555-4001-317

Nortel Networks Meridian SL-100/Communication Server 2100

M3900/EXPEC Firmware Manager (MEFM)

User Guide

SE07 Standard 01.04 January 2005

NORTEL

Nortel Networks Communication Server 2100

M3900/EXPEC Firmware Manager

User Guide

Publication number: 555-4001-317
Product release: SE07
Document release: Standard 01.04
Date: January 2005

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Publication history

January 2005

Version 01.04 SE07, Standard. Added peer edits and test case changes.

November 2004

Version 01.03 SE07, Draft. Added “Navigating the MEFM” chapter, which duplicates the Help Files found on the server.

October 2004

Version 01.02, SE07, Draft. Initial changes and edits are included in this version.

August 2004

Version 01.01, SE07, Draft. This is the first draft issue of the document for SE07.

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About this document

This document

This document describes the Meridian SL-100/Communication Server M3900/EXPEC Firmware Manager (MEFM).

Purpose and audience

This document describes the functionality and requirements of the M3900/EXPEC Firmware Manager and is a companion to the MEFM Help files and MEFM Quick Start Guide that are supplied with the product.

This document's audience is service provisioning, administrative and network management and planning personnel.

How to check the version and issue of this document

The version and issue of the document are indicated by numbers (for example, 01.01). For example, the first release of a document is 01.01. In the next software release cycle, the first release of the same document is 02.01.

The first two digits indicate the version. The version number increases each time the document is updated to support a new software release.The second two digits indicate the issue. The issue number increases each time the document is revised, but re-released in the same software release cycle. For example, the second release of a document in the same software release cycle is 01.02.

FOR MORE INFORMATION

To determine whether you have the latest version of this document, check the release information in the *Meridian SL-100 Master Index of Publications*.

Related documents

Table 1 lists related documents for the Meridian SL-100/Communication Server 2100 M3900/EXPEC Firmware Manager.

Table 1
Related documents

Description	Document number
Meridian SL-100 M3900 Digital Telephones Reference Guide	NTP 555-4001-136
MEFM Help Files	None
Meridian SL-100/Communication Server 2100 MEFM Quick Start Guide	None

Introduction

Background

The M3900/EXPEC Firmware Manager (MEFM) provides a web-based interface through which the firmware on the M3900 telephone sets and EIPE controller, that is, the EXPEC (Enhanced Extended Peripheral Equipment Controller) can be downloaded.

The M3900/EXPEC Firmware Manager tool includes the following functions:

- Telnet and FTP
- Scheduling
- EXPEC controller card load management
- M3900 firmware maintenance
- Secure web-based user interface

The M3900/EXPEC Firmware Manager will support SL-100 customers and SL-100 customers who transition to CS2100.

Functional description

The MEFM application has the following responsibilities:

- authenticate client's login and provide Client Sessions
- maintain client profile information in the database
- manage connections to the EXPECs
- manage the connections to the file servers for firmware downloads
- manage secure connections to the web clients
- schedule downloads
- maintain a log of activity and errors

The following sections describe the features provided by the MEFM.

Security

The MEFM provides the following security features

- Limited user access – only users who have logged in with a correct password may use the MEFM system. An administrator has full access to all the features of the system.
- Secure web access – Secure Socket Layer (SSL) will be used between the web clients and the web server.
- Encryption – encryption will be used for passwords and other confidential information stored on the server.

Scheduler

The scheduler feature is used to schedule downloads of software either to the M3900 sets or the EXPEC. Current status of all scheduled jobs is available from the web client. Scheduled jobs is kept in a “database” until they are executed.

Web interface

The web client has the following functions:

- user login
- ability to add:
  - file server
  - user
  - EXPEC
- ability to view:
  - EXPEC load details
  - activities
  - active jobs
- list EXPECs
- ability to edit/delete:
  - EXPECSs
  - file servers
  - users
  - jobs
- get firmware load
- schedule status
- list M3900 sets

- view M3900 load details
- set bootable load
- remove load
- view log report
- view scheduled job list
- view active job list/status
- display error

EXPEC load management

MEFM provides load management for the EIPE controller card (EXPEC). Load management of the EXPEC loads includes the ability to

- view loads on the EXPEC
- initiate the transfer of loads to the EXPEC
- delete loads from the EXPEC
- set the “bootable” load for the EXPEC
- see the space remaining on the EXPEC
- initiate the transfer of a load file to multiple EXPECs
- provide a record of the completion of each load transfer

The loads are transferred through the Ethernet portion of the EXPEC card. The advantage of transferring the load files through Ethernet is that the transfer time is greatly reduced and that the Intelligent Peripheral Equipment (IPE) remains in service while the load file is being transferred. Once a load is transferred to the IPE and set as the “bootable” load, the IPE must be BSY’d (busied) and RTS’d (returned to service) from a MAPCI, before the new load takes effect on that IPE.

Integrated Element Management Systems (IEMS)

For information about configuration management in Nortel Networks Integrated EMS, please refer to the *Meridian SL-100/Communication Server 2100 Product Guide*, 555-4001-806 and the *Integrated EMS Configuration Management,* NN10330-511.

M3900 firmware maintenance

MEFM provides load management and load maintenance for the M3900 sets. The load management functions include the following:

- view loads on the EXPEC and M3900 sets
- initiate the transfer of loads to the EXPEC
- delete loads from the EXPEC

- set a “bootable” load for each version of the M3900 on the EIPE
- see the space remaining on the EXPEC
- initiate the transfer of a load file to multiple EXPECs
- provide a record of the completion of each firmware load operation

The maintenance of the loads includes the ability to schedule sending the loads to one M3900, or sequentially to all M3900s, on an IPE or multiple IPEs.

Logging

A flat file is used to store information about items including

- errors
- critical events such as startup of the application
- firmware load operation

Database

An XML database is kept for persistent information including

- user information
- scheduled jobs
- EXPECs
- M3900s
- other application configuration information

Web server

The Apache Tomcat web server handles transaction handling, client sessions, and serving up web pages.

Integration with the CS 2100 Network Management System (NMS)

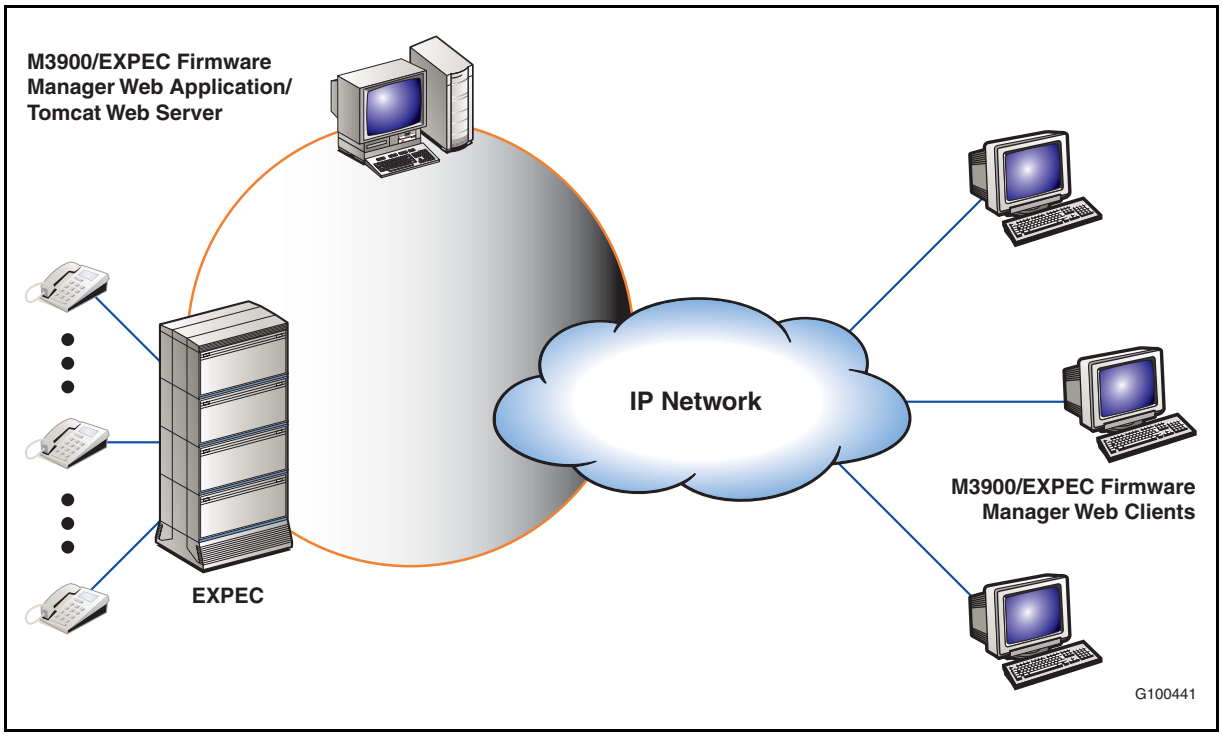
The cross-platform of Java and the web interface makes the integration with the CS 2100 NMS possible since the CS 2100 NMS strategy is to be on the Solaris platform with web interfaces.

System architecture

The M3900/EXPEC Firmware Manager architecture allows the load transfer function of the M3900 and EXPEC to be integrated into the CS 2100 management system. The web application is written in Java and runs on the Apache Tomcat web, server providing cross-platform support. The Model/View/Controller 2 (MVC2) pattern provides ease of maintenance and robustness. The architecture consists of the EXPEC controller card which communicates with the M3900 sets. The MEFM application communicates with the EXPEC through Telnet. The web

clients communicate with the MEFM application through secure HTTP using a browser. FTP can be used, if necessary, to retrieve the firmware load from a file server.

Figure 1
M3900/EXPEC Fimware Manager Web Application/Tomcat Web Server



System requirements

MEFM application system requirements

The MEFM application has the following system requirements

Hardware

- 500 MHZ Pentium II, or equivalent processor
- minimum of 128 MB of RAM
- minimum of 300 MB hard drive space available
- a network connection to EXPEC/M3900 Firmware Manager client

Software

- Sun Java JDK
- Tomcat Web server
- Windows 2000 Operating Systems with latest service pack installed

MEFM Web Client requirements

The web client application has the following requirements:

Hardware

- a network connection to the EXPEC/M3900 Firmware Manager server
- a color monitor
- a computer system capable of running Microsoft Internet Explorer 4.0 or above

Software

- Microsoft Internet Explorer 4.0 or above.

Installation and setup

Installation and setup

Installation of the ME3900/EXPEC Firmware Manager (MEFM) application requires no license key. Install and uninstall MEFM, Sun Java JDK, and Tomcat web server using the following procedures.

Note: Refer to "System requirements" on page 19 before you proceed.

Procedure 1
Installing the MEFM, Sun Java JDK, and Tomcat web server

From your PC browser

1 Enter the following link and download and install Sun's JDK 1.4.2_04:

http://java.sun.com/j2se/

2 Enter the following link and download and install Tomcat 5.0.28:

http://jakarta.apache.org/site/binindex.cgi

3 Download and install MEFM. You must install MEFM in the webapps directory of the Tomcat installation.

4 Open a command prompt.

From the Command prompt

5 Go to the **<Java_Home>\bin** directory, where <Java_Home> is the directory where you installed the JDK in step 1. Execute the following command:

```
keytool -genkey -alias tomcat -keyalg RSA
```

6 After executing this command, you will first be prompted for the keystore password. The default password used by Tomcat is **changeit** (all lower case).

Note: You may specify a custom password, but if you do so, you must also specify this custom password in the server.xml configuration file (found in the **<Tomcat>\conf** directory, where <Tomcat> is the directory where you installed Tomcat server in Step 2).

7 Enter the general information about this certificate that you are prompted for, such as company, contact name, and so on.

Note: This information will be displayed to users who attempt to access a secure page in your application, so make sure that the information provided here matches what they will expect.

8 Enter the **key password**. This password is specifically for this certificate (as opposed to any other certificates stored in the same keystore file).

Note: You must use the same password here as was used for the keystore password itself. (Currently, the keytool prompt will tell you that clicking on the **ENTER** key does this for you automatically.)

9 The previous steps created a keystore file with a certificate that can be used by your server.

From the Start Menu

10 Select: Programs > Apache Tomcat > Start Tomcat

11 Select: Programs > MEFM > Start MEFM Client.

This procedure is now complete

Procedure 2
Uninstalling the MEFM, Tomcat, and JDK

From the Start Menu

1 Select: Programs > MEFM > Start MEFM> Shutdown Tomcat.

2 Select: Programs > MEFM > Uninstall MEFM.

Note: SSL keystore files must be manually uninstalled.

Note: Open a command prompt.

From the Command prompt

3 Go to the **<Java_Home>\bin** directory, where <Java_Home> is the directory where you installed the JDK in Step 1 of Procedure 1 on page 21.

4 Type **keystore -delete**.

5 Enter the alias name (the default was **tomcat**).

6 Enter your **key password** (the default was **changeit**).

7 The next step uninstalls the Tomcat.

From the Start Menu

8 Select: Programs > Tomcat> Uninstall Tomcat.

9 The next step uninstalls the JDK.

10 Select: Control Panel > Add/Remove Programs. Select the JDK you installed.

Note: If you are going to reinstall MEFM, it is not necessary to uninstall the keystore file, Tomcat, or the JDK.

When reinstalling MEFM, perform only Step 3 of Procedure 1 on page 21.

This procedure is now complete

Navigating the MEFM

This chapter provides steps that help you navigate and perform various tasks using the M3900/EXPEC Firmware Manager (MEFM). The chapter is broken down into the following sections:

- Admin (see “Administration (Admin)” on page 24)
- Login and User Administration (see “Login and user administration” on page 31)
- EXPEC (see “EXPEC” on page 33)
- M3900 (see “M3900” on page 39)
- File servers (see “File servers” on page 44)
- Viewing Log Files (see “Viewing Log files” on page 48)

When you first enter the MEFM by entering the MEFM’S URL in your browser address window (for example, **http://localhost:8080/mefm),** you will be presented with a login screen.

These navigation procedures also appear as Help Files on the MEFM.

Note: Please see “MEFM Password rules” on page 52 for the MEFM password requirements.

Administration (Admin)

The Admin section includes the following tasks

- Initial Login
- Admin Login
- Adding a User
- Admin update of User information
- Admin delete of User
- Change password for Admin type

Note: See "MEFM Password rules" on page 52 for the MEFM password requirements.

Initial Login (Admin)

Procedure 3
Initial Login

In Login window

1 Type "Admin" for the **User Name** and "admin" for **Password** (case sensitive), when first presented with the Login window. Click on **Submit**.

The Change Password page is presented.

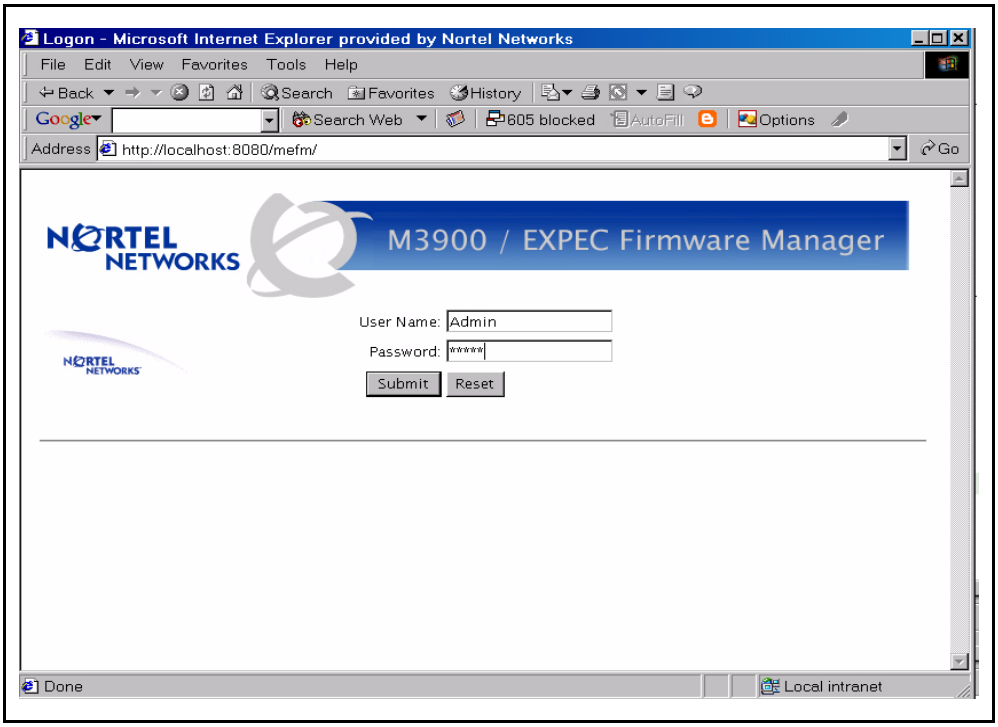
In Change Password page

2 Type **admin** for **Current Password** (case sensitive) and enter a new (compliant) password for the next two boxes. Click on **Submit**.

This procedure is now complete

Figure 2 on page 25 shows an example of the login screen.

Figure 2
Login screen



Admin Login

Procedure 4
Admin Login

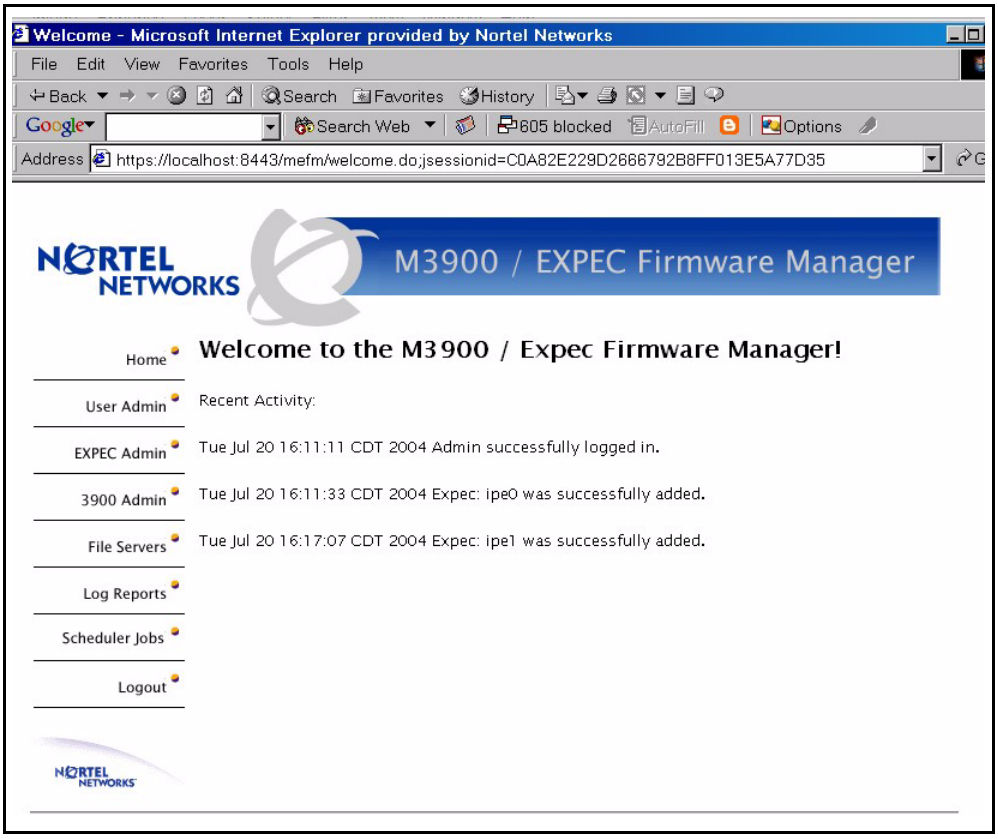
In Login window

1 Type in valid “Admin” type **User Name a**nd **Password** (case sensitive), when presented with the Login window. Click on **Submit** (see “Changing Access Type”).

The Welcome page is presented (**User Admin** option on the sidebar is optional).

This procedure is now complete

Figure 3
M3900/EXPEC Firmware Manager Home Screen



Adding a User

Procedure 5
Adding a User

In the MEFM Home screen

1 Select the **User Admin** option on the sidebar.

2 Select the **Add User** option on the sidebar.

3 Type the new users's properties in each field.

4 Click on the **Submit** button.

5 Verify the user information and click on the **Submit** button.

Note: To make changes click on the **Make Changes** link and repeat Step 3.

6 Confirm that the user was added by selecting **Home** and **User Admin** in the Activities log and in the User list.

7 Provide the user name and password to the new user.

This procedure is now complete

Figure 4 shows an example of adding a user and Figure 5 on page 27 is an example of the screen confirming a new user has been added.

Figure 4
Add a user

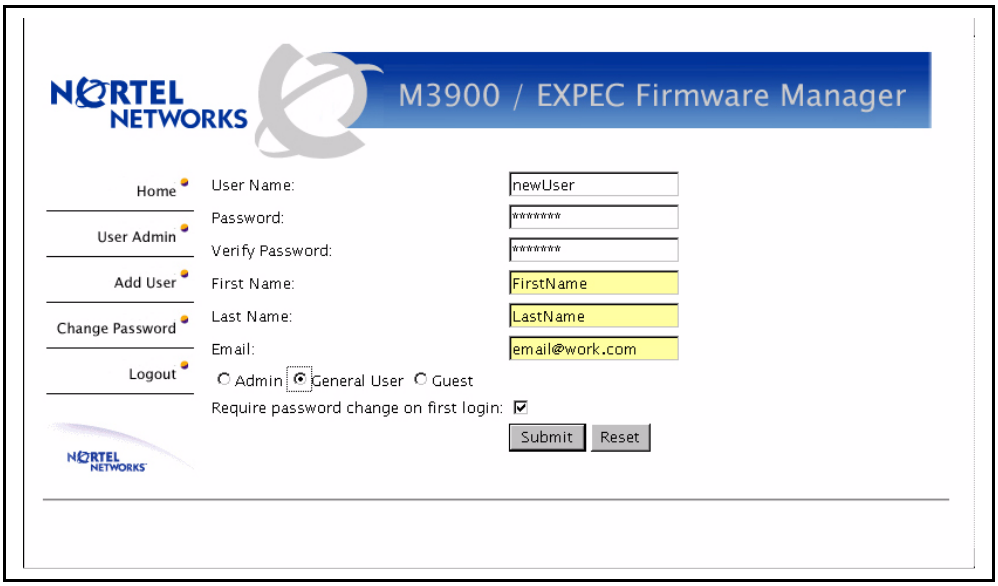


Figure 5
Confirm a new user

Admin update of user information

Procedure 6
Administrator update of user information

In MEFM home screen

1 Select the **User Admin** option on the sidebar.

2 Select a user from the user list.

3 Click on the **Edit User** button.

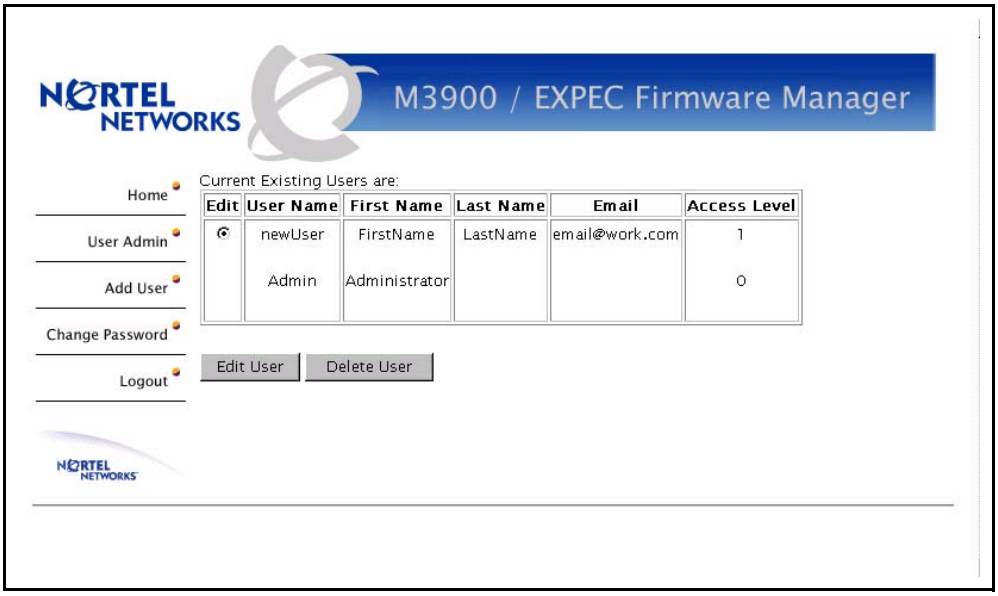
4 Make changes to the appropriate fields.

5 Click on the **Submit** button.

This procedure is now complete

Figure 6 on page 28 shows an example of the Current Existing Users list.

Figure 6
Current Existing Users list (User Admin screen)



Admin deletion of user

Procedure 7
Administrator deletion of user

In MEFM home screen

1 Select the **User Admin** option on the sidebar.

2 Select a user from the user list.

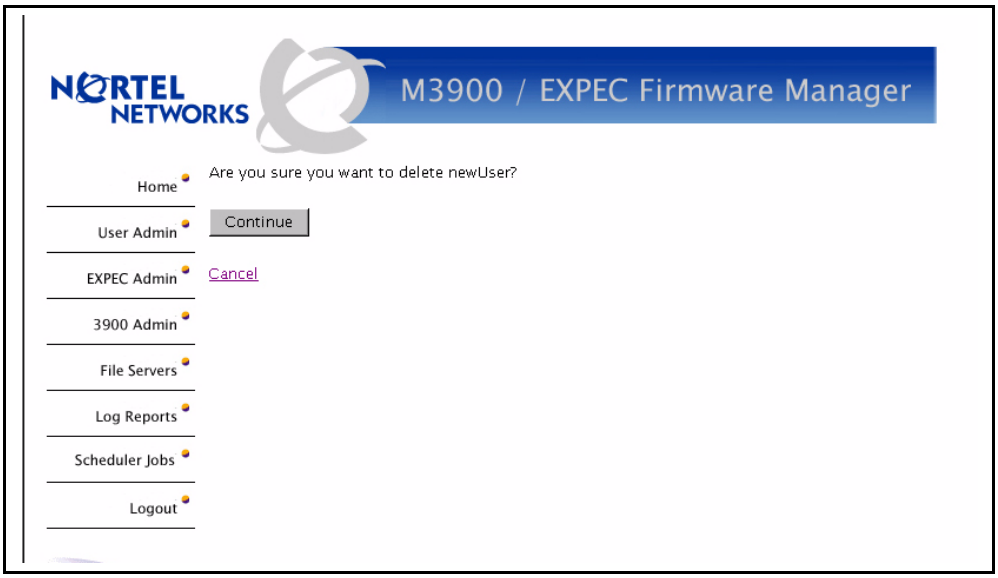
3 Click on the **Delete User** button.

4 Click on the **Continue** button to delete the user, or **Cancel** button to return to the previous screen.

This procedure is now complete

Figure 7 on page 29 shows the screen to delete a new user.

Figure 7
Delete new user



Change password for Admin type user

Procedure 8
Changing a password for Admin type user

In MEFM home screen

1 Select the **User Admin** option on the sidebar.

2 Select the **Change Password** option on the sidebar.

3 Fill in the fields with the old and new passwords.

4 Click on the **Submit** button.

This procedure is now complete

Figure 8 on page 30 shows the screen for Admin to change a user password.

Figure 8
Change password for user: Administration

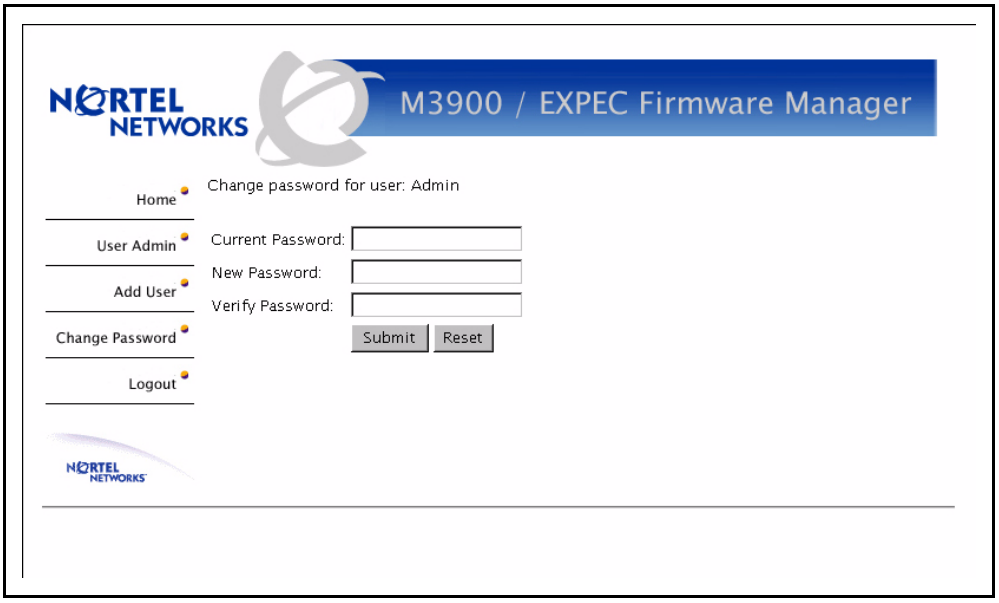
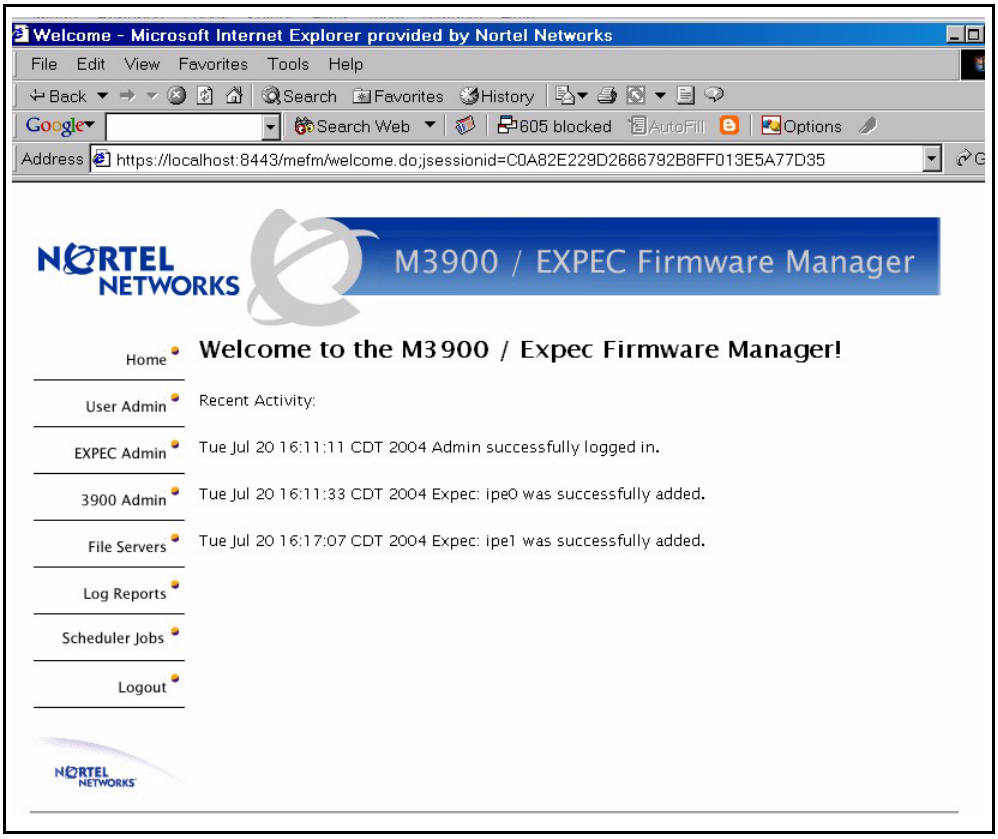


Figure 9 on page 31 shows the M3900/EXPEC Firmware Manager Home screen.

Figure 9
M3900/EXPEC Firmware Manager Home Screen



Login and user administration

The section includes the following tasks for non-Admin users

- Login
- User logout
- Changing passwords for General or Guest Users

Initial Login for General and Guest type users

Procedure 9
Initial Login

In Login window

1 Type in **User Name a**nd **Password** you have been provided with (case sensitive), and click **Submit**.

The Change Password page is presented

2 Type in the password used in Step 1 and enter a new (compliant) password for the next two boxes, and submit.

Note: See "MEFM Password rules" on page 52 for password requirements.

The user is now logged in.

Login for General and Guest type users

Procedure 10
Login

In Login window

1 Type in valid "Admin" type **User Name a**nd **Password** (case sensitive), and click **Submit**.

The "Welcome" page is presented

- When logging in as a "General or "Guest" type user, the User Admin option is not available
- When logging in as a "Guest" type user, the **Fileservers** and **Add Expec** options are not available
- No internal MEFM web page can be bookmarked

This procedure is now complete

User Logout

Procedure 11
User Logout

On MEFM Home screen

1 Click on the **Logout** option on the sidebar menu.

This procedure is now complete

Changing passwords for General or Guest type users

Procedure 12
Changing passwords for General or Guest type users

In MEFM home screen

2 Select the **Change Password** option on the sidebar.

3 Fill in the fields with the old and new passwords

4 Click on the **Submit** button.

This procedure is now complete

EXPEC

The section includes the following tasks for working with EXPECs

- Adding an EXPEC
- Deleting an EXPEC
- Verifying changes in EXPEC list
- Get EXPEC file directory information on selected EXPECs
- Determine available memory on the EXPEC
- Release EXPECs that have been selected
- Add a load to a selected EXPEC
- Delete a firmware load from the EXPEC list
- Set a boot load on an EXPEC from the EXPEC list

Adding an EXPEC

Procedure 13
Adding an EXPEC

In MEFM home screen

1. Select the **EXPEC Admin** option on the sidebar.
2. Select the **Add EXPEC** option on the sidebar.
3. Fill in the fields and add an EXPEC by clicking on the **Add EXPEC** button.
4. Verify the information and click on the **Submit** button.

   Note: If the information is not correct, click on the **Make changes** link and correct the information.

This procedure is now complete

Figure 10 on page 34 shows the Add Expec screen, and Figure 11 on page 34 shows the screen that confirms that an EXPEC was added.

Figure 10
Add EXPECs

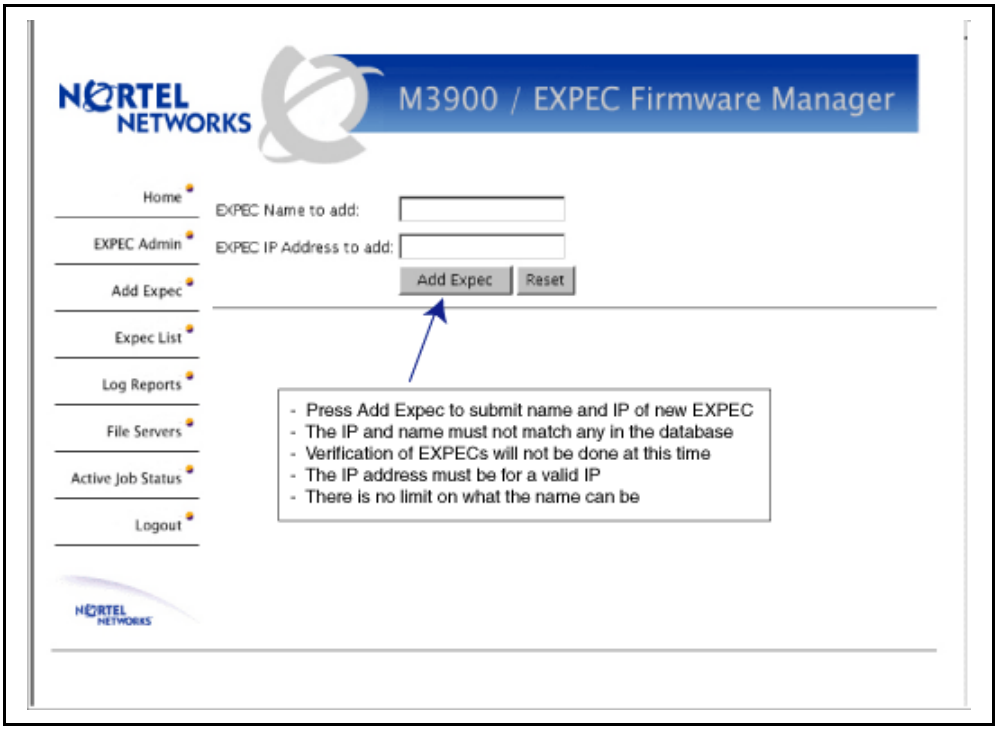
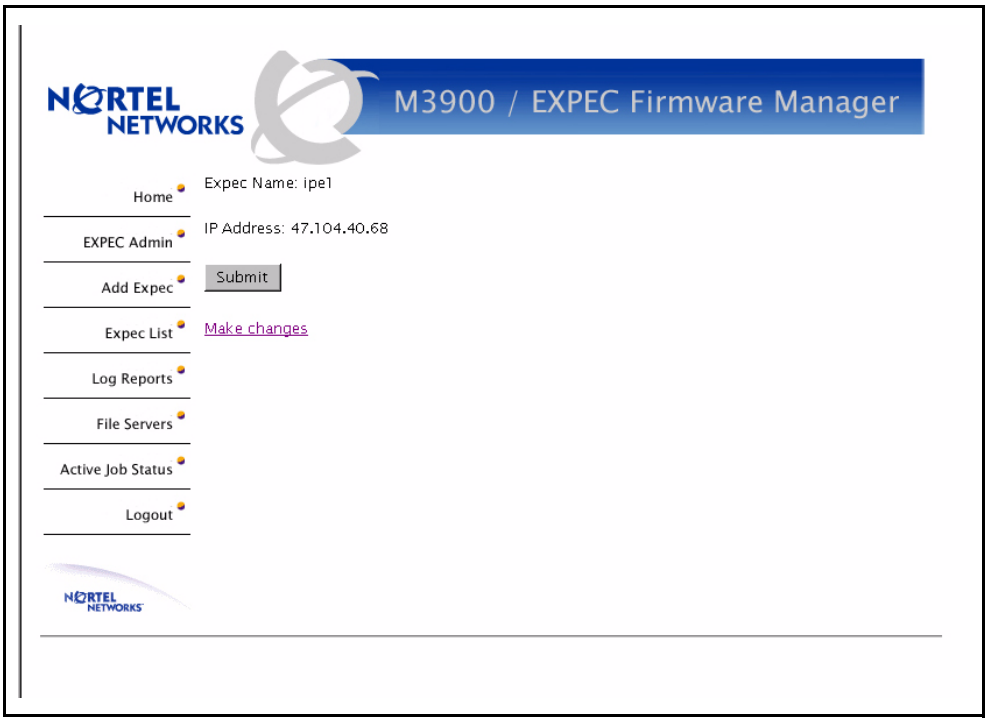


Figure 11
Confirming an EXPEC was added



Deleting an EXPEC

Procedure 14
Deleting an EXPEC

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Select the **EXPEC List** option on the sidebar.

3 Select the EXPEC to be deleted.

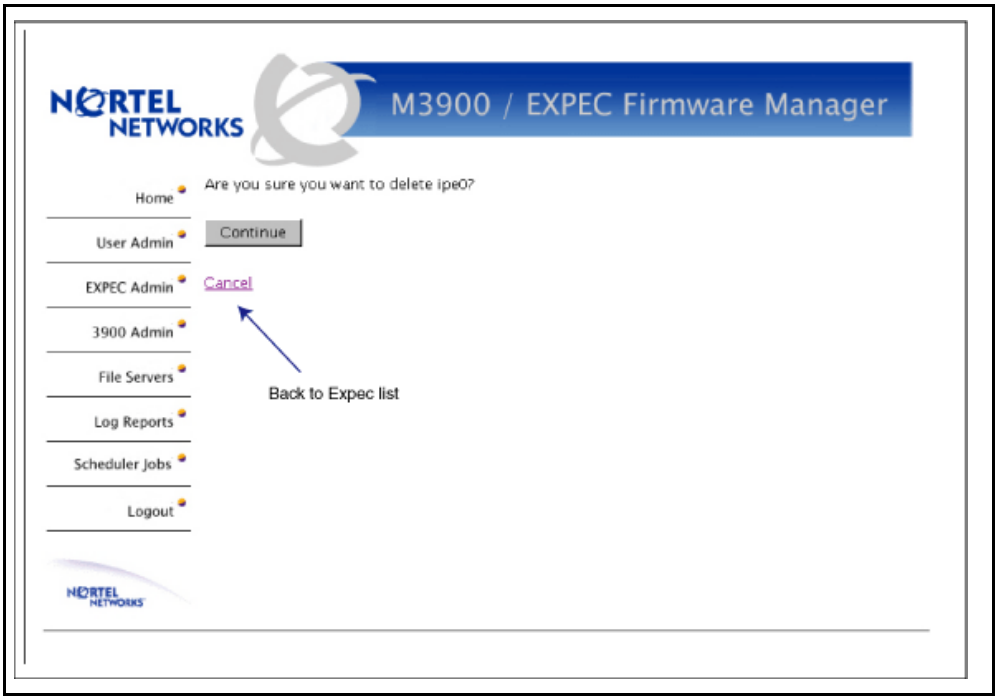
4 Click on the **Delete EXPEC** button.

5 Verify that you want to delete the EXPEC or cancel the action (the **Item removed** screen will be displayed).

This procedure is now complete

Figure 12 on page 35 shows the screen for deleting an EXPEC.

Figure 12
Deleting an EXPEC



Editing an EXPEC

Procedure 15
Editing an EXPEC

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Select the **EXPEC List** option on the sidebar.

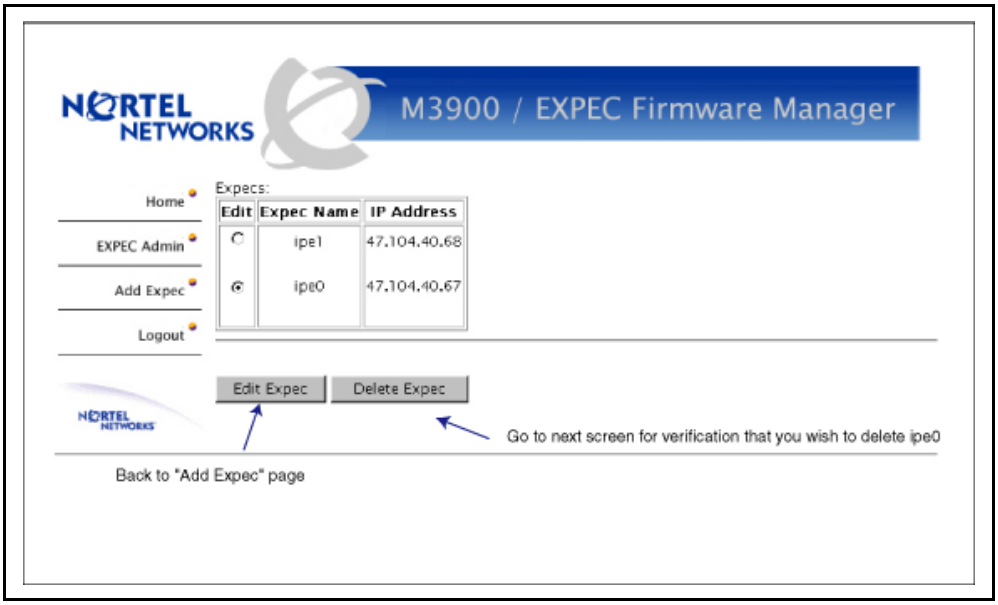
3 Select the EXPEC to be edited from the list.

4 Modify the IP address.

5 Click on the **Update** button. (Figure 13 on page 36 shows the EXPEC list).

This procedure is now complete

Figure 13
The EXPEC List



Verifying changes in EXPEC list

Procedure 16
Verifying changes in EXPEC list

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Select the **EXPEC List** option on the sidebar.

3 Verify the changes you made.

This procedure is now complete

Get EXPEC file directory information on selected EXPECs

Procedure 17
Get EXPEC file directory information on selected EXPECs

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Click on single or multiple EXPECS from the list (to select multiple EXPECs, hold down control key while selecting).

3 Click on the **Submit** button.

Note: The status message and table are updated. The table shows the directory contents of the EXPECS selected.

This procedure is now complete

Determine available memory on the EXPEC

Procedure 18
Determine available memory on the EXPEC

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Select single, or multiple, EXPECs from the list and click on the **Submit button.**

Note: A table will display the available memory on the EXPEC.

This procedure is now complete

Release EXPECs that have been selected

Procedure 19
Release EXPECs that have been selected

In Expec Admin screen

1 Select single, or multiple, EXPECs from the list and click on the **Release** button.

Note: The status message and table should update. Only the EXPECs that are selected will be released.

This procedure is now complete

Add a load to a selected EXPEC

Procedure 20
Add a load to a selected EXPEC

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Select single or multiple EXPECs from the list and click on the **Select** button.

3 Select the EXPEC/EXPECs and press the **Add Load** button.

4 Select the file server from the list and press the **List Files** button.

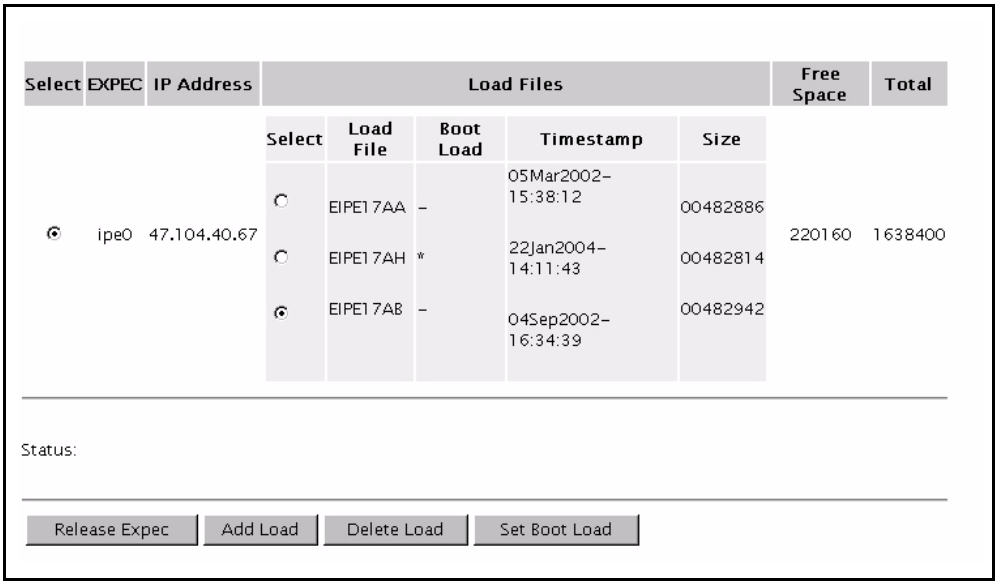
5 Select the load to be transferred from the list and click on the **Select** button.

Note: The status message and table are updated. The table shows the load that was added on each EXPEC that was selected.

This procedure is now complete

Figure 14 on page 38 shows examples of EXPEC loads.

Figure 14
EXPEC Loads



Delete a firmware load from EXPEC list

Procedure 21
Delete a firmware load from EXPEC list

In MEFM home screen

1 Select the **EXPEC Admin** option on the sidebar.

2 Select an EXPEC from the Expec List and press the **Select** button.

3 Select the firmware load from the list and press the **Delete Load** button.

Note: The status message and table are updated. The table displays only the loads that were not selected to be removed.

This procedure is now complete

Set a boot load on an EXPEC from the EXPEC list

Procedure 22
Set a boot load on an EXPEC form the EXPEC list

In MEFM home screen

1 Select the **Expec Admin** option on the sidebar.

2 Select an EXPEC from the list and click on the **Select** button.

3 Select the file on the Expec List and click on the **Set Boot Load** button.

Note: The status message and table are updated. The table displays a marker next to the new boot load. The EXPEC must now be BSY'd (busied)

or RTS'd (Returned to Service) for the changes to take effect. This must be done from the MAPCI;MTC;PM level on the switch.

This procedure is now complete

M3900

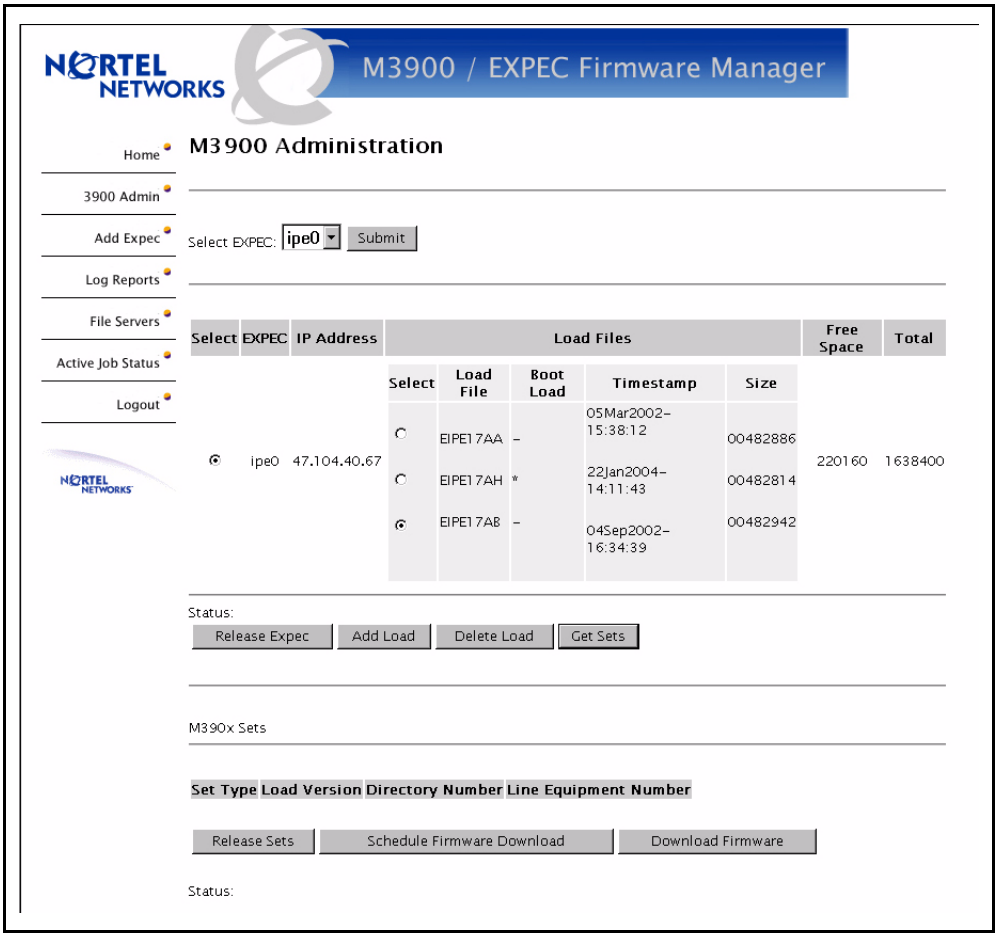
Get EXPEC file directory information on selected EXPECs (M3900)

The M3900 section includes the following tasks for M3901, M3902, M3903, M3904, and M3905 telephones:

- Get EXPEC file directory information on selected EXPECs (for M3900)
- Check available memory in EXPEC (for M3900)
- Release EXPECs that have been selected (for M3900)
- Add firmware load to selected EXPEC (for M3900)
- Download firmware to an M3900
- Download firmware to multiple M3900s on multiple EXPECS
- Delete a firmware load from the EXPEC list (for M3900)
- Schedule a firmware download

Figure 15 on page 40 shows the M3900 Administration screen.

Figure 15
M3900 Administration screen



Procedure 23
Get EXPEC file directory information on selected EXPECs (M3900)

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select an EXPEC from the list and click on the **Submit** button.

Note: The status message and table are updated. The table displays a marker next to the new boot load. If the IP address is for a valid EXPEC, the table will show the directory contents of the M3900 loads.

This procedure is now complete

Check available memory in EXPEC (M3900)

Procedure 24
Check available memory in EXPEC (M3900)

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select single or multiple EXPECs from the list and click on the **Submit** button.

3 Find the available memory in the table for the EXPEC/s.

This procedure is now complete

Release EXPECs that have been selected (M3900)

Procedure 25
Release EXPECs that have been selected (M3900)

In the M3900 Admin screen

1 Select single or multiple EXPECs from the list and click on the **Release** button.

Note: The status message and table are updated. Only the EXPECs that are selected are released.

This procedure is now complete

Add firmware load to selected EXPEC (M3900)

Procedure 26
Add firmware load to selected EXPEC (M3900)

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select single or multiple EXPECs from the list and click on the **Select** button.

3 Select single or multiple EXPECs and click on the **Add Load** button.

4 Select the file server from the list and click on the **List Files** button.

5 Select the firmware load to be transferred from the list and click on the **Select** button.

Note: The status message and table are updated. The table displays the firmware loads that were added on each EXPEC that was selected.

This procedure is now complete

Download firmware to an M3900

Procedure 27
Download firmware to an M3900

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select the **Expec List** option on the sidebar.

3 Select single or multiple EXPECs from the list and click on the **Select** button.

4 Select an EXPEC and click on the **Get Sets** button.

5 Select which set to transfer the load to and click on the **Select Firmware Download** button.

6 Select the file server from the list and press the **List Files** button.

7 Select the firmware load to be transferred from the list and click on the **Select** button.

8 Confirm the job selections and enter a job title in the form.

9 Click on the **Download Firmware** button.

10 The Active Job status is displayed. Watch the page until the job completes (or select the job and click on the **Cancel Job** button).

Note: The status message and table are updated and states that the job completed successfully. The Active Job page shows the job status as "Completed Successfully".

This procedure is now complete

Download firmware to multiple M3900s on multiple EXPECs

Procedure 28
Download firmware to multiple M3900s on multiple EXPECs

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select the **Expec List** option on the sidebar.

3 Select multiple EXPECs from the list and click on the **Get Sets** button.

4 Select multiple sets of the same type and on multiple EXPECs to transfer the load to.

5 Select which set to transfer the load to and click on the **Select Firmware Download** button.

6 Select the file server from the list and press the **List Files** button.

7 Select the firmware load to be transferred from the list and click on the **Select** button.

8 Confirm the job selections and enter a job title in the form.

9 click on the **Download Firmware** button.

10 The Active Job status is displayed. Watch the page until the job completes (or select the job and click on the **Cancel Job** button).

Note: The status message and table are updated and states that the job completed successfully. The Active Job page shows the job status as "Completed Successfully".

This procedure is now complete

Delete a firmware load from EXPEC list (M3900)

Procedure 29
Delete a non-bootable EXPEC load from EXPEC list (M3900)

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select an EXPEC from EXPEC list and press the **Select** button.

3 Select the firmware load from the list and press the **Delete Load** button.

Note: The status message and table are updated. The table displays only loads that were not selected to be removed.

This procedure is now complete

Schedule a firmware download (M3900)

Procedure 30
Schedule a firmware download (M3900)

In MEFM home screen

1 Select the **M3900 Admin** option on the sidebar.

2 Select the **Expec List** option on the sidebar.

3 Select an EXPEC from the list and click on the **Select** button.

4 Select an EXPEC and click on the **Get Sets** button.

5 Select which set to transfer the load to and click on the **Select Firmware Download** button.

6 Select the file server from the list and press the **List Files** button.

7 Select the firmware load to be transferred from the list and click on the **Select** button.

8 Confirm the job selections and enter a job title in the form.

9 Click on the **Schedule Download Firmware** button.

10 Enter start date, start time, end time, repeat interval, and comments, and click on the **Submit** button.

11 Confirm that the information is correct and click on the **Submit**.

12 The Active Job status is displayed. Watch the page until the job completes.

Note: The download will be scheduled and will occur at the designated time.

This procedure is now complete

File servers

This section includes the following tasks:

- Add a file server
- Modify a file server
- Delete a file server
- Cancel a file server
- Modify new file server before submitting to database

Add a file server

Procedure 31
Add a file server

In MEFM home screen

1 Select the **File Servers** option on the sidebar.

2 Select the **Add File Server** option on the sidebar.

3 Type in the new file server's properties in each field.

4 Click on the **Submit** button.

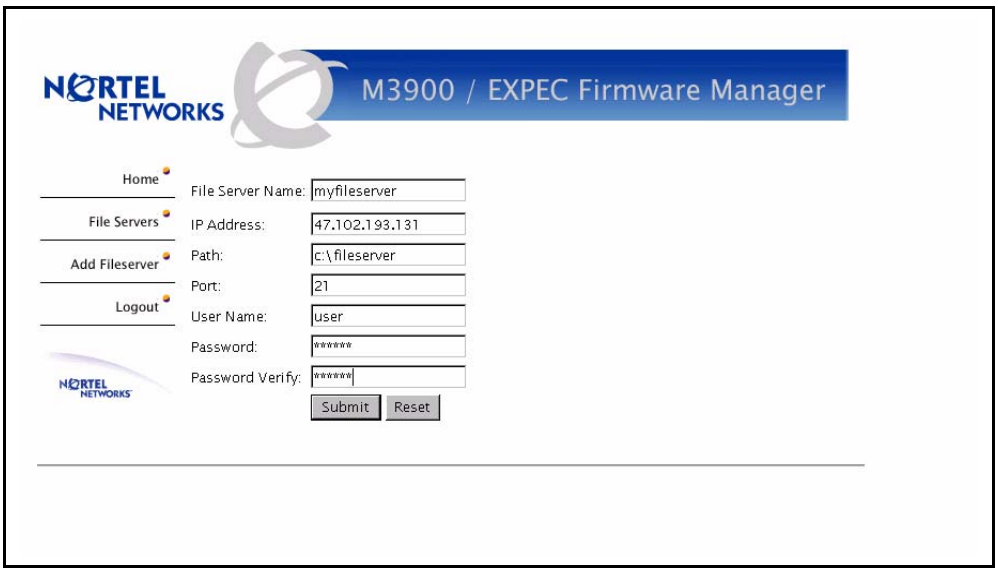
5 Verify that the information that is displayed is correct and click on the **Submit** button.

Note: The file server lists and the database are updated with the new file server.

This procedure is now complete

Figure 16 on page 44 shows the Add Fileserver screen.

Figure 16
Add a file server screen



Modify a file server

Procedure 32
Modify a file server

In MEFM home screen

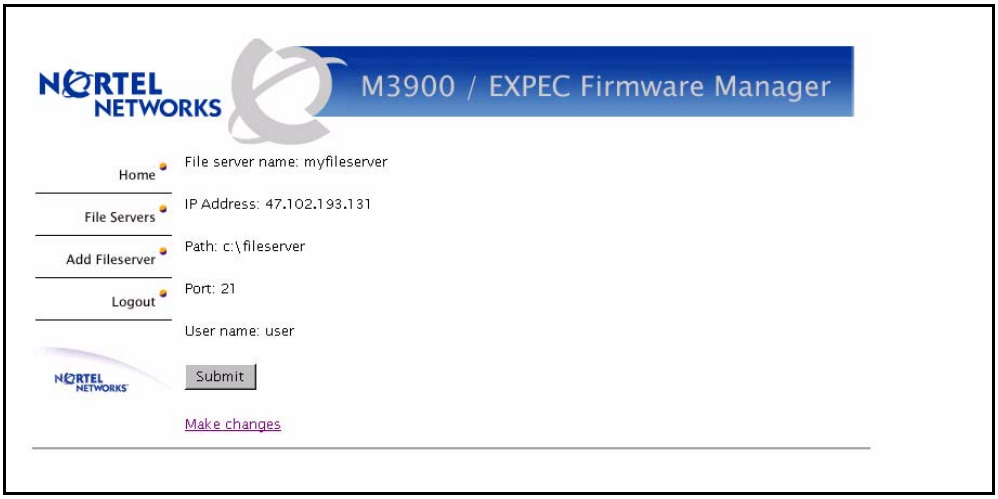
1. Select the **File Servers** option on the sidebar.
2. Select a file server from the list.
3. Click on the **Edit File Server** button.
4. Change the file server's properties in each field.
5. Click on the **Submit** button.
6. Verify that the information that is displayed is correct and click on the **Submit** button.

   Note: The file server lists and the database are updated with the new information.

This procedure is now complete

Figure 17 on page 45 shows the screen to confirm file server information.

Figure 17
Confirm file server information



Delete a file server

Procedure 33
Delete a file server

In MEFM home screen

1. Select the **File Servers** option on the sidebar.
2. Select a file server from the list.
3. Click on the **Delete File Server** button.

4 Confirm that the file server to be deleted is the correct one.

5 Click on the **Submit** button.

6 Verify that the information that is displayed is correct and click on the **Submit** button.

Note: The file is deleted and the server lists and the database are updated.

This procedure is now complete

Cancel a file server deletion

Procedure 34
Cancel a file server deletion

In MEFM home screen

1 Select the **File Servers** option on the sidebar.

2 Select a file server from the list.

3 Click on the **Delete File Server** button.

4 View the “Confirm the file server deleted” page.

5 Click on the **Cancel** button.

Note: The file is not deleted and the server lists and the database are intact.

This procedure is now complete

Modify new file server before submitting to database

Procedure 35
Modify new file server before submitting to database

In MEFM home screen

1 Select the **File Servers** option on the sidebar.

2 Select a file server from the list.

3 Click on the **Edit File Server** button.

4 Click on the **Submit** button.

5 The **Confirm File Server Fields** page is displayed.

6 Click on the **Make Changes** link (the **Add FTP file server** page is displayed).

7 Modify the fields and click on the **Submit** button.

8 Verify that the information that is displayed is correct and click on the **Submit** button.

Note: The file server lists and the database are updated with the new information.

This procedure is now complete

Figure 18 on page 47 shows an example of file server errors.

Figure 18
File server errors

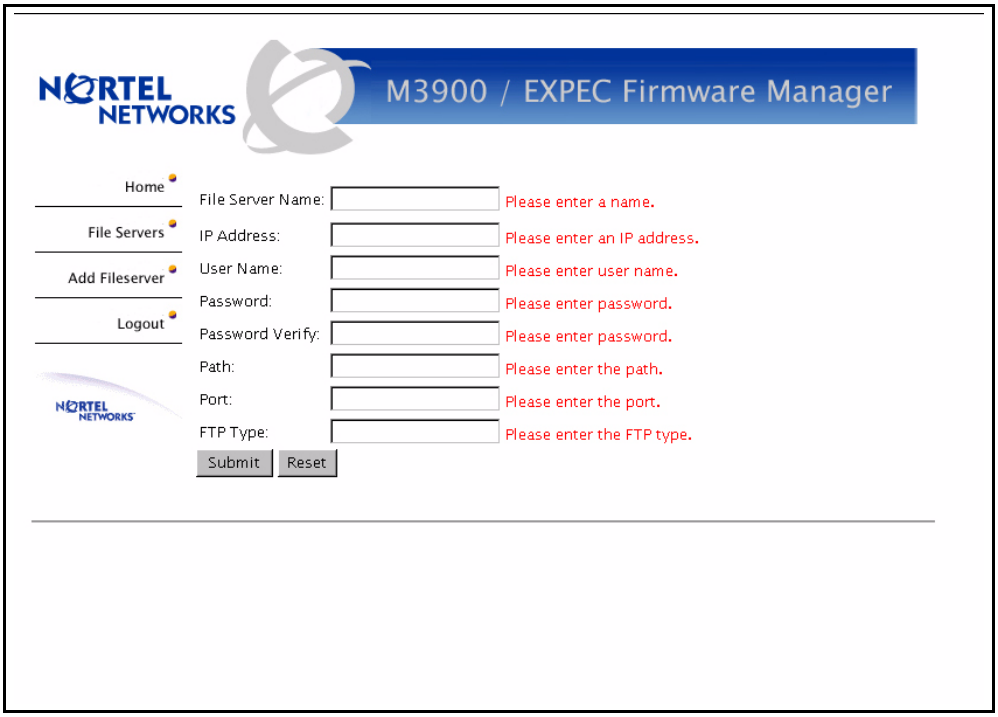
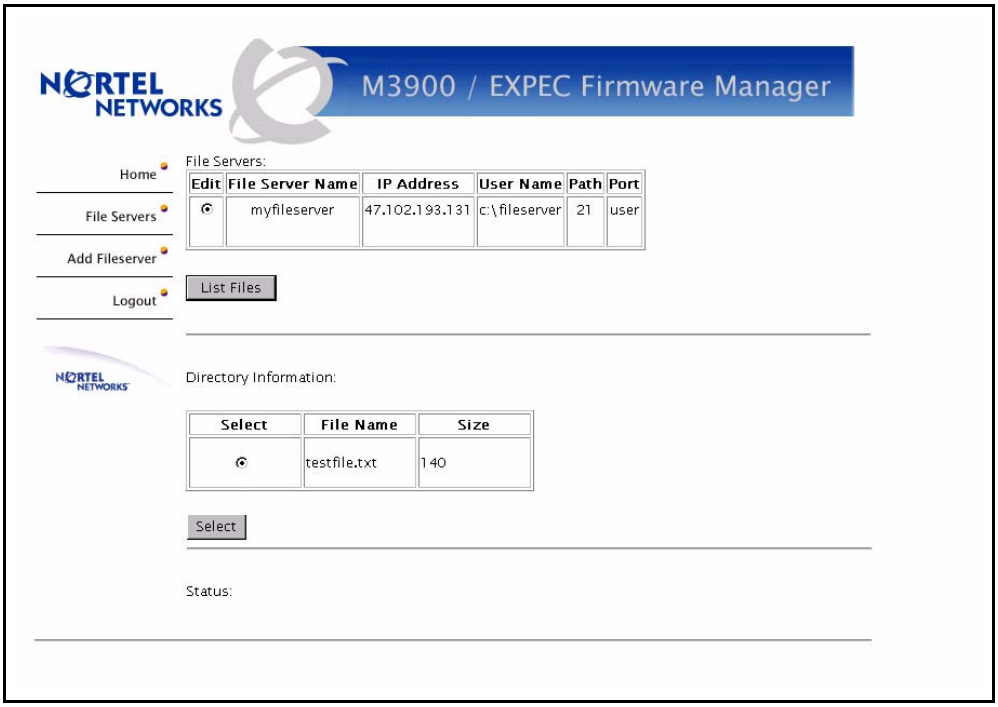


Figure 19 on page 48 shows the screen to list and select file servers.

Figure 19
List file server and select load



Viewing Log files

This section includes information about how to view Log Files.

View log files

Procedure 36
View logfiles

In MEFM home screen

1 Select the **Log Reports** option on the sidebar.

2 From the pull-down menu, select a log file to view.

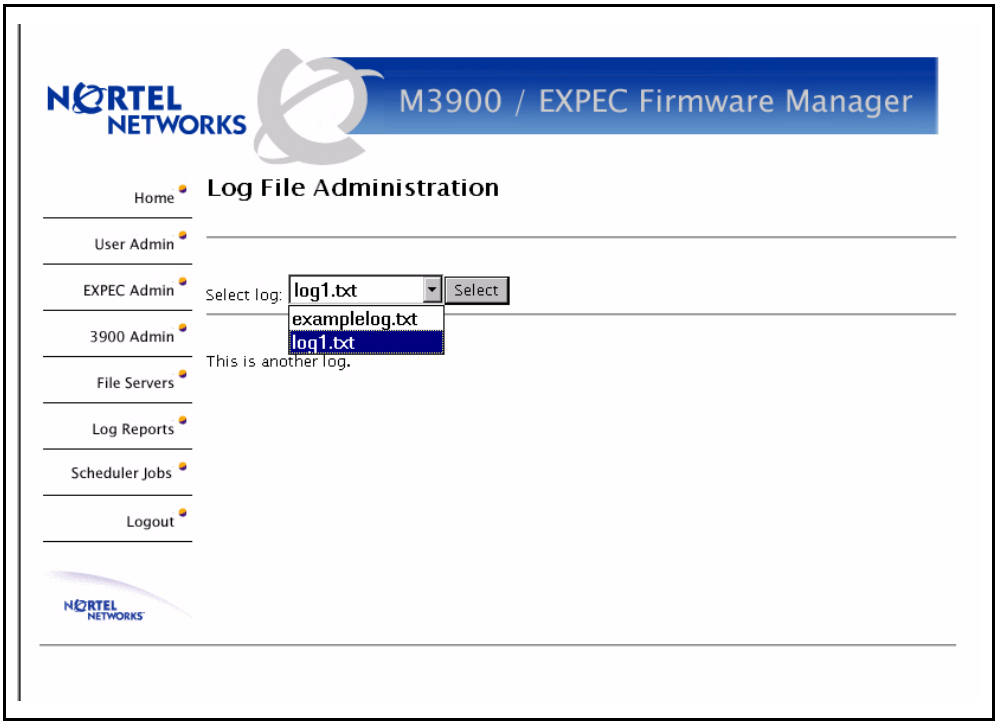
3 Click on the **Select** button.

Note: The log file contents are displayed.

This procedure is now complete

Figure 20 on page 49 shows the Log File Administration screen.

Figure 20
View log files



Security

Security benefits of the M3900/EXPEC Firmware Manager

The MEFM/EXPEC firmware down loader application provides the following capabilities:

- secure page indication in toolbar
- allows user to change password
- provides the following levels of user access and privileges:
  - — Admin – an administrator can add users
  - — General user – can add EXPECS and fileservers
  - — Guest user – can download files
- SSL – Secure Socket Level (SSL) is used to secure communication between client and server
- encryption – all passwords, IP addresses and similar information are encrypted
- log of major events – users who are active on the system (logged in) are logged in a file and displayed as recent activity on the main page
- Login – Admin

For Administrator login, “Admin” is the user name and password for the first-time login.

Note: Bookmarks cannot be set within the application.

See “MEFM Password rules” on page 52 for MEFM password requirements.

MEFM Password rules

Table 2 contains the requirements for M3900/EXPEC Firmware Manager (MEFM) passwords.

Table 2
MEFM Password requirements

Your password must	Your password must not
contain at least 8 characters.	be a previously used password.
contain both upper and lower case letters.	be a password that matches an account name.
contain at least one number or symbol.	have sequentially repeating characters.
	contain: • a space • editing characters (@, #, $) • field separator characters (:, or ;) • single or double quotation marks
	contain letters in forward or reverse alphabetic sequence.
	contain letters in forward or reverse keyboard patterns or sequence, for example, “qwerty”.
	contain only numbers or only punctuation characters.
	contain the same character for the first three positions.

List of terms

API	Application Programming Interface
DMS	Digital Multiplex System
EIPE	Enhanced Intelligent Peripheral Equipment
EXPEC	Enhanced Extended Peripheral Equipment Controller
GUI	Graphic User Interface
IPE	Intelligent Peripheral Equipment
JRE	Java Runtime Environment
MAP	Maintenance and Administration Position.
MAPCI	Maintenance and Administration Position Command Interpreter
MEFM	M3900/EXPEC Firmware Manager
MSL	Meridian Stored Logic
NMS	Network Management System
OA&M	Operations, Administration, and Maintenance
ODBMS	Object Oriented Database Management System
SNMP	Simple Network Management Protocol
SSL	Secure Socket Layer
SWACT	Switch Activity
UTR	Universal Tone Receiver
WUI	Web User Interface

Nortel Networks Meridian SL-100/Communication Server 2100

M3900/EXPEC Firmware Manager

User Guide

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Publication number: 555-4001-317
Product release: SE07
Document release: Standard 01.04
Date: January 2005
Printed in the United States of America.

NORTEL