HP DIGITAL SENDING SOFTWARE 4.91

System Administrator Guide

HP Digital Sending Software 4.91

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Trademarks

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1 Introduction to Digital Sending

This chapter contains the following topics:

- Digital sending overview
- Introduction to DSS
- Embedded Digital Sending vs DSS
- DSS vs Web Jetadmin
- What is new in DSS 4.91?

Digital sending overview

HP Digital Sending technology offers a fast, simple and reliable way to capture valuable information from paper-based documents and convert it to a digital format which can be further processed and routed to a number of different destinations.

Routing destinations include, but are not limited to, the following:

- Network folders
- E-mail
- FTP sites
- Fax

The digital file types available include, but are not limited to, the following:

- JPEG
- TIFF
- PDF
- PDF/A

Optical Character Recognition and Compression are also available offering a wide range of digital file types of varying sizes and quality that the user can select to meet their needs.

Additional data, or metadata, can also be specified and routed along with the scanned images as a method for enabling more complex workflows.

Digital Sending is available from most HP Multi-function Peripherals, the Digital Sender line of products and some HP Scanners. These products offer a wide range of Digital Sending capability "out of box" via the product firmware. This out of box functionality is referred to as embedded digital sending. What functions are available via embedded digital sending varies by product. See Table 1-1 Feature comparison on page 7 for more information.

The functionality of embedded digital sending can be extended with the server based HP Digital Sending Software (DSS) product. Some features DSS adds to embedded digital sending are shared address books, secure E-mail, a single point for e-mail routing and Optical Character Recognition.

Introduction to DSS

The HP Digital Sending Software (DSS) extends the embedded Digital Sending functionality of supported devices by adding the following capabilities:

- Routing e-mail through a central point (the DSS server), which simplifies SMTP security management in environments with Access Control List security.
- Multiple SMTP gateways for redundancy in delivering e-mail jobs.
- Encrypted e-mail channel with SMTP over SSL.
- Sending fax through LAN Fax and Internet Fax servers.
- Public- and Personal Address Books.
- Access to Microsoft® Exchange Contacts from the front panel of the device with the Exchange Contacts feature.
- The LDAP Replication feature allows access to the company directory while off-loading the LDAP servers.
- The Workflow feature allows easy and consistent scanning into company workflow processes. Metadata can be collected for each job using custom keys or built-in system prompts, allowing integration with third-party applications.
- OCR processing of e-mail, folder and FTP jobs through the I.R.I.S OCR engine to create searchable output.
- Easy and intuitive interface to manage Digital Sending features through the Configuration Utility.
- Central logging of document sending activity for tracking, auditing, and troubleshooting purposes.
- Additional file types, such as PDF/A and Compact PDF.

DSS runs as a software service on a networked server. Supported devices are "DSS aware," which means they have components built into the firmware that allow them to make use of the services/features offered by DSS. Once a device is added into DSS, all of the Digital Sending features are managed through the Configuration Utility.

This section contains the following topics:

- Features overview
- Supported devices – Legacy device support

Features overview

This section gives a basic overview of the various features of the DSS.

- **E-mail**
  - **Route e-mail jobs from multiple devices through a single point.** DSS makes it possible to route e-mail jobs either through DSS or directly from the device to the SMTP gateway. Routing e-mail through the DSS server simplifies SMTP security management in environments with Access Control List security on the SMTP gateways.
  - **SMTP gateway redundancy.** Multiple SMTP gateways for redundancy in delivering e-mail jobs.
  - **Encrypted e-mail channel.** DSS can provide a secure e-mail channel using SMTP over SSL.
- **Fax**
  - **Manage analog fax settings.** The DSS Configuration Utility provides an intuitive interface for managing fax settings on devices that have an analog fax accessory installed.
  - **Electronic faxing.** Integrates with LAN Fax and Internet Fax servers.
- **Address Books.** Devices attached to DSS have access to the DSS address books, which provide the following functionality:
  - **Public Address Book.** Allows the administrator to create an address book which is accessible from all attached devices.
  - **Personal Address Book.** Each user can create, use and manage a personal address book from any attached device.
  - **Exchange Contacts.** Each user can access their Microsoft Exchange® Contacts from the front panel of any attached device.
  - **LDAP Replication.** This feature allows access to the company directory while off-loading the LDAP servers.
  - **Address Book Management.** Allows the administrator to manage all DSS address books.
- **Workflow**
  - **Integration with third-party applications.** The Workflow feature allows easy and consistent scanning into company workflow processes, either through a shared folder or FTP site. Metadata can be collected for each job using custom keys or built-in system prompts, allowing integration with third-party applications.
- **Optical Character Recognition (OCR)**
  - **Searchable documents.** OCR processing of e-mail, folder and FTP jobs through the I.R.I.S OCR engine to create searchable output in file formats such as PDF, XPS, HTML, RTF etc.
- **Digital Sending management**
  - Easy and intuitive interface to manage Digital Sending features through the Configuration Utility.

- **Logging**
  - Central logging of document sending activity for tracking, auditing and troubleshooting purposes.
- **Additional file types**
  - **PDF/A.** This file format is used for long-term archiving of electronic documents.
  - **Compressed PDF.** Advanced compression technology allows creating PDF files of significantly smaller size while preserving good image quality.

Supported devices – Legacy device support

The DSS supports most recent HP high-end multi-function peripheral (MFP) products, Digital Senders and some ScanJet products. This document refers to these devices as *DSS-enabled devices*. A list of all compatible products can be found on the HP Website at www.hp.com/go/dss.

Important notes:

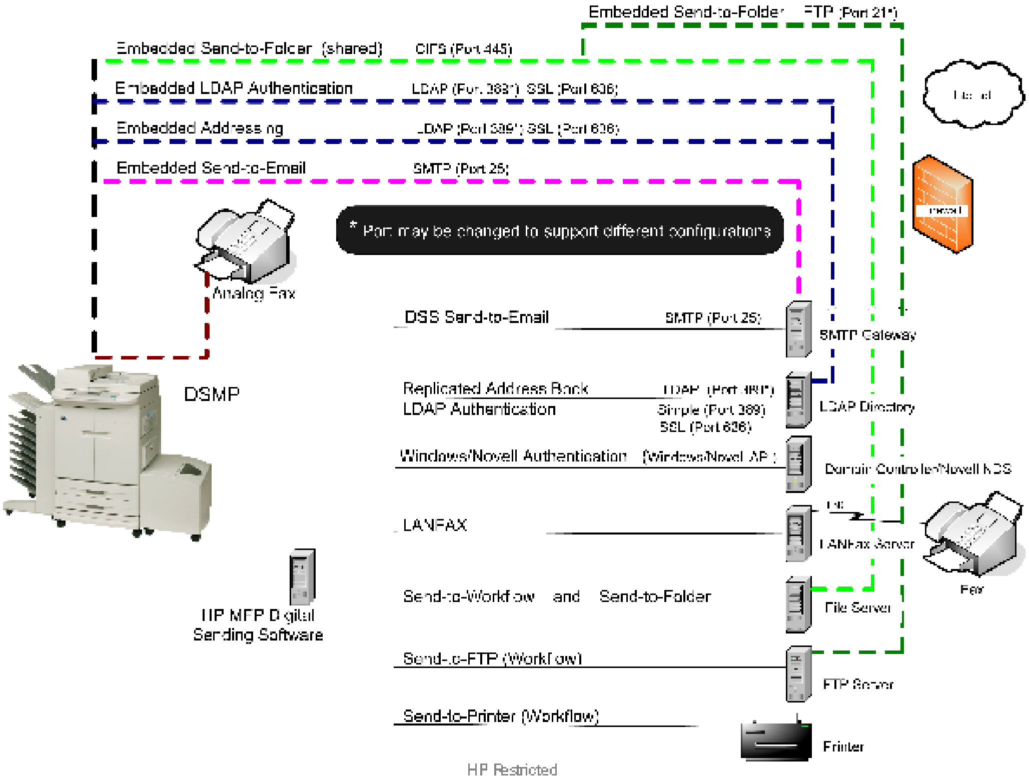
- Some DSS features are not available on certain models. This is due to differences in firmware generations in the supported device models. For example, the Send to Folder feature is not supported on the LaserJet 4100mfp and 9000mfp series – however, it is possible to send to folder through the Workflow feature on those devices. Also, only configuration of Embedded Digital Sending features is supported on the Edgeline series devices. Updated feature compatibility information can be located in the readme file.
- As DSS support is built into the device firmware DSS is generally "forwards compatible" with new device models – provided the device in question supports DSS. Consequently, although HP recommends keeping DSS updated, it is typically not necessary to update DSS in order to use a new device model. Exceptions to this are published in the DSS release notes (readme) file.

Embedded Digital Sending vs DSS

There are two ways to implement Digital Sending:

1. **Embedded Digital Sending.** Embedded Digital Sending indicates device-specific Digital Sending capabilities. These Digital Sending capabilities are embedded in the firmware of the Digital Sending enabled device. Embedded Digital Sending includes capabilities such as e-mail and fax.
2. **Digital Sending Software (DSS).** DSS is a software service running on a network that expands the existing embedded capabilities of Digital Sending enabled devices. DSS includes capabilities such as Send to E-mail (encrypted e-mail), Send to Fax, Send to Workflow, and Send to Network Folder.

Figure 1-1 Embedded and service-based Digital Sending



Embedded Send-to-Folder FTP (Port 21*)
Embedded Send-to-Folder (shared) CIFS (Port 445)
Embedded LDAP Authentication LDAP (Port 389*) SSL (Port 636)
Embedded Addressing LDAP (Port 389*) SSL (Port 636)
Embedded Send-to-Email SMTP (Port 25)
Internet
Firewall
* Port may be changed to support different configurations
Analog Fax
DSS Send-to-Email SMTP (Port 25)
SMTP Gateway
DSMP
Replicated Address Book LDAP (Port 389*)
LDAP Authentication Simple (Port 389) SSL (Port 636)
LDAP Directory
Windows/Novell Authentication (Windows/Novell API)
Domain Controller/Novell NDS
LANFAX
LANFax Server
Fax
HP MFP Digital Sending Software
Send-to-Workflow and Send-to-Folder
File Server
Send-to-FTP (Workflow)
FTP Server
Send-to-Printer (Workflow)
Printer
HP Restricted

Differences

The following product groups are represented in the Features Comparison table below.

- Group 1 — HP LaserJet 4100 and 9000 MFP
- Group 2
  - HP LaserJet 4345, 9040/9050, M3035, M4345, M5035 and M9040/9050 MFP
  - HP Color LaserJet 4730, 9500, CM3530, CM4730 and CM6030/6040 MFP
  - HP 9200c and 9250c Digital Sender

- Group 3
  - HP ScanJet Enterprise 7000n Document Capture Workstation
  - HP M4555 MFP and CM4540 Color MFP
- Group 4 — HP LaserJet 9055 / 9065 MFP
- Group 5 — HP CM8050/8060 Color MFP

Table 1-1 Feature comparison

Area	Feature	Product Groups				
		Group 1	Group 2	Group 3	Group 4	Group 5
Authentication	LDAP	NA	✓	✓	NA	✓
	LDAP over SSL	NA	✓	✓	NA	✓
	Microsoft Windows	DSS	DSS	✓	DSS	✓
	Kerberos	NA	E	E	NA	E
	Novell Netware	DSS	DSS	✓	DSS	✓
Send to	E-mail	✓	✓	✓	DSS	✓
	Folder	NA	✓	✓	NA	✓
	LAN Fax	DSS	DSS	✓	NA	✓
	Internet Fax	DSS	DSS	✓	NA	✓
	Analog Fax	E	E	E**	NA	E
	Printer	DSS	DSS	✓ **	DSS	NA
Addressing	Direct LDAP	✓	✓	✓	NA	✓
	Replicated LDAP	DSS	DSS	✓	NA	✓
	Public Address Book	DSS	DSS	✓	DSS	DSS
	Personal Address Books	DSS	DSS	✓	DSS	✓
	Exchange Contacts	DSS	DSS	✓	DSS	✓
	Local Address Book	E	E	✓	DSS	✓

Table 1-1 Feature comparison (continued)

Area	Feature	Product Groups				
		Group 1	Group 2	Group 3	Group 4	Group 5
Other	Optical Character Recognition (OCR)	DSS	DSS	DSS***	DSS	✓
	Workflow	DSS	DSS	DSS	DSS*	DSS
	Metadata support	DSS	✓	✓	NA	✓
	Custom-keys metadata	DSS	DSS	DSS	NA	DSS
	FileNet integration	DSS	DSS	DSS	DSS	DSS
	Single point for e-mail routing	DSS	DSS	DSS	DSS	NA
	SMTP gateway redundancy	DSS	DSS	DSS	DSS	DSS
	SMTP over SSL	DSS	DSS	✓	DSS	DSS
	Quick Sets	NA	NA	✓	NA	NA
	PDF/A	DSS	DSS	✓	✓	NA
	Compact PDF	DSS	DSS	✓	✓	✓
	Signed e-mail	NA	✓	✓	NA	✓
	Encrypted E-mail (message)	NA	✓	✓	NA	✓

Legend

- **DSS** — Requires DSS
- ✓ — Available both embedded and when managed by DSS
- **E** — Available only in embedded Digital Sending
- **NA** — Not available
- ***** — Appended: limitations apply
- ** — Not available on the HP ScanJet Enterprise 7000n Document Capture Workstation.
- *** — The HP ScanJet Enterprise 7000n Document Capture Workstation has this feature available both embedded and when managed by DSS.

Advantages of DSS

HP Digital Sending Software allows customers to do the following:

Table 1-2 What else does DSS allow you to do?

Feature	Benefits
Send to LAN Fax and Internet Fax	Allows sending faxes through LAN Fax and Internet Fax systems from DSS-enabled devices using the Fax icon, which offers a user-friendly interface with Speed Dials, address book etc.

Table 1-2 What else does DSS allow you to do? (continued)

Feature	Benefits
Public Address Book	Allows an administrator to maintain an address book which is accessible to all devices connected to the DSS server.
Personal Address Books	Gives each user of the DSS-enabled device a personal address book, which is accessible from any device connected to the DSS server. Users can manage the contents of their personal address book from the front panel of the device.
Microsoft® Exchange Contacts	Gives the user access to his/her Exchange Contacts within the e-mail- and fax address book of the device.
LDAP Replication	Offers a way to allow DSS-enabled devices to access the content of an LDAP address book through DSS. As the replication occurs at a schedule set by the administrator this feature can off-load the LDAP servers.
Address Book Manager	Allows an administrator to manage the contents of DSS address books.
Send to E-mail	With DSS the Send to E-mail jobs from connected devices can be routed through DSS. This provides the following benefits: ● Allows scanning to e-mail in environments with strict SMTP security with minimal management effort. ● Supports several SMTP gateways for redundancy.
Optical Character Recognition (OCR)	Allows scanning to searchable text formats, such as PDF, XPS and RTF.
Device Management	Allows management of Digital Sending features on the entire fleet of DSS-enabled device from a user-friendly interface.

DSS vs Web Jetadmin

HP Digital Sending Software and HP Web Jetadmin are two different software products available from HP with very different value propositions. However, while the products are different there is still some overlap in functionality. The purpose of this section is to provide a basic understanding of the differences between DSS and HP Web Jetadmin.

HP Web Jetadmin is a fleet management tool designed to manage printers and Digital Sending-enabled devices on a network. Features include device configuration, firmware installation, remote diagnostics, alerting and reporting - to name a few. For instance, system administrators can use this tool to get alerts for specific error conditions, update firmware on the entire fleet of devices and create usage reports.

HP Digital Sending Software extends the embedded Digital Sending features of supported devices with features such as LAN Fax, OCR, Workflows and Personal Address Books. Where DSS may appear to overlap somewhat with Web Jetadmin is in that it also manages the Digital Sending settings for connected devices. In fact, when a device is connected to DSS it is only possible to manage the Digital Sending settings using the DSS Configuration Utility. Web Jetadmin can still be used to manage all other settings on the device. For more information on the values and capabilities of DSS, please refer to other sections of this document.

What is new in DSS 4.91?

With the release of DSS 4.91, several improvements have been made. DSS 4.91 provides the functionality of DSS 4.x on a new .NET platform and also adds support for DSS-enabled devices using the new HP firmware base code.

Table 1-3 Product improvements in DSS 4.91

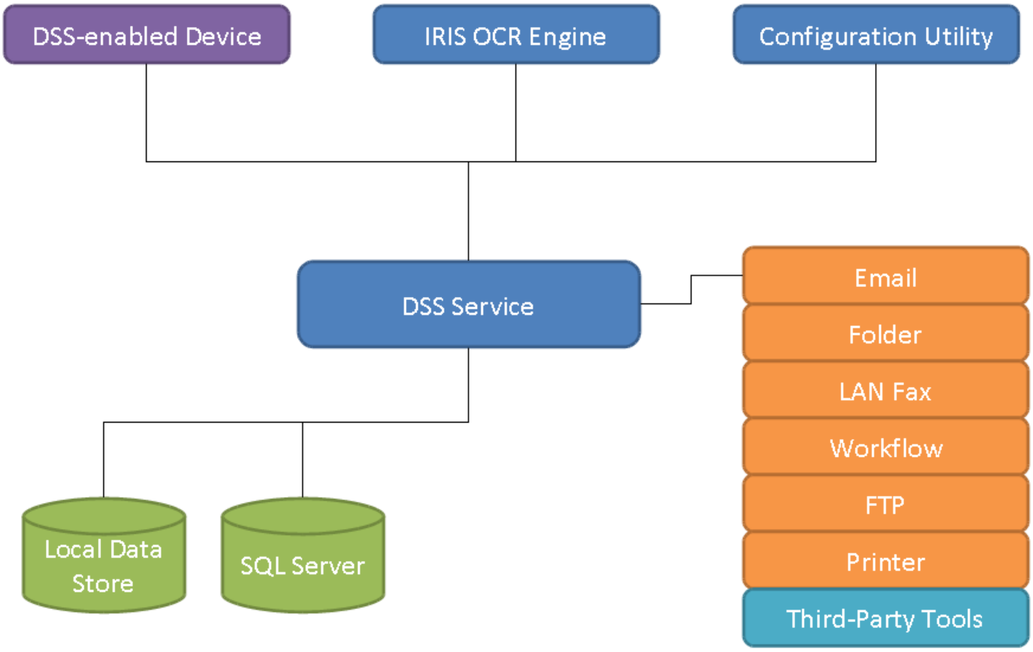
Component	Description
Operating system support	• Adds support for Windows 2008, Windows 7 and Windows Vista. • Supported on R2 and 64-bit versions of these operating systems, but runs in 32-bit (x86) mode.
Product compatibility	• Supports the HP ScanJet Enterprise 7000n Document Capture Workstation. • Supports Digital Sending-enabled devices based on the new HP firmware code, starting with the HP M4555 MFP and CM4540 Color MFP.
Configuration Utility	• Configuration Utility window can be maximized and stretched • Supports simultaneous use by multiple administrators. • Faster Configuration Utility start time as device status is only updated when selected by administrator. • Device grouping. • Miscellaneous UI improvements, such as progress bars.
OCR engine	• Updated to I.R.I.S. engine version. • Improved text recognition. • Improved performance and scalability.
Send to E-mail	Secure e-mail channel (SMTP over TLS/SSL).
File types	• PDF/A – Supporting PDF/A allows customers to meet ISO standards for long-term archival of electronic documents. • Compact PDF (high compression of PDF files).
Addressing	• Exchange Contacts now via HTTPS. MAPI client no longer required. • Address Book Manager now integrated within the Configuration Utility.
Replaced outdated functionality	• Multiple device configuration and copy/paste for device configuration replaced with templates. • Secondary e-mail replaced with SMTP over SSL. • Novell Bindery no longer supported for authentication. • Windows Fax Service no longer supported.

2 Theory of operations

This chapter contains the following topics:

Components

Figure 2-1 DSS Components



DSS can be viewed as a system that consists of a number of components, where each component provides a specific set of features that allows the system to function as a whole. The above diagram shows the DSS components and how they are connected. The following covers each of these in detail.

DSS Service

the central nervous system of the HP Digital Sending Software is the service named "HP Digital Sending Software", typically called the "DSS service". This is the key component of the software that ties together all other components and enables the DSS system to function.

Internally, the DSS service is divided into several subcomponents and has dependencies. The below figure shows this at a high level:

Figure 2-2 DSS Service Architecture

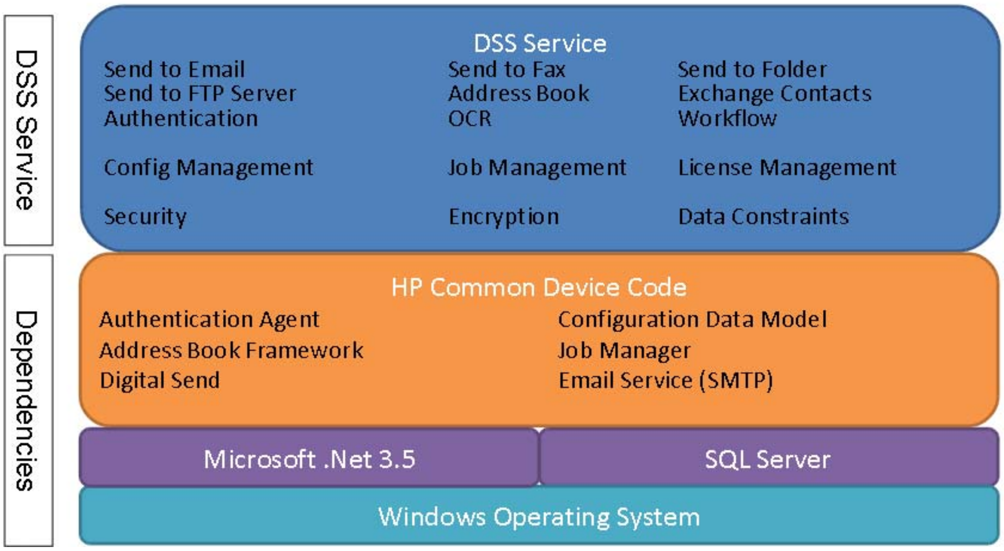


Table 2-1 DSS Service – Technical Detail

Technical detail	
Service display name:	HP Digital Sending Software
Service name:	DssWinService
Executable name:	HP.Dss.App.WinService.exe
Typical memory usage:	200-400MB

Configuration Utility

The role of the Configuration Utility is to act as a management console for DSS. It provides a user friendly interface to manage all settings for DSS functions as well as devices.

The Configuration Utility is always installed with DSS, but can also be installed separately on a different computer on the network. When installed separately it is typically referred to as the "Remote

Configuration Utility", since in this mode it is used to manage a remote DSS server. The address of the server to be managed is entered in the startup dialog.

Figure 2-3 Configuration Utility

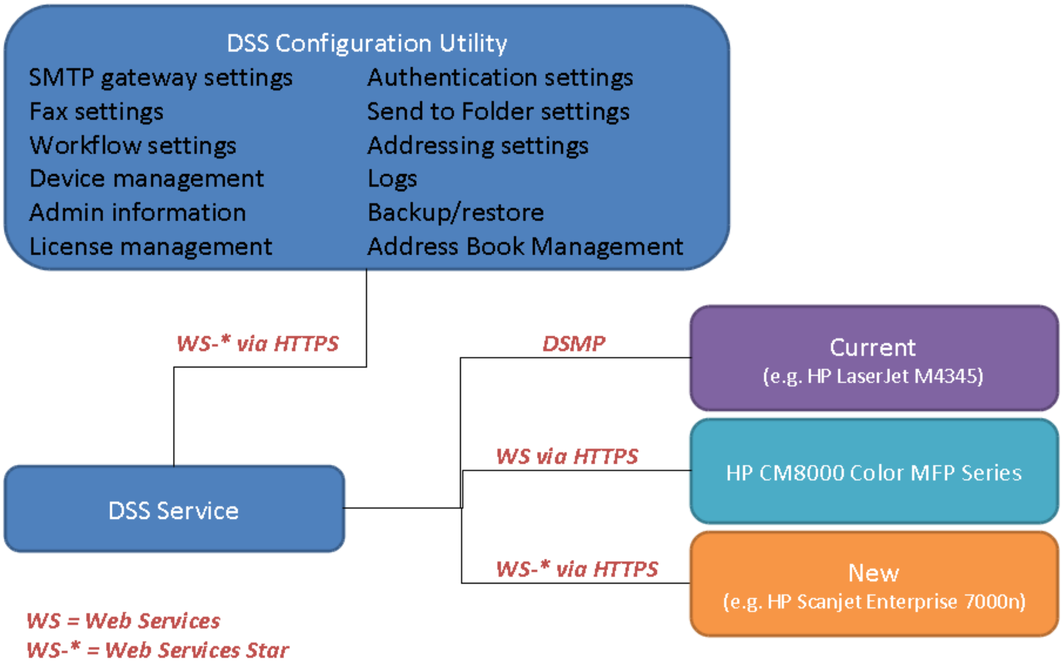


Table 2-2 Configuration Utility– Technical Detail

Technical detail	
Executable name:	HP.Dss.App.ConfigurationUtility.View.exe
Default window size:	1024x768
Typical memory usage:	200-300MB

DSS-enabled device

DSS-enabled devices are the HP MFPs, Digital Senders or ScanJet products that support DSS. These devices allow end-users to make use of DSS functionality by scanning to the various destination types, using the address book etc. See Supported devices – Legacy device support on page 5 for a complete list of supported devices.

The firmware in these devices has a component built-in which enables use of DSS functionality. In the previous generation products this is enabled through DSMP (Digital Sending Management Protocol). In HP's latest generation products this component has been replaced by a WS-* (Web Services Star) based interface.

Since all DSS features have to be supported by the device firmware DSS 4.91 has a minimum firmware version requirement, which can be found here Table 3-3 DSS 4.91 supported device firmware revisions on page 25. Over time, as new features become available in DSS, it may be required to update the device firmware for compatibility. These changes will be documented in detail in the DSS release notes.

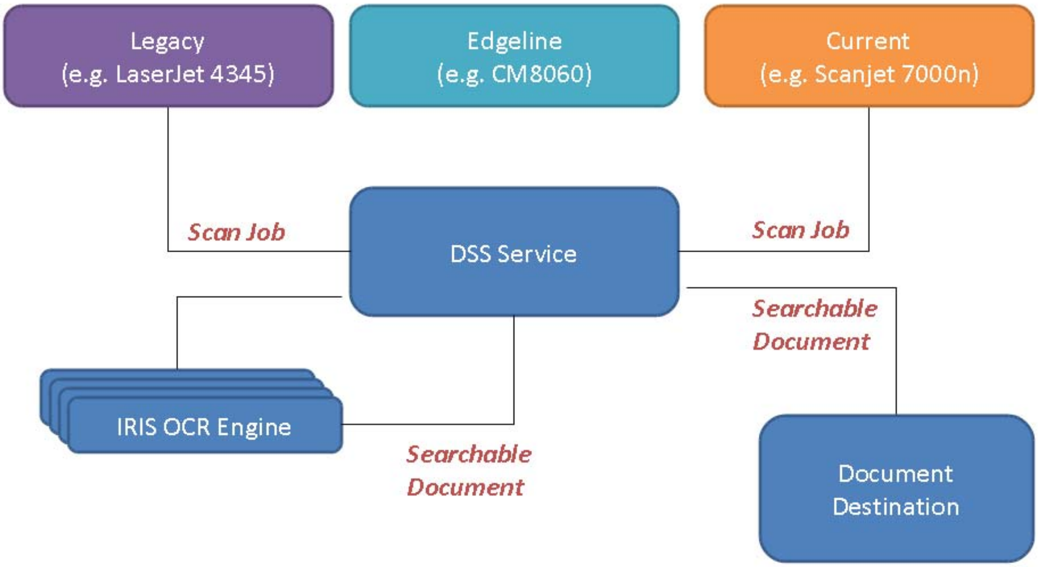
Table 2-3 **DSS-enabled devices – Technical Detail**

Technical detail	
List of supported devices:	See Supported devices – Legacy device support on page 5
Minimum firmware version:	See Table 3-3 DSS 4.91 supported device firmware revisions on page 25
Feature matrix:	See Table 1-1 Feature comparison on page 7.

I.R.I.S. OCR engine

DSS uses I.R.I.S. OCR engine version 12 to provide Optical Character Recognition (OCR) and High Compression PDF functionality. The engine features Intelligent High Quality Compression (iHQC) technology™.

Figure 2-4 **OCR engine**



The figure above shows how the process flow OCR processing in DSS. When DSS receives a job where OCR processing is required it invokes the I.R.I.S. OCR engine using COM (Component Object Model). The image data/document is transferred together with control parameters, such as the required output file type. Once OCR processing is completed the searchable document is passed back to DSS which delivers the document to the destination.

DSS is a multi-threaded application and will launch multiple instances of the OCR engine when there are multiple jobs in the queue that require OCR processing. We refer to this as ‘parallel processing of OCR jobs’. This makes the OCR feature scalable, which means that average job processing times will be improved if the server's resources are improved. For instance, adding additional CPUs and more memory to the server will improve the average processing time of each OCR job when the server is processing multiple jobs simultaneously. This is a significant improvement over previous versions of DSS, where OCR processing was serial.

Table 2-4 **I.R.I.S. OCR engine – Technical Detail**

Technical detail	
OCR engine:	I.R.I.S. OCR engine version 12

Table 2-4 **I.R.I.S. OCR engine – Technical Detail (continued)**

Technical detail	
Default install directory:	C:\Program Files\DsOcrComSrvr
Executable name:	dpe_ocr123.exe
Languages supported:	I.R.I.S OCR 12 recognizes more than 120 languages

Database

DSS uses Microsoft SQL Server 2005 Express Edition to host the DSS database. The database is used to hold the DSS activity log.

Table 2-5 **Database – Technical Detail**

Technical detail	
Database name:	HPDSS
Access security:	Windows Integrated Security

Local Data Store

The Local Data Store is the series of files located in the DSS installation directory, which is used to store the DSS configuration data, device information and debug logs. This is also where the job queue resides.

Table 2-6 **Local Data Store – Technical Detail**

Technical detail	
Default installation dir:	C:\Program Files\Hewlett-Packard\HP Digital Sending Software 4.91
Job queue dir:	.\ Filesystems\CustomerData\DSS\Jobs
Configuration dir:	. \Filesystems\Product\DSS\Configuration

Third-party tools

As the name indicates, third party tools are not a part of the DSS system. However, they are mentioned here because third party tools are required to deliver some of the DSS functionality as listed here:

- **LAN Fax.** This feature requires a compatible LAN Fax product. DSS enables the functionality by providing a Fax interface at the Digital Sending-device and then passing the fax job along with an HPF file (metadata) to a watched folder.
- **Internet Fax.** This feature requires an Internet Fax server. DSS enables the functionality by providing a Fax interface at the Digital Sending-device and then sending out an e-mail with the fax job attached.
- **Workflow.** One of the main ideas behind the Workflow feature is the ability to capture metadata at the Digital Sending-device and pass it on to a folder that is watched by a third party

application. This application is then able to read the metadata and further process and route the job.

- **Personal Address Book.** This feature requires a Microsoft Exchange Server that supports HTTP connections.

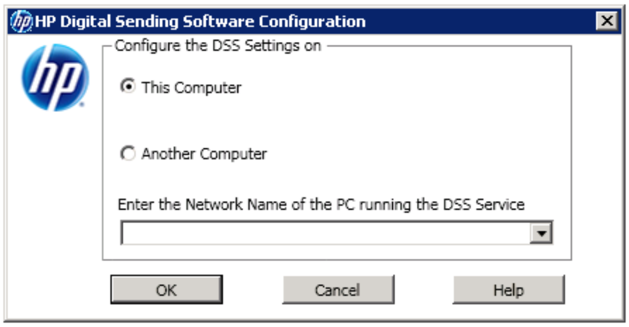
Remote Configuration Utility

The Remote Configuration Utility is a version of the Configuration Utility that is designed to install and operate on a remote computer.

Using the Remote Configuration Utility allows DSS configuration across the network.

1. Launch the Configuration Utility.
2. Click **Another Computer**.

Figure 2-5 Remote Configuration Utility



HP Digital Sending Software Configuration

Configure the DSS Settings on

● This Computer

○ Another Computer

Enter the Network Name of the PC running the DSS Service

3. Type in the network name of the DSS server.
4. Click **OK**.

Device firmware

DSS-enabled devices are "DSS aware," meaning they have components built into the firmware that allow them to make use of the services and features offered by DSS. Some DSS features require a minimum firmware level; therefore, the version of firmware loaded on the DSS-enabled device is important.

For example, the OCR processing feature for Send to E-mail requires a minimum firmware revision of 48.051.1 to work on the HP LaserJet M5035 MFP. If the firmware revision is not at least 48.051.1, the OCR processing feature for DSS Send to E-mail cannot function.

Understand licensing

This section contains the following topics:

- Trial license
- Licensing requirements
- Auto-generate license
- Node Locking

Trial license

When DSS is installed for the first time, you have the option of entering a license number or using the software on a 60-day evaluation basis. During the evaluation period, the software can support up to 50 Digital Sending-enabled devices. When the trial period expires, the software becomes inactive until a license is installed.

Licensing requirements

The **Licenses** section of the Configuration Utility **General** tab contains a Trial License entry where new licenses must be added. The remaining trial period also appears on that tab.

DSS is available in five different seat configurations.

Seats	Part Number
1	T1936AA#UA0
5	T1936AA#0AD
10	T1936AA#0A9
50	T1936AA#0AA
250	T1936AA#UD6

Each seat enables Digital Sending features on one device. As many licenses as needed can be installed to in order to accumulate seats.

Click **Add** on the **General** tab to type a new license key code for the HP Digital Sending Software.

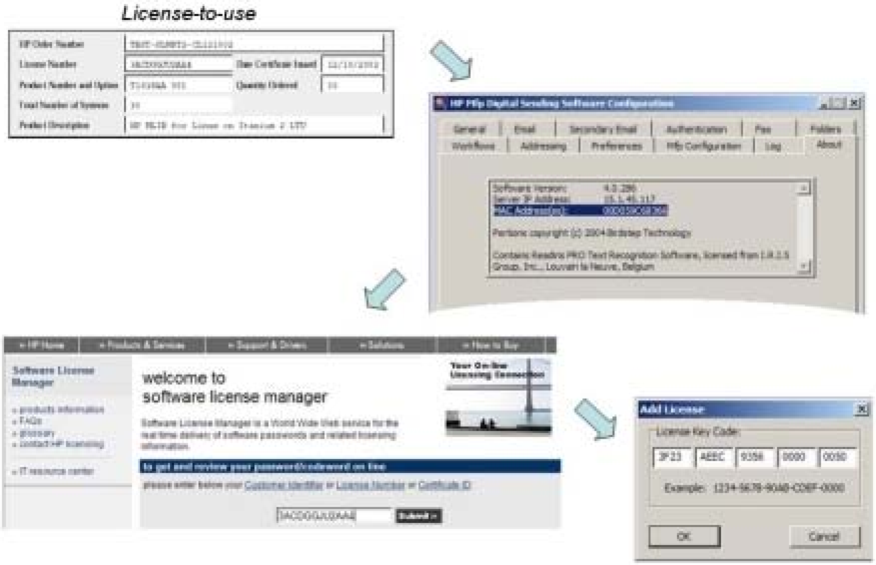
Auto-generate license

The HP 9200C Digital Sender and HP 9250C Digital Sender devices auto-generate licenses after being added to an existing licensed DSS server. These are the only two DSS-enabled devices that auto-generate licenses.

Node Locking

Purchased licenses can be applied only to a specific DSS server. The node-locking process combines the license certificate with a unique ID from the DSS server. The unique ID appears on the **About** tab of the Configuration Utility as the **MAC Address**. This ID appears during and after the trial period. To activate the license certificate, record the **MAC Address** that appears on the **About** tab of the Configuration Utility and proceed to the HP Software License Manager Website at licensing.hp.com. At this Website, type the license certificate number and the MAC address. The Software License Manager activates licenses based on information located on the purchased license certificate(s) and the server ID of the DSS server. After this information is entered into the Software License Manager, the generated licenses are delivered by fax or e-mail.

Figure 2-6 License Node Locking



HP Order Number	[illegible]		
License Number	[illegible]	Date Certificate Issued	[illegible]
Product Number and Option	[illegible]	Quantity Ordered	[illegible]
Total Number of Systems	[illegible]		
Product Description	HP [illegible]		

Software Version: 4.3.286
Server IP Address: 15.1.45.117
MAC Address(es): [illegible]

Portions copyright (c) 2004 Birdstep Technology

Contains Readiris PRO Text Recognition Software, licensed from I.R.I.S Group, Inc., Louvain la Neuve, Belgium

welcome to
software license manager

Software License Manager is a World Wide Web service for the real time delivery of software passwords and related licensing information.

to get and review your password/codeword on line

please enter below your Customer Identifier or License Number or Certificate ID

JACDGGJU3AA4

License Key Code:

3F23	AEEC	9356	0000	0030

Example: 1234-5678-90AB-CDEF-0000

3 Installation and configuration

This chapter contains the following topics:

- Planning the DSS deployment
- Installation
- Configuration

Planning the DSS deployment

This section contains the following topics:

- System and environment requirements
- Backup and restore strategy
- Licensing
- Device differences

System and environment requirements

This section contains the following topics:

- Software requirements
- Hardware requirements
- Port requirements

Software requirements

The following table shows the server software requirements.

Table 3-1 DSS software requirements

Area	Requirements
Operating systems	● Microsoft Windows XP ● Microsoft Windows Vista ● Microsoft Windows 7 ● Microsoft Windows Server 2003, including R2 ● Microsoft Windows Server 2008, including R2 **NOTE:** 64-bit operating systems are supported, but DSS runs in 32-bit mode
Virtual servers	● VMware ESX 3.5 and later ● Microsoft Virtual Server 2005 and later ● Microsoft HyperV
Miscellaneous	.NET Framework 3.5
Novell	● Novell Netware 5 or higher ● Novell Client 4.91 or higher for Windows XP/2003 ● Novell Client 2 or higher for Windows Vista/7/2008

Hardware requirements

The following table shows the server hardware requirements.

Table 3-2 **DSS hardware requirements**

	Type	Minimum	Recommended	Recommended for 1000 devices
Processor	See operating system documentation.	1 GHz	2 GHz	2 GHz, dual core
Memory	See operating system documentation.	1 GB of RAM	1 GB of RAM per server plus 3 MB per device.	4 GB
Page file	n/a	See operating system documentation.	See operating system documentation.	See operating system documentation.
Disk free space	n/a	400 MB on the drive where you install DSS (this is where jobs are spooled). 200 MB on the drive where you install the database.	1 GB on the drive where you install DSS (this is where jobs are spooled). 1 GB on the drive where you install the database.	2 GB on the drive where you install DSS. 2 GB for the database.
Screen resolution	n/a	1024 x 768 pixels	Larger than 1024 x 768	Larger than 1024 x 768
Network link	Ethernet	100 MB	1 GB	1 GB
Network link	NTFS	n/a	n/a	n/a
Virtual server	● VMware ESX 3.5 and later ● Microsoft Virtual Server 2005 and later ● Microsoft HyperV			

NOTE: Minimum requirement must be reserved on virtual servers.

Actual requirements vary depending on number of devices managed, features enabled and usage load. Note that heavy usage of OCR may have a significant impact on server performance.

Device firmware requirements

To support DSS features, some devices require a minimum revision of firmware. Over time, as new features become available in DSS, it may be required to update the device firmware for compatibility. These changes will be documented in detail in the DSS release notes.

Table 3-3 **DSS 4.91 supported device firmware revisions**

Device model	Minimum firmware revision
HP LaserJet 4100 and 9000 MFP	03.804.6
HP LaserJet 4345mfp	09.111.1
HP LaserJet 9040 / 9050 MFP	08.101.9
HP LaserJet 9055 / 9065 MFP	07.006.7, and requires the DSS JAR file version 4.0.0.0 to be installed. Contact HP support if an update is required.
HP Color LaserJet 9500mfp	08.101.9
HP Color LaserJet 4730mfp	46.191.2
HP LaserJet M3035mfp	48.051.1

Table 3-3 DSS 4.91 supported device firmware revisions (continued)

Device model	Minimum firmware revision
HP LaserJet M4345mfp	48.051.1
HP LaserJet M5035mfp	48.051.1
HP 9200c Digital Sender	09.111.1
HP 9250c Digital Sender	48.041.1
HP Color LaserJet CM3530 MFP	Any
HP Color LaserJet CM4730mfp	50.031.0
HP Color LaserJet CM6030 / CM6040 MFP	Any
HP CM8050 / CM8060 Color MFP with Edgeline Technology	Any
HP LaserJet M4555 MFP	Releases fall of 2010
HP CM4540 Color MFP	Releases fall of 2010
HP ScanJet Enterprise 7000n Document Capture Workstation	Releases fall of 2010

Port requirements

DSS 4.91 uses a number of industry standard network protocols and their corresponding TCP and UDP ports in order to facilitate its Digital Sending functionality, such as Send to E-mail, Send To Folder, Authentication, and LDAP Replication. This section gives an overview of which ports are used in different configurations.

In its most basic configuration, DSS 4.91 requires ports 1783, 5213, 7627 and 161 to function. At install time DSS will register itself with the desktop firewall to ensure connections are allowed on these ports. Administrators may refer to the table in this section to determine which ports are required for their specific configuration of DSS 4.91.

Ports used

DSS uses the TCP/IP protocol to communicate on the network. Which TCP or UDP ports are used depends on which features are enabled in DSS 4.91 and which underlying protocols facilitate these features. Also, note that for each protocol DSS acts as a server or client, or both. The following table provides an overview. Administrators should ensure that the required ports are open at appropriate points in the network, for example, desktop firewall, switches and routers.

Table 3-4 **Ports used by DSS 4.91**

Feature	Type	Protocol	Port	Role of DSS	Can it be changed?
Device communication for current and legacy devices	Required	DSMP (HP Proprietary)	1783 (TCP)	Server & client	No
WS-* (WS-STAR), used for device communication for latest generation devices and for communication between DSS and the Configuration Utility	Required	HTTPS	7627 (TCP)	Server & client	No
Device discovery and configuration	Required	SNMP	161 (UDP)	Client	No
E-mail notifications, e-mail via service	Optional[1]	SMTP	25 (TCP)	Client	Yes
Send to Folder (Network UNC path)[2]	Optional	CIFS / SMB	445 (TCP)	Client	No
Send to FTP	Optional	FTP	21 (TCP)	Client	No
LDAP Replication & Authentication, simple bind	Optional	LDAP	389 (TCP)	Client	Yes
LDAP Replication & Authentication, simple over SSL bind	Optional	LDAP	636 (TCP)	Client	Yes

Table 3-4 Ports used by DSS 4.91 (continued)

Feature	Type	Protocol	Port	Role of DSS	Can it be changed?
LDAP Replication & Authentication SPNEGO	Optional	Kerberos	88 (TCP)	Client	No
LDAP Replication & Authentication, Global Catalog	Optional	LDAP	3268 (TCP)	Client	Yes
DSS Address Book access for latest generation devices	Required	Secure SQL	5213[3]	Server	No

[1] If a mail gateway is not required, enter a dummy address (0.0.0.0) in the Configuration Utility.

[2] Does not apply to local folders, for example. c:\myfolder.

[3] If another application is using 5213, a configuration file is available to override this port number.

DSS Address Book access for latest generation devices

HP's latest generation devices, starting with the HP ScanJet Enterprise 7000n Document Capture Workstation, HP M4555 MFP and HP Color CM4540 MFP, now access the DSS Address Book by connecting directly to the SQL database (which is running on the same server as DSS).

Hostname resolution

DSS 4.91 supports the use of hostnames for server addresses. Depending on the configuration of the host machine, DSS 4.91 will use NetBIOS/WINS (port: 137, 138 or 139)) or DNS (port: 53) for hostname resolution.

Backup and restore strategy

This section contains the following topics:

- Understand DSS data structures
- Software capabilities for backup and restore
- Scaling the DSS server

Understand DSS data structures

This section aims to provide an understanding of what data DSS manages in order to help customers develop a sound backup and restore strategy. The following describes the different types of data that makes up the DSS system and where it is stored.

Table 3-5 DSS data

Component	Location	Description
Job logs	Database	Job logs for all devices are stored in the DSS database.
Error logs	Database and Windows Event Log	The error logs show system events for information, warning and error conditions such as service stop and security audit.

Table 3-5 DSS data (continued)

Component	Location	Description
Debug logs	[Install Path]\FileSystems\MachineData \Logs	DSS maintains a set of debug log files. These files are designed to help HP support debug issues with the DSS service, such as crashes, hangs etc.
DSS configuration settings	[Install Path]\FileSystems\Product\DSS \Configuration	Configuration data used by DSS is stored in a series of files found in the Configuration folder. This data includes things like SMTP gateway settings, LDAP addressing settings, Workflow settings etc.
Device information		DSS maintains a list of all the devices it manages in a binary configuration file. This file also contains some basic information about the device, such as the hostname, device model etc.
Device configuration settings	Stored on the device	All the device-specific configuration data is stored on the device itself. When required DSS will read back the data from the device, manipulate it and send it back.
Configuration Utility UI ‘convenience’ data	Windows Registry	For usability the DSS Configuration Utility will remember entries made into selected list boxes, as well as the state of the Configuration Utility window when closed.

Software capabilities for backup and restore

DSS features a backup and restore feature to allow for easy backup and restore of DSS data.

Back up DSS data

1. Open the DSS Configuration Utility.
2. On the **General** tab, click **Backup**. The **Backup DSS Settings** dialog box appears.
3. Navigate to the location where you want to save the backup file, and then click **Save**.

Restore DSS data

1. Open the DSS Configuration Utility.
2. On the **General** tab, click **Restore**. The **Open** dialog box appears.
3. Navigate to the location where you saved the backup file, click to select the file, and then click **Open**.

Scaling the DSS server

Correctly scaling/sizing a DSS server is a complex task which should include industry standard tools and methods. This section provides information specific to DSS to assist in the scaling process, but is not a complete reference.

Limitations

There is no hard limit to how many devices can be added to the server, but HP will support up to 1000 devices per server with DSS 4.91. Note that this limit may change in the future, so make sure to read the release notes when updates are available and look for information on the HP Website at: www.hp.com/go/dss.

Features and factors that limit scalability

Most features offered by DSS are fairly lightweight in terms of server processing, with the exception of the following.

- Optical Character Recognition (OCR)
- High compression PDF
- LAN fax with notification support

Other factors that limit scalability include the following.

- Utilization/scan job volume
- Routing jobs through DSS
- Very large DSS address books
- Complex workflow design

Recommendations

Given the factors stated above, DSS administrators should consider the following approaches to improving the scalability of DSS:

- Limit OCR to specific workflows.
- Configure devices to send e-mail directly via the SMTP gateway, rather than via DSS.
- Configure devices to use direct LDAP address book.
- Use the notification features of the LAN Fax server.
- For OCR intensive environments, use high performance servers and use multiple servers to divide the load.

It is recommended to perform a pilot test of a given DSS configuration prior to wide scale roll-out. During the pilot administrators should make sure to test all the required DSS features on a limited number of devices while using the Windows performance monitoring tools to assess the impact on server performance.

Licensing

In order to use the features of this version of the DSS, you must purchase and install at least one device license. These licenses come in bundles of 1, 5, 10, 50 and 250 device licenses (device licenses are sometimes also referred to as "license seats").

Each seat allows you to enable DSS features on one DSS-enabled device. Adding licenses is cumulative and there is no limit to the number of license seats you can add to one server. SeeScaling the DSS server on page 29 for information about how to scale the DSS server.

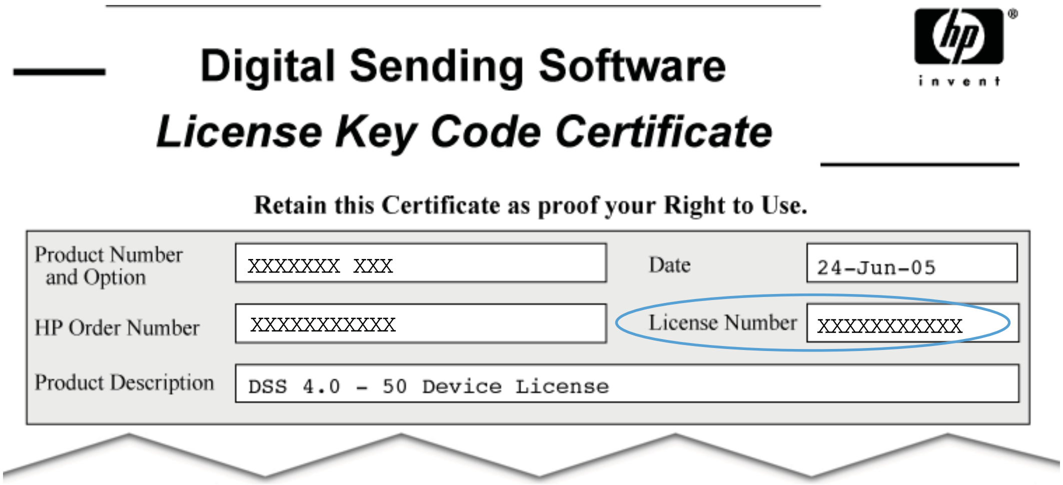
Activating licenses

To prevent misuse DSS licenses are protected by node locking technology. This means that licenses need to be activated before they can be used. Activation occurs by registering the license on the HP Software License Manager site: licensing.hp.com.

To register the license the following information is required:

- The License Number found on the Software License Certificate.

Figure 3-1 **DSS License Certificate**



Digital Sending Software

License Key Code Certificate

Retain this Certificate as proof your Right to Use.

Product Number and Option	XXXXXXX XXX	Date	24-Jun-05
HP Order Number	XXXXXXXXXXX	License Number	XXXXXXXXXXX
Product Description	DSS 4.0 - 50 Device License		

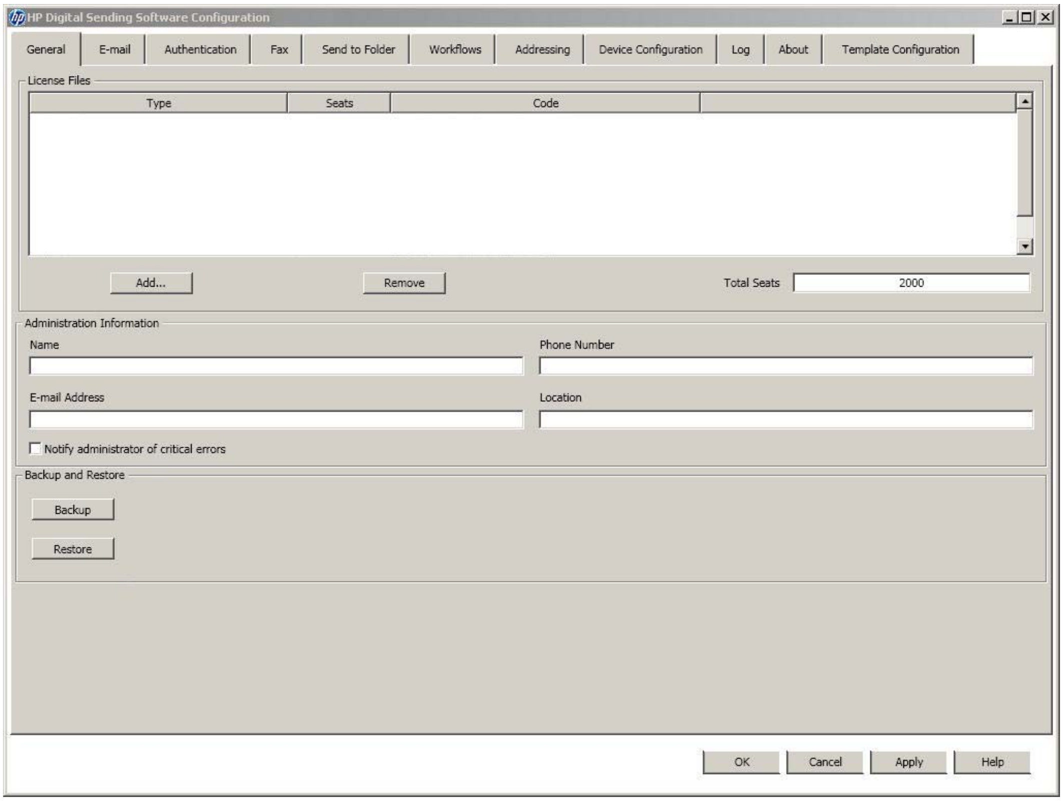
- The MAC address of the server where DSS is installed (you can find this information in the **About** tab of the DSS Configuration Utility).
- Your contact information.

After entering this information into the Software License Manager an activated license key is generated and delivered to the screen, and via fax or e-mail.

Install licenses

The activated license key is in the format XXXX-XXXX-XXXX-XXXX-XXXX. The key is entered in the General tab for the Configuration Utility, which will then show the number of seats provided by each license key, as well as the total accumulated number of seats.

Figure 3-2 Install licenses



Total Seats: 2000

☐ Notify administrator of critical errors

Trial or demo license

When DSS 4.91 is installed for the first time, the software is fully functional in trial mode, supporting 50 devices for 60 days. The License section of the DSS Configuration Utility displays a "Trial License" message and the time remaining in the trial period. The trial license period cannot be extended. Once the trial license expires, customers must install a valid license to continue using DSS.

Upgrading from previous products

Licenses from DSS 3.0 and earlier revisions of DSS 4.x are fully functional in DSS 4.91. For DSS 3.0 it is required to manually enter each license key into the General tab in the Configuration Utility. For earlier revisions of DSS 4.x the licenses are carried over through the backup/restore feature.

Node locking

DSS licenses are protected by node locking. For more information, see the Node Locking on page 20 section of this guide.

Device differences

As part of planning the deployment of a DSS server it is important to understand the Digital Sending features available in the various device models in the environment. See Table 1-1 Feature comparison on page 7 for more information.

Installation

This section contains the following topics:

- Pre-installation checklist
- Installer screens and options

Pre-installation checklist

1. Review the hardware and software requirements for the DSS server. See System and environment requirements on page 24 for more information.
2. Verify that devices planned for connection to DSS have the minimum required firmware.
3. If you are upgrading from a previous version of DSS, make a backup of the existing configuration.
4. The MAC address of the server that will host the DSS service.

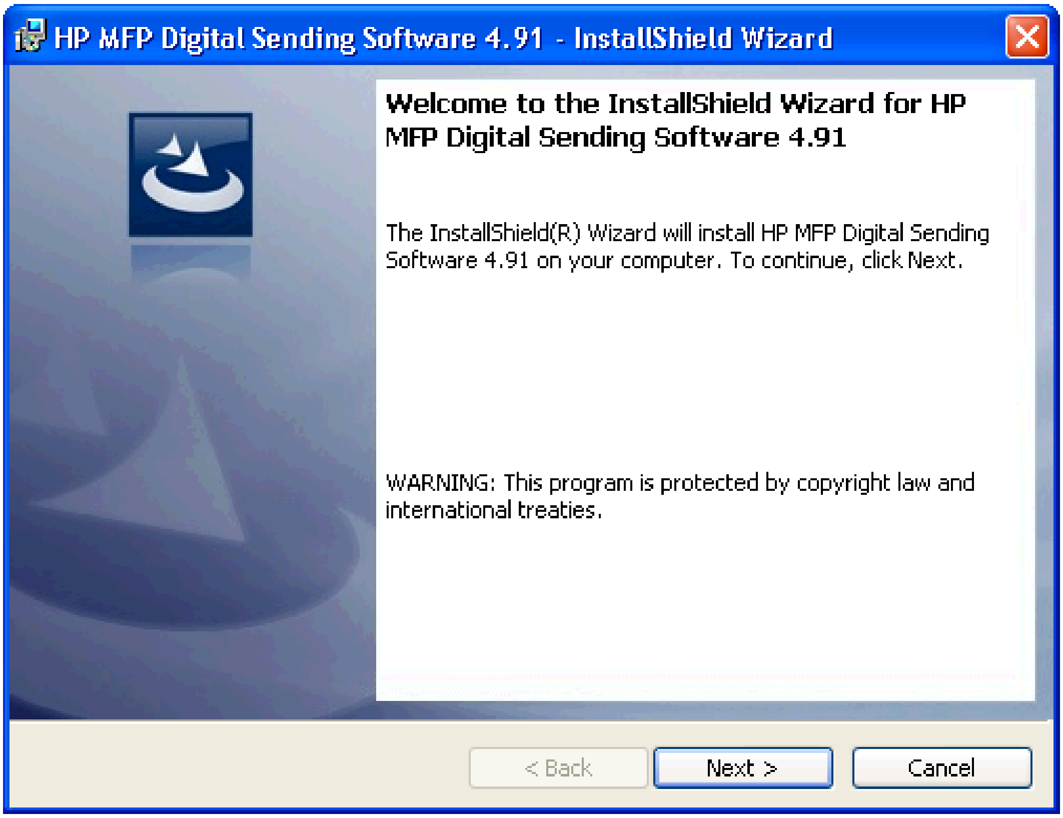
Installer screens and options

Follow these steps to install the HP Digital Sending Software 4.91.

1. After downloading the software to your computer or network, close all programs that are open on the computer.
2. Navigate to the location on the computer or network where you downloaded the HP Digital Sending Software 4.91 software, and double-click the **setup.exe** file.

3. The **Welcome** screen appears. Click **Next** to continue.

Figure 3-3 **Software Installation – Welcome screen**



HP MFP Digital Sending Software 4.91 - InstallShield Wizard

Welcome to the InstallShield Wizard for HP MFP Digital Sending Software 4.91

The InstallShield(R) Wizard will install HP MFP Digital Sending Software 4.91 on your computer. To continue, click Next.

WARNING: This program is protected by copyright law and international treaties.

4. The **License Agreement** screen appears. Click **Print** to print a copy of the license agreement. Click **I do not accept the terms in the license agreement**, and then click **Next** to cancel the installation.

   After reading the license agreement, click to select **I accept the terms in the license agreement**, and then click **Next** to continue the installation.

5. The **Windows Firewall Configuration** screen appears. Click to select the **Allow this service to accept incoming network requests.** check box, and then click **Next** to continue.

6. The **Destination Folder** screen appears. Click **Browse** to select a different destination folder. Click **Full Installation** or **Configuration Utility Only**, and then click **Next** to continue.

7. The **Ready to Install the Program** screen appears. Click **Back** to go back to change installation options. Click **Install** to start the installation.

8. The **Microsoft SQL Server 2005 Setup Progress** screen displays the installation progress for the SQL server.

9. The **Installing HP Digital Sending Software 4.91** screen shows the progress of the software installation.

10. When the installation completes, the **InstallShield Wizard Completed** screen appears. Based on your configuration and the options installed, a reboot of the DSS server may be required. Click the **Launch HP Digital Sending Software 4.91** check box to launch the software when the installer closes. Click the **Show me the readme file** check box if you want to see the product readme file when the installer closes. Click **Finish** to complete the installation.

Configuration

The HP Digital Sending Software (DSS) executes as a Windows service and allows users to scan documents at Digital Sending-enabled devices, and send the scanned images to various types of destinations (such as e-mail, fax and folder). This software package includes a Configuration Utility that allows you to set up DSS features in a way that works best in your environment. Each DSS feature must be configured before it is available for use on Digital Sending-enabled devices.

This section contains the following topics:

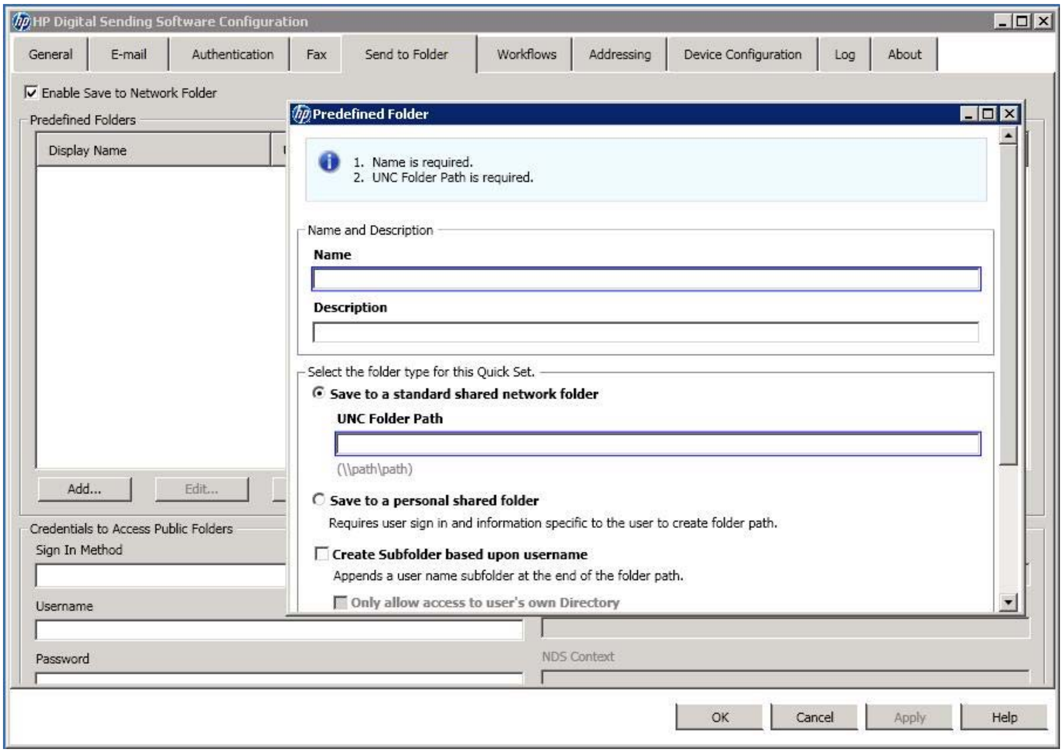
- Configuration Utility
- Licensing
- Device management
- Authentication
- General Device configuration
- Send to Folder
- Send to E-mail
- Send to Fax
- Send to Workflows
- Addressing

Configuration Utility

The Configuration Utility manages settings that apply across all Digital Sending-enabled devices, such as e-mail server and Authentication method, and also settings that apply to specific devices.

The Configuration Utility has several display elements to assist you in knowing what data is required to make DSS features available on devices.

Figure 3-4 Configuration Utility elements



☑ Enable Save to Network Folder

1. Name is required.
2. UNC Folder Path is required.

● Save to a standard shared network folder

○ Save to a personal shared folder

Requires user sign in and information specific to the user to create folder path.

□ Create Subfolder based upon username

Appends a user name subfolder at the end of the folder path.

□ Only allow access to user's own Directory

Table 3-6 **Configuration Utility elements**

Callout	Component	Description
1	**Exclamation point**	An exclamation point (!) next to the name of a tab indicates that required data for that feature has not been supplied.
2	**Asterisk**	An asterisk (*) next to the name of a tab indicates that data has been entered, but not yet applied. The Apply button must be clicked in order to save the settings.
3	**Outline**	Required data is highlighted with an outline around the necessary setting. In this diagram the Name and UNC Folder Path settings are highlighted to indicate that those are required.

Licensing

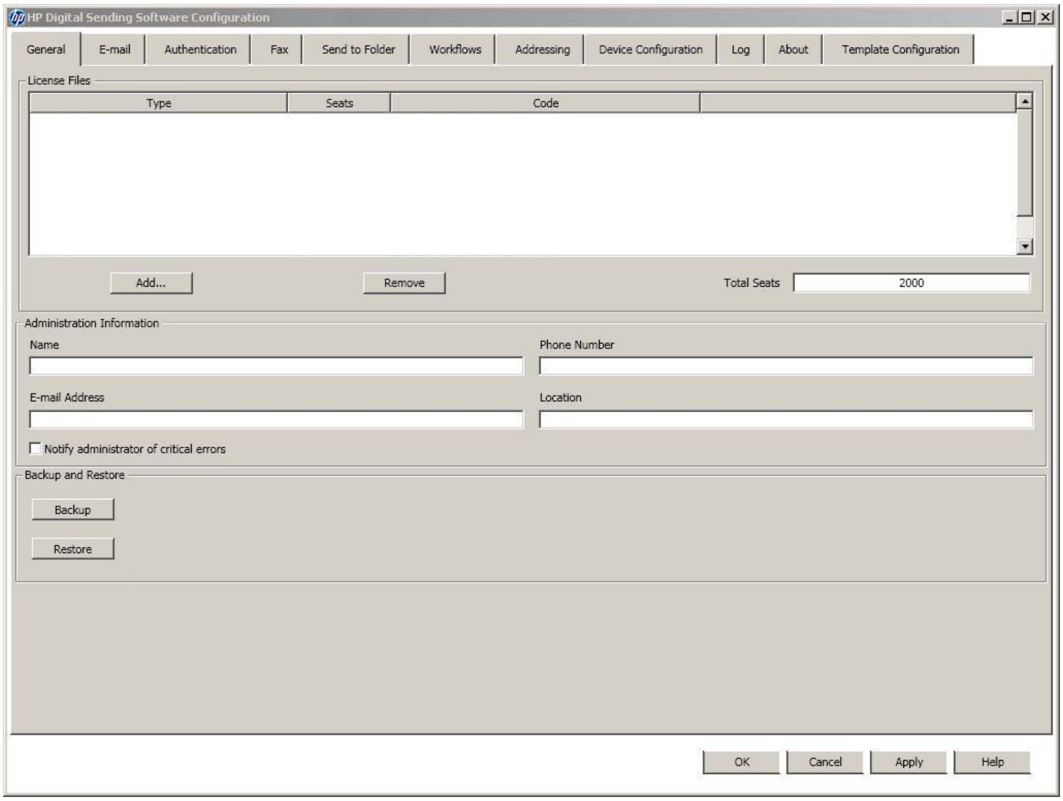
This section contains the following topics:

- Add licenses
- Remove licenses
- Auto-generated licenses

Add licenses

1. In the DSS Configuration Utility, click the **General** tab.

   Figure 3-5 **General** tab – DSS Configuration Utility

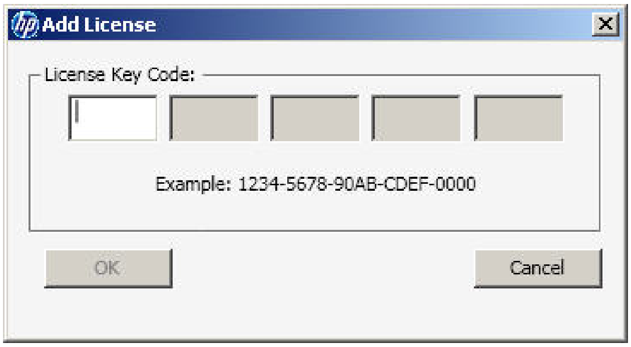


Total Seats 2000

□ Notify administrator of critical errors

2. In the **License Files** section, click **Add**. The **Add License** dialog box appears.

   Figure 3-6 **Add License** dialog box



Example: 1234-5678-90AB-CDEF-0000

3. Type in the 20-digit license key code for the license you are installing, and then click **OK**.

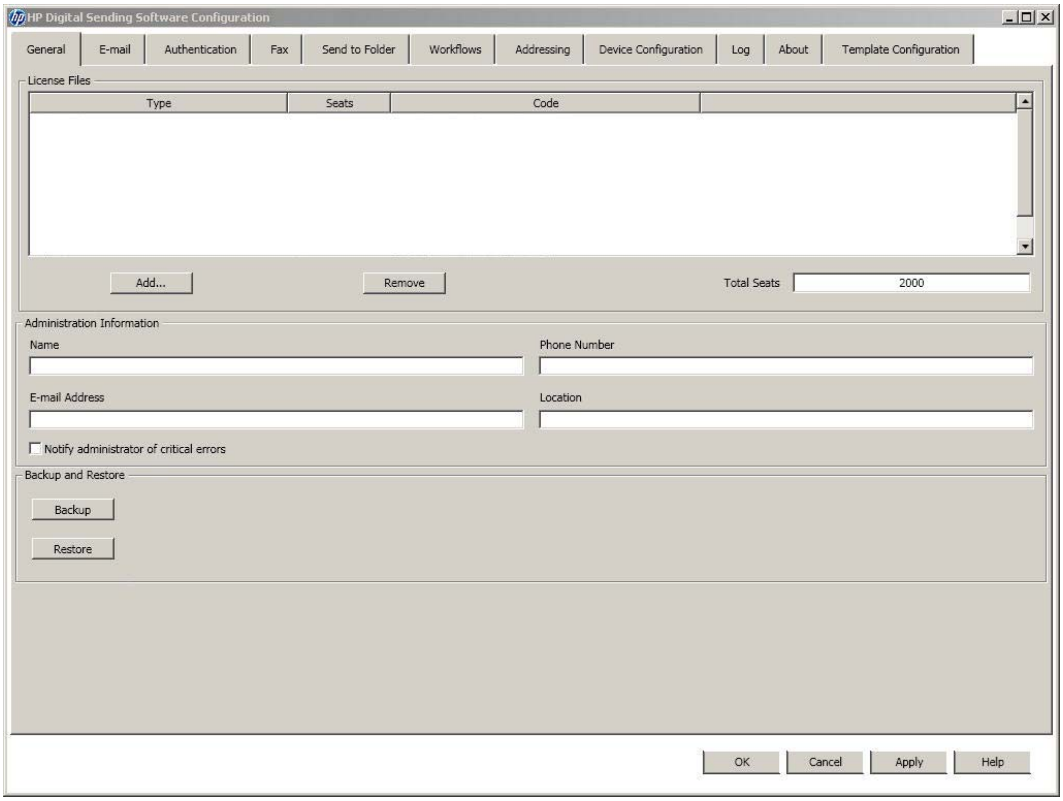
4. The new license appears in the **License Files** list and the **Total Seats** field updates to reflect the additional seats provided by this license.

Remove licenses

In rare instances it is necessary to remove licenses from the DSS server. One condition that would prompt license removal from a DSS server would be to install those licenses on a new DSS server to provide hardware redundancy.

1. In the DSS Configuration Utility, click the **General** tab.

   Figure 3-7 **General** tab – DSS Configuration Utility



Total Seats 2000

□ Notify administrator of critical errors

2. In the **License Files** section, click the license you want to remove, and then click **Remove**.

3. The license is removed from the **License Files** list and the **Total Seats** field updates to reflect the current number of seats provided by any remaining licenses.

NOTE: If by removing a license, your total number of seats falls below the number of Devices you currently have configured for Digital Sending features, you will be required to remove Devices from the **Device List** on the **Device Configuration** tab to match the number of remaining sets available.

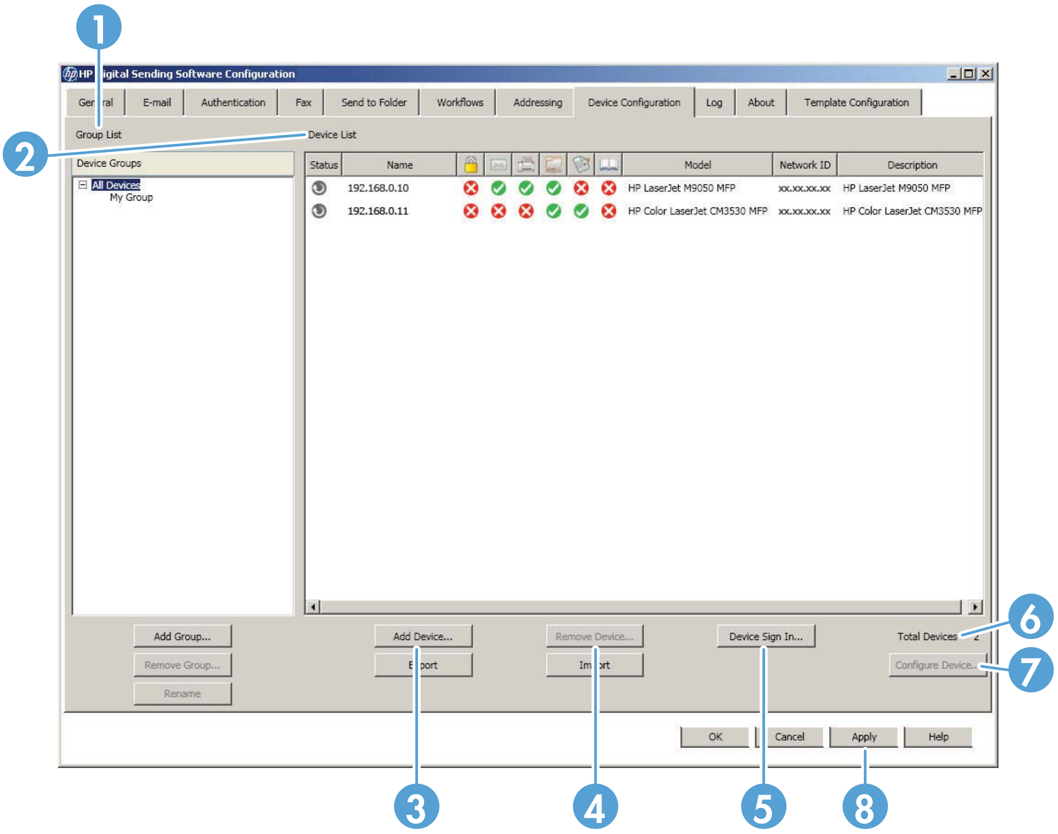
Auto-generated licenses

The HP LaserJet 9200c and 9250c devices auto-generate a license for use in DSS. This means that no additional license seat is required for these devices. Once these devices are managed by DSS they will automatically generate a license that shows up in the DSS Configuration Utility.

Device management

The **Device Configuration** tab on the Configuration Utility specifies which devices are using the DSS service and also provides an interface for customizing DSS features for specific devices.

Figure 3-8 **Device Configuration** tab



Status	Name							Model	Network ID	Description
	192.168.0.10	✗	✓	✓	✓	✗	✗	HP LaserJet M9050 MFP	xx.xx.xx.xx	HP LaserJet M9050 MFP
	192.168.0.11	✗	✗	✗	✓	✓	✗	HP Color LaserJet CM3530 MFP	xx.xx.xx.xx	HP Color LaserJet CM3530 MFP

The **Device Configuration** tab contains the following elements.

Table 3-7 **Device Configuration tab**

Callout	Component	Description
1	**Group List**	Use this list to organize and filter the devices using the DSS service. - **Add Group.** Click to create a new group. - **Remove Group.** Click to remove a group. - **Rename.** Click to change a group name.

Table 3-7 **Device Configuration tab (continued)**

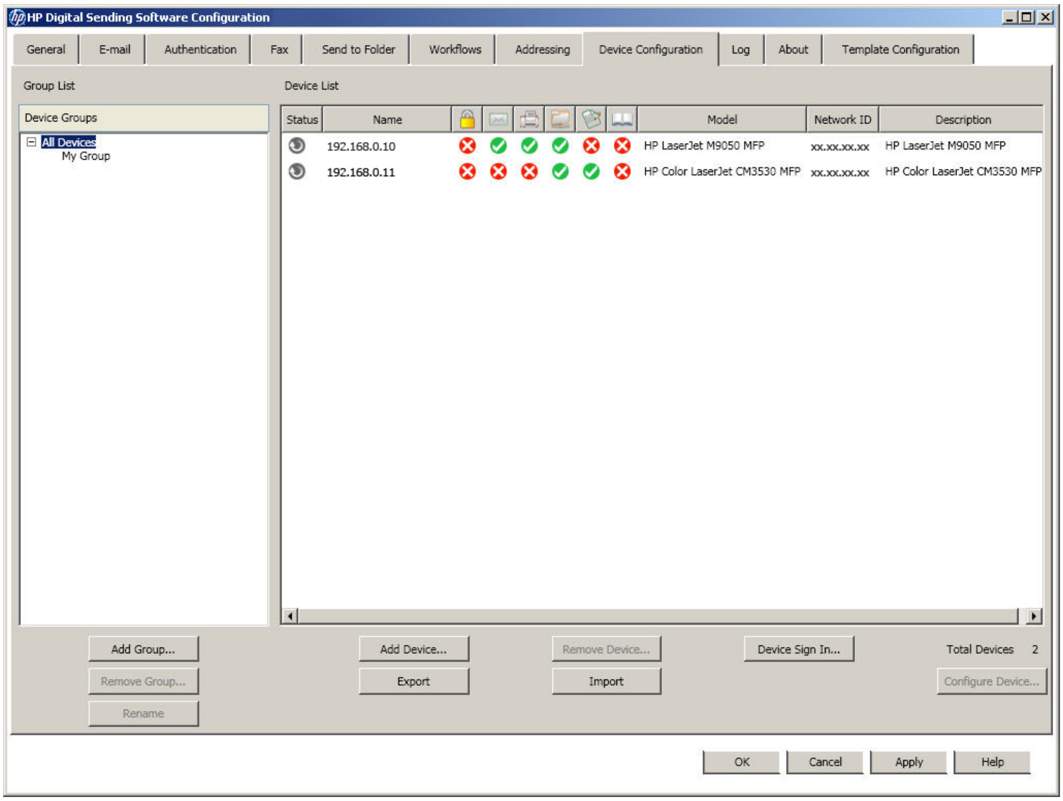
Callout	Component	Description
2	**Device List**	This list shows the individual devices using the DSS service as well as the features that are enabled or not enabled on each device. The **Device List** contains the following headings: ● **Status** ● **Name** ● **Authentication icon** ● **Send to E-mail icon** ● **Fax icon** ● **Send to folder icon** ● **Send to workflows icon** ● **Addressing icon** ● **Model** ● **Network ID** ● **Description**
3	**Add Device**	Click to connect a new device to the DSS service. Once added, the device will appear in the Device List.
4	**Remove Device**	Click to select a device from the list, then click this button to remove the device.
5	**Device Sign-in**	Click this button to configure the device sign-in settings.
6	**Total Devices**	Displays the total number of devices in the **Device List**.
7	**Configure Device**	Click to select the device you want to configure, then use the sub-tabs to configure DSS features for the selected device.
8	**Apply**	Click this button to save changes made on this tab.

Add and remove devices

Add a device

1. On the DSS server, open the Configuration Utility and click the **Device Configuration** tab.

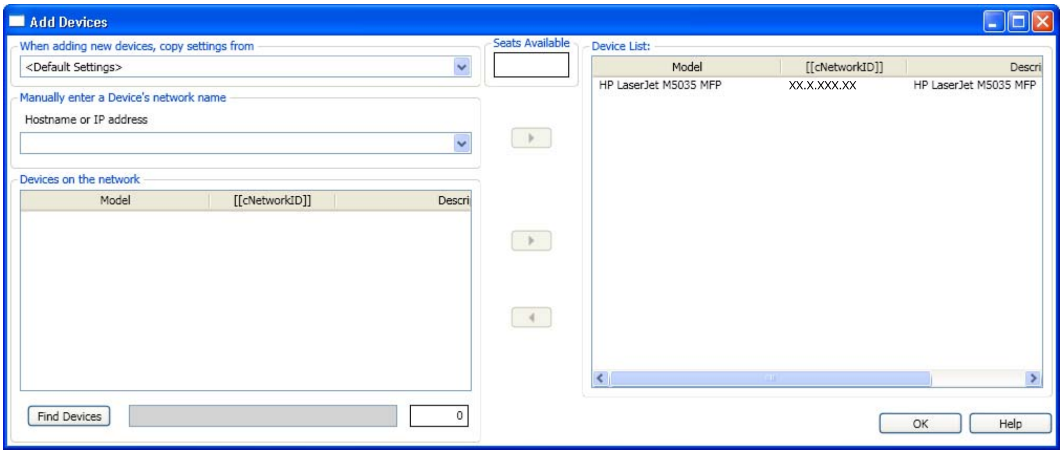
Figure 3-9 **Device Configuration** tab



Status	Name							Model	Network ID	Description
	192.168.0.10	✗	✓	✓	✓	✗	✗	HP LaserJet M9050 MFP	xx.xx.xx.xx	HP LaserJet M9050 MFP
	192.168.0.11	✗	✗	✗	✓	✓	✗	HP Color LaserJet CM3530 MFP	xx.xx.xx.xx	HP Color LaserJet CM3530 MFP

2. Click **Add Device**. The **Add Devices** dialog box appears.

Figure 3-10 **Add Devices** dialog box



When adding new devices, copy settings from

<Default Settings>

Devices on the network

Model	[[cNetworkID]]	Descri

Device List:

Model	[[cNetworkID]]	Descri
HP LaserJet M5035 MFP	XX.X.XXX.XX	HP LaserJet M5035 MFP

3. Click **Find Devices** to display a list of the DSS-enabled devices on the network.

4. From the displayed list, select the device to be added.

NOTE: If you know the hostname or TCP/IP address of the device, you can type it in the **Hostname or IP Address** text box under **Manually enter a device's network name** instead of using the **Find Devices** button.

5. Click **>** to add the device to the Device List.

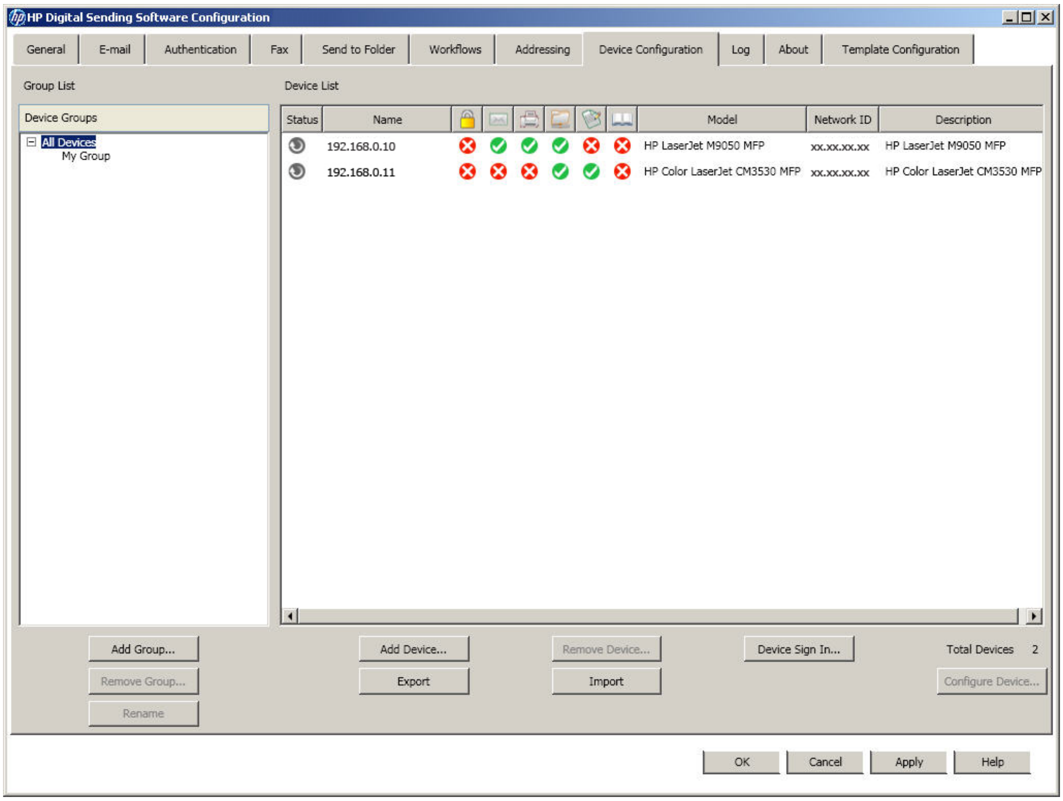
NOTE: You can add only as many DSS-enabled devices as there are seats available in the DSS license. The number of seats available appears near the top of the **Add Devices** dialog box.

6. Click **OK** to close the **Add Devices** dialog box.

Remove a device

1. On the DSS server, open the Configuration Utility and click the **Device Configuration** tab.

Figure 3-11 **Device Configuration** tab

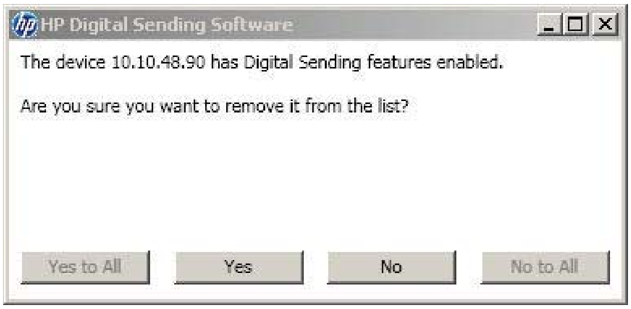


Status	Name							Model	Network ID	Description
●	192.168.0.10	✗	✓	✓	✓	✗	✗	HP LaserJet M9050 MFP	xx.xx.xx.xx	HP LaserJet M9050 MFP
●	192.168.0.11	✗	✗	✗	✓	✓	✗	HP Color LaserJet CM3530 MFP	xx.xx.xx.xx	HP Color LaserJet CM3530 MFP

Total Devices 2

2. In the **Device List**, click to select the device you want to remove, and then click **Remove Device**. The **Remove Device** dialog box appears.

Figure 3-12 **Remove Device** dialog box



HP Digital Sending Software

The device 10.10.48.90 has Digital Sending features enabled.

Are you sure you want to remove it from the list?

3. Click **Yes** (or **Yes to All** if you are removing multiple devices) to remove DSS-enabled devices.

Device configuration

After adding a new device (or group of devices), use the following procedure to configure the Digital Sending features for the device or group.

1. On the DSS server, open the Configuration Utility and click the **Device Configuration** tab.
2. Select a device from the **Device List**.
3. Click **Configure Device**. The dialog box that appears looks similar to the main Configuration program interface. Use this interface to customize the specific Digital Sending settings for this device.

NOTE: Use this interface to enable the Digital Sending features for the individual devices. Even if a feature is enabled on the DSS configuration tabs, it is not available on the device until it has been enabled in the **Configure Device** interface.

4. On the **Authentication** tab, click to select the check box for the authentication method you want to use to enable authentication for the selected device. Select the check boxes next to the features that are being enabled. Enabling authentication requires the user to log in before using the selected features. Select the network domain from the **Default Domain** drop-down menu.
5. On the **Send to E-mail** tab, select the **Enable Send to E-mail** check box, and select **via the Digital Sender service** in the **Send E-mail** drop-down list.

   Then use the controls in the **Address and Message Field Control**, **Signing and Encryption**, and **File Settings** sections to customize the Send to E-mail settings for the selected device.
6. On the **Addressing** tab, select the **Enable Network Contacts (use LDAP server)** check box if DSS should retrieve e-mail addresses directly from an LDAP server. Enter the LDAP server Hostname or IP address, or click the "Auto Find" button. Then enter the LDAP port number (usually 389).
7. On the **Fax** tab, select the **Enable Fax Send** check box to enable the fax feature. Select the desired fax method in the drop-down menu.
8. On the **Send to Folder** tab, select the **Enable Send to Folder** check box to enable this feature.

9. On the **Send to Workflows** tab, select the **Enable Send to Workflows** check box to enable workflows and configure settings.

10. Click **Apply** to save all of the changes.

NOTE: The settings are not propagated to the device until **Apply** is selected.

Understanding the Device List

The **Device List** on the **Device Configuration** tab shows the Digital Sending-enabled devices that are currently being served by DSS. The icon to the left of the device name indicates the status of the device.

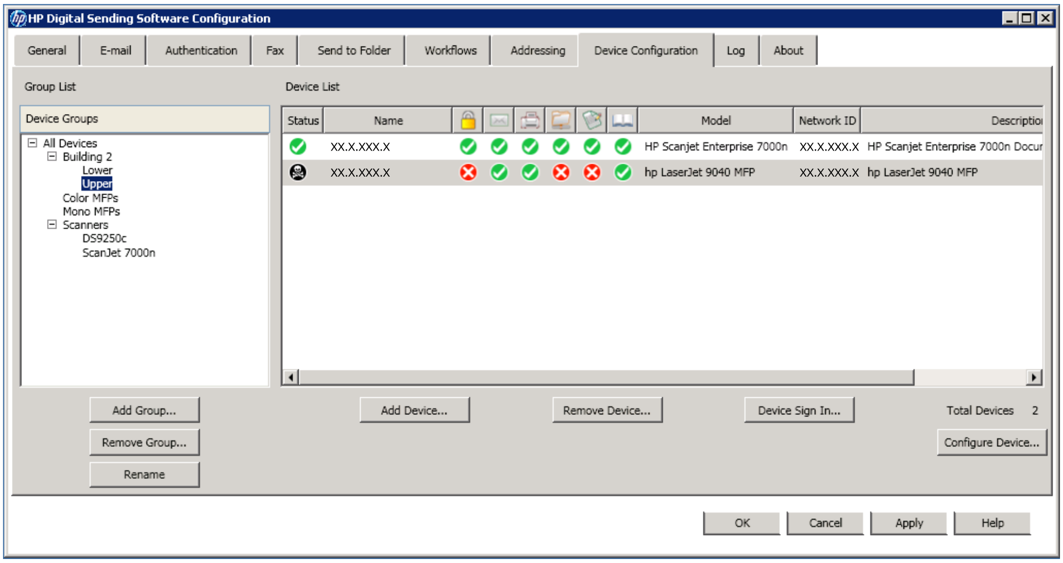
Table 3-8 **Device List icons**

Icon	Description
✓	Communication with the device is established and the configuration settings are known.
↻	The device configuration has not been retrieved since the Configuration Utility was loaded.
⚡	DSS is unable to establish communication with the device and the settings are unknown.
☠	The device was seized by another computer that is running the Configuration Utility. The TCP/IP address of the other computer is available under the **Status** heading on the **Device List**. To reclaim ownership of a seized device, right-click the crossbones icon and click **OK** in the two dialog boxes that appear.

Device grouping

Device grouping is a new feature in DSS 4.91 and provides the ability to organize devices for more efficient configuration and management.

Figure 3-13 Device grouping



Status	Name							Model	Network ID	Descriptio
✓	XX.X.XXX.X	✓	✓	✓	✓	✓	✓	HP Scanjet Enterprise 7000n	XX.X.XXX.X	HP Scanjet Enterprise 7000n Docur
☠	XX.X.XXX.X	✗	✓	✓	✗	✗	✓	hp LaserJet 9040 MFP	XX.X.XXX.X	hp LaserJet 9040 MFP

Total Devices 2

Create a device group

1. Open the Configuration Utility and click the Device Configuration tab.
2. Select the group in which you want to add a new group or select **All Devices**. Device groups can be nested within other groups.
3. Click **Add group**.
4. Type a name for the new group.

Add devices to a group

1. Right-click on a device and select **Add to Group**.
2. Click the desired group for this device.

Remove devices from a group

1. Right-click on a device and select **Remove**.
2. Click **Remove from Group**.

Authentication

Authentication is a security feature that requires users to provide a network username and password before using Digital Sending features. Authentication can be turned on or off for each device that the DSS supports.

NOTE: At no time are the credentials that are used to authenticate at the device written to either the DSS server or the device hard disk. In addition, although the credentials that the DSS administrator uses to configure authentication or LDAP addressing are written to the DSS server hard disk, a hashing algorithm is incorporated to ensure that these credentials cannot be recovered.

Configure DSS

This section contains the following topics:

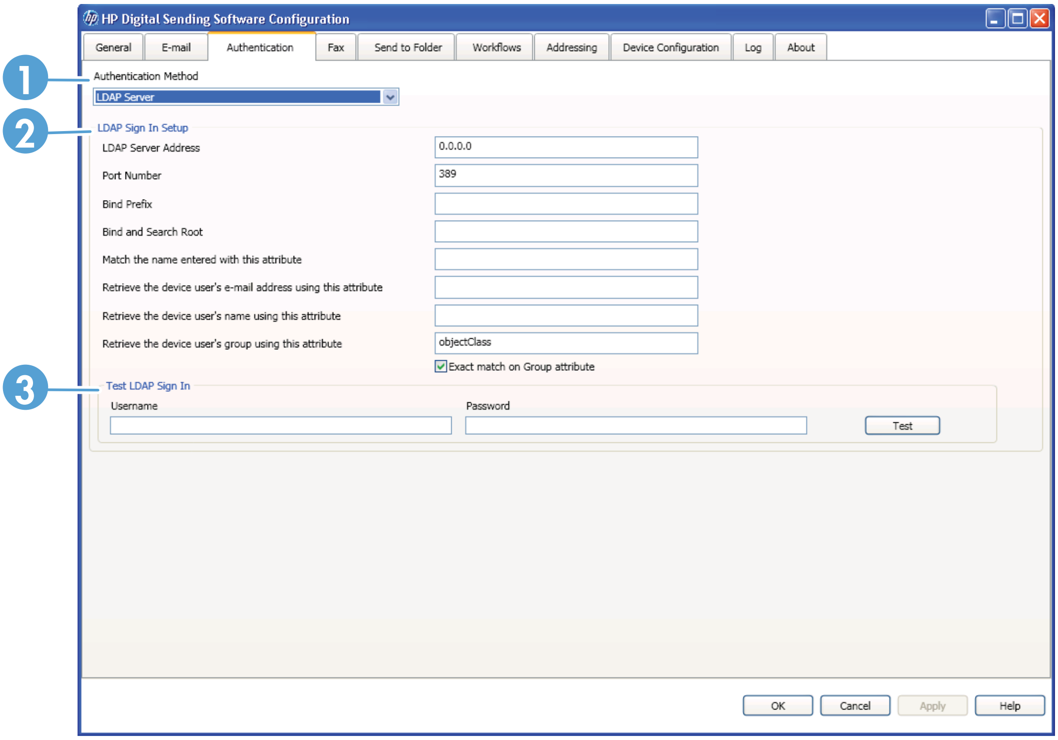
- Authentication methods
- LDAP bind
- How to

Authentication methods

This section describes the three methods of authentication:

- LDAP authentication
- Windows Active Directory
- Novell authentication

LDAP Server



Authentication Method: LDAP Server

LDAP Sign In Setup

LDAP Server Address	0.0.0.0
Port Number	389
Bind Prefix	
Bind and Search Root	
Match the name entered with this attribute	
Retrieve the device user's e-mail address using this attribute	
Retrieve the device user's name using this attribute	
Retrieve the device user's group using this attribute	objectClass

☑ Exact match on Group attribute

Test LDAP Sign In

Username

Password

Figure 3-14 **Authentication** tab – LDAP Server

The LDAP Server option on the **Authentication** tab contains the following elements.

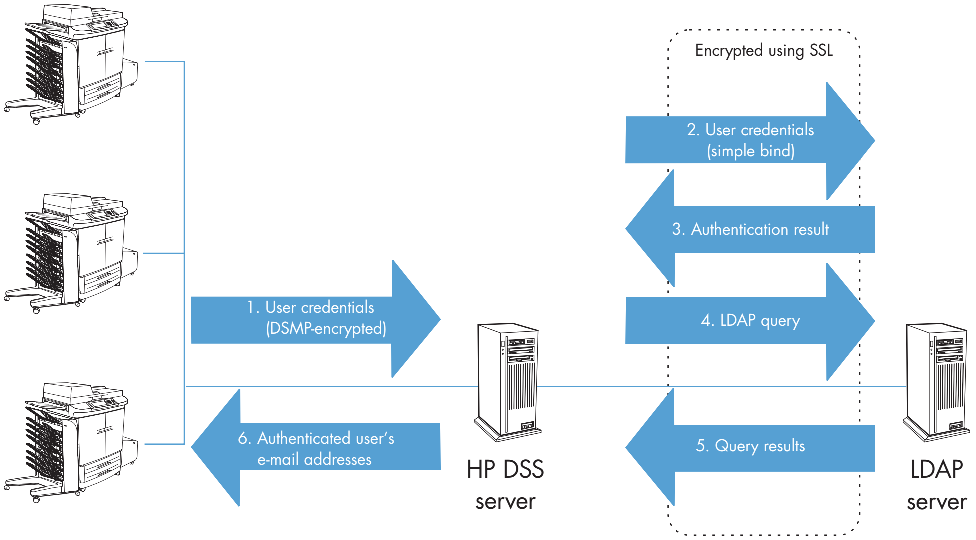
Table 3-9 **Authentication tab – LDAP Server**

Callout	Component	Description
1	**Authentication method**	Select **LDAP Server** from the drop-down menu.
2	**LDAP Sign In Setup**	Use the following fields to set up the sign-in method. • **LDAP Server address** • **Port number** • **Bind prefix** • **Bind and Search Root** • **Match the name entered with this attribute** • **Retrieve the device user's e-mail address using this attribute** • **Retrieve the device user's name using this attribute** • **Retrieve the device user's group using this attribute** To allow an exact match only, click to select the **Exact match on Group attribute** check box.
3	**Test LDAP Sign in**	Type information into the following fields, and then click **Test** to test the LDAP Server sign-in setup. • **Username** • **Password**

LDAP is a standard, extensible directory-access protocol. It is a common language that LDAP clients and servers use to communicate with each other. LDAP is a message-oriented protocol. The client constructs a message that contains a request and sends it to the server. The server processes the request and sends back the result in a series of LDAP messages. LDAP is also a connection-oriented protocol. The client opens a connection and performs any number of operations on the same connection.

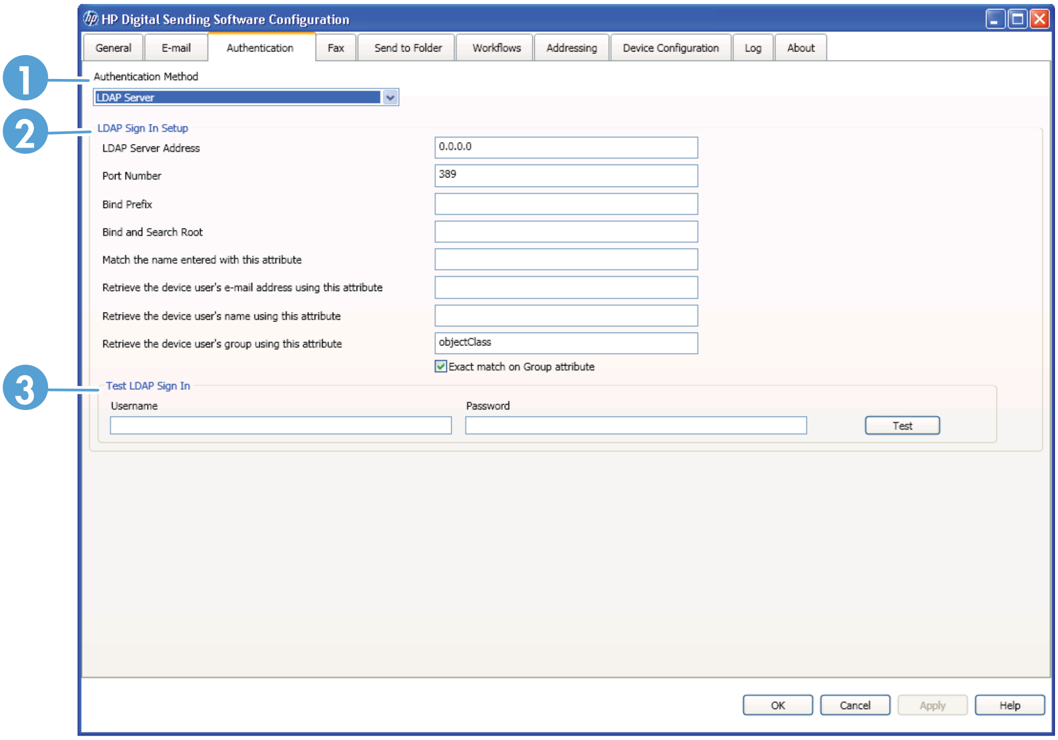
For the LDAP server bind method, LDAP authentication uses either the Simple or the Simple over SSL method. See Table 3-12 Authentication bind methods on page 53.

Figure 3-15 LDAP authentication


Encrypted using SSL
2. User credentials (simple bind)
3. Authentication result
1. User credentials (DSMP-encrypted)
4. LDAP query
6. Authenticated user's e-mail addresses
5. Query results
HP DSS server
LDAP server

Microsoft Windows

Figure 3-16 **Authentication** tab – Microsoft Windows



Authentication Method: LDAP Server

LDAP Sign In Setup

LDAP Server Address: 0.0.0.0

Port Number: 389

Bind Prefix:

Bind and Search Root:

Match the name entered with this attribute:

Retrieve the device user's e-mail address using this attribute:

Retrieve the device user's name using this attribute:

Retrieve the device user's group using this attribute: objectClass

☑ Exact match on Group attribute

Test LDAP Sign In

Username:

Password:

Test

The Microsoft Windows option on the **Authentication** tab contains the following elements.

Table 3-10 Authentication tab – Microsoft Windows

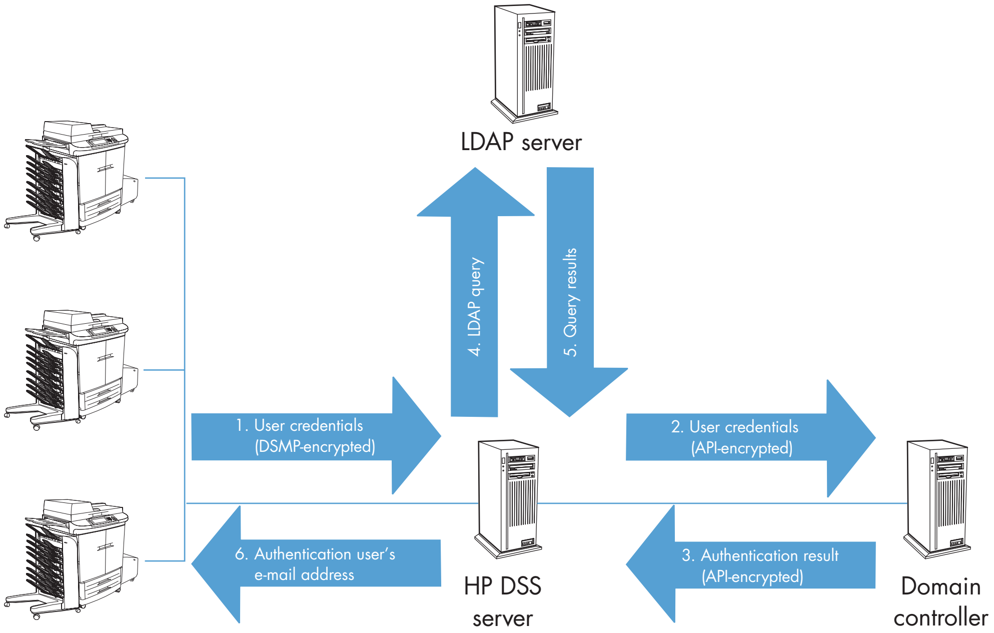
Callout	Component	Description
1	**Authentication method**	Select **Microsoft Windows** from the drop-down menu.
2	**Windows Sign in Setup (Kerberos and NTLM)**	Click **Add** to add domains to the **Trusted Domains** list. Click **Remove** to remove domains from the list. Select the **Default Windows Domain** from the drop-down menu. Use the following fields to set up the sign-in method. ● **Match the name entered with this attribute** ● **Retrieve the user's e-mail address using this attribute**
3	**Test Windows Sign In**	Type information into the following fields, and then click **Test** to test the Microsoft Windows sign-in setup. ● **Domain** ● **Username** ● **Password**

DSS Windows authentication uses Microsoft Active Directory, a special-purpose database that contains information about objects, including users, that are contained within the domain. The Active Directory database resides on domain controllers and is automatically replicated across all domain controllers in the domain. Active Directory provides an LDAP interface to the data in the directory database.

As shown in Figure 3-17 Windows Active Directory authentication on page 50, the following steps occur during Windows authentication:

1. The user types his or her username and password at the device. This information is securely transmitted to the DSS server.
2. The DSS program authenticates to the domain through the Windows API to validate the user's credentials.
3. If the user's credentials are correct, the Domain Controller returns either the security identifier (SID) or the BSID (Binary SID).
4. Using the LDAP interface, DSS queries the LDAP directory for the authenticated user's e-mail address.
5. The LDAP directory returns the authenticated user's e-mail address.
6. DSS inserts the authenticated user's e-mail address in the **From:** text box of the e-mail and prohibits the user from changing the field.

Figure 3-17 Windows Active Directory authentication


LDAP server
4. LDAP query
5. Query results
1. User credentials (DSMP-encrypted)
2. User credentials (API-encrypted)
6. Authentication user's e-mail address
3. Authentication result (API-encrypted)
HP DSS server
Domain controller

Determining the LDAP server bind method for Windows

By default, Active Directory is not configured to accept anonymous queries for information that is contained in the Active Directory store. When an administrator configures LDAP addressing or authentication, he or she must decide between changing Active Directory to accept anonymous queries and configuring DSS to have authenticated access. If Active Directory is configured for anonymous access, DSS can be configured to do an anonymous LDAP query. If Active Directory is *not* configured for anonymous access, DSS must be configured for either Simple or SPNEGO authentication. Because Active Directory supports SPNEGO for backward compatibility with Windows clients, it is the preferred method for configuring DSS authentication. SPNEGO authentication uses either Kerberos or NTLM, depending on the environment.

NOTE: The username and password that are used in the Simple method of authentication are transmitted over the network in cleartext. This means that this information can be read by anyone who has access to the data on the network.

To configure Active Directory Services for an anonymous LDAP query

1. Open the Active Directory Users & Computers Microsoft Management Console program.
2. Right-click the **Users** container and then select **Properties**.
3. Click the **Security** tab.
4. Click **Add**.
5. Select **Everyone** and then click **Add**.
6. Click **OK**.
7. Click **Advanced**.
8. Select **Everyone**.
9. Click **View/Edit**.

10. In the **Apply onto** drop-down list, select **This object and all child objects**.

11. Click **Apply**.

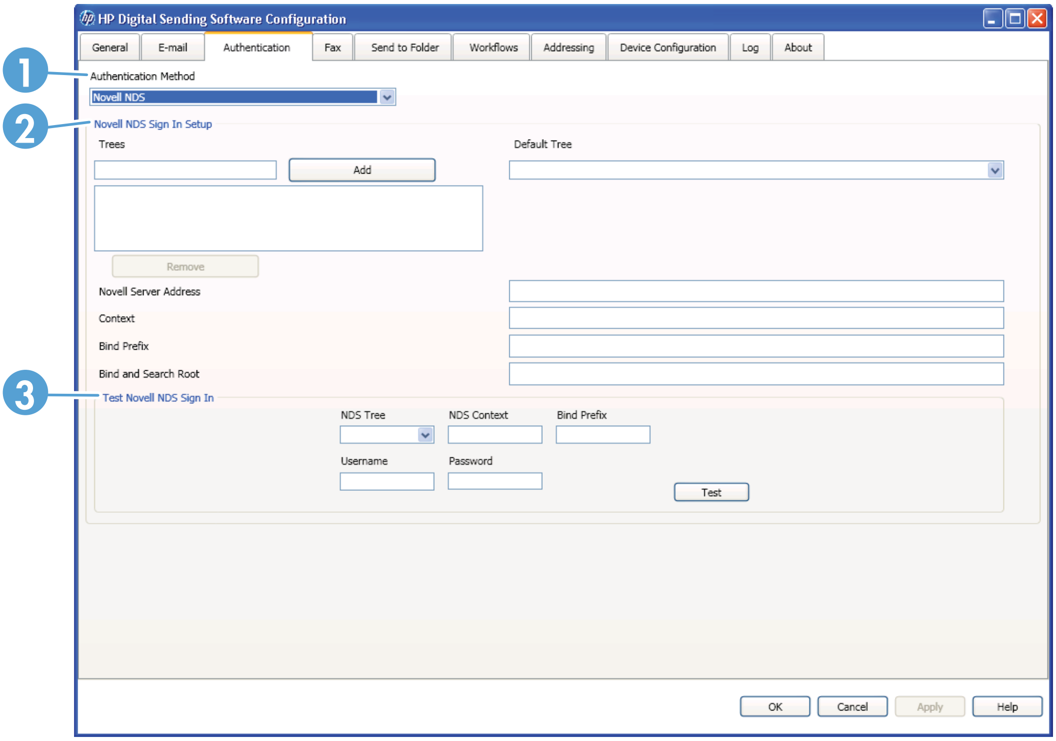
12. Click **OK** to close the **Properties** dialog box.

13. Right-click **Users** and then click **Refresh**.

NOTE: Enabling anonymous access to the **Users** container might also enable other anonymous users (for example, the Guest logon) to view LDAP properties. For more information about security and Active Directory, consult Microsoft support.

Novell NDS

Figure 3-18 Authentication tab – Novell NDS



Authentication Method: Novell NDS

The Novell NDS option on the **Authentication** tab contains the following elements.

Table 3-11 Authentication tab – Novell NDS

Callout	Component	Description
1	**Authentication method**	Select **Novell NDS** from the drop-down menu.

Table 3-11 Authentication tab – Novell NDS (continued)

Callout	Component	Description
2	**Novell NDS Sign in Setup**	Click **Add** to add trees to the **Trees** list. Click **Remove** to remove trees from the list. Select the **Default Tree** from the drop-down menu. Use the following fields to set up the sign-in method. ● **Novell Server Address** ● **Context** ● **Bind prefix** ● **Bind and Search root**
3	**Test Novell NDS Sign in**	Type information into the following fields, and then click **Test** to test the Novell NDS sign-in setup. ● **NDS Tree** ● **NDS Context** ● **Bind prefix** ● **Username** ● **Password**

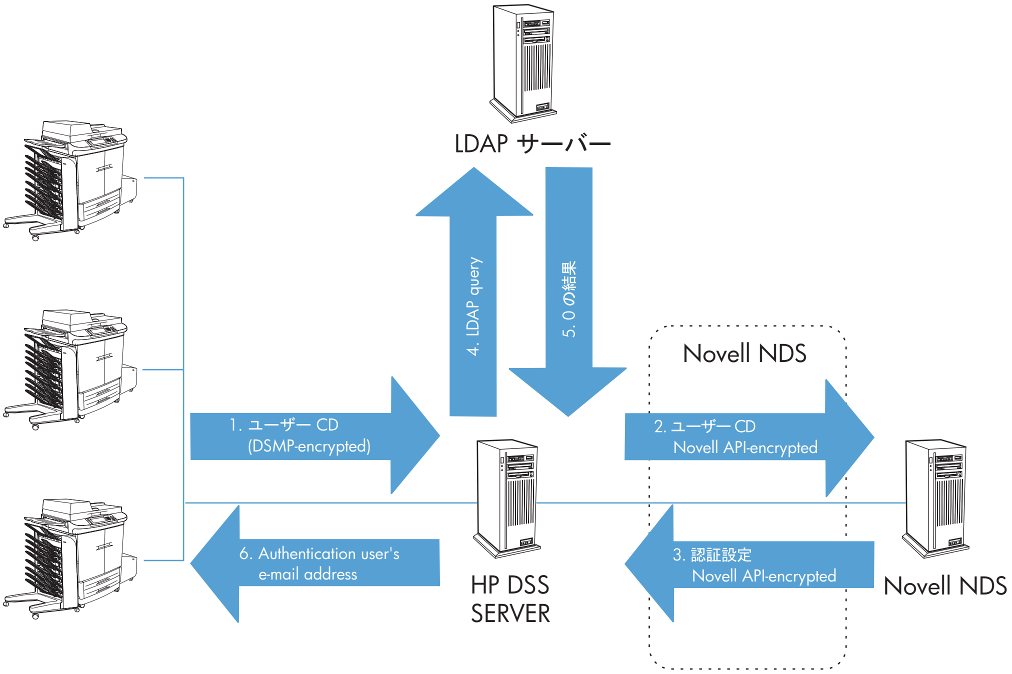
Only Novell NDS authentication is available. This method integrates with Novell Directory Services.

For the LDAP server bind method, Novell can use either Simple or Anonymous. See Table 3-12 Authentication bind methods on page 53.

As shown in Figure 3-19 Novell authentication on page 53, the following steps occur during Novell authentication:

1. The user types his or her username and password at the device and this information is securely transmitted to the Digital Sending Service (DSS).
2. DSS authenticates to the directory through the Novell client API to validate the user's credentials.
3. If the user's credentials are correct, the Novell Directory Server returns success.
4. Using the LDAP interface, DSS queries the LDAP directory (Novell Directory Server or Novell eDirectory Server) for the authenticated user's e-mail address.
5. The LDAP directory returns the authenticated user's e-mail address.
6. DSS inserts the authenticated user's e-mail address in the **From:** text box of the e-mail and prohibits the user from changing that field.

Figure 3-19 Novell authentication



Novell NDS configuration

When setting up Novell NDS authentication on the **Authentication** tab, the **Search Root** text box is typically left blank. Then, on the Device configuration **Authentication** tab, information is provided about the **Default NDS Tree** and **Default NDS Context**. When users log in at the device, the default NDS tree and context are shown on the login screen, and the user can edit them if necessary.

LDAP bind

This section contains the following topics:

- LDAP bind methods
- Search root

LDAP bind methods

Authentication can be performed by using Microsoft Windows, an LDAP server, or Novell NetWare. The authentication process also retrieves the user's e-mail address, so that the sender's address is automatically supplied in the **From:** text box when the e-mail is sent. Because the address cannot be changed or erased, users are prevented from sending e-mail using a fictitious return address.

E-mail retrieval is carried out by connecting to a local LDAP server using one of four possible bind methods. The following table outlines the types of LDAP bind methods that are used for DSS.

Table 3-12 **Authentication bind methods**

Bind method	Description	Can be used by
Anonymous	The selected LDAP server does not require user credentials to gain access to the LDAP database	Windows Novell

Table 3-12 Authentication bind methods (continued)

Bind method	Description	Can be used by
Simple	The selected LDAP server requires user credentials but does not support NTLM or SPNEGO. ● The password, if any, is sent non-encrypted across the network. ● The process requires a username and password.	Windows Novell LDAP
Simple over Secure Channel (SSL)	The selected LDAP server requires user credentials but does not support NTLM or SPNEGO. ● All data, including the username and password, is encrypted by using the Secure Sockets Layer (SSL). ● The LDAP server must be set up to support SSL.	Windows LDAP
Windows Negotiated (SPNEGO)	The selected LDAP server requires user credentials and supports SPNEGO and SSL. ● Use this selection negotiate the strongest authentication protocol that both the LDAP Server and the DSS server support. ● Kerberos 5 is supported for Active Directory authentication. ● NTLM is supported for Exchange 5.5 server authentication.	Windows

Search root

The search root is the distinguished name (DN) of the entry in the LDAP directory where the search is to begin. A DN is made up of '*attribute=value*' pairs separated by commas.

In Windows Active Directory Services, the search root normally takes the form: `CN=Users,DC=domain_name,DC=domain_suffix`. To limit the address search even more, for example, to a single organizational unit (OU), add components to the search root. For example, to search for users in the "accounting" OU, add "`OU=accounting`" to the search root (`OU=accounting,CN=Users,DC=domain_name,DC=domain_suffix`). By using these methods to configure the search root that is used in authentication, access to Digital Sending features can be limited to a subset of users in an organization. Several methods can be used to determine the search root.

NOTE: On some LDAP servers, the search root can remain blank. In this case, the root node is assumed to be the starting place.

How to

Use the Configuration Utility **Authentication** tab to control how users are authenticated when using the Digital Sending features.

Authentication consists of two interdependent parts. First, the device verifies the user's credentials by using the selected authentication method. Then, the device attempts to find the user's e-mail address in the database of an LDAP server by using settings that are specific to the LDAP server. If either step fails, the user is denied access to the Digital Sending features. These two steps utilize two distinct technologies (an authentication server and an LDAP server), except in the case of the LDAP server method, where both steps are accomplished by using the LDAP server. To enable authentication, start by selecting an option from the **Authentication** drop-down list. The following options are available.

- **None**
- **Microsoft Windows**
- **LDAP server**
- **Novell NDS** (if Novell client software is present)

LDAP Configuration

After selecting the authentication method on the **Authentication** tab, the LDAP configuration settings appear. The device uses LDAP to retrieve the e-mail address for the authenticated user. After the user has provided valid credentials, the software uses this information to match an attribute in the LDAP database. After the match is made and the user is identified in the database, the user's e-mail address is retrieved by using another database attribute. The LDAP settings include the following options.

- Options for configuring DSS to gain access to the LDAP server
- Options for searching the database to obtain user e-mail addresses

To configure the LDAP server

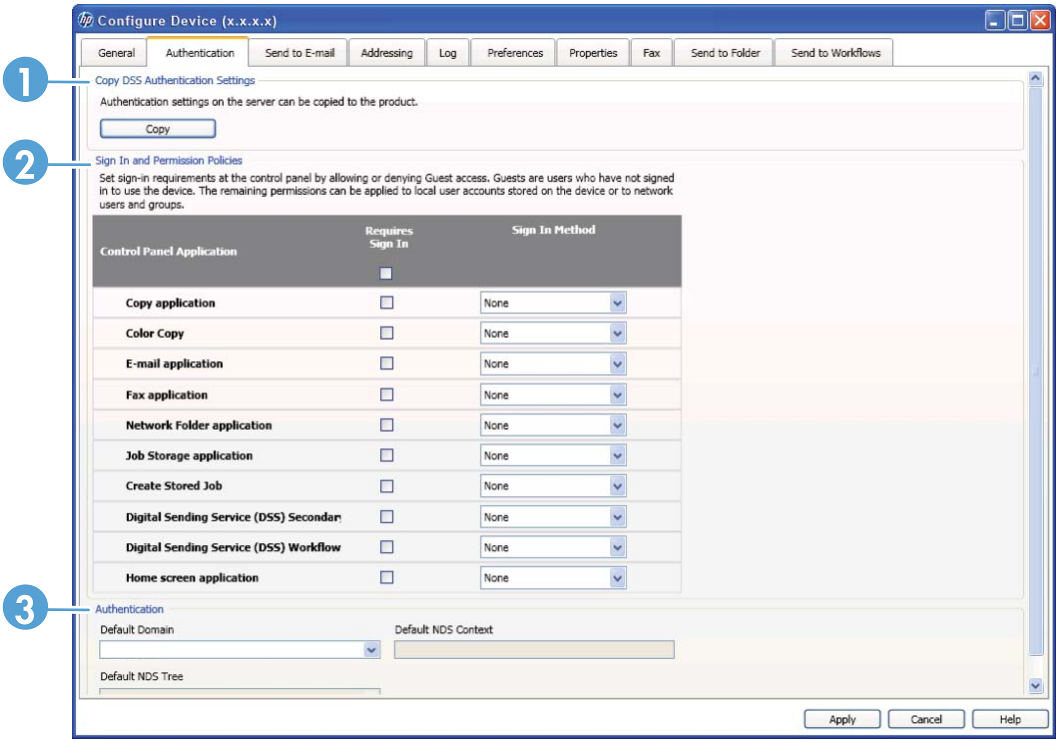
1. Click **Find Servers**. The program searches the network for LDAP servers, and might also prompt you for your network username and password, depending on the network configuration. Next, the **Select LDAP Server** dialog box appears, containing a list of LDAP servers on the network.

   NOTE: The **Find Servers** option for finding LDAP servers does not work in all environments. If the Find Servers process does not work, the TCP/IP address or hostname of the Domain Controller or Global Catalog Server should be typed in the **LDAP Server** text box. If the Global Catalog Server is used, the default LDAP port in the **Port** text box must be changed to 3268.

2. Select the LDAP server to use. The information about the selected server appears.
3. Click **OK** to accept the selected server. The server information is filled in on the **Authentication** tab.
4. Click **Find Settings**. The server settings appear in a dialog box. Click **Yes** to accept the settings.
5. Click **Test** on the **Authentication** tab to test the settings. In the **Test User Authentication** dialog box, type in the network logon credentials of a user in order to test whether the user can be authenticated and whether LDAP can successfully retrieve an e-mail address.

Configure the Device

Figure 3-20 **Authentication** subtab – Configure Devices tab set



Copy DSS Authentication Settings

Authentication settings on the server can be copied to the product.

Sign In and Permission Policies

Set sign-in requirements at the control panel by allowing or denying Guest access. Guests are users who have not signed in to use the device. The remaining permissions can be applied to local user accounts stored on the device or to network users and groups.

Control Panel Application	Requires Sign In □	Sign In Method
Copy application	□	None
Color Copy	□	None
E-mail application	□	None
Fax application	□	None
Network Folder application	□	None
Job Storage application	□	None
Create Stored Job	□	None
Digital Sending Service (DSS) Secondar	□	None
Digital Sending Service (DSS) Workflow	□	None
Home screen application	□	None

Authentication

Default Domain

Default NDS Context

Default NDS Tree

The **Authentication** subtab on the Configure Devices tab set contains the following elements.

Table 3-13 **Authentication subtab — Configure Devices tab set**

Callout	Component	Description
1	**Copy DSS Authentication Settings**	Click this button to copy saved settings on the server to the device.

Table 3-13 Authentication subtab — Configure Devices tab set (continued)

Callout	Component	Description
2	**Sign In and Permission Policies**	Set sign-in requirements at the control panel by allowing or denying guest access. Guests are users who have not signed in to use the device. The remaining permissions can be applied to local users account on the device or to network users and groups. Select the Requires Sign In **Requires Sign In** check box, if needed, and select the **Sign In Method** from the drop-down menu for each of the following options. ● **Copy application** ● **Color copy** ● **E-mail application** ● **Fax application** ● **Network folder application** ● **Job storage application** ● **Create stored job** ● **Digital Sending Service (DSS) Secondary** ● **Digital Sending Service (DSS) Workflow** ● **Home screen application**
3	**Authentication**	Add the following information to enable authentication. ● **Default domain** ● **Default NDS context** ● **Default NDS tree**

How to

The **Authentication** tab on the **Configure Devices** tab set allows you to configure user authentication for the selected device.

1. Open the Configuration Utility, and then click the **Device Configuration** tab.
2. Click to select the device you want to configure, and then click **Configure Device**. The **Configure Devices** tab set appears.
3. Click the **Authentication** tab.
4. Click to select the **Enable Authentication** check box. Authentication requires that the device user be authenticated before using the Digital Sending features of this device.
5. Any of the Authentication Agents can be selected for each feature from the corresponding drop down menu.

If you select anything other than **HP Digital Sending Service** as the Authentication Agent for any feature, you will need to set up the authentication in the Embedded Web Server or Web Jetadmin.

6. Depending on the Authentication Method you selected on the Authentication Settings page, you can provide certain default user credential information.

   - If you selected Microsoft Windows as the Authentication Method, select or enter a Default Domain that is presented to the device user during the authentication process. If no Default Domain is desired, this field may be left blank.

   - If you selected Novell NDS as the Authentication Method, select or enter a Default Tree and Default Context that is presented to the device user during the authentication process. If no Default Tree or Default Context is desired, these fields may be left blank.

   - If you selected LDAP as the Authentication Method and want to apply that to a feature, select HP Digital Sending Service as the Authentication Agent for that feature.

General Device configuration

This section contains information about some of the more general sub-tabs available on the **Configure Devices** tab set in the Configuration Utility. Use this tab set to configure individual Digital Sending-enabled devices. The following tabs are included in this section:

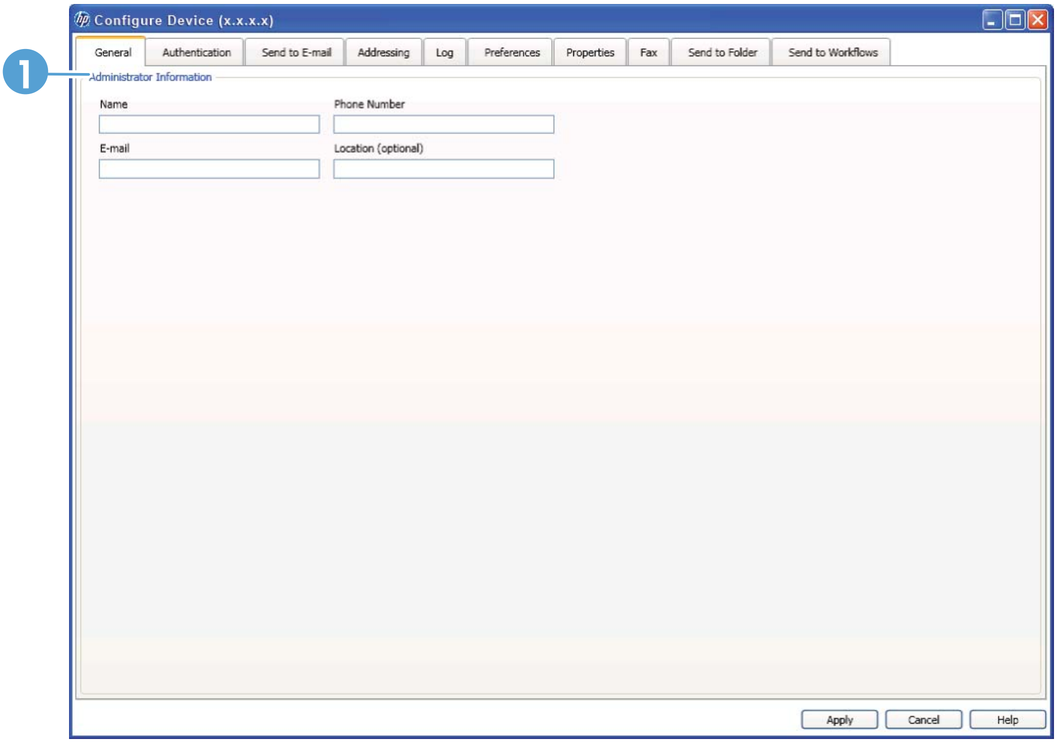
- General subtab
- Addressing subtab
- Log subtab
- Preferences subtab

For information about the remaining tabs, see the following topics:

- Table 3-13 Authentication subtab — Configure Devices tab set on page 56
- Table 3-21 Send to E-mail subtab — Configure Devices tab set on page 72
- **Fax subtab** — Configure the Device on page 80
- Table 3-29 Send to Workflows subtab – Configure Devices tab set on page 102

General subtab

Figure 3-21 **General** subtab in the Configure Devices tab set



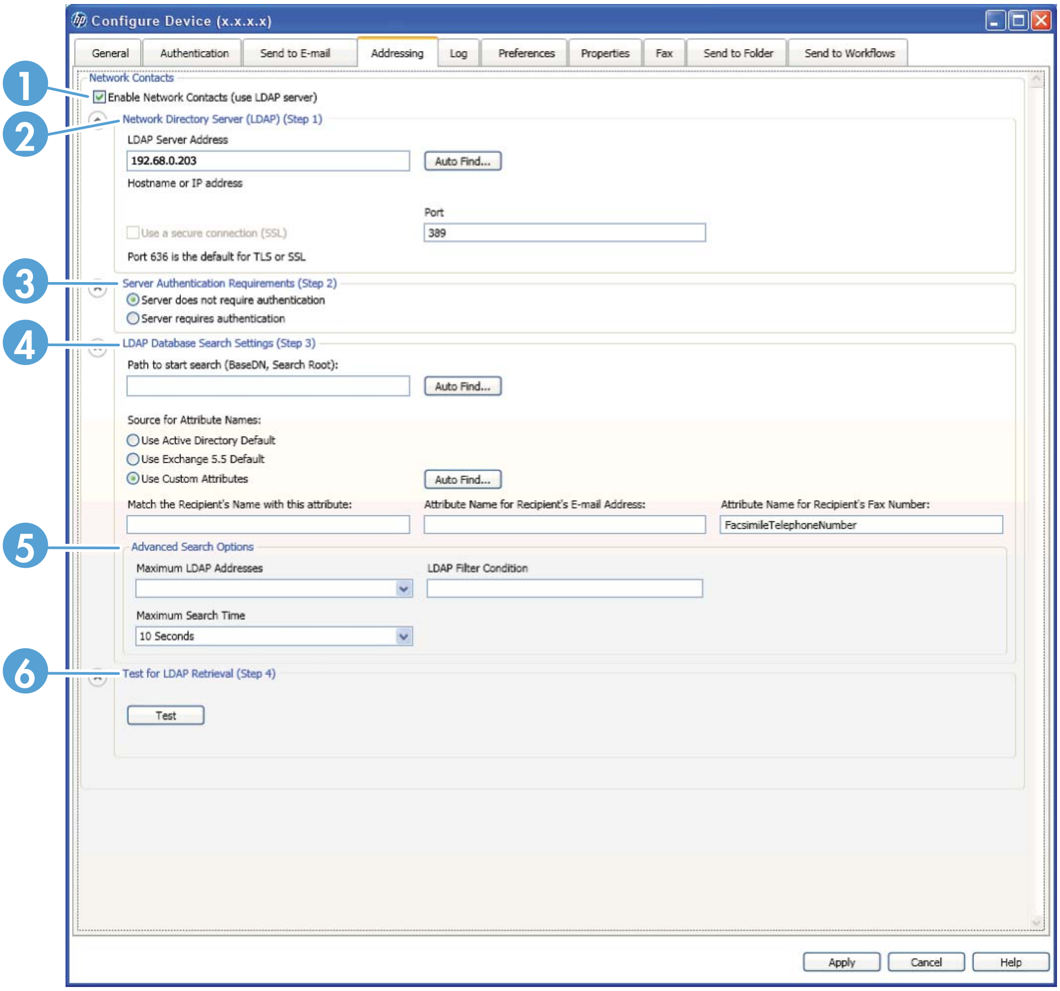
The **General** subtab in the Configure Devices tab set contains the following elements.

Table 3-14 **General subtab on the Configure Devices tab set**

Callout	Component	Description
1	**Administrator Information**	The General tab allows you to configure settings common to all the Digital Sending features supported on the device. The device displays the Administrator Contact Information when an error occurs that requires administrator intervention. ● In the Name edit box, enter the name of the person responsible for maintaining the Digital Sending features of this device. ● In the E-mail Address edit box, enter the e-mail address of the person responsible for maintaining the Digital Sending features of this device. ● In the Phone Number (optional) edit box, optionally enter the phone number of the person responsible for maintaining the Digital Sending features of this device. ● In the Location (optional) edit box, optionally enter the physical location of the person responsible for maintaining the Digital Sending features of this device.

Addressing subtab

Figure 3-22 **Addressing** subtab on the **Device Configuration** tab set



Configure Device (x.x.x.x)

General | Authentication | Send to E-mail | Addressing | Log | Preferences | Properties | Fax | Send to Folder | Send to Workflows

Network Contacts

☑ Enable Network Contacts (use LDAP server)

Network Directory Server (LDAP) (Step 1)

LDAP Server Address: 192.68.0.203 [Auto Find...]

Hostname or IP address

Port: 389

□ Use a secure connection (SSL)

Port 636 is the default for TLS or SSL

Server Authentication Requirements (Step 2)

● Server does not require authentication

○ Server requires authentication

LDAP Database Search Settings (Step 3)

Path to start search (BaseDN, Search Root): [Auto Find...]

Source for Attribute Names:

○ Use Active Directory Default

○ Use Exchange 5.5 Default

● Use Custom Attributes [Auto Find...]

Match the Recipient's Name with this attribute:

Attribute Name for Recipient's E-mail Address:

Attribute Name for Recipient's Fax Number: FacsimileTelephoneNumber

Advanced Search Options

Maximum LDAP Addresses

LDAP Filter Condition

Maximum Search Time: 10 Seconds

Test for LDAP Retrieval (Step 4)

[Test]

[Apply] [Cancel] [Help]

Table 3-15 **Addressing subtab — Configure Devices tab set**

Callout	Component	Description
1	**Enable Network Contacts (use LDAP server)**	Click to select **Enable Network Contacts (use LDAP server)** check box, and then follow the steps below.
2	**Network Directory Server (LDAP) (Step 1)**	Use the following controls to designate the LDAP server. ● Type the hostname or IP address in the **LDAP Server Address** text box or click **AutoFind** to have DSS find the LDAP server address. ● Click to select the **Use a secure connection (SSL)** check box. ● Tye the port number in the **Port** text box.
3	**Server Authentication Requirements (Step 2)**	Click to select one of the following options. ● **Server does not require authentication.** ● **Server requires authentication.**

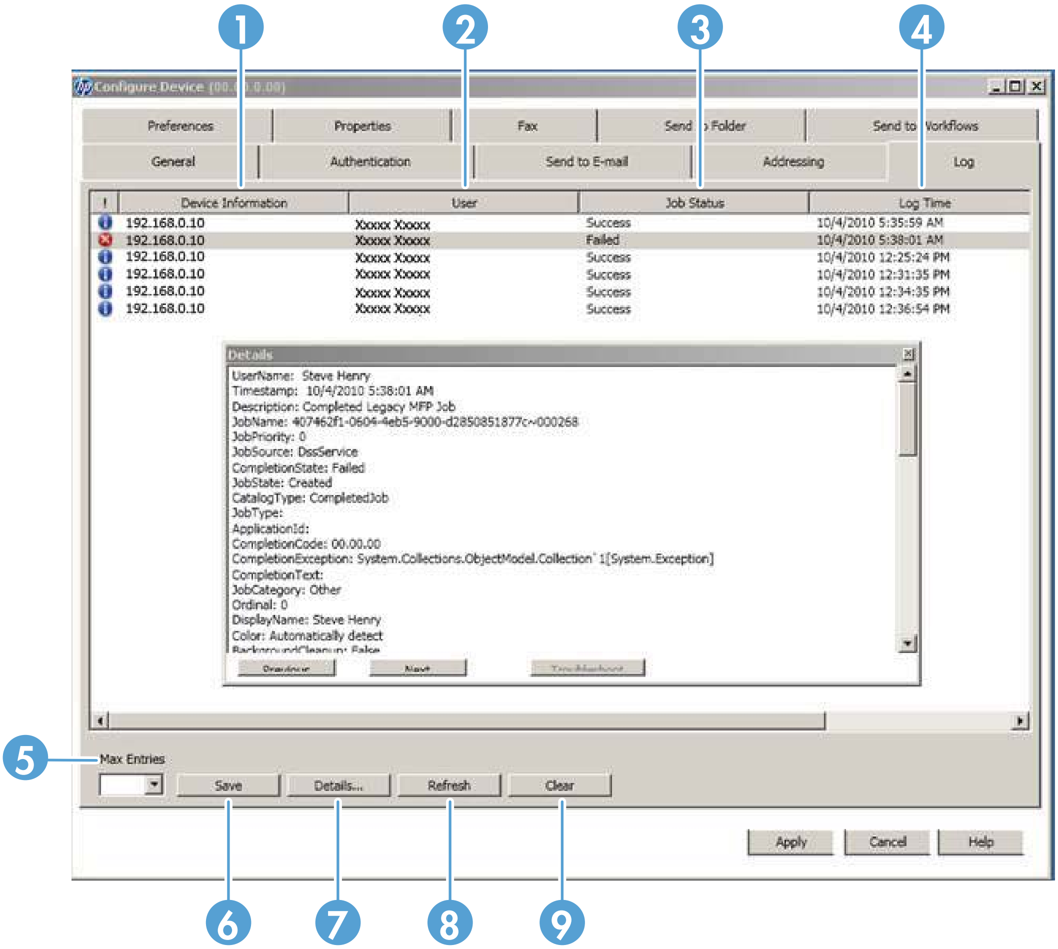
Table 3-15 Addressing subtab — Configure Devices tab set (continued)

Callout	Component	Description
4	**LDAP Database Search Settings (Step 3)**	Use the following controls to configure the search settings. ● Type in the **Path to Start Search (BaseDN, Search Root)** or click **Auto Find** to have DSS find the path. ● Select a **Source for Attribute Names** or click **Auto Find** to have DSS find the source. ● Type in the attribute to match the recipient's name, e-mail address, and fax number.
5	**Advanced Search Options**	Select the **Maximum LDAP Addresses** and the **Maximum Search Time** from the drop-down menus, and then type in the **LDAP Filter Condition** in the text box.
6	**Test for LDAP Retrieval (Step 4)**	Type in at least 3 characters to test the retrieval of address book entries using the LDAP setup, and then click **Test**.

Log subtab

The **Log** subtab in the **Configure Devices** tab set displays the Digital Sending activities carried out by the specific selected device.

Figure 3-23 **Log** subtab in the Configure Devices tab set



!	Device Information	User	Job Status	Log Time
●	192.168.0.10	Xxxxx Xxxxx	Success	10/4/2010 5:35:59 AM
☒	192.168.0.10	Xxxxx Xxxxx	Failed	10/4/2010 5:38:01 AM
●	192.168.0.10	Xxxxx Xxxxx	Success	10/4/2010 12:25:24 PM
●	192.168.0.10	Xxxxx Xxxxx	Success	10/4/2010 12:31:35 PM
●	192.168.0.10	Xxxxx Xxxxx	Success	10/4/2010 12:34:35 PM
●	192.168.0.10	Xxxxx Xxxxx	Success	10/4/2010 12:36:54 PM

Details

```
UserName:  Steve Henry
Timestamp:  10/4/2010 5:38:01 AM
Description: Completed Legacy MFP Job
JobName: 407462f1-0604-4eb5-9000-d2850851877c~000268
JobPriority: 0
JobSource: DssService
CompletionState: Failed
JobState: Created
CatalogType: CompletedJob
JobType:
ApplicationId:
CompletionCode: 00.00.00
CompletionException: System.Collections.ObjectModel.Collection`1[System.Exception]
CompletionText:
JobCategory: Other
Ordinal: 0
DisplayName: Steve Henry
Color: Automatically detect
BackgroundCleanup: False
```

The **Log** subtab contains the following controls.

Table 3-16 **Log subtab on the Configure Devices tab set**

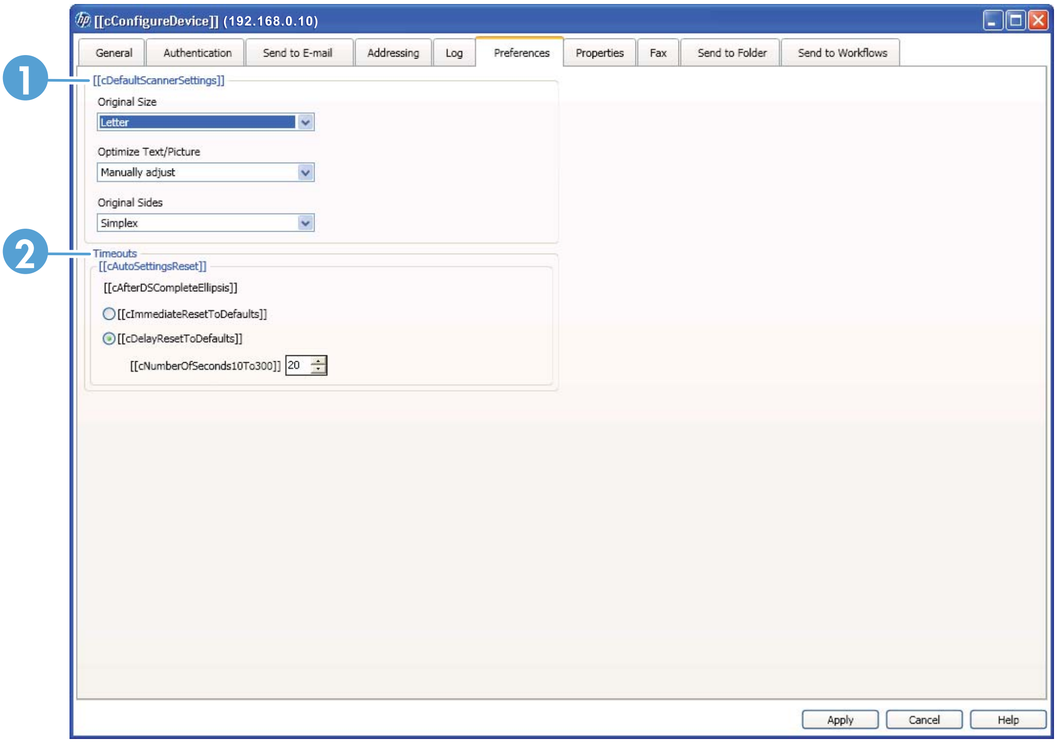
Callout	Component	Description
1	**Device Information**	This list shows the individual device on which the event occurred.
2	**User**	This column shows the user that was logged in to the device when the event occurred.
3	**Job Status**	Status indicator
4	**Log Time**	This column lists the time each event occurred.
5	**Max entries**	Use this drop-down list to select the number of entries that appear in this window. The options are **0**, **32**, **256**, **512**, and **1024**. NOTE: Selecting a maximum entries option greater than 32 can cause a delay when starting the Configuration Utility.
6	**Save**	Click this button to save the log file as a text file.

Table 3-16 Log subtab on the Configure Devices tab set (continued)

Callout	Component	Description
7	**Details**	Click this button to view additional details about the selected log event.
8	**Refresh**	Click this button to refresh log events.
9	**Clear**	Click this button to clear all of the log entries.

Preferences subtab

Figure 3-24 Preferences subtab in the Configure Devices tab set



[[cDefaultScannerSettings]]

Original Size: Letter

Optimize Text/Picture: Manually adjust

Original Sides: Simplex

Timeouts

[[cAutoSettingsReset]]

[[cAfterDSCompleteEllipsis]]

○ [[cImmediateResetToDefaults]]

● [[cDelayResetToDefaults]]

[[cNumberOfSeconds10To300]] 20

The **Preferences** subtab contains the following controls.

Table 3-17 Preferences subtab on the Configure Devices tab set

Callout	Component	Description
1	**Default Scanner Settings**	Use **Default Scanner Settings** to set the default settings for document size, expected page content, and duplexing: ● **Original Size** ● **Optimize Text/Picture** ● **Original Sides**
2	**Timeouts**	Use the controls in the **Time-outs** group box to control the delay before the device returns to its default digital-send settings. The following options are available to control the auto settings resets: ● **Immediate reset to defaults** ● **Delay reset to defaults** ● **Number of seconds** combo box – choose from 1 to 30 seconds.

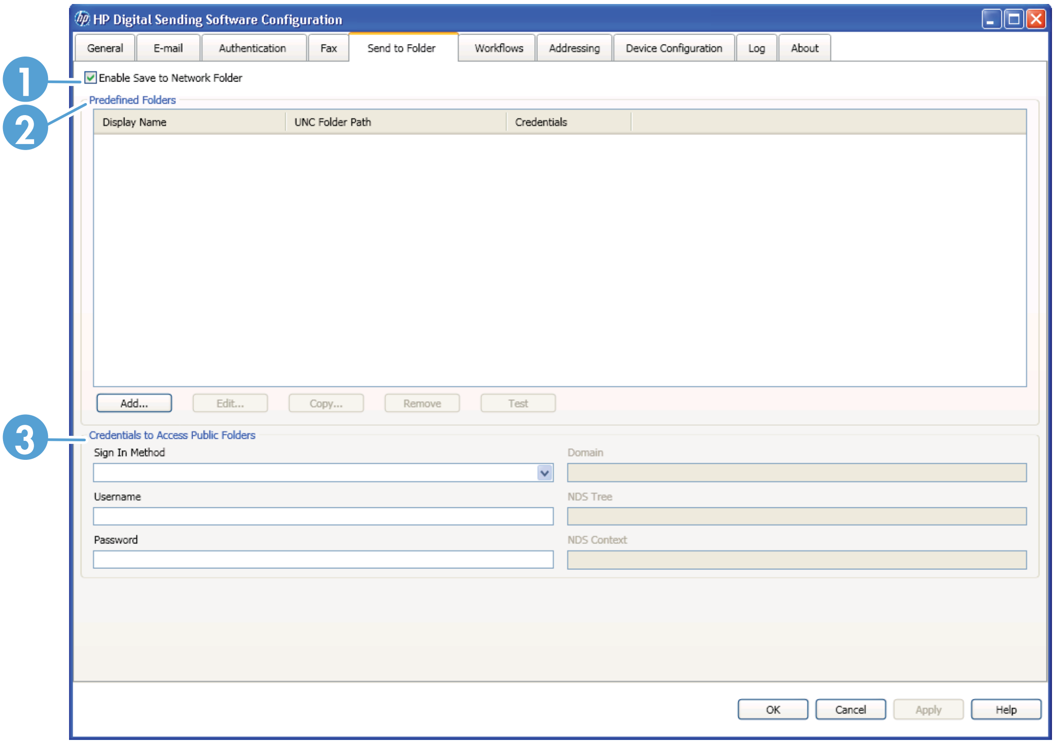
Send to Folder

The Digital Sending features of the device can send scanned documents directly to a network folder, transforming paper-based information into digital images that can be shared, stored, or edited.

Configure DSS

Use the Configuration Utility **Send to Folder** tab to set up the Send to Folder feature and select network folders to send to.

Figure 3-25 The **Send to Folder** tab



☑ Enable Save to Network Folder

Table 3-18 Send to Folder tab

Callout	Component	Description
1	**Enable Save to Network Folder**	Click to select the **Enable Save to Network Folder** check box.
2	**Predefined folders**	The **Predefined folders** list shows the folders as they are added to the DSS service. These folders are available at the device. The **Display name**, **UNC Folder path**, and **Credentials** for each folder are listed here. The following controls are also available for configuring the folders. ● **Add**. Click to add a new folder ● **Edit**. Click to edit settings for the selected folder. ● **Copy**. Click to copy a folder. ● **Remove**. Click to remove a folder from the list of available folders. ● **Test**. Click to test folder settings.
3	**Credentials to Access Public Folders**	Use the **Credentials to Access Public Folders** section to configure the credentials required for users to use Public Folders. ● **Sign-in Method**. Select the sign-in method from the drop-down menu. ● **Username**. Type in the username. ● **Password**. Type in the password. ● **Domain**. Type in the domain. ● **NDS tree**. Type in the NDS tree. ● **NDS content**. Type in the NDS content.

To configure the Send to Folder feature

1. On the DSS server, open the Configuration Utility and click the **Send to Folder** tab.

2. Select the **Enable Send to Folder** check box.

3. Click **Add…** to add a new folder. The **Predefined Folder** dialog box appears.

4. Type a name and description for the folder into the **Name** and **Description** text boxes. The name and description appear on the device control-panel interface.

5. Click to select one of the following folder types:

NOTE: Supported operating systems for folder destinations areCIFS/SMB-compliant file systems.

- **Save to a standard shared network folder.** Type a folder location in the **UNC Folder Path** field.

- **Save to a personal shared folder.** Type a folder name in the **Retrieve the device user's home folder using this attribute** field. The default is **HomeFolder**.

- **Create subfolder based upon user name.** If you want to restrict the user's read/write access, click to select the **Only allow access to user directory** check box.

6. Next, select the credentials that should be used to gain access to the folder in the **Authentication Settings** section. Click to select **Use credentials of user to connect after Sign-in at the control panel** to use the credentials of the user when logged into the device. Or click to select **Use common credentials** to use the credentials designated in the **Credentials to Access Public Folders** section on the **Send to Folder** tab. Click **Verify Access** to test authentication.

7. Click **OK** to save the settings. The new folder is added to the **Predefined Folders** list.

8. Repeat steps 1 through 7 to add more folders.

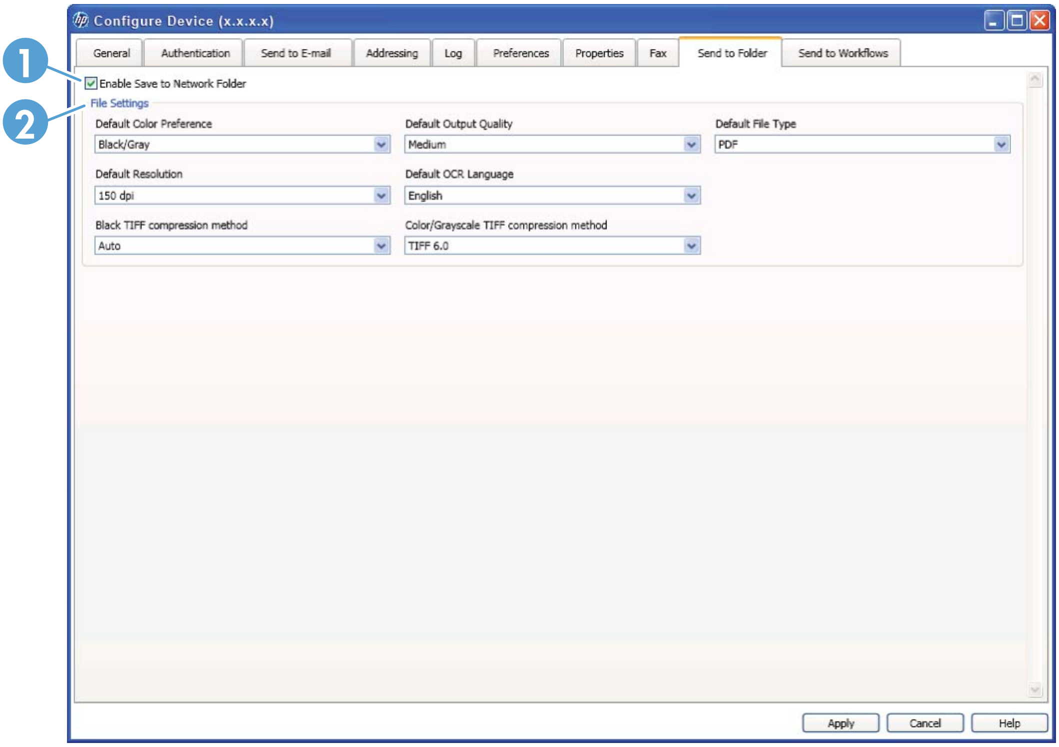
9. Type the public access credentials that are required to gain access to folders in the **Credentials to Access Public Folders** section of the **Send to Folder** tab. This information is required before the folder list can be saved.

10. Click **Apply** to save the new folders.

Configure the Device

Use the Configuration Utility **Send to Folder** subtab on the **Device Configuration** tab set to set up the Send to Folder feature on the device.

Figure 3-26 The **Send to Folder** tab on the **Device Configuration** tab set



☑ Enable Save to Network Folder

File Settings

Default Color Preference: Black/Gray

Default Output Quality: Medium

Default File Type: PDF

Default Resolution: 150 dpi

Default OCR Language: English

Black TIFF compression method: Auto

Color/Grayscale TIFF compression method: TIFF 6.0

Table 3-19 Send to Folder subtab on the Configure Devices tab set

Callout	Component	Description
1	**Enable Save to Network Folder**	Click to select the **Enable Save to Network Folder** check box.
2	**File Settings**	Use the controls in the **File Settings** section to configure how files are formatted in the predefined folders. ● **Default color preference** ● **Default resolution** ● **Black TIFF compression method** ● **Default output quality** ● **Default OCR language** ● **Color/Grayscale TIFF compression method** ● **Default file type**

Configure the device to use Send To Folder

1. Click to select the Enable Send to Folder check box on the Send To Folder subtab on the Configure Devices tab set.

2. To enable options for OCR processing the scanned documents, select an OCR file type from the Default File Type drop-down menu.

NOTE: On some devices, the user is allowed to override some of these settings.

Send to E-mail

This section contains the following topics:

- Configuration overview
- Configure DSS
- Configure the Device

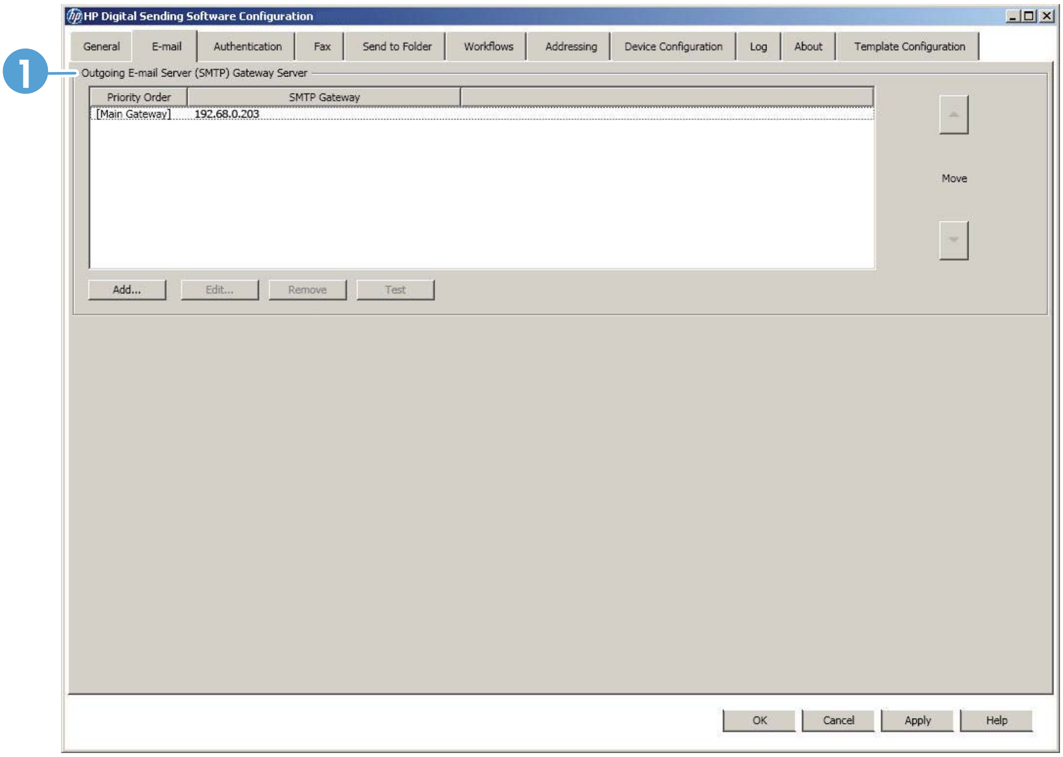
Configuration overview

The Digital Sending features of the device can send scanned documents directly to e-mail, transforming paper-based information into digital images that can be shared, stored, or edited. This saves the device user from having to first create and save an electronic copy of a hard-copy document and then send it via their mail application. This can now all be done in one step at the device.

Configure DSS

Use the **E-mail** tab of the Configuration Utility to configure and organize the SMTP e-mail servers that DSS uses to send e-mail messages.

Figure 3-27 **E-mail** tab



Priority Order	SMTP Gateway
[Main Gateway]	192.68.0.203

The **E-mail** tab contains the following elements.

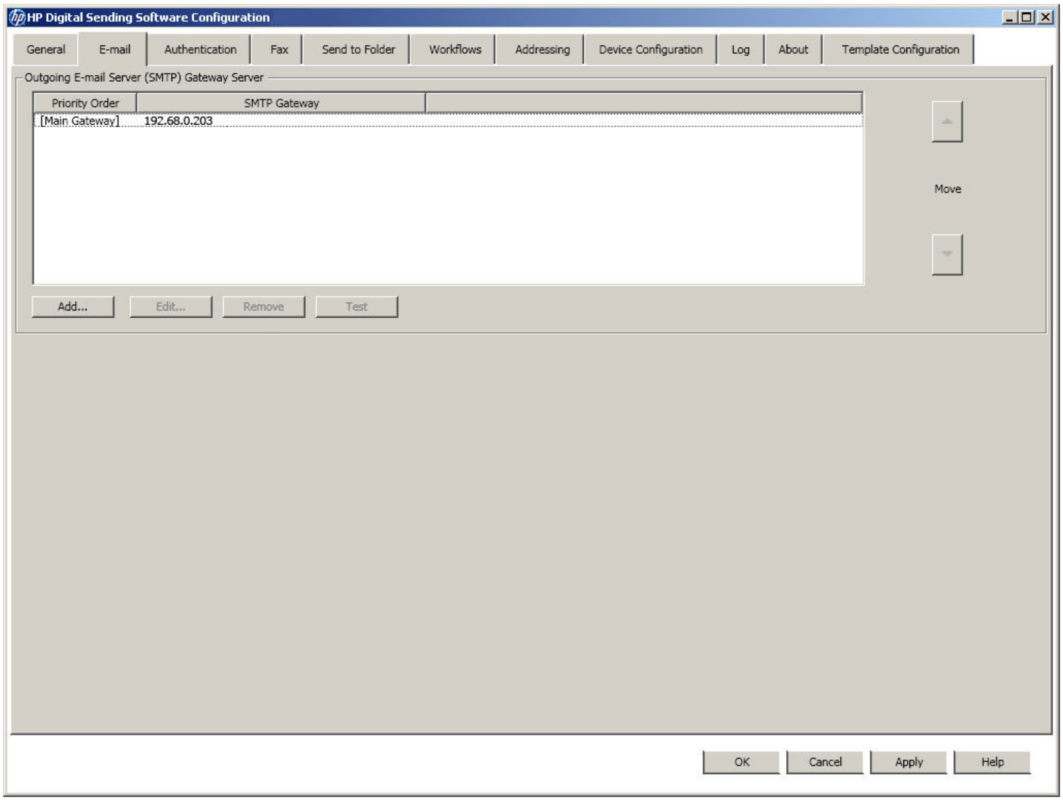
Table 3-20 **E-mail tab**

Callout	Component	Description
1	**Outgoing E-mail Server (SMTP) Gateway Server**	Use the **Outgoing E-mail Server (SMTP) Gateway Server** to manage e-mail servers for the DSS server. The e-mail servers are listed here by priority. Use the up and down arrows to move e-mail servers up or down in the list. The following controls are available for configuring the e-mail servers. ● **Add**. Click to add a new e-mail server. ● **Edit**. Click to edit the settings for an e-mail server. ● **Remove**. Click to remove an e-mail server from the list. ● **Test**. Click to test an e-mail server.

Configure the e-mail feature on DSS

1. On the DSS server, open the Configuration Utility and click the **E-mail** tab.

   Figure 3-28 The **E-mail** tab



Priority Order	SMTP Gateway
[Main Gateway]	192.68.0.203

2. Click **Add**. The **Add SMTP Gateway** dialog box appears.

3. Type the host name or TCP/IP address of the SMTP server in the **Server Name or Address** field.

   -or-

   Or click **Auto Find** to find all of the SMTP servers on the network. A list of SMTP servers appears. Select one or more SMTP servers and click **OK**.

4. Select any of the following additional SMTP gateway options:

   - **Enable SMTP SSL Protocol**

   - **Server Requires Authentication**

   - **Split e-mails if larger than (MB).** Use this control to set a maximum file size for the specified SMTP gateway. If an e-mail attachment exceeds the specified file size, the attachment is divided into two or more smaller attachments.

   - **Send a test e-mail to.** Type an e-mail address and then click **Send** to verify the presence of the SMTP gateway.

   NOTE: If the test fails, double-check the gateway address and then contact the network administrator to see if the SMTP server is functioning. See Verifying the SMTP gateway on page 70.

5. Click **OK** to add the server to the SMTP Gateway Server list.

6. If there is more than one SMTP server, use the **Move** arrow buttons to move SMTP servers to a different position on the list. DSS attempts to use the first SMTP server when processing an e-mail transmission. If the first server is unavailable for use, DSS attempts to use the next server on the list. DSS continues this process until it finds an available SMTP server.

SMTP gateways

The following servers can be used as SMTP gateways for DSS.

- **Exchange 5.5** – In Exchange 5.5, the Internet Mail Service (IMS) is responsible for the transfer of SMTP mail. To transfer the mail successfully, the IMS must be configured with a route to another gateway.

- **Exchange 2000** – Exchange 2000 (IIS5) does not directly support SMTP, but it is installed with IIS5, which does support the SMTP service. Exchange 2000 integrates with the Active Directory. It does not have its own data store. Similarly, IIS5 manages the SMTP service for Exchange 2000. Verify that the SMTP service in Windows 2000 is running by clicking **Administrative Tools** and then clicking **Services**.

- **Sendmail** – Sendmail runs as a UNIX® daemon (service). In many large networks, several Exchange servers are routed to a Sendmail gateway, which can serve as a firewall.

- **Qmail** – Qmail is very similar to Sendmail. Qmail does not accept a bare line-feed character in any SMTP content.

- **Lotus Domino (Notes)** – The SMTP message transfer agent (MTA) must be configured in Domino for it to work as an SMTP gateway.

Verifying the SMTP gateway

The following instructions explain how to open a telnet session and send an e-mail to verify communication with the SMTP gateway and also to verify that the SMTP gateway is correctly configured to route Internet e-mail. Use an e-mail account outside of the local network (for example, a Hotmail account) to verify communication outside of the network.

By verifying that e-mail can be sent, you can rule out any problem with the particular gateway that has been configured for HP DSS.

The default local echo setting for a telnet session is "off," which means that characters do not appear as the user types at the telnet prompt. To change the local echo setting to "on," open a command prompt window, type `telnet`, and then press Enter. The Telnet prompt appears. Type `set LOCAL_ECHO` to turn on the local echo setting.

Use the following procedure to verify the communication through the SMTP gateway.

NOTE: You cannot use the backspace key in a telnet session. Any characters that are typed are sent one character at a time to the SMTP gateway, backspaces included. Note also that SMTP is not case-sensitive. The local echo setting for the telnet session must be set to "on".

To verify the SMTP gateway

1. On a networked computer, open a command prompt, type `telnet <smtp gateway> 25`, and then press Enter (where <smtp gateway> is the fully qualified domain name or TCP/IP address of the SMTP gateway) to establish communication with the SMTP gateway on port 25.

2. Type `help` and then press Enter. Note the different SMTP options that are returned.

3. To start a conversation with the SMTP gateway, type `HELO <smtp gateway>` and then press Enter. Note that the response contains a list of attributes as well as the type of SMTP gateway that you are communicating with.

4. To send an e-mail, type `mail from: <your e-mail address>` and then press Enter.

5. Type `rcpt to: <your e-mail address>` and then press Enter.

6. Type `subject: This is a test message.`

7. Type `data:` and then press Enter.

8. Type what you want to go into the body of the message.

9. To send the message, type a period (".") and then press Enter.

10. Type `quit` and then press Enter to end the telnet session.

    The test e-mail message should appear in the sender's inbox in a few seconds.

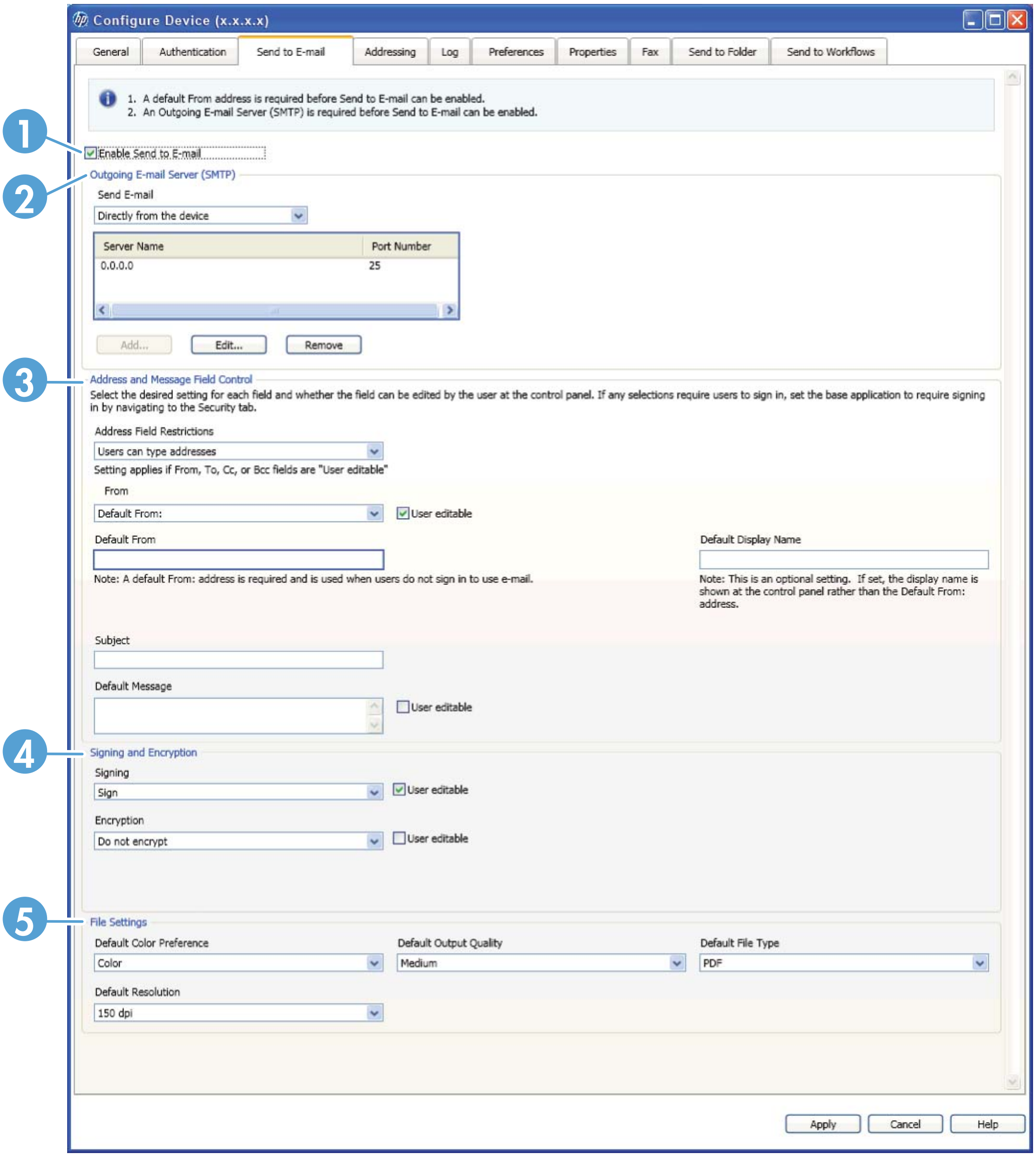
If the sender does not receive the e-mail message, the SMTP server might not be relaying e-mail. Contact the network administrator.

NOTE: Versions of DSS earlier than 4.3 do not support authenticated SMTP.

Configure the Device

The **Send to E-mail** subtab is shown in the following illustration. Use it to configure e-mail settings for individual Digital Sending devices.

Figure 3-29 **Send to E-mail** subtab in the Configure Devices tab set



1. A default From address is required before Send to E-mail can be enabled.
2. An Outgoing E-mail Server (SMTP) is required before Send to E-mail can be enabled.

☑ Enable Send to E-mail

Outgoing E-mail Server (SMTP)

Send E-mail: Directly from the device

Server Name	Port Number
0.0.0.0	25

Address and Message Field Control

Select the desired setting for each field and whether the field can be edited by the user at the control panel. If any selections require users to sign in, set the base application to require signing in by navigating to the Security tab.

Address Field Restrictions: Users can type addresses

Setting applies if From, To, Cc, or Bcc fields are "User editable"

From: Default From: ☑ User editable

Default From:

Note: A default From: address is required and is used when users do not sign in to use e-mail.

Default Display Name:

Note: This is an optional setting. If set, the display name is shown at the control panel rather than the Default From: address.

Subject:

Default Message: ☐ User editable

Signing and Encryption

Signing: Sign ☑ User editable

Encryption: Do not encrypt ☐ User editable

File Settings

Default Color Preference: Color

Default Output Quality: Medium

Default File Type: PDF

Default Resolution: 150 dpi

Table 3-21 **Send to E-mail subtab — Configure Devices tab set**

Callout	Component	Description
1	**Enable Send to E-mail**	Click to select **Enable Send to E-mail** check box.

Table 3-21 Send to E-mail subtab — Configure Devices tab set (continued)

Callout	Component	Description
2	**Outgoing E-mail Server**	Use the Outgoing E-mail (SMTP) Server section to manage the e-mail server for the device. Select how the device sends e-mail from the **Send E-mail** drop-down menu, then use the following controls to configure the e-mail server. ● **Add**. Click to add a new e-mail server. ● **Edit**. Click to edit the settings for an e-mail server. ● **Remove**. Click to remove an e-mail server from the list.
3	**Address and Message Field Control**	Select the desired setting for each field and whether the field can be edited by the user at the control panel. If any selections require users to sign in, set the base application to require signing in by navigating to the Security tab. Use the following controls: ● Select the **Address Field Restrictions** for the From, To, CC, and Bcc fields from the drop-down menu. ● Select the **From** field from the drop-down menu. Click to select the **User editable** check box if you want users to be able to edit the fields from the device. ● Type in a **Default From** address in the text box. A Default From address is required and is used when users do not sign in to use e-mail. ● Type in a **Default Display Name** in the text box. This is an optional setting. If set, the display name is shown at the control panel rather than the Default From address. ● Type in the **Subject** in the text box. ● Type in the **Default Message** in the text box, and then click to select the **User editable** check box if you want users to be able to edit the message at the device.
4	**Signing and Encryption**	● Select the **Signing** method from the drop-down menu, and then click to select the **User editable** check box if you want users to be able to change the signing method at the device. ● Select the **Encryption** method from the drop-down menu, and then click to select the **User editable** check box if you want users to be able to change the encryption method at the device.
5	**File settings**	Select the file settings from the **Default Color Preference**, **Default Output Quality**, **Default File Type**, and **Default Resolution** drop-down menus.

Select routing type

To enable Send to E-mail by using DSS

1. On the DSS server, open the Configuration Utility and select a device from the list on the **Device Configuration** tab.

2. Click **Configure Device...**, and then select the **Send to E-mail** tab.

3. Click to select the **Enable Send to E-mail** check box to enable Digital Sending by using e-mail.

4. Select **via the Digital Sending service** from the **Send E-mails** drop-down menu.

5. If authentication has *not* been enabled, type in an e-mail address in the **Default From** field. If the device user does not provide a **From** e-mail address, this is the return address that will be used. To prohibit users from changing the return e-mail address, click to de-select the **User Editable** check box.

   NOTE: If authentication is enabled, the **Default From** field is disabled. The e-mail address of the authenticated user is used for the **From** e-mail address.

6. Type the **Display Name**(optional). This name appears in the **From:** text box when the device user first initiates a send-to-e-mail operation. This text box can be used to provide instructions to the device user (with messages such as "Please type your e-mail address here").

   NOTE: If the display name is not provided, the default sender is the e-mail address that appears in the **From:** text box.

7. Type a default e-mail subject into the **Subject** text box, if one is needed. This is used if the device user does not type in their own e-mail subject.

8. Type in a message in the **Default Message** text box, if needed. The message appears in the body of all e-mail messages that are sent from the device. Click to select the **User Editable** check box to allow the user to edit the e-mail message.

9. Select **Signing** and **Encryption** options from the drop-down menus. Click to select the **User Editable** check box to allow the user to change these options.

10. Select the default **File Settings** from the drop-down menus.

11. Click **Apply** to save changes.

To enable send to e-mail directly from the Device

1. On the **Send to E-mail** tab, select the **Enable Send to E-mail** check box.

2. Select **directly from the device** from the **Send E-mails** drop-down menu.

3. In the **Device's SMTP Gateway** text box, type the SMTP server TCP/IP address or hostname. If you do not know the SMTP address, click **Find Gateway** to find it, and then click **Test** to verify that it is a valid SMTP server.

   NOTE: Some Device models only recognize TCP/IP addresses. In these cases, the hostname is converted to the equivalent TCP/IP address.

4. Use the **Maximum Attachment Size** drop-down list to control the size of the attachments that the e-mail server can accept. If an attachment exceeds the maximum size, it will be split between two or more e-mails.

5. If authentication has *not* been enabled, complete the **E-mail Address** in the **Default 'From' Address** group box. If the Device user does not provide a **From** e-mail address, this is the return address that will be used. To prohibit users from changing the return e-mail address, select the **Prevent device user from changing the Default 'From:' Address** check box. This prevents a user from impersonating someone else.

   NOTE: If authentication is enabled, the **Default 'From' Address** group box is disabled. The e-mail address of the authenticated user is used for the **From** e-mail address.

6. Type the **Display Name**(optional). This name appears in the **From:** text box when the Device user first initiates a send-to-e-mail operation. This text box can be used to provide instructions to the Device user (with messages such as "Please type your e-mail address here").

NOTE: If the display name is not provided, the default sender is the e-mail address that appears in the **From:** text box.

7. Type a default e-mail subject into the **Default Subject** text box. The default subject is used if the Device user does not provide an e-mail subject.

Send to Fax

This section contains the following topics:

- Configuration overview
- Configure DSS
- Configure the Device

Configuration overview

This section contains the following topics:

- Analog fax
- Third-party fax

Analog fax

DSS can be used to configure the settings for the embedded analog fax modem in a device. Use the **Send to Fax** tab in the Device Configuration interface to configure these settings on individual devices.

Third-party fax

HP DSS is compatible with the following third-party fax-software programs:

- ACCPCC
- Anny Way Office Edition
- Biscom FAXCOM
- Capteris RightFAX
- Castelle FaxPress
- Cycos-mrs Unified Communication
- Esker Pulse/Fax
- Esker LAN fax
- FACSys Fax Messaging Gateway
- Fenestrae Faxination
- GFI FAXmaker
- Gold-Fax
- Imecom Integral Fax

- INTERSCOPE FaxPlus/Open
- Interstar LightningFAX
- Object Fax
- Omtool
- RedRock FaxNow!
- RTEFax
- Tobit DvISE
- TOPCALL
- Zetafax

Configure DSS

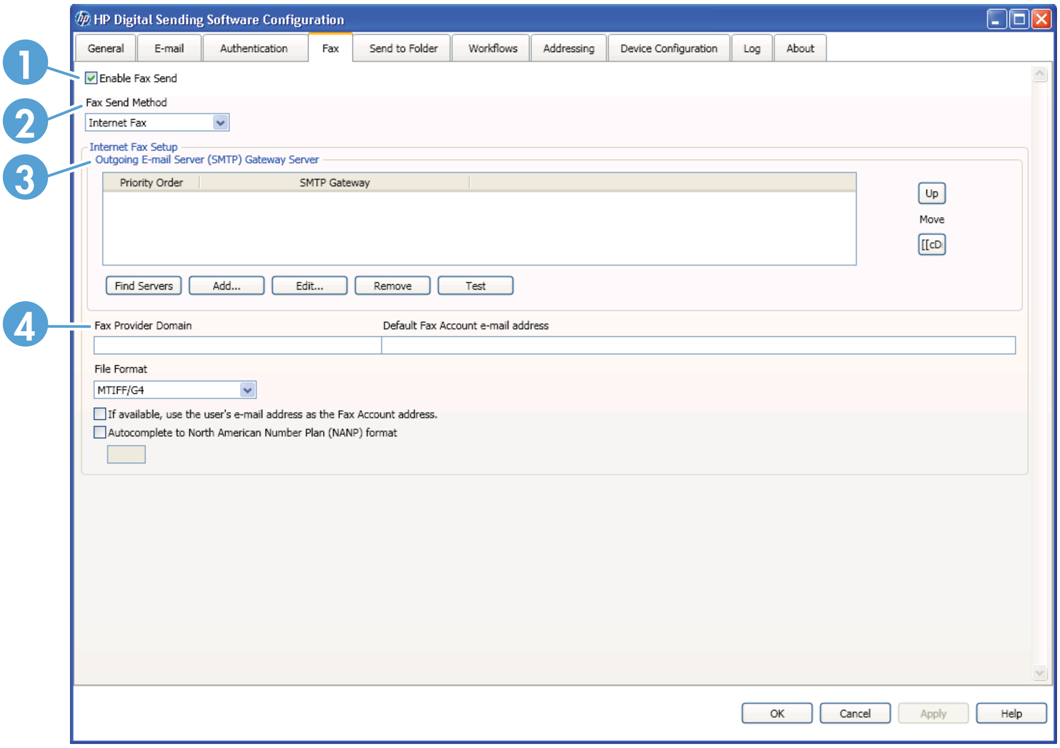
The Configuration Utility **Fax** tab controls all of the DSS fax settings. To configure the fax option, first select the fax delivery method from the **Fax Send Method** drop-down list. The following options are available:

- None
- LAN Fax
- Internet Fax

Depending on which method is selected, the applicable settings appear on the **Fax** tab. Fill in these settings to complete the fax configuration process.

Internet fax

Figure 3-30 **Fax** tab – Internet fax option



☑ Enable Fax Send

Fax Send Method: Internet Fax

File Format: MTIFF/G4

□ If available, use the user's e-mail address as the Fax Account address.

□ Autocomplete to North American Number Plan (NANP) format

The Internet fax option on the **Fax** tab contains the following elements.

Table 3-22 **Fax tab – Internet fax option**

Callout	Component	Description
1	**Enable Fax Send**	Click to select the **Enable Fax Send** check box.
2	**Fax Send Method**	Select the **Fax Send Method** from the drop-down menu.

Table 3-22 **Fax tab – Internet fax option (continued)**

Callout	Component	Description
3	**Outgoing E-mail Server (SMTP) Gateway Server**	Use the controls in the **Outgoing E-mail Server (SMTP) Gateway Server** section to configure and prioritize e-mail servers to use the Internet fax feature. The list shows the e-mail servers in order of priority. Use the up and down arrows to move servers on the list. The following options are also available. ● **Find servers**. Click this option to have the DSS software search the network for available e-mail servers. ● **Add**. Click to add a new e-mail server. ● **Edit**. Click to edit settings for an e-mail server. ● **Remove**. Click to remove a server from the list. ● **Test**. Click to test an e-mail server.
4	**Internet Fax setup**	Use the following controls to configure the Internet fax. ● **Fax provider domain** ● **Default fax account e-mail address** ● **File format** ● **If available, use the user's e-mail address as the Fax Account address** ● **Autocomplete to North American Number Plan (NANP) format**

To configure Internet fax

With an Internet fax service, faxes are sent in e-mail. When using DSS, the user specifies a fax number at the device, and then the software creates and sends the e-mail behind the scenes.

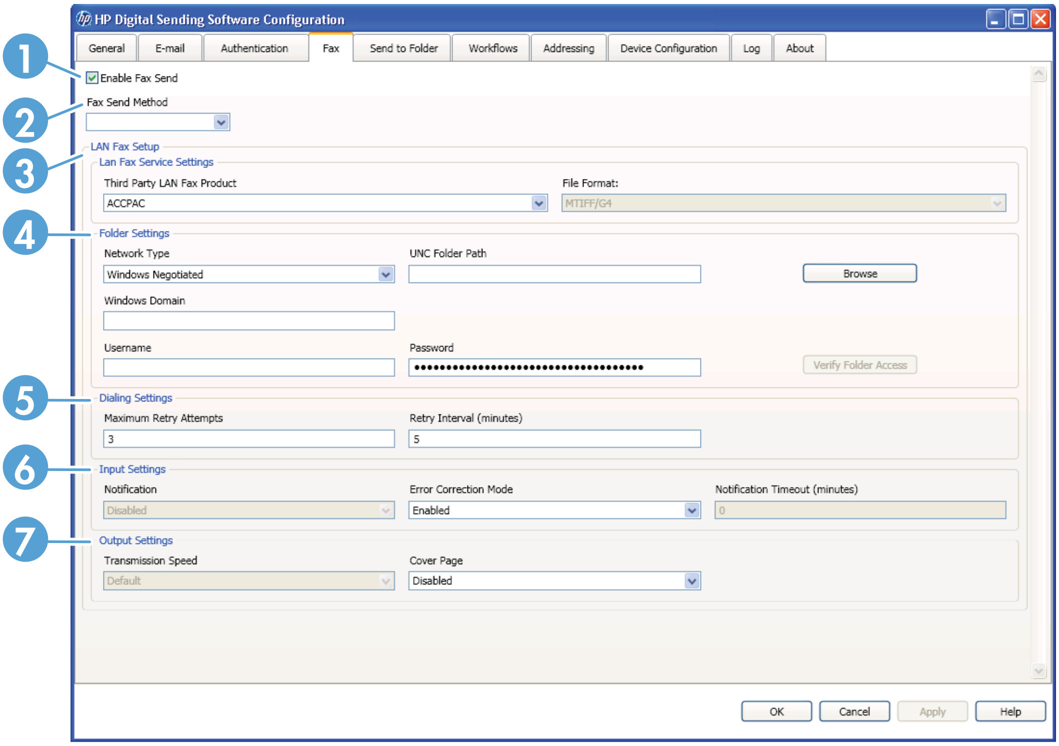
1. On the DSS server, open the Configuration Utility and click the **Fax** tab.
2. Select **Internet Fax** from the **Fax Send Method** drop-down list.
3. Set up the **Outgoing E-mail Server (SMTP) Gateway Server**. Click **Add** to add the server address manually, or click **Find Servers** to search for servers.
4. Type the domain name for the Internet fax provider into the **Fax Provider Domain** text box (for example, efax.com). DSS takes the phone number that is typed at the device and then uses this domain name to create the e-mail (for example, [phone number]@efax.com).
5. Type a valid e-mail address into the **Default Fax Account E-mail Address** text box. The fax service uses this e-mail address for billing purposes and for any returned or failed Internet fax e-mail.
6. Select the default **File Format** from the drop-down menu.
7. Select the check box to use the authenticated user's e-mail address as the return e-mail address. If the device user's e-mail address is not available, the **Default Fax Account E-mail Address** e-mail address is used.

NOTE: If you select this option, the user's e-mail address must be registered with the Internet fax service provider in order to fax successfully.

8. Click **Apply** to save the Internet fax settings.

LAN fax

Figure 3-31 **Fax** tab – LAN fax option



☑ Enable Fax Send

Fax Send Method:

LAN Fax Setup

Lan Fax Service Settings

Third Party LAN Fax Product: ACCPAC

File Format: MTIFF/G4

Folder Settings

Network Type: Windows Negotiated

UNC Folder Path:

Windows Domain:

Username:

Password: ••••••••••••••••••••••••••••••••••

Dialing Settings

Maximum Retry Attempts: 3

Retry Interval (minutes): 5

Input Settings

Notification: Disabled

Error Correction Mode: Enabled

Notification Timeout (minutes): 0

Output Settings

Transmission Speed: Default

Cover Page: Disabled

The LAN fax option on the **Fax** tab contains the following elements.

Table 3-23 **Fax tab — LAN fax**

Callout	Component	Description
1	**Enable Fax Send**	Click to select the **Enable Fax Send** check box.
2	**Fax Send Method**	Select the Fax Send Method from the drop-down menu.
3	**Lan Fax Service Settings**	Select the **Third-party LAN fax product** and the **File Format** from the drop-down menus.
4	**Folder Settings**	Select the **Network Type** from the drop-down menu, and then type in the **UNC Folder Path** or click **Browse** to navigate to the correct path. Type in the **Windows Domain**, **Username**, and **Password**, and then click **Verify Folder Access** to test the settings.
5	**Dialing Settings**	Configure the following dialing settings. ● **Maximum retry attempts** ● **Retry interval (minutes)**

Table 3-23 **Fax tab — LAN fax (continued)**

Callout	Component	Description
6	**Input Settings**	Configure the following input settings. ● **Notification** ● **Error correction mode** ● **Notification timeout (minutes)**
7	**Output Settings**	Configure the following output settings. ● **Transmission speed** ● **Cover page**

To configure LAN fax

Follow these instructions to set up faxing from the device by using the network LAN fax service.

1. On the DSS server, open the Configuration Utility and click the **Fax** tab.
2. Select **LAN fax** from the **Fax Send Method** drop-down list.
3. Select the LAN fax software product name from the **Third Party LAN Fax Product** drop-down menu.

   NOTE: If you are unsure about whether the product supports notification, select the **Generic LAN fax product without notification support** option from the drop-down menu.

4. Select the **Network Type** from the drop-down menu.
5. Type in the network path in the **UNC Folder Path**, or click **Browse** to select the network folder that the fax software uses.
6. Complete the **Windows Domain** section, if required. Then click **Verify Folder Access** to test the credentials and verify access to the folder.
7. Complete the **Dialing Settings** section by typing in the values you want to use in the **Maximum Retry Attempts** and **Retry Interval (minutes)** text boxes.
8. Complete the **Input Settings** section by selecting the values you want to use in the **Notification** and **Error Correction Mode** drop-down menus. Type in the value you want to use in the **Notification Timeout (minutes)** text box.
9. Complete the **Output Settings** section by selecting the values you want to use in the **Transmission Speed** and **Cover Page** drop-down menus.
10. Click **Apply** to save the LAN fax settings.

Configure the Device

Use the **Fax** tab on the **Configure Devices** tab set to configure the send-to-fax features for the selected device. Depending on the faxing method and settings, some of these options might not be available.

To configure the fax option, first select the fax delivery method from the **Fax Send Method** drop-down list. The following options are available:

- Internet Fax
- LAN Fax
- Analog Fax

Internet fax

Configuring the Internet Fax feature on the device

1. On the DSS server, open the Configuration Utility and select a device from the list on the **Device Configuration** tab.
2. Click **Configure Device...**, and then select the **Fax** tab.
3. Select the **Enable Fax Send** check box to enable the send-to-fax feature. If you want to enable the device to receive faxes, click **Enable Fax Receive**.
4. Configure the following settings for using Internet fax.
   - Click **Add** to select and configure the **Outgoing E-mail Server (SMTP)**.
   - Type in the information for the internet fax service in the **Internet Fax Provider Domain**, **Default Fax Account E-mail Address**, and **T37 Prefix** text boxes. Then select the file format from the **File Format** drop-down menu.
   - Click the **If available, use the signed-in user's e-mail address as the Fax Account address** check box to automatically use the user's e-mail address in the **From** field.
   - Click the **Auto configure to North American Numbering Plan (NANP) format using area code** check box to have numbers automatically conform to this numbering format.
5. Select the fax notification options in the **Notification** group box.
   - Make a selection from the **Condition on which to notify** drop-down menu. The options are **Never**, **Always**, or **for errors on any faxes**.
   - When notification is enabled, the **Method used to deliver notification** drop-down menu becomes available. If authentication is enabled, the two options are **Print** and **E-mail**. If authentication is not enabled, only the **Print** option is available, because DSS does not have access to the user's e-mail address.

   NOTE: Notification is not available for all fax delivery methods.
6. Select the quality of the fax by selecting a resolution from the **Resolution** drop-down list.

   NOTE: The user cannot change the resolution setting from the device control panel.
7. Optionally, provide a **Billing Code** that can be used for accounting.

   If the user needs to type or change the billing code, select the **Allow users to edit billing code** check box. In addition, type in the minimum number of characters to use for a billing code value in the **Minimum Length** text box.

LAN fax

Configuring the LAN fax feature on the device

1. On the DSS server, open the Configuration Utility and select a device from the list on the **Device Configuration** tab.

2. Click **Configure Device...**, and then select the **Fax** tab.

3. Select the **Enable Fax Send** check box to enable the send-to-fax feature. If you want to enable the device to receive faxes, click **Enable Fax Receive**.

4. Configure the following settings for using LAN fax.

   - Select the settings for the LAN fax service from the **Third Party LAN fax product** and the **File Format** drop-down menus.

   - Select the network type from the **Network Type** drop-down menu, and then type the folder path in the **UNC Folder Path** text box or click **Browse** to navigate to the folder on the network.

   - If you are using Windows credentials, type the domain name in the **Windows Domain** text box and the user name and password in the **Username** and **Password** text boxes. Click **Verify Folder Access** to test credentials.

5. Select the fax notification options in the **Notification** group box.

   - Make a selection from the **Condition on which to notify** drop-down menu. The options are **Never**, **Always**, or **for errors on any faxes**.

   - When notification is enabled, the **Method used to deliver notification** drop-down menu becomes available. If authentication is enabled, the two options are **Print** and **E-mail**. If authentication is not enabled, only the **Print** option is available, because DSS does not have access to the user's e-mail address.

   NOTE: Notification is not available for all fax delivery methods.

6. Select the quality of the fax by selecting a resolution from the **Resolution** drop-down list.

   NOTE: The user cannot change the resolution setting from the device control panel.

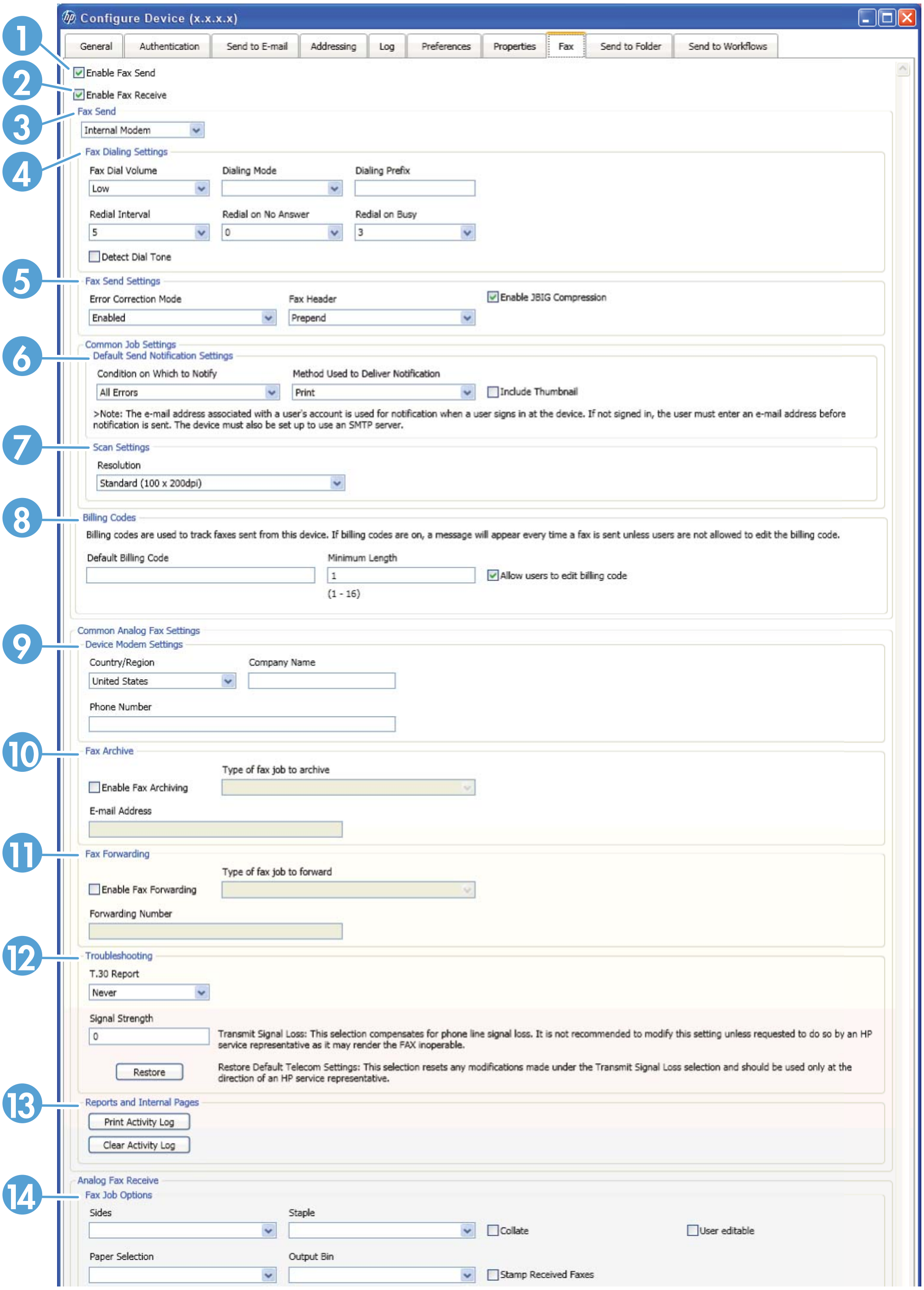
7. Optionally, provide a **Billing Code** that can be used for accounting.

   If the user needs to type or change the billing code, select the **Allow users to edit billing code** check box. In addition, type in the minimum number of characters to use for a billing code value in the **Minimum Length** text box.

Analog fax

If the Device has an analog fax modem, faxes can be sent by using this functionality rather than using DSS.

Figure 3-32 **Fax** subtab on the Configure Devices tab set – Analog fax option – 1 of 2



☑ Enable Fax Send

☑ Enable Fax Receive

Fax Send

Internal Modem

Fax Dialing Settings

Fax Dial Volume: Low

Dialing Mode:

Dialing Prefix:

Redial Interval: 5

Redial on No Answer: 0

Redial on Busy: 3

□ Detect Dial Tone

Fax Send Settings

Error Correction Mode: Enabled

Fax Header: Prepend

☑ Enable JBIG Compression

Common Job Settings

Default Send Notification Settings

Condition on Which to Notify: All Errors

Method Used to Deliver Notification: Print

□ Include Thumbnail

>Note: The e-mail address associated with a user's account is used for notification when a user signs in at the device. If not signed in, the user must enter an e-mail address before notification is sent. The device must also be set up to use an SMTP server.

Scan Settings

Resolution: Standard (100 x 200dpi)

Billing Codes

Billing codes are used to track faxes sent from this device. If billing codes are on, a message will appear every time a fax is sent unless users are not allowed to edit the billing code.

Default Billing Code:

Minimum Length: 1
(1 - 16)

☑ Allow users to edit billing code

Common Analog Fax Settings

Device Modem Settings

Country/Region: United States

Company Name:

Phone Number:

Fax Archive

□ Enable Fax Archiving

Type of fax job to archive:

E-mail Address:

Fax Forwarding

□ Enable Fax Forwarding

Type of fax job to forward:

Forwarding Number:

Troubleshooting

T.30 Report: Never

Signal Strength: 0

Transmit Signal Loss: This selection compensates for phone line signal loss. It is not recommended to modify this setting unless requested to do so by an HP service representative as it may render the FAX inoperable.

Restore

Restore Default Telecom Settings: This selection resets any modifications made under the Transmit Signal Loss selection and should be used only at the direction of an HP service representative.

Reports and Internal Pages

Print Activity Log

Clear Activity Log

Analog Fax Receive

Fax Job Options

Sides:

Staple:

□ Collate

□ User editable

Paper Selection:

Output Bin:

□ Stamp Received Faxes

Table 3-24 **Analog fax option — Fax subtab on the Configure Devices tab set — 1 of 2**

Callout	Component	Description
1	**Enable Fax Send**	Click to select this check box to enable the Fax Send for the device.
2	**Enable Fax Receive**	Click to select this check box to enable the Fax Receive for the device.
3	**Fax Send**	Select the Fax Send method from the drop-down menu.
4	**Fax Dialing Settings**	Use the following settings to configure fax dialing at the device. ● **Fax Dial Volume**. Select from the drop-down menu. ● **Dialing Mode**. Select from the drop-down menu. ● **Dialing Prefix**. Type the dialing prefix in the text box. ● **Redial Interval**. Select from the drop-down menu. ● **Redial on No Answer**. Select from the drop-down menu. ● **Redial on Busy**. Select from the drop-down menu. ● **Detect Dial Tone**. Click the check box to select.
5	**Fax Send Settings**	Use the following settings to configure fax send settings at the device. ● **Error Correction Mode**. Select from the drop-down menu. ● **Fax Header**. Select from the drop-down menu. ● **Enable JBIG Compression**. Click the check box to select.
6	**Default Send Notification Settings**	The **Default Send Notification Settings** are a part of the **Common Job Settings** group. The e-mail address associated with a user's account is used for notification when a user signs in at the device. If not signed, the user must enter an e-mail address before notification is sent. The device must also be set up to use an SMTP server. Use the following settings to configure the **Default Send Notification Settings** at the device. ● **Condition on Which to Notify**. Select from the drop-down menu. ● **Method Used to Deliver Notification**. Select from the drop-down menu. ● **Include Thumbnail**. Click the check box to select.
7	**Scan Settings**	The **Scan Settings** are a part of the **Common Job Settings** group. Click to select the **Resolution** from the drop-down menu.
8	**Billing Codes**	Billing codes are used to track faxes sent from the device. If billing codes are on, a message will appear every time a fax is sent unless users are not allowed to edit the billing code. ● **Default Billing Code**. Type into the text box. ● **Minimum Length**. Type into the text box. ● **Allow users to edit billing code**. Click the check box to select.

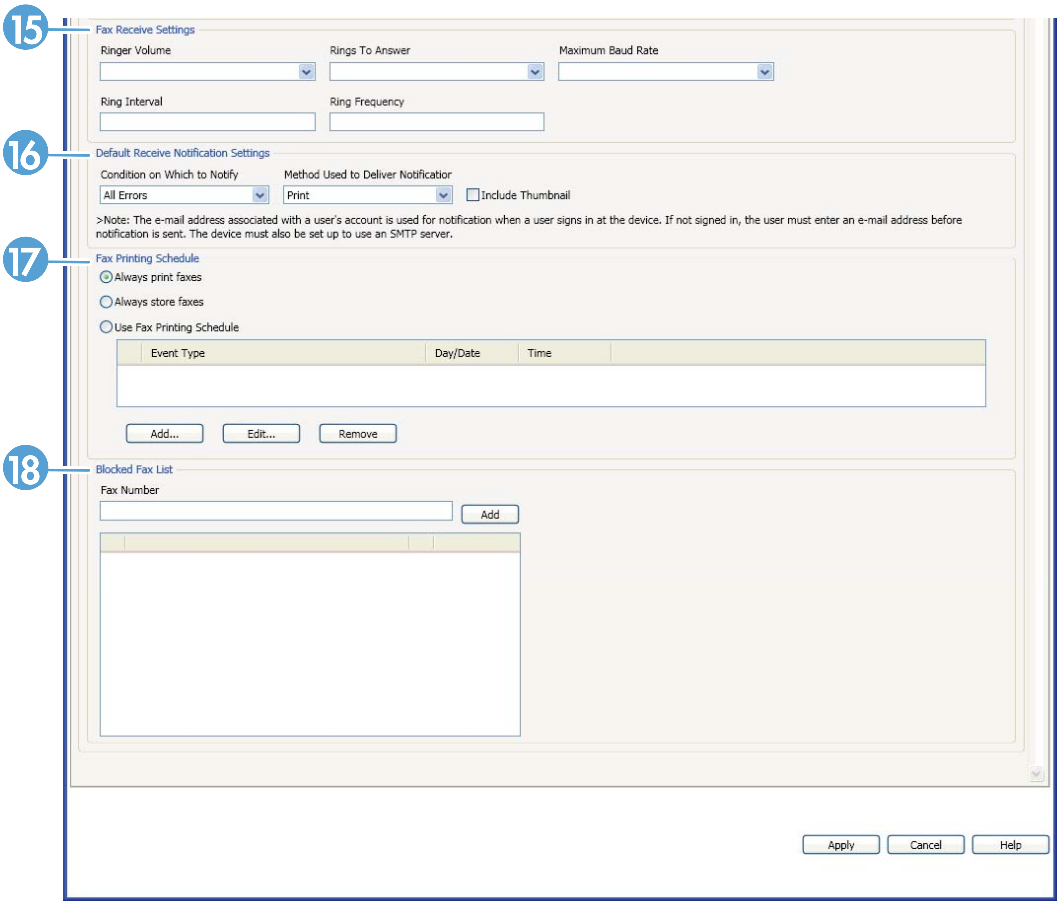
Table 3-24 **Analog fax option — Fax subtab on the Configure Devices tab set — 1 of 2 (continued)**

Callout	Component	Description
9	**Device Modem Settings**	The **Device Modem Settings** are a part of the **Common Analog Fax Settings** group. Use the following controls to configure the modem settings for the device. ● **Country/Region**. Select from the drop-down menu. ● **Company Name**. Type into the text box. ● **Phone Number**. Type into the text box.
10	**Fax Archive**	The **Fax Archive** is a part of the **Common Analog Fax Settings** group. Use the following controls to configure the fax archive for the device. ● **Enable Fax Archiving**. Click to select the check box. ● **Type of fax job to archive**. Select from the drop-down menu. ● **E-mail Address**. Type into the text box.
11	**Fax Forwarding**	The **Fax Forwarding** is a part of the **Common Analog Fax Settings** group. Use the following controls to configure fax forwarding for the device. ● **Enable Fax Forwarding**. Click to select the check box. ● **Type of fax job to forward**. Select from the drop-down menu. ● **Forwarding Number**. Type into the text box.
12	**Troubleshooting**	**Troubleshooting** is a part of the **Common Analog Fax Settings** group. Use the following controls to troubleshoot fax functions for the device. ● **T.30 Report**. Select from the drop-down menu. ● **Type of fax job to forward**. Type into the text box. This selection compensates for phone line signal loss. It is not recommended to modify this setting unless requested to do so by an HP service representative, as it might render the fax inoperable. ● **Restore**. Click this button to restore default telecom settings. This selection resets any modifications made under the Transmit Signal Loss selection and should be used only at the direction of an HP service representative..

Table 3-24 Analog fax option — Fax subtab on the Configure Devices tab set — 1 of 2 (continued)

Callout	Component	Description
13	**Reports and Internal Pages**	The **Reports and Internal Pages** are a part of the **Common Analog Fax Settings** group. Use the following controls to work with the fax reports for the device. ● **Print Activity Log**. Click to print the report. ● **Clear Activity Log**. Click to clear the activity log on the device.
14	**Fax Job Options**	The **Fax Job Options** are a part of the **Analog Fax Receive** settings. Use the following controls to configure the fax job options for the device. ● **Sides**. Select from the drop-down menu. ● **Staple**. Select from the drop-down menu. ● **Collate**. Click to select the check box. ● **User Editable**. Click to select the check box. ● **Paper Selection**. Select from the drop-down menu. ● **Output Bin**. Select from the drop-down menu. ● **Stamp Received Faxes**. Click to select the check box.

Figure 3-33 Fax subtab on the Configure Devices tab set – Analog fax option – 2 of 2



Condition on Which to Notify: All Errors

Method Used to Deliver Notificatior: Print

□ Include Thumbnail

>Note: The e-mail address associated with a user's account is used for notification when a user signs in at the device. If not signed in, the user must enter an e-mail address before notification is sent. The device must also be set up to use an SMTP server.

● Always print faxes

○ Always store faxes

○ Use Fax Printing Schedule

Table 3-25 Analog fax option — Fax subtab on the Configure Devices tab set — 2 of 2

Callout	Component	Description
15	**Fax Receive Settings**	The **Fax Receive Settings** are a part of the **Analog Fax Receive** settings. Use the following controls to configure the fax receive settings for the device. ● **Ringer Volume**. Select from the drop-down menu. ● **Rings to Answer**. Select from the drop-down menu. ● **Maximum Baud Rate**. Select from the drop-down menu. ● **Ring Interval**. Type into the text box. ● **Ring Frequency**. Type into the text box.
16	**Default Receive Notification Settings**	The **Default Receive Notification Settings** are a part of the **Analog Fax Receive** settings. The e-mail address associated with a user's account is used for notification when a user signs in at the device. If not signed in, the user must enter an e-mail address before notification is sent. The device must also be set up to use an SMTP server. Use the following controls to configure the default receive notification settings for the device. ● **Condition on Which to Notify**. Select from the drop-down menu. ● **Method Used to Deliver Notification**. Select from the drop-down menu. ● **Include Thumbnail**. Click to include a thumbnail.
17	**Fax Printing Schedule**	The **Fax Printing Schedule** is a part of the **Analog Fax Receive** settings. Use the following controls to configure the default receive notification settings for the device. ● **Always print faxes**. Click to select. ● **Always store faxes**. Click to select. ● **Use Fax Printing Schedule**. Click to select. ● **Add**. Click to add items to the fax printing schedule. ● **Edit**. Click to edit items in the fax printing schedule. ● **Remove**. Click to remove items from the fax printing schedule.
18	**Blocked Fax List**	The **Blocked Fax List** is a part of the **Analog Fax Receive** settings. Click **Add** to put a fax number on this list.

Configuring the analog fax feature on the device

1. On the DSS server, open the Configuration Utility and select a device from the list on the **Device Configuration** tab.
2. Click **Configure Device...**, and then select the **Fax** tab.
3. Select the **Enable Fax Send** check box to enable the send-to-fax feature. If you want to enable the device to receive faxes, click **Enable Fax Receive**.

4. Configure the following settings for using analog fax on the device.
   - Select the Fax Dialing settings from the **Fax Dialing Volume**, **Dialing Mode**, **Redial Interval**, **Redial on No Answer**, and **Redial on Busy** drop-down menus.
   - Type in the **Dialing Prefix** and click to select the **Detect Dial Tone** check box if needed.
   - Click to select the **Fax Number Confirmation**, **Enable PC Fax Send**, and **Enable JBIG Compression** check boxes if needed.
   - Select **Error Correction** and **Fax Header** settings from the drop-down menus.
5. Select the fax notification options in the **Notification** group box.
   - Make a selection from the **Condition on which to notify** drop-down menu. The options are **Never**, **Always**, or **for errors on any faxes**.
   - When notification is enabled, the **Method used to deliver notification** drop-down menu becomes available. If authentication is enabled, the two options are **Print** and **E-mail**. If authentication is not enabled, only the **Print** option is available, because DSS does not have access to the user's e-mail address.

   NOTE: Notification is not available for all fax delivery methods.
6. Select the quality of the fax by selecting a resolution from the **Resolution** drop-down list.

   NOTE: The user cannot change the resolution setting from the device control panel.
7. Optionally, provide a **Billing Code** that can be used for accounting.

   If the user needs to type or change the billing code, select the **Allow users to edit billing code** check box. In addition, type in the minimum number of characters to use for a billing code value in the **Minimum Length** text box.
8. Configure the Common Analog Fax settings:
   - Configure the **Device Modem** settings.
     - **Country/Region.** Type the country/region in which the device is located.
     - **Company Name.** Type the company name.
     - **Phone Number.** Type the phone number to which the device internal modem is connected.
   - Configure the **Fax Archive** settings.
     - **Enable Fax Archiving**
     - **Type of fax job to archive**
     - **E-mail address**
   - Configure the **Fax Forwarding** settings.
     - **Enable Fax Forwarding**
     - **Type of fax job to forward**
     - **Forwarding number**

- Configure the **Troubleshooting** settings.
  - **T30 Report**
  - **Signal Strength**
  - **Restore**
- Select the **Reports and Internal Pages** you want to receive.

Send to Workflows

This section contains the following topics:

- Configuration overview
- Configure DSS
- Configure the Device

Configuration overview

Workflows, in conjunction with third-party applications, gives device users the ability to send additional information along with the scanned document to a specified location (defined by the third-party application). Prompts can be used to query the device user for specific information. The third-party applications can then retrieve and decipher the information, performing the desired operation on the scanned image.

Metadata files

Metadata files related to Send to Workflow contain information about the user prompts and answers given at the device control panel.

Menu structure

Workflows are arranged in an hierarchical fashion. The top-most level is Groups. The default group is called the Common Device Group and cannot be deleted. Typically, the Common Device Group contains a superset of all workflows. Create additional groups only if you want different devices to present a different list of workflows to the device user. For example, if you wanted the device in the marketing department to present only marketing specific workflows, you might create a Marketing Workflow Group that contained a subset of the workflows (the marketing specific ones). You would then configure the marketing department's device to use the Marketing Workflow Group (see the Send to Workflow settings in Device Configuration). All your other devices would then be configured to use the Common Device Group.

The next Workflow level is Menus. Menus are the first level which are viewable at the device's control panel. Typically, Menus are used to categorize workflows. Within a Menu, you can create another Menu (up to 30 levels deep) or a Form. A Form is where you specify all the necessary details of a Workflow so that it can properly function with a third-party application. Within a Form, you can also specify Prompts, which allow for gathering data from the device user.

Configure DSS

The Configuration Utility **Workflows** tab can also be used to view workflow entries or to set up workflow processes.

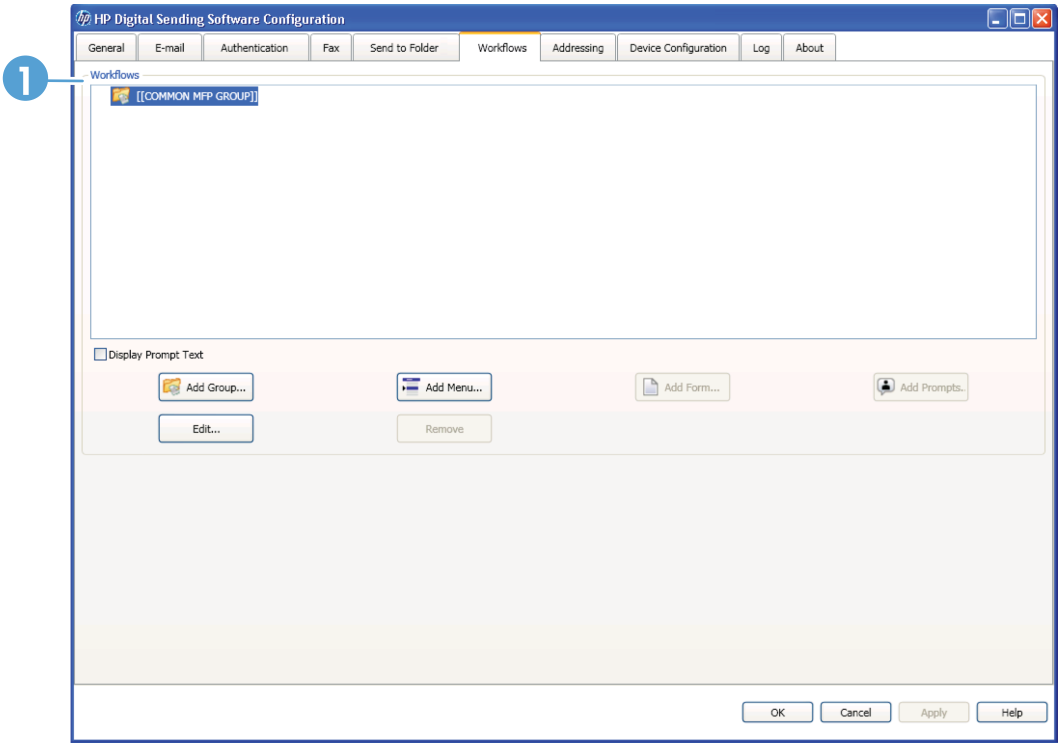


Figure 3-34 The **Workflows** tab

Table 3-26 **Workflows tab**

Callout	Component	Description
1	**Workflows**	This list shows the workflows that are set up and available for use to any of the devices connected to the DSS server. Click to select the **Display Prompt Text** check box to show the prompt text for each workflow in the list. The following controls are available to help configure workflows. ● **Add Group**. Click to add a group to a workflow. ● **Add Menu**. Click to add a menu to a workflow. ● **Add Form**. Click to add a form to a workflow. ● **Add Prompts**. Click to add prompts to a workflow. ● **Edit**. Click to change workflow settings. ● **Remove**. Click to remove a workflow from the list.

Configure the menu structure (groups, menus, and forms)

The workflow configuration process comprises three steps:

- Creating the workflow group, which defines which workflow menus and forms are available on the device control panel.
- Creating the workflow menu, which creates logical groups of workflow forms.
- Creating the workflow form, which accumulates information that the user specifies at the control panel before initiating a send-to-workflow job.

Groups

The first step in creating a workflow process is to create a workflow group.

NOTE: Rather than creating a new group, the default group, called the **Common Device Group** can also be used. This group cannot be deleted. Custom groups are optional and provide a way to associate different workflows with different devices or groups of devices.

1. On the DSS server, open the Configuration Utility and click the **Workflows** tab.
2. Click **Add Group**. The **Workflow Group** dialog box appears.
3. Type the name of the new group. The name must be unique.
4. Click to select either the **This group does not contain the devices mentioned below** option or the **This group contains workflows that will be used on LJ9065, LJ90** option.
5. Click **OK** to save the new group.

Menus

The second step in creating a workflow process is to create a workflow menu.

1. In the workflow tree, click a group to select it.
2. Click **Add Menu**. The **Workflow Menu** dialog box appears.
3. Type the name of the new menu. This name must be unique within the workflow group.
4. Click **OK** to save the new workflow menu.

Forms

The final step in creating a workflow process is to create a workflow form. Forms are destination-specific. Three destination types are available:

- Folder
- FTP site
- Printer

The following sections describe how to create a workflow form for each of these destination types.

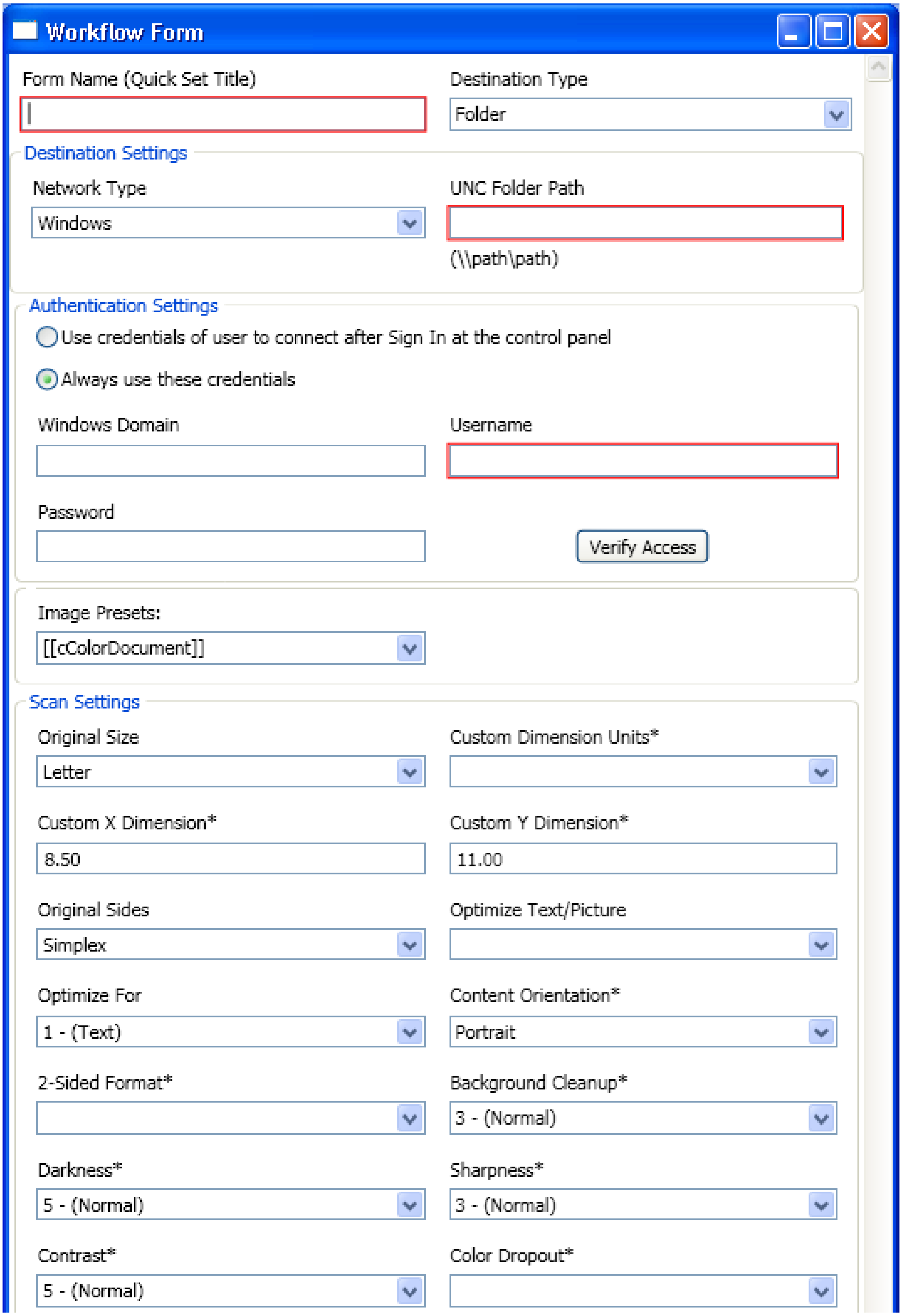
Folder

To create a workflow form for a folder destination

1. Click a workflow menu to select it.

2. Click **Add Form**. The **Workflow Form** dialog box appears.

Figure 3-35 **Workflow Form** dialog box



Workflow Form

Form Name (Quick Set Title):

Destination Type: Folder

Destination Settings

Network Type: Windows

UNC Folder Path:

(\\path\path)

Authentication Settings

○ Use credentials of user to connect after Sign In at the control panel

● Always use these credentials

Windows Domain:

Username:

Password:

Image Presets: [[cColorDocument]]

Scan Settings

Original Size: Letter

Custom Dimension Units*:

Custom X Dimension*: 8.50

Custom Y Dimension*: 11.00

Original Sides: Simplex

Optimize Text/Picture:

Optimize For: 1 - (Text)

Content Orientation*: Portrait

2-Sided Format*:

Background Cleanup*: 3 - (Normal)

Darkness*: 5 - (Normal)

Sharpness*: 3 - (Normal)

Contrast*: 5 - (Normal)

Color Dropout*:

3. In the **Form Name** text box, type a name for the new form. The name must be unique within the workflow menu.

4. Select **Folder** from the **Destination Type** drop-down list.

NOTE: Based on the option selected, the options on the **Workflow Form** dialog box change. This procedure applies to the **Folder** option. See the following sections for instructions for creating a workflow form for an FTP site or a printer.

5. Select the **Network Type** from the drop-down menu. Type the path for the destination folder in the **Folder Path** text box, or browse to select a path.

6. In the **Authentication Settings** section, click to select the **Use credentials of user to connect after Sign In at the control panel** option to have DSS use the credentials of the user that is logged into the device. Or click to select the **Always use these credentials** option and then type in the **Windows Domain**, **Username**, and **Password**. Click **Verify Access** to test the credentials.

7. Select a setting from the **Image Presets** drop-down menu, if needed.

8. Under **Scan Settings** and **File Settings**, select the settings for the scanned file. These should be the settings that the third-party software program that processes the file requires.

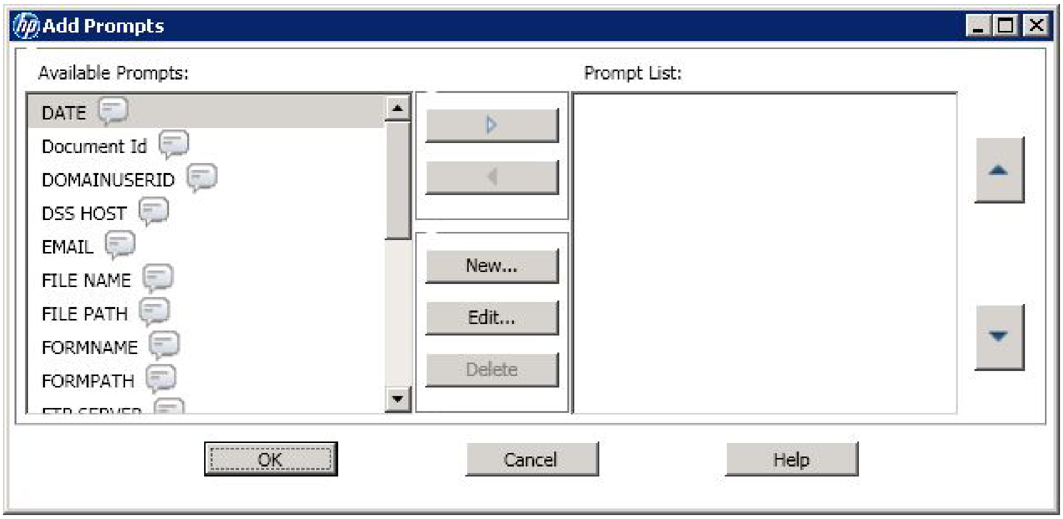
9. From the **Meta Data File Settings** section, select the file type for the metadata file from the **File Format** drop-down menu. The options are **None**, **HPS**, or **XML**. The metadata file contains the data that is collected by the workflow prompts. If no prompts are being created, select **None**.

10. In the **Prompts** area, define any appropriate prompts and expected responses for the user of the workflow form. The prompts appear on the device control panel. The responses to the prompts are saved in the metadata file, which is stored with the document image for use by the third-party workflow software program.

    Follow these instructions to add prompts.

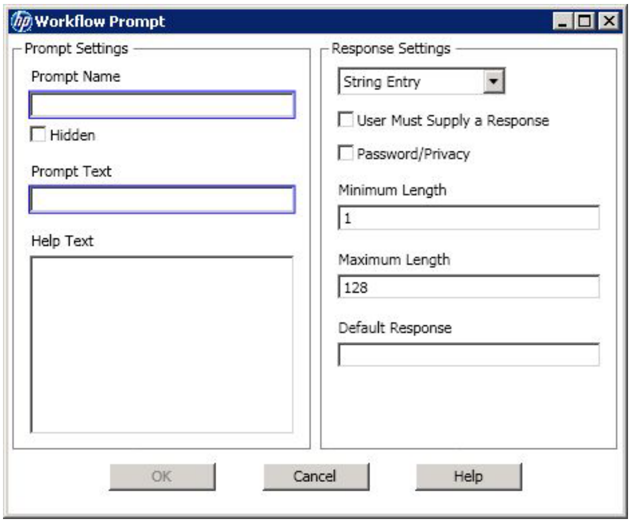
    a. Click **Add**. The **Add Prompts** dialog box appears.

Figure 3-36 **Add Prompts** dialog box



b. In the **Add Prompts** dialog box, click **New** to create a new prompt. This opens the **Workflow Prompt** dialog box.

Figure 3-37 **Workflow Prompt** dialog box



Response Settings: String Entry

Minimum Length: 1

Maximum Length: 128

c. Under **Prompt Settings** in the **Workflow Prompt** dialog box, type the **Prompt Name**. This name is used internally and is not visible to the user. It must be unique within the workflow form.

d. Select the **Hidden** check box if the prompt is not to be shown to the user. Hidden prompts are typically used to send specific unaltered information to the third-party programs in the metadata file. When the **Hidden** check box is selected, a **Prompt Information** text box appears. Type the information for the hidden prompt in the **Prompt Information** text box.

e. In the **Prompt Text** text box, type the text that you want to appear on the device control panel.

f. In the **Help Text** text box, type the help text for the prompt. The help text appears if the user touches HELP on the device control panel while the prompt is on the screen.

g. Select a setting from the **Response Settings** drop-down menu. The following table provides a description of each option.

Table 3-27 **Response format options**

Format	Attributes
String Entry	● The user can type any alphanumeric string. ● Minimum length: 1 ● Maximum length: 127
Number Entry	● The user is limited to typing numbers only. ● Decimal places range from 0 to 15 ● Minimum Value: 0 ● Maximum Value: 4294967295
Selection List	● The user can select from a list of options.

Table 3-27 **Response format options (continued)**

Format	Attributes
Date	● The user is limited to typing a date value in the form of HH/DD/YYYY. The date format cannot be changed.
Time	● The user is limited to typing a time value in the form of HH:MM:SS using the 24-hour clock. The time format cannot be changed.

h. Click to select the **User must supply a response** check box to require a response to the prompt.

i. Click to select the **Password Privacy** check box to have passwords displayed as asterisks.

j. As appropriate, type a default response in the **Default Response** text box. The program uses the default response if the user does not provide a response to the prompt. Specify the **Minimum Length** and **Maximum Length** by typing values in the text boxes.

k. Click **OK** to save the prompt settings. The new prompt is added to the **Prompts List** in the **Add Prompts** dialog box.

l. Repeat steps as needed to create more prompts.

m. After creating all of the required prompts, use the **Move** buttons to the right of the list to adjust the order of the prompts.

n. Click **OK** to accept the new set of prompts. The new prompts appear in the **Prompts** area of the **Workflow Form** dialog box.

11. Click **OK** to accept all of the settings on the **Workflow Form** dialog box. The new form appears in the workflows list on the **Workflows** tab.

NOTE: A workflow form can be edited at any time by selecting it and then clicking **Edit**.

12. Click **Apply** to save the new workflow settings.

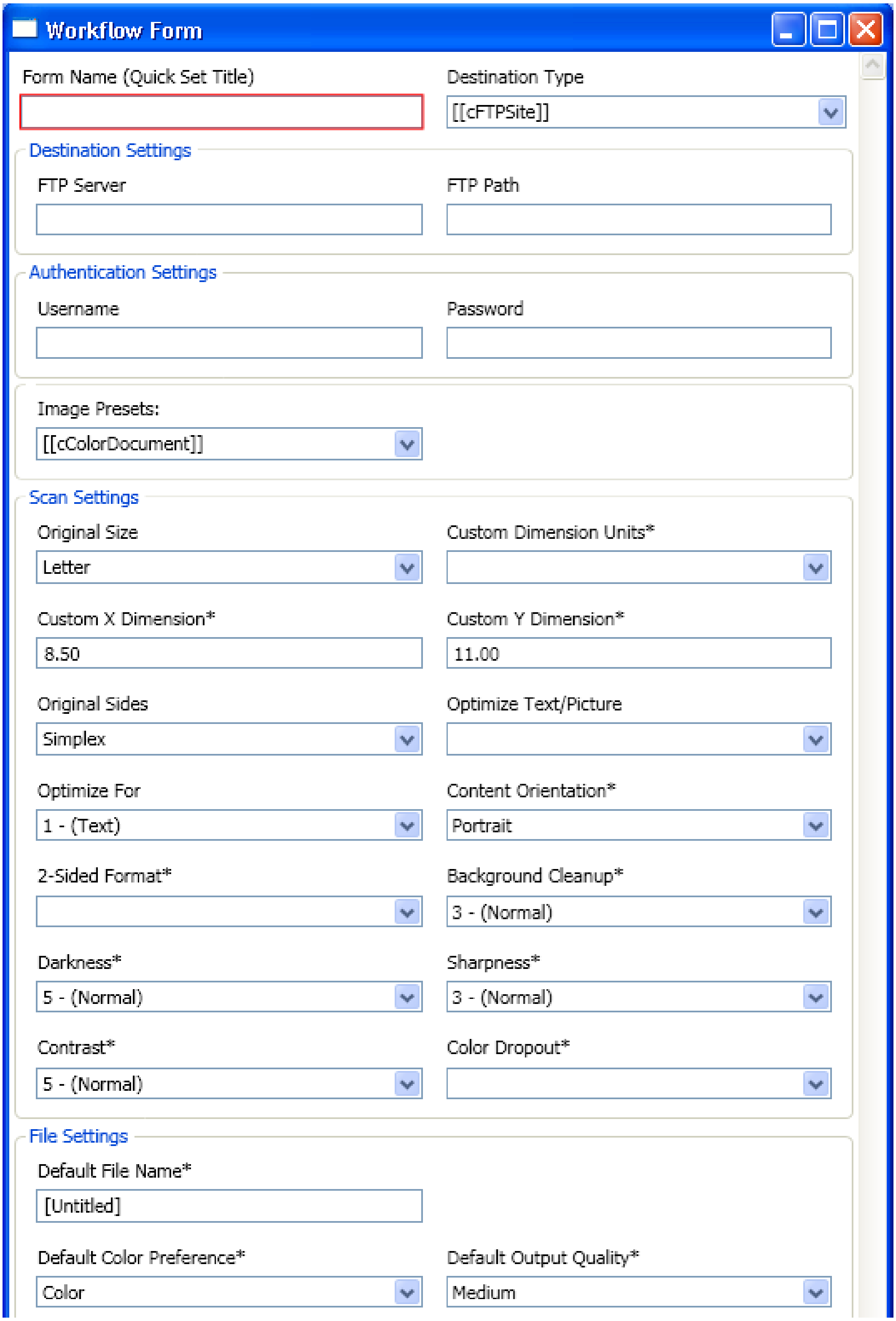
FTP site

The following instructions describe how to send a workflow document to an FTP site rather than a network folder.

1. Click a workflow menu to select it.

2. Click **Add Form**. The **Workflow Form** dialog box appears.

Figure 3-38 Workflow form for an FTP site



Workflow Form

Form Name (Quick Set Title):

Destination Type: [[cFTPSite]]

Destination Settings

FTP Server:

FTP Path:

Authentication Settings

Username:

Password:

Image Presets: [[cColorDocument]]

Scan Settings

Original Size: Letter

Custom Dimension Units*:

Custom X Dimension*: 8.50

Custom Y Dimension*: 11.00

Original Sides: Simplex

Optimize Text/Picture:

Optimize For: 1 - (Text)

Content Orientation*: Portrait

2-Sided Format*:

Background Cleanup*: 3 - (Normal)

Darkness*: 5 - (Normal)

Sharpness*: 3 - (Normal)

Contrast*: 5 - (Normal)

Color Dropout*:

File Settings

Default File Name*: [Untitled]

Default Color Preference*: Color

Default Output Quality*: Medium

3. In the **Form Name** text box, type a name for the new form. The name must be unique within the workflow menu.

4. Select **FTP Site** in the **Destination Type** drop-down menu.

5. In the **FTP Server** text box, type the host name or TCP/IP address of the FTP server.

6. In the **FTP Path** text box, type in the path to the directory on the FTP server that will hold the scanned documents.

7. In the **Authentication Settings** section, type in the username and password that are required for the FTP server.

8. Select a setting from the **Image Presets** drop-down menu, if needed.

9. Under **Scan Settings** and **File Settings**, select the settings for the scanned file. These should be the settings that the third-party software program that processes the file requires.

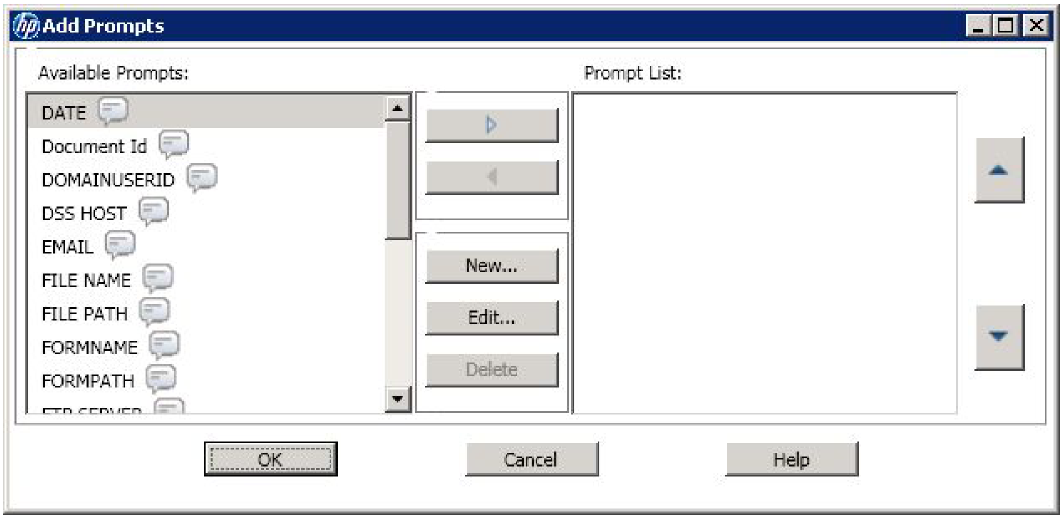
10. From the **Meta Data File Settings** section, select the file type for the metadata file from the **File Format** drop-down menu. The options are **None**, **HPS**, or **XML**. The metadata file contains the data that is collected by the workflow prompts. If no prompts are being created, select **None**.

11. In the **Prompts** area, define any appropriate prompts and expected responses for the user of the workflow form. The prompts appear on the device control panel. The responses to the prompts are saved in the metadata file, which is stored with the document image for use by the third-party workflow software program.

    Follow these instructions to add prompts.

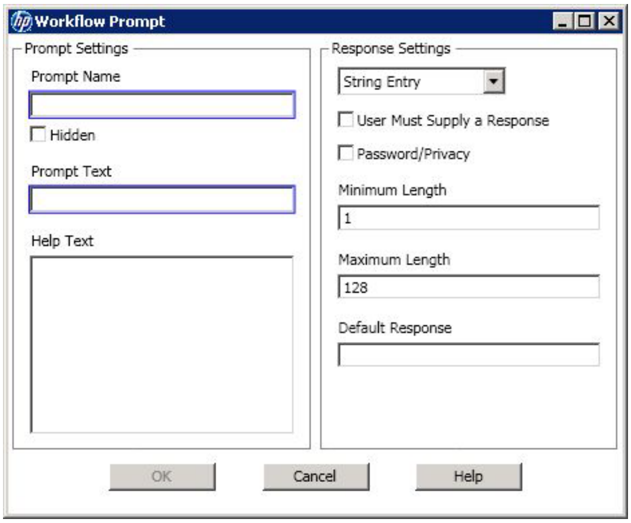
    a. Click **Add**. The **Add Prompts** dialog box appears.

Figure 3-39 **Add Prompts** dialog box



b. In the **Add Prompts** dialog box, click **New** to create a new prompt. This opens the **Workflow Prompt** dialog box.

Figure 3-40 Workflow Prompt dialog box



String Entry

☐ User Must Supply a Response

☐ Password/Privacy

Minimum Length: 1

Maximum Length: 128

Default Response

c. Under **Prompt Settings** in the **Workflow Prompt** dialog box, type the **Prompt Name**. This name is used internally and is not visible to the user. It must be unique within the workflow form.

d. Select the **Hidden** check box if the prompt is not to be shown to the user. Hidden prompts are typically used to send specific unaltered information to the third-party programs in the metadata file. When the **Hidden** check box is selected, a **Prompt Information** text box appears. Type the information for the hidden prompt in the **Prompt Information** text box.

e. In the **Prompt Text** text box, type the text that you want to appear on the device control panel.

f. In the **Help Text** text box, type the help text for the prompt. The help text appears if the user touches HELP on the device control panel while the prompt is on the screen.

g. Select a setting from the **Response Settings** drop-down menu. The following table provides a description of each option.

Table 3-28 Response format options

Format	Attributes
String Entry	● The user can type any alphanumeric string. ● Minimum length: 1 ● Maximum length: 127
Number Entry	● The user is limited to typing numbers only. ● Decimal places range from 0 to 15 ● Minimum Value: 0 ● Maximum Value: 4294967295
Selection List	● The user can select from a list of options.

Table 3-28 **Response format options (continued)**

Format	Attributes
Date	● The user is limited to typing a date value in the form of HH/DD/YYYY. The date format cannot be changed.
Time	● The user is limited to typing a time value in the form of HH:MM:SS using the 24-hour clock. The time format cannot be changed.

h. Click to select the **User must supply a response** check box to require a response to the prompt.

i. Click to select the **Password Privacy** check box to have passwords displayed as asterisks.

j. As appropriate, type a default response in the **Default Response** text box. The program uses the default response if the user does not provide a response to the prompt. Specify the **Minimum Length** and **Maximum Length** by typing values in the text boxes.

k. Click **OK** to save the prompt settings. The new prompt is added to the **Prompts List** in the **Add Prompts** dialog box.

l. Repeat steps as needed to create more prompts.

m. After creating all of the required prompts, use the **Move** buttons to the right of the list to adjust the order of the prompts.

n. Click **OK** to accept the new set of prompts. The new prompts appear in the **Prompts** area of the **Workflow Form** dialog box.

12. Click **OK** to accept all of the settings on the **Workflow Form** dialog box. The new form appears in the workflows list on the **Workflows** tab.

NOTE: A workflow form can be edited at any time by selecting it and then clicking **Edit**.

13. Click **Apply** to save the new workflow settings.

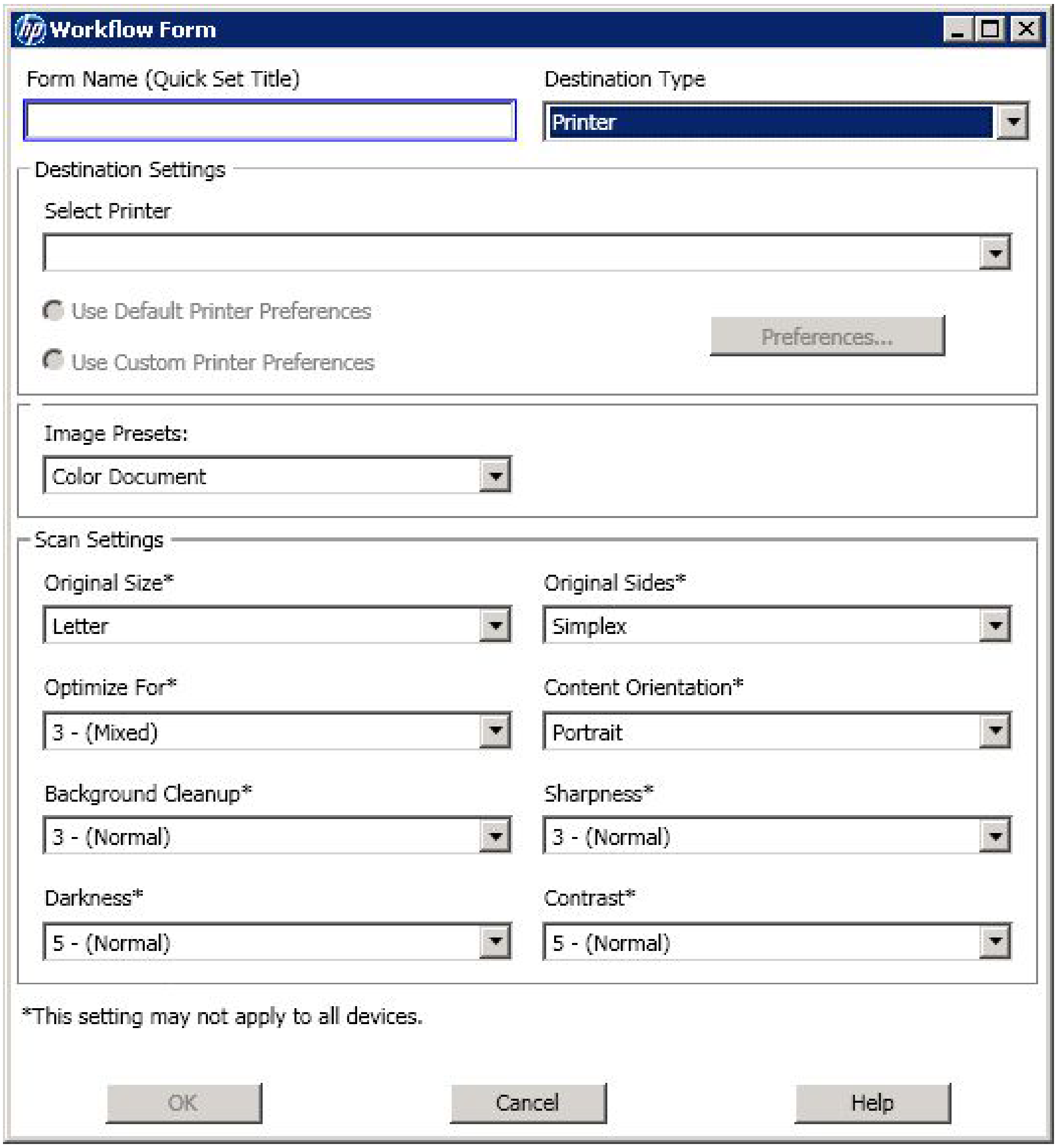
Printer

The following instructions describe how a workflow form can also be used to send a scanned document to a network printer to be printed.

1. Click a workflow menu to select it.

2. Click **Add Form**. The **Workflow Form** dialog box appears.

Figure 3-41 Workflow form for a printer



Form Name (Quick Set Title):

Destination Type: Printer

Destination Settings

Select Printer:

○ Use Default Printer Preferences

○ Use Custom Printer Preferences

Image Presets: Color Document

Scan Settings

Original Size*: Letter

Original Sides*: Simplex

Optimize For*: 3 - (Mixed)

Content Orientation*: Portrait

Background Cleanup*: 3 - (Normal)

Sharpness*: 3 - (Normal)

Darkness*: 5 - (Normal)

Contrast*: 5 - (Normal)

*This setting may not apply to all devices.

3. In the **Form Name** text box, type a name for the new form. The name must be unique within the workflow menu.

4. Select **Printer** in the **Destination Type** drop-down menu.

5. In the **Select Printer** drop-down menu, select a printer from the list of available network printers.

6. Select one of the option buttons to use the default or custom printer preferences. If custom printer preferences are selected, click **Preferences** to set them up.

NOTE: The device user cannot change any of these print settings from the device control panel.

7. Select a setting from the **Image Presets** drop-down menu, if needed. Options include **Color Document** and **Photo**.

8. Under **Scan Settings**, select the settings for the scanned file. These should be the settings that the third-party software program that processes the file requires.

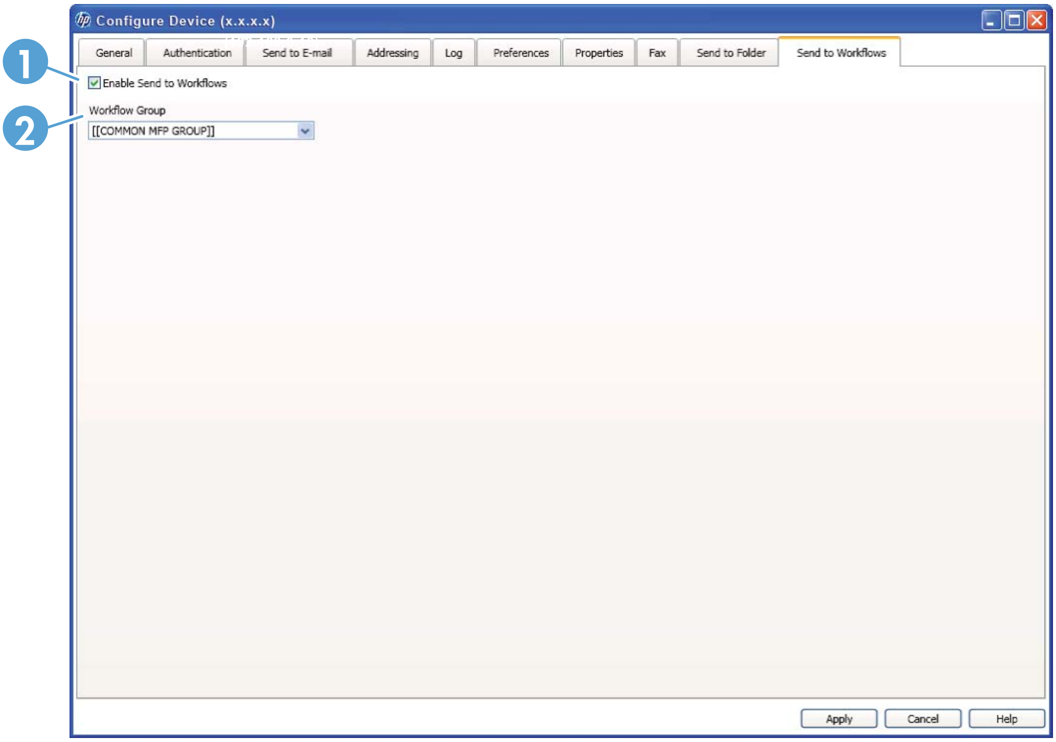
9. Click **OK** to save the workflow form.

10. Click **Apply** to save the settings on the **Workflow** tab.

Configure the Device

The **Send to Workflows** subtab is shown in the following illustration.

Figure 3-42 **Send to Workflows** subtab in the Configure Devices tab set



☑ Enable Send to Workflows

Workflow Group: [[COMMON MFP GROUP]]

Table 3-29 **Send to Workflows subtab – Configure Devices tab set**

Callout	Component	Description
1	**Enable Send to Workflows**	Click to select the **Enable Send to Workflows** check box.
2	**Workflow Group**	Select a workflow group from the drop-down menu.

Configure the device to use Send To Workflows

1. Click to select the **Enable Send to Workflows** check box on the **Send To Workflows** tab on the **Device Configuration** tab set.

2. Select a workflow from the **Workflow Group** drop-down menu.

3. Click **Apply**.

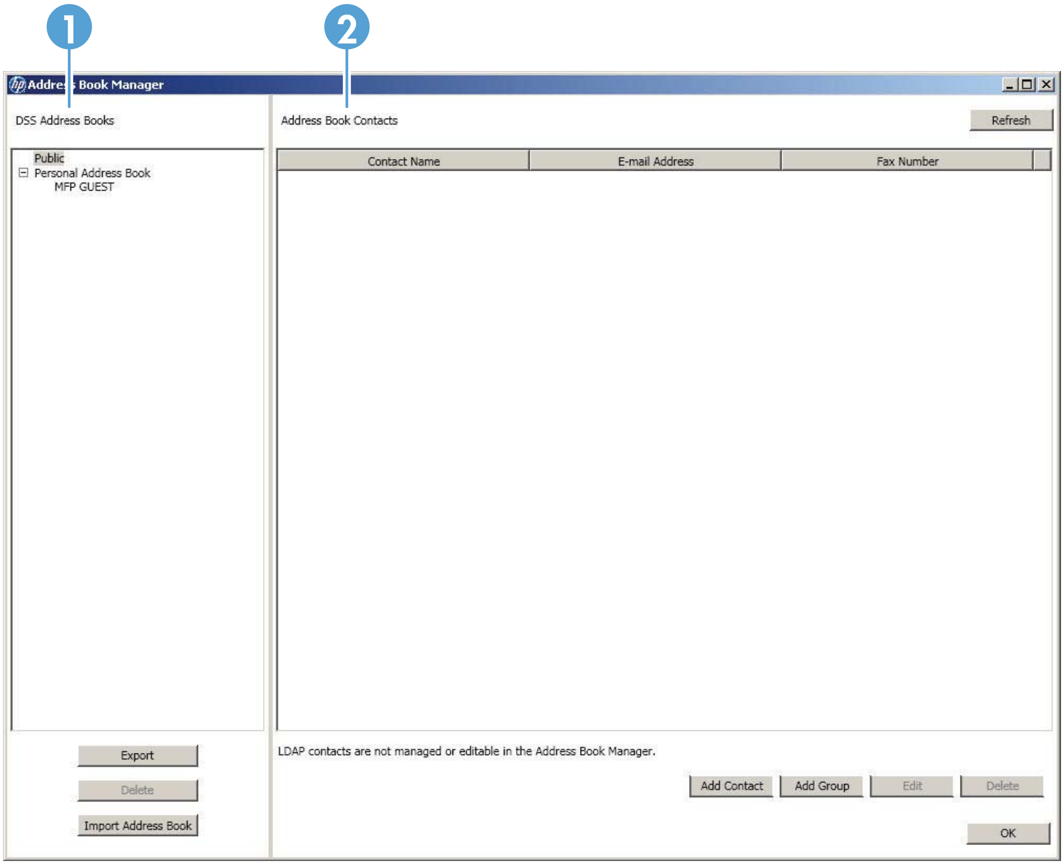
Addressing

This section contains the following topics:

Address Book Manager

Use the **Address Book Manager** on the **Addressing** tab to manage the address books for the DSS service.

Figure 3-43 Address Book Manager



LDAP contacts are not managed or editable in the Address Book Manager.

Table 3-30 **Address Book Manager**

Callout	Component	Description
1	**DSS Address Books**	The DSS Address Books list shows the address books available to the devices connected to the DSS server. Click an address book to see the address book contacts appear in the window to the right. Use the following controls to configure the address books ● **Export**. Click to export an address book. ● **Delete**. Click to delete an address book from the list. ● **Import Address Book**. Click to import an address book.
2	**Address Book Contacts**	The address book contacts appear in this part of the window. Use the following controls to manage contacts. ● **Refresh**. Click to update the contacts list. ● **Add Contact**. Click to add a contact. ● **Add Group**. Click to add a group. ● **Edit**. Click to edit a contact. ● **Delete**. Click to delete a contact. ● **Finish**. Click to close the Address Book Manager.

Importing addresses using the Address Book Manager

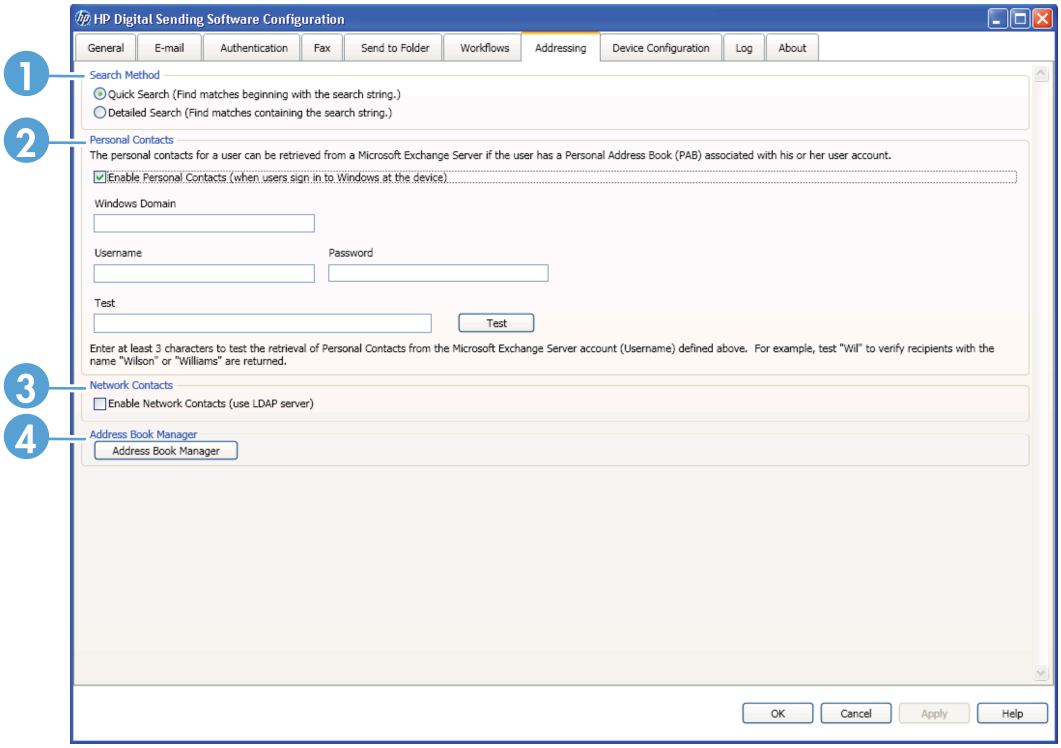
E-mail addresses can be imported from the Address Book Manager so that they can be made available to devices served by DSS. Four types of e-mail address lists can be imported:

- .CSV
- .HPB
- .LDIF
- Microsoft Exchange

Configuring address books on the Addressing tab

Use the Configuration Utility **Addressing** tab to configure DSS to make centralized address books available to digital-sender users.

Figure 3-44 The **Addressing** tab



Search Method

● Quick Search (Find matches beginning with the search string.)

○ Detailed Search (Find matches containing the search string.)

Personal Contacts

The personal contacts for a user can be retrieved from a Microsoft Exchange Server if the user has a Personal Address Book (PAB) associated with his or her user account.

☑ Enable Personal Contacts (when users sign in to Windows at the device)

Windows Domain

Username

Password

Test

Enter at least 3 characters to test the retrieval of Personal Contacts from the Microsoft Exchange Server account (Username) defined above. For example, test "Wil" to verify recipients with the name "Wilson" or "Williams" are returned.

Network Contacts

☐ Enable Network Contacts (use LDAP server)

Address Book Manager

Table 3-31 **Addressing tab**

Callout	Component	Description
1	**Search Method**	Click to select **Quick Search** to find matches beginning with the search string. Click to select **Detailed Search** to find matches containing the search string.
2	**Personal Contacts**	The personal contacts for a user can be retrieved from a Microsoft Exchange Server if the user has a personal address book (PAB) associated with his or her user account. Click to select the **Enable Personal Contacts (when users sign into Windows at the device)** check box to enable this feature. Then type in the **Windows Domain**, **Username**, and **Password**. To test the credentials, type at least 3 characters into the **Test** text box, and then click **Test**.

Table 3-31 Addressing tab (continued)

Callout	Component	Description
3	**Network Contacts**	Click to select the **Enable Network Contacts (use LDAP server)** check box, and then follow the steps below. ● **Network Directory Server (LDAP) (Step 1)**. Use the following controls to designate the LDAP server. ◦ Type the hostname or IP address in the **LDAP Server Address** text box or click **AutoFind** to have DSS find the LDAP server address. ◦ Click to select the **Use a secure connection (SSL)** check box. ◦ Tye the port number in the **Port** text box. ● **Server Authentication Requirements (Step 2)**. Click to select one of the following options. ◦ **Server does not require authentication.** ◦ **Server requires authentication.** ● **LDAP Database Search Settings (Step 3)**. Use the following controls to configure the search settings. ◦ Type in the **Path to Start Search (BaseDN, Search Root)** or click **Auto Find** to have DSS find the path. ◦ Select a **Source for Attribute Names** or click **Auto Find** to have DSS find the source. ◦ Type in the attribute to match the recipient's name, e-mail address, and fax number. ◦ In the **Advanced Search Options** section, Select the **Maximum LDAP Addresses** and the **Maximum Search Time** from the drop-down menus, and then type in the **LDAP Filter Condition** in the text box. ● **Test for LDAP Retrieval (Step 4)**. Type in at least 3 characters to test the retrieval of address book entries using the LDAP setup, and then click **Test**. ● **Sync Schedule (Step 5)**. Select a sync schedule from the drop-down menu, or click **Sync now**. The last replication shows in the text box.
4	**Address Book Manager**	Click this button to launch the Address Book Manager. For more information, see Address Book Manager on page 103.

Configuring Personal Contacts feature

When the **Enable Personal Contacts** check box on the **Addressing** tab is selected, users can gain access to their personal Outlook contacts address books at the device. Exchange Contacts support is only available if authentication is enabled and the authentication method is set to Microsoft Windows. See Authentication on page 46 for more information.

Configuring DSS address books

DSS uses address books to store e-mail addresses that a user types at the device. If user authentication is enabled on the device, addresses are stored in a user's personal DSS address book. Otherwise, the addresses are stored in a public DSS address book. These DSS address books are available to every digital sender or device that DSS supports. If the addresses that are contained in these address books are no longer needed, they can be deleted by clicking **Clear** in the **DSS Address Books** section of the **Addressing** tab. This lists all existing address books, so that one or more of them can be selected.

Configuring LDAP directory replication

The e-mail addresses and fax numbers in the address book come from several sources:

- The LDAP server on the network
- Destinations that users have previously specified at the control panel
- E-mail and fax address books that have been created by using the HP Address Book Manager

One of two methods can be used to synchronize the digital-sender address books with the LDAP server. Table 3-32 Address book synchronization on page 107 contains descriptions of these methods.

Table 3-32 **Address book synchronization**

Method	Description	Effect at the control panel
Using a replicated LDAP address book	DSS takes a snapshot of the LDAP server database and populates the device address book with the addresses that it finds. The Configuration Utility can be used to either initiate the task manually or schedule it to run automatically at a certain time.	As the user types the initial characters in a name, the device attempts to complete the name from the names in the address book. The user types more characters until a match is found. When the user selects a name, the associated e-mail address is automatically selected.
Using an LDAP address book directly	Firmware in the device initiates and resolves name queries directly with the LDAP server. The administrator does not need to synchronize the address book with the LDAP server, either manually or according to a schedule.	The user types a partial name. The device shows the list of resulting names from the LDAP server. When the user selects a name, the associated e-mail address is automatically selected.

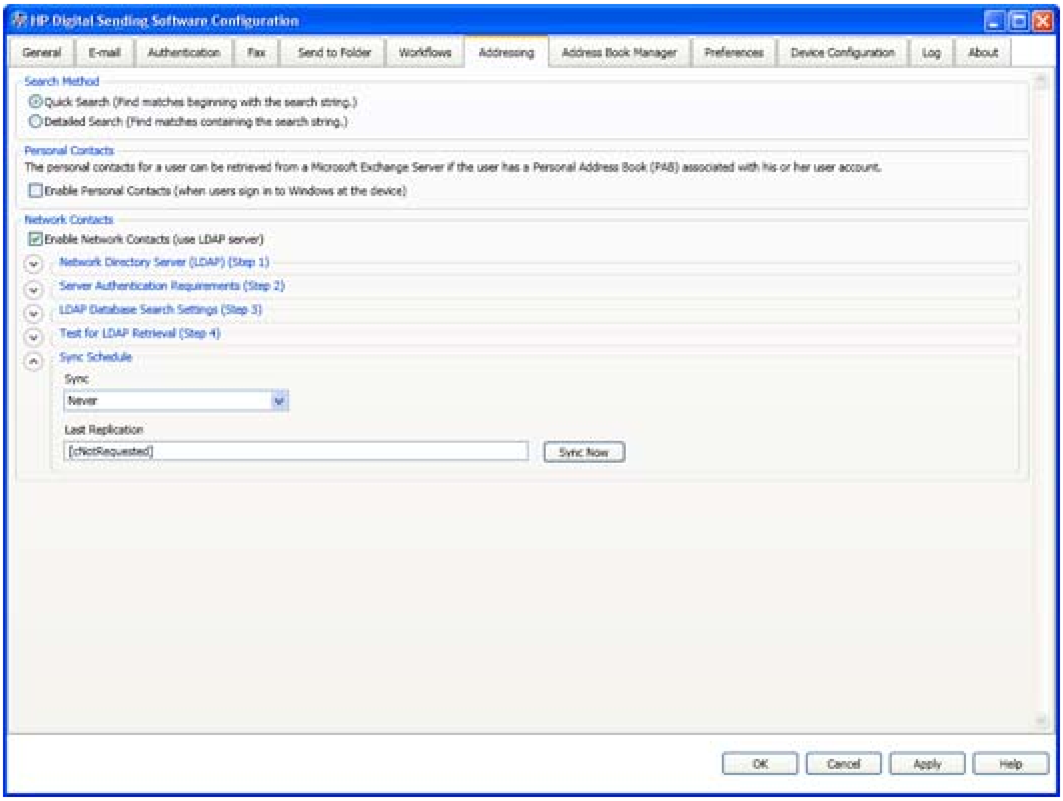
NOTE: If the device is configured to use an LDAP address book directly, it cannot gain access to the replicated address book. If replication is used, only the display names and e-mail addresses are replicated.

To set up automatic replication of the LDAP address book

1. On the DSS server, open the Configuration Utility and click the **Addressing** tab.

2. Click to select the **Enable Network Contacts** check box. The screen expands to show the steps for configuring the LDAP server.

   Figure 3-45 Enable Network Contacts section



Search Method

● Quick Search (Find matches beginning with the search string.)

○ Detailed Search (Find matches containing the search string.)

Personal Contacts

The personal contacts for a user can be retrieved from a Microsoft Exchange Server if the user has a Personal Address Book (PAB) associated with his or her user account.

□ Enable Personal Contacts (when users sign in to Windows at the device)

Network Contacts

☑ Enable Network Contacts (use LDAP server)

Network Directory Server (LDAP) (Step 1)

Server Authentication Requirements (Step 2)

LDAP Database Search Settings (Step 3)

Test for LDAP Retrieval (Step 4)

Sync Schedule

Sync: Never

Last Replication: [cNotRequested]

Sync Now

3. Click the arrow next to **Sync schedule**. The screen expands to show sync options.

4. Select a replication schedule from the **Sync** drop-down menu. Click **Sync Now** to replicate now. The **Last Replication** text box displays the last time the LDAP address book was replicated.

Personal address books

The Personal address book feature is automatically activated when users are authenticated at the device. The feature allows users to access and maintain a Personal address book from the front panel of any devices connected to the same DSS server.

An administrator can manage the contents of the Personal address books using the Address Book Management tab in the Configuration Utility.

Exchange contacts

The Exchange Contacts feature allows users to access their Microsoft Exchange Contacts from the front panel of devices. The feature must be activated in the DSS Configuration Utility. Users have read only access to the Exchange Contacts – entries added from the front panel of the device go into the Personal address book.

Guest address book

The Guest address book is always available to all devices and cannot be disabled. This address book is used to store addresses added by un-authenticated users ("guests") from the front panel of devices.

Public address book

The Public address book is always available to all devices and cannot be disabled. An administrator can use the Address Book Management tab in the Configuration Utility to manage the contents of the address book.

When enabled any address book entries added from the front panel of devices by un-authenticated users will be put into the Public address book – and thereby be available to all other devices connected to the same DSS server.

Use the Public Address Book when certain e-mail addresses and/or fax numbers need to be available to all devices.

LDAP replication

The LDAP Replication feature is designed to off-load LDAP servers by replicating the information into the DSS address book at a schedule set by the administrator. The address book information replicated from LDAP is stored in a dedicated, read-only and hidden address book.

The configuration settings for LDAP Replication are very similar to those for LDAP Addressing. The administrator needs to supply the address/name of the LDAP server, which port to connect to, the "bind" method and credentials, as well as the "search root" (search context) and attribute settings.

Configure direct LDAP addressing on the device

An address book is available at each Digital Sending device to speed up the process of selecting e-mail and fax destinations from the control panel. The e-mail addresses and fax numbers in the address book can be located on the LDAP server on the network or at a destination that has been previously specified at the control panel. This function is not supported in older device models.

Firmware inside the device initiates and resolves name queries directly with the LDAP server. The address book does not have to be synchronized with the LDAP server, either manually or on a schedule. To initiate a search at the control panel, the user types a partial name. On the device, the list of resulting names from the LDAP server appears. When a name is selected, the associated e-mail address or fax number is automatically entered.

Adding addresses

Addresses can be added to the device address book in the following ways:

- The user can touch **Add** on the device control panel to add a specific address.
- If the Exchange Contacts feature is enabled, the user can add addresses to their Outlook contact list and these addresses will automatically be made available at the device.

Clearing addresses

DSS uses address books to store e-mail addresses that a user types at the device. If user authentication is enabled on the device, addresses are stored in a user's individual DSS address book. Otherwise, the addresses are stored in a public DSS address book. DSS address books are available to every digital sender or device that the DSS server supports. If the addresses contained in these address books are no longer needed, they can be deleted by clicking **Clear** on the **Addressing** tab in the Configuration Utility.

LDAP filters

When doing an LDAP search, users and groups will appear in the result found.

To be able to filter the LDAP search, follow these steps.

1. Open the Configuration Utility, and then click the **Device Configuration** tab

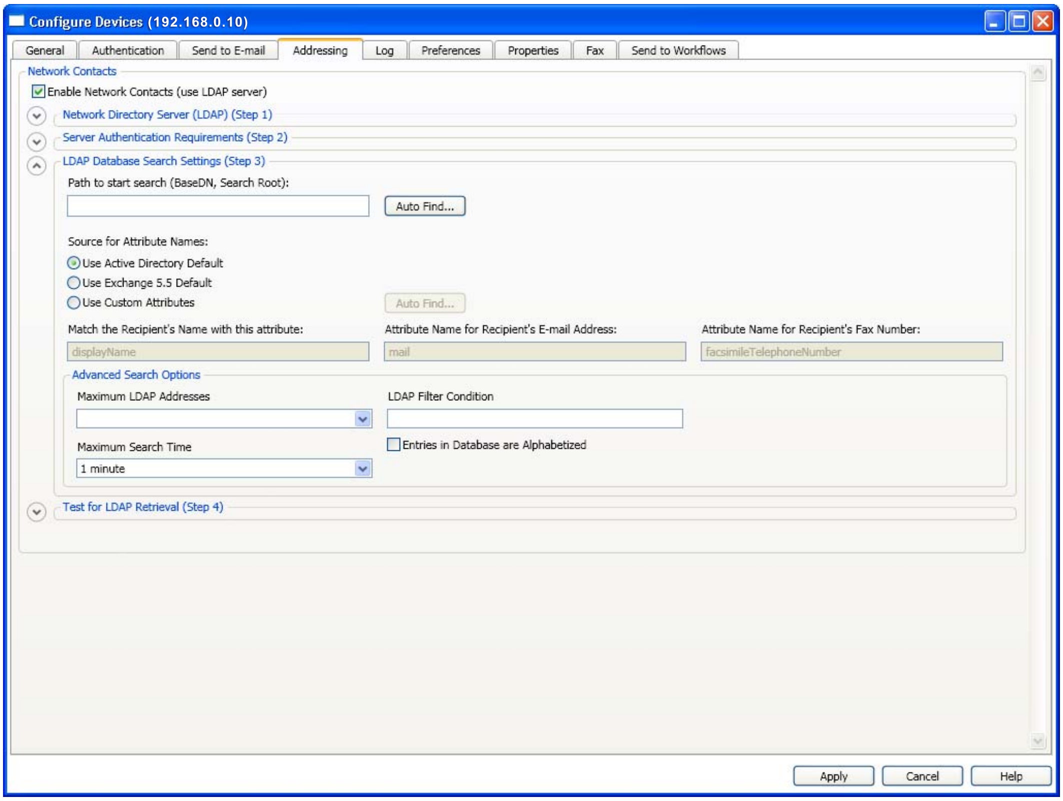
2. Click to select the device that you would like to filter. Click **Configure Devices**.

   NOTE: If all the devices need this filter, configure one and then copy the configuration to the other devices.

3. The **Configure Devices** dialog box appears. Click the **Addressing** subtab.

4. Click to select the **Enable Network Contacts (use LDAP server)** check box, and then click the arrow next to **LDAP Database Search Settings (Step 3)**.

   Figure 3-46 The **LDAP Database Search Settings** section



Configure Devices (192.168.0.10)
General
Authentication
Send to E-mail
Addressing
Log
Preferences
Properties
Fax
Send to Workflows
Network Contacts
Network Directory Server (LDAP) (Step 1)
Server Authentication Requirements (Step 2)
LDAP Database Search Settings (Step 3)
Auto Find...
Auto Find...
Advanced Search Options
Test for LDAP Retrieval (Step 4)
Apply
Cancel
Help

☑ Enable Network Contacts (use LDAP server)

Path to start search (BaseDN, Search Root):

Source for Attribute Names:

● Use Active Directory Default

○ Use Exchange 5.5 Default

○ Use Custom Attributes

Match the Recipient's Name with this attribute: displayName

Attribute Name for Recipient's E-mail Address: mail

Attribute Name for Recipient's Fax Number: facsimileTelephoneNumber

Maximum LDAP Addresses

LDAP Filter Condition

Maximum Search Time: 1 minute

□ Entries in Database are Alphabetized

5. In the **LDAP Filter condition** text box, type in the syntax to filter the LDAP search.

   To exclude the groups setting for Exchange 5.5, the filter would be (!(objectclass=groupofnames)).

Other e-mail settings could include but not limited to the following:

- iPlanet: (!(objectclass=groupofuniquenames))
- Active Directory: (!(objectclass=group))

6. Click **Apply**.

Configure DSS for Windows Active Directory Services

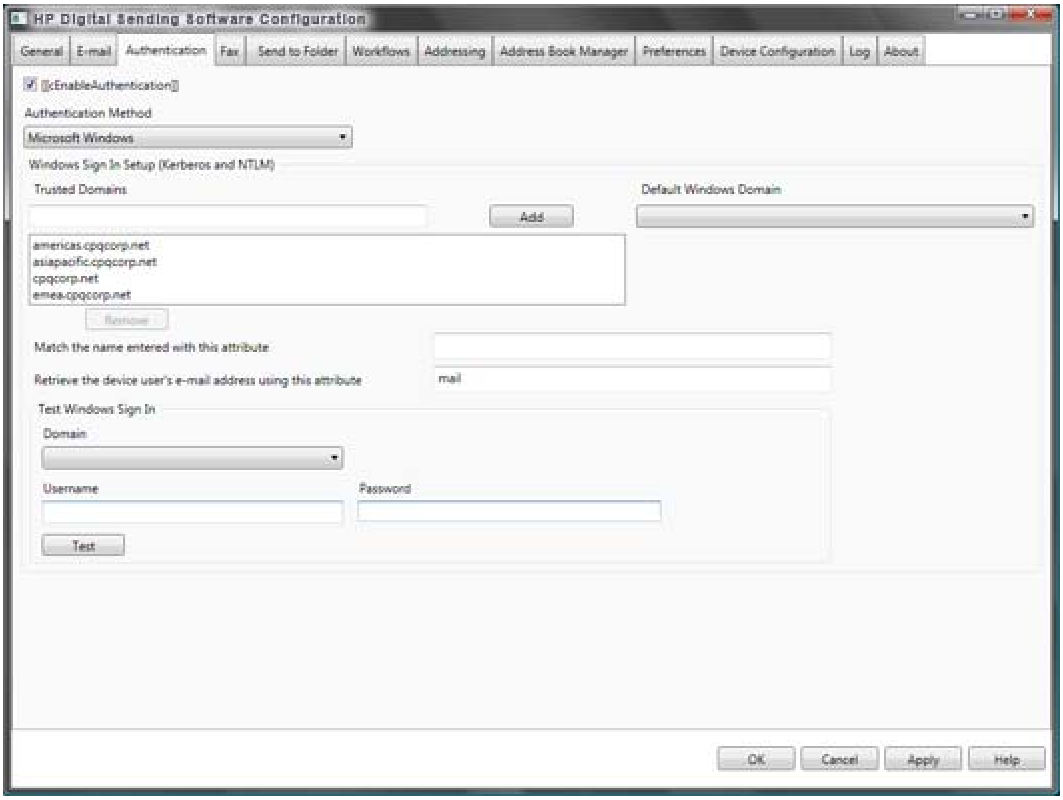
You must install the Digital Sending Software and ensure that the Digital Sending Service is running before you can configure the software for the Windows Active Directory environment.

Configure Authentication

Follow these steps to configure Authentication for the Windows Active Directory environment.

1. Open the DSS Configuration Utility and click on the **Authentication** tab.
2. Click to select the **Enable Authentication** check box, and then select **Microsoft Windows** from the **Authentication Method** drop-down menu.

Figure 3-47 Authentication tab



☑ [[cEnableAuthentication]]

Authentication Method: Microsoft Windows

Windows Sign In Setup (Kerberos and NTLM)

Trusted Domains:
americas.cpqcorp.net
asiapacific.cpqcorp.net
cpqcorp.net
emea.cpqcorp.net

Default Windows Domain:

Match the name entered with this attribute:

Retrieve the device user's e-mail address using this attribute: mail

Test Windows Sign In

Domain:

Username:

Password:

3. Type in the domain name in the **Trusted Domains** text box, and then click **Add**.
4. In the **Test Windows Sign In** section, select the domain from the **Domain** drop-down menu, and then type in the username and password for an authenticated user in the **Username** and **Password** text boxes. Click **Test** to test the credentials.
5. Click **Apply**.

Configure Addressing

Devices configured to use the Digital Sending Software can be configured to use one of two different types of address books: (1) an address book that resides on the server on which the Digital Sending Software is installed, and (2) the Global Address List (GAL) that exists as data in Active Directory. You can only configure a device to use one of these addressing methods at a time.

In option one, the Digital Sending Software can be configured to periodically export data from the Global Address List to the service-based address book. Or, by using the Address Book Manager (an optional component of the Digital Sending Software) administrators can create recipients by entering names and e-mail addresses or can import lists of recipients in several popular formats. In either case, devices perform queries of the service-based address book as users enter a recipient's e-mail address at the control panel of the device. Option one has the advantage that NTLM can be used to "bind" (authenticate) to the Active Directory server. Option two only provides Simple authentication.

NOTE: NTLM authentication can be used as the bind method for option one. Option two only provides Simple authentication. If Simple is chosen, the username and password are transmitted over the network as ‘cleartext.’ This means that this information can be read by anyone with access to the data on the network.

Configure the Service-Based Address Book

Follow these steps to configure the service-based address book.

1. Open the DSS Configuration Utility and click the **Addressing** tab.
2. Click to select the **Enable Network Contacts (use LDAP server)** check box.
3. In the **Network Directory Server (LDAP) Step 1** section, type in the IP address or Hostname of the Domain Controller or Global Catalog Server in the **LDAP Server Address** text box.

   NOTE: If the Global Catalog Server is used, the default LDAP port must be changed to 3268.

4. In the **Server Authentication Requirements (Step 2)** section, click to select the **Server requires authentication** option, and then select **NTLM** from the drop-down menu.
5. Type the credentials of an authenticated user into the **Username**, **Password**, and **Domain** text boxes.
6. In the **Sync Schedule** section, select the replication frequency.
7. Click **Apply**.

Configure individual devices to connect to the LDAP interface of Active Directory

1. Open the DSS Configuration Utility, and then click the **Device Configuration** tab.
2. Click to select the device you want to configure, and then click **Configure Device**.
3. Click the **Authentication** subtab. Set the **Authentication Method** to **Microsoft Windows**.
4. Set the **Login Method** to **Simple**.
5. Type in the credentials of an authenticated user into the **Username**, **Password**, and **Domain** text boxes.
6. Type the IP Address or Hostname of the Domain Controller or Global Catalog Server.

7. Make sure the **LDAP Database is Alphabetized** check box is not selected. When configuring for Active Directory Services, in most cases, having this check box selected will cause names shown in the list of matching names to **not** appear in alphabetical order.

8. Click **Apply**.

4 Support and troubleshooting

This chapter contains the following topics:

- Obtaining support
- Control panel messages
- DSS error messages

Obtaining support

This section contains the following topics:

- HP customer care service and support
- Finding documentation and other supporting information
- Using Internet support

HP customer care service and support

Along with your product, you receive a variety of support services from HP and our support partners. These services are designed to give you the results you need, quickly and professionally. For information about HP support locations, see the support flyer that came in the box with your HP product, or visit www.hp.com.

Finding documentation and other supporting information

The following table outlines the source for, and description of, the information that is available about issues that can arise when using HP DSS.

Table 4-1 Sources of information

Source	Description
Device online Help system	Digital Sending-enabled devices feature an online Help system that provides instructions for resolving common problems. To use Help, press **?** on the control panel.
Activity-log messages	The activity log is a record of Digital Sending and is probably the best tool for troubleshooting. It contains information, warning, and error messages that can help resolve problems. It also provides access to the embedded Web server event log for devices. Two logs can be viewed: ● The Configuration Utility **Log** tab shows general log messages for DSS. ● In the Device Configuration section of the Configuration Utility, a second **Log** tab shows log messages that are specific to the selected device. See the Help file for the Configuration Utility for a list of messages and recommended actions.
Windows Event Viewer messages	The Event Viewer shows a record of the startup procedure for the DSS that is running on the Windows server.
Control-panel messages	Messages appear on the device control panel to report Digital Sending problems.
Configuration Utility messages	Messages appear in the Configuration Utility when problems occur.
Alert notifications	E-mail alert notifications can be sent when Digital Sending problems occur. The Help file for the Configuration Utility explains how to do this.

Using Internet support

Information about the software and all documentation can be found at the following Website:

www.hp.com/support/dss

Control panel messages

This section lists and explains the messages that might appear on the device control panel during Digital Sending.

If a problem persists, contact an HP-authorized dealer.

Table 4-2 **Device control-panel messages**

Message	Description and actions
Address book is full. To add an address, you must first delete an address.	Delete unused addresses from the address book.
Access denied	The user is trying to use a feature or access a folder that they do not have authorization to use. If the user is trying to send to a folder, verify that the folder is set up to be shared.

Table 4-2 Device control-panel messages (continued)

Message	Description and actions
Authentication failed: Error code ###	Authentication failed for a reason other than incorrect user-specified information (username and password). The following error codes might appear in the error message. ● **201**: Unexpected failure. ● **202**: Authentication is not available. The service is too busy to accept the authentication request. ● **203**: Authentication is not supported. ● **204**: Encryption is not supported. ● **205**: Invalid parameter ● **206**: Invalid LDAP logon method (the LDAP server does not support this logon method.) ● **207**: Unexpected LDAP failure occurred, either because the LDAP server failed or the connection is bad. ● **208**: The LDAP server not available; it either is not a server or is not running LDAP. ● **209**: The LDAP server is too busy. ● **210**: Invalid LDAP username because the user does not have access to the LDAP server. ● **211**: Invalid LDAP user password ● **212**: Invalid LDAP user credentials ● **213**: Invalid LDAP user domain ● **214**: Invalid LDAP privileges because the user does not have permission to read from the LDAP database. ● **215**: Invalid LDAP user record because the user does not have an entry in the LDAP database. ● **216**: Invalid LDAP container because the search root is invalid. ● **217**: Invalid LDAP name attribute ● **218**: Invalid LDAP e-mail name attribute ● **219**: Invalid fax attribute ● **220**: Invalid LDAP display-name attribute ● **221**: No e-mail address at the specified attribute ● **222**: Tested user does not have an account on the domain

Table 4-2 Device control-panel messages (continued)

Message	Description and actions
Authentication failed: Error code ### – continued	● **223**: Tested user's password is not valid ● **224**: Tested user's credentials are not valid ● **225**: Tested user's domain is not valid ● **226**: Test account exists but cannot be opened ● **227**: The server did not contain the necessary information to locate the user's home mail server.
Authentication information is incorrect. Please re-enter information.	The username or password that was used is incorrect. Type the information again. Verify that the settings on the **Authentication** tab of the Configuration Utility are correct for the network.
Digital Send Communication Error.	The device was unable to connect to the DSS service. 1. Verify that the DSS program is running. 2. Verify that the DSS server and the device are connected to the network. 3. Restart the DSS service. 4. Restart the computer on which DSS is installed.
Digital Send server is not responding. Contact Administrator.	The device cannot communicate with the DSS server. Check the network connection. Verify that the DSS server is running and has an active network connection.
E-mail Gateway did not accept the job because the attachment was too large.	Resend the job by using a lower resolution setting, smaller file size setting, or fewer pages. Increase the attachment size that the e-mail gateway accepts (see the documentation for the e-mail package). Read the "returned mail" message (if one was received) to determine the reason that the e-mail message was not delivered.
E-mail Gateway did not respond. Job failed.	The e-mail gateway stopped responding while the device was processing a digital-send job. 1. Verify that the SMTP server is running. 2. Select another SMTP server. 3. Verify that the SMTP server and the device are connected to the network. 4. Try sending the job later.
E-mail Gateway is not configured. Contact administrator.	The user attempted to select **E-mail** as a send option, but no TCP/IP address for a SMTP Gateway has been configured. Use the Configuration Utility to configure the e-mail gateway.

Table 4-2 Device control-panel messages (continued)

Message	Description and actions
E-mail Gateway is not responding. Contact administrator.	An e-mail gateway is configured, but is not responding. 1. Verify that the SMTP server is running. 2. Select another SMTP server. 3. Verify that the SMTP server and the device are connected to the network. 4. Restart the computer on which the DSS service is installed.
E-mail Gateway rejected the job because of the addressing information. Job failed.	Correct the e-mail address and send the job again.
Error executing Digital Send job. Job failed.	A transmission error occurred while the device was sending a digital-send job. 1. Try sending the job again. 2. Check the activity log in the Configuration Utility for details about the error. 3. Restart the DSS service. 4. Restart the computer on which the DSS is installed.
HP Digital Sending: Delivery Error	Try sending the job again. If problems continue, check the network connection and contact the network administrator.
LDAP Server is not responding. Contact administrator.	1. Verify that the LDAP server is running. 2. Select another LDAP server. 3. Verify that the LDAP server and the device are connected to the network. 4. Try sending the job later.
Login failed. Please try again.	The information that the user typed for authentication resulted in a failure to login (the username or password, or both, was invalid). Try the login again. Make sure that the username and password are valid and that they have been typed correctly. NOTE: The username and password are case-sensitive.
Network connection required for Digital Sending. Contact administrator.	The device was unable to communicate over the network. 1. Verify that the device is connected to the network. 2. Verify the status of the network.

Table 4-2 **Device control-panel messages (continued)**

Message	Description and actions
No Send Options are currently available	No licensed DSS services are available, and the device is not configured for embedded e-mail or fax capabilities. 1. Use the Configuration Utility to enable one or more send options. 2. Restart the DSS service. 3. Use the Configuration Utility to verify that the license for the device was typed correctly. 4. Use the Configuration Utility to configure embedded e-mail.
Novell login required	The device has been configured to require a Novell login in order to use the selected feature.
Password or name is incorrect. Please enter correct login.	The username or password is incorrect or was mistyped. Retype the username and password. Verify that the settings on the **Authentication** tab of the Configuration Utility are correct for the network.
The Digital Sending Service at 15.XX.YY.ZZ does not service this device. Contact administrator.	The license for the device was removed from the Digital Sending service at the TCP/IP address 15.XX.YY.ZZ, but the service was able to communicate with the device. Therefore, the device was not notified that it was no longer licensed. When this error occurs, the device is updated to indicate that it is not licensed by a Digital Sending service, so the message will only appear once. Relicense the device.
Too many addresses were found to display. Please refine your search.	When the user initiated an address-book search, the number of addresses in the address book that matched the search criteria was more than the device could show on the control-panel display. Refine the search by typing more characters before starting the search function.
The folder you have entered is not a valid folder.	The device was unable to validate the path that was typed for the Send to Folder feature. Verify that the correct path is being used.
Unable to send Fax. Please check fax configuration.	The fax accessory must be configured before faxing can take place. Configure the fax accessory by using the Configuration Utility, or enable faxing by using the DSS service. Resend the fax job.

DSS error messages

Select the **Notify administrator of critical error** check box on the **General** tab of the Configuration Utility to receive e-mail messages when critical errors occur. The subject line of these e-mail messages reads: **Digital Sending Software – Critical Error Notification**. The e-mail message body reads as follows: "The Digital Sending Software server [server TCP/IP] incurred a critical error [error message]. This error might require administrative action."

This section lists some of the critical-error messages that might be sent.

Table 4-3 **Critical error messages**

Error Message	Suggested Actions
Insufficient disk space to allow job	Check available disk space on the DSS server. In some high-usage environments where numerous devices are configured in DSS, several gigabytes of free disk space might be required during peak usage periods.
Firmware has not been upgraded on device	This message should be seen only when older devices are managed DSS. Remove the device from the configuration and add it back again.
A notification message was not printed on the [device TCP/IP] printer	Verify that DSS can communicate with the device that is indicated in the message.
Address Book checking terminated with a severe corruption indication	Call HP Support or an authorized service provider. The Address Book might need to be rebuilt.
The SMTP server didn't accept the e-mail message because it was too big	Reduce the e-mail size limit in DSS to a number less than the limit that is configured at the SMTP server.
A disk file was not downloaded to the [device IP] printer	Remove the device (indicated by the TCP/IP address) and add the device back again to DSS.

Glossary

ABM
The Address Book Manager is used to access public address books in legacy devices.

Anonymous
Choose this option if the selected LDAP server does not require user credentials, also known as authentication, to access the LDAP database.

Authentication
A security feature within the DSS that verifies a user identity with a user name and password. Authentication requires an LDAP server.

Client
This is a PC in a client/server environment.

Configuration Application
Once the software is installed, a configuration program is used to set DSS configuration.

DHCP
Dynamic Host Configuration Protocol software assigns IP addresses to stations on a TCP/IP network. With DHCP, the manual assignment of permanent IP addresses is eliminated.

DNS database
A Domain Name System database resides on a DNS server and maintains domain (host) names and IP addresses. The server needs the database to match host names and IP addresses.

Domain
This is a subnet made up of a group of PCs and servers that are controlled by one security database.

Domain Controller
Software that controls authentication, or security, within a domain.

DSMP
Digital Sender Module Protocol is used by the sending software to communicate with the device.

Dynamic (live) LDAP
This addressing system updates when a new e-mail address is added. Because the address book is updated as new addresses are input, it is never out of date.

Embedded Digital Sending

The term Embedded Digital Sending refers to the technology which is embedded in the firmware of a Digital Sending-enabled device. Typical features include:

- Ability to send documents to e-mail, fax, folder and FTP destinations.
- Address Book capabilities.
- End user authentication through LDAP, Kerberos and other methods.

FTP
File Transfer Protocol is used to transfer files over a TCP/IP network, such as the Internet.

GUI
A Graphical User Interface is employed in a device display.

HP Digital Sending technology
HP Digital Sending technology offers a fast, simple, and reliable way to capture valuable information from paper-based documents and convert it to a digital format that can be processed and routed.

The technology is embedded in HP's high-end Multi-function peripheral (MFP) products, as well as the Digital Sender series and some ScanJet products, and offers a range of features, such as Send to E-mail, Send to Folder, Address Books etc. This functionality can be extended with service-based Digital Sending through the DSS.

HTTP
HyperText Transport Protocol is a communications protocol that connects servers to the Web.

Installer
The administrator uses this program to install the DSS.

Isolated Network
In a training environment, a server could be used to se up a network of a least two PCs and a printer.

LAN Fax server
This server is required if the DSS is configured for the use of LAN Fax.

LDAP
Lightweight Directory Access Protocol is used to access directory listings.

LDAP database
This is where addresses are stored on an LDAP server.

LDAP server
This server is used to obtain addresses from the LDAP database, which contains the device address book. An LDAP server is necessary for authentication.

Microsoft Exchange
This is messaging and groupware software for Microsoft Windows.

MIME
Encoder Multipurpose Internet Mail Extension is the Internet standard for attaching non-text files to standard Internet mail messages. Because PDF and TIFF files are binary, MIME encoding is necessary to convert regular binary data into 7-bit ASCII encoding.

MTIFF (tif.)
A multiple page TIFF allows the user to send multiple .tif documents as one attachment. Some applications are not able to read multiple page .tif documents and only recognize the first page. The attachment appears with a .tif extension, as does the tagged image file format (.tif).

NANP
North American Number Plan

NDS
Novell Directory Services in NetWare software that provides directory services within a server. The DSS uses NDS versions 4.x and 5.x for authentication.

NetWare
Novell operating system software that runs within a server.

NTLM (NT LAN Manager)
Choose this option if the selected LDAP server requires user credentials and supports NT Challenge Response authentication.

PDF (.pdf)
The Portable Document Format is the file format most often used for e-mail attachments. A PDF gives recipients the ability of both view and print the e-mail attachment. The file extension is .pdf.

Seats
A licensed version of the DSS has a limit to how many devices can subscribe to the service. If a software license contains five seats, the connected device holds one seat.

Service-based Digital Sending
Service-based Digital Sending requires DSS to be installed on a Digital Sending server. The Digital Sending server then controls all of the Digital Sending tasks. Performing service-based Digital Sending by using DSS 4.91 and later also adds the ability to Send to E-mail, network folder, and workflow destinations.

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