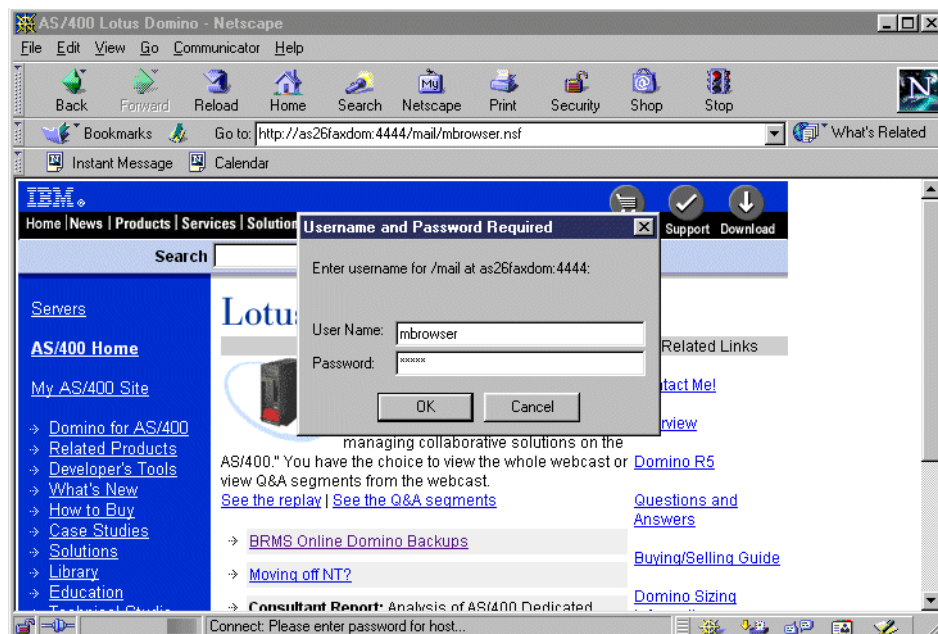


Figure 86. Web mail sign on

To send a fax using your Web mail client, open the Notes memo form by selecting the **New Memo** button shown in Figure 87 on page 102.

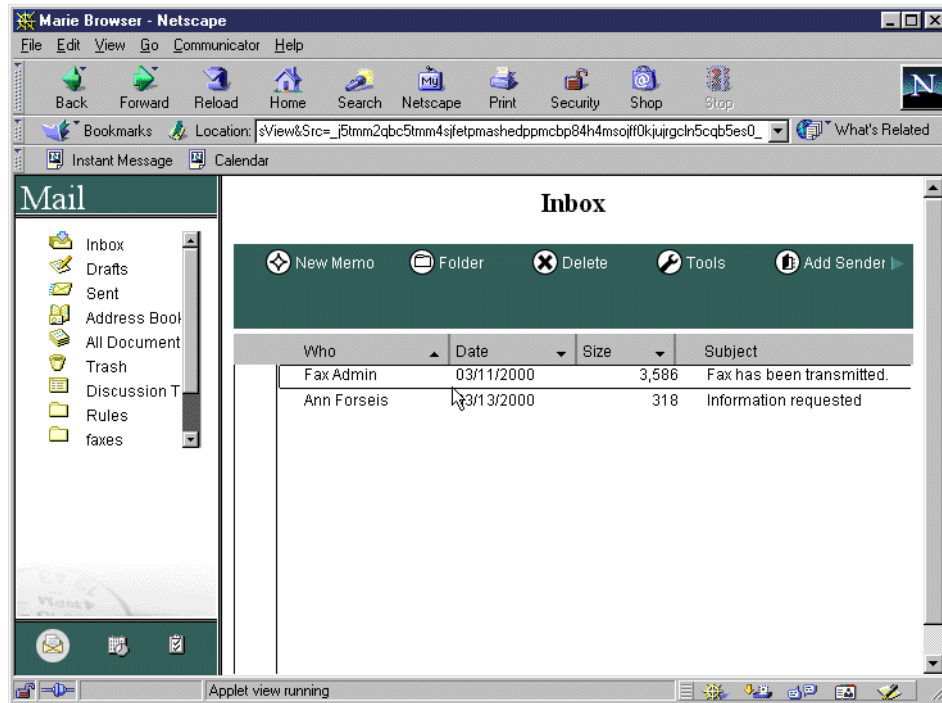


Figure 87. Web mail Inbox

Note that the word Fax in the following examples refers to the name of the fax domain defined by our administrator. You should substitute the name provided to you.

In Figure 88, we send Jane Doe a fax with a Lotus Word Pro attachment. The To:, cc:, or bcc: fields must be used since the Fax to: is *not* available when using Web mail. Enter `Jane.Doe@Fax` in the To: field since Jane is the fax recipient. Remember, we can use the shorter address since Jane Doe's associated fax number is in the Domino Directory (refer to 6.1, "Using FxD with the Lotus Notes client" on page 81). Otherwise, you have to enter the fax phone number when sending the fax e-mail in the format: `name@faxphonenumber@faxdomain`.

In this example, we could have used the full address, `Jane.Doe@5-7068@Fax`, but we chose to use the shorter version since Jane's fax number is in the Domino Directory.

Note

If you click on the Address button, which appears in Figure 88, and select your site's Domino Directory, only users with a Mail system specified in their Person document will appear. You may also notice that not all names are displayed and that the Previous and Next buttons do not seem to work. You are only shown a portion of the Directory at any one time.

To display more entries in the Domino Directory, do a search on the first letter of a last name in the required alphabetic part of the directory. This restriction may be lifted in a future release of the template.

Note

When using Web mail to send a fax, up to two attachments may be specified.

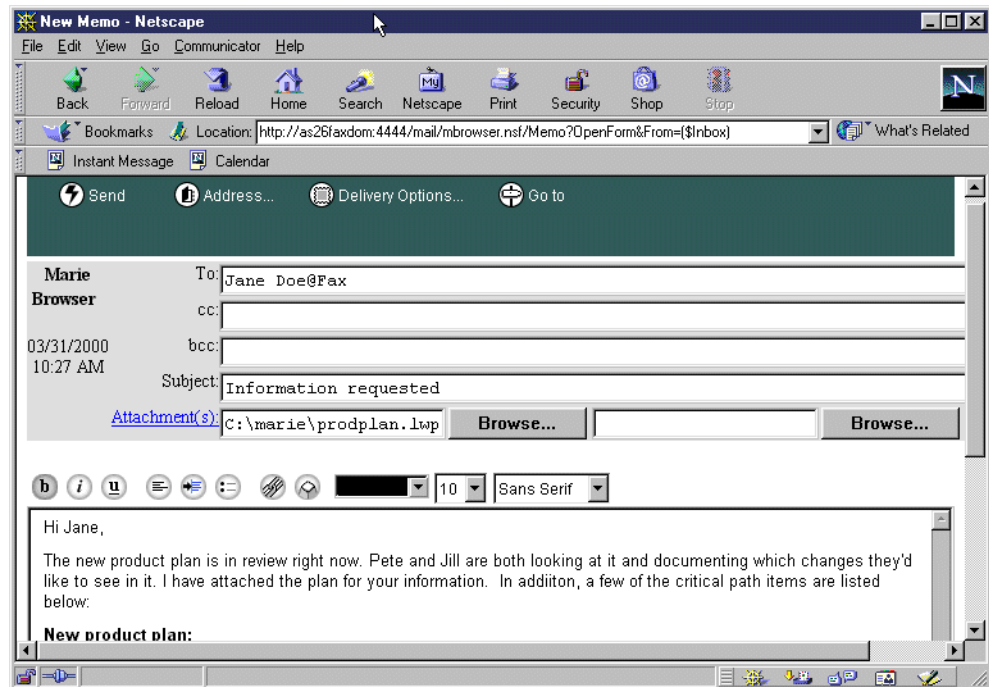


Figure 88. Sending a fax e-mail

Click the **Send** button, which is at the top of the page shown in Figure 88, and then click **Send and Save** to send the fax. After the fax has been transmitted, a notification message is sent to your inbox.

6.2.2 Sending a fax directly

Since the Lotus Print to Fax driver requires a Lotus Notes client, this function is *not* available when using Web mail through a browser.

6.2.3 Receiving a fax

As a Domino Web mail user, incoming faxes are viewed from within your Domino mailbox. For your information, the actual method by which the inbound fax e-mail arrives in your mailbox varies depending on the inbound routing method set by the Fax for Domino administrator. Additional details on the various inbound routing methods are discussed in 7.4, “Routing” on page 131.

As shown in Figure 89 on page 104, Marie has a new fax e-mail in her mail box. Double click on it to open this e-mail. For your information, since we are using manual routing in this example, this fax was routed to Marie by the “administrator” designated to handle the routing of inbound faxes.

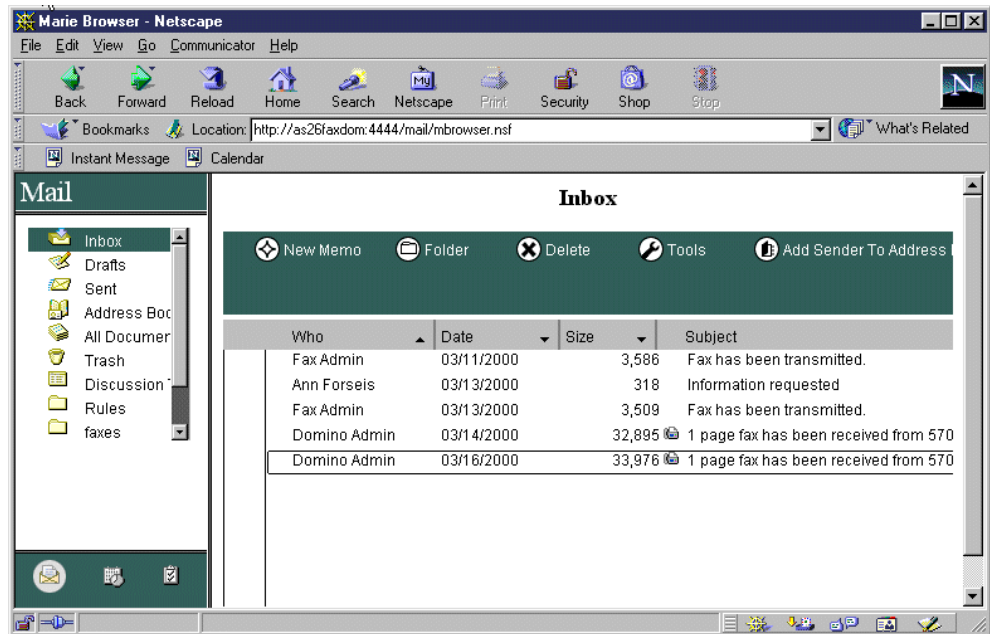


Figure 89. Receiving a fax

To view the fax, click once on the attached TIFF (fax) file as shown in Figure 90.

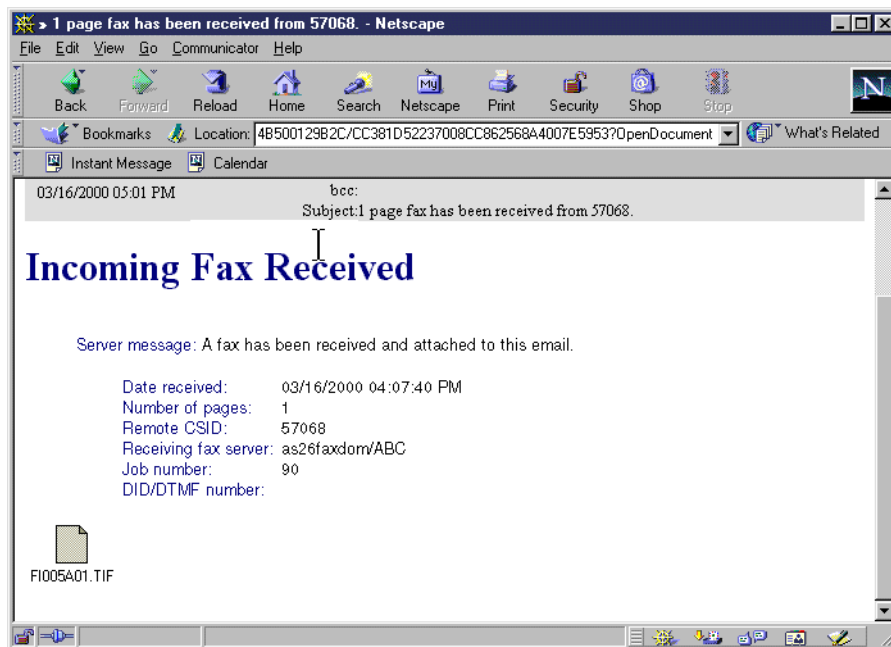


Figure 90. Viewing fax e-mail in mail box

As shown in Figure 91, click the **OK** button in the pop-up window to open the TIFF file with the Imaging for Windows 95 application installed on our PC. See 6.2.4, "Printing a fax" on page 106, for more details on this application. If you are using Windows NT, use Imaging for Windows NT.

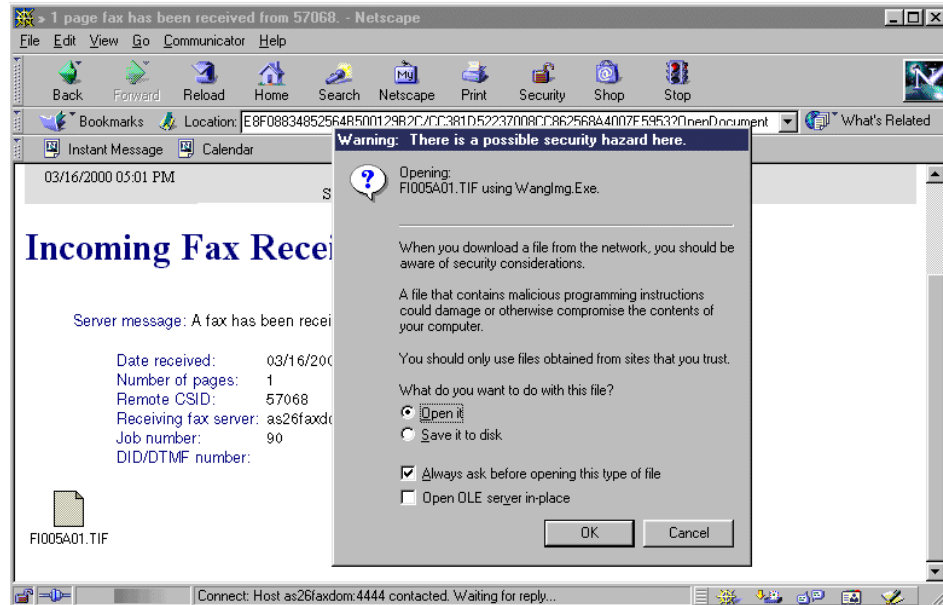


Figure 91. Opening the fax image file

The fax that Jane sent from her fax machine to Marie through Fax for Domino is displayed in Figure 92.

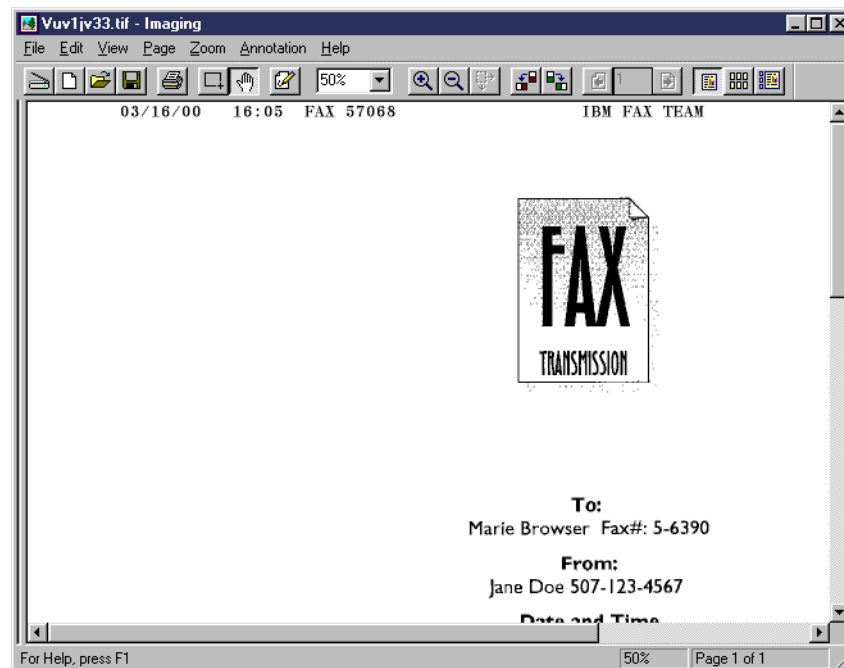


Figure 92. Web mail: Viewing a received fax

To zoom in on the fax image, click **Zoom->Fit to Width** as shown in Figure 93 on page 106. Alternatively, you can select another zoom option, such as Custom, and enter a desired magnification.

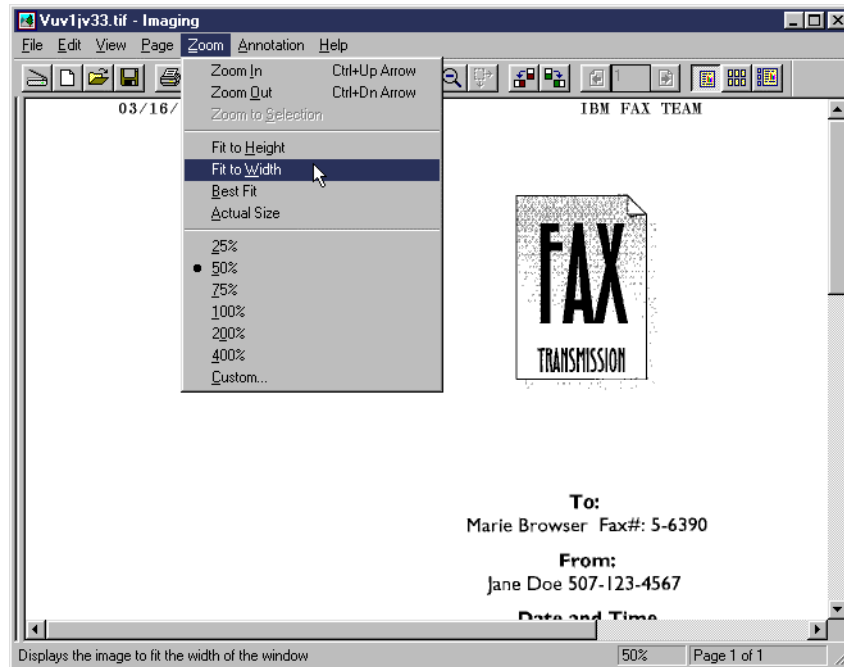


Figure 93. Zoom option

The fax image is resized to fit the width of the window as shown in Figure 94. The rest of the fax can be seen by using the scroll bar on the right side of the window.

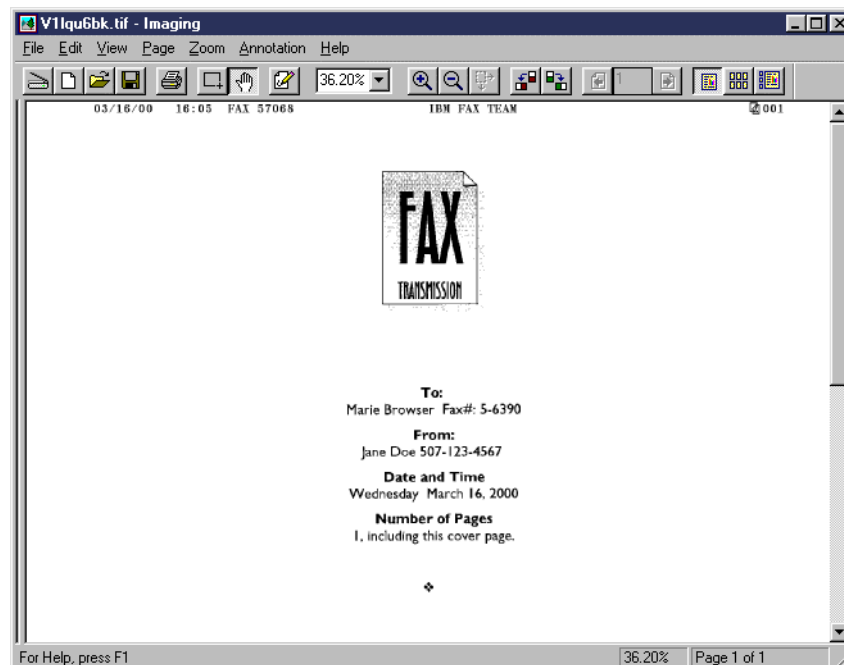


Figure 94. Reading a received fax

6.2.4 Printing a fax

As discussed in 6.2.3, "Receiving a fax", a received fax can be viewed online by a Web mail user through the use of an image viewing application, such as Imaging for Windows 95. The process for printing a received fax is simple and is

described in this section. As shown earlier in Figure 90 on page 104, click once on the attached TIFF file in your fax e-mail. Click the **OK** button in the pop-up window to open the TIFF file. A window like the one in Figure 95 appears. See 6.1.4, “Printing a fax” on page 98, for more details on the Imaging for Windows 95 or NT application.

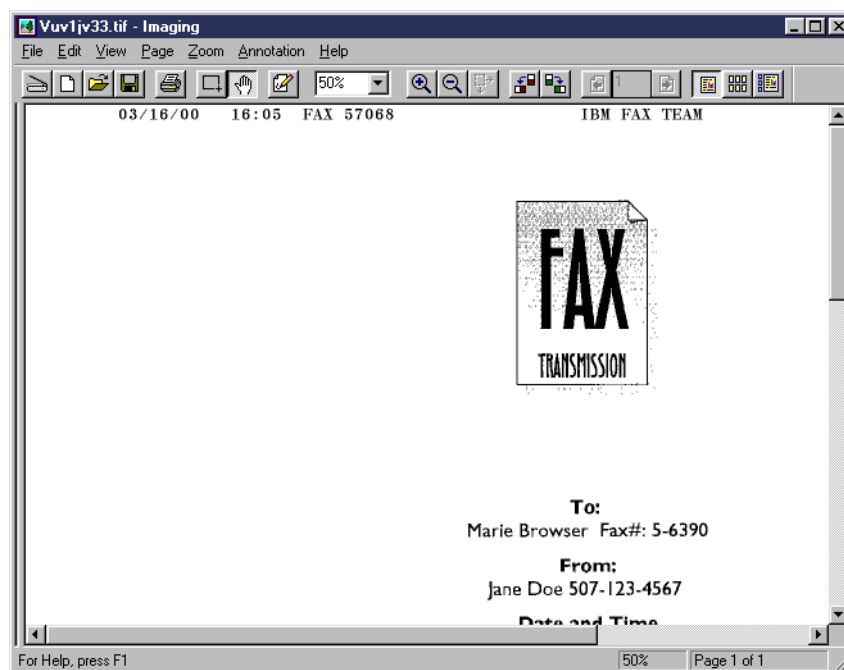


Figure 95. Viewing a fax

Click on **File->Print** as shown in Figure 96. You can also click on the printer icon in the action bar at the top of the window.



Figure 96. Printing a fax

When a print window appears, like the example shown in Figure 97, choose the desired printer and any other options and then click **OK**.

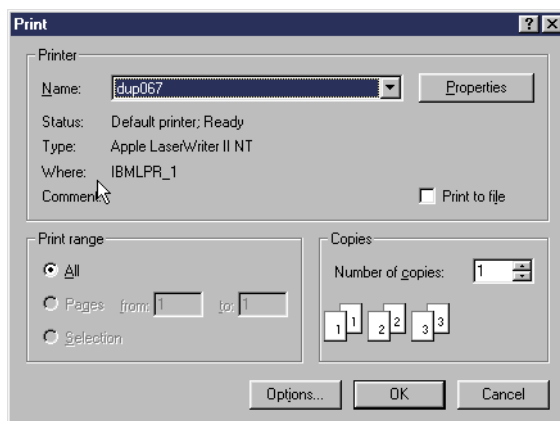


Figure 97. Print options window

Assuming that the selected printer is operational, the fax sent from Jane will be printed out.

6.3 Using FxD from a browser e-mail client

In addition to the Web mail client discussed in the above section, a POP3 or IMAP client can use Domino for AS/400 as a mail server. This section discusses how a POP3 browser based client can use Fax for Domino. However, other functions, such as using the Domino mail interface, calendar and discussion databases, are not available to the browser POP3 or IMAP user.

As a user, your browser may have been set up for you so that it can be used as a POP3 or IMAP client to Domino. However, if this is not the case, additional details on how to set up a POP3 client in Netscape can be found in B.3, "Setting up Netscape Messenger as a POP3 client" on page 211.

Notes

- When using a POP3 client (or any SMTP client), there is *no* Fax Options button as there is when using a Lotus Notes client. See 5.2, "User profiles" on page 64, for how to tailor the settings for a POP3 client. If you are using combined administration, you are limited to using the default fax (DefaultFxDUser) profile settings.
- We are assuming that the Domino Administrator has already registered our POP3 client user, Martin Popp, with the Domino for AS/400 server. Details on registering a POP3 user is discussed in B.2, "Registering a POP3 client with Domino" on page 210. We are using Netscape Communicator 4.7 in this section.

6.3.1 Sending a fax using a browser e-mail client

As a browser POP3 client, Martin Popp opens Netscape and then selects **Communicator->Messenger** as illustrated in Figure 98.

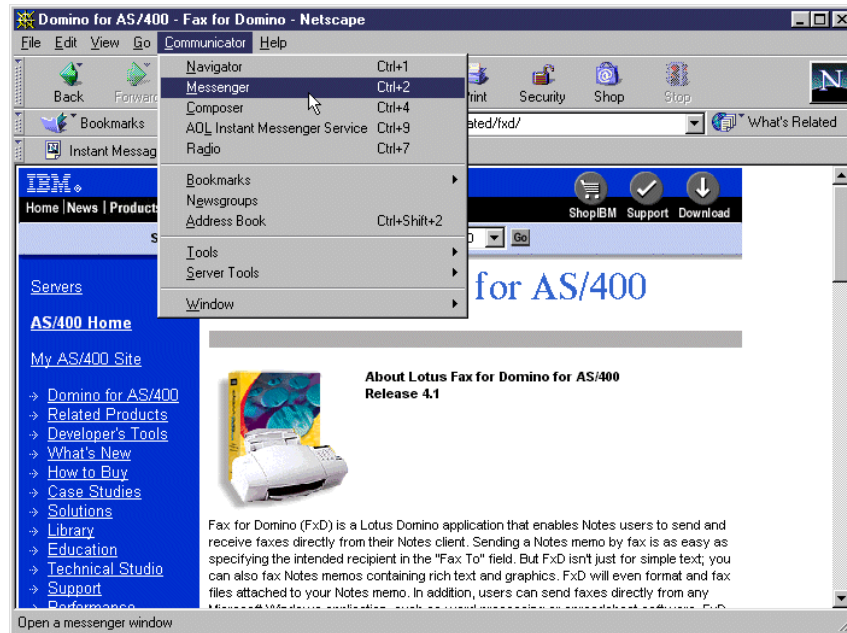


Figure 98. Starting Netscape Messenger (POP3 client)

In the window in Figure 99, Martin's POP3 mail inbox is displayed.

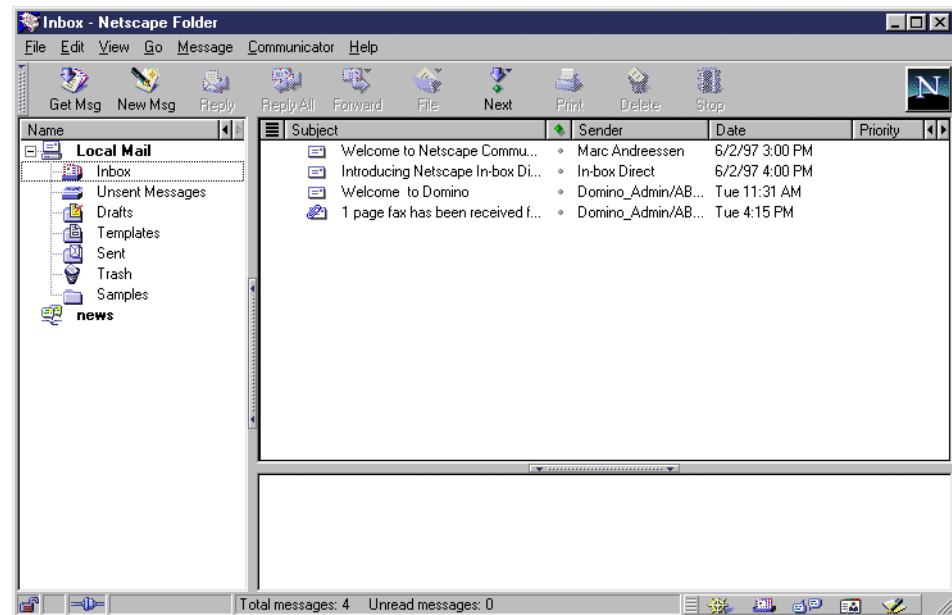


Figure 99. Netscape Messenger POP3 inbox

Click the **New Msg** button at the top of the window. The contents of the fax Martin is sending to Jane Doe is typed in the lower frame as shown in Figure 100 on page 110.

Note

In our environment, native Domino SMTP is being used. Therefore, as a POP3 user, the addressing format, *name%faxnumber%faxdomain@maildomain*, must be used to send a fax. This fax mail will arrive at the SMTP server of the domain which processes it, transforms the address, and delivers the message through the fax domain indicated to the FxD spool mail box. If AS/400 AnyMail (Mail Server Framework) is being used instead of the native Domino SMTP, a POP3 user can use the addressing format *name.faxnumber.faxdomain@maildomain*. See 9.7, "Broadening the reach" on page 160.

In our example, Jane Doe's fax number is stored in our Address book as her e-mail address.

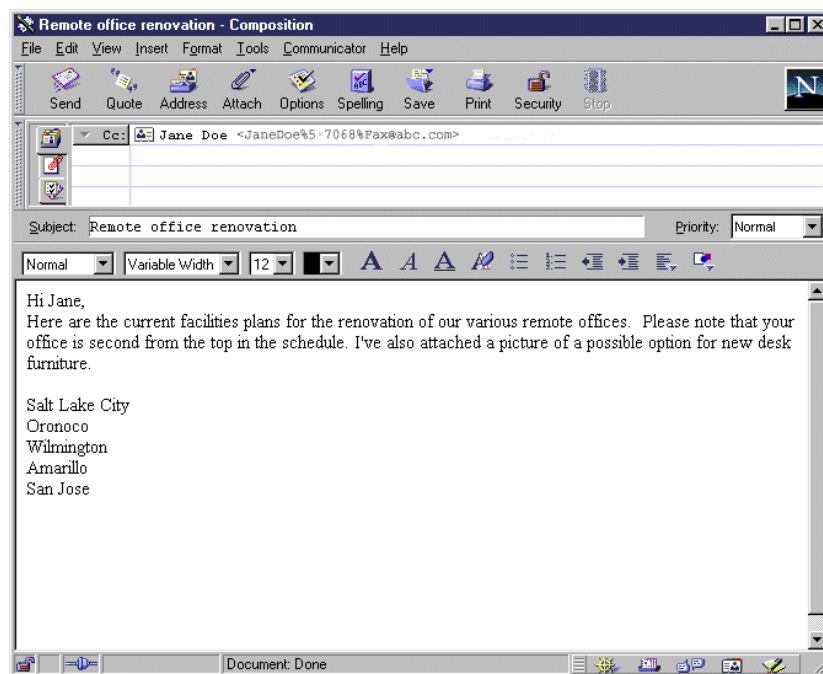


Figure 100. POP3 client: Sending a fax

Since we want to attach a file, click the **Attach** button, click **File**, and select the desired file. As shown in Figure 101, the name of our attached file, desk.jpg, appears next to the attachments icon (the paper clip) in the top part of the display.

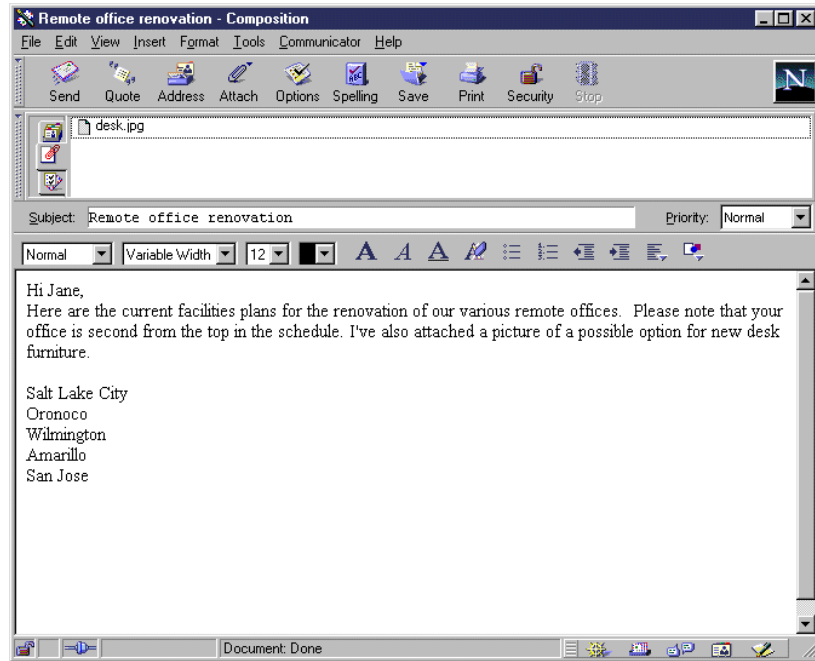


Figure 101. POP3: Sending a fax with an attachment

Click the **Send** button. The fax is handled by FxD after it has been routed through the Domino SMTP server. After FxD has processed the request, Martin Popp (our POP3 user) receives a notification message in his Messenger inbox indicating that his fax has been transmitted.

6.3.2 Sending a fax directly

Since the Lotus Print to Fax driver requires a Lotus Notes client, this function is *not* available when using a browser based e-mail client.

6.3.3 Receiving a fax

A POP3 client can receive faxes coming into FxD for AS/400. In our example, Jane Doe has faxed in a document for Martin Popp. Since we are using manual inbound routing, the person designated as the “handler of inbound faxes” has forwarded the fax to Martin. As a result, start Netscape Communicator and click **Communicator->Messenger** at the top of your Netscape window, click the **Get Msg** button, and then enter a password if prompted as shown in Figure 102.

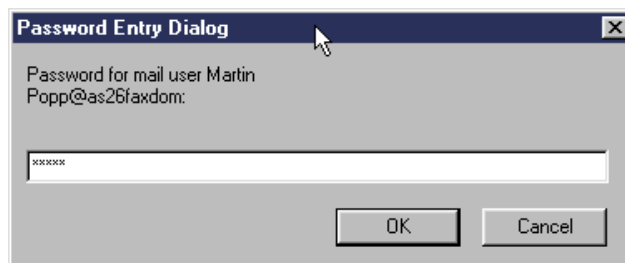


Figure 102. Entering password for POP3 user

Click once on the fax mail item. It appears in the lower frame as shown in Figure 103 on page 112.

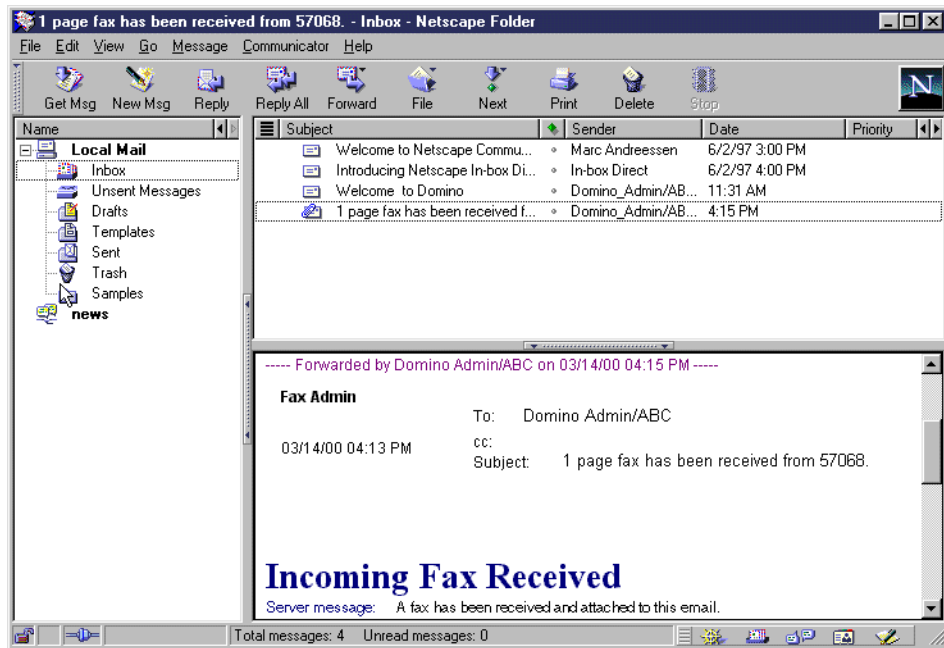


Figure 103. POP3 client: Receiving a fax

Scroll down until the TIFF file is visible. Then, click on it as shown in Figure 104.

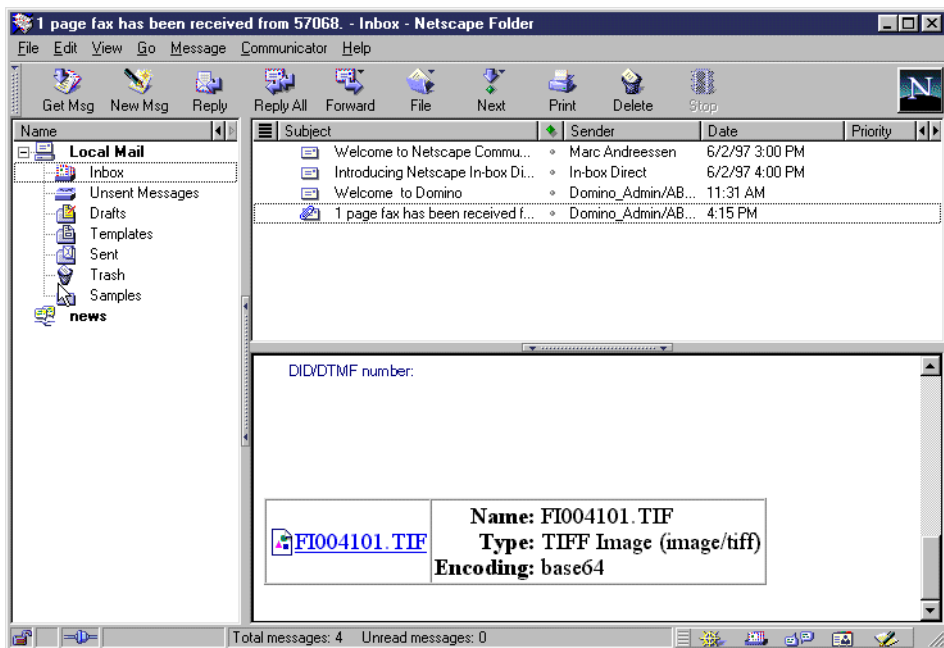


Figure 104. Viewing the fax

As illustrated in Figure 105, click the **OK** button to open the TIFF file.

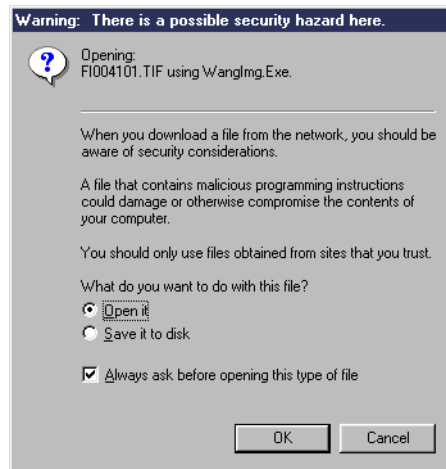


Figure 105. Security message: Viewing a TIFF file

As described in 6.1.4, “Printing a fax” on page 98, the TIFF file is opened using the Imaging for Windows 95 application since that is what is set to handle TIFF files on our PC. Figure 106 displays the fax sent from Jane’s fax machine to Martin using Fax for Domino.

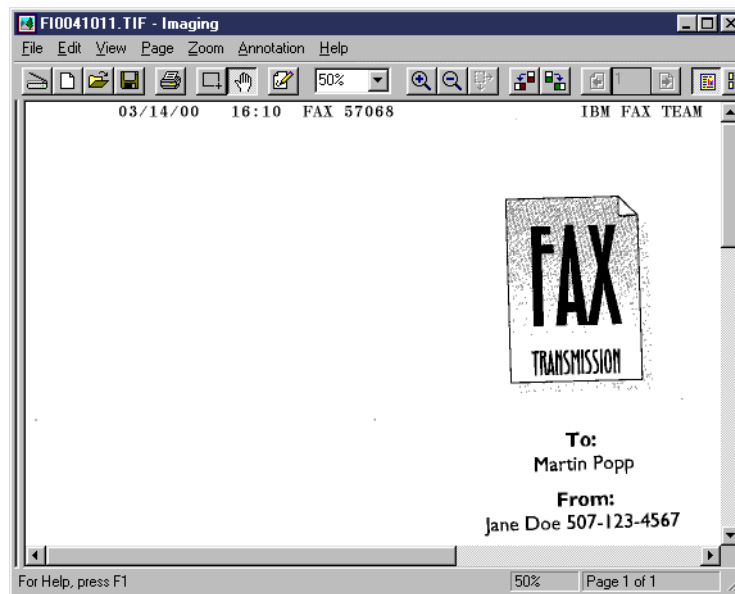


Figure 106. Viewing a received fax TIF file

6.3.4 Printing a fax

Printing received faxes from within our POP3 browser client is a natural extension to viewing the fax as discussed in section 6.3.3, “Receiving a fax” on page 111. To print our received fax, follow the steps described in 6.3.3 to open the fax in a viewer. In our example, the viewer we are using is Imaging for Windows 95. Additional details on this application is in 6.1.4, “Printing a fax” on page 98. As shown in Figure 107 on page 114, click **File->Print** in the action bar.

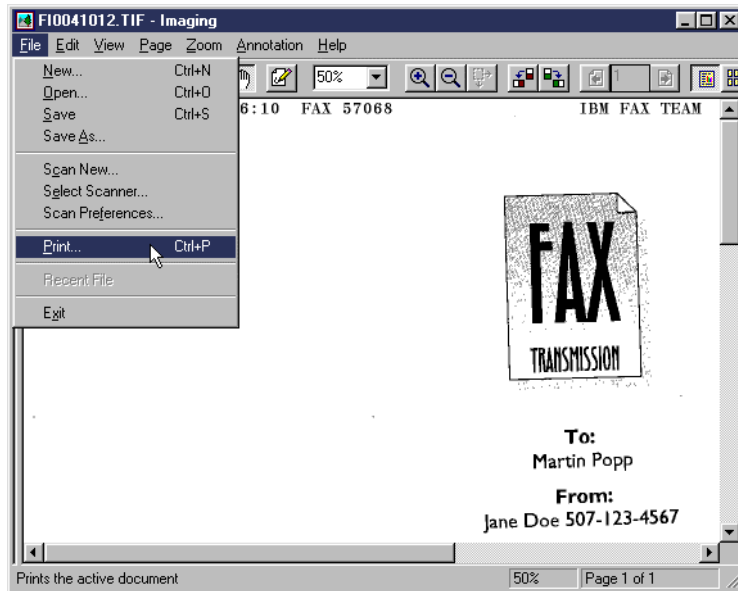


Figure 107. POP3 client: Printing a received fax

A print window, like the one in Figure 108, appears. Select the desired printer and any other options, such as number of copies. Then, click the **OK** button.

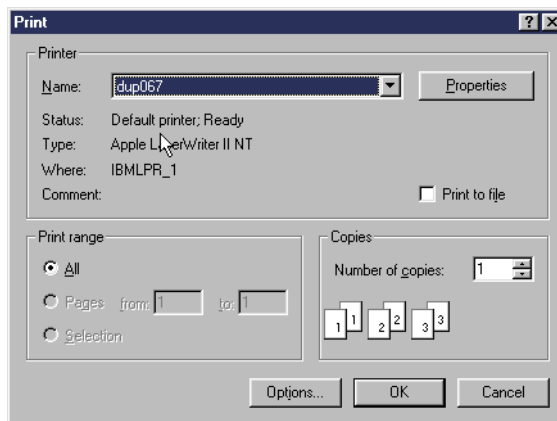


Figure 108. Print window

Assuming the designated printer is operational, the received fax will be printed on it.

Note

The release notes for FxD 4.1 list some limitations under a section entitled "Known Problems and limitations". These include differences in font sizes and rendering issues with radio buttons and twisties. These limitations are associated with the FxD product and are not specific to the AS/400 implementation.

Chapter 7. Customization

Once you install and configure FxD, it can be used to send and receive faxes. However, you may want to consider customizing some of the features to provide enhanced and company-specific support in your organization.

This chapter discusses the following topics:

- How to customize cover pages
- Providing support for faxing attachments from PC applications
- Fax headers
- Routing of inbound faxes
- Telephone number translation
- Cost codes

It is also possible to automate sending faxes from within Lotus applications using LotusScript. You can see an example of this in the *FxD for Domino Administrator's Guide* (nfxa400.nsf).

7.1 Fax cover page

When you send a fax, FxD checks whether a cover page should go out with the fax and, if so, what the cover page settings are for the fax. To determine the name of the cover page, FxD looks first at the fax options specified for the individual fax. If no cover page is entered there, it checks the user information, and if no cover page is listed there, it uses the server default user's cover page.

As shown in Figure 109, after installing FxD server, there are three fax cover pages in the database (nfxcover.nsf). As with any Domino application, you can create new cover pages (new forms) in this database. You must have the Notes Designer (R4.6) or Domino Designer (R5) client installed to change or create cover pages.

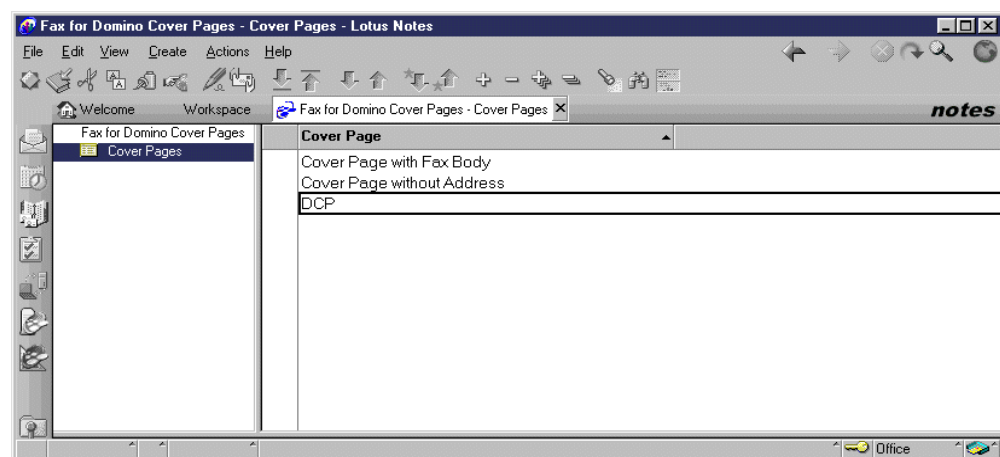


Figure 109. Cover Pages view of Fax for Domino Cover Pages

7.1.1 Using cover pages

After your users' environments have been changed, as described in 4.6, "Setting up Fax for Domino users" on page 55, Notes R4 client users will see two new

buttons (Fax Options and Fax Help) when you create a Notes Memo as shown in Figure 110. If you are using an R5 client, there is a single Fax button with two pull-down list choices: Fax Options and Fax Help.

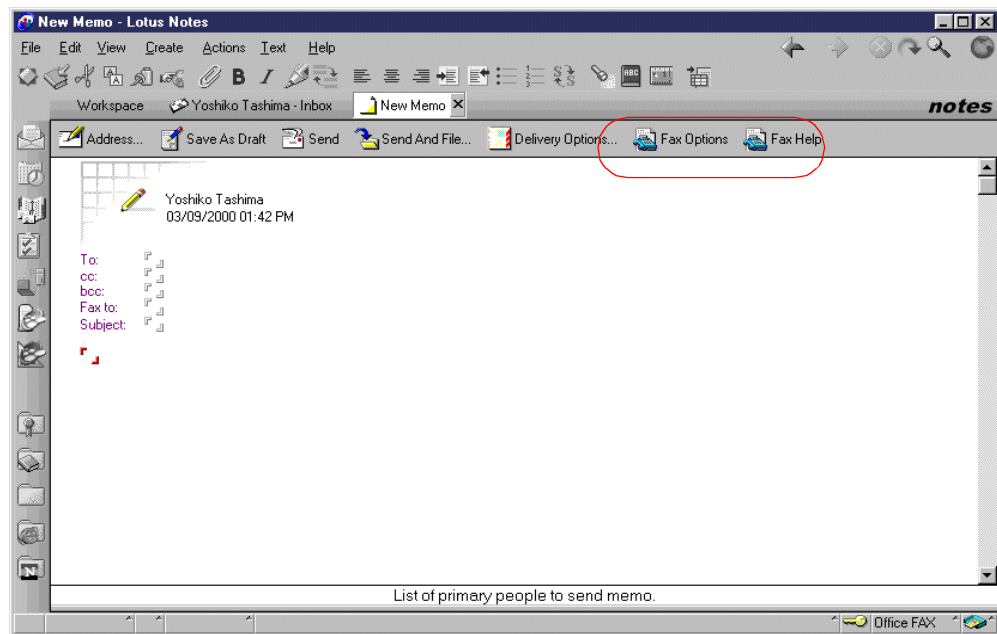


Figure 110. New Memo

By clicking the **Fax Options** button, you can specify the cover page for an individual fax as well as other fax options as shown in Figure 111. If the Cover Page form field is left blank, or if the cover page entered does not exist, FxD checks the user's settings for a cover page, and if none is found there, the server's DefaultFxDUser cover page setting is used. The default cover page setting for the DefaultFxDUser is DefaultFaxCoverPage, which has an alias of DCP. If you are using Combined Administration, the cover page can be set in the Fax section of the Person document in the Domino Directory (Public Address Book). If you are using Separate Administration, the cover page can be set in the user profile document in the FxD Administrator's database.

If FxD determines that a cover page should be sent with the fax, but a cover page form is *not* specified in Fax Options, the sender's settings, or the DefaultFxDUser's settings, then the fax will not be sent. In addition, the sender will receive a Delivery Failure message in their mailbox. This is contrary to the information provided in the *FxD for AS/400 Administrator's Guide* (nfxa400.nsf), which states that a fax with no cover page will be sent.

Fax Options

Send Settings

Priority:

Resolution: ☒ Fine ☐ Normal

Orientation: ☒ Portrait ☐ Landscape

Page size:

Notify when completed: ☒ Yes ☐ No

Send non-image file attachments: ☒ Yes ☐ No

Cost code:

Send cover page: ☒ Yes ☐ No

Transmit fax on: at

Cover Page Settings

Include all names: ☒ Yes ☐ No

Sender's name:

Cover page form:

Cover page message:

Company name:

Address line 1:

Address line 2:

Sender's e-mail address:

OK Cancel

Figure 111. Fax Options

7.1.2 Changing the cover page design

As an administrator, you can modify the layout and format of the default cover pages as depicted in Figure 112. To do this, you can use any of the form design tools available in Notes. For example, you can add text and graphics or change the design and organization of the default cover page.

Fax for Domino Cover Pages - Design - Forms - Lotus Domino Designer

File Edit View Create Design Help

Recent Databases: Fax for Domino Cover F as24faxdom\nfxcover.nsf

Forms

Name/Comment	Alias	Last Modified	Last Modified By	Notes	Web
Cover Page with Fax Body		01/28/2000 04:55:12 PM	Lotus Fax Development/Lotus No	✓	✓
Cover Page without Address		01/28/2000 04:55:11 PM	Lotus Fax Development/Lotus No	✓	✓
DefaultFaxCoverPage	DCP	03/06/2000 04:59:39 PM	Yoshiko Tashima/Japan/IBM	✓	✓
(\$NFXInFaxDelivery)		01/28/2000 04:55:10 PM	Lotus Fax Development/Lotus No	✓	✓
(\$NFXOutFaxDelivery)		01/28/2000 04:55:11 PM	Lotus Fax Development/Lotus No	✓	✓
(\$NFXOutFaxMultiDelivery)		01/28/2000 04:55:11 PM	Lotus Fax Development/Lotus No	✓	✓

Figure 112. Fax for Domino Cover Pages

If you try to change these forms, you get a caution message as shown in Figure 113. You also receive this message if you use “copy and paste” to create new forms. This warning advises you that your Cover Pages database (nfxcover.nsf) is based on a template (NFXCoverPage (nfxcover.ntf)) and is still linked to that template for refreshing the design. It is possible, although unlikely, that a future refresh of the template could overwrite your new forms. If you unlink the database, you may lose some important future updates.

Lotus Domino Designer

! If you make changes to this Form, they may be lost because the master copy of this Form is in a different Design Template database; see 'Design\Design Properties - Design' and 'File\Database\Properties - Design' for more info.

OK Cancel

Figure 113. Designer message

Note

The Cover Pages database also contains other forms and documents needed by FxD. Do *not* edit or delete these.

Table 5 lists the fields contained in the Fax for Domino Cover Pages forms. The How to set column indicates the search order for the information.

Table 5. Field list in Fax for Domino cover pages

Field name	Description	How to set
IS_FaxOutToName	Recipient's name	Fax Options->Your fax settings->Default fax settings
IS_FaxOutRequestOriginator	Sender's name	Fax Options->Your fax settings->Default fax settings->"From" field of Notes Memo
IS_FaxOutCompany	Sender's company	Fax Options->Your fax settings->Default fax settings
IS_FaxOutSendersAddress1	Sender's address1	Fax Options->Your fax settings->Default fax settings
IS_FaxOutSendersAddress2	Sender's address2	Fax Options->Your fax settings->Default fax settings
IS_FaxOutReturnPhoneNumber	Sender's phone number	Person Document in the Domino Directory(Public Address Book)
IS_FaxOutReturnFaxNumber	Sender's fax number	Person Document in the Domino Directory(Public Address Book)
IS_FaxOutSenderEmail	Sender's e-mail address	Fax Options->Your fax settings->Default fax settings
IS_FaxOutDtReceived	Date of sending fax	Fax Options->Your fax settings->Default fax settings
IS_FaxOutNumberPages	Number of sending fax pages	Fax Options->Your fax settings->Default fax settings
IS_Recipient	Other recipient	Fax Options->Your fax settings->Default fax settings
IS_FaxOutMessageText	Message	Fax Options->Your fax settings->Default fax settings
Subject	Mail subject	"Subject" field of Notes Memo
Body	Mail body	"Body" field of Notes Memo

Note

If you remove or change the name of a field when you design a new cover page, FxD ignores any information that is entered in that field in either the User Profile settings or the Fax Options.

Since fields that you add to the cover page cannot be controlled directly by the user in a fax request, you must generate the contents of these fields by assigning default values or by using Design Field formulas. FxD will not set a value for a new field that you add to a cover page.

Figure 114 shows an example of a new cover page that we will create. Graphics can be used but should ideally be in gray scale. In gray scale, dots are different shades of gray, where dots in dithered images are black or white.

If you use R5 Domino Designer, you aren't required to store the graphic with the database's resources. However, storing the graphic there allows it to be shared with other forms.

The image shows a sample fax cover page form. At the top left is the "ITSO" logo, and at the top right is the "IBM" logo. In the center is a graphic of two overlapping globes. Below the logos are several text input fields with labels: "To:" followed by a field containing the formula "IS_FaxOutToName", "Subject:" followed by a field containing the formula "Subject", "From:" followed by a field containing the formula "IS_FaxOutRequestOriginator", "Phone:" followed by a field containing the formula "IS_FaxOutReturnPhoneNumber", "Fax:" followed by a field containing the formula "IS_FaxOutReturnFaxNumber", and "Date:" followed by a field containing the formula "Date". Below these fields is a line of diamond-shaped symbols, and to the right of this line is the text "delivered by: Fax for Domino for AS/400". At the bottom left is a field labeled "Body".

Figure 114. Sample fax cover page

Ensure that your Lotus Notes R4 or R5 client has the Designer client installed. Then, complete the following steps to create and use a new cover page:

1. Open the Fax for Domino Cover Pages database in design mode. If you are using an R5 client, this can be done by right-clicking the database icon on your workspace and then selecting **Open In Designer**. If you are using an R4 client, click once on the **Fax for Domino Cover Pages** icon on your workspace and then click **View->Design** from the menu bar.

Note

If you do not see the Design option when you select View, open the **Fax for Cover Pages** database and then click **View->Show->Design**. Also, by default, the members of the FaxAdmins group and the Notes user registered for the FxD Windows Services System have “Manager” access to the FxD Cover Pages database.

2. Copy an existing cover page, or click **New Form** to create a blank form. To ensure you include appropriate fields, we suggest that you copy an existing cover page.
3. Modify or add fields or graphics to your custom cover page. Change the name of the form to avoid confusion. The name may be changed while the form is opened by selecting **Design->FormProperties**.
4. Click **File->Save** to save the form.

Although the cover page can be used when specified by name, it will not yet appear in the list of sample cover pages (see Figure 109 on page 115) that a user can use. This is due to the fact that this new cover page just created is a form while the database contains documents. To include your cover page in the list of documents that the user can see when the Fax for Domino Cover Pages database is opened, do the following steps:

1. Open the form you just saved in step 4 above in design mode and select **Design->FormProperties**. As shown in Figure 115, select the Form Property option to **Include in menu** first and then ensure that the Create menu option appears.

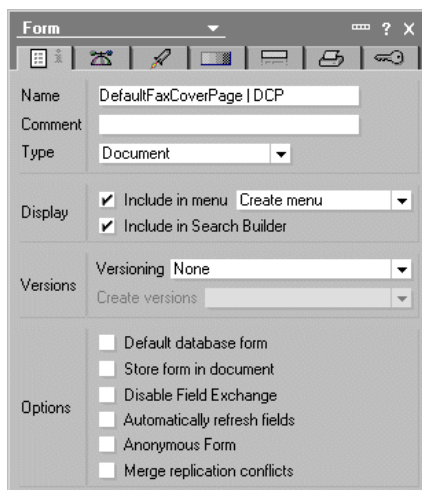


Figure 115. Form property

2. Click **File->Save**. Then, click **Create->Document** and select the form you just saved to create a “dummy” document for your new cover page. In the cover page document that appears, enter a space in one of the fields and click **File->Save** to save the document. Press Esc. Open the FxD Cover Page database, and your new custom cover page will be included in the list of documents.

When you send a fax using a cover page with a “Body” field defined in it and if the fax message has multiple text lines formatted using different point sizes and fonts, the various points sizes are correct in the delivered fax but not the fonts. For example, if the message has three lines, where the first line is Helv 12, the second is Script 14, and the third is Rockwell 14, and the first line of the delivered fax is Helv 12, as expected. However, the next two lines have the correct, respective point sizes but not the correct font styles. To avoid this problem, use a cover page, such as DefaultFaxCoverPage, which has the body of the message appear on a separate page. In summary, you should not specify the Body field in your cover page if the fonts you are sending are important to you or the fax recipients. We experienced similar results to those described in the above paragraph when faxing with Japanese fonts using a Domino for AS/400 4.6.6c server.

Note

The above restriction is also documented in the FxD 4.1 for AS/400 Release Notes. However, when we used FxD 4.1 on a Domino for AS/400 5.0.2c server and sent a fax using an R4.6.6c mail template, the font styles were *not* lost, even though we were using a cover page with the body field on the same page (like the standard Cover Page with Fax Body).

7.1.3 Assigning a default cover page

FxD uses the cover page form that is specified in the DefaultFxDUser settings as the default. Unless it is changed, DefaultFaxCoverPage is the default cover page listed in the DefaultFxDUser settings. If you are using combined administration, the default cover page information is in the Person document for DefaultFxDUser in the Domino Directory. If you are using separate administration, this information is in the User Profile document for DefaultFxDUser in the FxD Administration database. As an Administrator, you can change the DefaultFxDUser’s setting to specify a different system default cover page form.

7.1.4 Assigning a cover page to individual users

You can also specify a cover page form for individual users by changing their fax settings. This cover page becomes the default cover page used when that user sends a fax. If combined administration is being used, the user’s fax settings are part of the user’s Person document in the Domino Directory (Public Address Book) as shown in Figure 116 on page 122. If separate administration is being used, the user’s fax settings are in the User Profile document located in the FxD Administration database as shown in Figure 117 on page 122.

If a user requests a cover page that does not exist, the fax request fails, and FxD sends a Delivery Failure Report message to the sender.

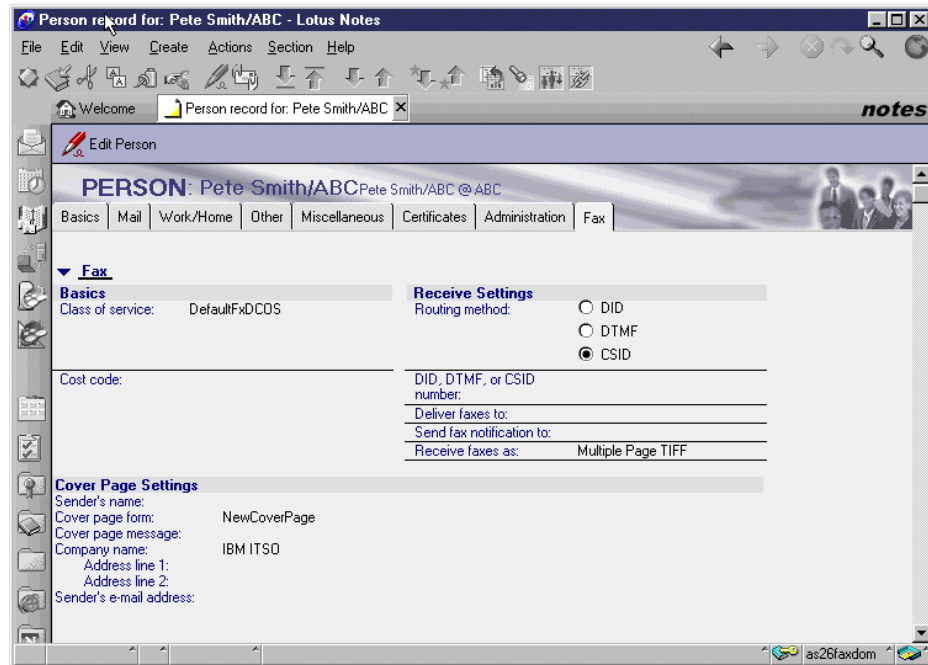


Figure 116. Combined Administration: Fax settings in Person document in Domino Directory

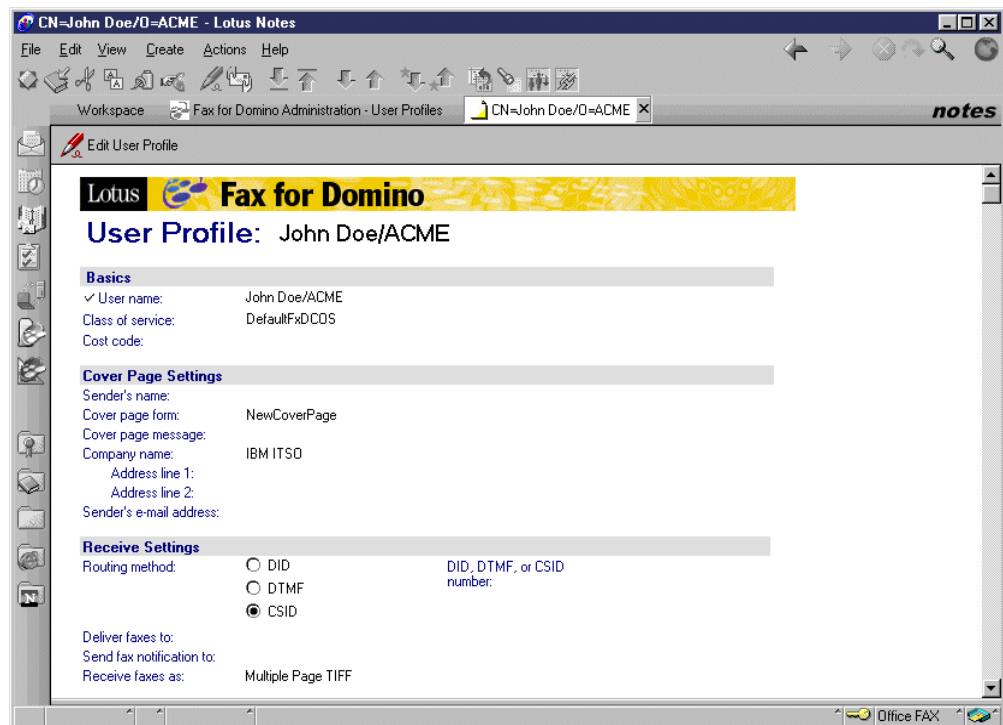


Figure 117. Separate Administration: User Profile document in FxD Administration database

7.2 Sending a fax with attachments

A Notes memo with attachments can be sent with FxD. FxD converts these attachments into TIFF format and sends the images along with the memo. Even if

your memo only contains an attachment, the received fax will have a page for the base memo containing an icon representing the attachment, and the attachment will start on a new page. To avoid this, use Cover Page with Fax Body, which puts the icons on the cover page.

Note

Additional information on sending an attachment with a fax is discussed in 6.1.1, “Sending a fax using Lotus Notes” on page 85, 6.2.1, “Sending a fax using a Web mail client” on page 101, and 6.3.1, “Sending a fax using a browser e-mail client” on page 108.

To enable the sending of PC application output as attachments, you may have to install all PC applications on the FxD Windows Services System that may be used by users to produce those files for attachment. Even if you can view those attachments from a Lotus Notes client, it is very likely that the viewer won't be sufficient to enable the attachment to be faxed using FxD. The FxD Windows Services System must have software installed that enables it to print the particular output type.

However, if your application produces output, such as a WordPad document, GIF, or JPEG image, for which Windows NT has built-in viewing and printing capabilities, then additional software may not need to be installed on the FxD Windows Services System.

When you install the FxD Windows Services System, the following two Domino databases are created in the local notes data directory:

- Convert Server Config (nfxconv.nsf): This database provides information required for the faxing of specific attachment types.
- Convert Server Log (nfxcnvlg.nsf): This database is used for logging the results of document conversion.

7.2.1 How attachments are handled

If a file attachment contains one of the following image file formats, the image attachment can be included in the fax transmitted by FxD without any additional software installed on the FxD Windows Services System:

- TIFF
- PCX
- DCX
- GIF
- JPEG
- BMP

Attachments in any other file format (for example, word processor documents or spreadsheets) are processed by the FxD Convert Server process. The Fax for Domino Conversion Service requires that an application that is capable of printing the attachment be installed on the FxD Windows Services System. For example, in order to fax a Lotus Word Pro document, Word Pro must be installed on the FxD Windows Services System. This system may be running on a PC with Windows NT Workstation (or Windows NT Server) or on an AS/400 Integrated Netfinity Server that you are using as your FxD Windows Services System. If the

mailFax Convert Server print driver encounters an error, an error message is logged to the Fax for Domino log (nfxlog.nsf) on the AS/400 system, and an error is logged to the Convert Server Log (nfxcnvlg.nsf) on the FxD Windows Services System.

If the application is not on the FxD Windows Services System, but the user has it on their PC, the user can send the attachment with the Lotus Print to Fax driver instead as discussed in 6.1.2, "Sending a fax directly from a PC application" on page 90). You must have a Notes client installed to be able to use this utility.

Note

If FxD cannot convert an attachment on an outgoing fax, it logs a major error in Fax for Domino Log (nfxlog.nsf) and does not transmit the fax. FxD notifies, by e-mail, the sender of the fax of the error.

FxD currently supports the file formats and associated applications shown in Table 6 without requiring any additional customer configuration.

Table 6. Tested file formats

File format	Application
Word Pro	Lotus SmartSuite Millennium Edition
1-2-3	Lotus SmartSuite Millennium Edition
Freelance Graphics	Lotus SmartSuite Millennium Edition
Microsoft Word	Microsoft Office 97
Microsoft Excel	Microsoft Office 97
Microsoft PowerPoint	Microsoft Office 97
ASCII text	WordPad
Rich text	WordPad
PDF	Adobe Acrobat

7.2.2 Convert Server Config documents

FxD Windows Services System processes an attachment based on its file type. When you install a new PC application on the FxD Windows Services System, the file type produced by that product is generally associated with that application. As a result, if you select a file of that type from Windows Explorer, the correct application is invoked. For many applications, this is sufficient to enable faxing attachments of that file type.

Note

Remember, before installing any additional applications on the FxD Windows Services System, make sure that you are a member of the NT Administrators group for the system. You should use the same user ID that you used to install and set up the FxD Windows Services System. If you do not use the appropriate privileges, you may experience problems converting attachments.

In order for an attachment to be faxed, the FxD Windows Services System must be able to “print” that attachment using the mailFax Convert Server “printer” without any user intervention. This printer driver is automatically installed when FxD Windows Services software is installed and configured, and it is not a physical printer. Although many application file types are supported immediately, some require additional setup because they require user interaction during printing. However, it is possible to provide the necessary user interaction to the application by using the Convert Server Config (nfxconv.nsf) database.

FxD comes with appropriately configured documents for the supported document types that require them. This includes Microsoft Excel, Microsoft PowerPoint, and Portable Data Format (PDF). Other document types, such as Microsoft Word 97 and Lotus Word Pro, do not require any additional configuration. If you have other applications you want to fax attachments from, you will have to test them. We recommend that when you install the PC application on the FxD Windows Services System, you also open the application once and try printing to the mailFax convert Server printer.

The FxD Windows Services System manages popup windows based on popup window documents in the Convert Server Config database (nfxconv.nsf). This database consists of two views: File Types and Popup Windows. When FxD is first installed, there are four File Type documents and three Popup Window documents defined in the Convert Server Config database. They are:

- File Type documents
 - doc
 - pdf
 - ppt
 - xls
- Popup Window documents
 - ppt (Print)
 - xls (Print)
 - xls (Print/Microsoft Excel)

While this process works correctly with many applications, some applications exhibit unusual behavior when asked to print a document. If an application behaves in an unusual way, you must configure FxD to handle the application. See Appendix C, “Handling non-standard attachments” on page 215, for information on creating new documents in the Convert Server Config database (nfxconv.nsf).

After you change or create documents in Convert Server Config database, you should restart Fax for Domino Windows Services. For details about starting and stopping FxD, see 5.7.2, “FxD Windows Services” on page 73.

If you want to fax Advanced Function Printing (AFP) files, see 9.1, “Prerequisites for faxing spooled file attachments” on page 153, and 9.2, “Preparing the FxD Windows Services System (AFP output only)” on page 154, for specific information related to AFP files.

7.2.3 Additional information

Sometimes, you may find that faxing attachments does not behave as expected. The following sections describe considerations when faxing .txt and .html attachments.

7.2.3.1 Faxing .txt documents

If Notepad is used to process a document or attachment, such as a .txt file, the TIFF file created by FxD Windows Services may contain a page number at the bottom of the page and a temporary file name (that is not part of the original document) at the top of the page as shown in Figure 118.

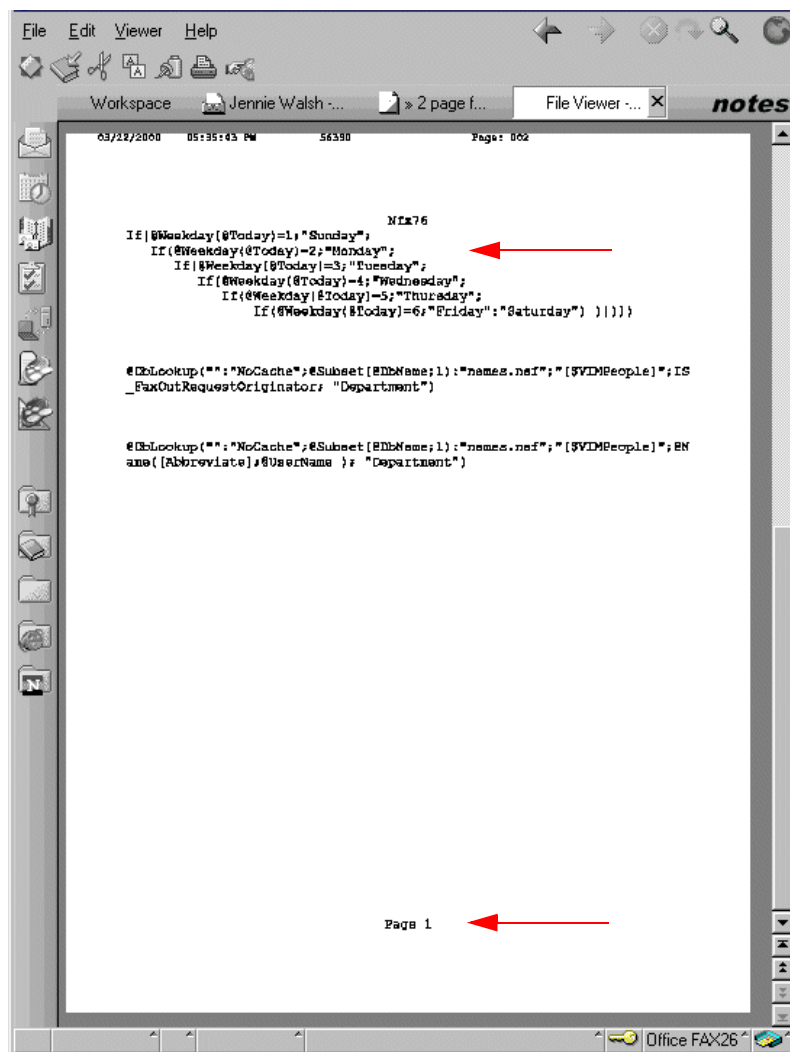


Figure 118. Received text file

If this is a concern, you can remove the header and footer by using one of the following methods:

- Use wordpad.exe instead of notepad.exe as the associated application for the txt extension on the FxD Windows Services System.
- Edit the notepad.exe registry entry on the FxD Windows Services System.

Note that you cannot solve this problem by changing the Notepad Page Setup on the FxD Windows Services System because the value is reset each time the program is run. Editing the registry entry is a permanent solution.

Using wordpad.exe instead of notepad.exe

1. Click **Start->Programs->Windows NT Explorer**.
2. Click **View->Options** and then select the **File Types** tab.
3. Scroll through the Registered file types and select **Text Document**. Click the **Edit** button.
4. Click the **New** button.
5. Specify the following values:
 - Action: `printto`
 - Application used to perform action:


```
"C:\Program File\Windows NT\Accessories\WORDPAD.EXE" /pt "%1" "%2" "%3" "%4"
```
6. Click **OK**.
7. Click **Close**.
8. Click **Close**.
9. Close the Windows NT Explorer window.
10. Open the Convert Server Config database.
11. Select **Create->File Type**. Complete the fields in the resulting window as shown in Figure 119.

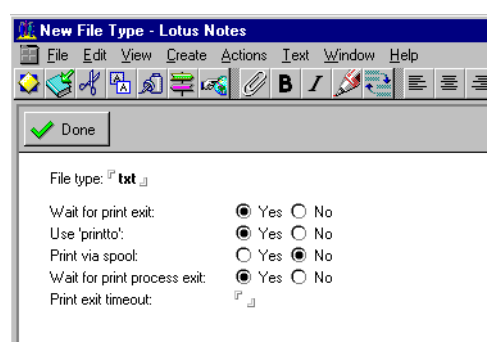


Figure 119. File type document for text document using printto

12. Restart FxD Windows Services and Fax for Domino for AS/400. Refer to 5.7, "Starting and stopping services" on page 72, for more details.

Editing the registry to change the Notepad default setting

1. Click **Start** and then click **Run**.
2. In the Run window, type `regedit` and then press Enter or click **OK**.
3. In the resulting Registry Editor window, edit the registry entry for `HKEY_USERS/.DEFAULT/Software/Microsoft/Notepad` by completing the following steps:
 - a. Right-click **HKEY_USERS** and choose **Expand** or click the plus (+) sign to the left of **HKEY_USERS**.

- b. Right-click **.DEFAULT** and choose **Expand** or click the plus (+) sign to the left of .DEFAULT.
 - c. Right-click **Software** and choose **Expand** or click the plus (+) sign to the left of Software.
 - d. Right-click **Microsoft** and choose **Expand** or click the plus (+) sign to the left of Microsoft.
 - e. Click **Notepad**.
4. Determine if the value szHeader is listed for Notepad.
 - If it is listed, right-click **szHeader**, choose **Modify**, and then ensure that the Value data field is blank.
 - If the szHeader value is *not* listed for Notepad, right-click **Notepad**, select **New**, left click **String Value**, type `szHeader`, and press Enter.
 5. Determine if the value szTrailer is listed for Notepad.
 - If it is listed, right-click **szTrailer**, choose **Modify**, and then ensure that the Value data field is blank.
 - If the szTrailer value is *not* listed for Notepad, right-click **Notepad**, and select **New**. Then, click **String Value**, type `szTrailer`, and press **Enter**.
 6. Close the Registry Editor window and restart the FxD Windows Services System and the *Fax for Domino* server (running on the AS/400 Domino server).

Note

Remember that the above registry changes will affect all users who send faxes with .txt attachments.

If you are using the Print to Fax driver on a Lotus Notes client workstation to fax an application's output directly, you should update the Notepad Page Setup on your client workstation. This update will only affect your workstation and will only affect the current Print to Fax request.

Every time you plan on faxing a Notepad document, and if you do not want the header and footer, you must perform the following steps after starting Notepad but before using **File->Print** to the Print to Fax driver:

1. Click **File->Page Setup**.
2. Remove the entry Page &p from the footer field and remove &f from the Header field.
3. Click **OK**.

You could also edit your registry as described in the previous section. This would be a permanent solution.

7.2.3.2 Faxing .htm and .html attachments

You can fax .htm attachments without any additional configuration. We found that we could fax .html attachments if we:

1. Installed Microsoft Internet Explorer on the FxD Windows Services System

2. Defined Microsoft Internet Explorer to be the default browser to handle .html files
3. Defined Convert Server Config documents as described in C.2.3, "Faxing .html attachments" on page 221.

However, at the time of writing, Netscape on the FxD Windows Services System gave an unknown popup error message ("Found unknown popup 'print'") that we were not able to resolve. In this scenario, you can use either Microsoft Internet Explorer or Netscape Navigator on the originating client PC because it is the FxD Windows Services System that is doing the conversion of the attachment.

If you want to use the Print to Fax driver to fax .html files, you can use either Microsoft Internet Explorer or Netscape Navigator on your Notes client.

7.2.3.3 Attachment order

Attachments are stored in the document separately from the 'hot spot' images and are held in chronological order, that is, in the order they were added to the memo. Therefore, the attachments will appear in the fax in the order they were added, regardless of how they appear to be ordered in the memo.

7.2.3.4 Multiple attachments must have a unique name

There may be problems if you fax a memo with multiple attachments having the same name. Lotus recommends that each application attachment in the same memo have a unique name.

7.3 Fax headers

If you use the AS/400 2761 PCI Analog device for FxD, you can send a header (banner) with the fax to include your company name, the sending time, and so on. The header is specified in the fax device settings in Fax for Domino Administration database (if using separate administration) or Domino Directory/Public Address Book (if using combined administration). The 7852-400 fax modem does not support fax headers.

To create and use a header on a fax page, complete the following steps:

1. If using separate administration, open the Fax for Domino Administration database, or if using combined administration, open the Domino Directory (Public Address Book).
2. Click **Fax**, then click **Devices**, and open the fax device settings.
3. Click the **Edit Device** button.
4. Click the arrow button to the right of the Fax page header field to view a list of available headers as shown in Figure 120 on page 130.
5. In the Select Keywords window, choose an existing header from the list or enter a desired fax header in the New Keyword field. It is a good idea to start your header with several space characters (^) to avoid having it cut off on the left side on the received fax.
6. Click **OK**.
7. Click **Save and Close**.

After you change the information, you *must* restart FxD on the AS/400 system.

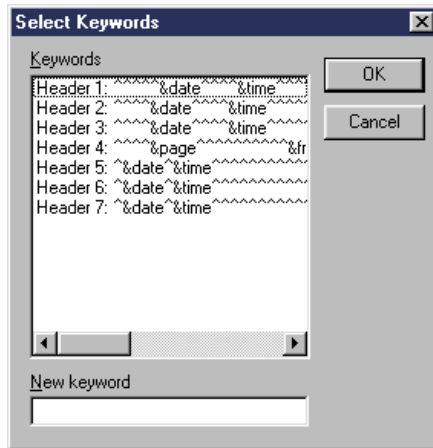


Figure 120. Fax page header selection

The header is now contained in the fax device settings and appears at the top of each page of the fax.

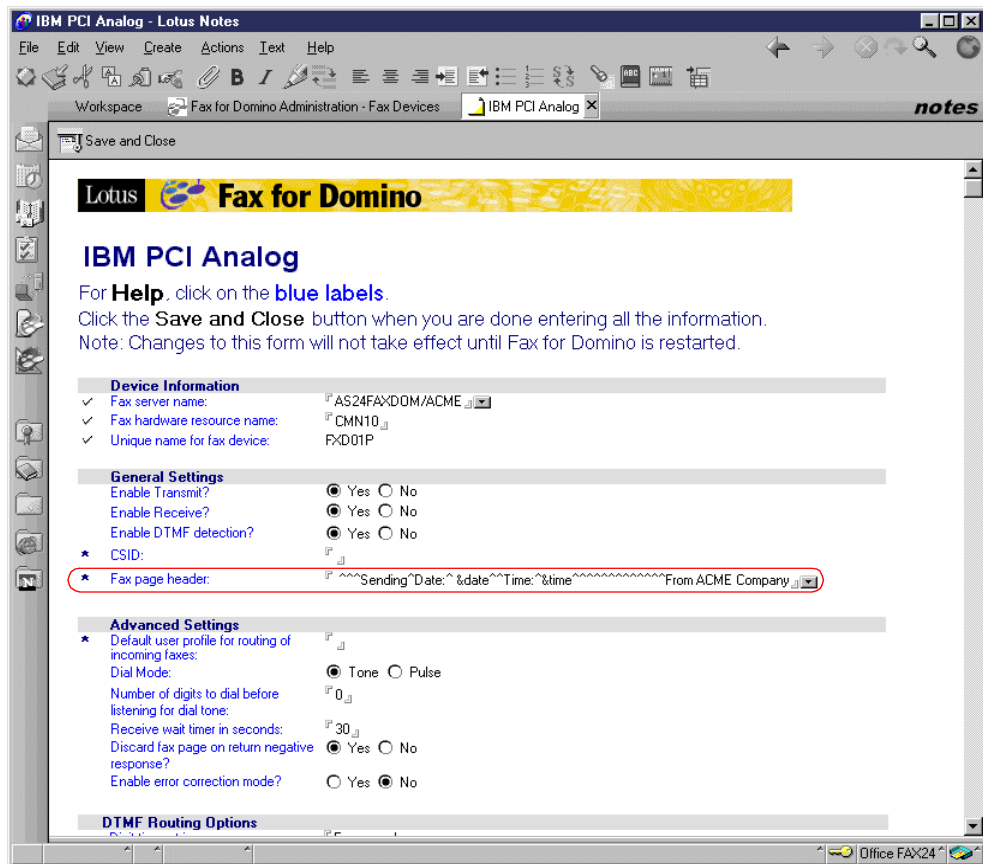


Figure 121. Fax Devices document

As shown in Figure 121, the following text has been specified as our fax header:

```
^^^Sending^Date: ^&date^^Time: ^&time^^^^^^^^^^^From ACME Company
```

The text string will appear in the fax header as:

Sending Date: 03/17/2000 Time: 07:37:14 PM From ACME Company

Variables that you may use in the header are listed in Table 7. You cannot use DBCS in the header.

Table 7. Options for Fax page header

Option	Description
&date	Current date
&time	Current time (hour and minute)
&day	Current day of week
&strmon	Current month
&year	Current year
&12hr	Hour (12-hour clock)
&24hr	Hour (24-hour clock)
&page	Page number
&to	Recipient's CSID
&from	Sender's CSID
&user	User name
^	Blank space

The maximum size fax header is 132 characters, and any fax header string exceeding the fax page width is truncated.

Note

Remember that when planning your fax header, many header formatting options, such as &user, are expanded during processing.

7.4 Routing

When incoming faxes are received, they are deposited into a mail box by FxD. If you do not specify any other form of routing, the fax is delivered to the inbox of the user specified in the Deliver faxes to: field in the DefaultFxDUser Person document or user profile. This fax administrator can view the fax and forward it to the final recipient. You cannot specify DefaultFxDUser as your default fax recipient because DefaultFxDUser doesn't have a mail file.

Incoming faxes may be automatically routed:

- By users' Dual Tone Multi Frequency (DTMF) numbers
- By fax senders' Called Subscriber Identification (CSID) numbers

- By port number
- Manually

If you specify all routing settings, incoming faxes are delivered according to whether delivery information can be found in the following sequence:

DTMF setting->Port setting->CSID setting->DefaultFxDUser setting (manual)

This means that if you set up someone to receive all faxes on a certain port, and the fax comes from a known CSID fax machine, the following actions occur:

1. If DTMF is used by the person sending the fax, DTMF takes priority and determines the recipient.
2. If the fax is sent without DTMF, the Port setting determines who receives the fax.
3. If you remove the Port setting, and the CSID is known, the CSID recipient receives the fax.
4. If the CSID is not known, the user set up in DefaultFxDUser receives the fax.

Note: Direct Inward Dial (DID) routing for the ISDN adapters was not available when this redbook was written.

7.4.1 DTMF routing

You can route incoming faxes to users based on extra routing Dual Tone Multi Frequency (DTMF) numbers supplied by the sender of the fax. The 7852-400 modem does not support DTMF. DTMF refers to the tone you hear when you press a phone key pad. Each tone is comprised of a low and a high frequency tone.

You can't automatically send a fax with DTMF tones with FxD, but if you want to test inbound faxes to FxD, this is how you manually send a fax using DTMF. You need to:

1. Know the DTMF of your recipient.
2. Dial the fax number using the on-hook button or handset associated with the fax machine so that you can hear the tones.
3. When the remote fax device answers and you hear a tone, press the **DTMF** sequence and the # key (unless you have changed the DTMF termination digit) to terminate the sequence. Then press the **send** button and replace the handset. Your fax is routed according to the settings at the recipient site.

To set up the routing of inbound faxes using DTMF, follow these steps:

1. Enable DTMF in the fax device settings. This document is in the Administration database for separate administration and in the Fax view of the Domino Directory for combined administration as shown in Figure 122). You have to restart Fax for Domino for the change to take effect (type `tell fax quit`, wait for it to finish, and then type `load fax` at the Domino server console). You can see that there are a number of options that you can set to customize your DTMF. To see help text associated with each option, click on the prompt.

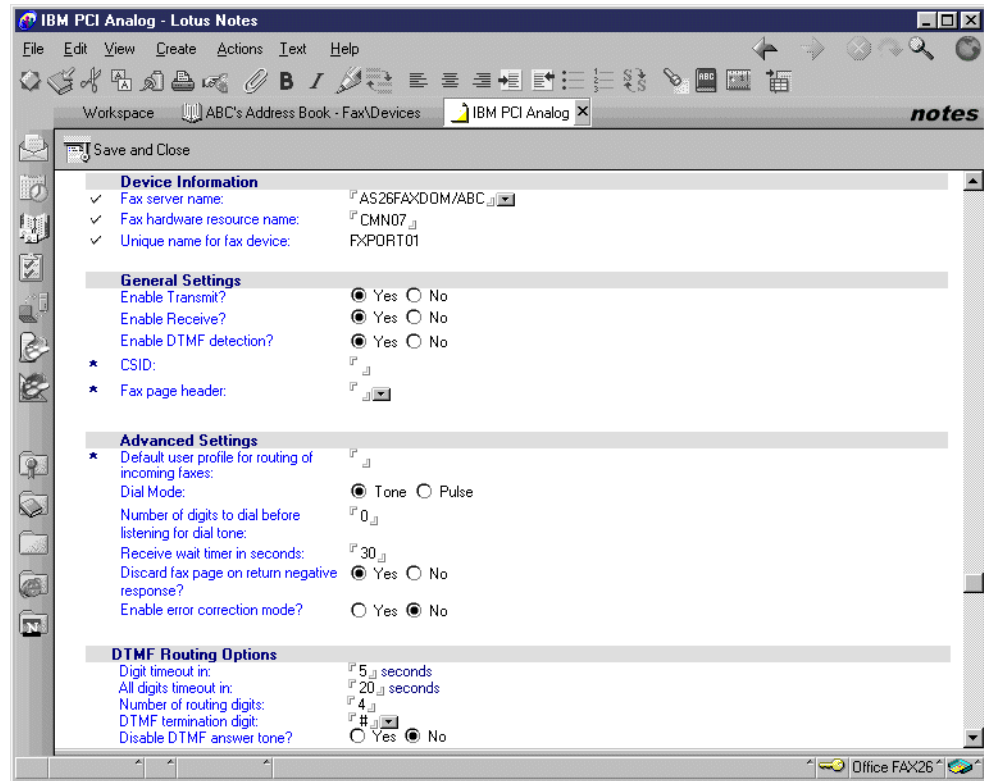


Figure 122. DTMF setting in Fax Devices settings

2. Assign a code sequence to each of the users who is to receive faxes using DTMF. A person's telephone extension number could be a suitable number to use.
3. Edit the user profile of the user to receive the fax and enter the DTMF sequence associated with this user. This will be in the Person document for combined administration and the User Profile of the Administration database for separate administration. See Figure 123 on page 134.
4. Enter in a name in the Deliver faxes to: field.

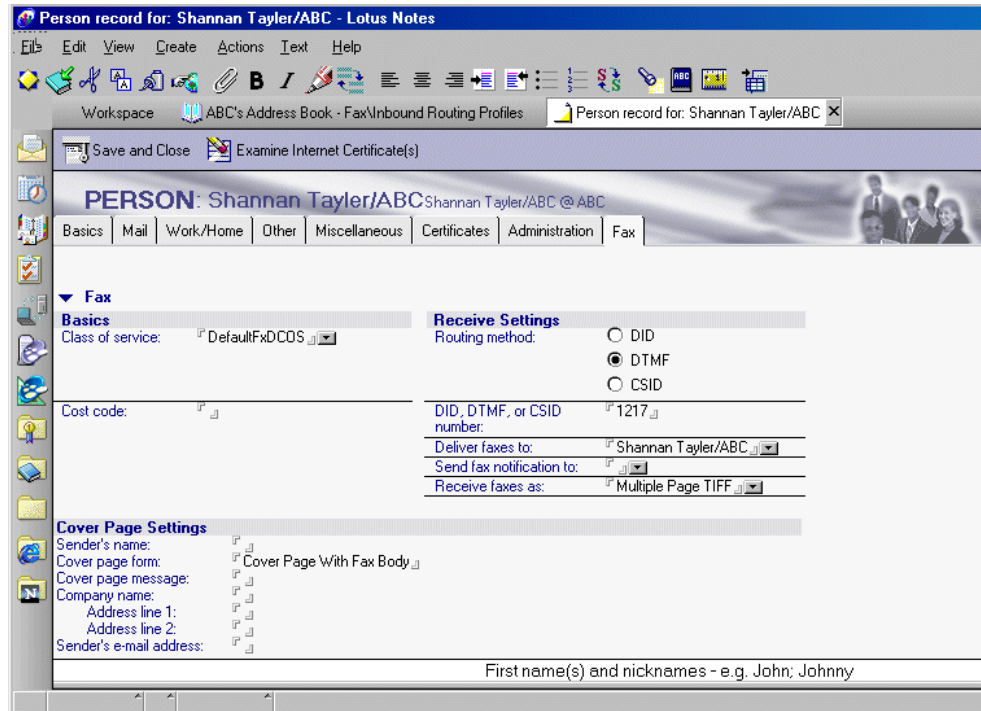


Figure 123. DTMF setting in Person document: Combined administration

7.4.2 CSID routing

You can route all incoming faxes coming from the same remote Called Subscriber Identification (CSID) number to the same address or addresses. The CSID is generally the phone number of the outside fax device and appears on the fax header that most fax machines print on incoming faxes. It can also be an alphanumeric character string. For example, it could be a descriptive title for the department of a company that does business with your organization. The CSID can be up to 20 characters long. Anything longer is truncated.

If you are having problems determining the CSID being used, look at a previously delivered inbound fax from that company. You may be able to identify the CSID from the banner at the top of the fax.

To use CSID routing, you must create a user profile or add information to existing user profile settings for each CSID number that you want to have automatically routed. If you use combined administration, create a new Person document or update an existing Person document with fax user profile settings. If you use separate database administration, create a User Profile document or modify an existing User Profile document. The user name in the new document you create can be the name of the source of the faxes (for example, "Acme Co."). Then, specify the CSID number for the source and the address(es) to which FxD will deliver incoming faxes.

Figure 124 shows an example of setting a CSID in an existing Person document and routing the fax to two people.

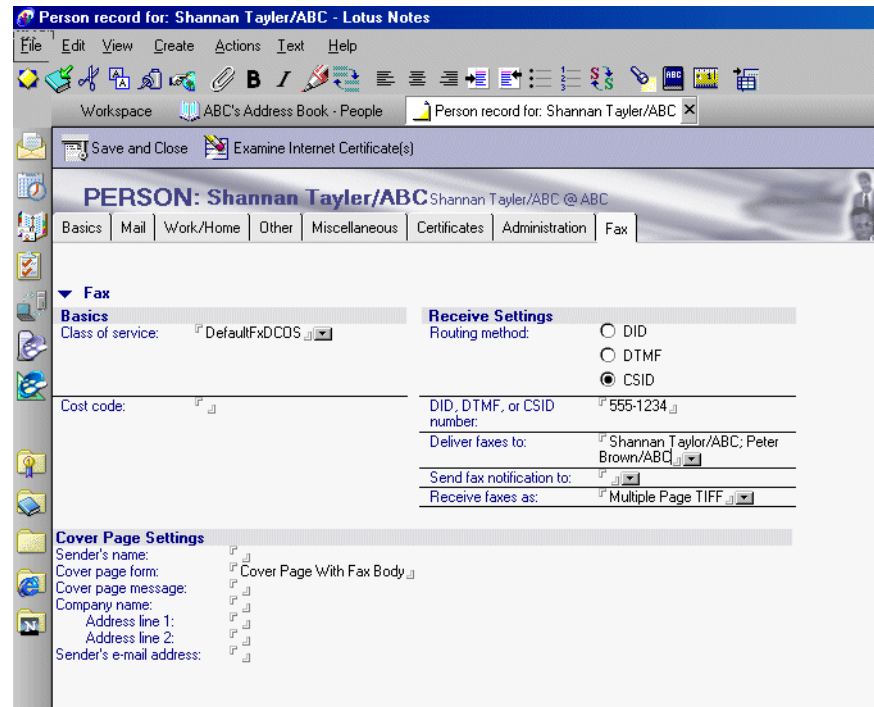


Figure 124. Defining inbound CSID routing using existing person

Figure 125 shows an example of setting a CSID in a new Person document defined specifically for the company sending the fax.

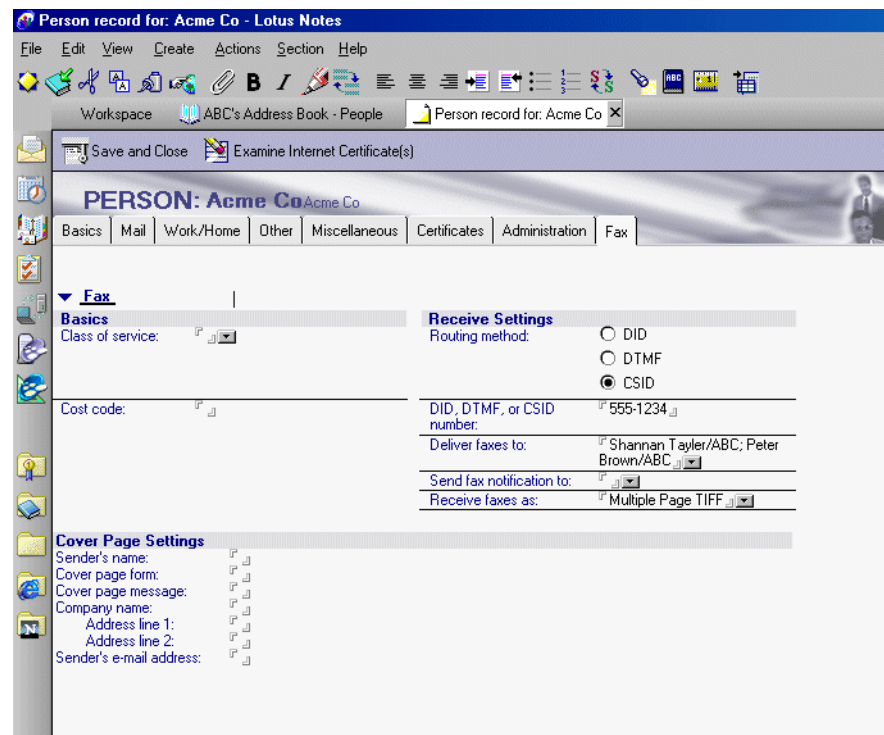


Figure 125. Defining inbound CSID routing using specific record

The CSID field that you see in the Fax Device screen (number 1 on Figure 126) is used for outbound faxes and is the CSID that you are sending when you send a fax.

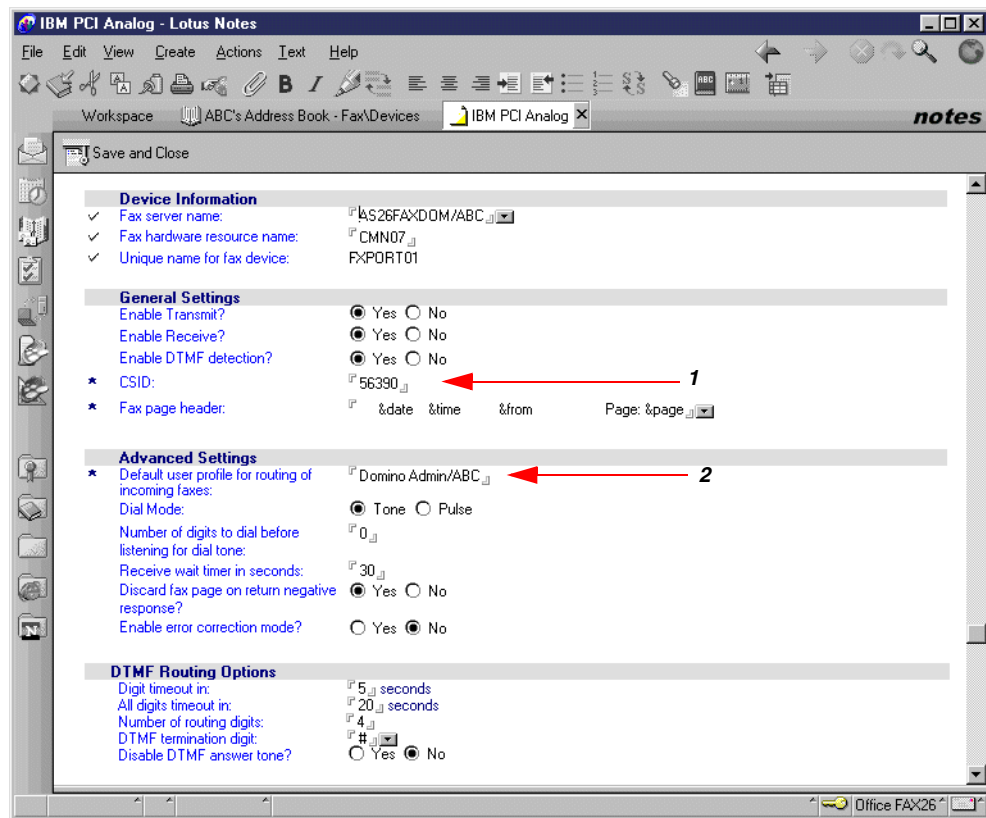


Figure 126. CSID setting in fax device settings...Combined administration

7.4.3 Port routing

You can route all faxes coming into a particular port to the same addresses. To do this, use the Advanced settings in the fax device settings to assign a user profile for that port. Faxes coming in to this port will be forwarded to the user profile specified in this field. Only one name can be specified in this field. Fax for Domino needs to be restarted on the AS/400 system to make the change effective (see number 2 in Figure 126).

7.4.4 Manual routing

You can route all incoming faxes that aren't routed by one of the other methods to a fax administrator who can then look at each fax and send it to the correct user. To do this, specify the administrator's address in the Deliver faxes to: field in the user profile settings of your default user profile. You should use a person who has a mail file so that the faxes can be delivered. See Figure 127 for an example.

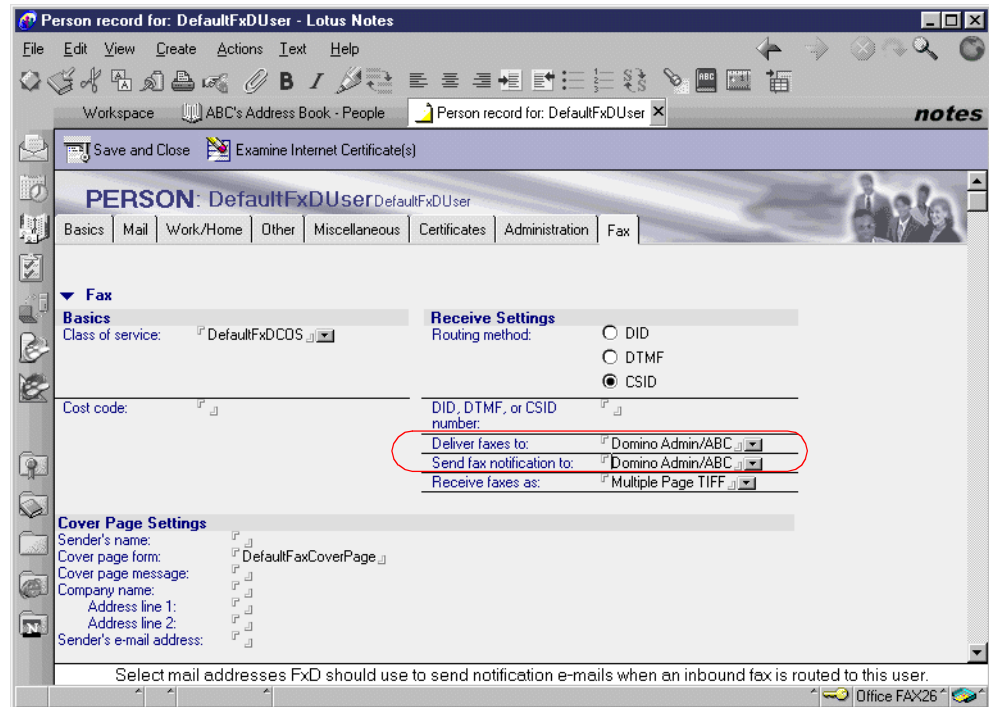


Figure 127. DefaultFxDUser's Person document...Combined administration

7.5 Telephone number translation

FxD translates telephone numbers supplied in fax requests into the local dialing sequence. This allows users to enter complete phone numbers even though they are unsure of the location of the FxD server relative to the target fax recipient. Fax for Domino translates the specified sequence of digits only when they are found at the beginning of a telephone number. Also, as shown in Figure 129 on page 138, Fax for Domino has the ability to use the plus sign (+) for phone number translation. It works when using the Fax to field too.

When you enter a fax/phone number in the Personal or Public Address Book (Domino Directory), a plus sign (+) is appended to the beginning of the number if the number starts with the number 1. For example, if you enter the phone number as 19785551234, Notes automatically parses it to +1 (978) 555-1234. If the FxD administrator sets up the plus sign to translate to 011, 011 is appended to the beginning of the number. In this case, a delivery failure report is generated because the intended phone number is a local number, not an international number.

Say you are in Boston, and your fax server is in Rochester. You do not know that your fax server is in Rochester. If you wanted to send a fax to someone in Rochester, you would probably send it to 1-507-555-1234. But, since your fax server is in Rochester, it is not a long distance call. Therefore, you would make a telephone translation that would translate all 1-507-XXX-XXXX to just XXX-XXXX.

To set up telephone number translation, complete the following steps:

1. If you are using combined administration, open the Domino Directory (Public Address Book), or if you are using separate administration, then open the Fax for Domino Administration database.
2. Click the Fax section to expand it. Then, click **Telephone number translation**.
3. Click **Add Fax Number Translation**
4. Select the server name and then enter the appropriate data in the Telephone number to translate: and Translate to: fields. Our example is shown in Figure 128.

Figure 128 shows the 'Translate: 123' form in Lotus Notes. The form is titled 'Fax for Domino Telephone Number Translation: 123'. It contains the following fields:

- Server name:** as26faxdom/ABC
- Telephone number to translate:** 123
- Translate to:** 5
- Comments:** Translation for using extension

Figure 128. Telephone Number Translation

5. Click **Save & Close**. As shown in Figure 129, the new telephone number translation is displayed.

Figure 129 shows the 'View of Telephone Number Translation' in Lotus Notes. The view displays a table with the following data:

Fax Server Name	Translate From	Translate To
as26faxdom/ABC	123	5
	+1 23	5
	+	011

Figure 129. View of Telephone Number Translation

Do not define a translation rule for a prefix that is specified in the fax server settings. For example, if users must dial 9 to reach an outside line, either specify 9 as the prefix in the fax server settings, as shown in Figure 130, or define a translation rule to replace 1 with 91.

Dialing	
Number of retries:	2
Retry delay (in seconds):	100
Prefix:	9
Minimum number of dialing digits before prefix is added:	0
Delay character:	~

Figure 130. Dialing setting in the Server document

7.6 Cost codes

FxD will record the cost code in FxD Log database entries for the user's outgoing faxes. Cost codes can be defined in User Profile documents in the Fax for Domino Administration database (separate administration) or Person documents in the Domino Directory (combined administration).

The cost code can be whatever you prefer to use. For example, a department code, such as A001, can be used. FxD comes with some predefined reports for the log including a report on fax usage by cost code as shown in Figure 131. This is now effectively a report by department.

Cost Code	Originator	Date	Remote CSID
A001	Shannan Tayler		
B001	Jennie Walsh		
(Not Categorized)			

Figure 131. Cost Code view in Log database

To set a cost code, follow these steps:

1. Open the Domino Directory database (Combined administration (names.nsf)) or the Fax for Domino Administration database (Separate administration (nfxadmin.nsf)).
2. Open **Person** or **User profile** View and select a user.
3. Click **Edit Person** and edit the Cost code under the Fax tab (Figure 132 on page 140). The cost code can be 32 characters long.
4. Click **Save and Close**.

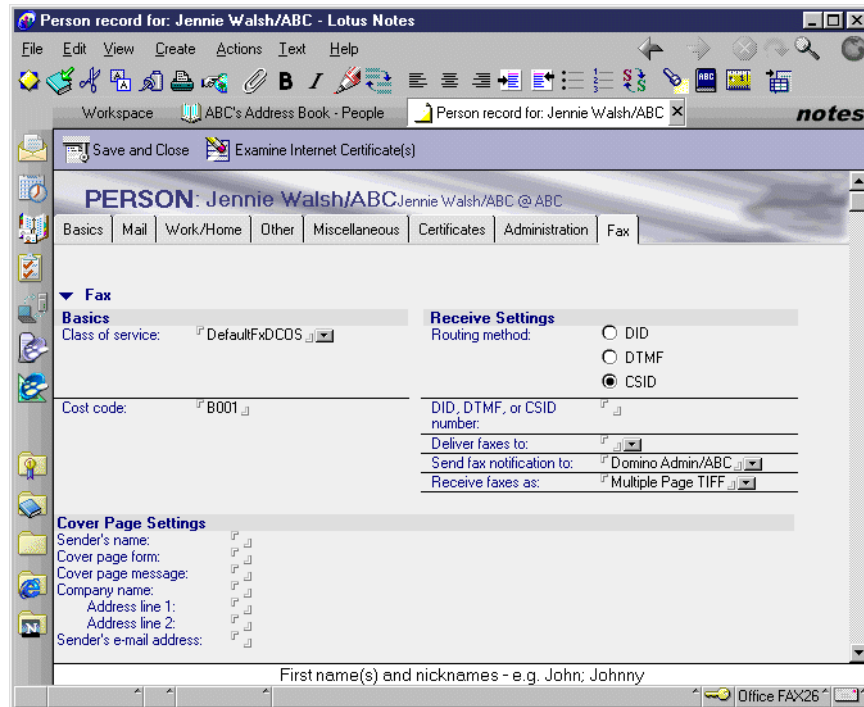


Figure 132. Cost code setting in the Person document...Combined administration

If you change the cost code of a user, the change does not affect existing log entries.

You can also create your own reports to tailor this information. For example, we defined a new view called New COST that summarizes the transmission time for successful faxes by cost code. Because the time reported here includes various intermediate times, it should not be seen as an indication of telephone line usage.

If you want to create new view of the Fax for Domino Log, follow these steps:

1. Open the Fax for Domino Log database (nfxlog.nsf) in the Domino Designer client.
2. Select **Views**
3. Press **New View**.
4. Specify a View name, type, select a location for the new View, and click **OK**.
5. Define the View.
6. Click **File->Close** and save the view.

Cost Code	Originator	TransTime	FAX No.	Date
▼ A001		220		
	▶ Pete Smith	220		
▼ B001		411		
	▶ Jennie Walsh	320		
		80	57068	03/28/2000 04:07:12 PM
		70	57068	03/28/2000 04:11:12 PM
		80	57068	03/28/2000 04:24:12 PM
		90	57068	03/28/2000 04:29:12 PM
	▶ Justine Test	91		
		631		

Figure 133. Sample view using Cost Code

As you see in Figure 133, this view shows the total of the field IS_FaxTransTime for faxes successfully delivered. The Select statement used in the View is:

```
SELECT ((Form = "LogFaxEntry") & (IS_RequestNumber != "0") &
(IS_RequestType="OUTFAX") & (IS_ErrorCode = 504 ) & IS_FaxOutCostCode !="")
```

We are not reporting on faxes from users without cost codes.

The fields used are:

Cost Code	IS_FaxOutCostCode
Originator	@ If (IS_RequestOriginator != "" ;@ Name([CN];IS_RequestOriginator) ; @ If(IS_RequestType="INFAX" ; IS_FaxRemoteCSID ; "Unknown"))
TransTime	IS_FaxTransTime
Fax No.	IS_FaxPhoneXlate
Date	@ If(@IsAvailable(Fax_EndProcTime) ; Fax_EndProcTime ; NFX_EntryTime)

Chapter 8. National language support

Fax for Domino for AS/400 Release 4.1 is available only in English. However, it can be used for sending faxes from non-English Notes clients. In this chapter, we look at how Notes clients using other languages can use Fax for Domino. We look first at how other Roman character-based languages, such as Spanish and German, can fax the special characters that are part of their alphabets. Then, we examine how a double-byte character set (DBCS) language, such as Japanese, can be supported by Fax for Domino.

8.1 Roman character-based languages

To fax Roman type characters in Notes memos and attachments, you can use either a national language version of Windows NT 4.0 and the Notes client or an English version of Windows NT 4.0 and the Notes client on your FxD Windows Services System.

We are assuming in this chapter that the person wanting to send a fax is using an NLS version of Notes. It is also possible to use an English client to send non-English language characters.

8.1.1 Installation and setup

For installation and setup of Fax for Domino for AS/400 on a Roman character type language AS/400 systems, follow the steps described in Chapter 4, "Installation" on page 35. You can see in Figure 134 on page 144 that the Fax Options and Help buttons are in English. The administrator sees that the configuration information in the Domino Directory or Administration database are also in English. Users find that the help database is in English as well.

You can install English or NLS versions of your applications on the FxD Windows Services System. It is the fonts in Windows NT that provide the special characters required.

8.1.2 Sending faxes

You can use accented or umlaut characters (for example, é, ì, â, ö, and û) in the Subject and Fax to fields on your Notes Memo (see Figure 134 on page 144 for a German example). You can see that the Fax to: field is in English.

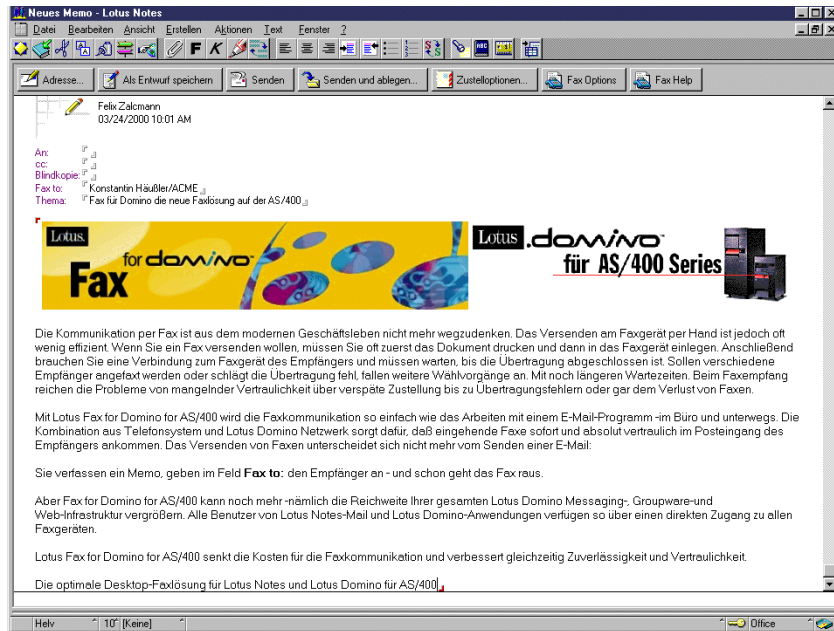


Figure 134. German Notes memo

The Fax to: field supports type ahead addressing in the same way as a To: field does. It works even if you use umlauts in the Fax to: field.

You can also fax attachments with umlauts in the name of the attachment. See Figure 135 for an example.

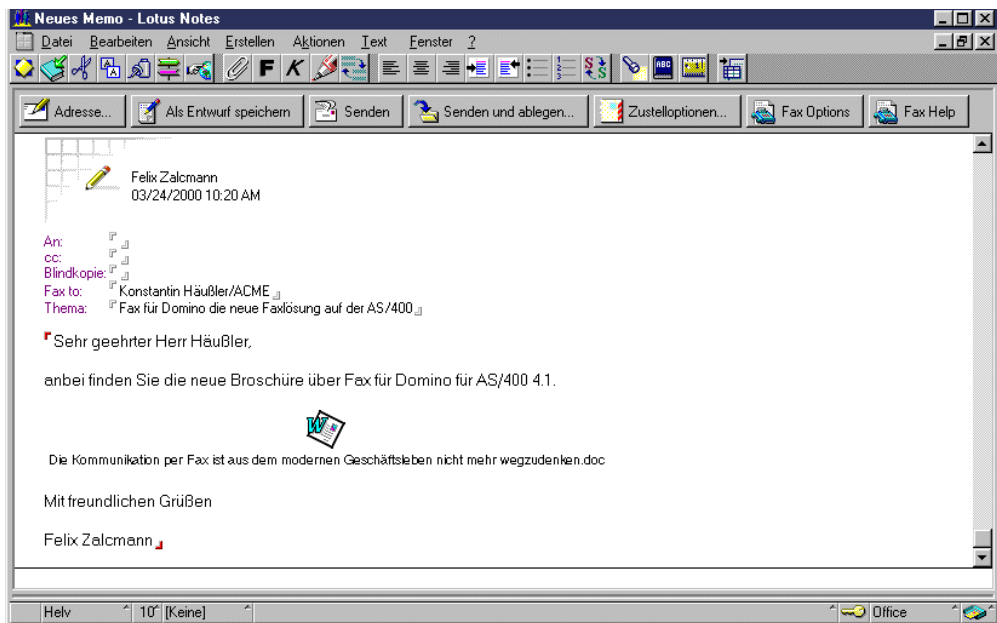


Figure 135. German Notes memo with umlauts in the attachment name

If the address you are using in the Fax to: field contains umlauts, you will also be able to see them in the Fax for Domino Spool database (Figure 136).

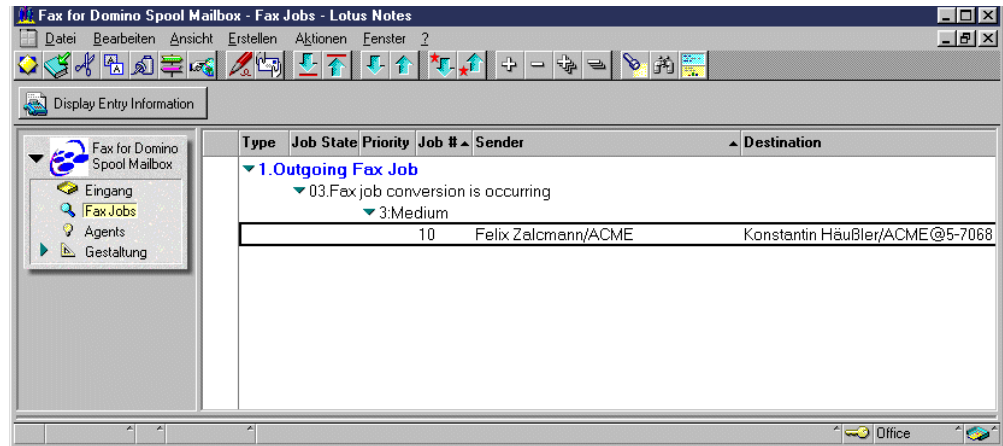


Figure 136. Fax for Domino Spool database with umlauts in destination address

8.1.3 Receiving faxes

Fax for Domino can receive faxes containing accented and umlaut characters. All received fax documents are stored as TIFF images and you can view them directly from your Notes client. See Figure 137 for an example in German.

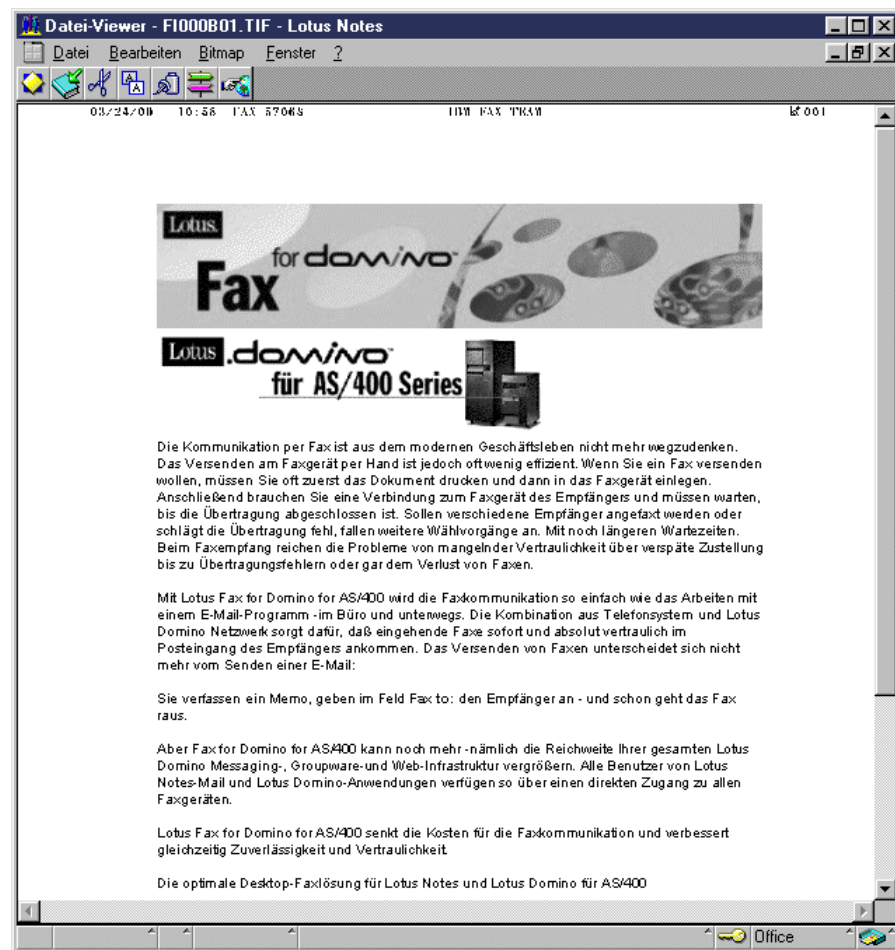


Figure 137. Inbound German fax document

8.2 Double-byte languages

To fax DBCS Notes memos and attachments, you need to install a Japanese version of Windows NT 4.0 and a Japanese Notes client on the FxD Windows Services System. You then install the FxD Windows Services as you would for other languages. You must install a DBCS version of any PC product that will be used to produce DBCS attachments on the FxD Windows Services System. The FxD Windows Services System can also be used for faxing Notes memos and attachments from SBCS clients as well as DBCS attachments containing Roman language characters. The Japanese character set, for example, contains fonts, such as MS Gothic, that enable characters, such as those you are reading now, to be included in a Japanese word processing document.

A Japanese client can also send in Roman characters using an English FxD Windows Services System. In this case, Japanese characters cannot be faxed.

8.2.1 Installation and setup

After you install FxD on your AS/400 server, you need to install a Japanese version of software for all components except for FxD Windows Services. Set up your FxD Windows Services System the same as for an English system.

8.2.1.1 Installation on Windows NT

1. Follow the English installation instructions but use Japanese Windows NT 4.0 and a Japanese Service Pack (minimum level is SP4 or higher).
2. Install the Japanese Lotus Notes Client (we used R4.6.6b) and set it up the same as you would for an English client.
3. Install FxD Windows Services System.
4. Install the DBCS PC applications that are required to support faxing of attachments. This may include Japanese versions of Microsoft Word or Lotus Word Pro.

8.2.1.2 Changing the templates on the server for DBCS client

If you are using a Japanese AS/400 system, you do not have to do this step, because your templates will be modified on the Domino server as part of the setup.

Remember, during FxD server setup, FxD adds two subforms (\$LotusFaxMemoSubform and \$LotusFaxOptionsSubform) to the mail template (mail45.ntf, mail46.ntf, mailc46.ntf, or mail50ex.ntf) and one subform (\$LotusFaxLocationSubform) to the personal name and address book template (pernames.ntf) on the server.

If you are using a Single Byte Character Set (SBCS) AS/400 system (for example, English) and have installed FxD, you can create DBCS templates on the server using client templates. To do this, follow these steps:

1. Stop FxD.
2. Change the mail template's name (mail46.ntf, for example) on the server for later use by English clients. Do these steps:
 - a. On any command line, type `WRKDOMSVR` and press Enter.

- b. On the resulting screen, type option 12 to display the contents of the server's data directory and press Enter.
- c. Type option 7 next to the template file you want to make a copy of and press Enter.
- d. Type in the new name, as shown in Figure 138, and press Enter.

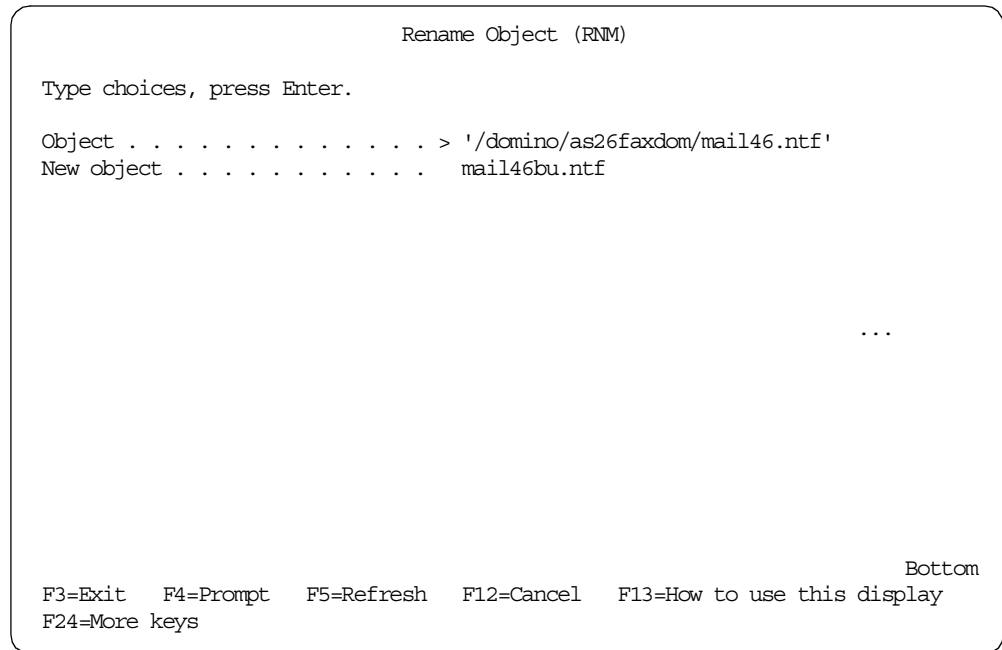


Figure 138. Rename Object command

- e. Your template may disappear from the list. Press F5 to refresh the screen. Your template name will reappear.
3. Perform the same tasks from step 2 for pernames.ntf.
4. Send your Japanese or other DBCS Notes client's mail template and personal name and address book template to the server.
You can use ftp or Client Access/400 to perform the copy.
5. Change the owner of the templates to QNOTES if you use ftp:
CHGOWN OBJ('/domino/as26faxdom/mail46.ntf') NEWOWN(QNOTES)
6. Open the Fax for Domino Setup database.
7. Click **Done** (no need to change).
Rerunning setup updates any of the mail templates, mail45.ntf, mail46.ntf, mailc46.ntf, mail50ex.ntf, or pernames.ntf, that are found on the system. After setup is rerun, you have DBCS versions mail46.ntf and pernames.ntf on the server with FxD subforms.
8. Start FxD.

If you support Notes clients using different languages on your Domino server, you should now change the names of the new DBCS templates, for example, mail46J.ntf and pernamesJ.ntf. Then, rename the English templates back to their original names. You can specify the template to be used when you create a new user and new mail file (on R5 only).

8.2.1.3 Setting up your Notes client

Your Notes users who want to send faxes have to complete the following steps:

1. Refresh the design of the personal address book (names.nsf on local) from the FxD server with the DBCS version of the template.
2. Change the Location document in the personal address book (names.nsf on local) to include the name of the Fax Domain (Figure 139).

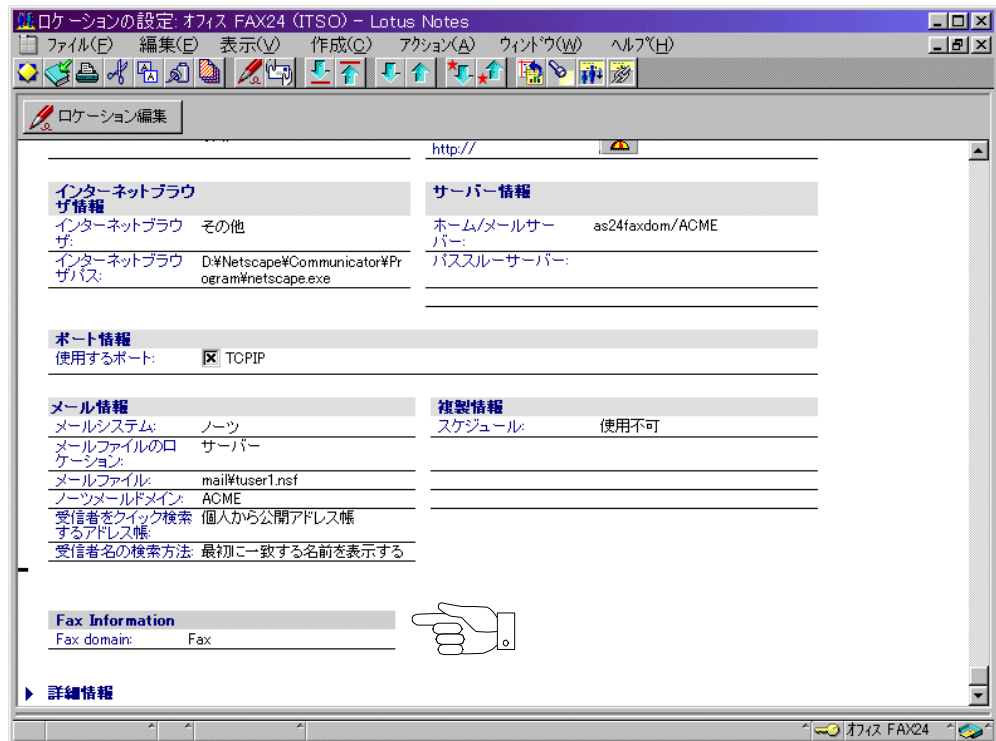


Figure 139. Location document on Japanese client

3. Replace the design of the Notes mail database from the FxD server with DBCS version template.

Note

If you have multiple templates, select the Japanese template by checking the template name to be used (Figure 140).

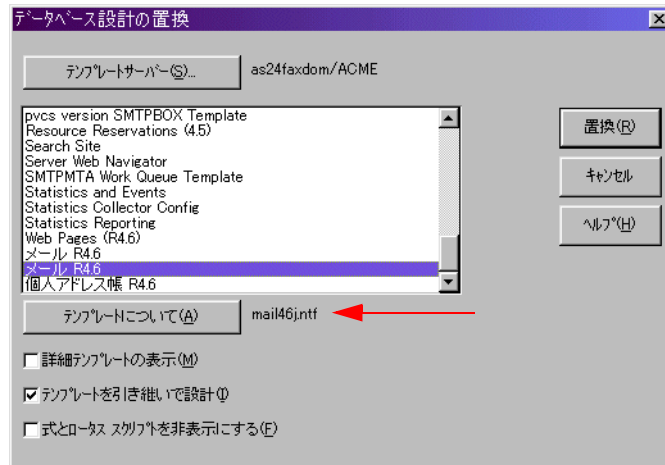


Figure 140. Replace design

You can now see the Fax to: field and the Fax option buttons (Figure 141). Notice that Fax Option and Fax Help are shown in English.

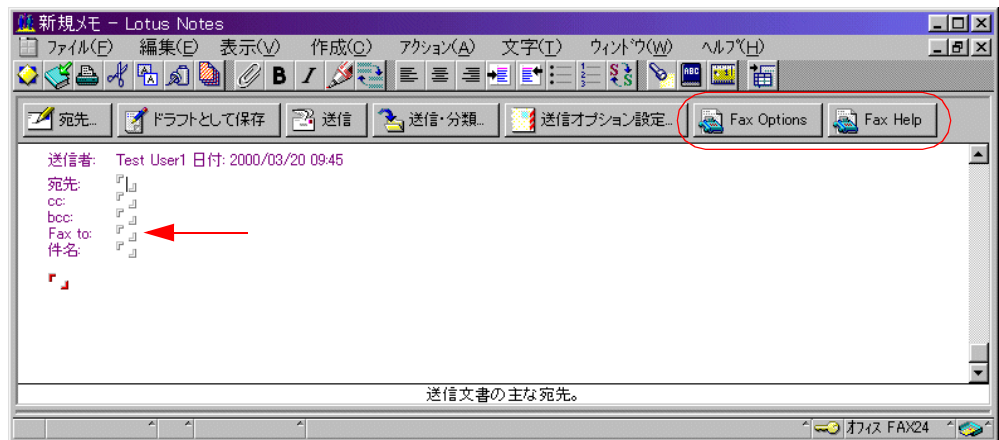


Figure 141. New Memo on Japanese client

8.2.1.4 Other setup considerations and limitations

You can also create a Japanese cover page (see 7.1.2, “Changing the cover page design” on page 117). If you copy or use the sample cover pages in the Fax for Domino Cover Pages database, you should change the field font to some font that can support DBCS. By default, fields in this form use Arial, which can't print DBCS. We suggest you use MS Gothic. Use your Notes designer client to change the font used for the fields.

You cannot use DBCS characters on the banner (see 7.3, “Fax headers” on page 129).

You can specify DBCS characters for the Windows Popup document in Convert Server Config database if the convert server send a error message about an unknown popup. The specific window title that generated the unknown popup is logged in Convert Server Log database. You should specify the window title exactly as it is in the log message (see Appendix C, “Handling non-standard attachments” on page 215).

Note

If you create a new cover page containing a Body field, MS Gothic font strings are changed into MS Mincho in the sent fax by FxD with Domino R4.6. To avoid this, use a cover page without the Body field. You can use the DefaultFaxCoverPage as your model.

8.2.2 Sending faxes

You can use Japanese characters in the Subject and Fax to fields on your Notes Memo (Figure 142).

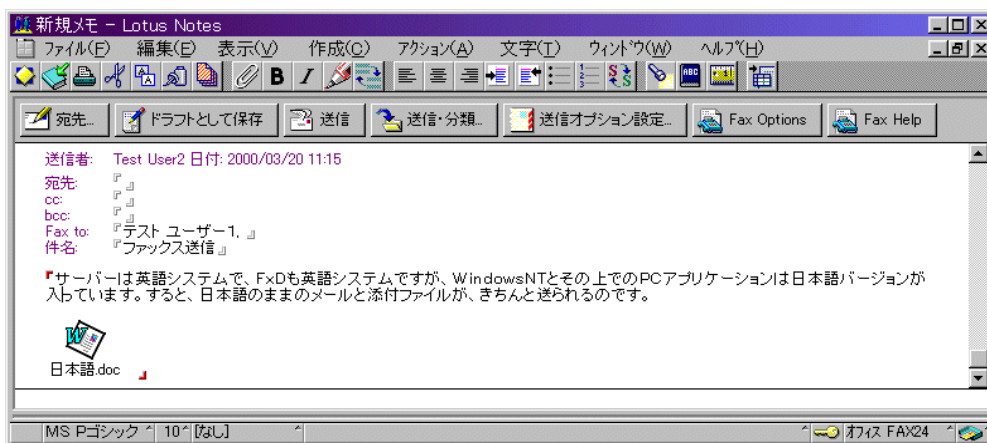


Figure 142. New memo on the Japanese Client

The Fax to: field supports type ahead addressing in the same way as a To: field does.

Also, if you are using a DBCS entry for a Business Card in your local Names and Address book, you don't need to specify the fax number in the Fax to: field because the information is retrieved from your local names.nsf file.

If the administrator of FxD uses an English client, the To: field doesn't appear correctly in the spooled database (Figure 143), but the fax is sent correctly.

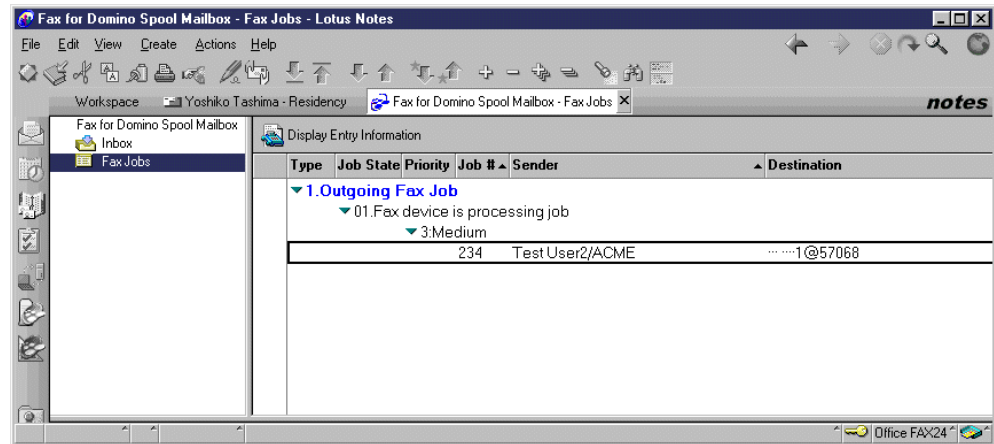


Figure 143. Spool mailbox with Japanese fax

8.2.3 Receiving faxes

Receiving Japanese faxes is easy because the fax is received as a TIFF image file. Even if you use an English FxD Windows Services System, you can receive a Japanese fax in your mail file, and you can see it on Japanese client.

Chapter 9. Faxing from the AS/400 system

We have shown you in previous chapters how to fax Notes memos and PC files as attachments. In this chapter, we discuss how to fax spooled files from OS/400. In this chapter, we cover faxing:

- SNA Character String (SCS) spooled files as attachments to Lotus Notes memos
- Advanced Function Printing (AFP) spooled files as attachments to Lotus Notes memos
- SCS and AFP spooled files using the Print to Fax Driver
- SCS and AFP spooled files from an AS/400 application
- OfficeVision/400 documents and the use of the Send Distribution (SNDDST) command.

To read more about AS/400 spooled files and AFP output in particular, see *IBM AS/400 Printing V*, SG24-2160.

9.1 Prerequisites for faxing spooled file attachments

Faxing spooled files as attachments is a two-step process, which consists of:

1. Copying the spooled file to your PC.
2. Sending a Memo with the attachment to the fax domain.

You use Operations Navigator and AFP Workbench Viewer.

It may also be possible to use third-party products that support transfer of AS/400 spooled files to the PC environment. Each product would have to be studied to determine if it could be used to produce and/or send suitable PC files.

To fax spooled files using the techniques described here, you need to use a client workstation with the following software installed:

- Windows 95, Windows 98, or Windows NT (we did not try Windows 2000)
Lotus has announced publicly that they will support Notes and Domino R5 running on Windows 2000 Professional/Windows 2000 Server within 90 days of Windows 2000 general availability. This is outside the time frame in which this redbook was written.
- Operations Navigator

If you are faxing AFP output, you also need to install an AFP viewing product on the FxD Windows Services System. This can be one of the following options:

- IBM Client Access Express version of the AFP Workbench Viewer
- IBM AFP Workbench for Windows NT and 95

Before installing and configuring the AFP viewer, make sure that you are a member of the Windows NT administrators group for the FxD Windows Services System. You should use the same user ID that you used to install and set up the FxD Windows Services System. If you do not use the appropriate privileges, you may experience problems converting AFP attachments.

Follow the instructions that came with IBM Client Access Express or IBM AFP Workbench for Windows to install the AFP viewer application on the FxD Windows Services System. Then, install the latest level of fixes for the AFP viewer.

For Client Access Express, see the Web site at:

<http://www.as400.ibm.com/clientaccess>

Select **Service Packs**.

If you can't find a file `ftdwpert.exe` on your PC, you also need the latest version of the viewer which is located at:

<ftp://ftp.software.ibm.com/as400/products/clientaccess/win32/v3r2m0/files/>

The latest version is currently in the file named `ftd149plus` and contains the file `ftdwpert.exe`. If you cannot find this file, contact IBM Support and tell them you need the file `ftdwpert.exe`. This only applies to Client Access Express.

For AFP Workbench for Windows NT and 95 fixes, go to the Web site at:

<http://www.printers.ibm.com>

Select **Support->Software Information->AFP Workbench for Windows and OS/2**.

See 9.2, "Preparing the FxD Windows Services System (AFP output only)" on page 154, for additional setup requirements for faxing AFP output.

The procedures described here were verified using:

- IBM AFP Workbench for Windows 95 and NT (5639-F14) V1.49
- Client Access Express for Windows (5769-XE1) Service Pack SF58121

9.2 Preparing the FxD Windows Services System (AFP output only)

After you install the AFP Viewer application, you must update the Windows NT registry on the FxD Windows Services System. Although many applications do not require special steps to enable faxing of their output, both Client Access Express and AFP Workbench Viewer require that you perform some additional tasks.

Figure 144 is a listing of the file `ca_afp_vwr.reg` that you can use to update the registry of the FxD Windows Services System for use with the AFP viewer of Client Access Express.

Figure 145 is a listing of the file `wkb_afp_vwr.reg` that you can use to update the registry of the FxD Windows Services System for use with AFP Workbench for Windows. Copies of both files are included with the downloadable material associated with this redbook. See Appendix E, "Using the additional material" on page 239, for more information on how to obtain the files.

```

REGEDIT4

[HKEY_CLASSES_ROOT\.afp]
@="afpfile"

[HKEY_CLASSES_ROOT\afpfile]
@="Advanced Function Print"
"EditFlags"=hex:00,00,00,00

[HKEY_CLASSES_ROOT\afpfile\shell]
@=""

[HKEY_CLASSES_ROOT\afpfile\shell\open]
@=""
"EditFlags"=hex:01,00,00,00

[HKEY_CLASSES_ROOT\afpfile\shell\open\command]
@="\"C:\\Program Files\\IBM\\Client Access\\AFPViewr\\FTDWINVW.exe\" %1"

[HKEY_CLASSES_ROOT\afpfile\shell\Print]
"EditFlags"=hex:01,00,00,00

[HKEY_CLASSES_ROOT\afpfile\shell\Print\command]
@="\"C:\\Program Files\\IBM\\Client Access\\AFPViewr\\FTDWPRT\" /p %1"

```

Figure 144. *ca_afp_vwr.reg*

```

REGEDIT4

[HKEY_CLASSES_ROOT\.afp]
@="AFP_auto_file"

[HKEY_CLASSES_ROOT\afp_auto_file]
@="Advanced Function Print"
"EditFlags"=hex:00,00,00,00

[HKEY_CLASSES_ROOT\afp_auto_file\shell]
@=""

[HKEY_CLASSES_ROOT\afp_auto_file\shell\open]
@=""
"EditFlags"=hex:01,00,00,00

[HKEY_CLASSES_ROOT\afp_auto_file\shell\open\command]
@="\"C:\\Program Files\\AFP Workbench 32\\FTDWINVW.exe\" %1"

[HKEY_CLASSES_ROOT\afp_auto_file\shell\Print]
"EditFlags"=hex:01,00,00,00

[HKEY_CLASSES_ROOT\afp_auto_file\shell\Print\command]
@="\"C:\\Program Files\\AFP Workbench 32\\FTDWPRT.exe\" /p %1"

```

Figure 145. *wkb_afp_vwr.reg*

Complete the following steps for the version of the AFP viewer that you installed. Do *not* double-click on the file expecting to edit it. You will, in fact, update your Windows registry, which may not be what you want to do.

IBM AS/400 Client Access Express for Windows

1. Download the Client Access registry file (ca_afp_vwr.reg).
2. If you installed the viewer application in any directory other than the default directory, update the registry file to specify the correct directory. The default directory is: C:\Program Files\IBM\Client Access\AFPSViewr. To update the registration file, follow these steps:
 - a. Right-click the registry file (ca_afp_vwr.reg) and select **Edit**.
 - b. Make the necessary changes and save the file. Notice that the path name is specified in two places in the file, and the directory names are separated by two back slashes.
3. To update the Windows NT registry, double-click the registry file (ca_afp_vwr.reg).

IBM AFP Workbench for Windows NT and 95

1. Download the AFP Workbench registry file (wkb_afp_vwr.reg).
2. If you installed the viewer application in any directory other than the default directory, update the registry file to specify the correct directory. The default directory is: C:\Program Files\AFP Workbench 32. To update the registry file, follow these steps:
 - a. Right-click on the registry file (wkb_afp_vwr.reg) and select **Edit**.
 - b. Make the necessary changes and save the file. Notice that the path name is specified in two places in the file, and the directory names are separated by two back slashes.
3. To update the Windows NT registry, double-click the registry file (wkb_afp_vwr.reg).

9.3 SCS spooled files as attachments

You do not need to add anything to the FxD Windows Services System to fax an SCS spooled file as an attachment to a Lotus Notes memo.

To fax an SCS spooled file, follow these steps:

1. Use Operations Navigator to connect to the AS/400 system with the spooled file you want to fax.
2. Select **Basic Operations**.
3. Select **Printer Output**.
4. Select the SCS file you want to fax and drag it to your desktop. This creates a file of type .txt and converts the data to ASCII. You can also copy it to any other location on your PC.
5. This file can now be attached to any rich text field in any Domino document, including a Notes Memo and sent.

You may notice extraneous information at the top or bottom of your fax. This is the header and footer put in by Notepad when it converts the .txt files to TIFF. For information on removing this information, see 7.2.3.1, "Faxing .txt documents" on page 126.

9.4 AFP spooled files as attachments

To fax AFP spooled files as attachments, you need to install a suitable viewer on the FxD Windows Services System and update the Windows NT registry so that the viewer will properly process *.afp files when you fax them. We listed the prerequisites for faxing AFP spooled files in 9.1, "Prerequisites for faxing spooled file attachments" on page 153.

9.4.1 Faxing an AFP spooled file

To fax an AFP spooled file, follow these steps:

1. Use Operations Navigator to connect to the system with the spooled file.
2. Select **Basic Operations**.
3. Select **Printer Output**.
4. Double-click the spooled file you want to attach. This opens the AFP application viewer.
5. Click **File->Copy pages to file** and specify a file name for the file using the extension .AFP.
6. This file can now be attached to any rich text field in any Domino document, including a Notes Memo and sent.
7. Recipients of a faxed copy of the AFP spooled file can view the fax from within their Notes client since it will have been converted to a TIFF format. Lotus Notes recipients of an e-mailed copy will need to have an AFP viewer application installed on their PC.

9.5 SCS and AFP spooled files using Print to Fax driver

In 6.1.2, "Sending a fax directly from a PC application" on page 90, we describe how to fax Windows application documents directly from an application. You can use this same method to fax AS/400 spooled files. To use the Print to Fax driver to fax AS/400 spooled files (both SCS and AFP), follow these steps:

1. Install the Print to Fax driver following the instructions in B.1, "Installing the Lotus Print to Fax driver" on page 207. Remember that you must have the Notes client installed to use this utility.
2. Use Operations Navigator to connect to the system with the spooled file you want to fax.
3. Select **Basic Operations**.
4. Select **Printer Output**.
5. Double-click the spooled file you want to fax. This opens the Client Access AFP application viewer.
6. Select **File->Print** and select to print to the Lotus Print to Fax driver.

9.6 SCS and AFP spooled files from an AS/400 application or command

OS/400 does not contain a built-in command to enable you to fax directly from an AS/400 command line. However, a sample command is provided that you can use "as is". You can also build such a command yourself using the source provided,

and then use it either from a command line or incorporate it into your line-of-business applications running on the AS/400 system.

The tool we are providing is called SNDDOMFAX. To run it, you need to download some code and objects from the Web at:

<http://www.as400.ibm.com/domino/related/fxd>

You do not need to use the source code to be able to use the command. Refer to the readme.html file for further details, including a disclaimer. The code is provided as a sample only, and no support is provided for it. The code is based on work found in *Lotus Domino for AS/400: Integration with Enterprise Applications*, SG24-5345, and uses Host Print Transform. This means that you may see some impact on your AS/400 CPU when the fax is being processed on the AS/400. There are also some types of AS/400 documents that will not fax. For example, overlays will not fax with SCS spooled files. You need to use AFP spooled files to fax overlays.

Before you try to use this command, consider the following points:

- Host Print Transform, which this command uses, requires that 5769-SS1 option 8 (AFP Compatibility Fonts) be installed on your AS/400 system.
- The user of the command must be registered in the system distribution directory. Use the Add Directory Entry (ADDDIRE) command to do this if necessary.
- The SNDDOMFAX program runs under user profile *OWNER (QSYS) instead of *USER. This is done because users won't have access to some of the objects that SNDDOMFAX uses. Because of this, it is important to note that if you rebuild the command, and you use the readme.html information, public authority to the command will be set to *EXCLUDE. You then manually add whomever you want to be able to run the command to the authorized list of users.
- You need to either run the qualified command (that is, QFXDTOOLS/SNDDOMFAX) or add the library QFXDTOOLS to your library list.

Make sure that the following requirements are met:

- The program SNDDOMFAX and the command processing program are in the same library, QFXDTOOLS.
If you want to put them into a different library, you can use the Change Command (CHGCMD) command to link the Command Processing Program with the command.
- The Workstation Customization object QFXDFINE is in the library QFXDTOOLS.

Once these conditions are satisfied, you can use the command. To see how it works, follow these steps:

1. On the AS/400 system, run a command to produce some spooled output.
2. Use the Work Spool File (WRKSPLF) command to identify the attributes of the spooled file.
3. On any command line, type QFXDTOOLS/SNDDOMFAX, and press F4. You see the display as shown in Figure 146.

```

Send Domino Fax (SNDDOMFAX)

Type choices, press Enter.

Domino Server Name . . . . . as26faxdom

Recipients:
Fax to . . . . . Susan Green@12345@fax

+ for more values

From:
Name . . . . . Justine Middleton
Company . . . . . IBM
Address Line 1 . . . . . *BLANK
Address Line 2 . . . . . *BLANK
Subject . . . . . *BLANK

More...

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Figure 146. Send Domino Fax (Part 1 of 2)

4. Enter the required information and press Page Down. You see the display as shown in Figure 147.

```

Send Domino Fax (SNDDOMFAX)

Type choices, press Enter.

Message Text . . . . . Here is the information you asked for

Spool File:
Spool File Name . . . . . qsysprt      Character value
Job Name . . . . . *                  Character value, *
User Name . . . . .                   Character value
Job Number . . . . . 000000-999999
Spooled File Number . . . . . *LAST    1-999999, *ONLY, *LAST
+ for more values
Scheduled Date . . . . . *CURRENT      Date, *CURRENT
Scheduled Time . . . . . *CURRENT      Time, *CURRENT
Notify on completion . . . . . *NO      *NO, *YES

Bottom

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

```

Figure 147. Send Domino Fax (Part 2 of 2)

5. You can see that you just faxed the most recent spooled file of a particular name (for example, QSYSVRT) for your current session by using * in Job Name. Complete the fields and press Enter.
6. Enter *YES for Notify on completion. You are prompted to provide an e-mail address.

7. This command supports both AFP and SCS spooled files. We could not fax an OfficeVision/400 document because the FFT format of the spooled file was not recognized.

You can use this tool as a basis for an enhanced command or incorporate it into a line-of-business application. The code is provided on an as-is basis for your use and information. The field in the From name parameter is what is used for looking up a fax user profile unless you specify an e-mail address together with Notify on completion. In this case, the e-mail address is used. See 5.2, "User profiles" on page 64, for more information on this.

9.7 Broadening the reach

This section was tested using Domino for AS/400 R5. We did not test the options with R4.6. If you set up your AS/400 system to use AnyMail/400 Integration and can exchange mail with users on your Domino server, you can use this support for sending faxes.

OfficeVision/400 users can send faxes by sending mail with an address format of user.faxno.faxdomain@maildomain. Although you can send SMTP mail such as this by predefining system distribution directory entries, you can also set up your AS/400 system to enable simpler ad-hoc Internet addressing. We describe how to do this in 9.7.1, "Enabling Internet addressing" on page 161.

In fact, even if you don't use OfficeVision/400, you can use the Send Distribution (`SNDDST`) command to send faxes. Non-OfficeVision/400 users on the AS/400 can use the `SNDDST` command to fax PC files (*DOC) for applications that have been installed on the FxD Windows Services System. Note that the `SNDDST` command does not support faxing of messages (*MSG) to Internet addresses.

Taking this one step further, if you can send e-mail to your FxD server from somewhere in your SMTP network, you can use the fax services from that client. There are some font conversion limitations that we document in Table 8 on page 165.

You may now want to consider security because anyone who can send SMTP mail to your AS/400 system can route faxes through it. However, in the Fax server configuration, you can specify whether certain users can send faxes as shown in Figure 148.

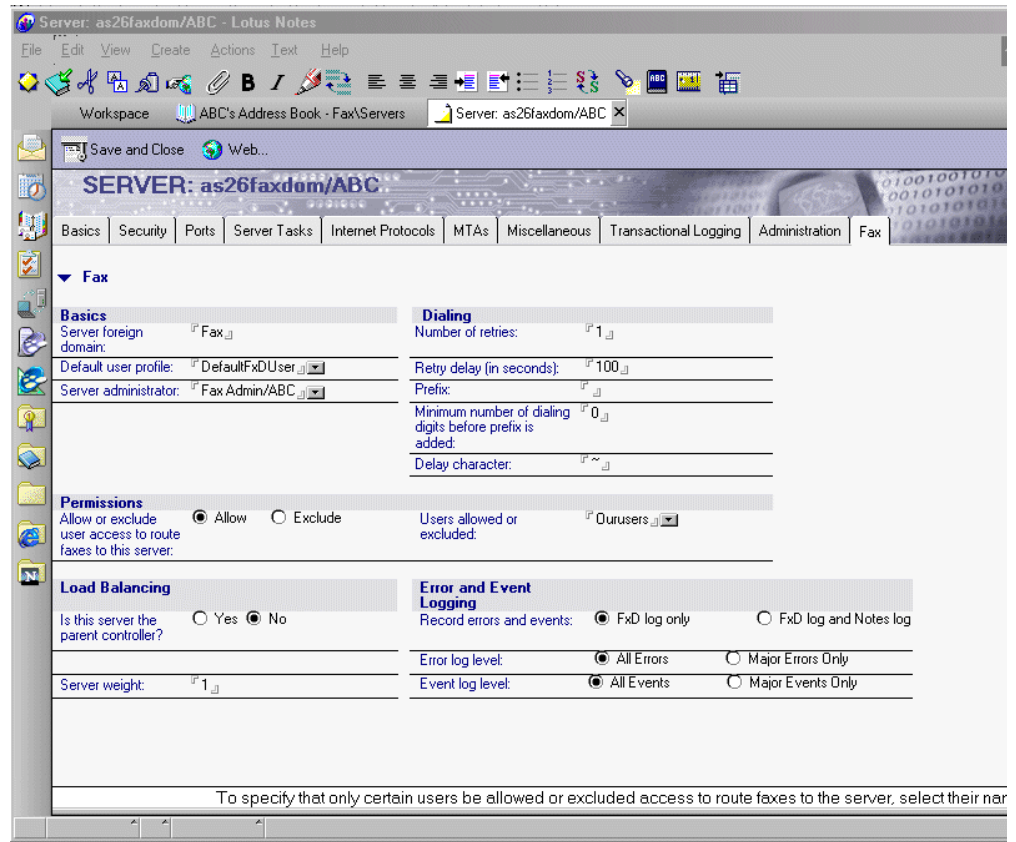


Figure 148. Restricting the use of Fax

You can use groups or individuals in your allow/exclude field. A denied user will receive a message back saying that they are not allowed to use this fax server. A minor event will be logged in the FxD log saying, for example:

Fax request from JMIDDLE?AS25@as25.itsoroch.ibm.com was denied due to setting of Fax Server access list.

9.7.1 Enabling Internet addressing

To enable Internet addressing from an AS/400, follow these steps:

1. On any AS/400 command line, type:

```
ADDIRE USERID (INTERNET SMTPRTE) USERD ('Internet addressing')
SYSNAME (INTERNET) MSFSRVLVL (*USRIDX) PREFADR (NETUSERID *IBM ATCONXTXT)
```

Press Enter.

2. On any AS/400 command line, type:

```
CHGDSTA SMTPRTE (INTERNET SMTPRTE)
```

Press Enter.

3. For any OfficeVision/400 user who needs to use Internet addressing, use OfficeVision/400 administration to change their Environment information to Allow Internet Addressing.

For more information, see *AS/400 Electronic-Mail Capabilities*, SG24-4703.

There is one more configuration item that you may want to know the value of in your installation. It is the SMTP attribute Percent routing character. It specifies whether the SMTP Server should interpret the “%” character as an SMTP routing character or allow the character to just pass through. *YES is the default that treats it as an SMTP routing character. Use the Change SMTP Attributes (CHGSMTPA) command to check the value.

9.7.2 Global Domain documents

This section specifically refers to Domino R5. We did not test Domino R4.6.6.

When you configure Domino for AS/400 server for AnyMail Integration, a Global Domain document (MTAGlobal) is created. The Conversions tab looks like the example shown in Figure 149. Your Local primary Internet domain entry will be different.

Figure 149. Global Domain document for AnyMail/400

If you change your configuration to Domino R5 SMTP, this document may still be in your configuration. You may or may not still require it.

When you configure a new Domino server for Domino SMTP, you do not get a Global Domain document by default. You may choose to create one to allow multiple inbound SMTP domains to be accepted by the Domino server. If you create one, the Conversions tab will look similar to the example shown in Figure 150. Your Local primary Internet domain will be different or empty if you have not defined this value.

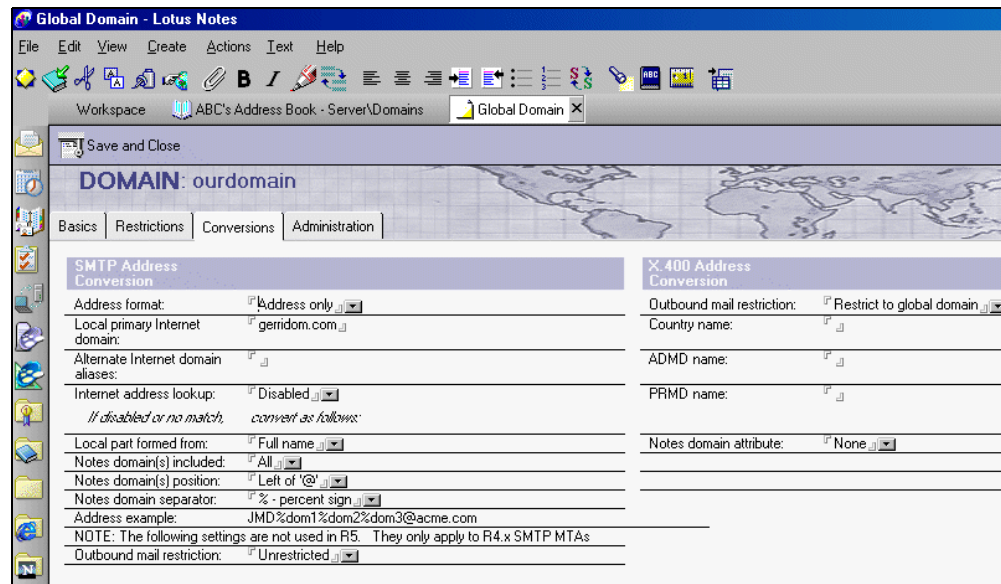


Figure 150. Global Domain document for Domino SMTP

We found that the naming alternatives for sending faxes from other AS/400 systems and Domino servers using our Fax for Domino server depend on the existence and configuration of the Global Domain document.

9.7.3 Testing environment

This is our testing environment. AS26 is our base machine with Fax for Domino running. We only tested with Domino Release 5.0.2c.

- AS/26 Fax for Domino on this AS/400: Two scenarios
 - AS/26a OfficeVision/400 and SNDDST AnyMail Integration
 - AS/26b Domino SMTP
- AS/23 Domino server not in the same Domino Domain as AS26 and not cross-certified
- AS/25 OfficeVision/400 and SNDDST AnyMail Integration

If trying to replicate these results, make sure your DNS/Host tables allow the AS/400s to locate the various SMTP domains so that the requests can be sent and the results of the faxing returned.

Note that the Default user profile will be used to provide outbound characteristics for the fax, as FxD is unable to get the User Profile document for the sending user. In some cases, you may be able to remove this limitation by creating a user profile that matches the name you see in the error log. This only works if you are using separate administration. See 5.2, “User profiles” on page 64 for more information.

9.7.4 Addressing the mail

How you can address the item to be faxed depends on your Domino settings. This information is included in the results in 9.7.5, “Test results” on page 165.

If you have no Global Domain document for inbound SMTP domains, you can use a percent (%) symbol or a period (.) to address your fax mail.

```

Send Note

Type mailing information, press F6 to type note.
  Subject . . . . . TEST FAX

  Reference . . . . .

Type distribution list and/or addressees, press F10 to send.
  Distribution list . . . . . F4 for list

-----Addressees-----
Type nickname, user ID address, or internet address. One per line.
Joanne%12345%fax@gerridom.com

More...

F3=Exit   F6=Type note   F9=Attach memo slip   F10=Send   F11=Change details
F12=Cancel   F13=Change send instructions   F14=Specify list   F24=More keys

```

To fax a document stored in a folder using the SNDDST command, address it as shown in Figure 152.

```

Send Distribution (SNDDST)

Type choices, press Enter.

Information to be sent . . . . . > *DOC          *MSG, *DOC, *FILE, *IDP...
Recipient:
  User ID . . . . .                               Character value
  Address . . . . .                               Character value
  Recipient type . . . . . *PRI                   *PRI, *CC, *BCC
      + for more values
Internet Recipient:
  Internet address . . . . . susanjones.2345.fax@as26faxdom

  Recipient type . . . . . *PRI                   *PRI, *CC, *BCC
      + for more values
Description . . . . . A fax from me

More...

F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys

```

Remember that, in both cases, the ability to use “.” or “%” depends on your environment.

9.7.5 Test results

The following points summarize 9.7, “Broadening the reach” on page 160:

- If you are using AnyMail integration, use a “.” as the delimiter.
- If you are not using a Global Domain document, you can use “.” or “%” as the delimiter.
- If you are using Domino SMTP and a Global Domain document, use “.” as the delimiter with an exception in the next bullet.
- If you are using Domino SMTP and a Global Domain document that looks like what is shown in Figure 150 on page 163, and your SMTP attributes on the AS/400 system allow the use of a % (that is, CHGSMTPA PCTRTGCHR(*NO)), and use “%” as the delimiter.

Table 8 shows a summary of the results we achieved. We did not test every possible combination. Use the guidelines in the above list and test in your environment to see if you can use a “%” rather than a “.”.

Table 8. Sending faxes in SMTP environment

Sent from	Addressing	Results
AS26 Domino (Base Environment)	name@12345@fax	Fonts are converted. Attachments converted correctly. Fax has no heading (To and From, etc.).
AS26 OV/400 memo	name.12345.fax@smt pdomain	Fonts not converted. Full heading of memo present. Requires AnyMail Integration
AS26 SNDDST Word document	name.12345.fax@smt pdomain	Fonts converted. Have to enter description when using SNDDST command but not used. Requires AnyMail Integration.
AS25 OV/400 memo	name.12345.fax@smt pdomain	Fonts not converted. Full heading of memo present.
AS25 SNDDST Word document	name.12345.fax@smt pdomain	Fonts converted.
AS23 Domino not cross-certified with AS26 and in different Domino domain	name.12345.fax@smt pdomain	Fonts lost. Attachments convert OK. Fax has no heading (To and From, etc.).
POP3 client using AS26 for SMTP	name.12345.fax@smt pdomain	Fonts are converted. Attachments convert OK. Requires AnyMail/400 integration.
POP3 client using Domino for SMTP	name%12345%fax@ smtpdomain	Fonts are converted. Attachments convert OK.
second Domino server in same Domain	name@12345@fax	Same as Base Environment.

Note the following observations:

- When using Internet addressing from OfficeVision/400, you can't put a space in the name. For example, you must use jmiddle.12345.fax@gerridom.com, not justine middleton.12345.fax@gerridom.com.
- When using the SNDDST command, a space in the user name is acceptable but disappears when displayed on the cover page. Justine Middleton becomes JustineMiddleton.
- In one test, the SNDDST command was used to fax a document from AS25. In one case, a Word document was sent, and in the other, a Lotus 123 document. In the former case, the subject that was included on the faxed cover page was ~wrdd0000.tmp, and in the other, it was mine.123 (the real name). We do not know the reason for this.

Note

The new bind-to-specific IP address PTFs (also known as dual stack) allow you to use AnyMail Integration and Domino SMTP on the same AS/400 at the same time. In our scenarios, this means that we can now fax from OfficeVision/400 on AS26 using our FxD server on AS26.

You will require the following PTFs and any co-requisite or pre-requisite PTFs:

AS/400 release	Server PTF	Client PTF
V4R2M0	SF55697	SF55704
V4R3M0	SF58661	SF59663
V4R4M0	SF60787	SF60764

Inbound faxes

Assuming that the network is set up so that OfficeVision/400 users can exchange mail with Domino users, inbound faxes that are for OfficeVision/400 users can be forwarded by the Fax administrator. The OfficeVision/400 user receives two mail items. The first item is the notification of the fax, and the second item is the fax TIFF file itself with an internally generated name. The OfficeVision/400 user can file the TIFF document to a folder and rename it at the same time, and then use a mapped network drive and the imaging software on the PC to view it.

Chapter 10. Problem determination

This chapter discusses problem determination when using Fax for Domino for AS/400. The method for troubleshooting a problem with Fax for Domino for AS/400 depends on when the problem occurs.

You can use this chapter as a first step in problem determination, but you should then use the FxD for AS/400 Admin Guide (nfxa400.nsf). There may also be more detailed information available from the Domino for AS/400 FxD Web site:

<http://www.as400.ibm.com/domino/related/fxd>

10.1 Problems during installation and setup

In this section, we describe how you can solve problems during installation and setup.

10.1.1 Add Domino Application (ADDDOMAPP)

This section describes a common problem encountered during an Add Domino Application (ADDDOMAPP) command as well as its cause and solution.

Problem

If your user profile does not have the right authority, as described in 4.1, “Installing the Fax for Domino software on the AS/400 system” on page 35, you see the screen (Figure 153) after entering the Add Domino Application (ADDDOMAPP) command and pressing F4.

The screenshot shows the 'Add Domino Application (ADDDOMAPP)' command interface. It prompts the user to 'Type choices, press Enter.' and displays fields for 'Server path:', 'Server name', and 'Data subdirectory'. The 'Data subdirectory' field is set to '*NONE'. Below these fields, there is a prompt '+ for more values _' and a 'Product' field. The 'Optional part to be added' field is set to '*BASE', with a hint '*BASE, 0, 1, 2, 3, 4, 5, 6...'. At the bottom, there are function key prompts: F3=Exit, F4=Prompt, F5=Refresh, F12=Cancel, F13=How to use this display, and F24=More keys. A red error message at the bottom states: 'Error occurred while retrieving choices text.'

```

                                Add Domino Application (ADDDOMAPP)

Type choices, press Enter.

Server path:
  Server name  . . . . .
-----
Data subdirectory  . . . . . *NONE
-----
                                + for more values _
Product  . . . . .
Optional part to be added  . . . *BASE          *BASE, 0, 1, 2, 3, 4, 5, 6...

                                Bottom
F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys
Error occurred while retrieving choices text.

```

Figure 153. Wrong authority for ADDDOMAPP

Cause

The message ID of this error is CPD6808. The cause is that without the *ALLOBJ and *SECADM special authorities, you cannot use the QNNINPDC program in the QNOTES library to retrieve the choices text for the LICPGM parameter. In our case, the QNNINPDC program, in the QNOTES library, does not have enough authority to retrieve information about 5733FXD, the licensed program for Fax for

Domino for AS/400. An example of how the screen should look is in Figure 25 on page 37.

Solution

Sign on using a user profile that has *ALLOBJ and *SECADM special authorities.

10.1.2 Setting up Fax for Domino using Fax for Domino Setup database

This section describes some problems you may encounter while setting up Fax for Domino using the Fax for Domino Setup database. Causes and solutions are also addressed.

Problem

You filled out the form of the Fax for Domino Setup database as described in 4.4.2, “Running the Fax for Domino setup” on page 47. After you click the Done button, you see a notice similar to the example in Figure 154.

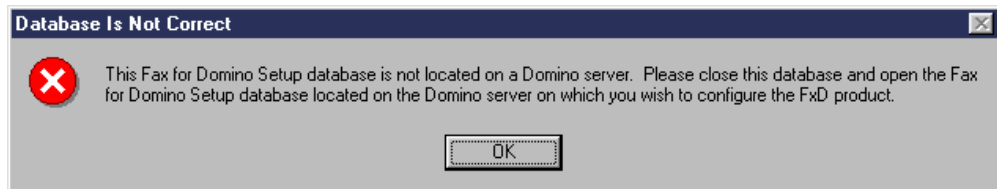


Figure 154. Database Is Not Correct

Cause

This error occurs because you created a local replica of the database and opened the local version of the database instead of the server version of the database.

Solution

Do not create a local replica of the Fax for Domino Setup database. Use only the server copy of the database.

Problem

You enter a fax domain name greater than 32 characters. After clicking on the Done button, you see a notice similar to Figure 155.

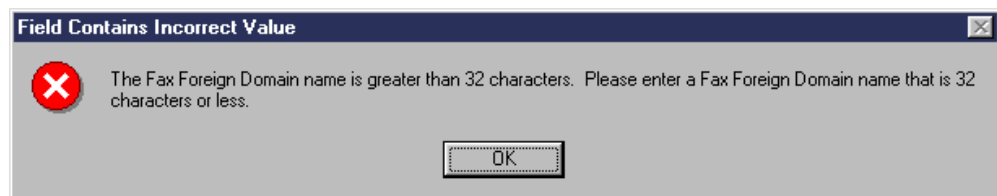


Figure 155. Fax domain greater than 32 characters

Cause

Only a fax domain name up to 32 characters is allowed.

Solution

Use a fax domain name that contains not more than 32 characters.

Problem

After clicking the Done button, you receive the display shown in Figure 156.

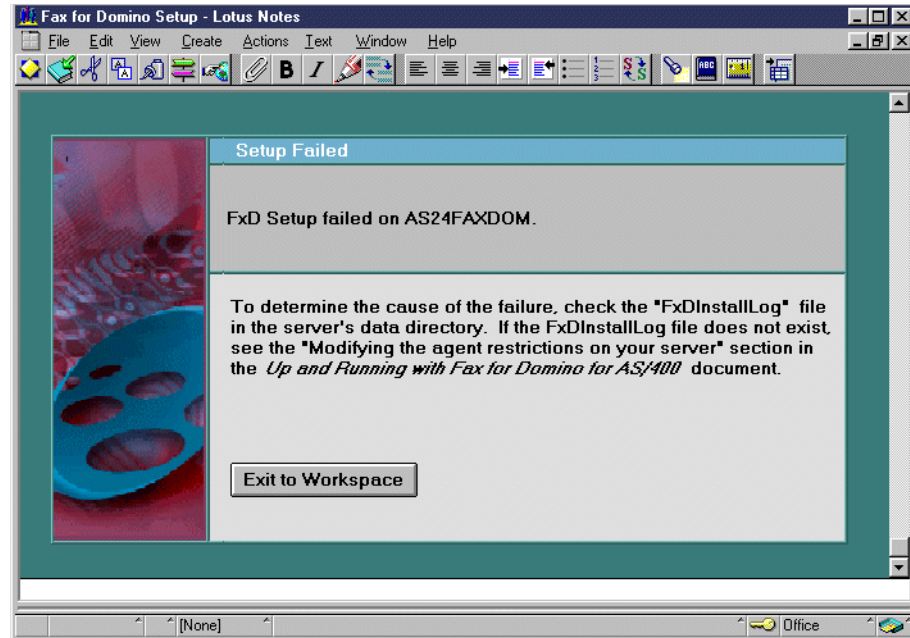


Figure 156. Setup failed

Cause

Your server has no authority to run unrestricted LotusScript/Java agents.

Solution

See 4.4.1, “Modifying the agent restrictions on your server” on page 46. This is the main cause of this error. However, there are others. If modifying agent restrictions doesn’t solve the problem, look at the FxDInstallLog file in the server’s data directory for further information.

10.2 Problems after starting Fax for Domino for AS/400

If a problem occurs once you have completed installation and setup and have started Fax for Domino for AS/400, you should check the Fax for Domino Log database (nfxlog.nsf) for more information.

10.2.1 The standard Fax for Domino Log entry codes

Every Fax for Domino subsystem (see 2.1, “Fax for Domino for AS/400 architecture overview” on page 11)-related entry in the log has an associated four-digit number. The first two digits identify the subsystem from which the message was generated. If the second digit is even, it is an error message. If it is odd, it is an event.

The ranges of entry codes for the various subsystems are described in Table 9.

Table 9. Code ranges for Fax for Domino subsystems

Range	Subsystem
0000 - 0199	Global errors
0200 - 0399	Configurator
0400 - 0599	Scheduler

Range	Subsystem
0600 - 0799	Administration
0800 - 0999	Spool
1200 - 1399	Router
1400 - 1599	Format converter
1600 - 1799	Logging
1800 - 1999	Job thread
2000 - 2199	E-mail

Note

If the error code is below 1000, you do not see the leading 0 in the log entry.

An example of an error is:

479: Fax configuration could not be updated due to error.

An example of an event is:

502: Fax server configuration record read successfully.

10.2.2 The AS/400-specific Fax for Domino Log entry codes

There are also AS/400-specific entry codes. These entry codes have a five-digit number. For problem resolution, refer to the *FxD for AS/400 Admin Guide* (nfxa400.nsf). There may also be more detailed information available from the Domino for AS/400 FxD Web site: <http://www.as400.ibm.com/domino/related/fxd>

10.2.3 Field NFX_xxx cannot be found in administration forms

When you find this error in your Domino console or in the Fax for Domino Log database, make sure that you have specified a name for the fax administrator of your Fax for Domino server in the Fax Server document when you configured FxD. Refer to 4.5, “Configuring Fax for Domino for AS/400” on page 50 for more information.

10.2.4 Dealing with FxD Windows Services System problems

The FxD Windows Services System must remain active whenever Fax for Domino for AS/400 is active. If you suspect a problem with the FxD Windows Services System, you may want to stop the services so that you can restart them again. These are the ways you can deal with FxD Windows Services System problems.

- Determine if the Windows Fax for Domino Conversion Service is active.
- Start the Windows Fax for Domino Conversion Service.
- Stop the Windows Fax for Domino Conversion Service.
- Manage the Windows Fax for Domino Service Monitor.

10.2.5 Determining whether Windows Fax for Domino Conversion Service is active

On your FxD Windows Services System, perform the following steps:

1. Click **Start->Settings->Control Panel** and select the **Services** icon. The display that is shown in Figure 157 appears.

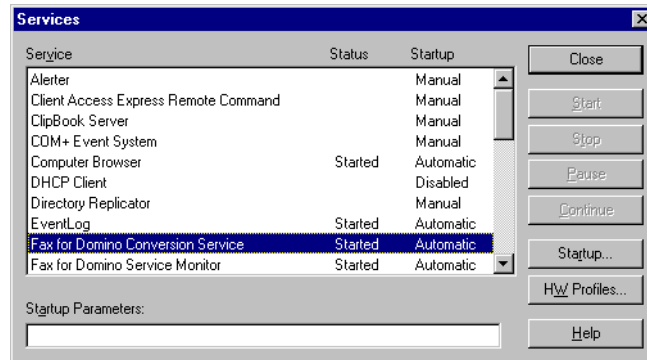


Figure 157. Fax for Domino Conversion Service

2. Look at the Status column for the Fax for Domino Conversion Service to determine its state:
 - **Blank:** The Fax for Domino Conversion Service is not currently active. Follow the Starting the FxD Windows Services System instructions to start it. See the following section for more information.
 - **Started:** The Fax for Domino Conversion Service has been previously started. Follow the Stopping the FxD Windows Services System instructions if you want to stop it for some reason. See 10.2.7, “Stopping the Windows Fax for Domino Conversion Service” on page 172, for more information.
 - **Starting:** The Fax for Domino Conversion Service is in the process of starting. Continue to monitor its status to make sure its status changes to Started.

10.2.6 Starting the Windows Fax for Domino Conversion Service

Perform the following process from your FxD Windows Services System:

1. Click **Start->Settings->Control Panel**. Select the **Services** icon.
2. Select the **Fax for Domino Conversion Service**.

Note

If you want to use the DEBUG option, enter the following command in the Startup Parameters box:

-debug

Monitor the C:\QFXDrouter.log file for debug information.

The debug log is never deleted. Additional debugging information is simply appended to it. If it becomes too large, you can stop the FxD Windows Services System and then delete it.

3. Click the **Start** button on the Services dialog.

Note

Starting the Windows Fax for Domino Conversion Service also starts the Windows Fax for Domino Service Monitor. Also, when you restart the Fax for Domino Windows Services, you must stop and restart Fax for Domino on each Domino for AS/400 server that uses the system for fax conversions.

10.2.7 Stopping the Windows Fax for Domino Conversion Service

On your FxD Windows Services System, perform the following steps:

1. Click **Start->Settings->Control Panel**. Select the **Services** icon.
2. Select the **Fax for Domino Conversion Service**.
3. Click the **Stop** button.

Note

Stopping the Windows Fax for Domino Conversion Service also stops the Windows FxD Service Monitor.

If fax conversions are in progress for very large files, it may take a long time for the services to end. If one or more conversion threads hang, the services never end, and you must reboot the FxD Windows Services System to recover.

10.2.8 Managing the Windows Fax for Domino Service Monitor

The Windows Fax for Domino Service Monitor is automatically stopped or started when the Fax for Domino Conversion Service is stopped or started. Do not attempt to stop this service directly. If you stop it, the service monitor automatically restarts. To stop it, you must stop the Windows Fax for Domino Conversion Service.

10.3 Problems using the Windows Fax Format Converter port 19700

It is possible that the Windows Fax for Domino Conversion Service cannot start because a different application on the FxD Windows Services System is already using port 19700 for TCP/IP communication.

Contact Lotus Support if you need to change the Windows Fax for Domino Conversion Service port from 19700 to a different port number.

10.4 Problems during the fax conversion of an attachment

In 4.3.5, "Installing the required applications" on page 45, we explained that you have to install the applications that your users most commonly use for document attachments so that the attachments can be converted. During the process of conversion, these attachments invoke the application and use the print function and the mailFax Convert Server driver to convert them to TIFF files.

Not all applications use the same mechanism to print, and sometimes unanticipated pop-up windows can occur during the conversion. With Fax for

Domino for AS/400, a tool to help identify the source of conversion problems is installed on the FxD Windows Services System.

10.4.1 The utility program mfDesk.exe

The mfDesk.exe utility program allows a suitably privileged user to display the Window NT Desktops currently active on a Windows NT system and to switch between them. It is installed on your FxD Windows Services System when you install FxD.

Note

This program is provided to you “as is”. There is no support available. Lotus, therefore, does not warrant or guarantee its reliability, serviceability, or function.

Sometimes an attachment produces an unknown dialog message on the FxD Windows Services System. Normally, you can't see the dialog, but running mfdesk.exe allows you to switch to the hidden desktop where the application is run. This should let you see popup dialog windows. This program is found in the Notes program subdirectory on the FxD Windows Services System.

After you execute mfDesk.exe, you see a display like the example in Figure 158.

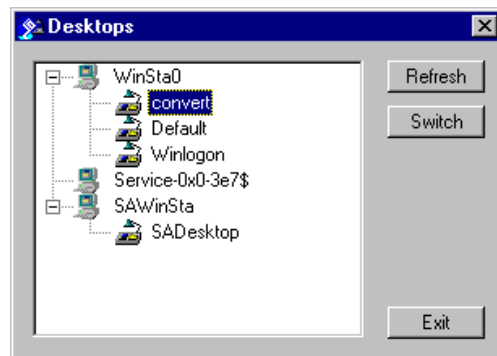


Figure 158. mfDesk.exe

To switch to the convert desktop, select **convert** and click the **Switch** button. You are switched to the desktop of the Windows Fax for Domino Convert Server (see Figure 159 on page 174).

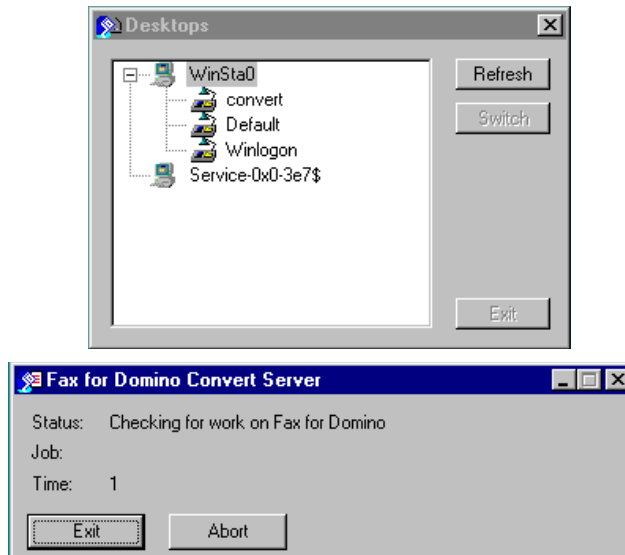


Figure 159. Fax for Domino Convert Server desktop

On this desktop, you can now see which applications are invoked during the conversion process, and if the conversion fails, you can see the pop-up window that is causing the problem. You can interact with these pop-up windows to correct the error.

An example of a pop-up window that needs an answer is, for example, to accept the Software License Agreement for Acrobat reader. The first time you want to fax a PDF file as an attachment, the window, which is shown in Figure 160, may appear.

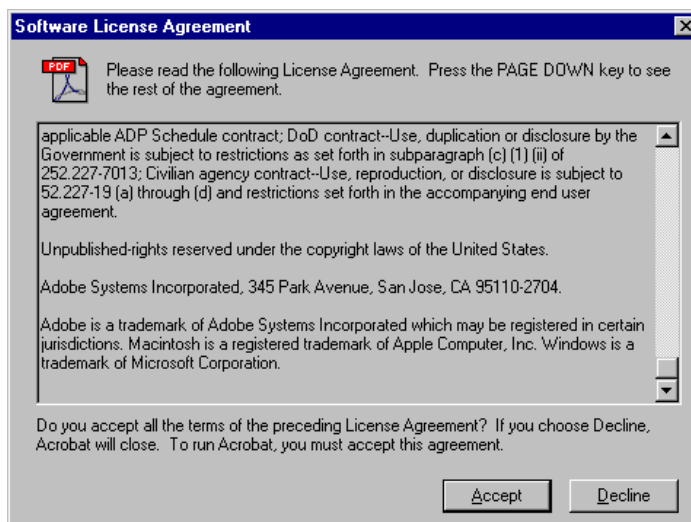


Figure 160. Acrobat Reader: Software License Agreement

After you select to Accept the Software License Agreement, the conversion process goes on. You will not see this window again.

Information on how to tailor FxD for non-standard applications can be found in Appendix C, "Handling non-standard attachments" on page 215.

Note

You must not touch the Fax for Domino Convert Server window, for example, to click the **Exit** button. Any interaction with the Fax for Domino Convert Server window, shown in Figure 159, may require you to reboot your entire FxD Windows Services System.

10.5 Problems ending Fax for Domino

When you shut down your Fax for Domino server, you may see a message that the fax is not ending gracefully. This is not an error, it is more of an information notice that Fax for Domino has reached a time-out in trying to shut down your fax devices.

10.5.1 Fax did not gracefully exit

The following sections describe an example of a non-graceful exit:

Problem

Using the `TELL FAX QUIT` command on the Domino console or the End Domino Server (`ENDDOMSVR`) command, as described in 4.8, “Stopping Fax for Domino for AS/400” on page 60, you may see an error message like the example in Figure 161.

```
Work with Domino Console
Server: AS26FAXDOM

Previous subcommands and messages:

03/20/2000 10:43:09 AM Internal error. Fax did not gracefully exit.
03/20/2000 10:43:24 AM Searching Administration Requests database.
03/20/2000 11:22:40 AM Periodic full text indexer starting, performing
hourly full text indexing
03/20/2000 11:22:41 AM Periodic full text indexer terminating
03/20/2000 11:43:24 AM Searching Administration Requests database.
03/20/2000 11:46:18 AM Opened session for Domino Admin/ABC (Release 5)
03/20/2000 11:46:18 AM Opened session for Domino Admin/ABC (Release 5)
03/20/2000 11:46:18 AM Closed session for Domino Admin/ABC
Databases accessed: 0 Documents read: 0 Documents written: 0
03/20/2000 11:58:12 AM Closed session for Domino Admin/ABC
Databases accessed: 2 Documents read: 3 Documents written: 0
Enter a Domino subcommand.
====>

F3=Exit F5=Refresh F6=Print F9=Retrieve
F17=Top F18=Bottom F21=Command line
```

Figure 161. Fax did not gracefully exit

Cause

It is possible that during the shut down process some of your fax devices are still receiving or sending a fax. Fax for Domino will not terminate these sending or receiving devices immediately. Fax for Domino will tell these devices to quit after finishing their job. You need to wait for these jobs to finish before you restart Fax for Domino.

Solution

Use the Work with Active Jobs (WRKACTJOB) command to display the subsystem of your Fax for Domino for AS/400 server. Refresh your screen by pressing F5 until the FAX and all QFAXDD jobs are gone. Check that your fax devices have a status of CONNECT PENDING or VARIED OFF, like the example shown in Figure 162, using the Work with Configuration Status (WRKCFGSTS) command. Once all these jobs are gone, FxD is in a stopped state.

```
Work with Configuration Status                                AS26
                                                             03/20/00 12:36:23
Position to . . . . . Starting characters

Type options, press Enter.
  1=Vary on   2=Vary off   5=Work with job   8=Work with description
  9=Display mode status   13=Work with APPN status...

Opt  Description      Status      -----Job-----
FXPORT01      CONNECT PENDING
FXPORT02      CONNECT PENDING
FXPORT03      CONNECT PENDING
FXPORT04      CONNECT PENDING
FXPORT05      CONNECT PENDING
FXPORT06      CONNECT PENDING
FXPORT07      CONNECT PENDING
FXPORT08      CONNECT PENDING

More...

Parameters or command
====>
F3=Exit   F4=Prompt   F12=Cancel   F23=More options   F24=More keys
```

Figure 162. Work with Configuration Status/Connect pending

Chapter 11. FxD in action

We want to document an example of a customer implementing Fax for Domino using an AS/400 Integrated Netfinity Server and a IBM PCI Analog 2761 modem card. The Domino administrator and the fax administrator are different people.

In this chapter, we discuss a number of topics including:

- Load balancing
- Port routing
- Fax enablement of Domino applications

The customer in this scenario is a computer company. The ACME company sells computers and software. They also want to maintain a good relationship with their business partners who are their distributors. They have developed an application running on a Domino Web server. The ACME company has about 500 employees who have been using Lotus Domino for AS/400 E-mail, calendaring, and workflow applications for some time. ACME uses clustering between their two Domino mail servers to ensure availability. They always intended to implement Lotus for Domino, so they named their servers MAILFAX1 and MAILFAX2. They also have a separate Domino server called Ebusiness, on which they are piloting some Web applications. In the future, they will use Internet Cluster Manager (ICM) to provide failover support in the Internet environment.

ACME now wants to install two Fax for Domino servers using load balancing so that all users can send and receive faxes with direct customers, suppliers, and business partners. They also want to fax enable the business partner registration part of their Web application. This allows them to create a fax and send it to the business partner as part of the registration process.

Note

You cannot cluster all Fax for Domino databases because it doesn't make sense to have two active Spool Mailboxes. Therefore, you cannot have an automatic failover fax system. In this chapter, we only cluster the Fax for Domino Cover Page database for load balancing and data management.

11.1 Scenario characteristics

In this scenario, we use the following environment:

- OS/400 Version 4 Release 4
- Domino for AS/400 R5.0.3
- Notes Client for Windows R5.0.3
- AS/400 Integrated Netfinity Server (as the Windows NT FxD Conversion Service System)
- IBM PCI Analog 8-port modem card (Feature code 2761)
- 500 Mail users in a clustered mail environment (in other words, two clustered Domino mail servers that use mail cluster failover). For more information on setting up Domino clustering, see *Administering Domino Clusters*, CT73SNA, which is also part of the Domino R5 Administration Help database.

- Domino Web server serving an e-business application with fax enablement. We are using a part of the eBoats application described in *Developing an e-business Application: Using Lotus Domino for AS/400*, SG24-6052.

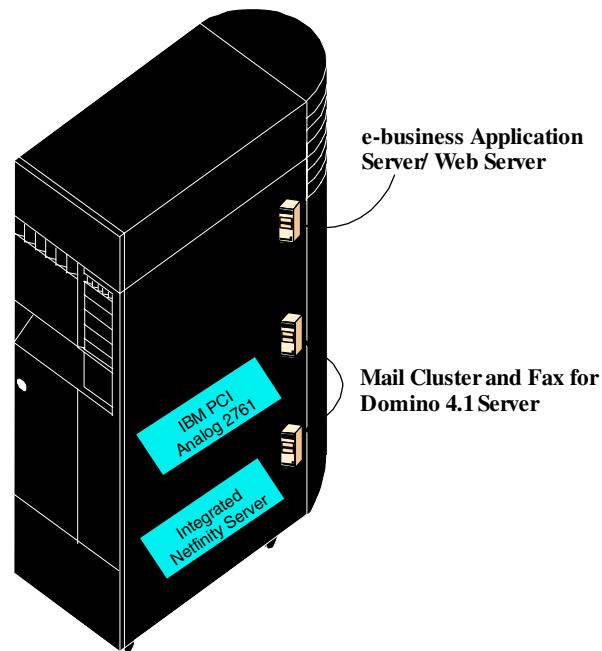


Figure 163. Advanced scenario

11.2 Scenario objectives

Our objective here is to set up Fax for Domino for AS/400 using the existing Domino for AS/400 environment so that all Domino users can send and receive faxes, but also so the e-business application clients can send a pre-created fax using a Web interface.

11.3 Planning

As with any software, planning is essential to a smooth implementation. Prior to installing the actual software, there are a number of pre-installation tasks that should be completed.

We are using the planning table described in Table 1 on page 34 to gather all information necessary prior to installing Fax for Domino for AS/400. Our values are summarized in Table 10.

Table 10. Fax for Domino for AS/400 planning table

Item	Sample value
CSID (refer 3.4.1, "CSID for your fax lines" on page 27)	5-6110, 5-6111, 5-6112, 5-6113, 5-6114, 5-6115, 5-6116, 5-12345
TCP/IP host name of your AS/400 system (refer 3.4.2, "TCP/IP host name of your AS/400 system" on page 28)	ACME1

Item	Sample value
TCP/IP host name of your external FxD Windows Services System (refer 3.4.3, "TCP/IP host name of your external FxD Windows Services System" on page 28)	We use an Integrated Netfinity Server located on the same AS/400 system. Therefore, we do not need a TCP/IP host name.
Network server description name (refer 3.4.4, "Network server description name" on page 29)	NTSVR1
Fax hardware installed on your AS/400 system (refer 3.4.5, "Determining which fax hardware is installed on the AS/400 system" on page 29)	X_ IBM PCI Analog 2761 (8-port) __ IBM Analog (7852 model 400)
Fax hardware resource name or names (refer 3.4.5, "Determining which fax hardware is installed on the AS/400 system" on page 29)	CMN10 CMN11 CMN12 CMN13 CMN14 CMN15 CMN16 CMN17
Notes user and password on FxD Windows Services System (refer 3.5, "Registering a Notes user for the FxD Windows Services System" on page 31)	FXDNTPC FAX lotusnotes

We decided to use combined administration to centralize the management.

11.4 Installation

The following steps are needed for installation:

1. Install FxD on the AS/400 system
2. Add FxD server to Domino
3. Set up FxD Windows Conversion Services server
4. Set up FxD for Domino for AS/400 server
5. Configure FxD for AS/400
6. Set up Fax for Domino users
7. Start Fax for Domino

11.4.1 Installing the FxD product on the AS/400 system

To install FxD on the AS/400 system, refer to 4.1, "Installing the Fax for Domino software on the AS/400 system" on page 35.

11.4.2 Adding the FxD server to the Domino server

Before we can add a Fax for Domino server to the existing Domino server, we must end the Domino for AS/400 server where we want to add it. In our case, we want to add Fax for Domino to server MAILFAX1 and MAILFAX2. In our clustered mail environment, we first shutdown MAILFAX1, add Fax for Domino, restart MAILFAX1, and do the same for MAILFAX2.

We use the Work Domino Server (`WRKDOMSVR`) command to show our servers and type option 6 to end MAILFAX1 as shown in Figure 164 on page 180.

```

Work with Domino Servers
System: AS24

Type options, press Enter.
1=Start server      2=Change server      5=Display console      6=End server
7=Submit command    8=Work console      9=Work server jobs
11=Change current directory  12=Work object links  13=Edit NOTES.INI

Domino
Opt Server          Subsystem      Domino
--- *HTTPSETUP      QDOMINOHT  *ENDED
6_ MAILFAX1         MAILFAX1    *STARTED
--- MAILFAX2         MAILFAX2    *STARTED
--- EBUSINESS        EBUSINESS   *STARTED

Parameters or command
====>
F3=Exit      F4=Prompt  F5=Refresh  F9=Retrieve  F11=Display path
F12=Cancel   F17=Top    F18=Bottom  F22=Display entire field  F24=More keys

```

Figure 164. Ending MAILFAX1 and MAILFAX2

After the MAILFAX1 server displays the Domino Status *ENDED (press F5 to refresh the screen), and we use the Add Domino Application (ADDDOMAPP) command as described in 4.2.2, “Adding the Fax for Domino software to the Domino server” on page 37, to add the Fax for Domino databases and templates to MAILFAX1. Then, we restart the server and follow the same procedure for MAILFAX2. Remember that this command can normally be used to add the application to both servers at the same time. However, in our case, we have clustered servers for availability, so we choose to keep one server up.

After that, we register the Notes user we want to use on the FxD Windows Services System as described in 3.5, “Registering a Notes user for the FxD Windows Services System” on page 31.

11.4.3 Setting up FxD Windows Services System

To install Windows NT 4.0 and the latest service pack for Windows NT, we follow the steps described in *AS/400 - Implementing Windows NT on the Integrated Netfinity Server*, SG24-2164.

Refer to 4.3, “Setting up the FxD Windows Services System” on page 40, for other steps required here.

11.4.4 Setting up FxD for AS/400 server

Before setting up Fax for Domino using the Fax for Domino Setup database, we have to remove the additional FaxAdmins group that was created during the second time we used the Add Domino Server (ADDDOMSVR) command. To do so, we open the Domino Directory on one of our Domino servers and select the **Groups** view on the left pane. Then, we select one of the FaxAdmins groups and delete it as shown in Figure 165.

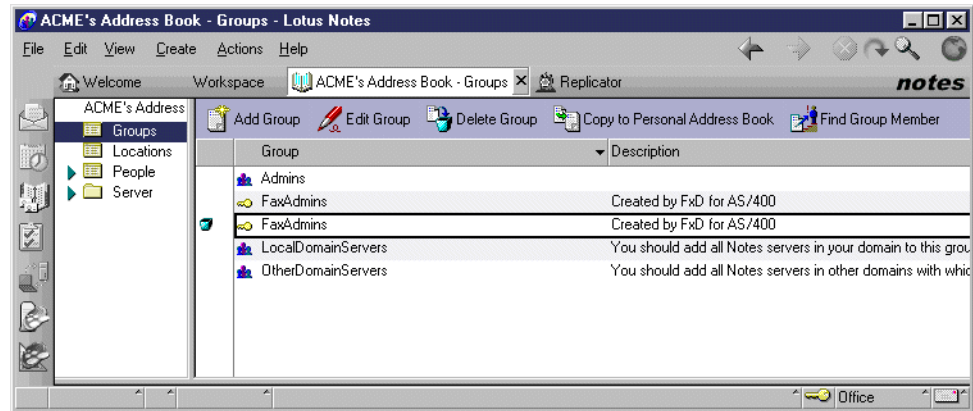


Figure 165. Delete additional FaxAdmins group

Then, we open the remaining FaxAdmins group and add all users we want to be able to administer faxes.

Now we can run the setup for Fax for Domino as described in 4.4, “Setting up the Fax for Domino for AS/400 server” on page 46.

On the Fax for Domino Setup database configuration display (Figure 166), we enter for MAILFAX1:

- **Fax Foreign Domain:** Fax1
- **Administration:** Select Combined
- **Notes User for FxD Windows Services:** fxdntpc fax/ACME
- **FxD Windows Services System:** Select Local Integrated Netfinity Server
- **Network Server Description:** NTSVR1

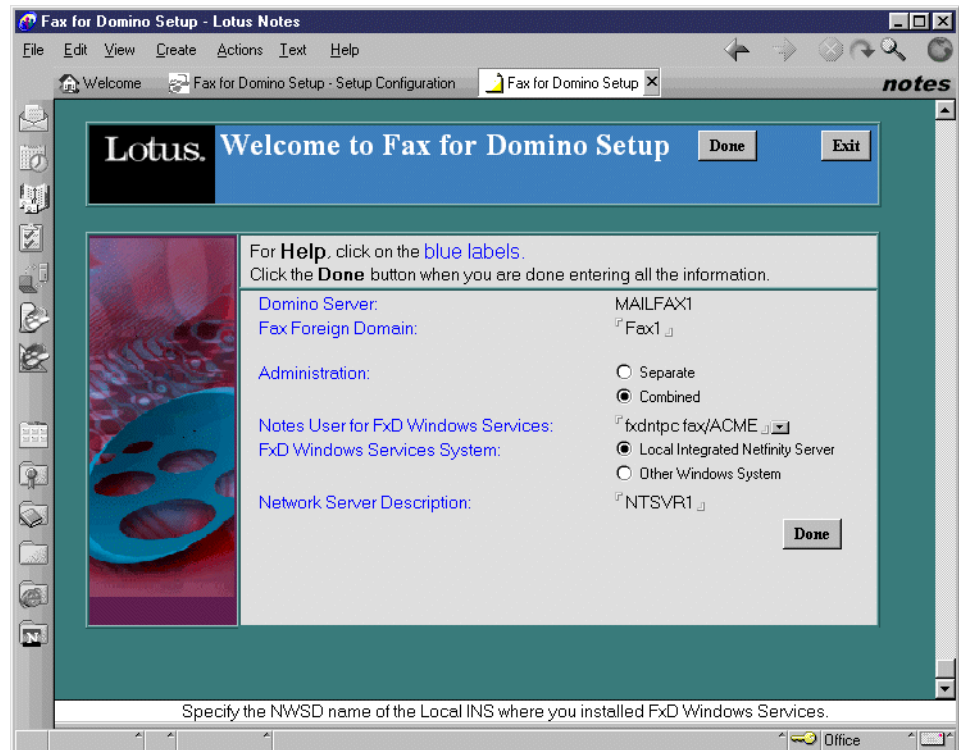


Figure 166. Fax for Domino Setup MAILFAX1

On the Fax for Domino Setup database configuration display, we enter for MAILFAX2:

- **Fax Foreign Domain:** Fax2
- **Administration:** Select Combined
- **Notes User for FxD Windows Services:** fxdtipc fax/ACME
- **FxD Windows Services System:** Select Local Integrated Netfinity Server
- **Network Server Description:** NTSVR1

After both setup procedures are completed successfully, we have to configure the Fax Server documents.

11.4.5 Configuring Fax for Domino for AS/400

To configure the Fax for Domino server using combined administration, we follow the steps described in 4.5, “Configuring Fax for Domino for AS/400” on page 50. We select the **Fax->Servers** view in the left hand pane of the Domino Directory and open the MAILFAX1 Server document. Expand the Fax section of the document.

1. In the Server administrator field, we specify the **FaxAdmins** group. All our fax administrators are included in this group.
2. Load balancing allows the fax transmission load within an organization to be shared by multiple fax servers in order to increase the transmission rate. Within a group of load balancing fax servers, one parent server monitors all child fax servers. We want to use load balancing. Therefore, we set the Is this server the parent controller? field to **Yes** and specify MAILFAX2 in the Child Server field as shown in Figure 167.

Note

All servers included in a load balancing arrangement must:

- Be fax servers
- Have the FxD software installed
- Have a fax device installed
- Include information in the Fax section of the Server document (combined administration) or have a Fax Server document in the FxD Administration database (separate database administration)
- Be in the same Notes domain
- Have a replica of the Cover Pages database

Load balancing is more important in a PC server environment than in a Fax for Domino for AS/400 implementation. In most cases, the AS/400 chassis should be able to provide space for the required number of fax lines. Although, in this example, we show the use of load balancing in a single footprint with two Domino servers, it does not really provide a true benefit here. The benefit comes when you have to use multiple AS/400 systems to supply the required number of fax lines.

Load balancing across servers is performed by using the ratio of the current load on a given server (the number of bytes waiting to be faxed by a server) and the load-balancing weight of that server in its fax server settings.

The administrator assigns server weights based on the number of outgoing fax lines, the performance rating of the system, and what other applications run on the server. For example, in the case of two identical systems that have similar non-fax workloads, the server with one outgoing fax line would get a weight of “1”, while the server with four outgoing fax lines would get a weight of “4”.

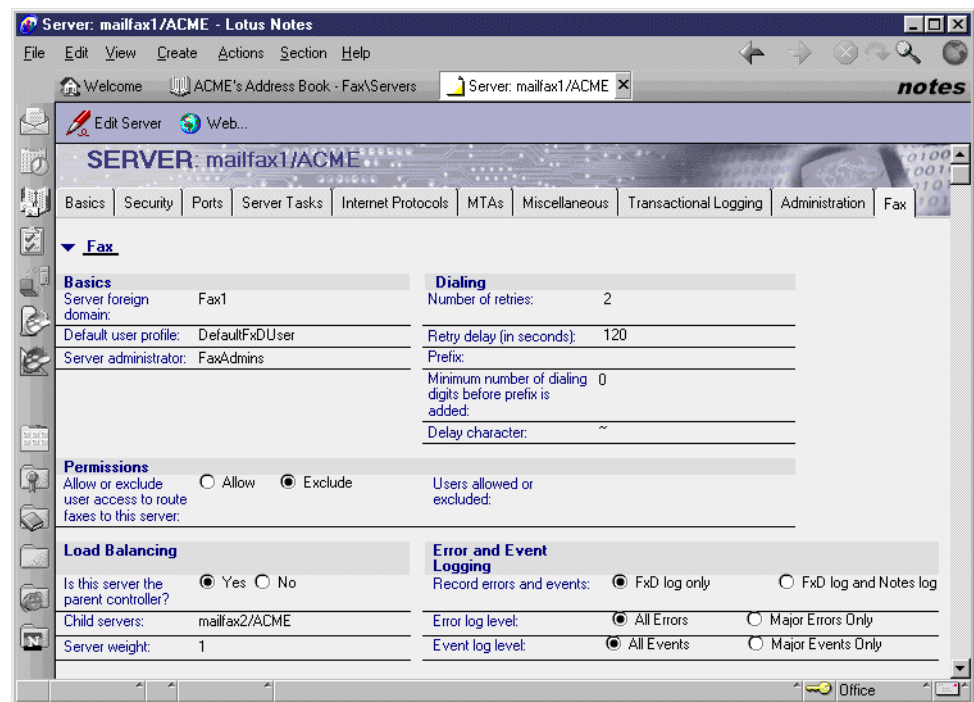


Figure 167. MAILFAX1 Server document

After we save and close the MAILFAX1 Server document, we open the MAILFAX2 Server document and expand the Fax section of the document.

1. In the Server administrator field, we specify the FaxAdmins group.
2. MAILFAX2 is the child server. Therefore, we set the Is this server the parent controller? field to **No** as shown in Figure 168 on page 184.

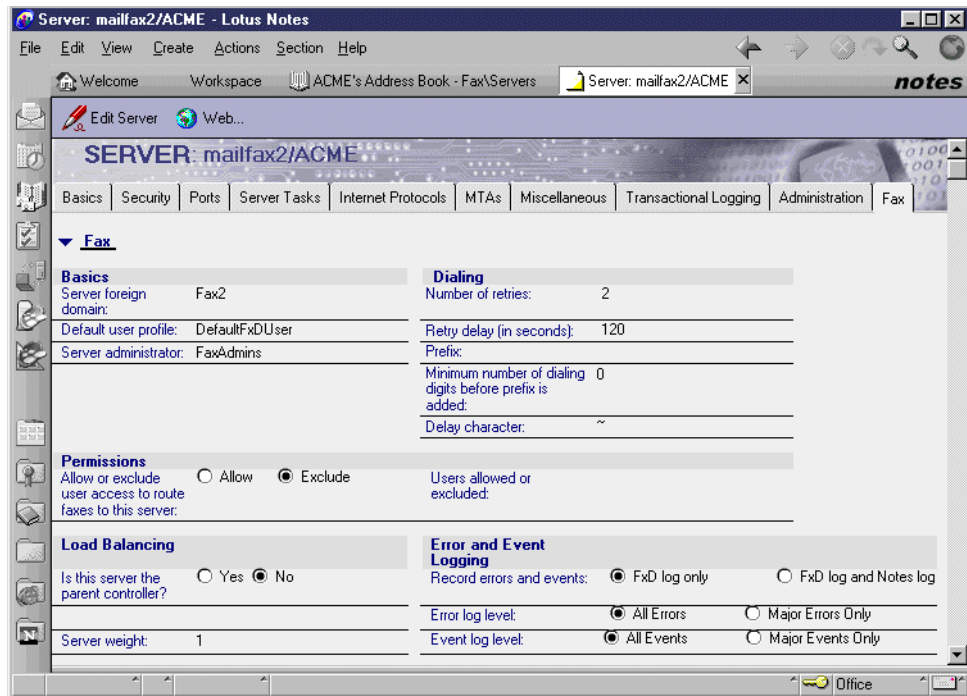


Figure 168. MAILFAX2 Server document

3. We save and close the MAILFAX2 Server document.

Now we are ready to define the fax devices for the Fax for Domino. Perform the following steps:

1. We select the **Fax->Devices** view in the right hand pane of the Domino Directory. Then, we click the **Create** menu and select **IBM PCI Analog**.

Note

We decide to use four ports of the IBM PCI Analog 2761 modem card for the MAILFAX1 Fax for Domino server and four ports for MAILFAX2. We also decide that we want to use the port routing method as described in 7.4.3, "Port routing" on page 136, to deliver inbound fax to different departments.

2. For the Fax server name field, we use MAILFAX1/ACME.
3. Using the planning table shown in Table 10 on page 178, we configure our first device using CMN10 in the Fax hardware resource name field.
4. In the Unique name for fax device field, we enter FAX101.
5. We enter the CSID, 5-6110, we defined in the planning table in the CSID field.
6. For the Fax page header, we select **Header 1**.

The completed display appears like the example in Figure 169.

IBM PCI Analog

For **Help**, click on the **blue labels**.
Click the **Save and Close** button when you are done entering all the information.
Note: Changes to this form will not take effect until Fax for Domino is restarted.

Device Information

✓ Fax server name: MAILFAX1/ACME
✓ Fax hardware resource name: CMN10
✓ Unique name for fax device: FAX101

General Settings

Enable Transmit? ☒ Yes ☐ No
Enable Receive? ☒ Yes ☐ No
Enable DTMF detection? ☒ Yes ☐ No
* CSID: 5-6110
* Fax page header: &date &time Page: &page

Advanced Settings

* Default user profile for routing of incoming faxes: Admin Domino/ACME
Dial Mode: ☒ Tone ☐ Pulse
Number of digits to dial before listening for dial tone: 0
Receive wait timer in seconds: 30
Discard fax page on return negative response? ☒ Yes ☐ No
Enable error correction mode? ☐ Yes ☒ No

DTMF Routing Options

Digit timeout in: 5 seconds
All digits timeout in: 20 seconds
Number of routing digits: 4
DTMF termination digit: #

Figure 169. IBM PCI Analog fax device settings

7. We enter the Notes person name in the Default user profile for routing of incoming faxes field. This person will distribute inbound fax documents in the department to which we assign this port.
8. After we save and close the first fax device settings, we create device settings for all eight ports of the IBM PCI Analog 2761 modem card.

When all devices are created, the devices view looks like the display in Figure 170.

Fax Server Name	Device Manufacturer	Device Type	Board Identifier
MAILFAX1/ACME	IBM	PCI Analog	FAX101
		PCI Analog	FAX102
		PCI Analog	FAX103
		PCI Analog	FAX104
MAILFAX2/ACME	IBM	PCI Analog	FAX201
		PCI Analog	FAX202
		PCI Analog	FAX203
		PCI Analog	FAX204

Figure 170. Fax devices view

11.4.6 Setting up FxD users

Before we inform our users that Fax for Domino is now available for use, we define the standards for our fax users. We design a corporate default cover page and specific cover pages for some users by following the steps described in 7.1, “Fax cover page” on page 115. The finished cover page is shown in Figure 171.

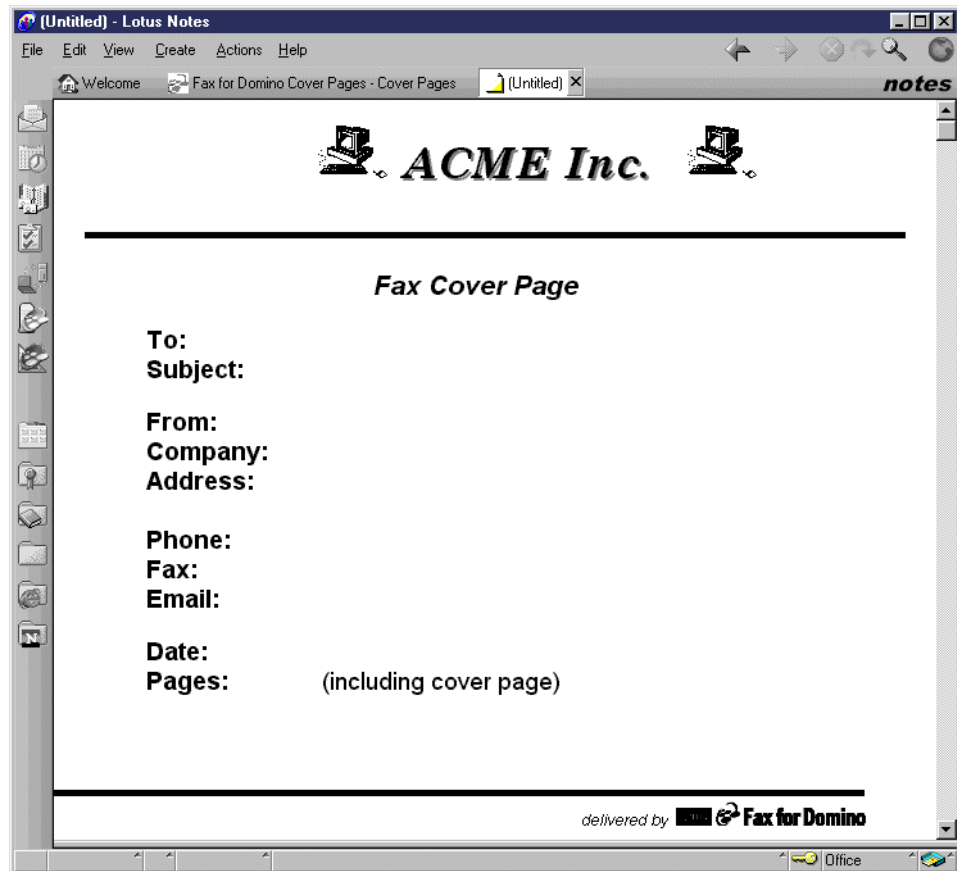


Figure 171. Corporate default cover page

We call it “ACME Fax Cover Page”.

To use this as a default for most of our fax users, we change the DefaultFxDUser Person document and set ACME Fax Cover Page as the value of the Cover Page field as shown in Figure 172.

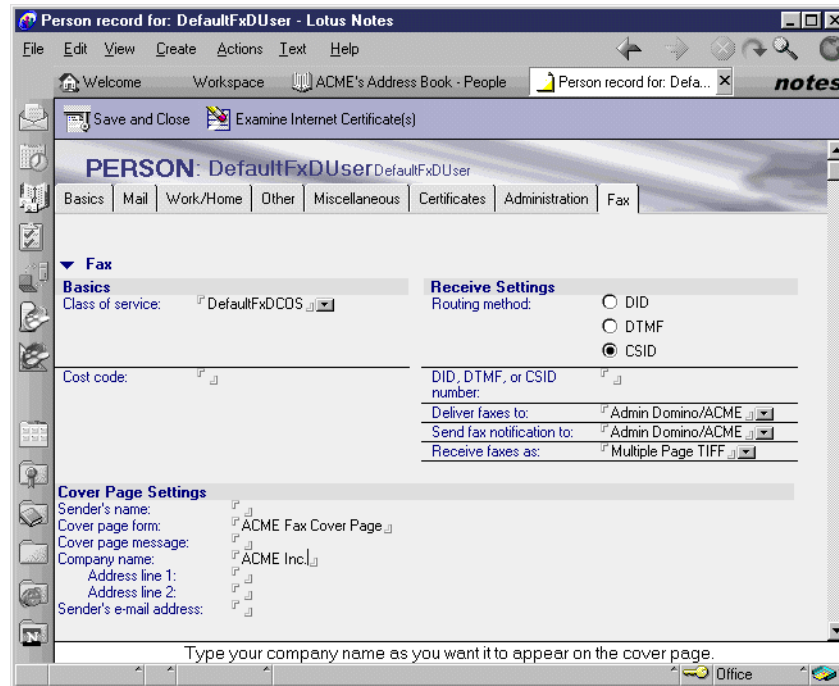


Figure 172. DefaultFxDUser

To maintain only one Fax for Domino Cover Pages database, we decide to delete the Fax for Domino Cover Pages database on MAILFAX2 and to create a replica of the Fax for Domino Cover Pages database of MAILFAX1 on MAILFAX2. Because these two Domino servers are clustered, all changes are mirrored immediately to the replica of the database on the other server.

To update the personal address books on the Notes client of our users, we now create a Memo that we send to all of our users.

This Notes memo includes, as an attachment, a copy of the updated pernames.ntf templates from MAILFAX1 and a step-by-step description on how to detach the template to the client and how to refresh the database design of their local address book against the template. The memo also includes the button described in 4.6.1, “Updating user Personal Address Books with fax domain information” on page 55 as a second step.

11.4.7 Starting Fax for Domino for AS/400

To start the two Fax for Domino servers, we follow the steps in 4.7, “Starting Fax for Domino for AS/400” on page 58.

Now all our Notes users can send and receive fax documents.

We provide our users with copies of Chapter 6, “Using Fax for Domino: A user’s perspective” on page 81, to assist them with learning how to use Fax for Domino for AS/400.

We advise them that to send faxes, they always address the fax to Fax domain Fax1, for example, jdoe@12345@Fax1. FxD will route faxes to the spool database represented by Fax2 as necessary. In the Fax for Domino Spool Mailbox database on the parent Fax for Domino server MAILFAX1, we can see

that some jobs are redirected to MAILFAX2. This is shown in Figure 173 by looking at the Original Server and Processing Server field in the Spool Information section of the fax entry information.

Note

Load balancing across servers is performed by using the ratio of the current load on a given server to the load balancing weight of that server. The current load is the number of bytes waiting to be faxed by the server. The load balancing weight is assigned to the server in its fax server settings.

The screenshot shows a Lotus Notes window titled 'Fax Entry - Lotus Notes'. The window has a menu bar (File, Edit, View, Create, Actions, Section, Help) and a toolbar. Below the toolbar is a yellow banner with the 'Lotus Fax for Domino' logo. The main content area is titled 'Fax Entry Information' and contains three sections: 'General Information', 'Outgoing Fax Characteristics', and 'Spool Information'. The 'Spool Information' section is expanded, showing 'Original Job Number: 12', 'Processing Job Number: 5', 'Original Server: mailfax1/ACMEInfxspool.nsf', and 'Processing Server: mailfax2/ACMEInfxspool.nsf'. The 'Temporary Files Information' section is also expanded, showing 'Temporary File Name(s):'.

General Information			
Job Type:	Outgoing Fax Job		
Job State:	Fax is ready for delivery		
Job Size:	4750 bytes		
Time job began processing:	03/30/2000 09:07:58 AM		
Time job completed processing:	03/30/2000 09:12:49 AM		

Outgoing Fax Characteristics			
Originator:	Pete Smith/ACME		
Recipients:	Felix Zalcmann@56390		
Destination (The name@phone for this individual job):	Felix Zalcmann@56390		
Cost Code:			
Retry Count:	0		

Spool Information:			
Original Job Number:	12	Original Server:	mailfax1/ACMEInfxspool.nsf
Processing Job Number:	5	Processing Server:	mailfax2/ACMEInfxspool.nsf

Temporary Files Information:	
Temporary File Name(s):	

Figure 173. Fax for Domino Spool Mailbox on MAILFAX1

We now open the Fax for Domino Spool Mailbox database on the child Fax for Domino server MAILFAX2 and then open the same entry. We can see in the Temporary Files Information section that the temporary fax TIFF files are processed by MAILFAX2 as shown in Figure 174.

General Information

Job Type:	Outgoing Fax Job
Job State:	Fax is ready for delivery
Job Size:	4750 bytes
Time job began processing:	03/30/2000 09:07:58 AM
Time job completed processing:	Job Not Completed yet

Outgoing Fax Characteristics

Originator:	Pete Smith/ACME
Recipients:	Felix Zalcmann@56390
Destination (The name@phone for this individual job):	Felix Zalcmann@56390
Cost Code:	
Retry Count:	

Spool Information:

Original Job Number:	12	Original Server:	mailfax1/ACMEInfxspool.nsf
Processing Job Number:	5	Processing Server:	mailfax2/ACMEInfxspool.nsf

Temporary Files Information:

Temporary File Name(s):	/QIBM/USERDATA/LOTUS/F A:\TMP\mailfax2/FC000501.T IF: /QIBM/USERDATA/LOTUS/F A:\TMP\mailfax2/FI000501.T1 F
-------------------------	---

Figure 174. Fax for Domino Spool Mailbox on MAILFAX2

11.5 Enabling the Web application to send fax documents

The application in this section is based on an example in *Developing an e-business Application: Using Lotus Domino for AS/400*, SG24-6052.

The ACME company is using a Web application to register business partners. Until now, the new business partner has to fill out a form on the Web. This form is stored in a Domino database, and mail is sent to the business partner telling them that their application to be a new business partner has been received. You can see the form in Figure 175 on page 190.

Form T Status T \$\$Return T

Please enter the following information. Fields in red are required!

Company	1	Company T
Address1	2	Address1 T
Address2	3	Address2 T
City	4	City T
State/Prov	5	State T
Postal Code	6	Zip T
Country	7	Country T
Location		Location
First Name	8	CFName T
Last Name	9	CLName T
Title	10	Title T
Phone	10	Phone T
Fax	10	Fax T
Email Address	11	Email T

Submit Cancel

Figure 175. Basic business partner application form

The approver of the application currently telephones the prospective business partner to request their credit card information.

Now, with Fax for Domino, we want to allow the new business partner to request a pre-created fax using the fax number they enter on the form. To do this, we add an additional button to our form. The Fax button is defined to invoke the following commands as you can see in Figure 176 on page 191:

```
@Command([FileSave]); 'Save the Document
@Command([ToolsRunMacro]; "Credit Card Request"); 'Run the agent that sends the
fax
db := @Subset(@DbName; -1);
url := "/" + db + "/AboutUs?OpenPage";
@URLOpen(url) 'Go to next web page
```

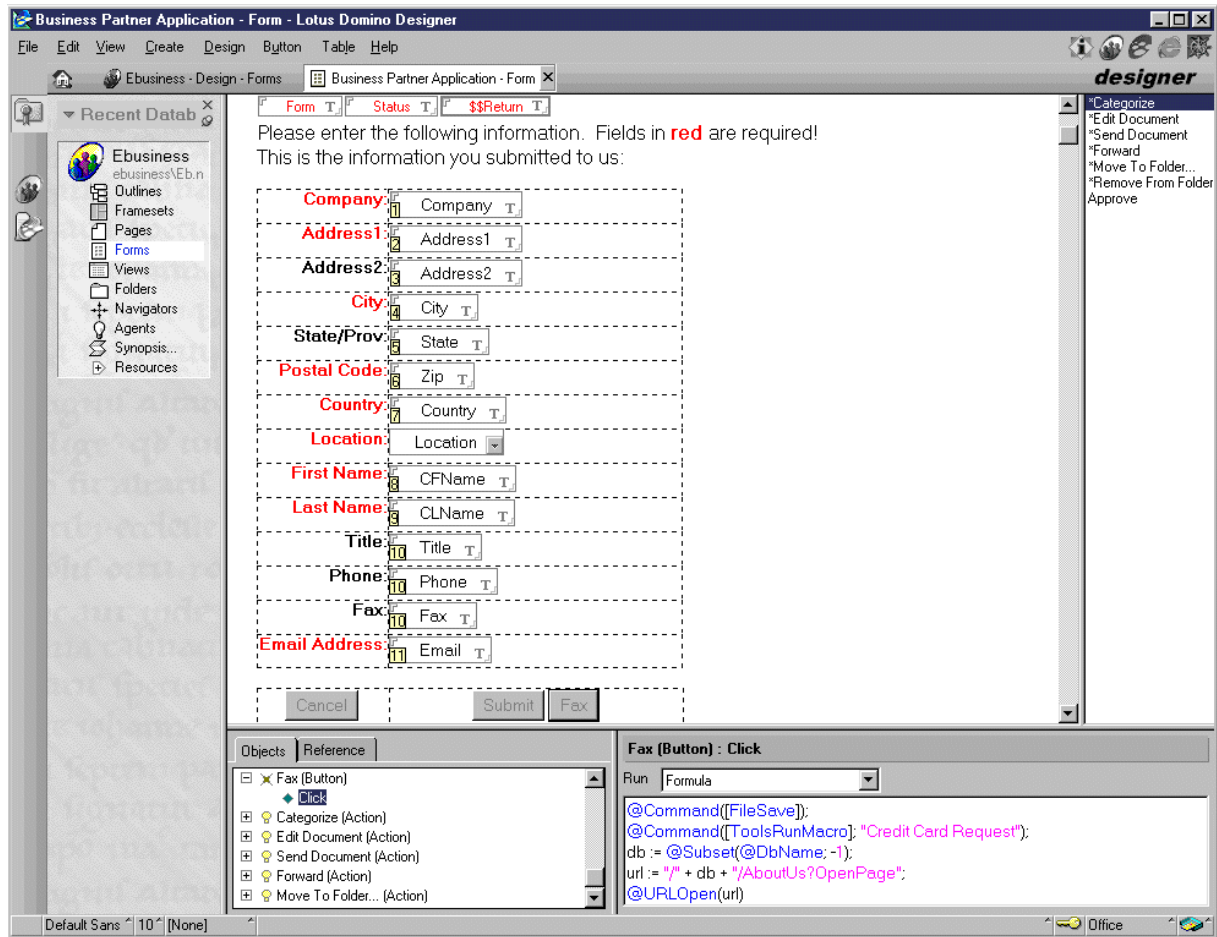


Figure 176. Fax button commands

In the next step, we change the text property of the first line of text (the line beginning with "Please enter the...") to be hidden on a Notes client display and the second line of text ("This is the information...") to be hidden on the Web interface as shown in Figure 177 on page 192.

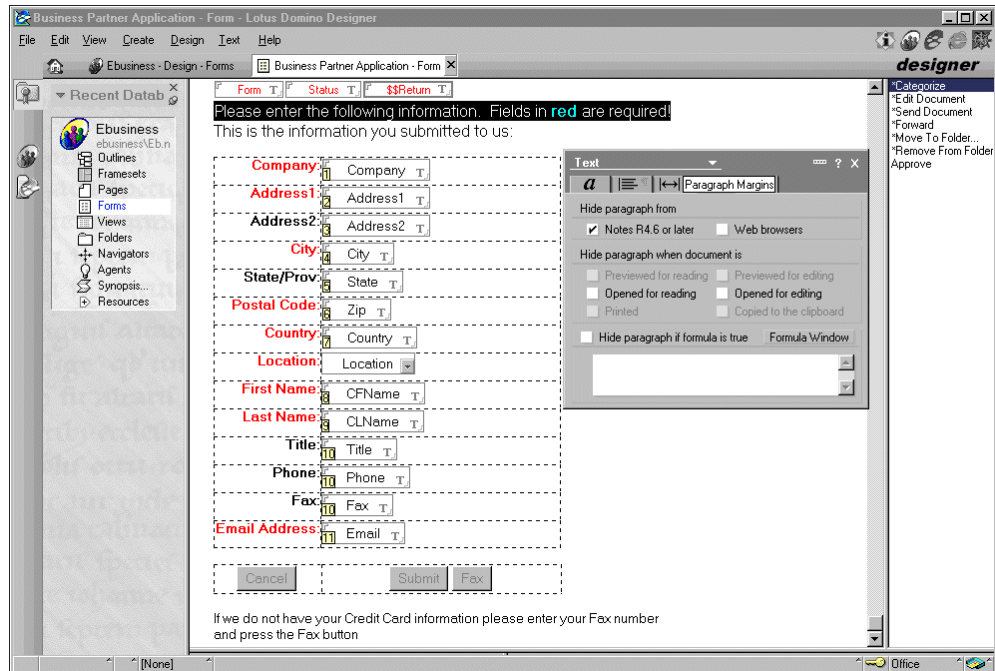


Figure 177. Hide paragraph

After we save the form, we now create the agent that sends the fax to the new business partner.

We name this agent Credit Card Request, define this to be a Shared Agent, and select the Action in the bottom part of the display to run a simple action as shown in Figure 178.

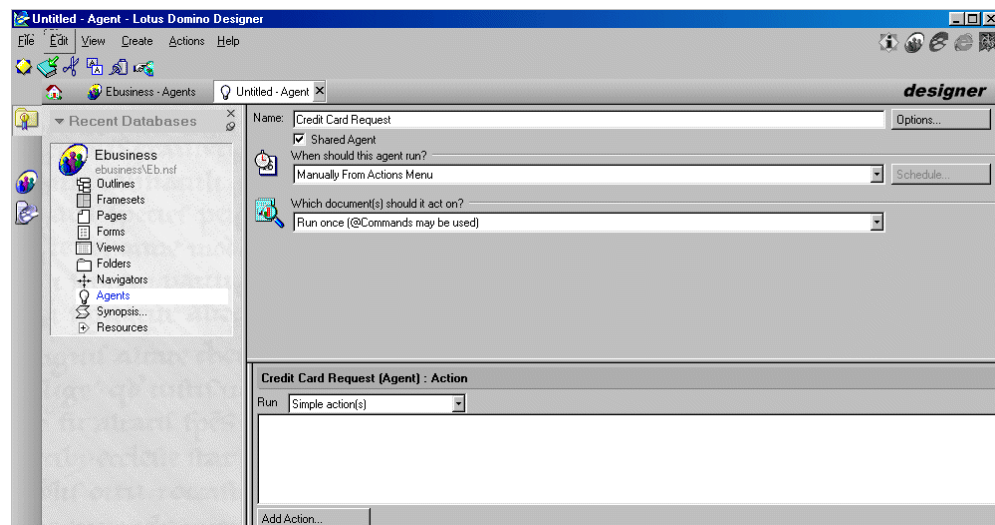


Figure 178. Simple action agent

We click the **Add Action** button and select **Send Mail Message** as shown in Figure 179.

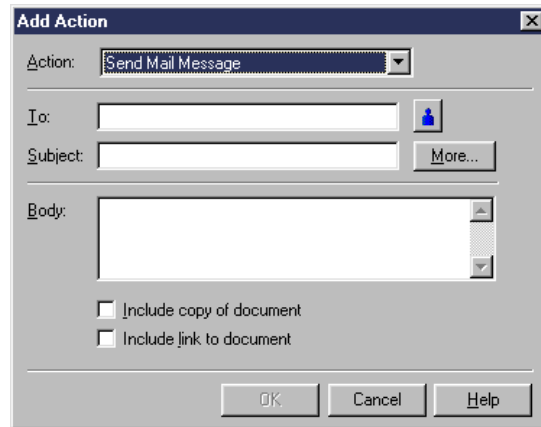


Figure 179. Send Mail Message Action

To create To: and Subject: fields using variables, we click the **More** button.

On the More Options display, we create a formula, using the fields from the business partner form to create the fax address in the required format, in the To: field and a variable Subject: field as shown in Figure 180.

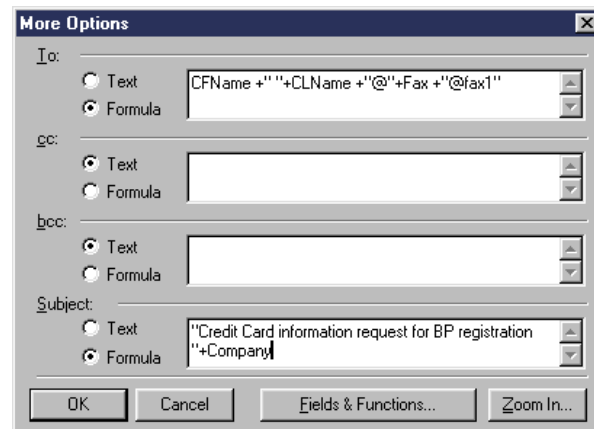


Figure 180. More options

After we click the **OK** button, we can now enter the body of the message.

The text we type in here is what you see in the top part of Figure 183 on page 195.

We want the new business partner to check the data they submitted to us. Therefore, we include a copy of the document in the fax as shown in Figure 181 on page 194.

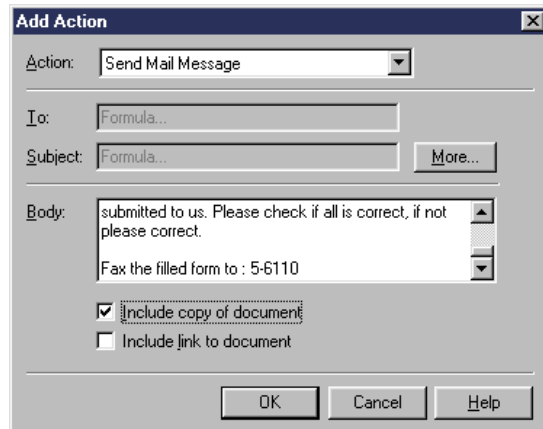


Figure 181. Include copy of document

Now, we can click the **OK** button and save the agent.

We now have a fax enabled Web application. When a new business partner wants to register and accesses our application through the Web, they see a display like the example in Figure 182.

Figure 182. New Business Partner registration

The completed and returned fax is shown in Figure 183.

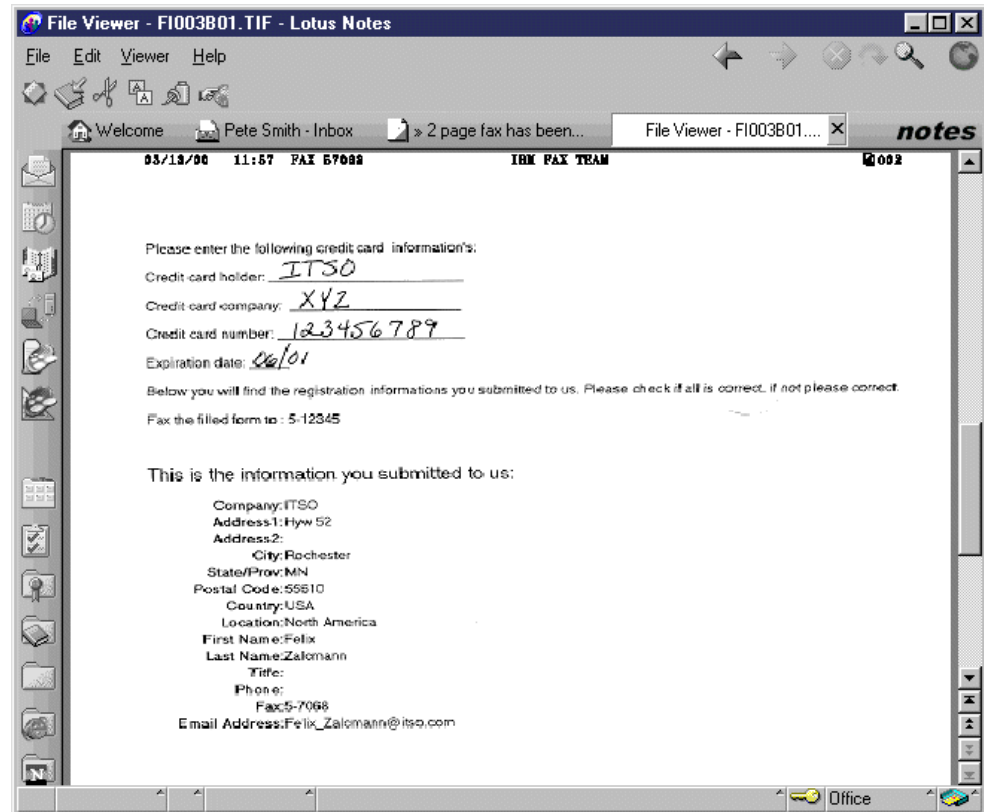


Figure 183. Inbound business partner fax

Now the fax enablement of the Web application is completed, and this concludes the scenario.

Appendix A. Additional installation topics

This appendix includes additional information pertaining to the installation of Fax for Domino for AS/400. The first section describes using a Lotus Notes 5.0.2b client, instead of a 4.6.6b client, to register a user for the FxD Windows Services System.

The second section provides information on how to cross certify the Notes user ID that you are using for the FxD Windows Services System with the cert.id file of this additional Notes organization. You only need to do this if you want to use one FxD Windows Services System to serve more than one Notes organization. Most installations do not require this.

A.1 Configuring the Notes client on the FxD Windows Services System

You have registered the user ID for the FxD Windows Services System in 3.5, “Registering a Notes user for the FxD Windows Services System” on page 31. This section describes how to configure an R5 Notes client using this user ID. Complete the following steps:

1. Start the Lotus Notes client application. When the window, as shown in Figure 184, appears, click **Next**.

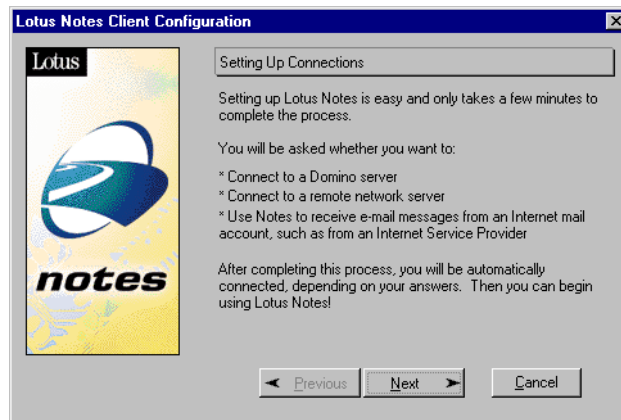


Figure 184. Lotus Notes Client Configuration

2. Select **I want to connect to a Domino server** as shown in Figure 185 on page 198.

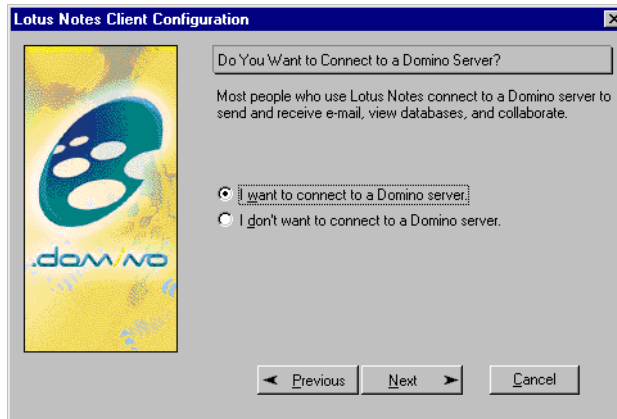


Figure 185. Configuration: Connect to Domino server?

3. Select the desired LAN connection, as shown in Figure 186, and click **Next**.

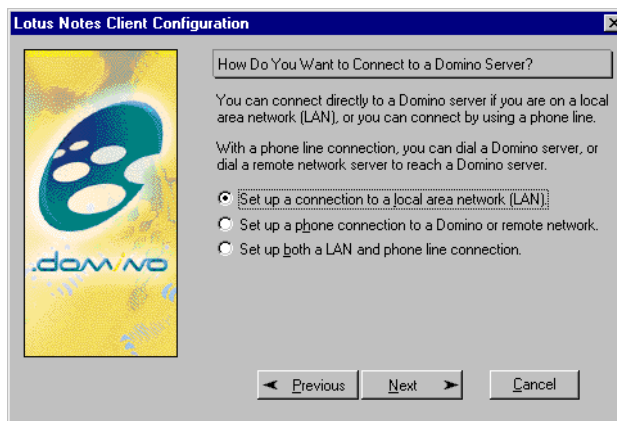


Figure 186. Configuration: Type of connection

4. Enter our Domino server name as depicted in Figure 187. Click **Next**.

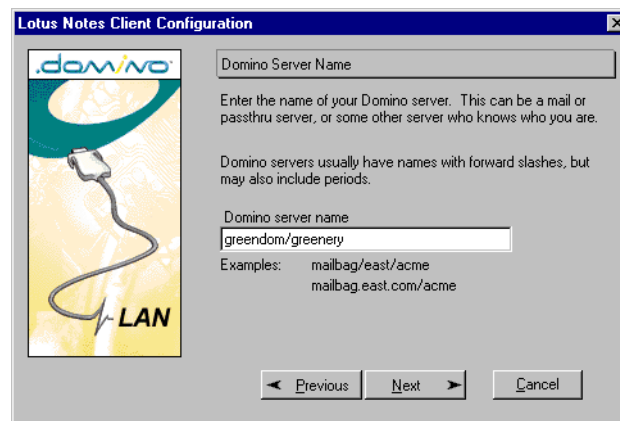


Figure 187. Configuration: Domino Server Name

5. The window, as shown in Figure 188, prompts for the user name. Enter the user, Grnfxdpc Fax, which was previously registered. Click **Next**.

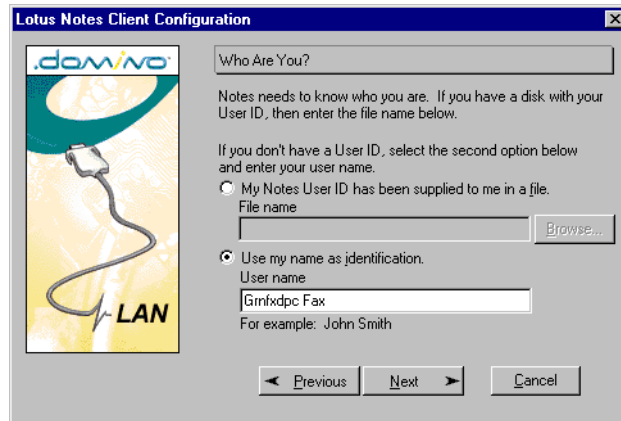


Figure 188. Configuration: Who Are You?

6. Click **Next** in the next window as shown in Figure 189.

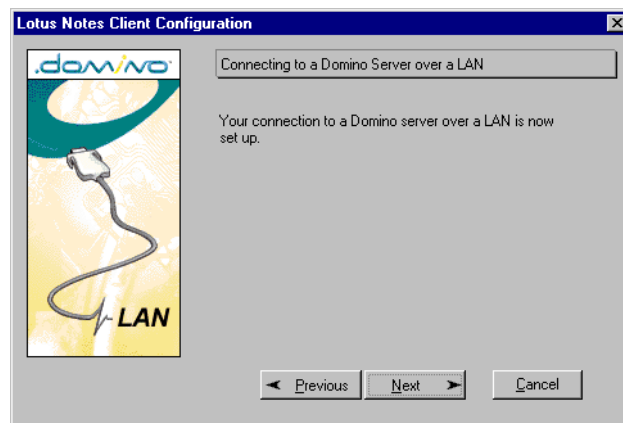


Figure 189. Configuration: Connection over LAN is set up

7. In the window, as shown in Figure 190, select **I don't want to create an Internet mail account** and click **Next**.

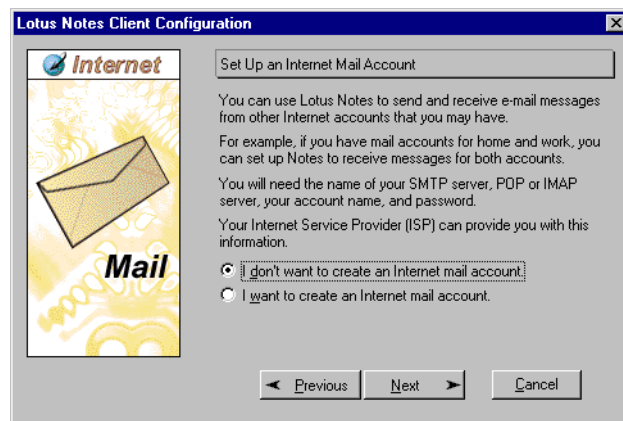


Figure 190. Configuration: Create Internet mail account

8. Select **I don't want to connect to a news server** as shown in Figure 191 on page 200. Click **Next**.

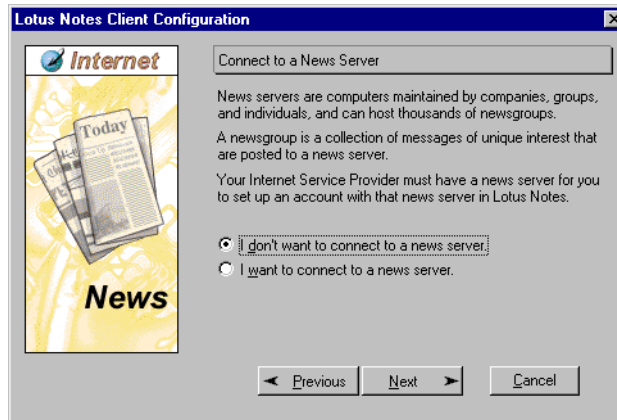


Figure 191. Configuration: Connect to a News Server

9. Choose **I don't want to connect to another directory server** and click on **Next** as illustrated in Figure 192.

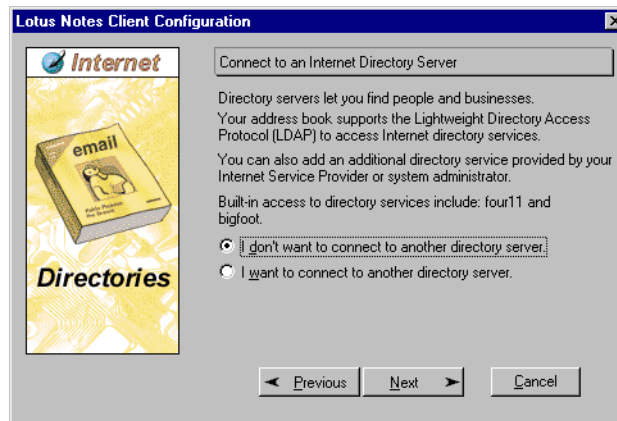


Figure 192. Configuration: Directory server

10. Select **I do not connect to the Internet through a proxy server**, as shown in Figure 193, then click the **Next** button.

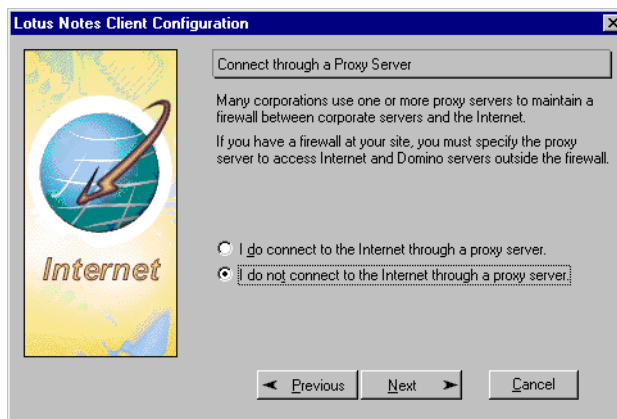


Figure 193. Configuration: Connect through a Proxy Server

11. Select **Connect over my existing local area network**, as shown in Figure 194. Then, click **Next**.

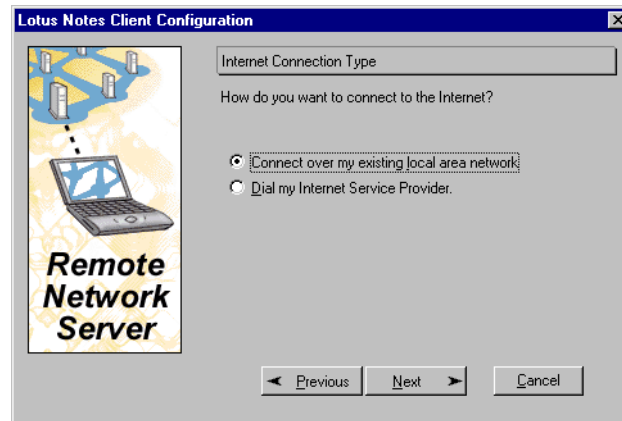


Figure 194. Configuration: Internet Connection Type

12. On the Congratulations window, as shown in Figure 195, click on **Finish**.

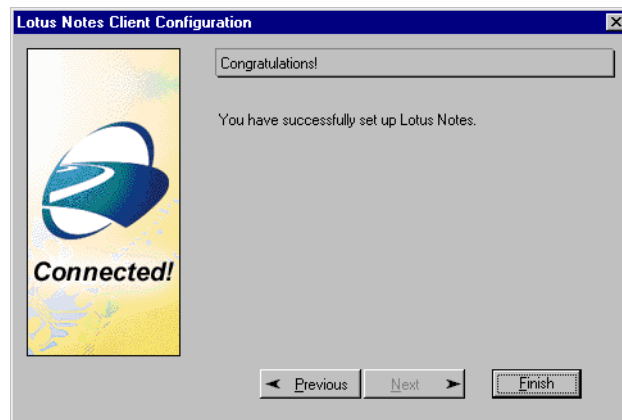


Figure 195. Configuration: Lotus Notes setup complete

13. Enter the password for user Grnfxdpc Fax as shown in Figure 196. The Lotus Notes client retrieves the user ID file for Grnfxdpc Fax from the GREENDOM server and stores it in the Notes data directory on our PC. Click **OK**.

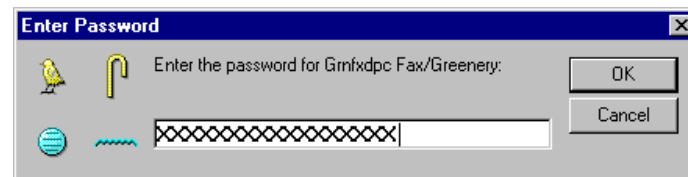


Figure 196. Enter Password

14. Click **OK** on the Notes Setup complete window as seen in Figure 197 on page 202.

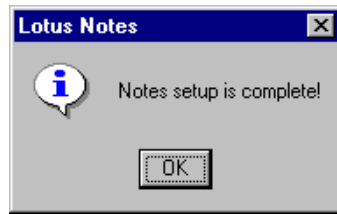


Figure 197. Lotus Notes setup complete

The Lotus Notes R5 desktop appears as shown in Figure 198.

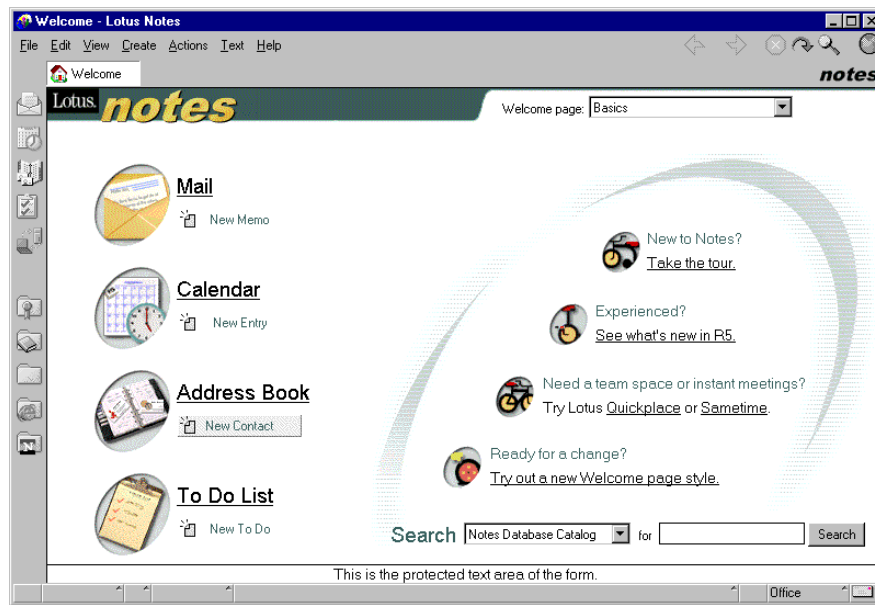


Figure 198. Lotus Notes desktop

15. Since the Lotus Notes setup is complete, close the Notes client.

You may now want to return to 4.3.4, “Installing FxD Windows Services System software” on page 43, to continue the installation process.

A.2 Cross certifying the user ID file

As described in 3.6.2, “One FxD Windows Services System serving different organizations” on page 32, you may want to use one FxD Windows Services System to serve more than one Domino organization. In this case, you have to cross certify the Notes user ID that you are using for the FxD Windows Services System with the cert.id file of this additional Domino organization.

To cross certify the user ID file of the FxD Windows Services System, follow these steps:

1. Use the FxD Windows Services System user ID file to send a safe copy of this ID file to the administrator of the second organization by following these steps:

Note

A safe copy means that you are not sending your original user ID file. You are sending only a stripped down copy to use for cross certification.

- a. On the Notes client, click **File->Tools->User ID**. Then, you see a window similar to the example in Figure 199.

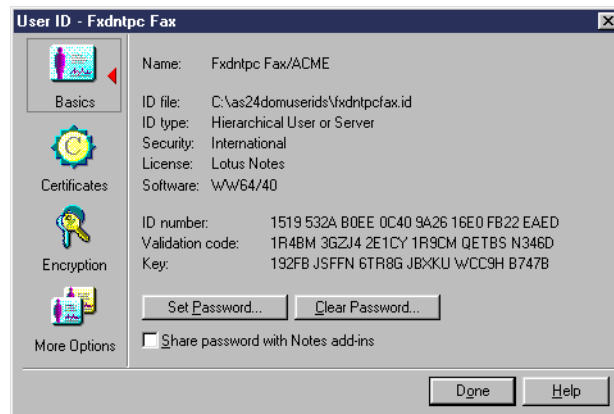


Figure 199. User ID

- b. Select the **Certificates** icon as shown in Figure 200.

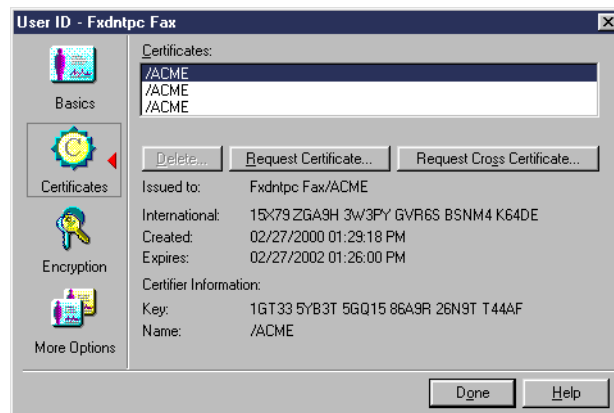


Figure 200. Certificates

- c. Click the **Request Cross Certificate** button and select the ID file you want to have cross certified (Figure 201 on page 204).

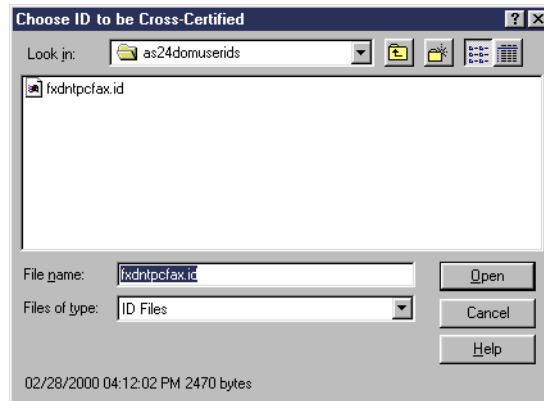


Figure 201. Choose ID to be Cross-Certified

- d. Type the other Domino administrator address where you want to send the safe copy of the ID file and click **Send** as shown in Figure 202.

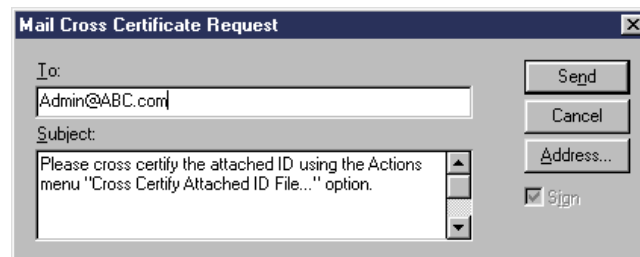


Figure 202. Mail Cross Certificate Request

2. The Domino administrator of the other organization now has to cross certify the safe copy of the ID received through mail by following these steps:
 - a. Open the mail document containing the cross certificate request and click the **Actions->Cross Certify Attached ID** file as shown in Figure 203.

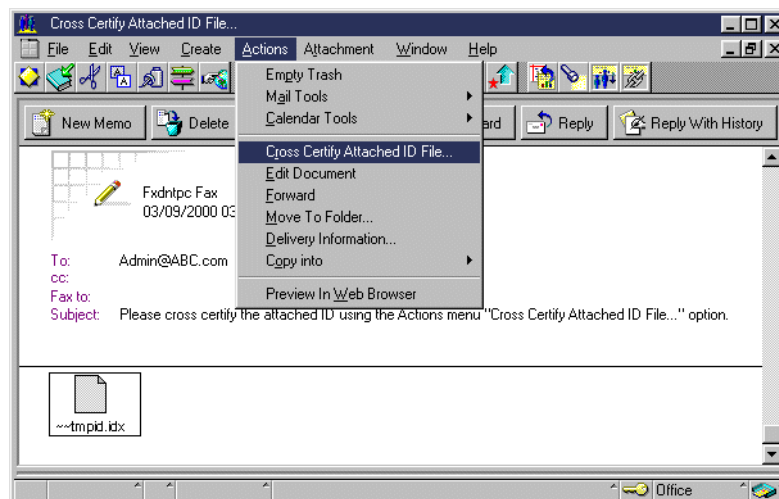


Figure 203. Cross Certify Attached ID File

- b. Choose the certifier ID file you want to use to certify the attached ID file and click **OK** (Figure 204).

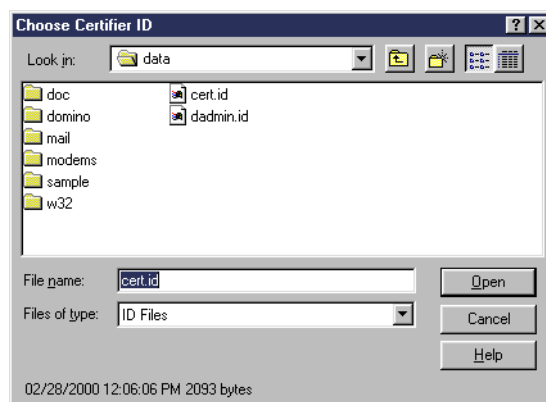


Figure 204. Choose Certifier ID

- c. Click the **Server** button, as shown in Figure 205, to change the registration server. Once all is selected, you may click the **Cross Certify** button to perform certification (Figure 205).

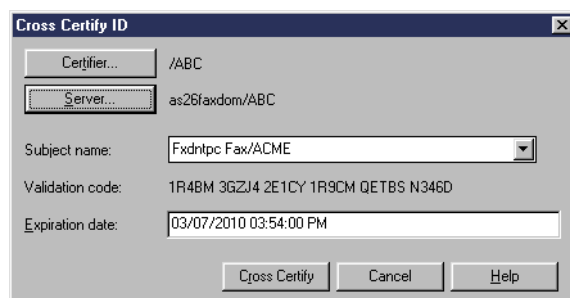


Figure 205. Cross Certify ID

Once certification is completed, the other organization can use the FxD Windows Services System to convert their fax documents.

Appendix B. A user's perspective: Installation topics

This appendix to Chapter 6, "Using Fax for Domino: A user's perspective" on page 81, includes additional details on installing the Lotus Print to Fax driver and setting up a POP3 client using Netscape 4.7.

B.1 Installing the Lotus Print to Fax driver

The Lotus Print to Fax driver enables you to fax output from any Windows-based application using FxD without directly using the Notes client. However, the Lotus Notes client *must* be installed before you can use the Print to Fax driver. This is an alternative to sending the output of Windows-based applications as attachments to Lotus Notes memos. You may see Lotus documentation refer to this driver as PTF. To avoid confusion with the AS/400 term Program Temporary Fix, we do not use this abbreviation.

First, download the Print to Fax driver for your Windows PC from the Web site at: <http://www.lotus.com/home.nsf/welcome/faxfordomino>

After the download completes, the file `lotusptf.exe` is on your system as shown in Figure 206. Double-click the **lotusptf.exe** icon. The installation occurs automatically. There is *no* need to run the Microsoft Windows - Add Printer function.

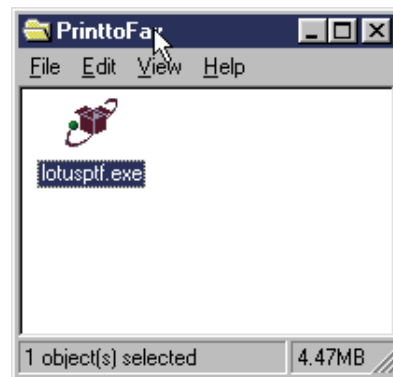


Figure 206. Lotus Print to Fax driver file

After a few seconds, a window appears, which is shown in Figure 207 on page 208. After closing any other active applications, as is suggested, click the **Next** button.

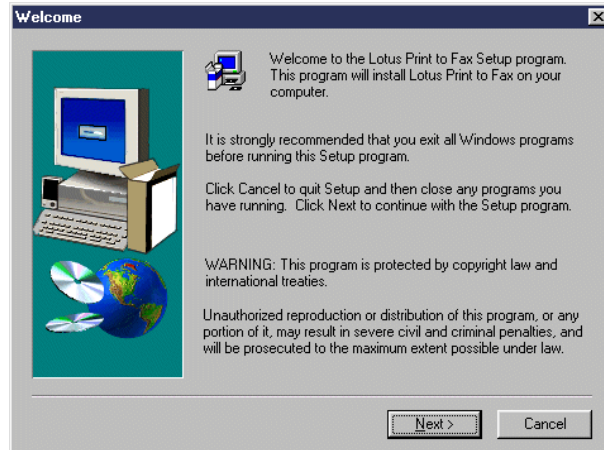


Figure 207. Print to Fax driver install: Welcome

The Software License Agreement window is displayed, as shown in Figure 208. Click **Yes** to continue after reading the agreement.

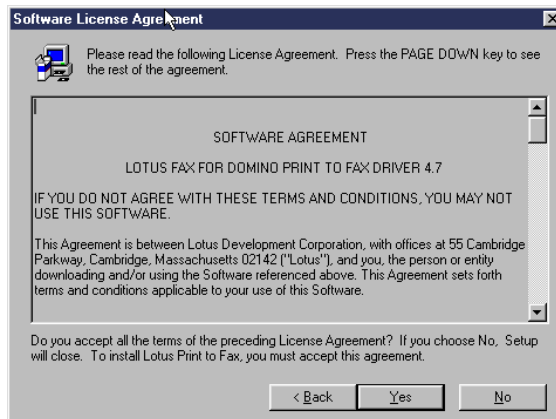


Figure 208. Installation window: Software Agreement

Figure 209 shows the next window, which includes information on the Print to Fax driver. This information is also in the readme.doc file that is in the directory selected in Figure 210. Click **Next** to continue the installation.

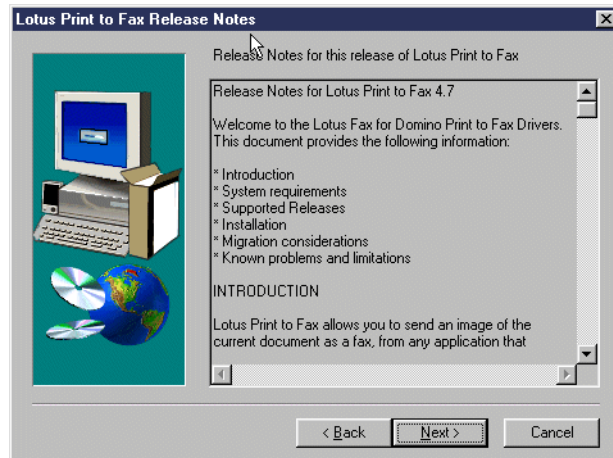


Figure 209. Print to Fax: Information

As shown in Figure 210, a default destination folder is already selected but can be changed if desired. Click the **Next** button to continue.

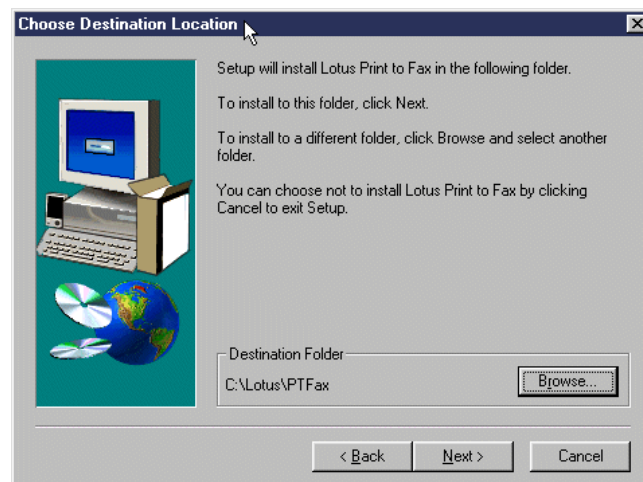


Figure 210. Destination folder for Print to Fax driver

After the installation is complete, the window shown in Figure 211 on page 210 appears. At this point, select whether to restart your computer immediately or later. A restart is *required* before using the Lotus Print to Fax driver.

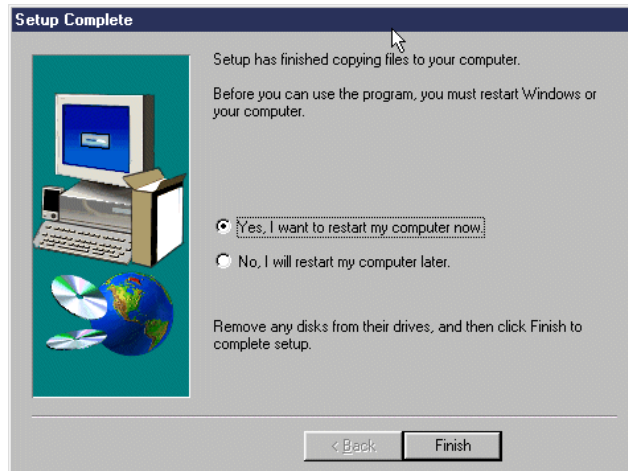


Figure 211. Setup Complete for Print to Fax driver

B.2 Registering a POP3 client with Domino

The following steps must be completed by the *Domino Administrator* to register a POP3 user with a Domino R5 server.

Note

Although the process would be similar to register a POP3 user with a Domino 4.6 server, the actual selections used in each step may vary. For example, the Domino Administrator client is new with R5.

1. Start Domino Administrator by clicking on its **bookmark** icon on your R5 desktop. Alternatively, click **File->Tools->Server Administration** to start Domino Administrator. Click **Esc** at the Administrator welcome display.
2. Select your domain and the server (if necessary) and then select the **People and Groups** tab.
3. Click the **People** twistie and then click **Register**. When prompted, enter the password for the cert.id of the your server.
4. Click **No** if you see a pop-up window regarding the certifier ID and recovery.
5. In the Register Person - New Entry window, select the **Advanced** box and enter:
 - First name
 - Last name
 - Password
 - Internet address, such as name@popdomain.com
6. Select the **Set Internet Password** box.
7. Click the **Mail** icon in the Register Person window. Verify that the mail server is correct. Also, you *must* ensure that the Mail system is changed to POP.
8. After verifying that the person's information has been entered as indicated above, click the **Add Person** button. The new user appears at the bottom of the window in the Registration queue area.

9. Click the **Register** button (or **Register All** if you are registering more than one person).
10. Close the Register Person - New Entry window and refresh the Domino Administrator window.

The new POP3 user appears in the People & Groups view.

B.3 Setting up Netscape Messenger as a POP3 client

The following steps outline what must be done to set up Netscape Messenger as a POP3 client. The information required to configure Microsoft Outlook Express is similar. We are assuming that the Domino Administrator has already registered you as a POP3 user as shown in B.2, “Registering a POP3 client with Domino” on page 210.

Before you (as a POP3 user) can send and receive e-mail, your browser settings must be changed to reflect your mail server and whether you will use an IMAP or POP3 server. You may have one POP3 server or multiple IMAP servers, but not both.

Note

The browser used in this section is Netscape Communicator 4.7.

To specify or change the servers you use for mail, perform the following steps:

1. From Netscape, click **Edit->Preferences**.
2. Click **Identity** and enter appropriate information as shown in Figure 212.

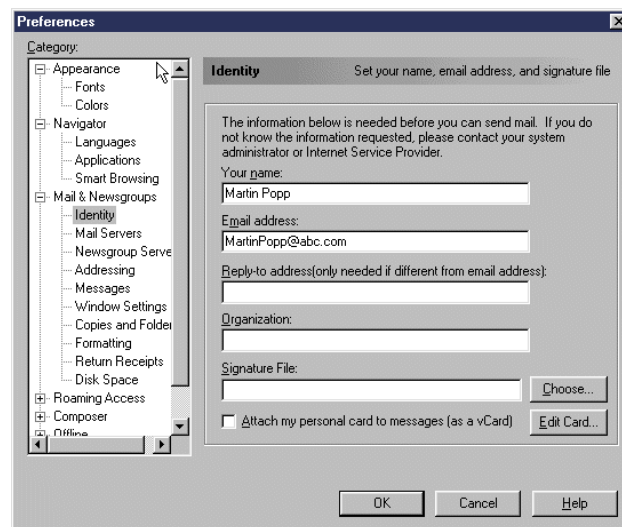


Figure 212. Entering the identity of the POP3 user

3. Click **Mail Servers** from the Mail & Newsgroup category. In the Incoming Mail Server field, click **Add** to add a server. As shown in Figure 213 on page 212, enter the appropriate information for your POP3 server. In our example, our as26fxdom server is functioning as both an FxD server and a POP3 mail server.

- a. At Server Type, click the drop-down list and select **POP3**.
- b. Enter your user name.
- c. Select **Remember password** if you'd rather not be prompted for your password each time you start Messenger (you are prompted for a password initially). In our example, do not select this option.
- d. If desired, select **Check for mail every ___ minutes** and set a time period. In our example, we are not selecting this option and, therefore, must click the **Get Msg** icon on the component bar to retrieve messages.
- e. Click the **OK** button.

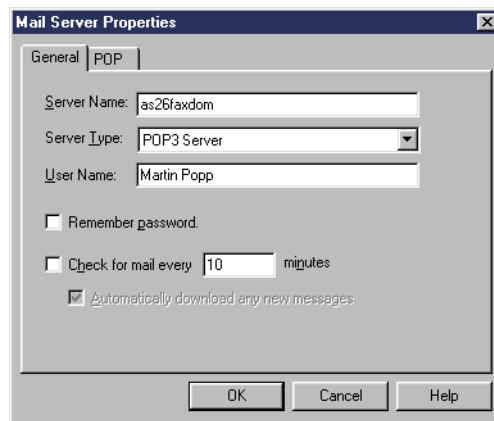


Figure 213. Mail Server Properties

4. Click the **POP** tab, and a window, as shown in Figure 214, appears.

Since we do not want to leave messages on both the mail server and our personal computer, do *not* check Leave messages on server.

Note

The other option, “When deleting a message locally, remove it from the server”, only applies if we select Leave messages on server.

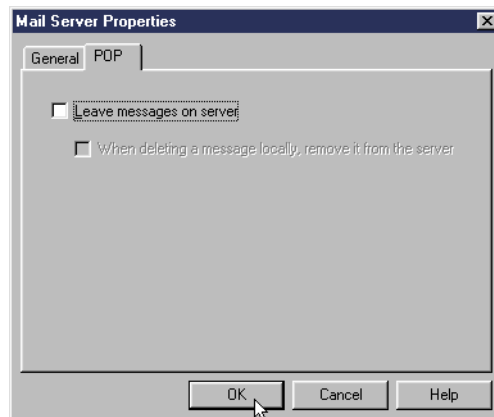


Figure 214. POP settings

5. At the Mail Servers window, as shown in Figure 215, enter your SMTP server in the Outgoing mail (SMTP) server field. In our case, our SMTP server is as26faxdom.abc.com.

Also, enter your user name as provided by your system administrator or Internet service provider. Do not enter your entire e-mail address.

We are leaving the defaults for the other Mail Server options.

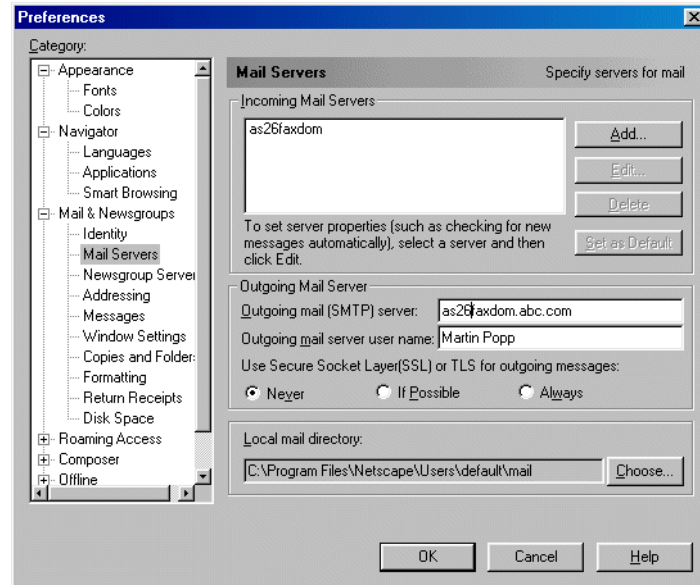


Figure 215. Outgoing mail settings

Note

Optionally, other Netscape preferences, such as the Messenger window layout and disk space settings, can be changed by selecting other Mail & Newsgroups categories.

Appendix C. Handling non-standard attachments

FxD converts non-image attachments to fax image format by starting the application associated with the document type and having that application print the document using the Fax for Domino Conversion Service print driver (mailFax Convert Server driver; this printer driver is installed by FxD automatically). This print driver captures the image created by the application and passes it back to FxD to transmit with the fax.

While this process works correctly with many applications, some applications exhibit unusual behavior when asked to print a document. Where an application behaves in an unusual way, you must configure FxD to handle the application by creating documents in Convert Server Config database (nfxconv.nsf).

Any necessary documents for the applications announced as supported for attachments are already provided.

C.1 Fax for Domino Conversion Service

After installation FxD Windows Services System, two services are started automatically: Fax for Domino Conversion Service and Fax for Domino Service Monitor (Figure 216).

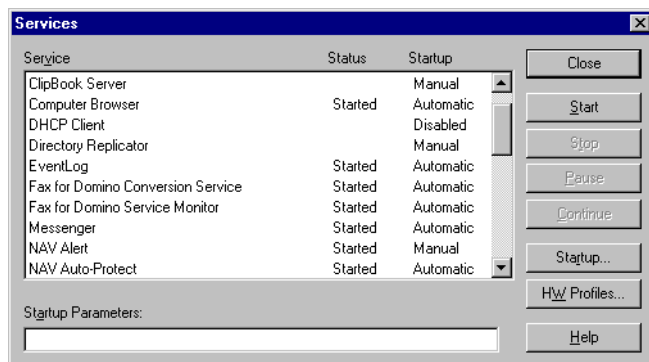


Figure 216. Services on Windows NT that FxD Windows Services System running on

The Fax for Domino Conversion Service is what actually converts Lotus Notes attachments to fax images (TIFF). This service continually monitors for conversion requests from any FxD for AS/400 that is configured to use this service for conversion purposes. Once the Fax for Domino Conversion Service has received a conversion request, it starts the Windows application that is needed to successfully convert the attachment. The Fax for Domino Conversion Service monitors this application's progress during the conversion process. Normally, the Fax for Domino Conversion Service is alerted that the application has finished converting the attachment into a print file when the application ends. However, if the application displays one or more dialog boxes during the conversion process, the Fax for Domino Conversion Service may not successfully complete the conversion process and may, in fact, timeout unless the necessary steps have previously been taken to handle these dialog boxes.

To handle these dialog boxes, the Fax for Domino Conversion Service uses the Convert Server Config database (nfxconv.nsf) found locally on the FxD Windows

Services System. Therefore, when the Fax for Domino Conversion Service encounters conversions of attachments that result in dialog boxes being displayed, it uses the nfxconv.nsf documents to automatically handle the dialog boxes without requiring any administrator intervention.

For example, suppose there is an application installed on the FxD Windows Services System named XYZ, which always displays a dialog box before starting a print request. This dialog box is titled "Print", it has some user input fields, and it has Yes and No buttons. Furthermore, assume the FxD administrator has added the necessary documents to the local Convert Server Config database (nfxconv.nsf) so that the Yes button is pressed whenever a "Print" dialog box is displayed during an XYZ attachment conversion. With this in mind, now suppose the Fax for Domino Conversion Service receives a request to convert an XYZ attachment. To convert the XYZ attachment, it starts the XYZ application to generate a print file. Next, the Fax for Domino Conversion Service is alerted that a "Print" dialog box has been displayed by the XYZ application. Therefore, using the nfxconv.nsf documents that were created to handle the XYZ application, the Fax for Domino Conversion Service automatically presses the Yes button on the "Print" dialog box. This allows the XYZ application to continue generating the print file. The Fax for Domino Conversion Service is notified again when the XYZ application ends, and it then creates a fax image from the XYZ generated print file.

Some applications start a second process to generate print files and then terminate themselves before the print file has been created. In these cases, the Fax for Domino Conversion Service must be configured to wait for the second process to finish generating the print file instead of assuming that the print file exists when the original application terminated. Once again, documents can be created in the local Convert Server Config database (nfxconv.nsf) to alert the Fax for Domino Conversion Service of this occurrence so that it monitors the correct process.

Please refer to the following section to better understand how to use the Convert Server Config database (nfxconv.nsf) to handle applications similar to the ones described above.

Whenever you change these documents, you need to perform the following tasks for the changes to take effect:

1. Stop FxD for AS/400 on each Domino fax server that uses this Fax for Domino Conversion Service.
2. Stop the Fax for Domino Conversion Service.
3. Start the Fax for Domino Conversion Service.
4. Start FxD for AS/400 for each Domino fax server that you previously stopped.

C.2 Configuring a file format

The configuration options for file formats are set in the Convert Server Config database (nfxconv.nsf), which has two views:

- **File Types view:** The File Types view of the Convert Server Configuration database contains a list of the file types the Fax for Domino Conversion Service must process in a non-standard manner.

- **Popup Windows view:** If the application displays one or more dialog boxes while printing a document, and these dialog boxes require either a button or keyboard keystrokes to be pressed, you must define the popup windows and the actions the Fax for Domino Conversion Service should perform.

C.2.1 File Types view

To view or edit the configuration information for a file type, select it from the list in the File Types view. To define the processing options for a new file type, select **Create->File Type**.

If a file type is not listed in this view, the Fax for Domino Conversion Service uses the default conversion options in an attempt to print the document.

Table 11 shows options of the File Types form.

Table 11. Options of the File Types form

Option	Description
File type	The file type (or file extension) these processing options are associated with, for example, "lwp" for a Word Pro document.
Wait for print exit	<p>Specifies whether the printing of the document should have completed by the time the application terminates. Most applications will finish printing a document before they terminate. However, some applications start a second process to print a document and then terminate the main process. In this case, this option should be set to No.</p> <p>If this option is set to Yes, but the conversion has not completed when the application terminated, the Fax for Domino Conversion Service will assume that the conversion has failed.</p>
Use 'printto'	<p>Specifies whether the Fax for Domino Conversion Service should use the <code>Print To</code> or the <code>Print</code> command to convert files of this type. Some applications define a <code>Print To</code> command in the Windows registry, which specifies how a file should be printed on any printer. Other applications define only a <code>Print</code> command, which specifies how a file should be printed on the Windows default printer.</p> <p>If you set this option to Yes, the Fax for Domino Conversion Service uses the <code>Print To</code> command to print files to the Fax for Domino Conversion Service printer. Setting this option to Yes may prevent the application from displaying a pop-up window prompting for the printer name, and therefore, avoiding the need to define a popup window.</p> <p>If you set this option to No, the Fax for Domino Conversion Service uses the <code>Print</code> command to print files to the default printer. The Fax for Domino Conversion Service sets the mailFax Convert Server printer to be the default. With this setting, some applications display a popup window that prompts you to choose which printer to use.</p>

Option	Description
Print via spool	If this option is set to Yes, the Fax for Domino Conversion Service will print files via the spooling system. If this option is set to No, the Fax for Domino Conversion Service will print files directly to the fax printer. This option should be set to No for most applications. However, some applications do not correctly print directly to the printer.
Wait for print process exit	If this option is set to Yes, the Fax for Domino Conversion Service waits for the application to terminate after the print conversion has completed before returning the converted document to FxD. This option should be selected for most applications.
Print exit timeout	The length of time (in seconds) the Fax for Domino Conversion Service will wait for the application to terminate after the document printing has completed. Leave this field blank or specify 0 to accept the Fax for Domino Conversion Service default wait time.

C.2.2 Popup Windows view

Documents in this view ensure that no manual interaction is required. You must create and configure one document in this view for each window the application can display.

Note

If you create a File Types document, one or more associated Popup Windows documents are only needed if the application displays dialog boxes.

If you create a Popup Windows document, an associated File Types document must also exist.

The Popup Windows view of the Convert Server Config database contains a list of the pop-up windows that the Convert Server will monitor for each file type. You can configure any number of popup windows for each file type. However, the popup windows for a file type must be specified in the order that they are displayed.

To view or edit the configuration information for a Popup Window, select it from the list in the Popup Windows view. To define a new Popup Window, select **Create->Popup**.

The Popup Window form contains the options shown in Table 12.

Table 12. Options of the Popup Window form

Option	Description
File type	The file type (or file extension) with which these processing options are associated, for example, "lwp" for a Word Pro document.
Window number	An integer number indicating the order in which this window is displayed when printing a document with this file type. The first window should have a window number of 1, the second - 2, etc.

Option	Description
Window title	<p>Specifies the title of the popup window so that the Fax for Domino Conversion Service can identify it. You can specify either the full window name or a portion of it. Normally, you would use only a portion of the window title if it contains some variable text, for example, the document name. Refer to the Must match full window title option.</p> <p>Specify the window title that appears in the log message when the Fax for Domino Conversion Service logs “unknown popup window”.</p>
Must match full window title	Specifies whether the Window title option contains the full or partial window title. Select Yes if it contains a full window title or No if it contains a portion of the window title.
Popup window is optional	Specifies whether the popup window always displays when printing a document with this application or whether it displays only under certain conditions. Select Yes if the popup window does not always display. If this option is set to No, the Fax for Domino Conversion Service waits for the popup window to display. If for some reason the window does not display, the process eventually times out and fails the conversion.
Clear dialog action	<p>Specifies the action the application should take when it detects this popup window. The options are:</p> <ul style="list-style-type: none"> • Press button: Specifies that a button on the popup window should be pressed when the window is displayed. If this option is selected, you must also complete the Button ID to press field. • Send key strokes: Specifies that keyboard keystrokes should be sent to the popup window when it is displayed. If this option is selected, you must also complete the Keys to send text box.
Button ID to press	Specifies which button to press. This is done by specifying a Button ID. Each button in a dialog box is assigned an ID number. Normally, the OK button is ID number 1. You can determine the ID number associated with a button either by using trial and error, or by using a tool such as Spy++ (a tool that comes with Microsoft Visual C++), which allows you to analyze the windows currently being displayed.
Keys to send	Specifies the keystrokes to send to the popup window. See below for an explanation of how to configure keystrokes.
Fail conversion message	If this popup window indicates that the file cannot be printed (for example, if the document is password protected, and this window is prompting for the password), specify the text of the error message that should be returned to the fax originator, for example, “Document is password protected”. This field should be left blank if this popup window does not indicate a failure of the conversion.

In the Keys to send text box, specify one or more keys in the order they should be pressed. This can include a list of keystrokes representing both printing and non-printing keys.

To send an ordinary keyboard key or sequence of keys, such as A, 8, or DIR, simply enter the actual characters in the Keys to send text box.

To send non-printing keyboard keys, such as Tab, Backspace, or keys that perform actions in the active window, such as Page Up, use the key code shown in Table 13 (including the braces).

Table 13. Key code

Key	Code
Backspace	{BS} or {BKSP} or {BACKSPACE}
Break	{BREAK}
Caps Lock	{CAPSLOCK}
Clear	{CLEAR}
Del	{DEL} or {DELETE}
Down arrow	{DOWN}
End	{END}
Enter	~ or {ENTER}
Esc	{ESC} or {ESCAPE}
Help	{HELP}
Home	{HOME}
Ins	{INSERT}
Left arrow	{LEFT}
Num Lock	{NUMLOCK}
Pg Dn	{PGDN}
Pg Up	{PGUP}
Right arrow	{RIGHT}
Scroll Lock	{SCROLLLOCK}
Tab	{TAB}
Up arrow	{UP}
Function keys	{F1} to {F16}

To include a character from the following table in this option, enclose it in braces as shown in Table 14.

Table 14. Character code

Character	Code
Brace	{ } or { }
Bracket	[] or []
Caret	{^}
Parenthesis	{ } or { }

Character	Code
Percent sign	{%}
Plus sign	{+}
Tilde	{~}

Table 15 shows how to designate keys pressed in combination with Alt, Ctrl, or Shift.

Table 15. Combination key code

Combination key	Code
Alt	%
Ctrl	^
Shift	+

To apply a combination key to a sequence of keys, enclose the sequence in parentheses. For example, +(xy) holds down the Shift key for both x and y. It is equivalent to +x+y.

C.2.3 Faxing .html attachments

As mentioned in 7.2.3.2, “Faxing .htm and .html attachments” on page 128, there was no special setup required to fax .htm documents. However, we had to configure specific documents for Microsoft Internet Explorer to allow .html documents to be faxed. These documents are described here. We were unable to determine how to configure Netscape to enable faxing .html documents using Netscape.

First, we installed Microsoft Internet Explorer on the FxD Windows Services System. Then, to fax html attachments, we needed to create documents in the Convert Server Config database.

You need a File type document as shown in Figure 217 and a Popup Window document as shown in Figure 218 on page 222.

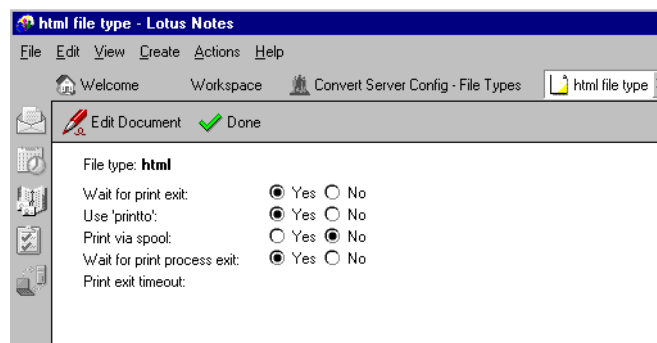


Figure 217. File type document for .html attachment

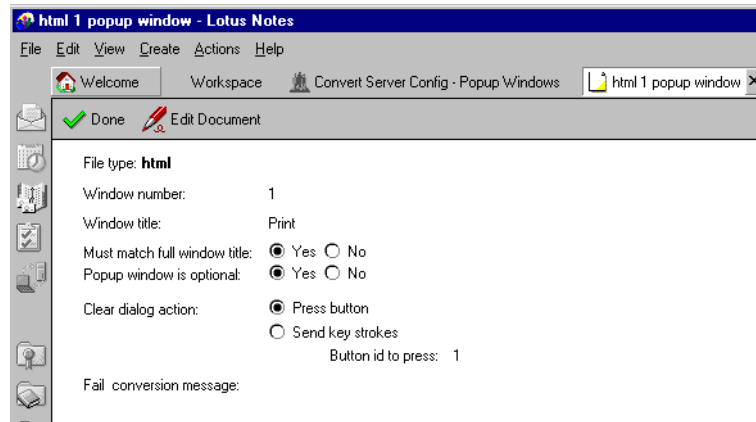


Figure 218. Popup window for html attachment

Once you update the database, you need to perform the following steps for the changes to take effect:

1. Stop FxD for AS/400 on each Domino fax server that uses this Fax for Domino Conversion Service.
2. Stop the Fax for Domino Conversion Service.
3. Start the Fax for Domino Conversion Service.
4. Start FxD for AS/400 for each Domino fax server that you previously stopped.

If you are faxing html files using the Print to Fax driver, the conversion takes place on your client PC, and you do not have to make these changes.

Note

To determine what should go into the documents, we used a combination of information from this appendix and looked at previous File type and Popup Window documents and extrapolated from there.

Use Microsoft Spy++ to determine which Button ID to press. Microsoft Spy++ is a tool in Microsoft Visual C++.

Appendix D. ISDN

The adapters 2750 and 2751 are PCI cards that support Integrated Services Digital Network (ISDN). Model 2750 is for the U.S. and has a 2-wire interface. Model 2751 is for Europe and has a 4-wire interface. Both have four ports and support eight simultaneous ISDN connections.

More information regarding ISDN is available on the AS/400 Information Center at <http://www.as400.ibm.com/infocenter>

Look under **Networking** for the topic on ISDN. Once the support is available, additional information will be posted on the Fax for Domino for AS/400 home page at: <http://www.as400.ibm.com/domino/related/fxd/>

D.1 Additional features with ISDN

As well as the inbound routing features described in 7.4, "Routing" on page 131, ISDN supports Direct Inward Dialing (DID) routing. DID fax routing assigns a unique fax number for every user who should receive faxes. Senders simply dial the fax number, and Fax for Domino delivers the incoming fax to the user's inbox. You can set up the DID numbers in the Person document (combined administration) or in the user profiles (separate administration).

D.2 Configuration for ISDN

When FxD is configured for the 2761 and 7852-400, the necessary line descriptions are automatically created as part of the FxD configuration process. When you are using ISDN, you need to do this manually.

You need to have *IOSYSCFG special authority on your user profile to run the Create Network Interface ISDN (CRTNWIISDN) command.

There may be different ways to configure ISDN for Fax for Domino. The following example is one option with sample values being used.

In the example that follows, the resource being used is CMN06. We are using the following conventions for the object names.

NWI name	FAXNWI06
Connection list	FAXCL06
Outbound conn. list entry	FAXCLE06O
Inbound conn. list entry	FAXCLE06I
Outbound PPP line description	FAXLIN06O
Inbound PPP line description	FAXLIN06I

Before you start, use the Change Network Attributes (CHGNETA) command to set the value for the Modem country ID. This parameter is on the last page of the command. Press F4 (Prompt) to see the available values.

D.2.1 Creating a network interface for ISDN

To create a network interface for ISDN, use the Create Network Interface ISDN (CRTNWIISDN) command.

Follow these steps:

1. From any command line, type `CRTNWIISDN` and press F4.
2. Enter the Network interface description and Resource name as shown in Figure 219 and press Enter.

Create Network Interface ISDN (CRTNWIISDN)

Type choices, press Enter.

Network interface description .	FAXNWI06	Name
Resource name	CMN06	Name
Online at IPL	*YES	*YES, *NO
Vary on wait	*NOWAIT	*NOWAIT, 15-180 seconds
Network type	*NISDN	*NETATR, *ATT, *DBP1TR6...

Bottom

F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel
F13=How to use this display F24=More keys

Figure 219. CRTNWIISDN command (Part 1 of 3)

3. You see the display as shown in Figure 220. Complete the fields as shown and press Enter.

Create Network Interface ISDN (CRTNWIISDN)

Type choices, press Enter.

Network interface description .	> FAXNWI06	Name
Resource name	> CMN06	Name
Online at IPL	*YES	*YES, *NO
Vary on wait	*NOWAIT	*NOWAIT, 15-180 seconds
Network type	> *NISDN	*NETATR, *ATT, *DBP1TR6...
Rate	*BASIC	*BASIC, *PRIMARY

Channel entries:

Channel number	> 1	1-30, *SWTALL, *D
Channel connection	> *SWT	*SWT, *NONSWT
Line description	_____	Name
Channel number	> 2	1-30, *D
Channel connection	> *SWT	*SWT, *NONSWT
Line description	_____	Name

+ for more values _

More...

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

Figure 220. CRTNWIISDN command (Part 2 of 3)

4. You see the display as shown in Figure 221. Complete the fields as shown and press Enter. The values in this display are examples only. Your service provider will advise you of appropriate Service profile identifiers (SPIDs) if you require them.

Create Network Interface ISDN (CRTNWIISDN)

Type choices, press Enter.

Protocol entries:

Protocol	>	*PPPMAX		*PPPMAX, *IDLCMAX, *X25MAX...
Preload Licensed Internal Code	>	*LOAD		*NOLOAD, *LOAD
Maximum switched channels . .	>	2		1-30, *MAX, *NONE
+ for more values				
Auto SPID detection	>	*NO		*NO, *YES

Service profile identifiers:

SPID number	>	1		1-2
SPID value	>	015555000		
SPID number	>	2		1-2
SPID value	>	015555001		
Local number	>	5000		
		5001		

More...

F3=Exit F4=Prompt F5=Refresh F12=Cancel F13=How to use this display
F24=More keys

Figure 221. CRTNWIISDN command (Part 3 of 3)

The network interface is created.

To delete the network interface, use the Delete Network Interface Description (DLTNWID) command.

D.2.2 Creating a connection list

To create a connection list, use the Create Connection List (CRTCNL) command. This list is used for inbound and outbound entries.

Follow these steps:

1. From any command line, type CRTCNL and press F4.
2. Enter the Connection list name and Network type as shown in Figure 222 on page 226 and press Enter.

Create Connection List (CRTCNL)

Type choices, press Enter.

Connection list	FAXCL06	Name
Network type	*NISDN	*NETATR, *ATT, *DBP1TR6...

Bottom

F3=Exit	F4=Prompt	F5=Refresh	F10=Additional parameters	F12=Cancel
F13=How to use this display	F24=More keys			

Figure 222. CRTCNL command (Part 1 of 2)

3. You see the display as shown in Figure 223. Complete the Text description as shown and press Enter.

Create Connection List (CRTCNL)

Type choices, press Enter.

Connection list	> FAXCL06	Name
Network type	> *NISDN	*NETATR, *ATT, *DBP1TR6...
Text 'description'	CONNECTION LIST	

Bottom

F3=Exit	F4=Prompt	F5=Refresh	F10=Additional parameters	F12=Cancel
F13=How to use this display	F24=More keys			

Figure 223. CRTCNL command (Part 2 of 2)

The connection list is created.

To delete the connection list, use the Delete Connection List (DLTCNL) command.

D.2.3 Adding a connection list entry for outbound

To add a connection list entry for outbound, use the Add Connection List Entry (ADDCNNLE) command.

Follow these steps:

1. From any command line, type `ADDCONNLE` and press F4.
2. Enter the Connection list name, as shown in Figure 224, and press Enter.

```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list . . . . . FAXCL06      Name

                                           Bottom
F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys

```

Figure 224. ADDCNNLE command (Part 1 of 5)

3. You see the display as shown in Figure 225 on page 228. Complete the fields as shown and press Enter.

```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list . . . . . > FAXCL06      Name
Entry . . . . . FAXCLE06O      Name
Remote number . . . . . *ANY

Information transfer type . . . *FAXMODEM

F3=Exit  F4=Prompt  F5=Refresh  F10=Additional parameters  F12=Cancel
F13=How to use this display  F24=More keys
Current values could not be retrieved.
Bottom

```

Figure 225. ADDCNNLE command (Part 2 of 5)

4. You see the display as shown in Figure 226. Complete the fields as shown and press F10 to see additional parameters.

```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list . . . . . > FAXCL06      Name
Entry . . . . . > FAXCLE06O      Name
Remote number . . . . . > *ANY

Information transfer type . . . > *FAXMODEM
Modem init command string . . . *LIND

Text 'description' . . . . . OUTBOUND CONNECTION LIST ENTRY

F3=Exit  F4=Prompt  F5=Refresh  F10=Additional parameters  F12=Cancel
F13=How to use this display  F24=More keys
Bottom

```

Figure 226. ADDCNNLE command (Part 3 of 5)

5. You see the display as shown in Figure 227. Complete the fields as shown and press Page Down.


```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list . . . . . > FAXCL06      Name
Entry . . . . . > FAXCLE060      Name
Remote number . . . . . > *ANY

Information transfer type . . . > *FAXMODEM
Modem init command string . . . > *LIND

Text 'description' . . . . . > 'OUTBOUND CONNECTION LIST ENTRY'


Additional Parameters

Remote number type . . . . . *UNKNOWN
Remote numbering plan . . . . . *UNKNOWN      *NETTYPE, *UNKNOWN, *ISDN...
Remote subaddress . . . . . *ANY

More...

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

```

Figure 227. ADDCNNLE command (Part 4 of 5)

6. You see the display as shown in Figure 228. Complete the fields as shown and press Enter.

```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Remote subaddress type . . . . . *USER      *NETTYPE, *NSAP, *USER
Local number . . . . . *ANY

Local number type . . . . . *UNKNOWN
Local numbering plan . . . . . *UNKNOWN      *NETTYPE, *UNKNOWN, *ISDN...
Local number presentation . . . *NONE      *NONE, *ALLOW, *RESTRICT
Local subaddress . . . . . *ANY

Local subaddress type . . . . . *ANY      *NETTYPE, *NSAP, *USER


Bottom

F3=Exit  F4=Prompt  F5=Refresh  F12=Cancel  F13=How to use this display
F24=More keys

```

Figure 228. ADDCNNLE command (Part 5 of 5)

The connection list entry is added.

To remove the connection list entry, use the Remove Connection List Entry (RMVCNNLE) command.

D.2.4 Adding a connection list entry for inbound

To add a connection list entry for inbound, use the Add Connection List Entry (ADDCNNLE) command.

Follow these steps:

1. From any command line, type `ADDCNNLE` and press F4.
2. Enter the Connection list name, as shown in Figure 229, and press Enter.

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list FAXCL06 Name

F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel

Bottom

F13=How to use this display

F24=More keys

Figure 229. `ADDCNNLE` command (Part 1 of 5)

3. You see the display as shown in Figure 230. Complete the fields as shown and press Enter.

```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list . . . . . > FAXCL06      Name
Entry . . . . . FAXCLE06I      Name
Remote number . . . . . *ANY

Information transfer type . . . *FAXMODEM

Bottom
F3=Exit  F4=Prompt  F5=Refresh  F10=Additional parameters  F12=Cancel
F13=How to use this display  F24=More keys
Current values could not be retrieved.

```

Figure 230. ADDCNNLE command (Part 2 of 5)

4. You see the display as shown in Figure 231. Complete the fields as shown and press F10 to see additional parameters.

```

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list . . . . . > FAXCL06      Name
Entry . . . . . > FAXCLE06I      Name
Remote number . . . . . > *ANY

Information transfer type . . . > *FAXMODEM
Modem init command string . . . *LIND

Text 'description' . . . . . INBOUND CONNECTION LIST ENTRY

Bottom
F3=Exit  F4=Prompt  F5=Refresh  F10=Additional parameters  F12=Cancel
F13=How to use this display  F24=More keys

```

Figure 231. ADDCNNLE command (Part 3 of 5)

5. You see the display in Figure 232 on page 232. Complete the fields as shown and press Page Down.

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Connection list	> FAXCL06	Name
Entry	> FAXCLE06I	Name
Remote number	> *ANY	
Information transfer type . . .	> *FAXMODEM	
Modem init command string . . .	> *LIND	
Text 'description'	> 'INBOUND CONNECTION LIST ENTRY'	
Additional Parameters		
Remote number type	*UNKNOWN	
Remote numbering plan	*UNKNOWN	*NETTYPE, *UNKNOWN, *ISDN...
Remote subaddress	*ANY	
More...		
F3=Exit	F4=Prompt	F5=Refresh
F12=Cancel	F13=How to use this display	
F24=More keys		

Figure 232. ADDCNNLE command (Part 4 of 5)

6. You see the display as shown in Figure 233. Complete the fields as shown and press Enter.

Add Connection List Entry (ADDCNNLE)

Type choices, press Enter.

Remote subaddress type	*USER	*NETTYPE, *NSAP, *USER
Local number	*ANY	
Local number type	*UNKNOWN	
Local numbering plan	*UNKNOWN	*NETTYPE, *UNKNOWN, *ISDN...
Local number presentation . . .	*NONE	*NONE, *ALLOW, *RESTRICT
Local subaddress	*ANY	
Local subaddress type	*ANY	*NETTYPE, *NSAP, *USER
Bottom		
F3=Exit	F4=Prompt	F5=Refresh
F12=Cancel	F13=How to use this display	
F24=More keys		

Figure 233. ADDCNNLE command (Part 5 of 5)

The connection list entry is added.

To remove the connection list entry, use the Remove Connection List Entry (RMVCNNLE) command.

D.2.5 Creating a PPP line description for outbound

To create a Point-to-Point Protocol (PPP) line description for outbound, use the Create Line Description PPP (`CRTLINPPP`) command.

Follow these steps:

1. From any command line, type `CRTLINPPP` and press F4.
2. Enter the Line description and Resource name, as shown in Figure 234, and press Enter.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description	FAXLIN060	Name
Resource name	*NWID	Name, *NWID
Connection type	*SWTPP	*SWTPP, *NONSWTPP...

F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel

F13=How to use this display F24=More keys

Bottom

Figure 234. `CRTLINPPP` command (Part 1 of 4)

3. You see the display in Figure 235 on page 234. Complete the fields as shown and press Enter. When FxD starts, it varies on the Line Description. We leave the parameter Online at IPL set to *NO.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description	> FAXLIN060	Name
Resource name	> *NWID	Name, *NWID
Connection type	*SWTPP	*SWTPP, *NONSWTPP...
Switched NWI list:		
NWI description	FAXNWI06	Name, *NONE
NWI channel type	*B	*B
NWI channel number	*CALC	*CALC, 1-30
+ for more values		
Online at IPL	*NO	*NO, *YES

Bottom

F3=Exit	F4=Prompt	F5=Refresh	F10=Additional parameters	F12=Cancel
F13=How to use this display	F24=More keys			

Figure 235. CRTLINPPP command (Part 2 of 4)

4. You see the display as shown in Figure 236. Complete the fields as shown and press Enter. Note that the Switched connection type should be set to *DIAL, not *BOTH.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description	> FAXLIN060	Name
Resource name	> *NWID	Name, *NWID
Connection type	*SWTPP	*SWTPP, *NONSWTPP...
Switched NWI list:		
NWI description	> FAXNWI06	Name, *NONE
NWI channel type	> *B	*B
NWI channel number	> *CALC	*CALC, 1-30
+ for more values		
Online at IPL	*NO	*NO, *YES
Vary on wait	*NOWAIT	*NOWAIT, 15-180 seconds
Line speed	115200	9600-2048000
Maximum frame size	4096	1500-4096
Switched connection type	*DIAL	*BOTH, *ANS, *DIAL
Switched NWI selection	*FIRST	*FIRST, *CALC

Bottom

F3=Exit	F4=Prompt	F5=Refresh	F10=Additional parameters	F12=Cancel
F13=How to use this display	F24=More keys			

Figure 236. CRTLINPPP command (Part 2 of 4)

5. You see the display as shown in Figure 237. Complete the fields as shown and press Page Down.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description > FAXLIN060

Resource name > *NWID

Connection type *SWTPP

Switched NWI list:

NWI description > FAXNWI06

NWI channel type > *B

NWI channel number > *CALC

+ for more values

Online at IPL *NO

Vary on wait *NOWAIT

Line speed 115200

Maximum frame size > 4096

Switched connection type > *DIAL

Switched NWI selection *FIRST

Outgoing connection list FAXCL06

Connection list entry FAXCLE060

Name

Name, *NWID

*SWTPP, *NONSWTPP...

Name, *NONE

*B

*CALC, 1-30

*NO, *YES

*NOWAIT, 15-180 seconds

9600-2048000

1500-4096

*BOTH, *ANS, *DIAL

*FIRST, *CALC

Name

Name

More...

F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel

F13=How to use this display F24=More keys

Figure 237. CRTLINPPP command (Part 4 of 4)

The line description is created.

To delete the line description, use the Delete Line Description (DLTLIND) command.

D.2.6 Creating a PPP line description for inbound

To create a Point-to-Point Protocol line description for inbound, use the Create Line Description PPP (CRTLINPPP) command.

Follow these steps:

1. From any command line, type CRTLINPPP and press F4.
2. Enter the Line description and Resource name, as shown in Figure 238 on page 236, and press Enter.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description	FAXLIN06I	Name
Resource name	*NWID	Name, *NWID
Connection type	*SWTPP	*SWTPP, *NONSWTPP...

Bottom

F3=Exit	F4=Prompt	F5=Refresh	F10=Additional parameters	F12=Cancel
F13=How to use this display	F24=More keys			

Figure 238. CRTLINPPP command (Part 1 of 4)

3. You see the display as shown in Figure 239. Complete the fields as shown and press Enter. When Fed starts, it varies on the Line Description;. We leave the parameter Online at IPL set to *NO.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description	> FAXLIN06I	Name
Resource name	> *NWID	Name, *NWID
Connection type	*SWTPP	*SWTPP, *NONSWTPP...

Switched NWI list:

NWI description	FAXNWI06	Name, *NONE
NWI channel type	*B	*B
NWI channel number	*CALC	*CALC, 1-30

+ for more values _

Online at IPL	*NO	*NO, *YES
-------------------------	-----	-----------

Bottom

F3=Exit	F4=Prompt	F5=Refresh	F10=Additional parameters	F12=Cancel
F13=How to use this display	F24=More keys			

Figure 239. CRTLINPPP command (Part 2 of 4)

4. You see the display as shown in Figure 240. Complete the fields as shown and press Enter. Note that the Switched connection type should be *ANS, not *BOTH.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description > FAXLIN06I

Resource name > *NWID

Connection type *SWTPP

Switched NWI list:

NWI description > FAXNWI06

NWI channel type > *B

NWI channel number > *CALC

+ for more values

Online at IPL *NO

Vary on wait *NOWAIT

Line speed 115200

Maximum frame size 4096

Switched connection type *ANS

Switched NWI selection *FIRST

Name

Name, *NWID

*SWTPP, *NONSWTPP...

Name, *NONE

*B

*CALC, 1-30

*NO, *YES

*NOWAIT, 15-180 seconds

9600-2048000

1500-4096

*BOTH, *ANS, *DIAL

*FIRST, *CALC

Bottom

F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel

F13=How to use this display F24=More keys

Figure 240. CRTLINPPP command (Part 2 of 4)

- You see the display as shown in Figure 241. Complete the fields as shown and press Enter.

Create Line Desc (PPP) (CRTLINPPP)

Type choices, press Enter.

Line description > FAXLIN06I

Resource name > *NWID

Connection type *SWTPP

Switched NWI list:

NWI description > FAXNWI06

NWI channel type > *B

NWI channel number > *CALC

+ for more values

Online at IPL *NO

Vary on wait *NOWAIT

Line speed 115200

Maximum frame size > 4096

Switched connection type > *ANS

Switched NWI selection *FIRST

Incoming connection list > FAXCL06

Network controller _____

Name

Name, *NWID

*SWTPP, *NONSWTPP...

Name, *NONE

*B

*CALC, 1-30

*NO, *YES

*NOWAIT, 15-180 seconds

9600-2048000

1500-4096

*BOTH, *ANS, *DIAL

*FIRST, *CALC

Name, *NETATR

Name

More...

F3=Exit F4=Prompt F5=Refresh F10=Additional parameters F12=Cancel

F13=How to use this display F24=More keys

Figure 241. CRTLINPPP command (Part 4 of 4)

The line description is created.

To delete the line description, use the Delete Line Description (DLTLIND) command.

D.3 Verifying Configuration

Once you configure the ISDN objects, you can vary on the NWI and the lines that you created. If they go to `CONNECT_PENDING`, everything is configured correctly. If they go to `VARY_ON_PENDING`, there is a problem with your configuration. Check the values you have used.

D.4 Configuring FxD

There is now an additional FxD Device form for configuring ISDN. You must create a fax device document of type IBM PCI ISDN for each channel or modem port you are using for Fax for Domino:

- For each PPP line description you create for outbound, create an IBM PCI ISDN fax device document in FxD that is set to Enable Transmit only.
- For each PPP line description you create for inbound, create an IBM PCI ISDN fax device document in FxD that is set to Enable Receive only.

You must restart FxD in order for the configuration changes to take effect. The controller and device descriptions are created automatically when you start FxD.

Appendix E. Using the additional material

This redbook also contains additional Web material. See the information below for instructions on using or downloading the material.

E.1 Locating the additional material on the Internet

The material associated with this redbook is available in softcopy on the Internet from the IBM Redbooks Web server. Point your Web browser to:

<ftp://www.redbooks.ibm.com/redbooks/SG245941>

Alternatively, you can go to the IBM Redbooks Web site at:

<http://www.redbooks.ibm.com/>

Select the **Additional materials** and open the directory that corresponds with the redbook form number.

E.2 Using the Web material

The additional Web material that accompanies this redbook includes the following:

<i>File name</i>	<i>Description</i>
5941code.zip	Sample Registry files and Fax Domain button

E.2.1 Using the Web material

Create a subdirectory (folder) on your workstation and copy the contents of the Web material into this folder.

Appendix F. Special notices

This publication is intended to help AS/400 Systems Administrators install and configure Lotus Fax for Domino for AS/400. The information in this publication is not intended as the specification of any programming interfaces that are provided by Lotus Fax for Domino for AS/400.

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Appendix G. Related publications

The publications listed in this section are considered particularly suitable for a more detailed discussion of the topics covered in this redbook.

G.1 IBM Redbooks

For information on ordering these publications see “How to get IBM Redbooks” on page 245.

- *IBM AS/400 Printing V*, SG24-2160
- *AS/400 - Implementing Windows NT on the Integrated Netfinity Server*, SG24-2164
- *AS/400 Electronic-Mail Capabilities*, SG24-4703
- *Lotus Domino for AS/400 - Installation, Customization, Administration*, SG24-5181
- *Lotus Domino for AS/400: Integration with Enterprise Applications*, SG24-5345
- *Lotus Domino for AS/400 R5: Implementation*, SG24-5592
- *Developing an e-business Application: Using Lotus Domino for AS/400*, SG24-6052

G.2 IBM Redbooks collections

Redbooks are also available on the following CD-ROMs. Click the CD-ROMs button at <http://www.redbooks.ibm.com/> for information about all the CD-ROMs offered, updates and formats.

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RS/6000 Redbooks Collection (PDF Format)	SK2T-8043
Application Development Redbooks Collection	SK2T-8037
IBM Enterprise Storage and Systems Management Solutions	SK3T-3694

G.3 Other resources

These publications are also relevant as further information sources:

- *OS/400 Backup and Recovery*, SC41-5304
- *Fax for Domino for AS/400 Installation Guide*:
<http://www.as400.ibm.com./domino/related/fxd/FXDINSTL.PDF>
- *Administering Domino Clusters*, CT73SNA, which is also part of the Domino R5 Administration help database (help/help5_admin.nsf)

G.4 Referenced Web sites

These Web sites are also relevant as further information sources:

- Fax for Domino page: <http://www.as400.ibm.com/domino/related/fxd/>
- Lotus Domino for AS/400 home page: <http://www.as400.ibm.com/domino/>
- Facsimile Support/400 information:
<http://www.as400.ibm.com/fax400/fax400.htm>
- BRMS enhancements for Domino:
<http://www.as400.ibm.com/service/brms/domino.htm>
- The *Fax for Domino for AS/400 Installation Guide* is shipped with the FxD product and is also available online at:
<http://www.as400.ibm.com./domino/related/fxd/FXDINSTL.PDF>
- You can download and install the latest Domino for AS/400 Quarterly Maintenance Update from the Web at:
<http://www.as400.ibm.com/domino/QMUList.htm>
- Informational APARs can be found online at: <http://as400service.ibm.com>
- You can install the latest AS/400 cumulative fix package and check the latest Domino for AS/400 related PTFs appropriate for your OS/400 release from:
<http://www.as400.ibm.com/domino/DomSupport.htm>
- If FxD Windows Services fixes are available, information will be posted at the FxD for AS/400 Web site at:
<http://www.as400.ibm.com/domino/related/fxd/index.htm>
- The Imaging for Windows 95 accessory, which can be used to create, annotate, view, and print TIFF and other images, can be downloaded from the Web site at: <http://www.microsoft.com/downloads/search.asp>
- For Client Access Express, the latest level of fixes for the AFP viewer can be found at: <http://www.as400.ibm.com/clientaccess>
- For AFP Workbench for Windows NT and 95 fixes, go to the Web site at:
<http://www.printers.ibm.com>
- You can download the Print to Fax driver for your Windows PC from the Web site at: <http://www.lotus.com/home.nsf/welcome/faxfordomino>

How to get IBM Redbooks

This section explains how both customers and IBM employees can find out about IBM Redbooks, redpieces, and CD-ROMs. A form for ordering books and CD-ROMs by fax or e-mail is also provided.

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Lotus Fax for Domino for AS/400

(0.5" spine)
0.5" <-> 0.875"
250 <-> 459 pages



Lotus Fax for Domino for AS/400

Getting the Straight Facts



Redbooks

**Discover alternatives
for faxing AS/400
spooled files**

**Explore options for
routing inbound faxes**

**Create personalized
cover pages**

Using Lotus Fax for Domino for AS/400 Release 4.1, you can now send faxes directly from your Lotus Notes desktop. You can save time by not having to get up from your desk to go to the printer and the fax machine to send faxes. You can save money by scheduling long distance faxes to be sent at lower-priced calling times. Even attachments from PC applications, such as Lotus Word Pro and Microsoft Word, can be sent. Incoming faxes can be delivered automatically to a fax administrator for redelivery to your inbox, or depending on your installation, they can be delivered directly to the final recipient.

This redbook shows you how to set up, configure, use, and manage this exciting new add-on product from Lotus. We show you how Domino applications can take advantage of integrating faxing into their processing. In addition, we show you how you can fax spooled files from the AS/400 system and provide a sample command to assist you in integrating Fax for Domino with AS/400 line-of-business applications.

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