

Nortel CallPilot

High Availability: Installation and Configuration

NN44200-311

Document status: Standard
Document version: 01.18
Document date: 23 April 2010

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Publication History

April 2010
CallPilot 5.0 Standard 1.18 of the *CallPilot High Availability: Installation and Configuration* is up-issued to include the procedure for Installing the AutoStart software on the replacement server for Chapter 6 Maintaining a High Availability system and update Chapter 7 Upgrades, migrations, and feature expansion with the procedure for Configuring the replacement server using the Configuration Wizard.

January 2010
CallPilot 5.0, Standard 1.17 of the *CallPilot High Availability: Installation and Configuration* is up-issued to properly identify CP1 and CP2 as replacement or existing servers.

December 2009
CallPilot 5.0, Standard 1.16 of the *CallPilot High Availability: Installation and Configuration* is up-issued to include changes in the chapter Call Pilot Configuration Wizard.

November 2009
CallPilot 5.0, Standard 1.15 of the *CallPilot High Availability: Installation and Configuration* is up-issued to include changes in the chapter Install and configure the High Availability pair.

October 2009
CallPilot 5.0, Standard 1.14 of the *CallPilot High Availability: Installation and Configuration* is up-issued to change Chapter 3 to Preparing for Installation.

October 2009
CallPilot 5.0, Standard 1.13 of the *CallPilot High Availability: Installation and Configuration* is up-issued to add instructions on RAID splitting on HA systems in the section Maintaining a High Availability system.

June 2009
CallPilot 5.0, Standard 1.12 of the *CallPilot High Availability: Installation and Configuration* is up-issued to update Install PEPs and Uninstalling PEPs procedures into Chapter 6 Maintaining a High Availability system.

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May 2009
CallPilot 5.0, Standard 1.11 of the *CallPilot High Availability: Installation and Configuration* is up-issued to add a CallPilot Manager, Channel Monitor section into Chapter 6 Maintaining a High Availability system.

March 2009
CallPilot 5.0, Standard 1.10 of the *CallPilot High Availability: Installation and Configuration* is up-issued to add a procedure for adding Channels/Features/Licenses in a single HA procedure.

December 2008
CallPilot 5.0, Standard 01.09 of the *CallPilot High Availability: Installation and Configuration* is up-issued to add Attention box in procedure Connecting and verifying LAN connections.

September 2008
CallPilot 5.0, Standard 01.08 of the *CallPilot High Availability: Installation and Configuration* is up-issued to include information about ACD queue in the procedure Configuring CP1 using the CallPilot Configuration Wizard and content in the Introduction section of the chapter Upgrades, migrations, and feature expansion.

September 2008
CallPilot 5.0, Standard 01.07 of the *CallPilot High Availability: Installation and Configuration* is up-issued with the content in the procedure Configure the existing server and replacement server using the CallPilot Configuration Wizard and with the content in the section Switch Planning.

May 2007
CallPilot 5.0, Standard 01.06 of the *CallPilot High Availability: Installation and Configuration* is issued for general release.

April 2007
CallPilot 5.0, Standard 01.05 of the *CallPilot High Availability: Installation and Configuration* is issued for general release.

April 2007
CallPilot 5.0, Standard 01.04 of the *CallPilot High Availability: Installation and Configuration* is issued for general release.

April 2007
CallPilot 5.0, Standard 01.03 of the *CallPilot High Availability: Installation and Configuration* is issued for general release.

March 2007
CallPilot 5.0, Standard 01.02 of the *CallPilot High Availability: Installation and Configuration* is issued for general release.

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March 2007

CallPilot 5.0, Standard 01.01 of the *CallPilot High Availability: Installation and Configuration* is issued for general release.

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Chapter 1
How to get help

This chapter explains how to get help for Nortel products and services.

Getting help from the Nortel Web site

The best way to get technical support for Nortel products is from the Nortel Technical Support Web site:

www.nortel.com/support

This site provides quick access to software, documentation, bulletins, and tools to address issues with Nortel products. From this site, you can:

- download software, documentation, and product bulletins
- search the Technical Support Web site and the Nortel Knowledge Base for answers to technical issues
- sign up for automatic notification of new software and documentation for Nortel equipment
- open and manage technical support cases

Getting help over the phone from a Nortel Solutions Center

If you don not find the information you require on the Nortel Technical Support Web site, and have a Nortel support contract, you can also get help over the phone from a Nortel Solutions Center.

In North America, call 1-800-4NORTEL (1-800-466-7835).

Outside North America, go to the following Web site to obtain the phone number for your region:

www.nortel.com/callus

Getting help from a specialist by using an Express Routing Code

To access some Nortel Technical Solutions Centers, you can use an Express Routing Code (ERC) to quickly route your call to a specialist in your Nortel product or service. To locate the ERC for your product or service, go to:

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www.nortel.com/erc

Getting help through a Nortel distributor or reseller

If you purchased a service contract for your Nortel product from a distributor or authorized reseller, contact the technical support staff for that distributor or reseller.

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Chapter 2 Introduction

In this chapter

"Overview of High Availability" (page 15)

"High Availability hardware" (page 16)

"High Availability network" (page 18)

"AutoStart software" (page 18)

"Failovers" (page 20)

"Limitations" (page 20)

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Overview of High Availability

In a High Availability configuration, a pair of peer CallPilot servers are used in the place of a single server. Both servers are connected to the same switch (Meridian 1 or Communication Server 1000 [CS 1000]) and they are configured so that one CallPilot server is active (that is, processing calls) and the other server is in standby mode.

The standby server takes over if the active server fails (due to predefined failure conditions), or if the administrator decides to manually switch over to the standby server. This process is known as a failover. For more information, see "Failovers" (page 20).

To support a High Availability configuration for CallPilot, a combination of hardware and third-party software is required, as follows:

- There is an entry in the CallPilot 5.0 keycode for the High Availability feature.
- High Availability is supported only on the 1005r and 1006r platforms. For more information about the hardware, see "High Availability hardware" (page 16).

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- System control and monitoring and disk mirroring of the High Availability system is provided by the EMC AutoStart software. For more information, see "AutoStart software" (page 18).

High Availability hardware

High Availability is supported only on the 1005r and 1006r platforms. Two servers, either a 1005r pair or 1006r pair, are required for the High Availability configuration.

The 1005r and 1006r servers are equipped with two extra dual-Ethernet interface cards that provide the following three connections between the two High Availability servers:

- The **Heartbeat signal (HB1)** connection is used to monitor the state of the active server.
- The **Heartbeat backup signal (HB2)** connection is a backup of HB1 in case the IP interface for HB1 fails.
- The **Mirroring** connection is used for mirroring data between the two servers.

ATTENTION

These three connections are critical to High Availability operation. Nortel recommends that these three connections be made directly, using crossover cables instead of a hub or switch. Failure of any device such as a hub or switch in the signal path can create an unwanted results.

Heartbeat signals

The standby server needs a way to tell if the active server is running to know when to take control if the active serves ceases to run. This is accomplished through the use of a heartbeat signal that is communicated between the active and standby server.

Due to the importance of the heartbeat signal, a pair of physical links (Heartbeat 1 and Heartbeat 2) between the active and the standby servers are used to transport the signal. This way, if either of the links fail, the heartbeat signal still has a path between the two servers.

Mirroring

In order for the standby server to take over call processing, the server must have the same configuration as the failed active server and have access to all of the data (such as the users and the Application Builder applications) on the failed server. This task is accomplished by mirroring data between the two servers. This way, if an active server fails, the standby server of the pair has an up-to-date copy of all of the data from the active server so it can take over the role of the failed active server.

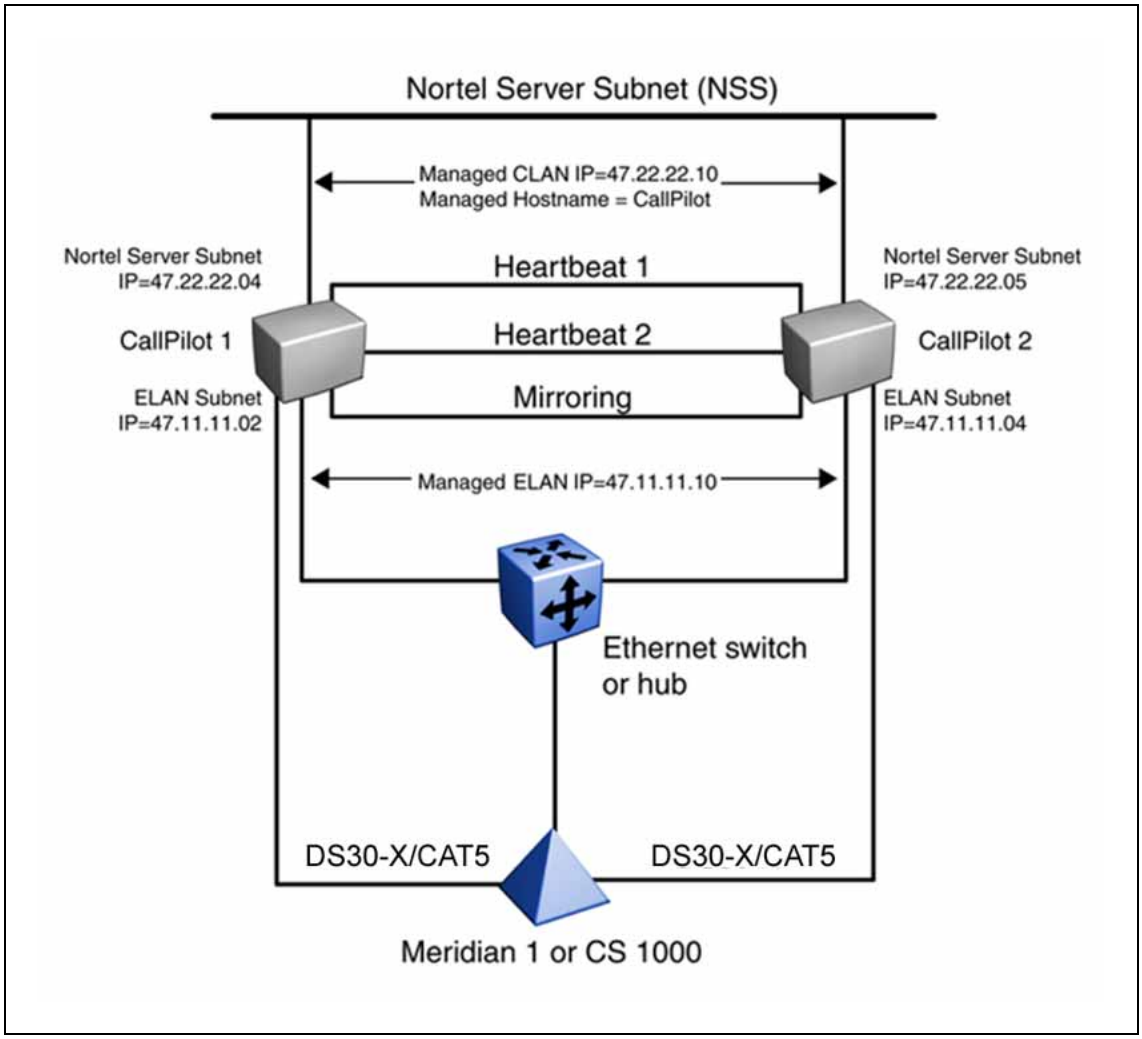
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Managed TCP/IP settings

To the external IP network (including the end users, the switch, and the CallPilot Web applications) the pair of servers must look like one server. To accomplish this, Managed IP (also called virtual IP) addresses and host name settings are used. The Managed IP addresses and host name settings allow the pair of CallPilot High Availability servers to appear as one IP address to the outside IP network.

The following figure shows two CallPilot servers and the connections between them.

Figure 1
Example of a High Availability system



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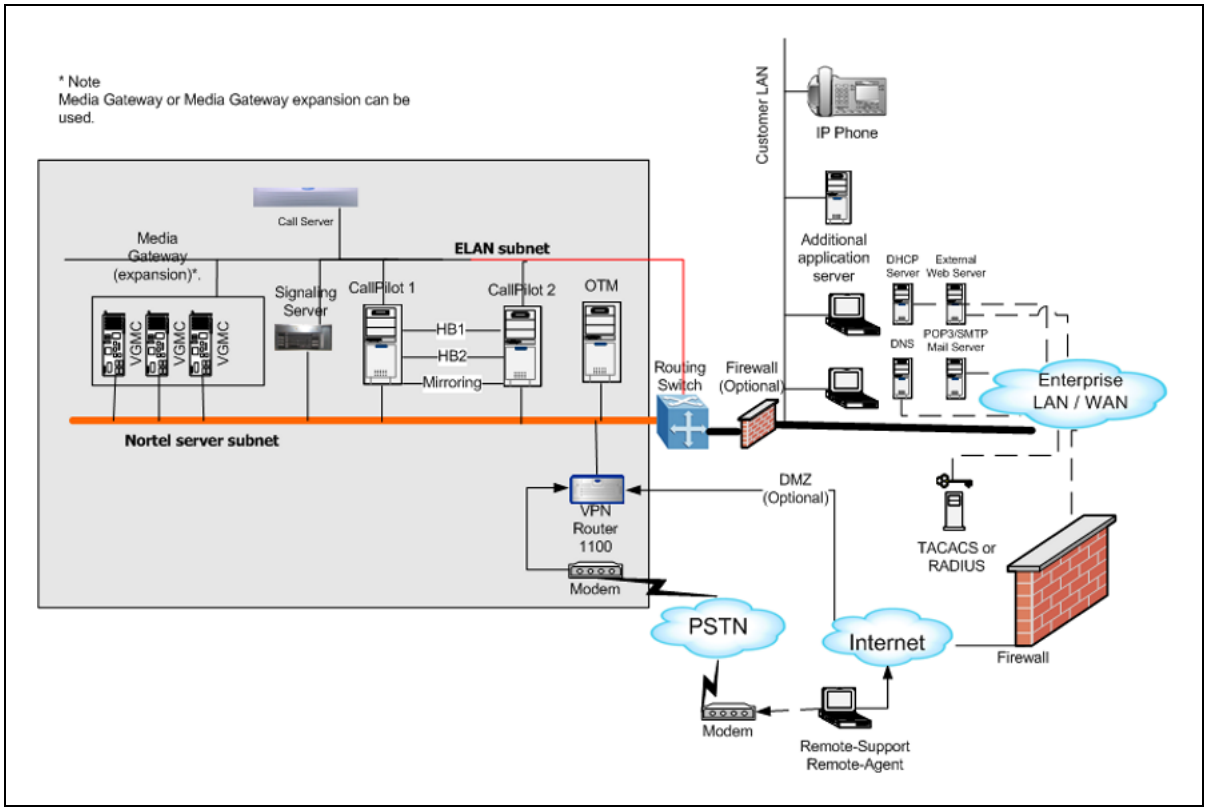
Switch connectivity

Both CallPilot servers have a DS30 connection to the switch. As a result, the number of MGate cards required in the switch is double the number required for a single CallPilot server. For a pair of servers providing 192 channels, the switch must have a total of 12 MGate cards installed (six MGate cards per 192 channels times two servers). At any one time only one of the two CallPilot servers is up and running. Therefore, even though there are 384 channels configured on the switch, a maximum of 192 channels are available for call processing at any one time.

High Availability network

The following figure shows the network containing the two High Availability servers (CallPilot 1 and CallPilot 2).

Figure 2
High Availability network



AutoStart software

The AutoStart software is installed on each server and performs the following functions:

- Monitors the status of both servers in the High Availability pair.

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- Performs an automatic failover when a failure condition is detected.
- Keeps the hard drives on both servers synchronized through a mirroring process.
- Manages the IP addresses of the ELAN subnet and Nortel Server subnet, making the server pair appear as a single server to the network.
- Provides a mechanism for administrator-initiated (manual) failovers.

The CallPilot High Availability system uses the following components of the AutoStart software:

- AutoStart Agent—The Agent software resides on both CallPilot servers and provides the disk mirroring and managed IP services. The AutoStart Agent includes the set of processes that performs the AutoStart monitoring and management functionality.
- AutoStart Backbone—The AutoStart Backbone includes the processes running on the AutoStart Agent that provide messaging services.
- AutoStart Console—The Console software provides a visual interface to the High Availability server pair and is used to administer the Agent software installed on the CallPilot servers. By default, the Console software is installed on both CallPilot servers so administration of the pair can be done when the administrator is logged on to either server; however, the Console software can also be installed on a PC on the Nortel Server subnet for remote administration.

  The AutoStart Console provides the following:

  — A centralized monitoring and administration tool for taking managed resources and resource groups online and offline, which reduces administrative overhead.

  — A real-time reflection of object states. As soon as AutoStart detects a state change for an object, the graphical interface updates its display to reflect that change. See "Checking the status of the servers and failovers" (page 198).

  — An interface to define and configure all the managed resources from a single local or remote location.

The AutoStart software is manually installed when you configure the pair of CallPilot servers with the High Availability feature. The required AutoStart software is included on the CallPilot 5.0 Applications CD.

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ATTENTION

This version of the software is tested and verified to work correctly with the CallPilot 5.0 High Availability feature. The AutoStart software on the CallPilot server must not be updated or patched unless the new software or patch is tested and validated by Nortel.

Failovers

In a High Availability system, one server is active while the other is in the standby mode. If a predefined failure occurs on the active server, the standby server comes into service, becoming the active server. The process of the standby server becoming the active server is called a failover.

For more information, see Chapter 4 "Failover overview" (page 37).

Limitations

The limitations of the High Availability system include the following:

- The two High Availability servers must be collocated. The locations of the servers are limited by the length of the cables that connect the High Availability servers to the Meridian 1 or CS 1000 switch. The 1005r High Availability pair can either use DS30X or CAT5 cables while the 1006r High Availability pair can only use CAT5 cables. The maximum length of the DS30X cables is 60 feet or 18.29 meters long. The maximum length of the CAT5 cables is 984 feet or 300 meters long.
- Failover limitations include the following:
  - Any connections (that is, calls in progress) to the active CallPilot server are lost after a automatic or manual failover occurs.
  - There is a window during the failover when neither the active nor standby server is available; therefore, the CallPilot system is inaccessible. In the default configuration, voice processing is not available for approximately 10 minutes after the failover is started. This time can be decreased by disabling the DSP diagnostics. Other services, such as Internet Message Access Protocol (IMAP) connections, may be available in a shorter window.
  - Only a limited number of automatic failover cases are supported, as follows:
    - A reboot or shut down of the active server.
    - Loss of connection on the ELAN at the TCP/IP level (for example, failure of the server to respond to the ping command for a specified period of time).

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  - Failure of one or more of the critical CallPilot services. The system attempts to restart a failed critical CallPilot service three times before resorting to a failover.

- Mirroring limitations include the following:
  - Due to the way the AutoStart software does disk mirroring, the mirrored drives cannot be accessed on the standby server while in use on the active server. This means that the multimedia file system (MMFS), database, and Application Builder applications cannot be accessed on the standby server while the active server is up and running.
  - There is no way to break the mirroring between the active and standby servers (to make the mirrored drives visible on the standby server while the active server is running) without also temporarily taking down the active server.

- Performance Enhancement Packages (PEPs) must be applied individually to each server in the High Availability pair.
- The CallPilot 5.0 High Availability feature does not support geographic redundancy.
- The Voice Profile for Internet Mail (VPIM) prefix on both servers in a High Availability server must be the same.
- If the High Availability system is part of a Windows Domain, both servers (CP1 and CP2) must belong to the same Windows domain.
- The CallPilot system monitor cannot run on the standby server as there are no database, MMFS access, or CallPilot services running.
- If scheduled backups are performed to a local tape drive on the active server, the backup fails after a switchover unless the tape drive is physically moved and connected to the standby server or a second tape drive is connected to the standby server.
- If scheduled backups are preformed to a remote backup device (that is, a network share), the same backup device must be configured through CallPilot Manager on both servers in the pair. If the device is only defined on the active server, any scheduled backups to that device fail on the standby server.
- The computer names of the High Availability servers must contain only alphanumeric characters. Nonalphanumeric characters (such as a hyphen [-]) are not allowed.
- In CallPilot 5.0, you can use the High Availability feature with CallPilot and Contact Center 6 and 7 integration, but it requires supplemental PEP updates to CS 1000, Contact Center, and CallPilot. For more information about CallPilot High Availability and Contact Center Inter-working, see

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DTR-2007-0069-Global-Rev12 – CallPilot Release 5.0 (see appendices specific for High Availability and Contact Center inter-working)

Reference documents

For a list of all CallPilot documents, see the following CallPilot Customer Documentation Map.

Call Pilot Customer Documentation Map

Fundamentals

- Fundamentals Guide (NN44200-100)
- Library Listing (NN44200-117)

Planning and Engineering

- Planning and Engineering Guide (NN44200-200)
- Network Planning Guide (NN44200-201)
- Converging the Data Network with VoIP Guide (NN43001-260)
- Solution Integration Guide for Communication Server 1000/Call Pilot/Contact Center/Telephony Manager (NN49000-300)

Installation and Configuration

- Upgrade and Platform Migration Guide (NN44200-400)
- High Availability: Installation and Configuration (NN44200-311)
- Installation and Configuration Task List Guide (NN44200-306)
- Quickstart Guide (NN44200-313)
- Installer Roadmap (NN44200-314)

Server Installation Guides

- 201i Server Hardware Installation Guide (NN44200-301)
- 202i Server Hardware Installation Guide (NN44200-317)
- 202i Installer Roadmap (NN44200-319)
- 703t Server Hardware Installation Guide (NN44200-304)
- 1002rp Server Hardware Installation Guide (NN44200-300)
- 1002rp System Evaluation (NN44200-318)
- 1005r Server Hardware Installation Guide (NN44200-308)
- 1005r System Evaluation (NN44200-316)
- 1006r Server Hardware Installation Guide (NN44200-320)
- 600r Server Hardware Installation Guide (NN44200-307)
- 600r System Evaluation (NN44200-315)

Configuration and Testing Guides

- Meridian 1 and CallPilot Server Configuration Guide (NN44200-302)

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T1/SMDI and CallPilot Server Configuration Guide (NN44200-303)

Communication Server 1000 System and CallPilot Server Configuration Guide (NN44200-312)

Unified Messaging Software Installation

Desktop Messaging and My CallPilot Installation and Administration Guide (NN44200-305)

Administration

Administrator Guide (NN44200-601)

Software Administration and Maintenance Guide (NN44200-600)

Meridian Mail to CallPilot Migration Utility Guide (NN44200-502)

Application Builder Guide (NN44200-102)

Reporter Guide (NN44200-603)

Maintenance

Troubleshooting Reference Guide (NN44200-700)

Preventative Maintenance Guide (NN44200-505)

Server Maintenance and Diagnostics

201i Server Maintenance and Diagnostics Guide (NN44200-705)

202i Server Maintenance and Diagnostics Guide (NN44200-708)

703t Server Maintenance and Diagnostics Guide (NN44200-702)

1002rp Server Maintenance and Diagnostics Guide (NN44200-701)

1005r Server Maintenance and Diagnostics Guide (NN44200-704)

1006r Server Maintenance and Diagnostics Guide (NN44200-709)

600r Server Maintenance and Diagnostics Guide (NN44200-703)

Contact Center Manager Communication Server 1000/Meridian 1 & Voice Processing Guide (297-2183-931)

End User Information

End User Cards

Unified Messaging Quick Reference Card (NN44200-111)

Unified Messaging Wallet Card (NN44200-112)

A-Style Command Comparison Card (NN44200-113)

S-Style Command Comparison Card (NN44200-114)

Menu Interface Quick Reference Card (NN44200-115)

Alternate Command Interface Quick Reference Card (NN44200-116)

Multimedia Messaging User Guide (NN44200-106)

Speech Activated Messaging User Guide (NN44200-107)

Desktop Messaging User Guide for Microsoft Outlook (NN44200-103)

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Desktop Messaging User Guide for Lotus Notes (NN44200-104)

Desktop Messaging User Guide for Novell Groupwise (NN44200-105)

Desktop Messaging User Guide for Internet Clients (NN44200-108)

Desktop Messaging User Guide for My CallPilot (NN44200-109)

Voice Forms Transcriber User Guide (NN44200-110)

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Chapter 3
Preparing for Installation

In this chapter

"Introduction" (page 25)

"Management of the TCP/IP network" (page 25)

"Network planning" (page 27)

"Planning the High Availability configuration" (page 28)

"High Availability system checklist" (page 29)

"Facility planning" (page 31)

"Switch planning" (page 32)

"Required hardware" (page 33)

Introduction

For detailed CallPilot 5.0 and 1005r or 1006r server information, see the *Planning and Engineering Guide* (NN44200-200).

Planning and engineering information specific to High Availability is covered in this chapter.

Management of the TCP/IP network

Each server in the pair of High Availability servers requires its own unique host name, ELAN IP address, and CLAN IP address. In addition, the pair of servers are assigned a Managed (or virtual) host name, Managed ELAN IP address, and Managed CLAN IP address to make the pair of servers look like a single CallPilot server to the end clients. The end clients include the following:

- CallPilot Reporter

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- My CallPilot
- Desktop Client
- Application Builder
- CallPilot Manager
- the switch

The managed network settings must be used by all clients. The clients do not need to access either server directly. All access must be done using the managed networking parameters. The EMC AutoStart software ensures that the currently active server responds to any requests made to either the Managed host name or IP addresses.

The CallPilot High Availability system uses managed networking settings so that common settings are used by the CallPilot clients, as follows:

- CallPilot Reporter, My CallPilot, Desktop Client, Application Builder, and CallPilot Manager (accessed using the Web) use the Managed CLAN IP address and host name.
- The switch uses the Managed ELAN IP address.

When a switchover occurs from Node 1 (CP1) to Node 2 (CP2), the CallPilot applications and the switch do not change IP settings and the clients do not notice any changes. The Managed CLAN requires IP name resolution. This means that the manage CLAN must be manually added by a Domain Name Service (DNS) administrator if you are using a DNS server as the solution or the host file must be updated on both the CP1 and CP2 servers.

For servers that are receiving the High Availability feature expansion, it is important that the current host name, CLAN IP address, and ELAN IP address are reused as the Managed host name, Managed CLAN IP address, and Managed ELAN IP address for the new High Availability pair. Reusing the network settings as the managed network settings ensures that any existing clients (for example, desktop client installations) do not have to change their configuration to access the new High Availability pair. The clients are unaware that there is now a pair of High Availability servers where there used to be a single CallPilot server.

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WARNING
If you do not reuse the existing host name, ELAN IP address, and CLAN IP address during an upgrade and you have an existing CallPilot Reporter installation with historical data, after the upgrade, all new data is recorded against the new Managed host name. Any older data collected in CallPilot Reporter does not appear.

If you do not reuse the existing host name, ELAN IP address, and CLAN IP address during an upgrade and you have existing Application Builder applications, then after the upgrade the applications must be recreated.

Network planning

In addition to the CLAN and ELAN connections, a pair of High Availability servers has three additional dedicated network interface ports for the following:

- HB1 (Heartbeat 1)
- HB2 (Heartbeat 2 backup)
- Mirror (Data mirroring between the two servers)

The NICs must be physically connected between the two servers using crossover LAN cables and must not be run through any type of switch or hub, as such a configuration is not supported.



WARNING
Crossover cables must be used to connect the NICs between the two High Availability servers.

Networking equipment (switch, hub, or router) is not supported in this configuration. The only supported configuration is the use of dedicated crossover LAN cables between the HB1, HB2, and Mirror NICs between the two High Availability servers.

The networking parameters (that is, IP address and subnet mask) for both nodes in the High Availability pair must be set before the EMC AutoStart software is installed or the High Availability pair does not work correctly (see "Install the AutoStart Agent and Console software " (page 86)). Each network connection must be on a different subnet. Nortel recommends the following values be used for the dedicated network connections:

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Table 1
Node 1

Network Interface Card (NIC)	IP address	Subnet mask
Heartbeat 1 (HB1)	192.0.0.10	255.255.255.0
Heartbeat 2 (HB2)	194.0.0.10	255.255.255.0
MIRROR	193.0.0.10	255.255.255.0

Table 2
Node 2

Network Interface Card (NIC)	IP address	Subnet mask
Heartbeat 1 (HB1)	192.0.0.11	255.255.255.0
Heartbeat 2 (HB2)	194.0.0.11	255.255.255.0
MIRROR	193.0.0.11	255.255.255.0

During the configuration of the High Availability servers, a CLAN Test IP address is required. The CLAN Test IP address can be any reliable working IP address on the CLAN subnet (Nortel server subnet). As a result, the High Availability system can ping this IP address at any time. If the CLAN subnet (Nortel server subnet) is configured, Nortel recommends that the CLAN Gateway IP address be used as the CLAN Test IP address. If the gateway is configured such that it does not reply to the ping command, another CLAN address that responds to the ping command must be used. If there is no CLAN subnet (Nortel server subnet) at the your site, enter 127.0.0.1 as the CLAN Test IP address.

Planning the High Availability configuration

During the configuration of the High Availability servers, the following information is needed by the High Availability Configuration Wizard (see Figure 32 "High Availability Configuration Wizard" (page 83)):

- User Name—This is the Windows administrator user name. Nortel recommends the use of the Windows default administrator user name (that is, administrator).

  If you use any other Windows user name, that user must have the full Windows administrative rights. Enter the name of a Windows account that is a member of the administrators group and that exists on both servers in the pair.

  Nortel recommends using the account called administrator. However, if the administrator account is renamed or another administrator account with a different name is created, use that renamed or new account.

- Server Workgroup / Domain Name—This is the Windows Workgroup / Domain name. Enter workgroup for the default Windows Workgroup

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or enter the real Windows Domain name if both servers in the High Availability pair have already joined the customer domain.

However, Nortel recommends using the Windows default workgroup to first configure the High Availability system, and then join the customer domain after the High Availability system is working (if the system has to join the domain).

- EMC AutoStart Domain Name—This is the unique name for the EMC AutoStart domain. The EMC AutoStart domain name must be the same for the pair of High Availability servers. This name must contain only alphanumeric characters and must have a maximum length of eight characters.

High Availability system checklist

Use the following table to plan and track the system settings for your High Availability servers. These settings are configured using the CallPilot Configuration Wizard and the High Availability Configuration Wizard.

Table 3
High Availability system checklist

	CP Node 1 (CP1)	CP Node 2 (CP2)
Configuration Wizard: Serial Number and Keycode page		
Serial Number		
Keycode		
Configuration Wizard: Server Information page		
Computer Name ***Note:*** Must only include alphanumeric characters.		
Time Zone		
Area Code		
Country Code		
LDAP Search Base		
Configuration Wizard: Password Information page		
Administrator password ***Note:*** Both nodes must have the same password.		
Configuration Wizard: Switch Information page		
Switch Type		
Switch Customer Number		
Switch IP Address		

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	CP Node 1 (CP1)	CP Node 2 (CP2)
Link1 TN		
Link1 Key0		
Link1 Key1		
Link2 TN		
Link2 Key0		
Link2 Key1		
Link3 TN		
Link3 Key0		
Link3 Key1		
CDN		
Configuration Wizard: Language Source Directory page		
Primary language		
Secondary language		
Configuration Wizard: CallPilot Local Area Network Interface page		
ELAN subnet IP address		
ELAN subnet mask		
Nortel server subnet (CLAN) IP address		
Nortel server subnet (CLAN) subnet mask		
Nortel server subnet (CLAN) gateway IP address		
Heartbeat 1 (HB1) IP address		
Heartbeat 1 (HB1) subnet mask		
Heartbeat 2 (HB2) IP address		
Heartbeat 2 (HB2) subnet mask		
Mirror IP address		
Mirror subnet mask		
High Availability Configuration Wizard		
Managed CLAN Host Name ***Note:*** The CLAN is the Nortel server subnet.		
Managed CLAN IP address		

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	CP Node 1 (CP1)	CP Node 2 (CP2)
Managed ELAN IP address ***Note:*** The ELAN is the ELAN subnet.		
Node 1 Host Name		
Node 2 Host Name		
Number of MPB96 Boards		
User Name ***Note:*** This is the Administrator's user name.		
Server Workgroup/Domain Name		
EMC AutoStart Domain Name		
CLAN Test IP		

Facility planning

The location of the servers in a CallPilot 5.0 High Availability system is limited by the length of the DS30X cables, which connect the High Availability servers to the Meridian 1 or CS 1000 switch. The maximum length of the DS30X cables is 60 feet or 18.29 meters long.

The two servers in the High Availability pair must be collocated, as they must be connected to the same switch. Having the servers collocated lets the servers take advantage of a common (customer-supplied) UPS if there is one available.

The physical distance that can separate the two servers is limited by the following:

- The length of the DS30X cables connecting the servers to the MGate cards in the switch (maximum of 60 feet or 18.29 meters long).
- The requirement that the HB1, HB2, and Mirror network connections between the two servers are connected using dedicated crossover LAN cables with no networking hardware (that is, switches, routers, or hubs) between the servers.
- The common grounding requirements for all hardware that is connected to the switch. For grounding requirements, see the *Planning and Engineering Guide* (NN44200-200).

Nortel recommends that the two servers be collocated to ensure that all of these requirements are met.

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Switch planning

AML over Ethernet is the only switch integration that is supported.

Note: T1 connectivity is not supported.

For detailed switch information, see the following:

- *Meridian 1 and CallPilot Server Configuration* (NN44200-302)
- *Communication Server 1000 and CallPilot Server Configuration* (NN44200-312)

Both servers must be connected to the same switch (using MGate cards and DS30X cables). Because both servers are connected to the same switch with their own dedicated DS30X cables, the switch must have twice as many MGate cards installed than it would for a single CallPilot server. For example, if a switch has a single 192-channel CallPilot server connected to it, the switch must have six MGate cards installed. For a 192-channel High Availability configuration, the switch must have 12 MGate cards installed because six are required for each CallPilot server in the High Availability pair.

Each 1005r server has a dedicated connection to the switch, and therefore, requires dedicated DS30X or CAT5 connections, MGate cards, and matching switch configuration. Each 1006r server has a similar dedicated connection to the switch but requires CAT5 connections, MGate cards, and matching switch configuration.

Two configuration are supported:

1. Two servers, either 1005r or 1006r, with one MPB96 each (up to 96 channels).

   For a 96-channel High Availability server, each server in the pair can support 96 channels, which means there could be three MGate cards per server for a total of 6 MGate cards.

2. Two servers, either 1005r or 1006r, with three MPB96 each (up to 192 channels).

   For a 192-channel High Availability server, each server in the pair can support 192 channels, which means there could be six MGate cards per server for a total of 12 MGate cards.

Both High Availability servers must share the same CDN so that users do not know which server in the pair is servicing requests.

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Meridian 1 planning

For Meridian 1 Option 51/61/81 switches, the clock controller card (QPC775c) must have vintage NTRB53AA or higher. This is required to avoid a problem when the midnight audit runs on the switch and IP connectivity is temporarily lost, which in turn causes the AutoStart software to initiate a failover to the standby server.

CS 1000 planning

Media Gateway shelves in a CS 1000E do not share the same clock reference. Media Gateway Expansion shelves share the same clock reference as the Media Gateway shelf to which they are connected. In a CS 1000E, all MGate cards connected to the CallPilot server must reside in the same Media Gateway/Media Gateway Expansion shelf pair.

ATTENTION

Each server in the High Availability pair must have all of its MGate connections in the same Media Gateway/Media Gateway Expansion shelf pair on a CS 1000E.

For the CS 1000M and CS 1000S, the MGate cards can reside on separate shelves.

Required hardware

The following checklists describe the contents required for a High Availability system. Most items are included when you order the High Availability feature; however, some items must be supplied by the customer. Ensure you have all of the applicable items prior to beginning the installation of the High Availability system.

Hardware included

When you order an High Availability system, the following hardware is included:

Table 4
1005r High Availability system (up to 96 MPUs or 288 MPUs)

Included with system	Qty	PEC number
CallPilot 5.0 1005r Server 96 MPU Chassis Sub-Assembly Package or CallPilot 5.0 1005r Server 288 MPU Chassis Sub-Assembly Package	2	NTUB28CAE5 NTUB28DAE5
CallPilot 5.0 Rackmount 1005r Server CD Image Set	2	NTUB50RA
CallPilot 5.0 Common Software Components and Documentation BOM	2	NTUB63CA

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Included with system	Qty	PEC number
CallPilot 5.0 Keycode	1	N0119677
CallPilot 5.0 HA Feature Activation	1	NTZE64AA
EMC Software RTU License Royalty - R	2	N0119699
EMC License Registration Card	2	N0129528
Ghost Solution Suite 1.1 with CallPilot 5.0	2	N0119681
RTU for Symantec PCAnywhere v12.0 for New CallPilot Applications	2	N0119700
RTU for Windows 2003 Document	2	P1013471
RTU for Crystal Decision (Report)	2	P0989628
RTU for DOS 6.20 Document	2	P0887449
RTU for SQL Anywhere	2	P0887451
CallPilot 1005r Storage Hours - 2400 Hours	1	NTZE08FA
CallPilot Prompt Languages - Activate Six	1	NTZE16AB
CallPilot Speech Activated Messaging Vocabulary - Activate Three	1	NTZE16BB
Nortel Standard Security Device [RoHS]	1	NTDK57AAE5
CABLE ASSY, TRIPLE DS30X InterConnect Cable for MPB96 2 (for 96 MPUs) or 4 (for 288 MPUs)	2 or 4	NTRH2014E6

Table 5
1006r High Availability system (up to 96 MPUs or 288 MPUs)

Included with system	Qty	PEC number
CallPilot 5.0 1006r Server 96 MPU Chassis Sub-Assembly Package or CallPilot 5.0 1006r Server 288 MPU Chassis Sub-Assembly Package	2	NTUB37AAE5 NTUB74AAE5
CallPilot 5.0 Rackmount 1006r Server CD Image Set	2	NTUB50UA
CallPilot 5.0 Common Software Components and Documentation BOM	2	NTUB63CA
CallPilot 5.0 Keycode	1	N0119677
CallPilot 5.0 HA Feature Activation	1	NTZE64AA
EMC Software RTU License Royalty - R	2	N0119699
EMC License Registration Card	2	N0129528
Ghost Solution Suite 1.1 with CallPilot 5.0	2	N0119681

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RTU for Symantec PCAnywhere v12.0 for New CallPilot Applications	2	N0119700
RTU for Windows 2003 Document	2	P1013471
RTU for Crystal Decision (Report)	2	P0989628
RTU for DOS 6.20 Document	2	P0887449
RTU for SQL Anywhere	2	P0887451
CallPilot 1006r Storage Hours - 2400 Hours	1	NTZE08FA
CallPilot Prompt Languages - Activate Six	1	NTZE16AB
CallPilot Speech Activated Messaging Vocabulary - Activate Three	1	NTZE16BB
Nortel Standard Security Device [RoHS]	1	NTDK57AAE5
CABLE ASSY, TRIPLE CAT5 InterConnect Cable for MPB96 2 (for 96 MPUs) or 4 (for 288 MPUs)	2 or 4	

Customer provided equipment

The following table provides the list of equipment that must be supplied by the customer.

Table 6
Customer provided equipment

Not included with system	Qty	PEC number	Notes
Crossover cable	3	n/a	Used to connect the HB1, HB2, and Mirror NICs.
1005r/1006r/600r/202i USB modem	2	NTRH9242E6	Used for remote support. Each server must have a dedicated modem.
ELAN cable	2	n/a	One for each 1005r server.
CLAN cable	2	n/a	One for each 1005r server.

Supported hardware configurations

The CallPilot 5.0 High Availability feature is only supported on the 1005r or 1006r platform. Two identical servers are required for the High Availability feature. A mixture of server types is not supported, therefore the High Availability pair can only include two 1005r servers or two 1006r servers. The pair of servers are required to provide the active and standby server configuration.

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One dongle is shared between the pair of High Availability servers as they share the same keycode and serial number.

The two supported hardware configurations are:

- three MPB96 boards (up to 192 channels/288 MPU) with two dual-port NIC cards
- one MPB96 board (up to 96 channels/96 MPU) with two dual-port NIC cards

Note: The hardware configuration must be identical on both servers making up the High Availability pair.

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Chapter 4
Failover overview

In this chapter

"Introduction" (page 37)

"Automatic failovers" (page 38)

"Manual failovers" (page 39)

Introduction

In a High Availability system, one server is active while the other is in standby mode. If a failure occurs on the active server, the standby server comes into service, becoming the active server. The process of the standby server becoming the active server is called a failover.

The standby server takes over from the active server when:

- A failure condition is detected on the active server and the software triggers a failover to the standby server. This is known as an automatic failover. For more information, see "Automatic failovers" (page 38).
- A manual failover is initiated by an administrator to perform maintenance activities, or when there is degradation of service that is not detected by the AutoStart software. For more information, see "Manual failovers" (page 39).

In normal day-to-day use, end users are not aware that two CallPilot servers are configured in a High Availability pair. There is one Control Directory Number (CDN) configured on the switch that users call for any given service. Any calls to a given CDN are routed to the CallPilot server that is currently active.

Note: The CDNs configured on both server must be the same.

If a failover occurs, the standby CallPilot server becomes the active server of the pair and the switch routes incoming calls to the active server.

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In case of a failover, where the standby server becomes the active server, any calls or connections that were in process when the failover occurs are dropped. The CallPilot server is out-of-service from the time the active server fails to the time the standby server takes over. During the failover process, when the standby server is coming into active service, neither server is available to accept or process connections. This process takes approximately 4 to 12 minutes (depending on the scenario). Calls coming in during this time receive the default treatment that is configured on the switch. After the standby server become the active server, end users can connect with the CallPilot server without changing any settings.

Automatic failovers

An automatic failover occurs when the AutoStart software determines that something has gone wrong on the active CallPilot server, that is, a critical CallPilot service has failed. The software initiates a failover to the standby CallPilot server without any user interaction. Only a limited number of automatic failover cases are supported in CallPilot 5.0.

The following cases trigger an automatic failover from the active CallPilot server to the standby server:

- A reboot or shut down of the active server.
- Failure of one or more of the critical CallPilot services. The system attempts to restart a failed critical CallPilot service three times before resorting to a failover. These critical services include:

Table 7
Critical CallPilot services

Service name	Description
Adaptive Server Anywhere - DB_SQLANY	Database service
CallPilot AOS Service	Active Operation Server (AOS) Service
CallPilot HAL Monitor	Monitors the Hardware Abstraction Layer (HAL)
CallPilot LDAP Service	Directory server used to set and retrieve the most persistent data except for messages and prompts
CallPilot Multimedia Volume 1	Data management for users, messages, and so on, stored in volume VS1 (VS1T, VS1V, and VS1B)
CallPilot Multimedia Volume 102	Data management for users, messages, and so on, stored in volume VS102 (VS102T, VS102V, and VS102B)
CallPilot Multimedia Volume 103	Data management for users, messages, and so on, stored in volume VS103 (VS103T, VS103V, and VS103B)

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Service name	Description
CallPilot Multimedia Cache	Cache for multimedia volumes 1, 102, and 103.
CallPilot Resource Package 1	Middleware resources for MPB board 1
CallPilot Resource Package 2	Middleware resources for MPB board 2
CallPilot Resource Package 3	Middleware resources for MPB board 3
CallPilot Blue Call Router	Routes calls to the CallPilot Blue application
CallPilot Call Channel Router	Telephony channel delivers the voice path of the call
CallPilot SLEE Service	Service Logic Execution Environment (SLEE)
CallPilot Notification Service	Event notification service
CallPilot MTA Service	Message Transfer Agent (MTA)
CallPilot MWI Service	Message Waiting Indication (MWI)

- Optional automatic failover on the loss of connection of the ELAN at the TCP/IP level (that is, failure of the switch to respond to the ping command of the Managed ELAN IP address for a specified period of time). By default, there is no failover on the Path Test failure of the Managed ELAN IP address, which CallPilot 5.0 High Availability servers use to connect to the switch through ELAN. However, the CallPilot 5.0 High Availability system sends a notification e-mail to the administrators when the Path Test failure of the Managed ELAN IP occurs. If necessary, you can also set up the failover on the failure of the Managed ELAN IP address by following the procedure "Configuring failovers on the Path Test failures of the Managed ELAN IP address" (page 194).

Using the AutoStart console software, you can disable and enable automatic failovers. For more information, see the following procedures:

- "Disabling automatic failovers (stop monitoring)" (page 218)
- "Enabling automatic failovers (start monitoring)" (page 219)

Manual failovers

A manual failover occurs when the server administrator decides to initiate a failure manually using the AutoStart Console. Failovers can also be manually triggered by powering down the active server. The actual failover mechanism is the same as in the automatic case; the only difference is that the failover is manually initiated.

The administrator can choose to perform a manual switchover if there is a problem on the active CallPilot server that is not part of the automatic failover rules. A manual failover can be initiated for the following situations:

- For hardware repairs of failed hardware in the server that requires the server to be powered down (for example, failure of an internal fan)

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- For service improvement due to an end-user-reported degradation of service on the server
- For scheduled maintenance

To perform a manual failover, see "Initiating a manual failover" (page 220).

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Chapter 5
Install and configure the High Availability pair

In this chapter

"New system installation procedure" (page 41)

"Prepare the switch and install the 1005r or 1006r servers" (page 44)

"Prepare both 1005r or 1006r servers" (page 45)

"Configure CP1 and CP2 using the CallPilot Configuration Wizard" (page 54)

"Connect and verify LAN connections" (page 75)

"Run Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration " (page 82)

"Install the AutoStart Agent and Console software " (page 86)

"Configure the AutoStart software" (page 106)

"Bring the Resource Groups online" (page 119)

"Test your configuration" (page 124)

"Create the CallPilot Reporter connections" (page 125)

"Add the servers to a Windows domain" (page 127)

New system installation procedure

This chapter describes how to perform a fresh installation of High Availability servers and how to configure the pair of CallPilot High Availability servers.

In this NTP, the administrator installs and configures the CallPilot server.

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This installation assumes the following:

- The CallPilot 5.0 image on the 1005r or 1006r server was installed at the factory.
- The additional hardware (two dual-port NIC cards) was installed at the factory.
- The AutoStart software is not installed as part of the CallPilot 5.0 image. The software must be installed by the customer as part of the High Availability installation.

A CallPilot High Availability system consists of two servers that work as peers. At any time, one server is active while the other server is in standby mode. For the purpose of the following procedure, the servers are referred to as CallPilot server 1 (CP1) and CallPilot server 2 (CP2). Initially, CP1 is the active server and CP2 is the standby server.

ATTENTION

The following table outlines the tasks required to install, configure, and test the High Availability feature.

The tasks (and procedures within each task) must be completed in the order presented.

Table 8
High Availability task list

Task	Estimated time	Procedures required to complete the task
Prepare the switch	60 minutes	– "Preparing the switch" (page 44)
Install the two servers	210 minutes per server	– "Installing the two 1005r or 1006r servers" (page 45)
Prepare both servers	120 minutes per server	– "Manually changing the server name" (page 46) (optional) – "Manually setting the IP parameters" (page 47) (optional) – "Installing the antivirus software" (page 48) (optional) – "Running the CallPilot Setup Wizard" (page 49)

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Task	Estimated time	Procedures required to complete the task
Configure CP1 and CP2 using the CallPilot Configuration Wizard	40 minutes per server based on two installed languages and three provisioned channels Allow 10 minutes for each additional language	– "Configuring the replacement server using the CallPilot Configuration Wizard" (page 54) – "Configuring CP2 using the CallPilot Configuration Wizard" (page 70)
Connect and verify the LAN connections	30 minutes	– "Connecting and verifying LAN connections" (page 76) – "Modifying the hosts file" (page 80) (optional) – "Testing the host name resolution" (page 82)
Run Stage 1 of the High Availability Configuration Wizard to check the configuration of CP1 and CP2	5 minutes	– "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83)
Install the AutoStart 5.2.2 software on CP1	10 minutes	– "Installing the AutoStart Agent and Console software on CP1" (page 86)
Configure licensing and security on CP1	10 minutes	– "Add the node 2 administrator account to the AutoStart Console on node 1" (page 94)
Install the AutoStart 5.2.2 software on CP2	10 minutes	– "Installing the AutoStart Agent and Console software on CP2" (page 96)
Configure the AutoStart software ***Note:*** All configuration is completed on CP1.	35 minutes	Configure the AutoStart software on CP1 – "Modifying the AutoStart Domain and Verification links" (page 106) – "Adding the Remote Mirroring Host for CP2" (page 109) – "Generating the AutoStart Definition File" (page 112)
		Import the AutoStart definition file on CP1 – "Importing the AutoStart definition file" (page 114)
		Add the Windows administrator password for the AutoStart utility processes in the AutoStart Console – "Adding the Windows administrator account password for the AutoStart Utility Processes" (page 115)
		Add e-mail addresses to the Managed_ELAN_IP _Failure_Notif rule

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Task	Estimated time	Procedures required to complete the task
		– "Adding e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule" (page 117)
Bring the Resource Groups online	10 minutes	– "Bringing the CallPilot Resource Group online on CP1" (page 119) – "Bringing the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online" (page 122)
Test your configuration	120 minutes	– "Testing the configuration of CP1 and CP2" (page 124)
Create the CallPilot Reporter connections	20 minutes	– "Creating the CallPilot Reporter connection" (page 126)
Add server to a Windows domain (if required)	30 minutes	– "Joining a Windows domain" (page 127)

Prepare the switch and install the 1005r or 1006r servers

Before you install and configure the High Availability feature you must prepare the switch and servers. Use the following procedures to prepare the switch and install the servers.

Preparing the switch

Step	Action
1	Configure the Meridian 1 or CS 1000 switch by referring to the following documents: • *Meridian 1 and CallPilot Server Configuration* (NN44200-302) • *Communication Server 1000 and CallPilot Server Configuration* (NN44200-312) ***Note:*** Both High Availability servers must use the same Control Directory Number (CDN). The MGate cards on the switch must provide twice the channel capacity than that of a single High Availability server. However, only half the channels are in use at any one time (the other half of the channels are in standby mode).

—End—

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Installing the two 1005r or 1006r servers

Step	Action
1	Refer to *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320) and *Installation and Configuration Task List* (NN44200-306) for details about performing the following tasks: a. Unpack both of the CP1 and CP2 servers. b. Install the dongle on CP1. c. Connect the peripheral equipment (monitor, keyboard, and mouse) to both servers. d. Connect USB modems to each server. e. Power on both servers. **Result:** The servers start and the Windows 2003 Mini-Setup runs. (During the Windows 2003 Mini-Setup, the servers automatically restart twice.)

—End—

Prepare both 1005r or 1006r servers

The following procedures can be required depending upon your setup configuration.

- Manually change the server name. (The CallPilot Configuration Wizard can also be used to change the server name.)
- Manually set the IP parameters. (The CallPilot Configuration Wizard can also be used to set the IP parameters.)

  Note: The procedures listed in the preceding bullets are performed under the following circumstances:

  1. If you are restoring from a network location. In order to perform a restore the CLAN IP address must first be set.
  2. If you are using a DNS as part of your network solution, then the DNS entries must be manually completed.

- Check the Primary DNS suffix.
- Install antivirus software on both servers. (optional)

  Note: For more information about the antivirus software packages that are approved by Nortel for CallPilot, see the *P-2007-0101-Global : CallPilot Support for Anti-Virus Applications* bulletin.

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- Run the CallPilot Setup Wizard

Manually changing the server name

Step	Action

Changing the server name can also be done using the CallPilot Configuration Wizard.

1 Log on to the server with the default administrator user name and password (administrator / Bvw250).

2 Right-click **My Computer** and select **Properties** from the shortcut menu.

Result: The System Properties window appears.

3 Select the **Computer name** tab.

4 Click **Change**.

Result: The Computer Name Changes window appears.

5 In **Computer Name** field, enter new computer name.

ATTENTION
The computer name must contain only alphanumeric characters. Nonalphanumeric characters (such as a hyphen [-]), are not supported.

6 Click **OK**.

Result: A warning message appears prompting you to restart the computer for the changes to take effect.

7 Click **OK**.

Result: The System Properties window appears.

8 Click **OK**.

Result: A message appears prompting you to restart the computer.

9 Click **Yes** to restart the computer.

Result: The system restarts.

—End—

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Manually setting the IP parameters

Step	Action

Setting the IP parameter can also be done using the CallPilot Configuration Wizard; however, DNS entries and Mirror network interface must be manually configured

1 Select **Start > Settings > Network Connections**.

Result: The Network Connections window appears and displays a list of network connections.

2 Right-click **CLAN** and select **Properties**.

Result: The CLAN Properties window appears.

3 Select **Internet Protocol (TCP/IP)** and then click **Properties**.

Result: The TCP/IP Properties window appears.

4 Enter the following IP information (which is provided by the network administrator):

- IP address
- Subnet mask
- Default gateway
- Preferred DNS server
- Alternate DNS server

Note: The DNS entries cannot be configured using the CallPilot Configuration Wizard. The DNS entries must be manually configured.

5 Click **OK**.

Result: The CLAN Properties window appears.

6 Click **Close**.

7 Repeat the preceding steps for the ELAN, HB1, HB2, and Mirror network interfaces.

8 Right-click **MIRROR** and select **Properties**.
Result: General tab of the MIRROR Properties window opens

9 Only the "**Internet Protocol TCP/IP**" protocol should be bound to the interface. Uncheck all other items in the list “This connection uses the following items”.

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Result: “Internet Protocol TCP/IP” item is enabled; "Client for Microsoft Networks", "File and Printer Sharing for Microsoft Networks", “Network Load Balancing” options are disabled

10 Select the "**Internet Protocol TCP/IP**" item and click Properties.
Result: Internet Protocol (TCP/IP) Properties window opens.

11 Click **Advanced** button at the bottom of the window.
Result: Advanced TCP/IP Settings window opens

12 Select **WINS** tab. Uncheck all options except “**Disable NetBIOS over TCP/IP**".
Result: The item “Disable NetBIOS over TCP/IP" is checked. The option “Enable LMHOSTS lookup” is unchecked.

13 Click **OK** at the bottom of **Advanced TCP/IP Settings** window.
Result: Advanced TCP/IP Settings window closes.

14 Click **OK** at the bottom of **Internet Protocol (TCP/IP) Properties** window.
Result: Internet Protocol (TCP/IP) Properties window closes.

15 Click **Close** at the bottom of **MIRROR Properties** window.
Result: MIRROR Properties window closes.

—End—

Installing the antivirus software

Step	Action

This procedure is optional.

1 For information about the antivirus software packages that are approved by Nortel for CallPilot, see the *P-2007-0101-Global : CallPilot Support for Anti-Virus Applications* bulletin.

2 Install the antivirus software on the CallPilot servers.

The Antivirus software must be configured to exclude the AutoStart Database directory to ensure uninterrupted processing. The path to the AutoStart Database directory is:

D:\Program Files\EMC AutoStart<AutoStart-Domain-Name>\<AutoStart-Domain-Name_NodeName>

See the *P-2007-0101-Global : CallPilot Support for Anti-Virus Applications* bulletin for detailed instructions on how to exclude the AutoStart Database directory on CallPilot 5.0 High Availability systems.

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—End—

Running the CallPilot Setup Wizard

Step	Action

The CallPilot Setup Wizard must be run on both CP1 and CP2.

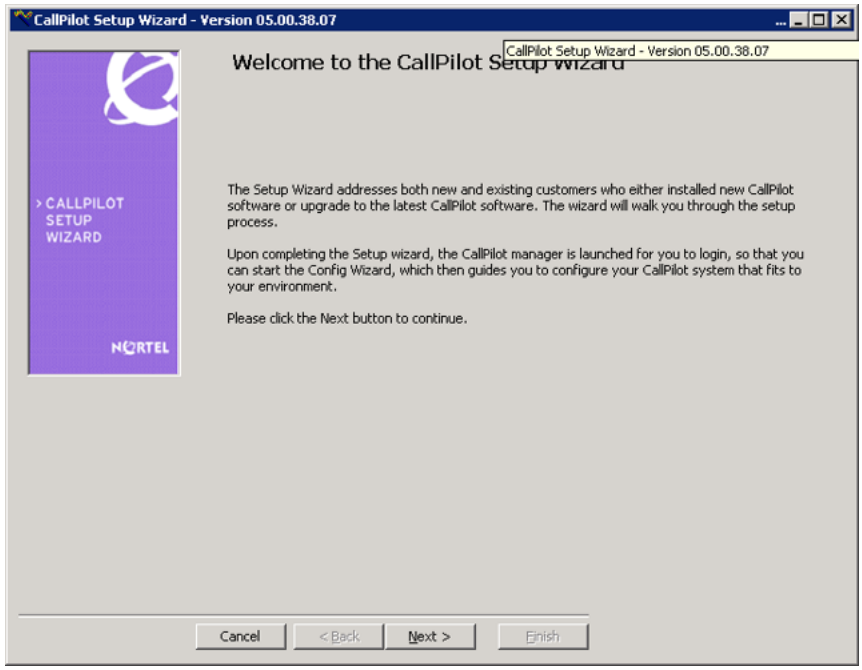
1 Log on to the CallPilot server.

The default password for the administrator account is Bvw250.

Result: When you first log on to the system after powering it up, the Setup Wizard runs automatically. If the Setup Wizard does not open, launch the Setup Wizard by clicking **Start > Programs > CallPilot > Setup Wizard**.

Result: The Welcome to the CallPilot Setup Wizard window appears.

Figure 3
CallPilot Setup Wizard: Welcome window

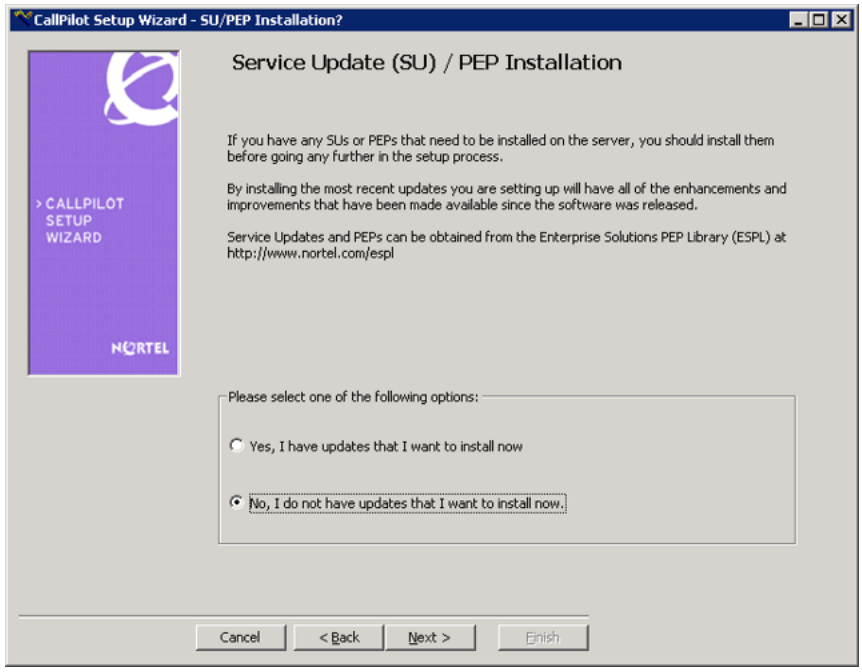


2 Click **Next**.

Result: The Service Update (SU) / PEP Installation window appears.

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Figure 4
Service Update (SU) / PEP Installation window



3 Select one of the following options:

- If you have SUs or PEPs to install, select the **Yes, I have updates that I want to install now** option.

  SUs and PEPs are found in the Enterprise Solutions PEP Library (ESPL) at the following Web site: www.nortel.com/espl

  Result: The Installing SU/PEP screen appears. Install the required updates and restart if necessary.

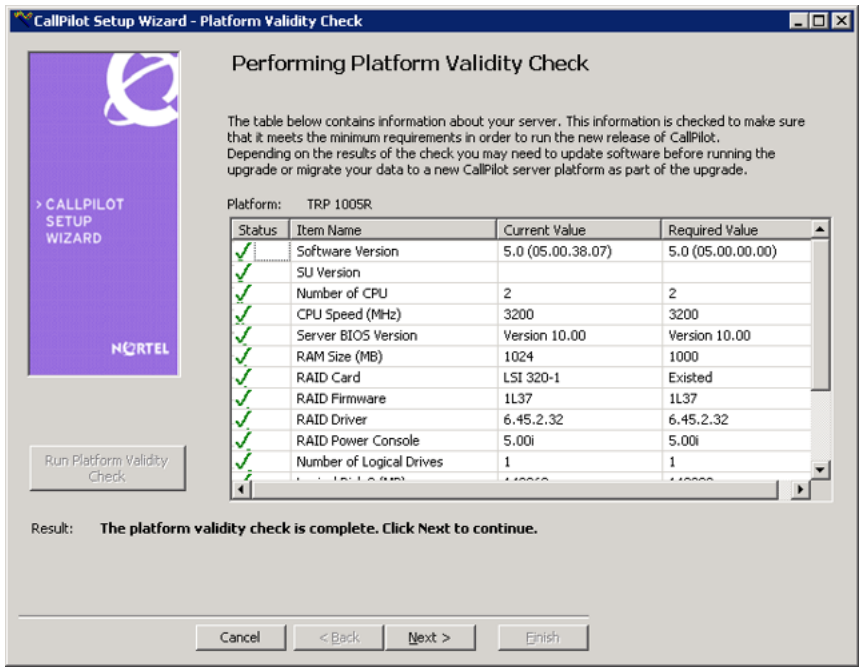
- If there are no SUs or PEPs to install, select the **No, I do not have updates that I want to install now** option.

4 Click **Next**.

Result: The Performing Platform Validity Check window appears.

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Figure 5
Performing Platform Validity Check window



5 View the items on the Performing Platform Validity Check screen.

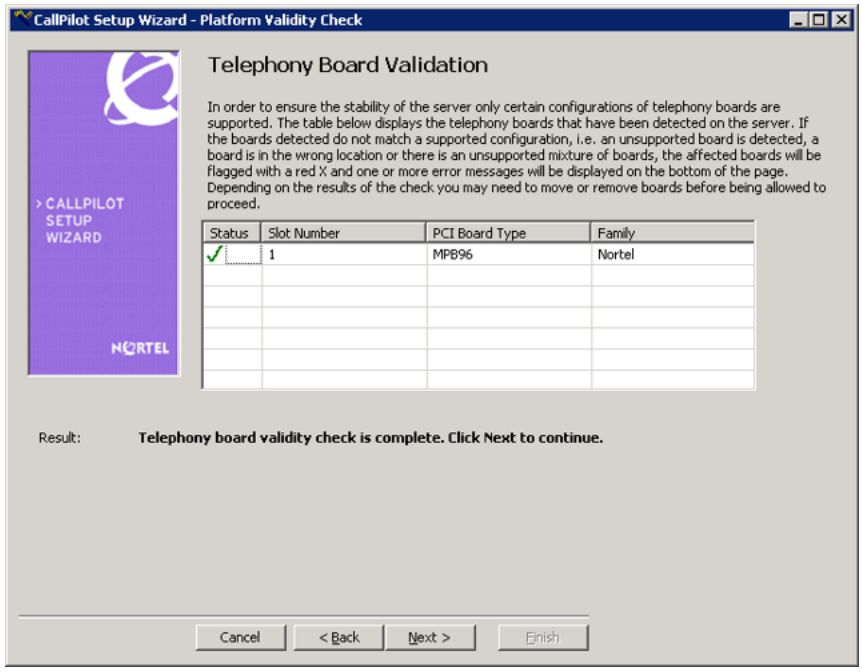
Note: If your server does not meet the minimum hardware and software requirements, contact your support organization.

6 Click **Next**.

Result: The Telephony Board Validation window appears.

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Figure 6
Telephony Board Validation window

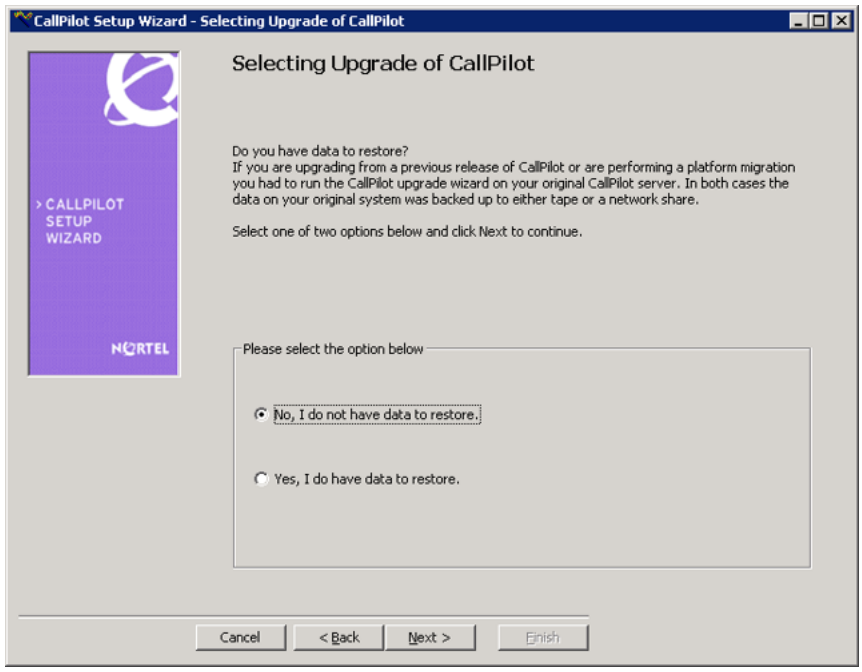


7 If your board configuration is correct, click **Next**.

Result: The Selecting Upgrade of CallPilot window appears.

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Figure 7
Selecting Upgrade of CallPilot window



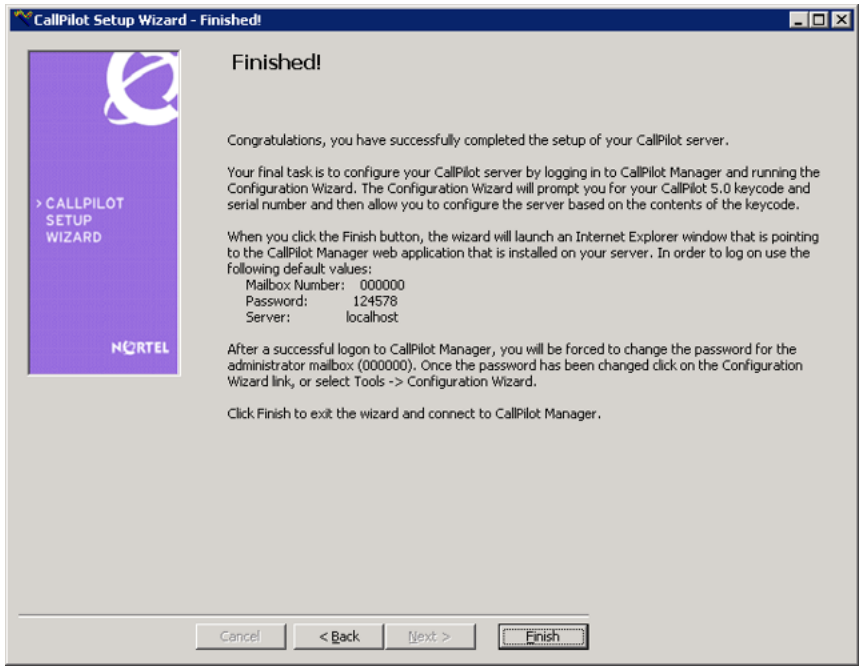
8 Select the **No, I do not have data to restore** option.

9 Click **Next**.

Result: The Finished window appears.

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Figure 8
Finished window



10 Click **Finish** to exit the CallPilot Setup Wizard.

—End—

Configure CP1 and CP2 using the CallPilot Configuration Wizard

This section provides the procedures to configure CP1 and CP2 using the CallPilot Configuration Wizard within CallPilot Manager.

ATTENTION

If you must go back into the Configuration Wizard at any time to correct any entries, note that the Database, LDAP, and AOS services must be started to gain access to CallPilot Manager.

The D:\Nortel\HA folder contains a file called start_svr.bat that automatically starts any necessary services. This script can be run to start the required services.

Configuring the replacement server using the CallPilot Configuration Wizard

Step **Action**

Time required: 20 minutes (assuming one language is installed)

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ATTENTION

Ensure that the dongle is installed on the replacement server.

1 Launch the Internet Explorer Web browser.

2 In the address field, enter the following URL to start CallPilot Manager: **http://localhost/cpmgr**

3 Log on to CallPilot Manager using the administrator mailbox and default password created from the CallPilot Setup Wizard:

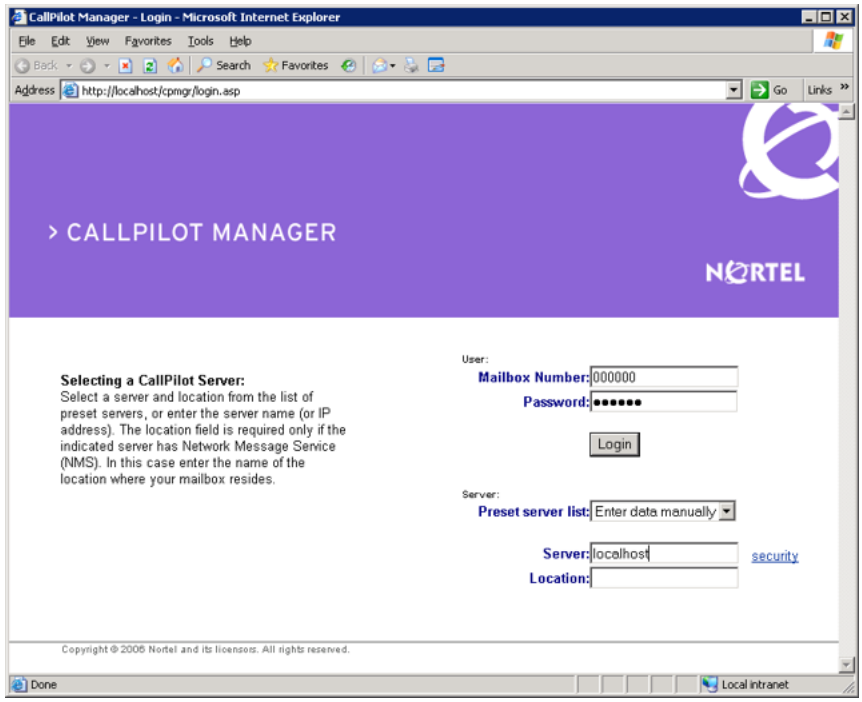
a. Under the **User** area, enter the following:

- The administrator mailbox number is 000000.
- The default password is 124578.

b. Under the **Server** area, enter the **localhost** in the **Server** field.

Note: All administrative changes must be performed on active server with dongle attached.

Figure 9
CallPilot Manger Login page

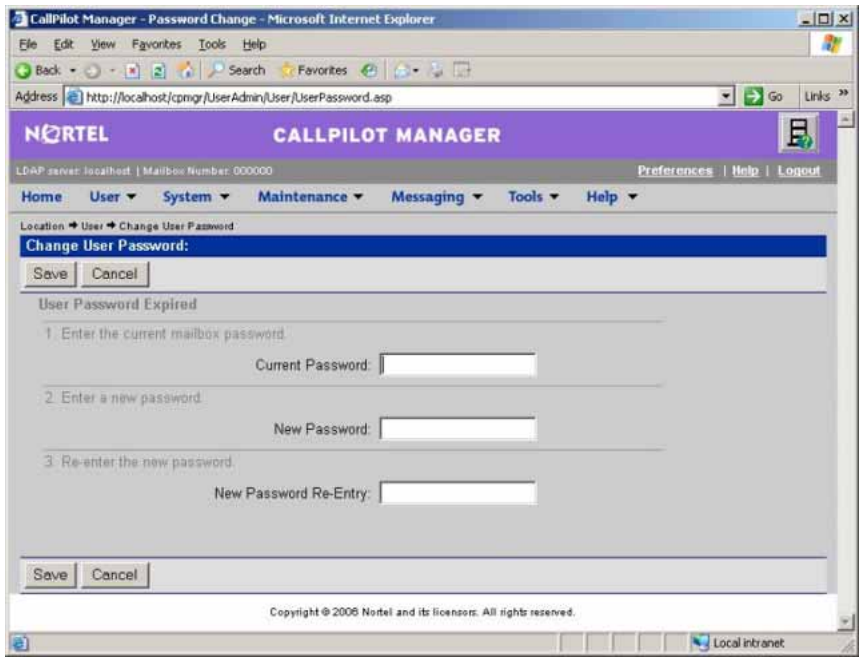


4 Click **Login**.

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Result: The Change User Password window appears.

Figure 10
Change User Password



5 Change the password for the 000000 administrator mailbox by doing the following:

a. Enter the **Current Password**.

b. Enter the **New Password**.

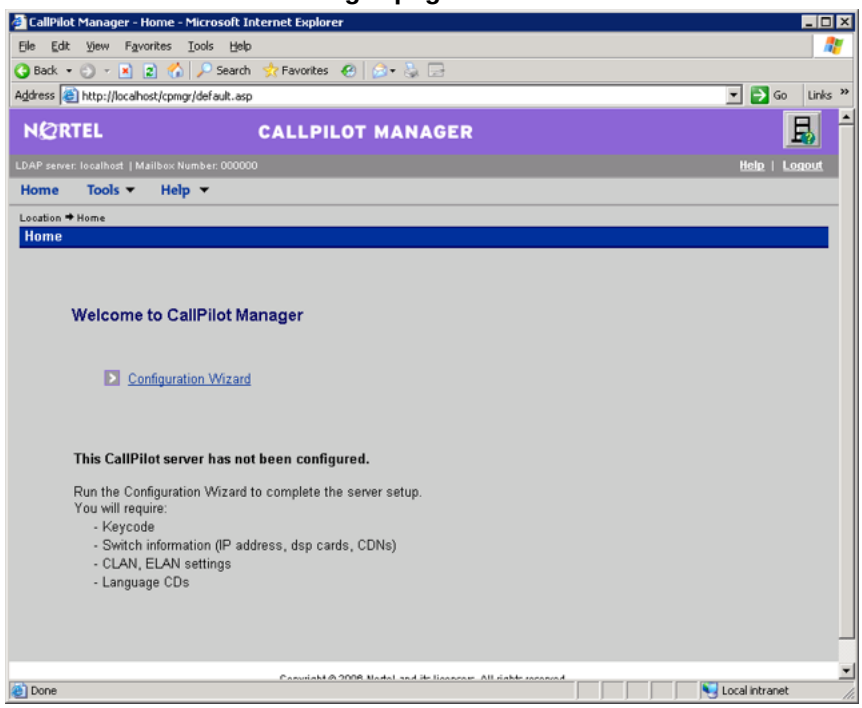
c. Reenter the new password in the **New Password Re-Entry** field.

d. Click **Save**.

Result: The Welcome to CallPilot Manager page appears.

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Figure 11
Welcome to CallPilot Manager page

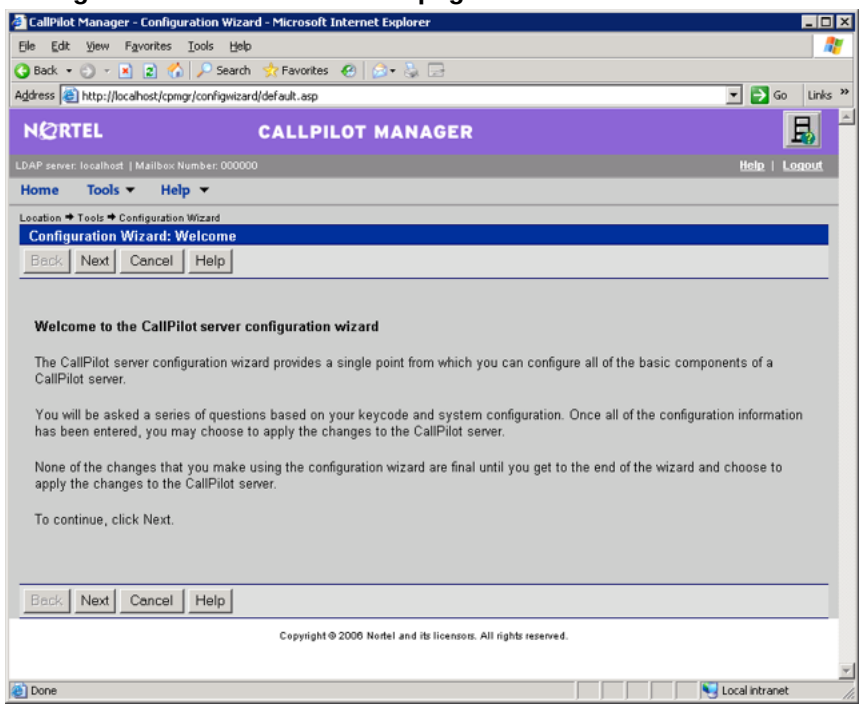


6 Click **Configuration Wizard**.

Result: The Configuration Wizard: Welcome page appears.

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Figure 12
Configuration Wizard: Welcome page

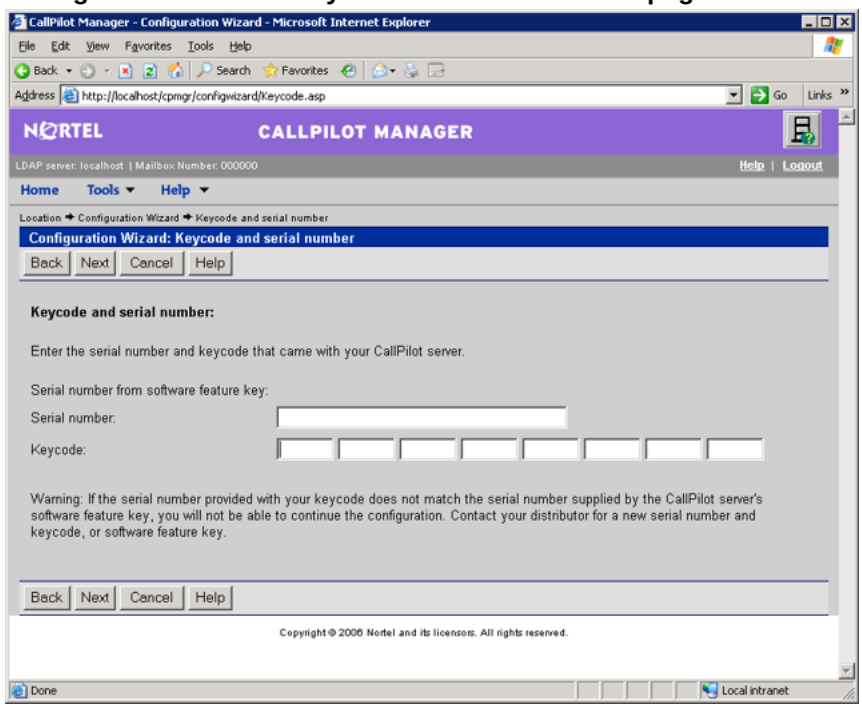


7 Click **Next**.

Result: The Keycode and serial number page appears.

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Figure 13
Configuration Wizard: Keycode and serial number page



8 Enter the following:

a. In the **Serial number** field, enter the serial number of the dongle assigned to the CallPilot server. The serial number entered for the replacement server must be the same as the serial number entered for the existing server.

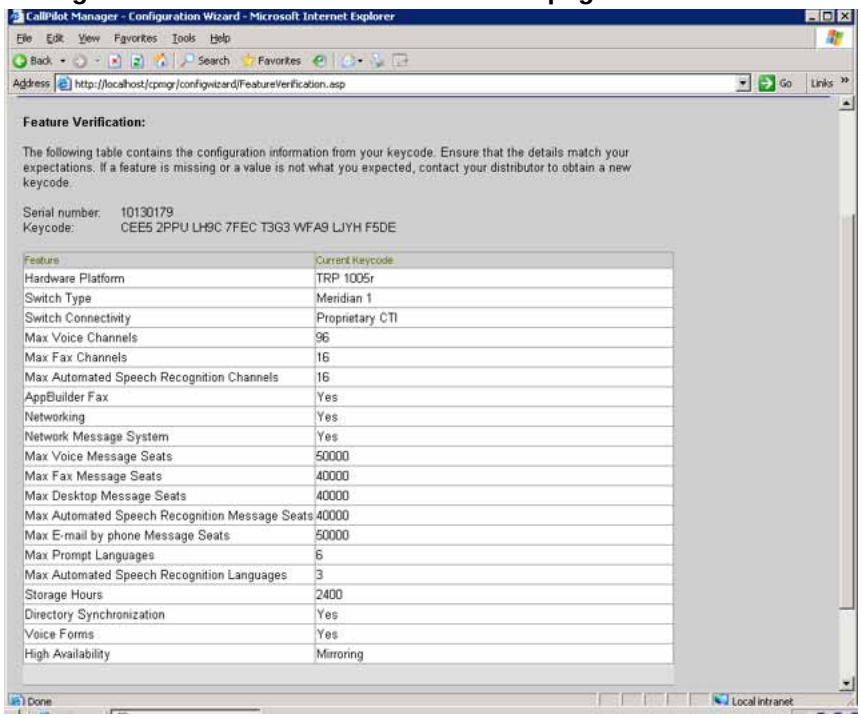
b. In the **Keycode** field, enter the High Availability-enabled keycode assigned to CallPilot server. The keycode entered for the replacement server must be the same as the keycode entered for the existing server.

9 Click **Next**.

Result: The Feature Verification page appears.

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Figure 14
Configuration Wizard: Feature Verification page



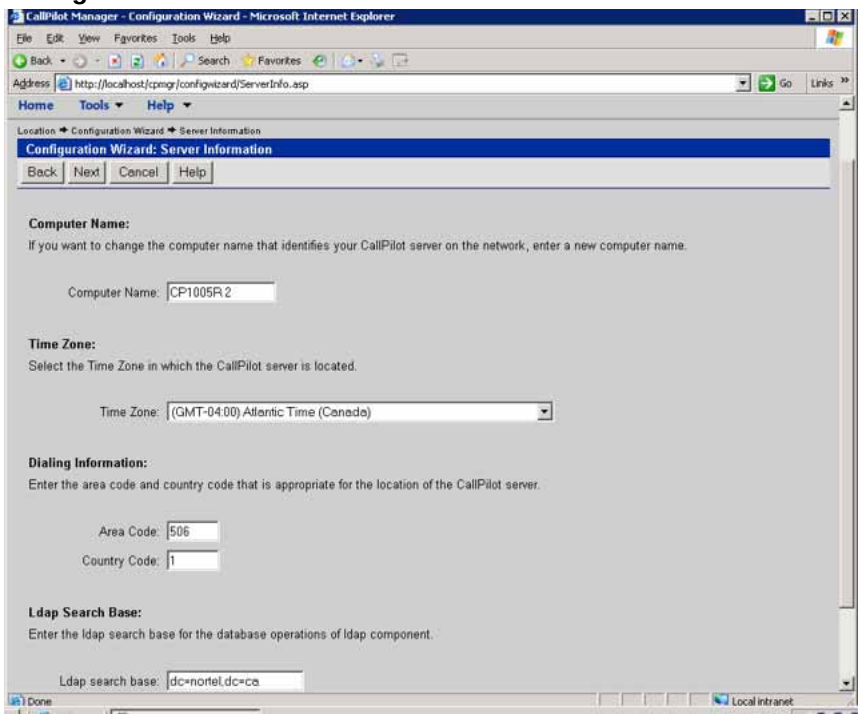
10 Ensure that all parameters are correct and that the High Availability feature is set to Mirroring.

11 Click **Next**.

Result: The Server Information page appears.

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Figure 15
Configuration Wizard: Server Information



12 On the Server Information page, do the following:

a. In the **Computer Name** field, enter the CallPilot server name.

b. In the **Time Zone** field, select the correct time zone.

c. Under Dialing Information, enter the **Area Code** and **Country Code**.

d. Enter the **LDAP search base**. For example, **dc=nortel,dc=ca**.

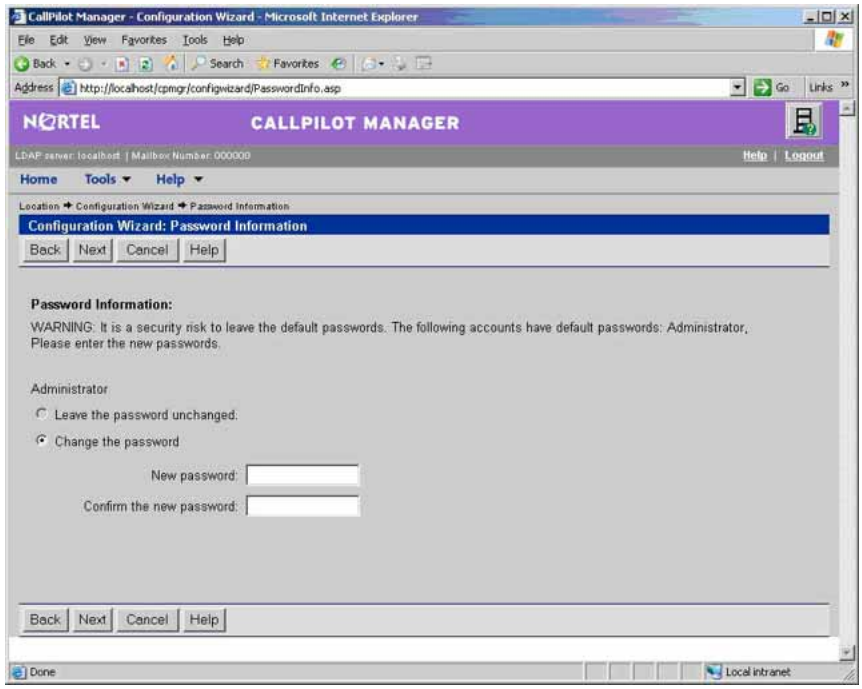
Note: All values on the Server Information page for the replacement server must be the same as for the existing server. Use Table 3 "High Availability system checklist" (page 29) that you completed for both nodes.

13 Click **Next** option.

Result: The Password Information page appears and the **Change the password** option is selected.

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Figure 16
Password Information



14 On the Password Information page, do the following:

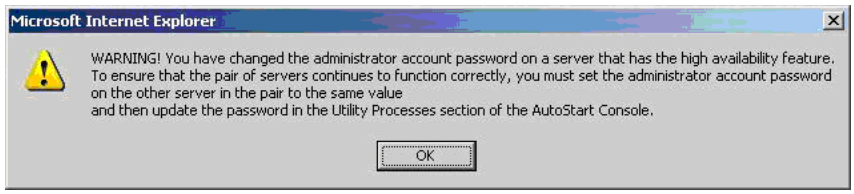
a. In the **New Password** field, enter the new password.

b. In the **Confirm the new password** field, reenter the new password.

c. Click **Next**.

Result: A warning message appears.

Figure 17
Change password warning message



15 Click **OK** to dismiss the warning message.

Result: The Password Information page reappears.

16 Click **Next**.

Result: The Multimedia Allocation page appears.

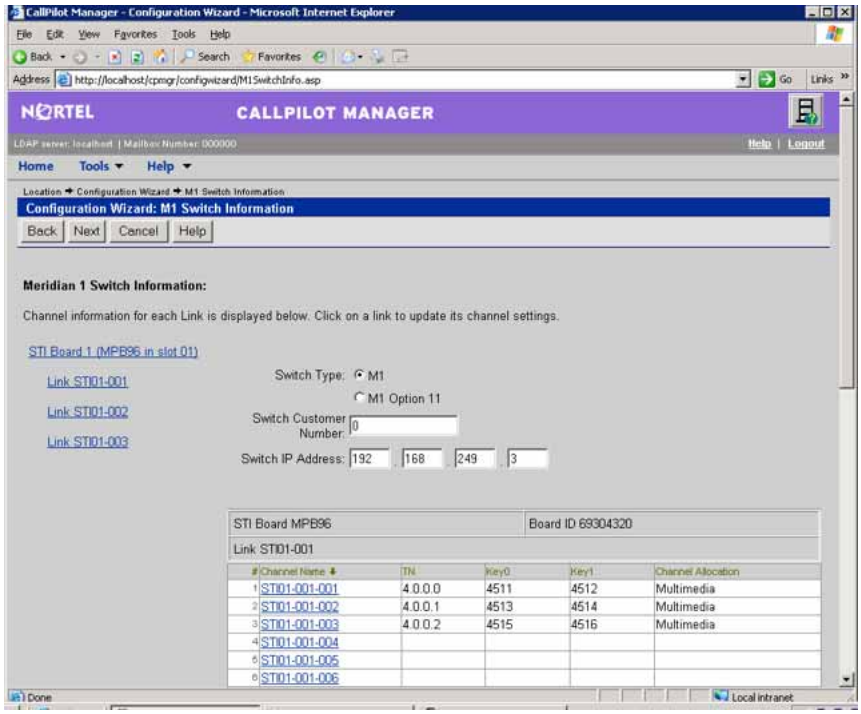
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17 Configure the MPB96 settings.

18 Click **Next**.

Result: The M1 Switch Information page appears.

Figure 18
Configuration Wizard: M1 Switch Information page



19 Configure the switch information.

a. Select the **Switch Type**.

b. Enter the **Switch Customer Number**.

c. Enter the **Switch IP Address**.

See the Table 3 "High Availability system checklist" (page 29) containing the information for both nodes.

d. Provision the channels, as follows:

i. Select a channel.

Result: The Channel Detail window appears.

ii. Enter the TN, ACD Position ID, and SCN.

iii. Ensure that Channel Allocation is set to Multimedia.

iv. Click **OK**.

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Result: The Meridian 1 Switch Information window appears again.

v. Continue the provisioning of channels until complete.

Note 1: To automatically provision a number of channels, you can enter the information for one channel, select the number of channels required, and then click **Fill**. The Configuration Wizard automatically datafills the channels, and increments the TNs, ACD Position ID, and SCN.

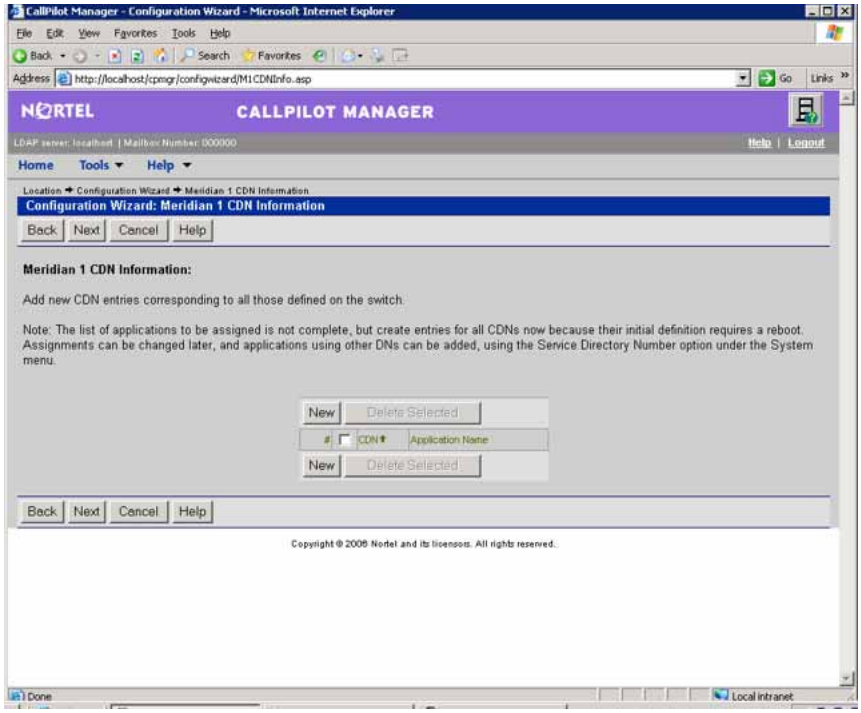
Note 2: The number of TNs configured on both nodes must be the same.

Note: To obtain switch-provisioning information, see Table 3 "High Availability system checklist" (page 29).

20 Click **Next**.

Result: The Meridian 1 CDN Information page appears.

Figure 19
Configuration Wizard: Meridian 1 CDN Information page



21 Click **New** to add a new CDN.

Result: The CDN Details page appears.

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ATTENTION
The CDNs must be the same on both nodes.

22 On the CDN Details page, do the following:

a. In the **CDN** field, enter the new CDN.

b. Select the **Application Name** (Voice Messaging or Multimedia Messaging).

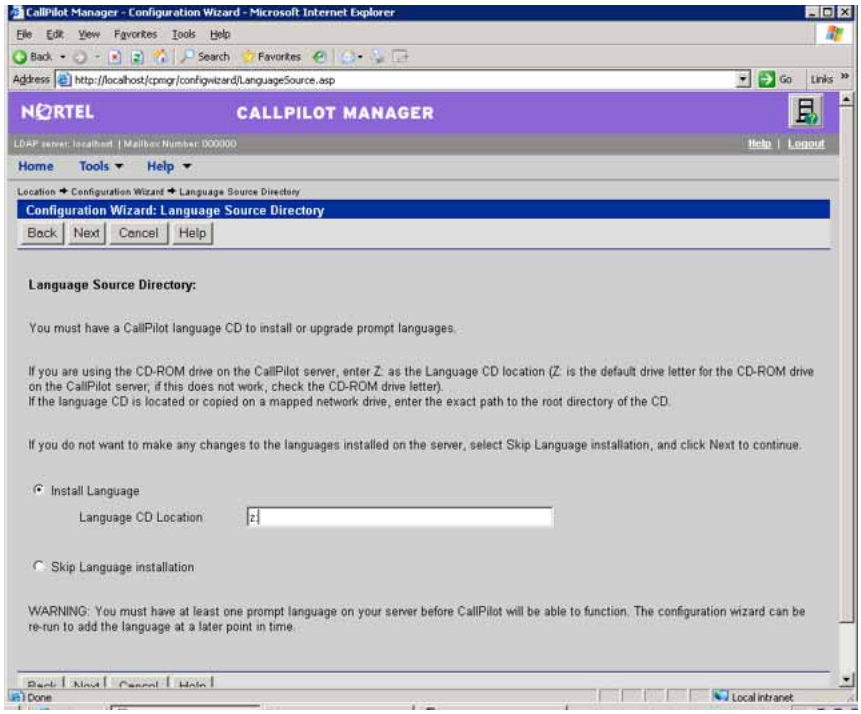
c. Click **OK**.

Result: The new CDN is added and the CDN information page reappears.

23 Click **Next**.

Result: The Language Source Directory page appears.

Figure 20
Configuration Wizard: Language Source Directory



24 Insert the CallPilot 5.0 Language CD into the CD/DVD drive on the replacement server.

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ATTENTION

You must use a CallPilot 5.0 Language CD.

Language CDs from previous CallPilot releases are not compatible with CallPilot 5.0. The Configuration Wizard checks the version of the Language CD and blocks the use of the CD if it is not a CallPilot 5.0 CD.

25 On the Language Source Directory Select page, do the following:

a. Select the **Install Language** option.

b. In the **Language CD Location** field, enter the directory location of the Language disk or file. Typically, CallPilot uses drive Z (therefore, enter **Z:**).

26 Click **Next**.

Result: The Language Installation page appears.

27 On the Language Installation page, do the following:

a. Select Languages and Automated Speech recognition to be installed.

b. Select Primary and Secondary Languages.

Note: The Secondary Language is optional.

ATTENTION

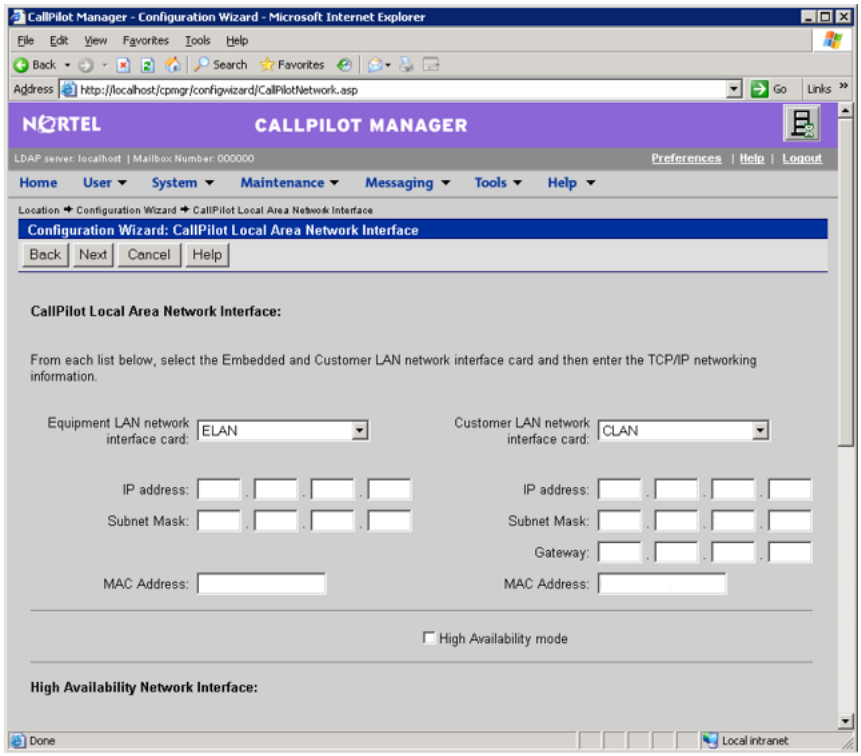
The same languages must be installed on both nodes.

28 Click **Next**.

Result: The CallPilot Local Area Network Interface page appears.

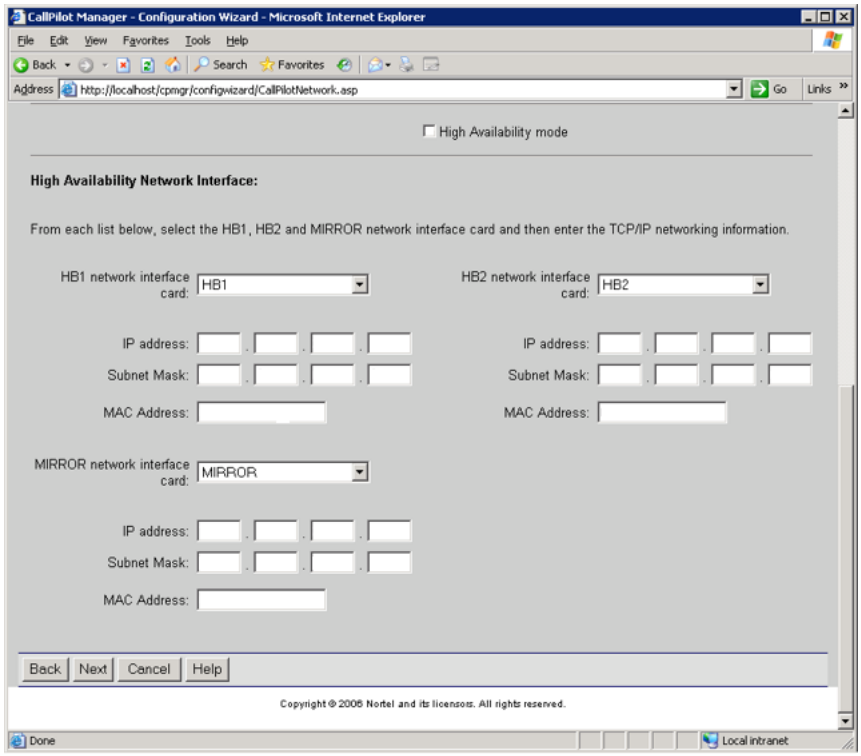
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Figure 21
Configuration Wizard: CallPilot Local Area Network Interface page (upper portion of page)



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Figure 22
Configuration Wizard: CallPilot Local Area Network Interface page (lower portion of page)



29 On the CallPilot Local Area Network Interface page, do the following:

a. Select the network interface card from the drop-down list.

Result: The MAC address, IP address, and Subnet mask values are updated for the network interface card.

b. Change the **ELAN** and **CLAN** IP information (**IP address** and **Subnet Mask**).

c. Select the **High Availability mode** check box to display the High Availability Network Interfaces.

Note: To enable High Availability, a proper keycode is required and the High Availability Mode check box must be selected. The keycode has the ability to enable High Availability; however, the feature does not have to be enabled and can be done at a later date.

d. Enter IP information for the **HB1**, **HB2**, and **MIRROR** network interface cards.

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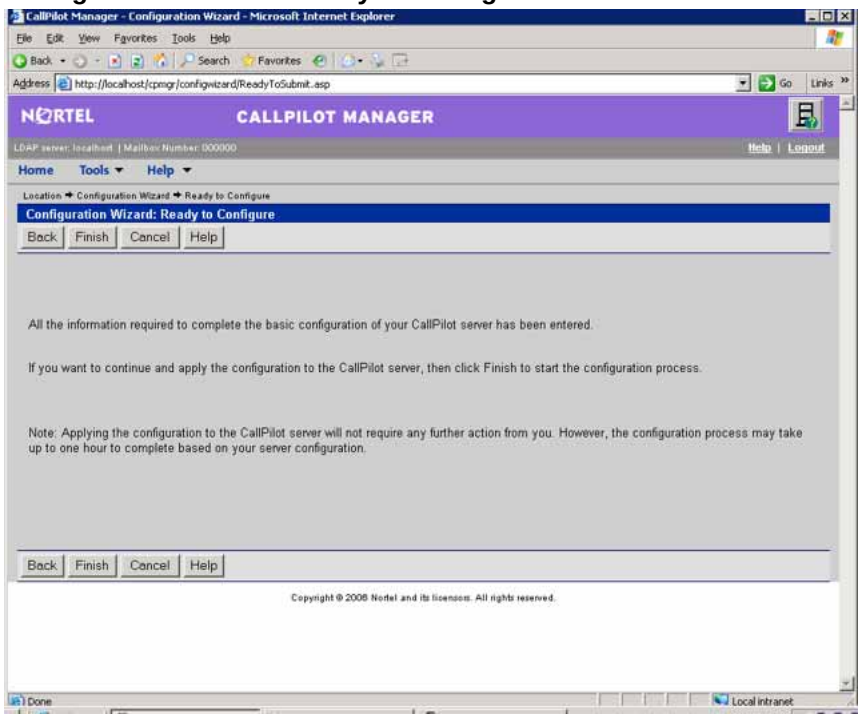
The following table shows the suggested default values for HB1, HB2, and MIRROR on CP1. If you do not use these suggested values, ensure that you use your new values throughout the configuration.

Network Interface Card (NIC)	IP Address	Subnet Mask
Heartbeat 1 (HB1)	192.0.0.10	255.255.255.0
Heartbeat 2 (HB2)	194.0.0.10	255.255.255.0
MIRROR	193.0.0.10	255.255.255.0

30 Click **Next**.

Result: The Ready to Configure page appears.

Figure 23
Configuration Wizard: Ready to Configure

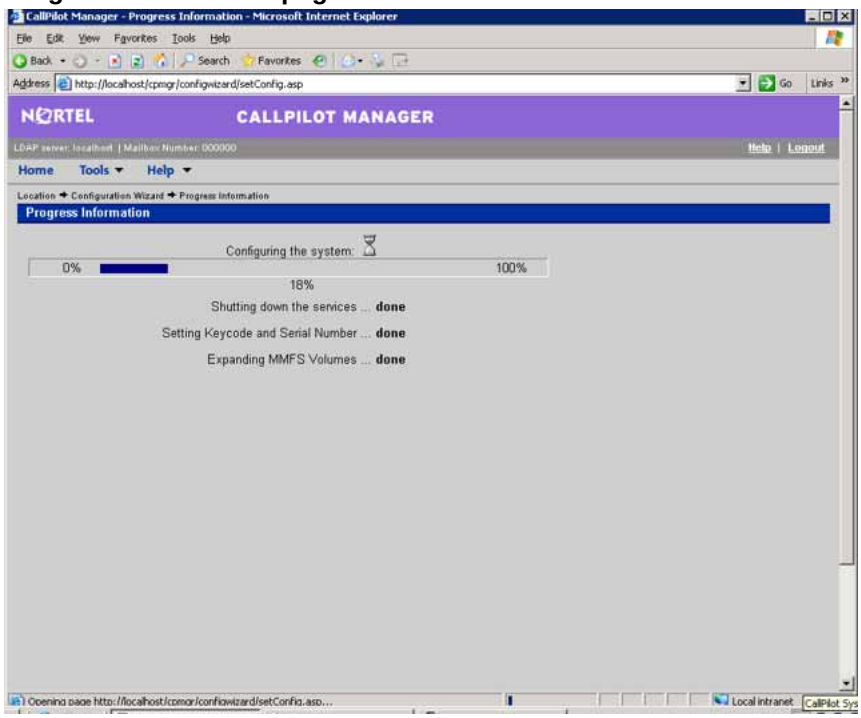


31 Click **Finish** to start process.

Result: The system starts the configuration process and the Progress Information screen appears.

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Figure 24
Progress Information page



32 After the process is complete, restart the CallPilot server.

—End—

Configuring CP2 using the CallPilot Configuration Wizard

Step	Action

Time required: 20 minutes (assuming one language is installed)

The dongle does not have to be moved from CP1 to CP2 to run the Configuration wizard on CP2. Using a High Availability-enabled keycode, the Configuration wizard can be run on CP2.

1 Launch a supported Internet Web browser on CP2.

2 In the address field, enter the following URL to start CallPilot Manager: **http://localhost/cpmgr**

3 Log on to CallPilot Manager using the administrator mailbox and default password created from the CallPilot Setup Wizard:

a. Under the **User** area, enter the following:

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- The administrator mailbox number is 000000.
- The default password is 124578.

b. Under the **Server** area, enter the **localhost** in the **Server** field.

4 Click **Login**.

Result: The Change User Password screen appears.

5 Change the password for the 000000 mailbox by doing the following:

a. Enter the **Current Password**.

b. Enter the **New Password**.

c. Reenter the new password in the **New Password Re-Entry** field.

d. Click **Save**.

Result: The Welcome to CallPilot Manager page appears.

6 Click **Configuration Wizard**.

Result: The Configuration Wizard Welcome Back page appears.

7 Click **Next**.

Result: The Keycode and serial number page appears.

8 Enter the following:

a. In the **Serial Number** field, enter the serial number of the dongle assigned to the CallPilot server. The serial number entered for CP2 must be the same as the serial number entered for CP1.

b. In the **Key Code** field, enter the High Availability-enabled keycode assigned to CallPilot server. The keycode entered for CP2 must be the same as the keycode entered for CP1.

9 Click **Next**.

Result: The Feature Verification page appears.

10 Ensure that all parameters are correct and that the High Availability feature says Mirroring.

11 Click **Next**.

Result: The Server Information page appears.

12 Do the following:

a. In the **Computer Name** field, enter the CallPilot server name.

b. In the **Time Zone** field, select the correct time zone.

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c. Under **Dialing Information**, enter the area code and country code.

d. Enter the **LDAP Search Base**. For example, **dc=nortel,dc=ca**.

Note: All values on the Server Information page for CP2 must be the same as CP1. Use Table 3 "High Availability system checklist" (page 29) that you completed for both CP1 and CP2.

13 Click **Next** option.

Result: The Password Information page appears and the **Change the password** option is selected.

14 On the Password Information page, do the following:

a. In the **New Password** field, enter the new password.

b. In the **Confirm the new password** field, reenter the new password.

c. Click **Next**.

Result: A warning message appears.

15 Click **OK** to dismiss the warning message.

Result: The Password Information page reappears.

16 Click **Next**.

Result: The Multimedia Allocation page appears.

17 Configure the MPB96 settings.

18 Click **Next**.

Result: The M1 Switch Information page appears.

19 Configure the switch information.

a. Select the **Switch Type**. The Switch Type for CP2 must be the same as CP1.

b. Enter the **Switch Customer Number**. The Switch Customer Number for CP2 must be the same as CP1.

c. Enter the **Switch IP Address**. The Switch IP Address for CP2 must be the same as CP1.

See Table 3 "High Availability system checklist" (page 29) containing the information for both the CP1 and CP2 nodes.

d. Provision the channels, as follows:

i. Select a channel.

Result: The Channel Detail window appears.

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ii. Enter the TN, ACD Position ID, and SCN.

iii. Ensure that Channel Allocation is set to Multimedia.

iv. Click **OK**.

Result: The Meridian 1 Switch Information window appears again.

v. Continue the provisioning of channels until complete.

Note: To automatically provision a number of channels, you can enter the information for one channel, select the number of channels required, and then click **Fill**. The Configuration Wizard automatically datafills the channels, and increments the TNs, ACD Position ID, and SCN.

The number of TNs configured on CP2 must be the same as the number configured on CP1.

Note: This is the CP2 switch-provisioning information for the switch. To obtain the CP2 switch-provisioning information, see the completed Table 3 "High Availability system checklist" (page 29).

20 Click **Next**.

Result: The Meridian 1 CDN Information page appears.

21 Click **New** to add a new CDN.

Result: The CDN Details page appears.

22 On the CDN Details page, do the following:

a. In the **CDN** field, enter the new CDN.

Note: The CDN for CP2 must be the same as the CDN configured on CP1.

b. Select the **Application Name** (Voice Messaging or Multimedia Messaging).

c. Click **OK**.

Result: The new CDN is added and the CDN information page reappears.

23 Click **Next**.

Result: The Language Source Directory page appears.

24 Insert the CallPilot 5.0 Language CD in to the CD/DVD drive on CP2.

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ATTENTION

You must use a CallPilot 5.0 Language CD.

Language CDs from previous CallPilot releases are not compatible with CallPilot 5.0. The Configuration Wizard checks the version of the Language CD and blocks the use of the CD if it is not a CallPilot 5.0 CD.

25 On the Language Source Directory Select page, do the following:

a. Select **Install Language**.

b. In the Language CD Location field, enter the directory of the Language disk or file. Typically, CallPilot uses drive Z.

26 Click **Next**.

Result: The Language Installation page appears.

27 On the Language Installation page, do the following:

a. Select Languages and Automated Speech recognition to be installed.

b. Select Primary and Secondary Languages.

Note: The Secondary Language is optional.

ATTENTION

The same languages must be installed on CP1 and CP2.

28 Click **Next**.

Result: The CallPilot Local Area Network Interface page appears.

29 On the CallPilot Local Area Network Interface page, do the following:

a. Select the network interface card from the drop-down list.

Result: The MAC address, IP address, and Subnet mask values are updated for the network interface card.

b. Change the **ELAN** and **CLAN** IP information (**IP address** and **Subnet Mask**).

c. Select the **High Availability mode** check box to display the High Availability Network Interfaces.

Note: To enable High Availability, a proper keycode is required and the High Availability Mode check box must be selected. The keycode has the ability to enable High Availability; however, the feature does not have to be enabled as it can be done at a later date.

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d. Enter IP information for the **HB1**, **HB2**, and **MIRROR** network interfaces cards.

The following table shows the suggested default values for HB1, HB2, and MIRROR on CP2. If you do not use these suggested values, ensure that you use your new values throughout the configuration.

Network Interface Card (NIC)	IP Address	Subnet Mask
Heartbeat 1 (HB1)	192.0.0.11	255.255.255.0
Heartbeat 2 (HB2)	194.0.0.11	255.255.255.0
MIRROR	193.0.0.11	255.255.255.0

30 Click **Next**.

Result: The Ready to Configure page appears.

31 Click **Finish** to start process.

Result: The system starts the configuration process and displays its progress.

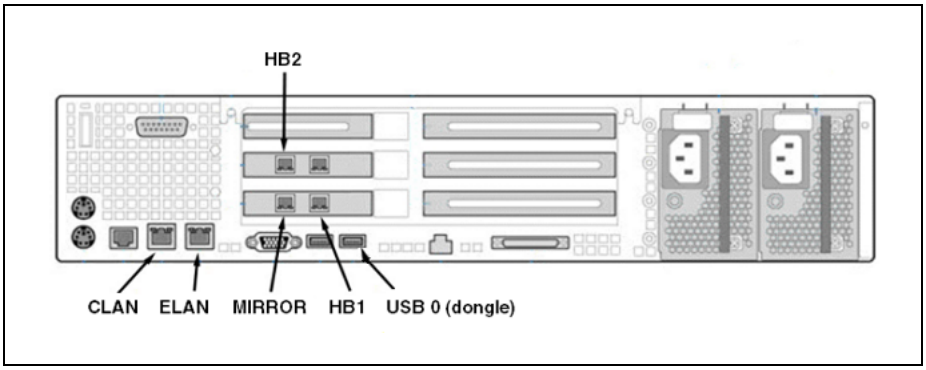
32 After the process is complete, restart the CallPilot server.

—End—

Connect and verify LAN connections

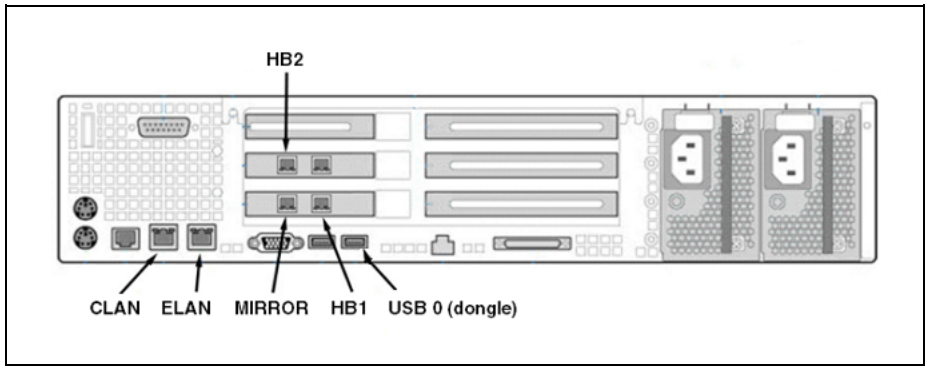
Use the following figure and procedure to connect the HB1, HB2, and MIRROR crossover LAN cables, and the ELAN and CLAN cables between the two High Availability servers.

Figure 25
Rear panel of 1005r server showing LAN connections



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Figure 26
Rear panel of 1006r server showing LAN connections



Connecting and verifying LAN connections

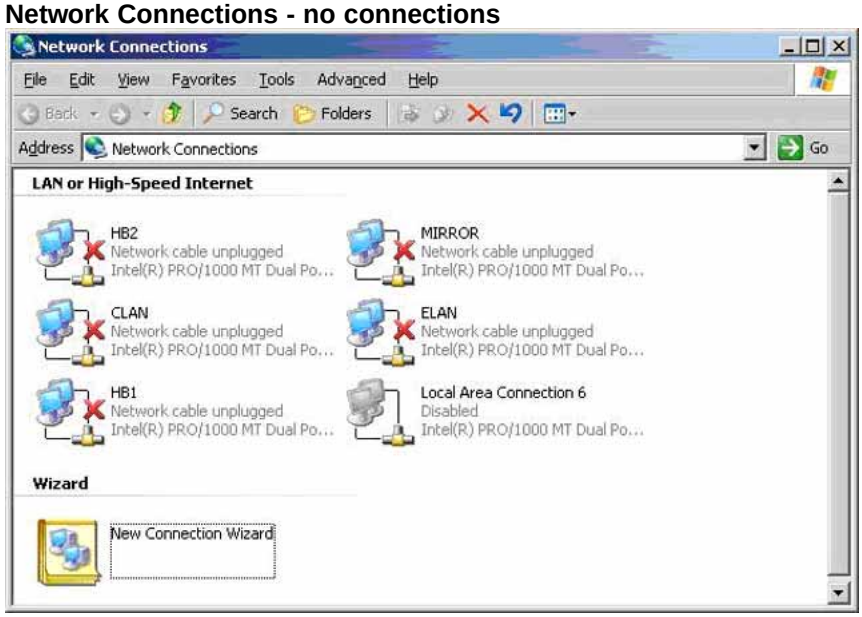
Step Action

ATTENTION
Do not change the names of default network connections (ELAN, CLAN, MIRROR, HB1, and HB2) created after High Availability servers installation.

1 On CP1 and CP2, select **Start > Settings > Network Connections**.

Result: The Network Connection window appears and shows that the HB1, HB2, MIRROR, ELAN, and CLAN connections are not connected.

Figure 27
Network Connections - no connections



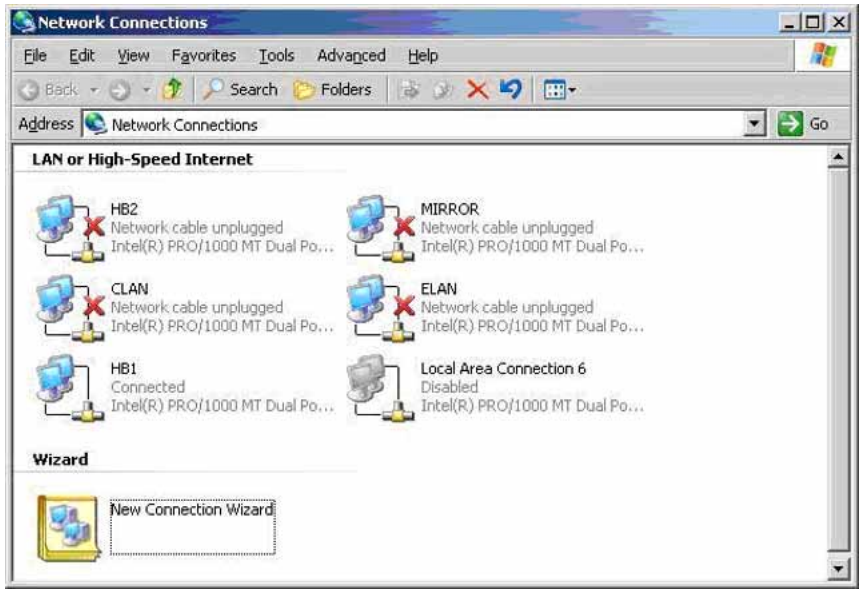
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2 Connect the HB1 crossover LAN cable between both the CP1 and CP2 servers.

3 In the Network Connections window, verify that HB1 shows that it is connected.

Result: The red X is removed from the HB1 icon, as shown in the following figure.

Figure 28
Network Connections - HB1 connected



4 To ensure that the HB1 cable is properly connected, perform the following from CP1:

a. Open a command prompt.

b. Enter the command **tracert –d 192.0.0.11** to verify the HB1 connection.

Note: If you are not using the default values for the heartbeat connections, enter tracert -d <IP address of HB1 on CP2>.

c. Confirm that server CP2 can be reached in one hop.

5 Connect the HB2 crossover LAN cable between both the CP1 and CP2 servers.

6 In the Network Connections window, verify that HB2 shows that it is connected.

Result: The red X is removed from the HB2 icon.

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7 To ensure that the HB2 cable is properly connected, perform the following from CP1:

a. Open a command prompt.

b. Enter the command **tracert –d 194.0.0.11** to verify the HB2 connection.

Note: If you are not using the default values for the heartbeat connections, enter tracert -d <IP address of HB2 on CP2>.

c. Confirm that server CP2 can be reached in one hop.

8 Connect the MIRROR crossover LAN cable between both the CP1 and CP2 servers.

9 In the Network Connections window, verify that MIRROR shows that it is connected.

Result: The red X is removed from the MIRROR icon.

10 To ensure that the MIRROR cable is properly connected, perform the following from CP1:

a. Open a command prompt.

b. Enter the command **tracert –d 193.0.0.11** to verify the MIRROR connection.

Note: If you are not using the default values for the heartbeat connections, enter tracert -d <IP address of Mirror on CP2>.

c. Confirm that server CP2 can be reached in one hop.

11 Connect the ELAN cable.

12 In the Network Connections window, verify that ELAN shows that it is connected.

Result: The red X is removed from the ELAN icon.

13 To ensure that the ELAN is properly connected, perform the following from CP1:

a. Open a command prompt.

b. Verify that the switch is accessible by running the following command: **ping <switch IP address>**

c. Verify that CP2 is accessible by running the following command: **ping <CP2 ELAN IP address>**

14 Connect the CLAN cable.

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15 In the Network Connections window, verify that CLAN shows that it is connected.

Result: The red X is removed from the CLAN icon.

16 To ensure that the CLAN is properly connected, perform the following from CP1:

a. Open a command prompt.

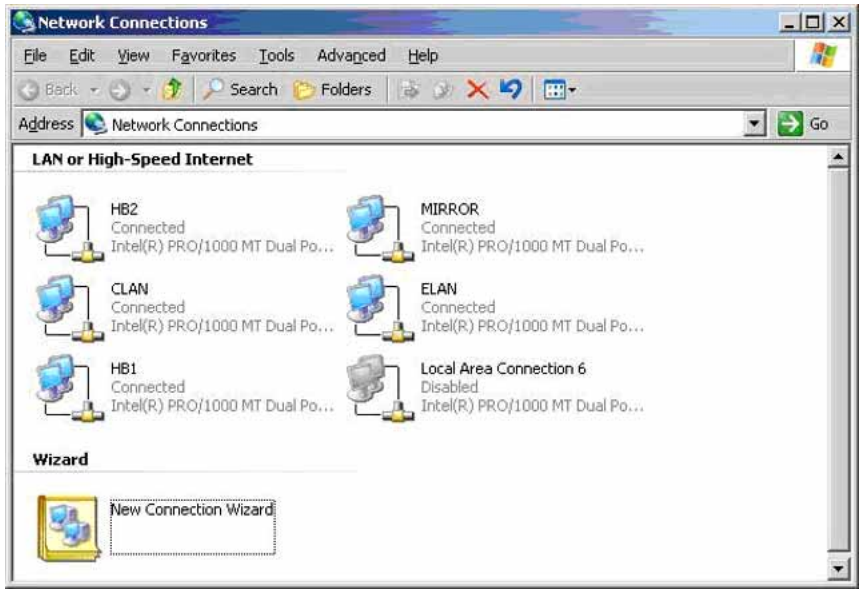
b. Verify that the default gateway is accessible by running the following command: **ping <CLAN/Nortel server subnet default gateway IP address>**

c. Verify that CP2 is accessible by running the following command: **ping <CP2 CLAN IP address>**

17 Check the Network Connections window and ensure that all connections are made.

Result: No red Xs appear on any of the icons (as shown in the following figure).

Figure 29
Network Connections - all connections made



—End—

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Modifying the hosts file

Step	Action

This procedure is required if a DNS server is not used in the network solution or part of the configuration (in particular, where IP address name resolution is preferred). Use the following procedure to resolve the Managed CLAN IP address (virtual CLAN IP address).

1 On your <server or client PC>, perform the following steps:

a. Open Windows Explorer and navigate to the following folder: **C:\WINDOWS\system32\drivers\etc**

b. Double-click the **hosts** file.

Result: The **Open with** window appears.

Figure 30
Open With window



c. Select **Notepad**.

d. Click **OK**.

Result: The Notepad application appears and displays the hosts file information.

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e. Save a copy of the hosts file (as a backup) before you modify the file.

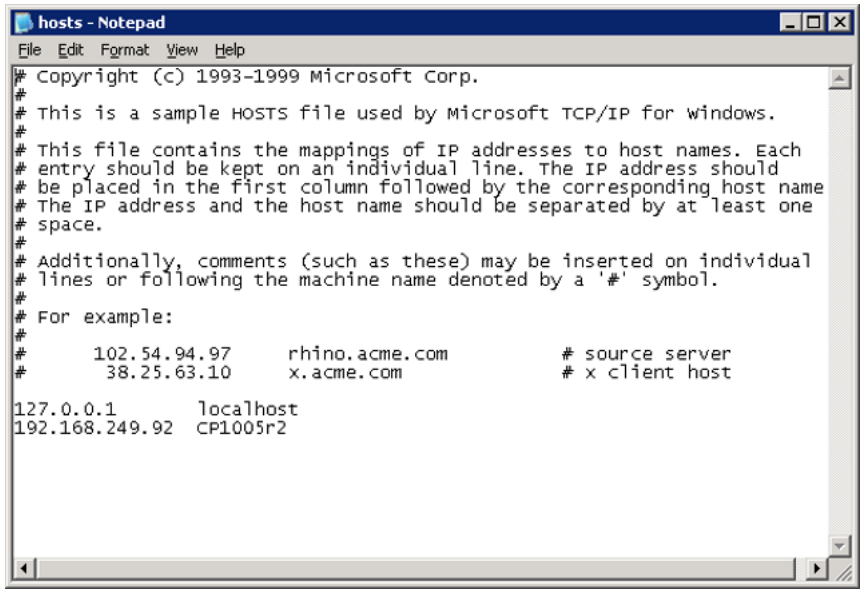
f. Place the cursor at a new line directly underneath the default entry 127.0.0.1.

g. Enter the Managed CLAN IP address.

For more information, see Table 3 "High Availability system checklist" (page 29).

h. Press the **Tab** key until cursor is underneath the default localhost and enter the **Managed CLAN Host Name** for the associated Managed CLAN IP address that was just entered.

Figure 31
hosts file



i. Press the **Enter** key to go to next line.

Note: If a DNS server is used as a solution, ensure Network Administrator has the entries entered into the DNS server configuration.

—End—

Use the following procedure to test the host name resolution.

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Testing the host name resolution

Step	Action

This procedure is an example of how to test the host name for CP1 and CP2 if the Managed CLAN host name has been added to their respective host files.

1 On CP1, do the following:

a. Select **Start > Run**.

Result: The Run window appears.

b. In the **Open** field, type **`cmd`**.

Result: The DOS Command Prompt appears.

c. Enter the following command: **`ping <CP2 CLAN Host Name>`**

Result: If the CLAN is properly connected and the host file is configured with the IP address and host name information, a reply is displayed showing the Managed CLAN IP address and the time to return.

d. Repeat (if necessary) with other host names from CP2.

2 On CP2, repeat the preceding steps.

—End—

Run Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration

The High Availability Configuration Wizard is run twice during the configuration of a High Availability server pair:

- Stage 1: The High Availability Configuration Wizard is run for the first time to gather and verify the configuration of the two nodes in the High Availability pair. This is done to ensure that the nodes are correctly configured (for example, to ensure that the networking information is consistent between the two nodes). For more information, see "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83).
- Stage 2: The High Availability Configuration Wizard is run a second time to verify the AutoStart software installation and to generate the definition file that is imported into the AutoStart Console to provide the initial configuration. For more information, see "Generating the AutoStart Definition File" (page 112).

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Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration

Step	Action

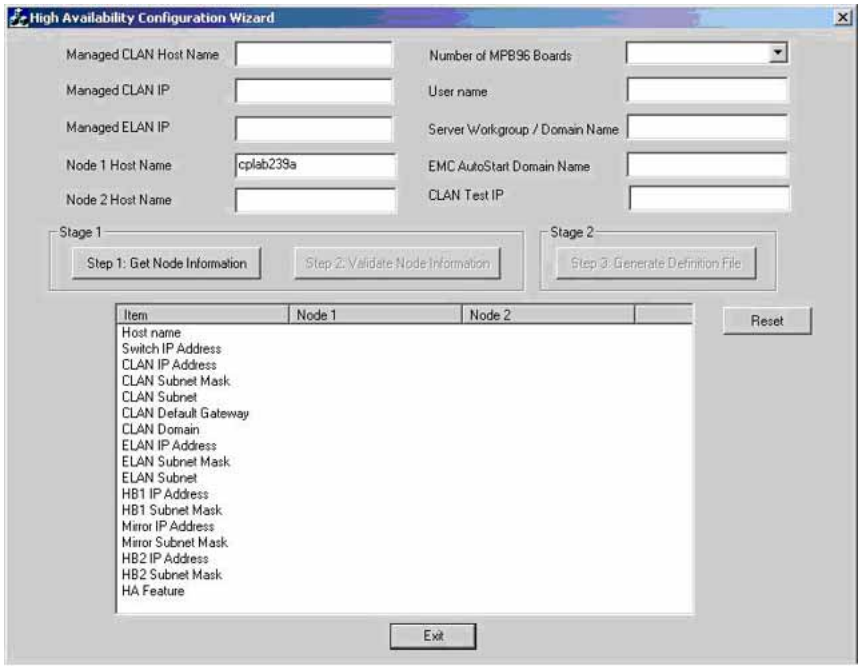
The High Availability Configuration Wizard is only run on CP1.

1 Use Windows Explorer to navigate to the **D:\Nortel\HA** folder.

2 Double-click the **HighAvailabilityConfigurationWizard.exe** file.

Result: The High Availability Configuration Wizard appears.

Figure 32
High Availability Configuration Wizard



3 Enter the following information based on the server configuration. This information is completed in Table 3 "High Availability system checklist" (page 29):

a. **Managed CLAN Host Name**: Enter the Host Name of the Managed CLAN.

b. **Managed CLAN IP**: Enter the IP address of the Managed CLAN.

c. **Managed ELAN IP**: Enter the IP address of the Managed ELAN.

d. **Node 1 Host Name**: The Node 1 Host Name is initialized to the name of the server on which the High Availability Configuration Wizard is run. The Host Name is the name of the first CallPilot server (CP1) in the High Availability pair.

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e. **Node 2 Host Name:** Enter the Host Name of the second CallPilot server (CP2) in the High Availability pair.

f. **Number of MPB96 boards:** Enter the number of MPB96 boards installed in the server.

g. **User name:** Enter the user name of the administrator account.

h. **Server Workgroup / Domain Name:** Enter the name of the Windows workgroup or Windows domain in which the CallPilot servers belong.

i. **EMC AutoStart Domain Name:** Enter the domain name of the AutoStart domain.

The Domain Name must be a unique name and is used as the AutoStart domain for the pair of CallPilot servers. This name must contain only alphanumeric characters and have a maximum length of eight characters. The domain name must be the same domain name that was used in the High Availability Configuration Wizard.

Note: This document uses [AutoStart_Domain]. This value must be replaced with your AutoStart domain name.

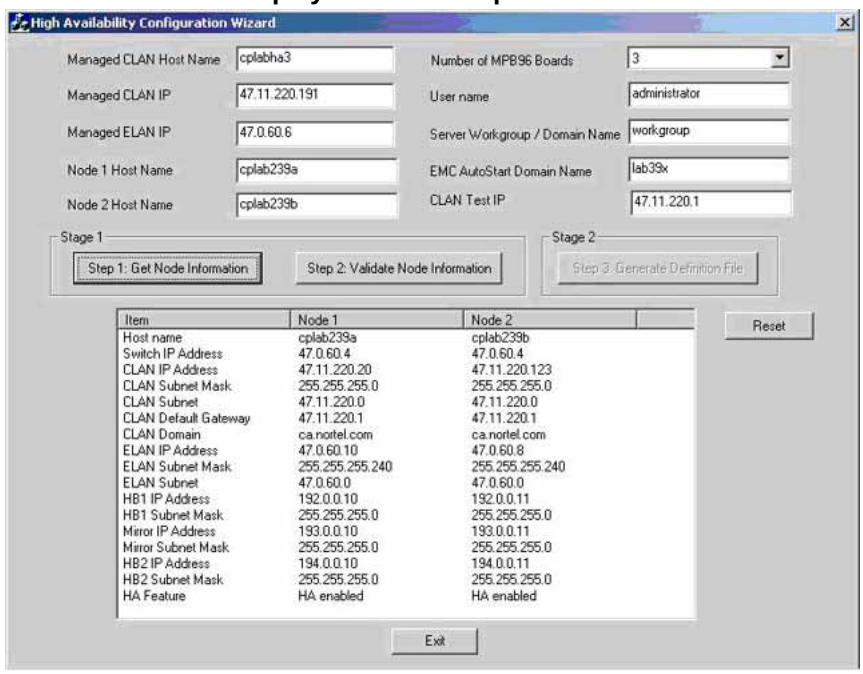
j. **CLAN Test IP:** Enter the IP address on the CLAN to be used to verify the CLAN connection. The IP address must be of a device that responds to the ping command. If there is no CLAN connection, enter the loopback IP address (127.0.0.1).

4 Click the **Step 1: Get Node Information** button to retrieve information from the two servers in the High Availability pair.

- If there are any errors, a dialog box is displayed with the error details. If the Configuration Wizard is unable to communicate with either of the servers, verify that both servers have all the network cables connected and that the administrator account passwords are the same on both servers.
- If there are no errors, the Configuration Wizard is updated with the information from the servers and the Validate Node Information button is enabled.

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Figure 33
Node Information displayed in bottom pane



5 Click the **Step 2: Validate Node Information** button to check that the configuration of the two servers in the pair match. The Validate Node Information button checks the format of the entered IP addresses, pings the HB1, HB2, and Mirror IP addresses, and compares the workgroup or domain information on both nodes to ensure the information is the same.

- If there are any errors, a message box is displayed with details of the error. Correct the problem on the server that has the error and then click the **Step 2: Validate Node Information** button again.
- If there are no errors, a message displays showing that Stage 1 is complete. You must exit the Configuration Wizard and continue with the installation (or upgrade) process. The information you entered is automatically saved.

Figure 34
Stage 1 Complete



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6 Click the **Exit** button.

7 Click **Yes** to confirm the exit from the High Availability Wizard.

—End—

Install the AutoStart Agent and Console software

The High Availability feature uses the AutoStart software that must be installed on both servers. The AutoStart software includes both Agent and Console software.

There can also be AutoStart software patches that must be installed. SUs and PEPs are found in the Enterprise Solutions PEP Library (ESPL), which can be accessed at the following Web site: www.nortel.com/espl

Note: Within the AutoStart software, the two CallPilot servers are included in an AutoStart domain. The name of the domain must be unique within the network. For the purposes of this document, the domain name **[AutoStart_Domain]** is used. This value must be replaced with the AutoStart domain name to be used by the customer. The AutoStart Domain has no association with the customer's network domain and is used only by the AutoStart software.

Install the AutoStart software on CP1

The following procedure installs AutoStart 5.3 SP3 Agent and Console software on the CP1 server. This procedure takes approximately 10 minutes.

Installing the AutoStart Agent and Console software on CP1

Step	Action

ATTENTION

The computer name must be set before you install the AutoStart software. The software requires the computer name. The computer name must contain only alphanumeric characters. Nonalphanumeric characters (such as a hyphen [-]) are not supported.

If you want to change the computer name after installing the server you must uninstall and then reinstall the AutoStart software.

1 Insert the **CallPilot Application CD**.

2 Navigate to the **Z:\EMC** folder on the CallPilot Application CD.

3 Double-click **EMC_AutoStart_5.3_SP3_Update.exe** to unpack the archive to **D:\temp** folder..

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Result: Three files are unpacked into the D:\temp\EMC_AutoStart_5.3_SP3_Update folder: EAS53_WIN_x86.exe, EAS53SP3_WIN_x86.exe, EMC AutoStart Update Process.pdf

4 Double-click **EAS53SP3_WIN_x86.exe** file to start the installation.

Result: The InstallShield Wizard informs you that the AutoStart 5.3 SP3 software is preparing to install (install preparation can take a few minutes). After preparation is complete, Welcome window appears.

Figure 35
InstallShield Wizard - Preparing to install AutoStart 5.3 SP3 software

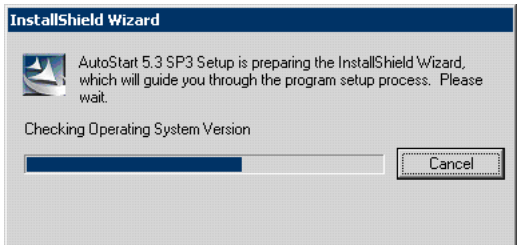
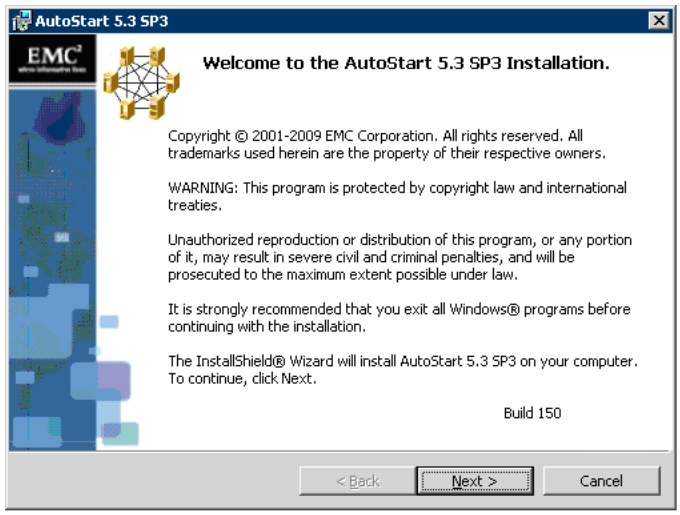


Figure 36
Welcome window

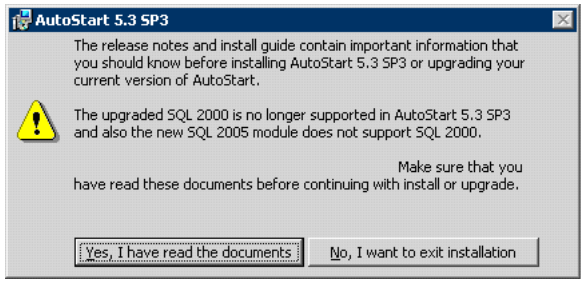


5 Click **Next** .

Result: AutoStart 5.3 SP3 reminder to read the documents appears.

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Figure 37
Reminder to read the documents



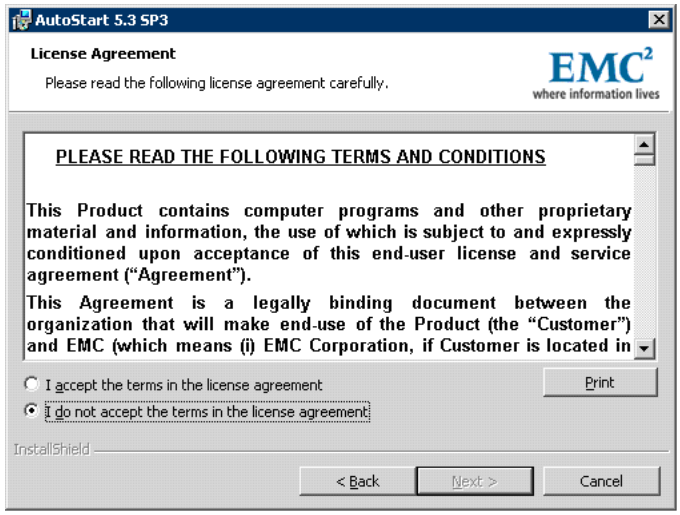
6 Click **Yes, I have read the documents.**

Result: AutoStart 5.3 SP3 reminder is closed.

7 Click **Next** on Welcome window.

Result: License Agreement window appears.

Figure 38
License Agreement window



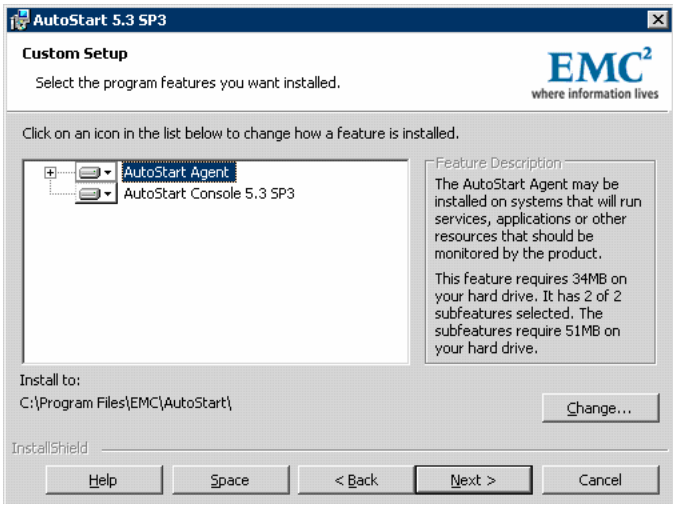
8 Select the option **I accept the terms in the license agreement**.

9 Click **Next**.

Result: The Custom Setup window appears.

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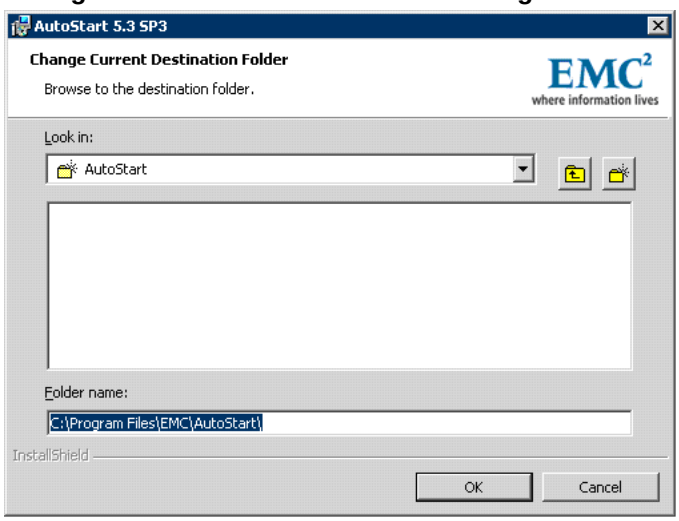
Figure 39
Custom Setup window



10 Click **Change** to change the installation path.

Result: The Change Current Destination Folder dialog box appears.

Figure 40
Change Current Destination Folder dialog box



11 In **Folder name** field, change the drive letter from C to D, change the path to:

D:\Program Files\EMC AutoStart

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ATTENTION
You must install the software in the D:\Program Files\EMC AutoStart\ directory or the software does not work correctly.

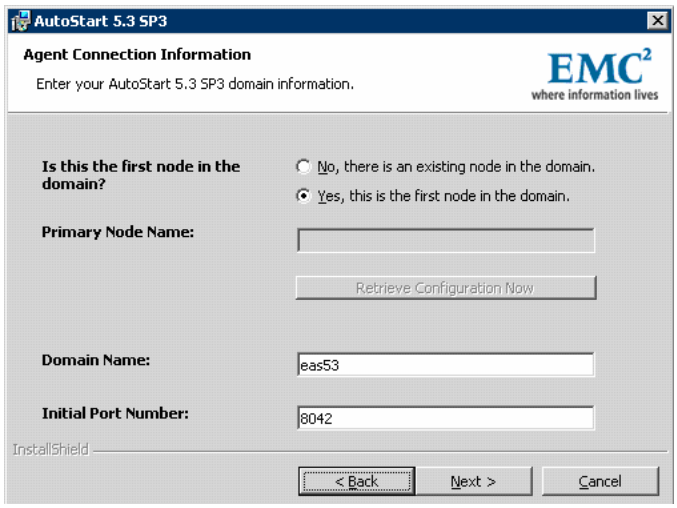
12 Click **OK**.

Result: The Change Current Destination Folder dialog box closes and you are returned to the Custom Setup window, which shows the correct installation path.

13 Click **Next**.

Result: The Agent Connection Information window appears.

Figure 41
Agent Connection Information window



14 Leave the option **Yes, this is the first node in the domain** selected.

15 Enter the EMC AutoStart**Domain Name**. The AutoStart Domain Name must be the same name that you entered in the High Availability Configuration Wizard.

Note: This document uses [AutoStart_Domain]. This value must be replaced with your AutoStart domain name.

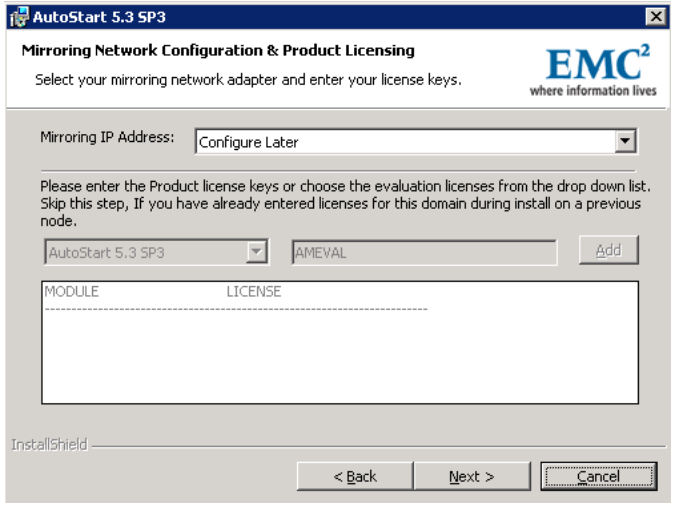
16 Leave **Initial Port Number** unchanged.

17 Click **Next**

Result: The Mirroring Network Configuration & Product Licensing window appears.

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Figure 42
Mirroring Network Configuration and Product Licensing window



18 In the field **Mirroring IP Address**: select the IP address that was assigned to the Mirror NIC on CP1 server. The default value is **Configure Later**.

19 By default the **AutoStart 5.3 SP3** module is selected from the drop-down list. Enter AutoStart 5.3 SP3 Product license key (provided with your CallPilot server) in the field on the right. Click **Add** to add the license in the list.

Result: The AutoStart 5.3 SP3 module is added in the list at the bottom with appropriate license key.

Note 1: The AutoStart license key is a string of 24 characters plus a dash. There are 8 characters before the dash and 16 characters after the dash (XXXXXXXX-XXXXXXXXXXXXXXXX). When entering the AutoStart license key, you must enter the whole string including the dash.

Note 2: When you order the High Availability feature, AutoStart 5.3 SP3 license key comes in the form of EMC License Registration Card.

20 For all other five modules in the drop-down list (Exchange 2003, Oracle 3.1, Sql Server, MirrorView, SRDF) do the following:

a. Select the module from the drop-down list.

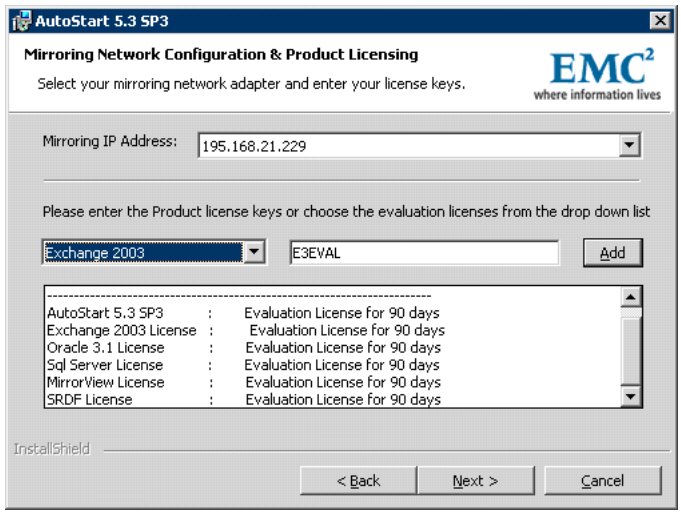
Result: Appropriate evaluation license is displayed in the field on the right.

b. Click **Add**

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Result: Evaluation licenses for the five modules are added in the list at the bottom.

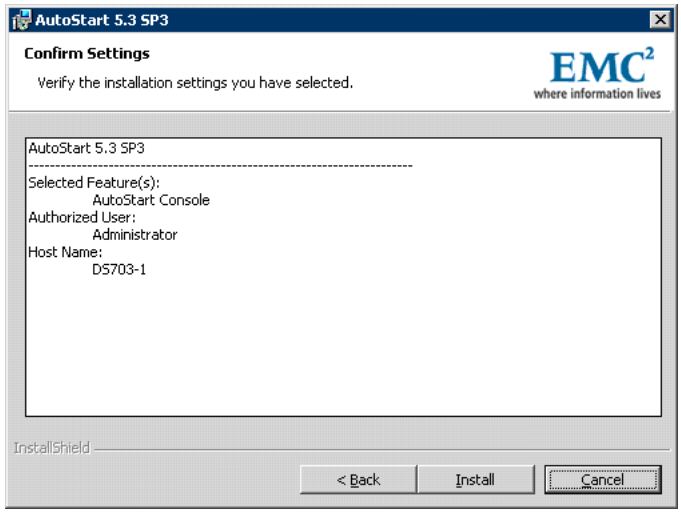
Figure 43
Mirroring Network Configuration and Product Licensing window



21 Click **Next** to continue.

Result: The Confirm Settings window appears.

Figure 44
Confirm Settings window



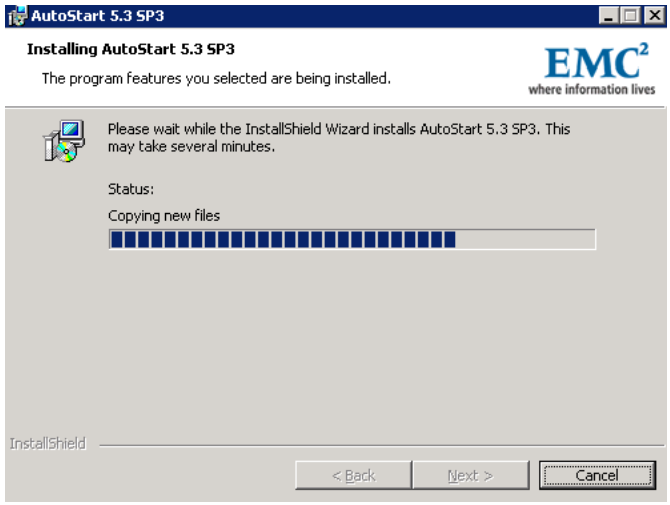
22 Verify that the settings are correct.

23 Click **Install** to start the installation of the AutoStart Agent and Console software.

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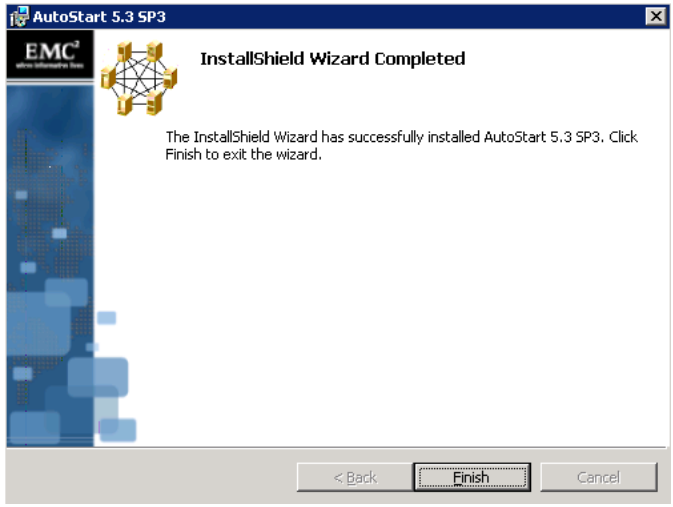
Result: The Installing AutoStart 5.3 SP3 window appears and shows the status of the installation.

Figure 45
Installing AutoStart 5.3 SP3 window



24 Wait until the installation is complete and the InstallShield Wizard Completed window appears.

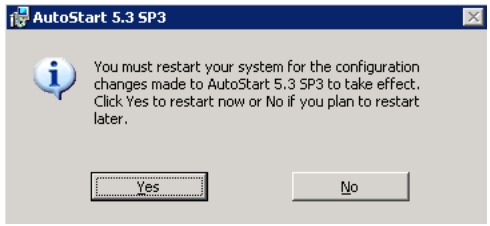
Figure 46
InstallShield Wizard Completed window



25 Click **Finish**
Result: The AutoStart 5.3 SP3 Installer Information dialog box appears.

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Figure 47
AutoStart 5.3 SP3 dialog box



26 Click **No** if there are patches to install or click **Yes** to restart the CP1 server.

Note: If there are patches available for AutoStart 5.3 SP3, install the patches and then restart the CP1 server.

27 Delete the folder **D:\temp\EMC_AutoStart_5.3_SP3_Update**.

—End—

Add the node 2 administrator account to the AutoStart Console on node 1

Add the node 2 administrator account to the AutoStart Console on node 1

Step Action

This procedure adds the CP2 Administrator Account to the AutoStart Console on CP1.

ATTENTION
The CP2 Administrator Account must be added to the AutoStart Console on CP1 before you install the AutoStart software on CP2. If you try to install the AutoStart software on CP2 before you add the administrator account of CP2 into the AutoStart console on CP1, the AutoStart Agent installed on CP2 cannot communicate with the Agent installed on CP1. You must uninstall the Agent and Console software and then reinstall the software.

1 Log on to CP1.

Note: An error can appear, indicating that “At least one service or driver failed to start.” This is normal, as the AutoStart mirroring service is installed on node 1; however, the service is not yet fully configured so the server cannot start.

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2 Launch the AutoStart Console on CP1 by selecting **Start > Programs > EMC AutoStart > EMC AutoStart Console 5.3 SP3**.

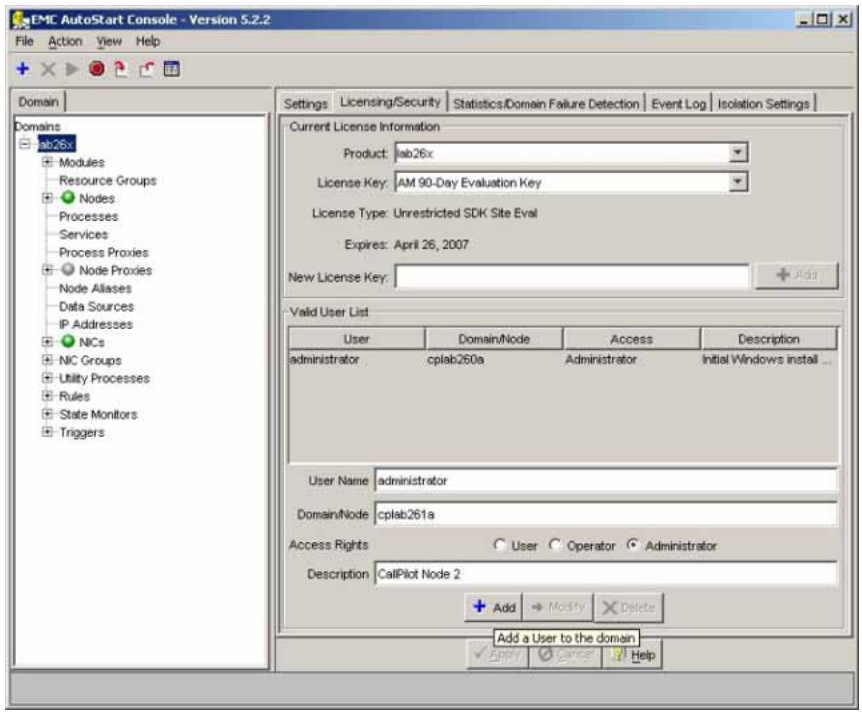
Result: The AutoStart Console appears.

3 In the Domain pane (left side of the window), click **[AutoStart_Domain]** where [AutoStart_Domain] is the domain name created when you installed the AutoStart Agent.

Note: If the domain is not visible and an error is reported, close and reopen the AutoStart Console.

4 Select the **Licensing/Security** tab.

Figure 48
AutoStart Console - Licensing/Security tab - Add Admin User



5 In the **Valid User List** area, enter the following information:

a. In the **User Name** field, enter administrator.

b. In the **Domain/Node** field, enter the host name of CP2.

c. For the **Access Rights** option, select the **Administrator** option button.

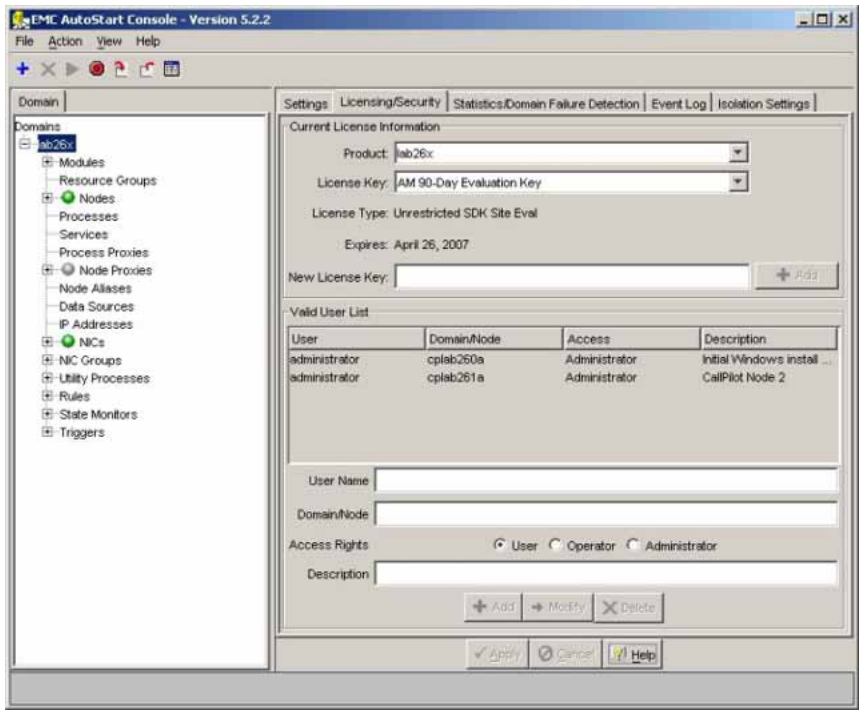
d. In the **Description** field, enter CallPilot Node 2.

6 Click **Add**.

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Result: A row is added to the Valid User List.

Figure 49
AutoStart Console - Licensing/Security tab - Node 2 Administrator user is added



7 Exit the AutoStart Console on CP1.

—End—

Install the AutoStart software on CP2

The following procedure installs AutoStart 5.3 SP3 Agent and Console software on the CP2 server. This procedure takes approximately 10 minutes.

Installing the AutoStart Agent and Console software on CP2

Step	Action

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ATTENTION

The computer name must be set before you install the AutoStart software. The software requires the computer name. The computer name must contain only alphanumeric characters. Nonalphanumeric characters (such as a hyphen [-]) are not supported.

If you want to change the computer name after installing the server you must uninstall and then reinstall the AutoStart software.

1 Insert the **CallPilot Application CD**.

2 Navigate to the **Z:\EMC** folder on the CallPilot Application CD.

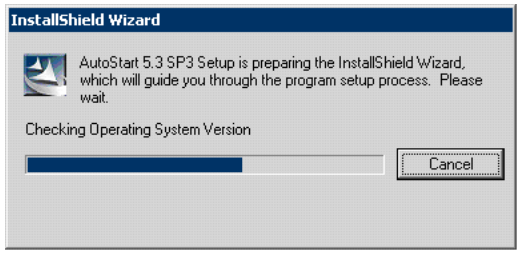
3 Double-click **EMC_AutoStart_5.3_SP3_Update.exe** to unpack the archive to the **D:\temp** folder.

Result: Three files are unpacked into the D:\temp\EMC_AutoStart_5.3_SP3_Update folder: EAS53_WIN_x86.exe, EAS53SP3_WIN_x86.exe, EMC AutoStart Update Process.pdf

4 Double-click **EAS53SP3_WIN_x86.exe** to start the installation.

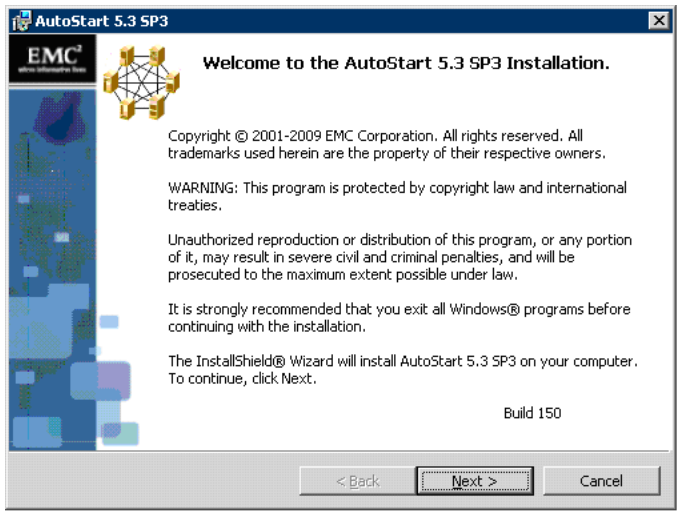
Result: The InstallShield Wizard informs you that AutoStart 5.3 SP3 software is preparing to install (this can take a few minutes). After preparation is complete, the Welcome window appears.

Figure 50
InstallShield Wizard - Preparing to install AutoStart 5.3 SP3 software



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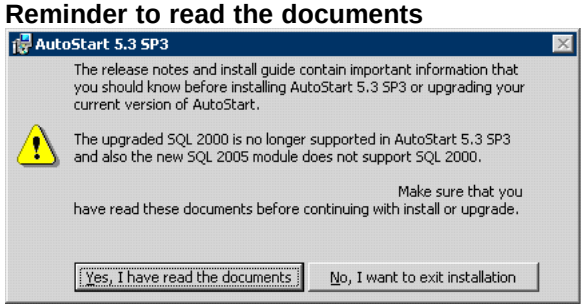
Figure 51
Welcome window



5 Click **Next**.

Result: AutoStart 5.3 SP3 reminder to read the documents appears.

Figure 52
Reminder to read the documents



6 Click **Yes, I have read the documents.**

Result: AutoStart 5.3 SP3 reminder is closed.

7 Click **Next** on the Welcome window.

Result: The License Agreement window appears.

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Figure 53
License Agreement window

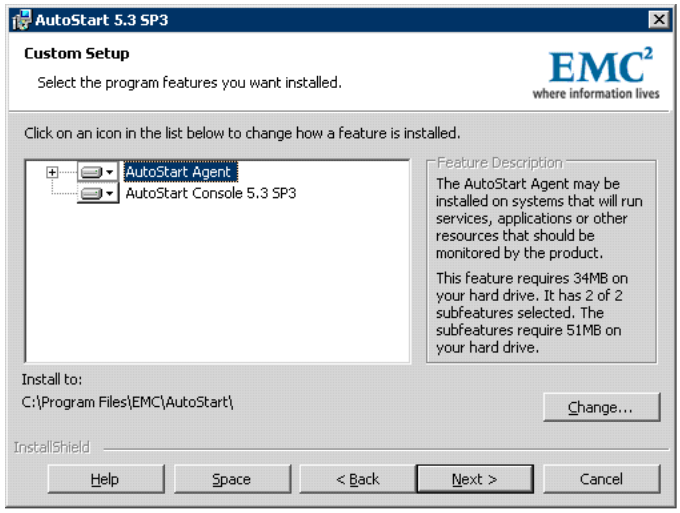


8 Select the **I accept the terms in the license agreement** option.

9 Click **Next**.

Result: The Custom Setup window appears.

Figure 54
Custom Setup window

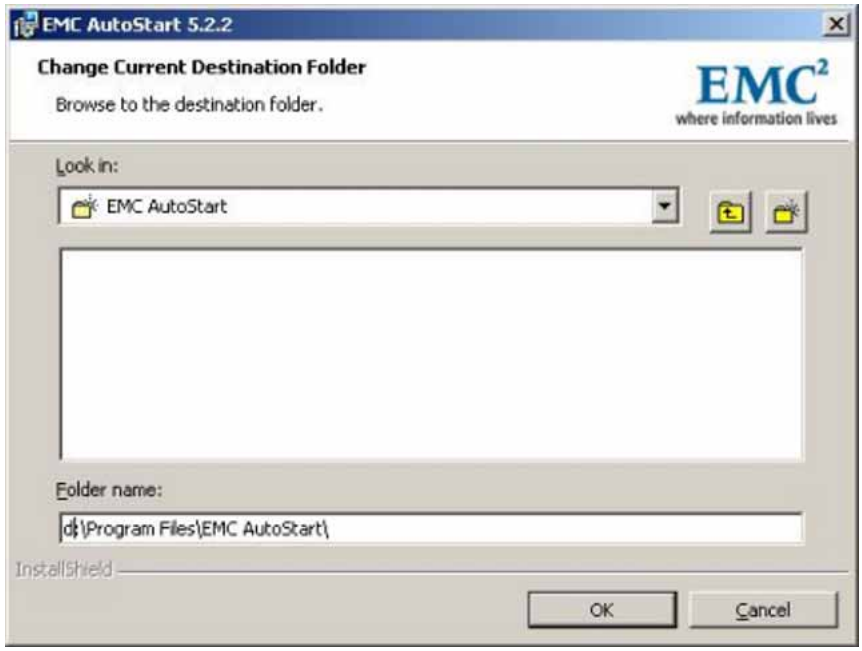


10 Click **Change** to change the installation path.

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Result: The Change Current Destination Folder dialog box appears

Figure 55
Change Current Destination Folder dialog box



11 In the **Folder name** field, change the drive letter from C to D, change the path to: **D:\Program Files\EMC AutoStart**

ATTENTION
You must install the software in the **D:\Program Files\EMC AutoStart** directory or the software does not work correctly.

12 Click **OK**.

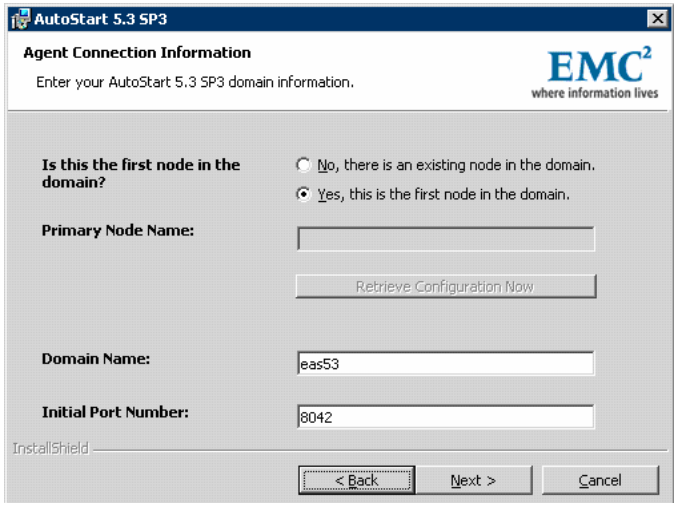
Result: The Change Current Destination Folder dialog box closes and you are returned to the Custom Setup window, which shows the correct installation path.

13 Click **Next**.

Result: The Agent Connection Information window appears.

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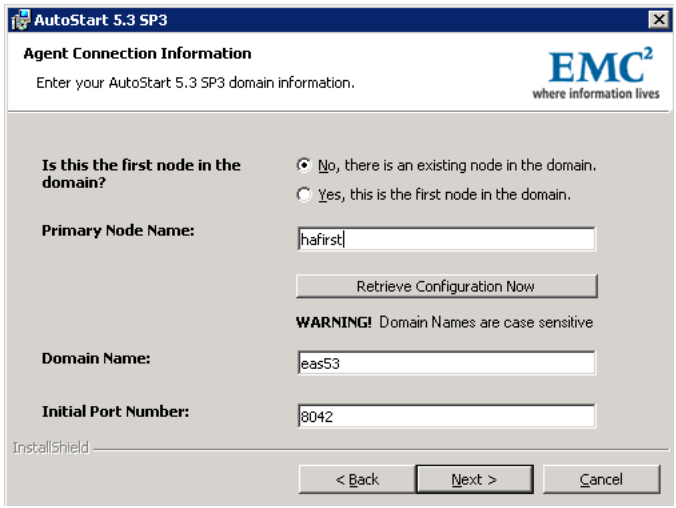
Figure 56
Agent Connection Information window



14 Select the **No, there is an existing node in the domain** option button.

Result: The field **Primary Node Name** is highlighted.

Figure 57
Agent Connection Information window – there is an existing node in the domain



15 Enter the host name of CP1 server in the **Primary Node Name** field.

16 Enter the EMC AutoStart **Domain Name**. The AutoStart Domain Name must be the same name that you entered in the High Availability Configuration Wizard.

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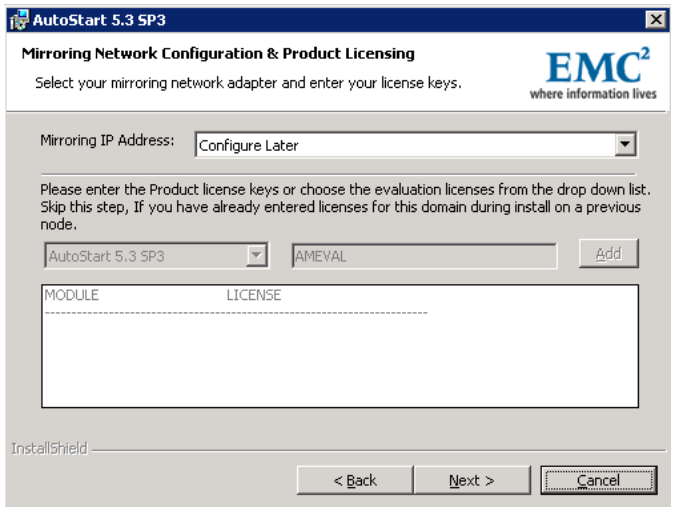
Note: This document uses [AutoStart_Domain]. This value must be replaced with your AutoStart domain name.

17 Leave the **Initial Port Number** unchanged.

18 Click **Next**.

Result: The Mirroring Network Configuration & Product Licensing window appears. The list of licenses is disabled.

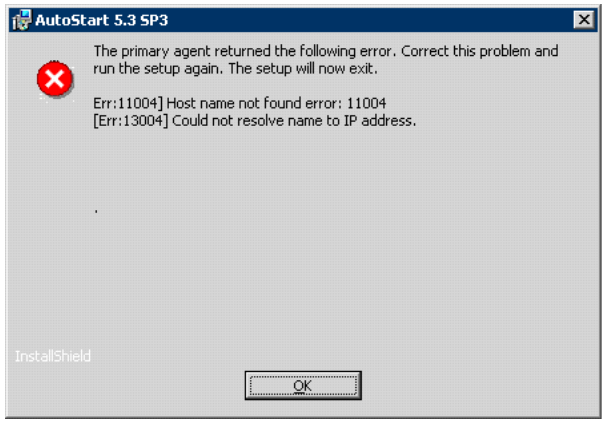
Figure 58
Mirroring Network Configuration and Product Licensing window



Note: If you enter an invalid **Primary Node Name**, or the AutoStart Agent is not running on the specified node, an error message is displayed (similar to the following). Check that the Primary Node Name is correct and that the networking is configured so that the name can be resolved on another node. Click **OK** to return to the Agent Connection Information window.

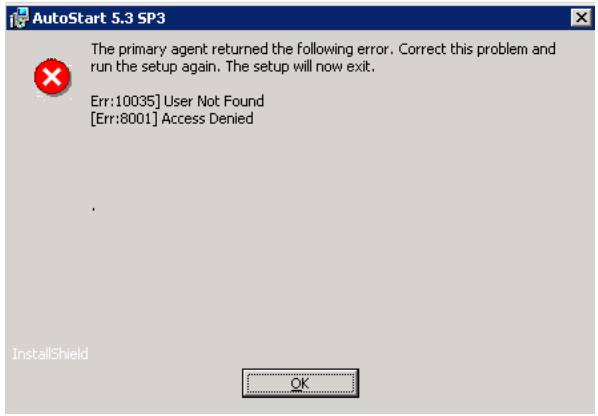
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Figure 59
Error: Invalid name or agent not running on Primary node



Note: : If you forgot to add the administrator account of CP2 server into the AutoStart domain, the following error is displayed. Click **OK** to return to the Agent Connection Information window. Configure licensing and security on the CP1 server according to the chapter "Add the node 2 administrator account to the AutoStart Console on node 1 " (page 94).

Figure 60
Primary Agent error



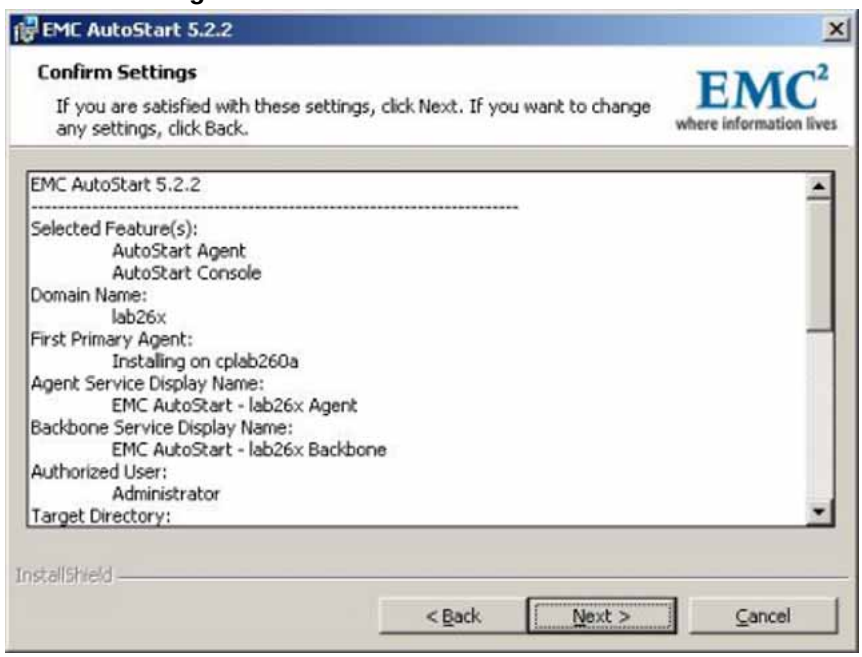
19 In the field **Mirroring IP Address:** select the IP address that was assigned to the Mirror NIC on CP2 server. The default value is **Configure Later**.

20 Click **Next**.

Result: The Confirm Settings window appears.

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Figure 61
Confirm Settings window

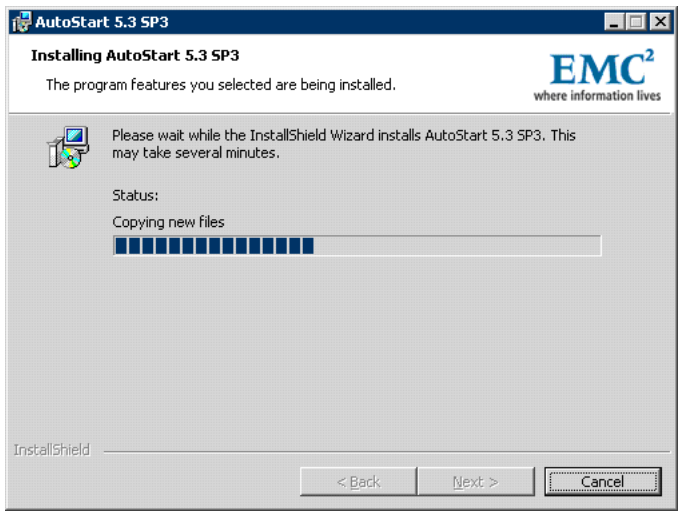


21 Verify that the settings are correct.

22 Click **Install** to start the installation of the AutoStart Agent and Console software.

Result: The Installing AutoStart 5.3 SP3 window appears and shows the status of the installation.

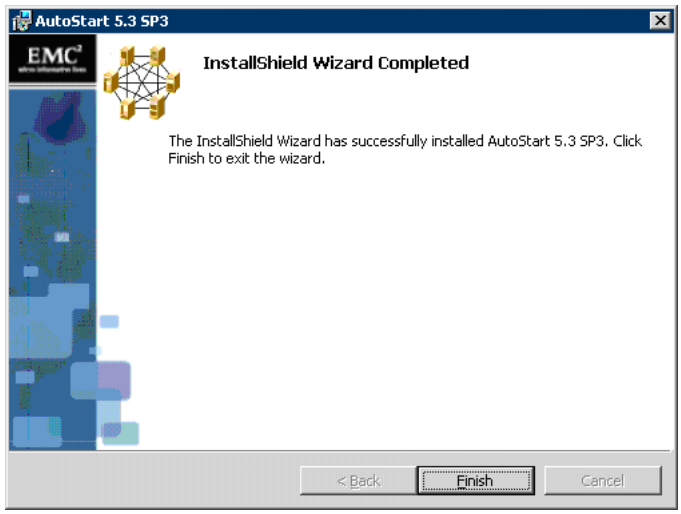
Figure 62
Installing AutoStart 5.3 SP3 window



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23 Wait until the installation is complete and the InstallShield Wizard Completed window appears.

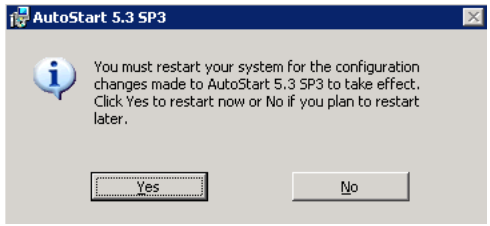
Figure 63
InstallShield Wizard Completed window



24 Click **Finish**.

Result: AutoStart 5.3 SP3 Installer Information dialog box appears.

Figure 64
AutoStart 5.3 SP3 dialog box



25 Click **No** if there are patches to install or click **Yes** to restart the CP2 server.

Note: If there are patches available for AutoStart 5.3 SP3 software, install the patches and then restart the CP2 server.

26 Delete the folder **D:\temp\EMC_AutoStart_5.3_SP3_Update**.

—End—

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Configure the AutoStart software

To configure the AutoStart software, both servers (CP1 and CP2) must be running and have the HB1, HB2, and MIRROR LANs connected so that the two servers can communicate using the LAN connections.

Configure the AutoStart software on CP1

Use the procedures in the following section to configure the AutoStart software on CP1.

Modifying the AutoStart Domain and Verification links

Step	Action

1 Launch the AutoStart Console by selecting **Start > Programs > EMC AutoStart > EMC AutoStart Console 5.3 SP3**.



WARNING
Do not continue the configuration process until CP2 is finished rebooting.



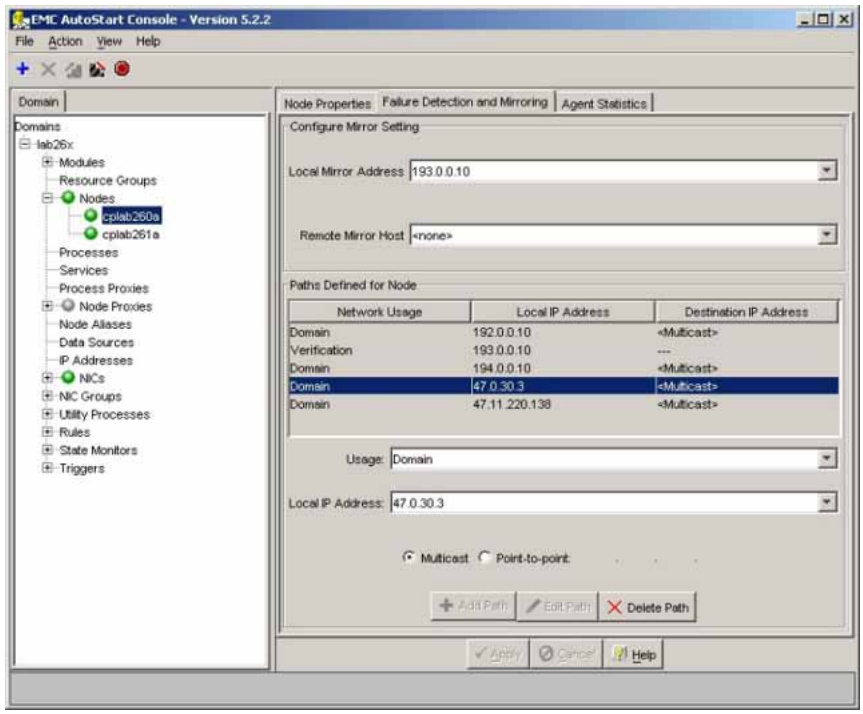
WARNING
Wait for both servers under Domains > [AutoStart_Domain] > Nodes to appear green before making any changes in the AutoStart Console. Failure to do so can result in losing configured information for verification links upon the next reboot.

2 In the **Domains** pane, select the CP1 node (**Domains > [AutoStart_Domain] > Nodes > <CP1 Node Name>**).

a. Select the **Failure Detection and Mirroring** tab.

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Figure 65
AutoStart Console - Failure Detection and Mirroring tab



b. In the **Paths Defined for Node** list, select the entry that has the ELAN IP address for CP1.

c. Click **Delete Path**.

d. In the **Usage** drop-down list, select **Verification**.

e. In the **Local IP Address** drop-down list, select the ELAN IP address for CP1.

f. Click **Add Path**.

g. In the **Paths Defined for Node** list, select the entry that has the CLAN IP address for CP1.

h. Click **Delete Path**.

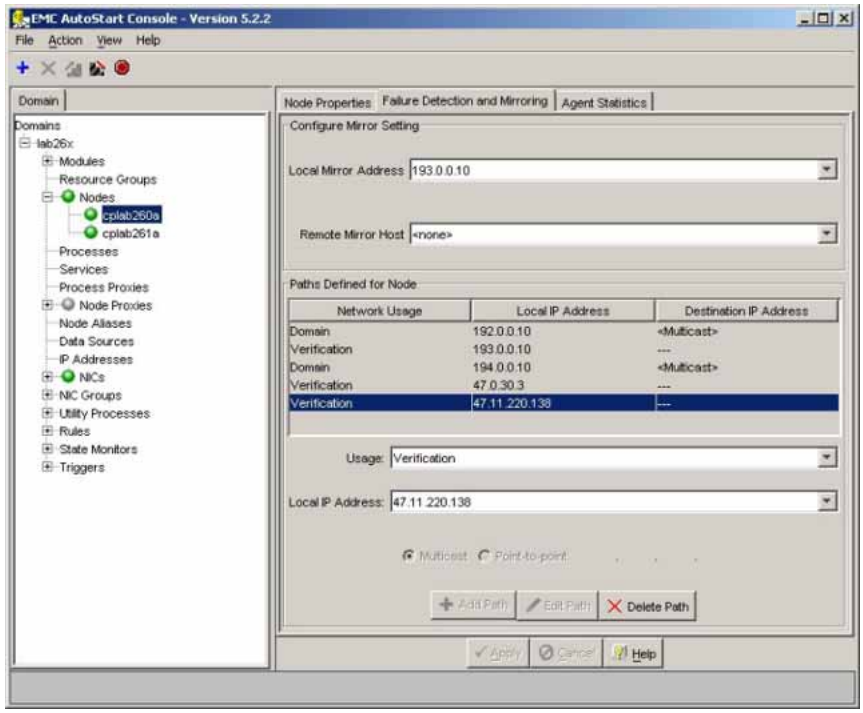
i. In the **Usage** drop-down list, select **Verification**.

j. In the **Local IP Address** drop-down list, select the CLAN IP address for CP1.

k. Click **Add Path**.

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Figure 66
AutoStart Console - Failure Detection and Mirroring tab - Adding path



l. Click **Apply**.

m. Click **Yes**, if you are prompted to restart the agent to apply the changes.

Note: It takes a few minutes for the agent to restart.

3 In the **Domains** pane, select the CP2 node (**Domains > [AutoStart_Domain] > Nodes > <CP2 Node Name>**).

a. Select the **Failure Detection and Mirroring** tab.

b. In the **Paths Defined for Node** list, select the entry that has the ELAN IP address for CP2.

c. Click **Delete Path**.

d. In the **Usage** drop-down list, select **Verification**.

e. In the **Local IP Address** drop-down list, select the ELAN IP address for CP2.

f. Click **Add Path**.

g. In the **Paths Defined for Node** list, select the entry that has the CLAN IP address for CP2.

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h. Click **Delete Path**.

i. In the **Usage** drop-down list, select **Verification**.

j. In the **Local IP Address** drop-down list, select the CLAN IP address for CP2.

k. Click **Add Path**.

l. Click **Apply**.

m. Click **Yes**, if you are prompted to restart the agent to apply the changes.

Note: It takes a few minutes for the agent to restart.

4 Wait for the CP1 node and the CP2 node to start.

The icon for the nodes (in the left-hand pane of the AutoStart console) turn green after the AutoStart Agent starts.

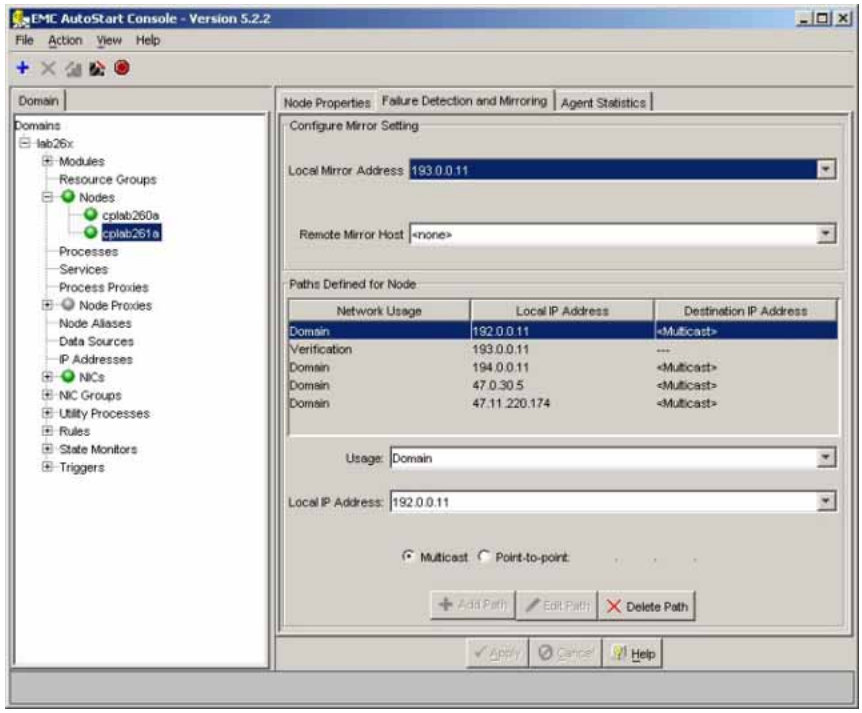
—End—

Adding the Remote Mirroring Host for CP2

Step	Action
1	On CP1, and in the **Domains** pane, select the CP2 node (**Domains > [AutoStart_Domain] > Nodes > <CP2 Node Name>**).
2	Select the **Failure Detection and Mirroring** tab.
3	Ensure that the value in the **Local Mirror Address** field is set to the IP address assigned to the MIRROR NIC on CP2. (The default value is 193.0.0.11.)

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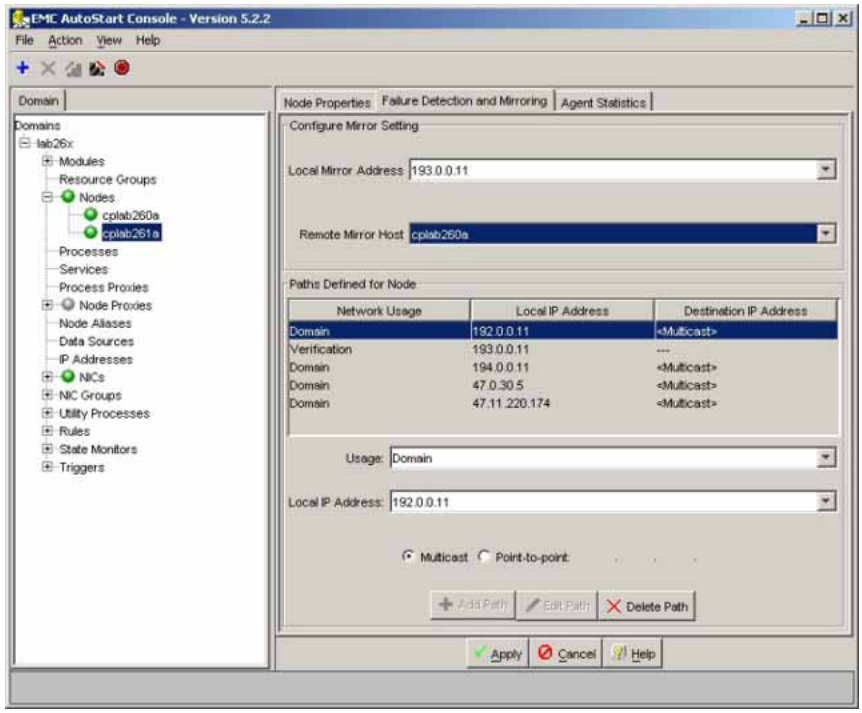
Figure 67
AutoStart Console - Failure Detection and Mirroring tab - Local Mirror Address



4 Change the value in the **Remote Mirror Host** field to the host name of node CP1.

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Figure 68
AutoStart Console - Failure Detection and Mirroring tab - Remote Mirror Host



5 Click **Apply**.

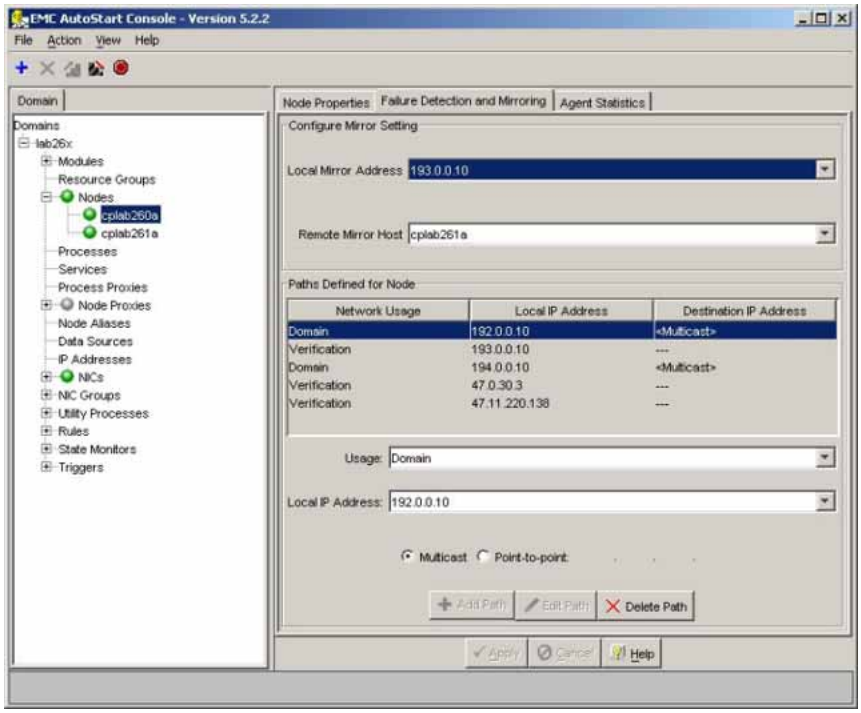
6 Click **Yes**, if you are prompted to restart the agent to apply the changes.

7 In the **Domains** pane, select the CP1 node (**Domains > [AutoStart_Domain] > Nodes > <CP1 Node Name>**).

8 Select the **Failure Detection and Mirroring** tab.

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Figure 69
AutoStart Console - Failure Detection and Mirroring tab - Verify Local and Remote Mirrors



9 Verify that the value in the **Local Mirror Address** field is set to the IP address assigned to the MIRROR NIC on CP1. (The default value is 193.0.0.10.)

10 Verify that the value in the **Remote Mirror Host** field is set to the host name of node CP2.

—End—

Generating the AutoStart Definition File

Step	Action

Generating the AutoStart Definition File is required to set the node-specific settings in the AutoStart Definition Template file.

1 In Windows Explorer, navigate to the **D:\Nortel\HA** folder.

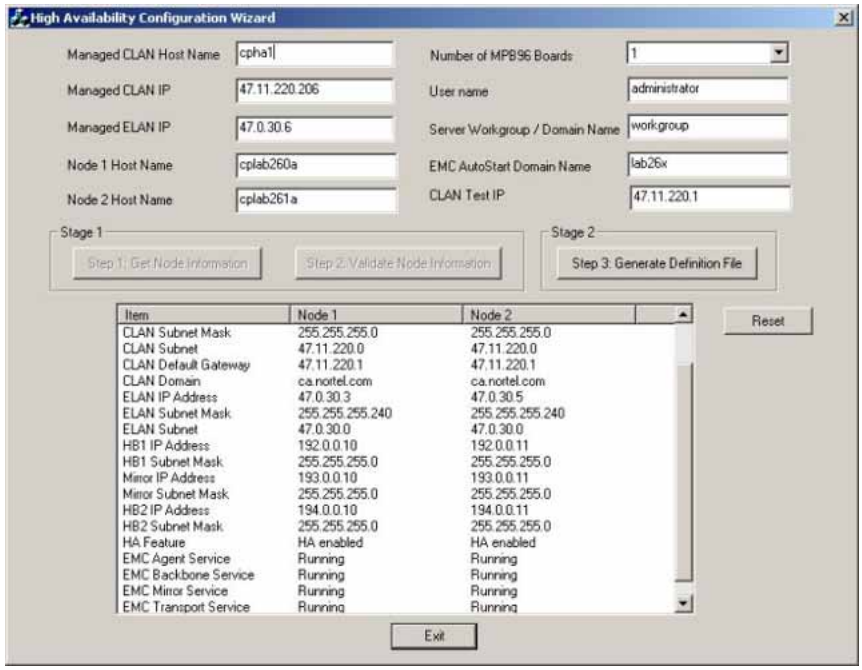
2 Double-click the **HighAvailabilityConfigurationWizard.exe** file.

Result: The High Availability Configuration Wizard appears.

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The information that was previously entered is automatically loaded and the node information validation is automatically rerun.

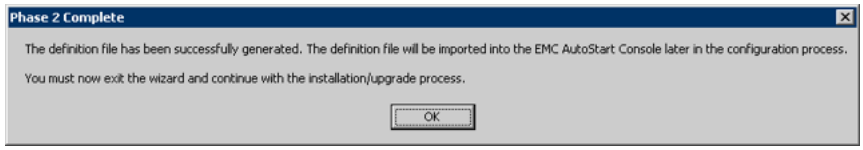
Figure 70
High Availability Configuration Wizard



3 Click the **Step 3: Generate Definition File** button to validate the AutoStart software configuration and generate the Definition File.

- If there are any errors, a message box is displayed with the error. Correct the problem and then click the **Step 3: Generate Definition File** button again.
- If there are no errors, a message is displayed that the Definition File is successfully generated and that you can exit the High Availability Configuration Wizard.

Figure 71
Phase 2 Complete



4 Click **OK** to return to the High Availability Configuration Wizard.

5 Click **Exit** and then confirm that you want to exit from the High Availability Configuration Wizard.

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—End—

Import the AutoStart definition file on CP1

Import the AutoStart definition file (CallPilot-Mirroring.def or CallPilot-Mirroring-Single.def) in the AutoStart Console on CP1 by using the following the procedure. Two AutoStart definition files are available, as follows:

- CallPilot-Mirroring-Single.def (For systems with one MPB96 board.)
- CallPilot-Mirroring.def (For systems with three MPB96 boards.)

Importing the AutoStart definition file

Step	Action
1	Open the **AutoStart Console** window.
2	Expand **Domains**.
3	Right-click **[AutoStart_Domain]**. (This is the domain name created when the AutoStart agent is installed.)
4	Select the **Import Domain Information** option. **Result:** The Import dialog box appears.
5	In the **Import** window, select **CallPilot-Mirroring.def** or **CallPilot-Mirroring-Single.def** from the **D:\Nortel\HA\ToolkitInstaller2.0** folder. The AutoStart definition file is named either CallPilot-Mirroring-Single.def (for systems with one MPB96 board) or CallPilot-Mirroring.def (for systems with three MPB96 boards).
6	Click **Import**. The import process takes approximately one minute to complete.
7	Verify that the AutoStart definition file was successfully imported by doing the following:



WARNING
During the Import process the AutoStart Console does not respond.

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a. Check the information bar at the bottom of the AutoStart Console window for any error or warning messages.

b. In the AutoStart Console, expand **Data Sources** and check that the drvE and drvF data sources were created.

c. In the AutoStart Console, expand **Resource Groups** and check that the CallPilot resource group was created.

—End—

Add the Windows administrator password for the AutoStart Utility Processes

ATTENTION

If the Windows administrator account names or passwords are different on servers CP1 and CP2, the AutoStart software does not work correctly after it is installed and configured.

You must ensure that the Windows administrator account is the same on both High Availability servers for the AutoStart software to work properly.

The AutoStart software requires that the Windows administrator account be updated for each Utility Process in the AutoStart software.

Use the following procedure to enter the Windows administrator account information for each AutoStart Utility Process on CP1.

Adding the Windows administrator account password for the AutoStart Utility Processes

Step	Action
1	Open the **AutoStart Console** window.
2	Expand **Domains**.
3	Expand **[AutoStart_Domain]**. (This is the domain name created when the AutoStart agent is installed.)
4	Expand **Utility Processes**. **Result:** The Utility Processes are displayed: • DisableAOS • KillServices • LoadDN • LoadTSP

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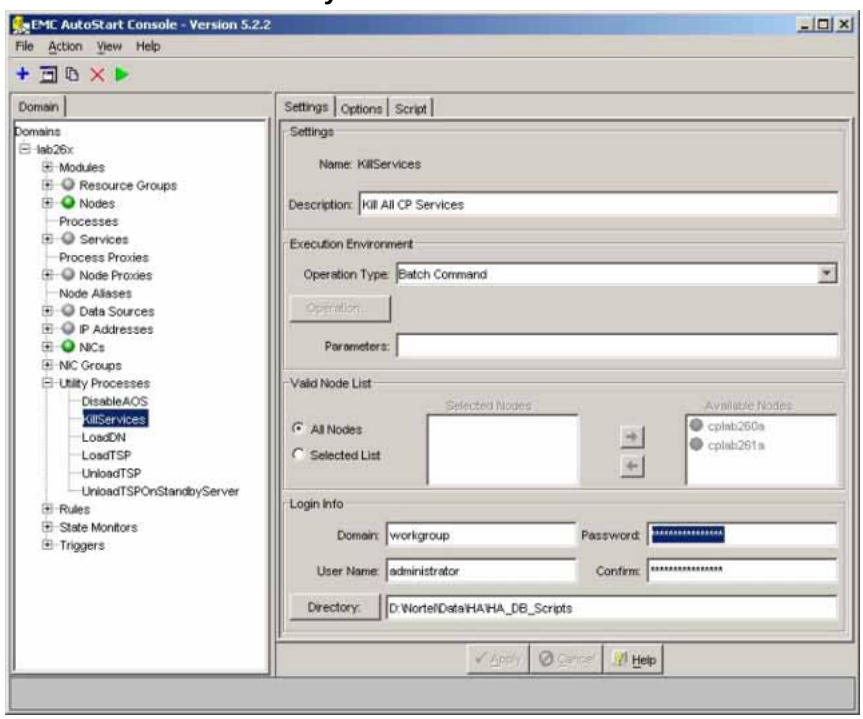
- UnloadTSP
- UnloadTSPOnStandbyServer

5 Select the **DisableAOS** Utility Process.

6 Select the **Settings** tab and do the following:

a. In the **Login Info** section, enter the password for the Windows administrator account in the **Password** and **Confirm** fields.

Figure 72
AutoStart Console - Utility Processes



b. Check the **Domain**, **User Name**, and **Directory** fields to ensure they are right.

- Domain must be the Windows domain that the CallPilot servers are on (if applicable) or the Windows workgroup in which the servers are located.
- User name must be the administrator account for selected domain.
- The default directory is D:\Nortel\Data\HA\HA_DB_Scripts.

c. Click **Apply**.

7 Repeat Step 6 for each of the remaining Utility Processes.

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—End—

Add e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule

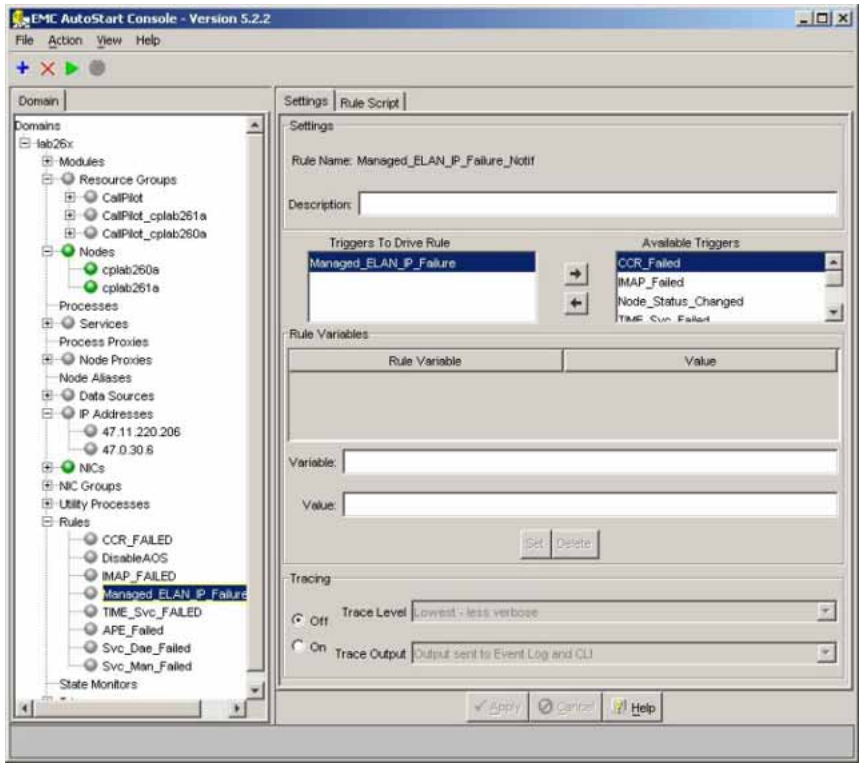
Use the following procedure to add e-mail addresses into the script of the Managed_ELAN_IP_Failure_Notif rule so that the AutoStart software can send out notification e-mail to the administrators when the Path Test failure of the Managed ELAN IP occurs.

Adding e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule

Step	Action
1	Open the AutoStart Console.
2	On the left pane of the AutoStart Console, expand **Rules**.
3	Select **Managed_ELAN_IP_Failure_Notif**.

Result: The Settings tab for the Managed_ELAN_IP_Failure_Notif rule appears.

Figure 73
Rules - Managed_ELAN_IP_Failure_Notif

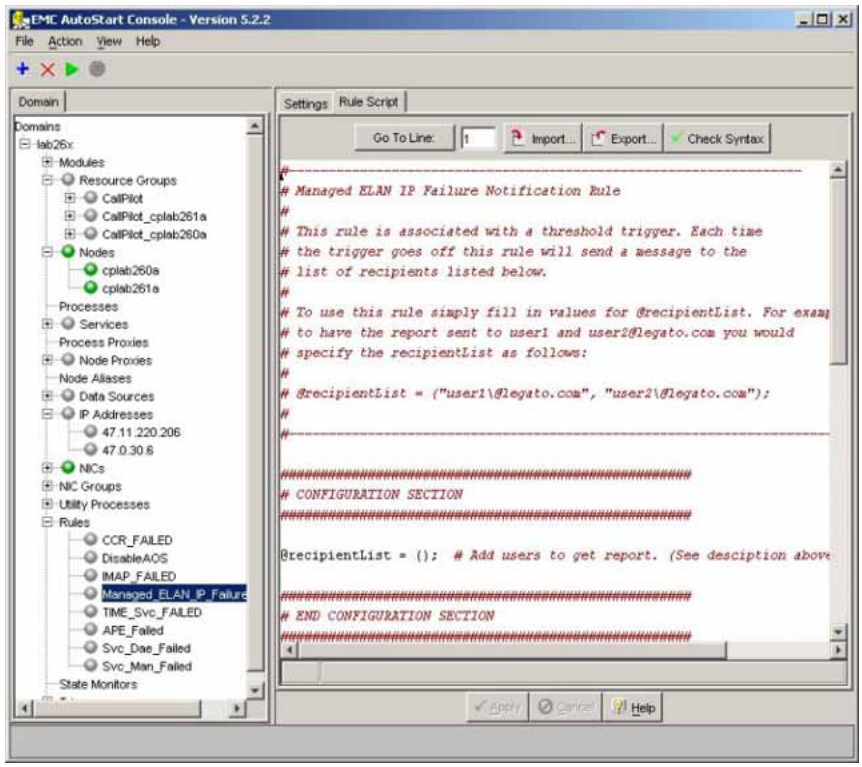


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4 Select the **Rule Script** tab.

Result: The rule script appears in the right pane of the AutoStart Console.

Figure 74
Rule Script tab for Managed_ELAN_IP_Failure_Notif rule



5 Look for the **@recipientList = ()** line in the rule script.

6 Add the recipient's e-mail address in the parenthesis () of the @recipientList line. You must add the backslash symbol (\) before the at symbol (@) in the e-mail address.

If multiple e-mail addresses are added, separate each e-mail address by a comma (,).

7 Click **Apply**.

8 Configure the Simple Mail Transfer Protocol (SMTP) server so that the AutoStart software can provide e-mail notification for failovers and resource group state changes. The SMTP server domain must first be configured for recipients to receive notification that a failover or state change has occurred. See "Configuring the SMTP Server for a domain" (page 188).

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—End—

Bring the Resource Groups online

This section provides the procedures for bringing the following resource groups online:

- CallPilot Resource Group
- CallPilot_[CP1] and CallPilot_[CP2] Resource Groups

Bring the CallPilot Resource Group online on CP1

Using the AutoStart Console, bring the CallPilot Resource Group online on CP1 to activate the High Availability feature. Bringing the CallPilot Resource Group online does the following:

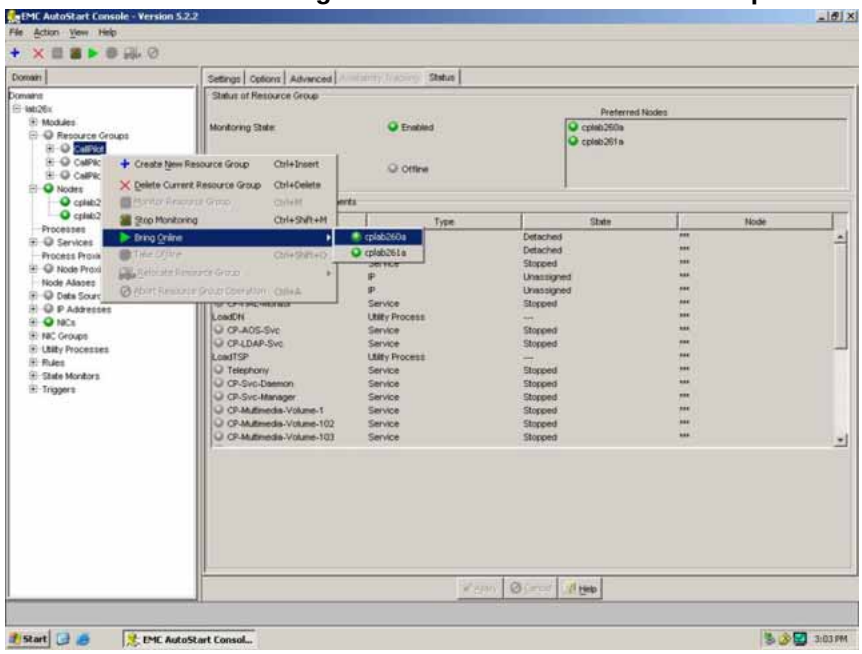
- Assigns the shared drives to server CP1.
- Assigns the Managed ELAN/CLAN (virtual) IP addresses so that they point to CP1.
- Loads the CallPilot database tables back to the CallPilot database.
- Starts all CallPilot services.

Bringing the CallPilot Resource Group online on CP1

Step	Action
1	In the **AutoStart Console** window, expand **Resource Groups** (**Domains > [AutoStart_Domain] > Resource Groups**).
2	Right-click **CallPilot**.
3	Select the **Bring Online** option, and then select **<CP1 node name>**.

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Figure 75
AutoStart Console - Bring Online - CallPilot Resource Group



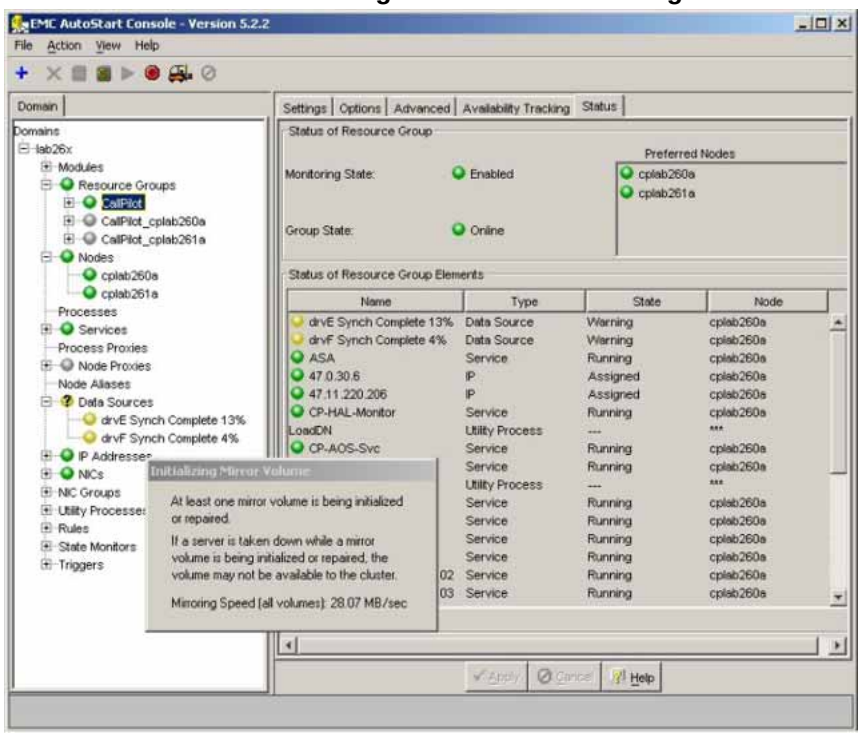
Result: The following occurs:

- The Group State changes to Online Pending.
- The data sources (drive E and drive F) are automatically attached and initialized. While the data sources are initialized, they are in the warning state and their icons are yellow.
- The CallPilot services start on CP1.

Note: A message is displayed informing you that a data source is being mirrored and the status of the data source is updated to show the progress of the synchronization. It can take between 30 minutes to 2 hours for the data sources to be mirrored between the two servers.

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Figure 76
AutoStart Console - Initializing Volume Mirror message



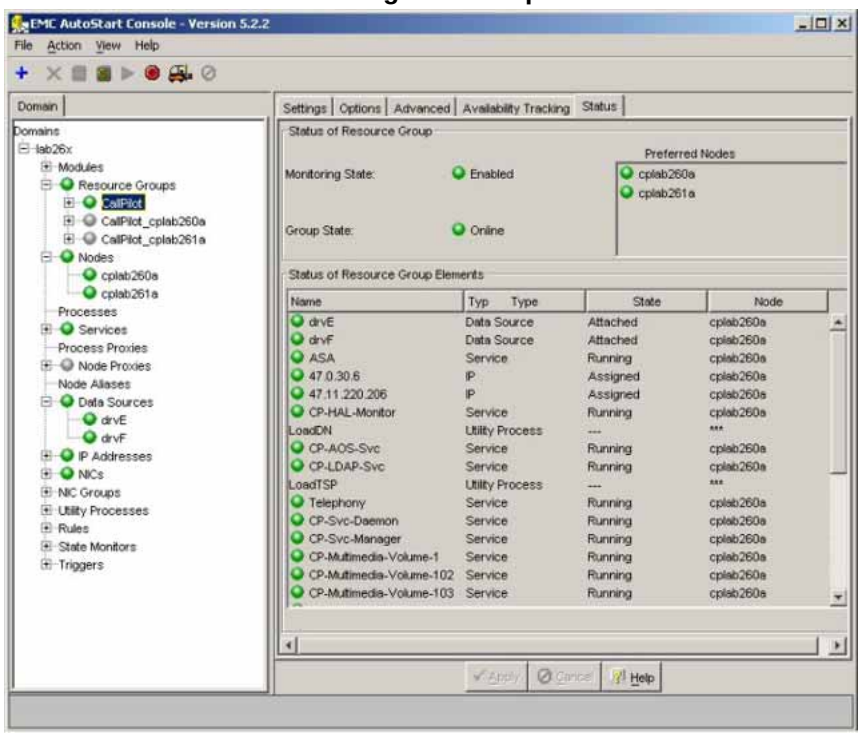
4 Wait while the data sources are mirrored.

5 Verify that the **Group State** field turns green and shows as Online.

Result: When the Group State appears green and online, CallPilot is started.

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Figure 77
AutoStart Console - Monitoring and Group States



—End—

Bring the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online

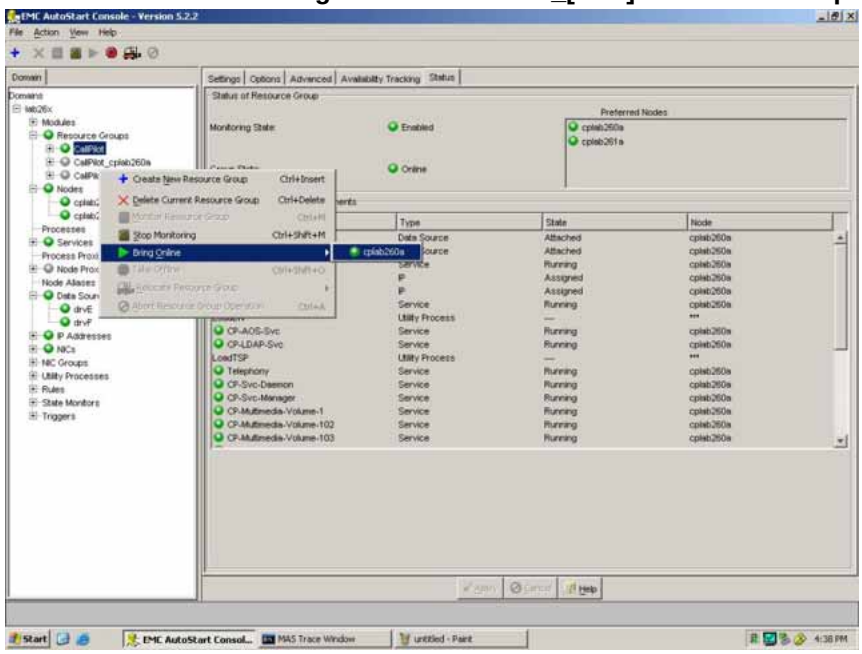
Use the following procedure to bring the CallPilot_[CP1] and CallPilot_[CP2] resource groups online.

Bringing the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online

Step	Action
1	In the **AutoStart Console** window, expand **Resource Groups** (**Domains > [AutoStart_Domain] > Modules > Resource Groups**).
2	Bring CallPilot_[CP1] online (where [CP1] is the name of the CP1 server). a. Right-click **CallPilot_[CP1]**. b. Select the **Bring Online** option, and then select **<CP1 node name>**.

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Figure 78
AutoStart Console - Bring Online - CallPilot_[CP1] Resource Group



3 Bring CallPilot_[CP2] online (where [CP2] is the name of the CP2 server).

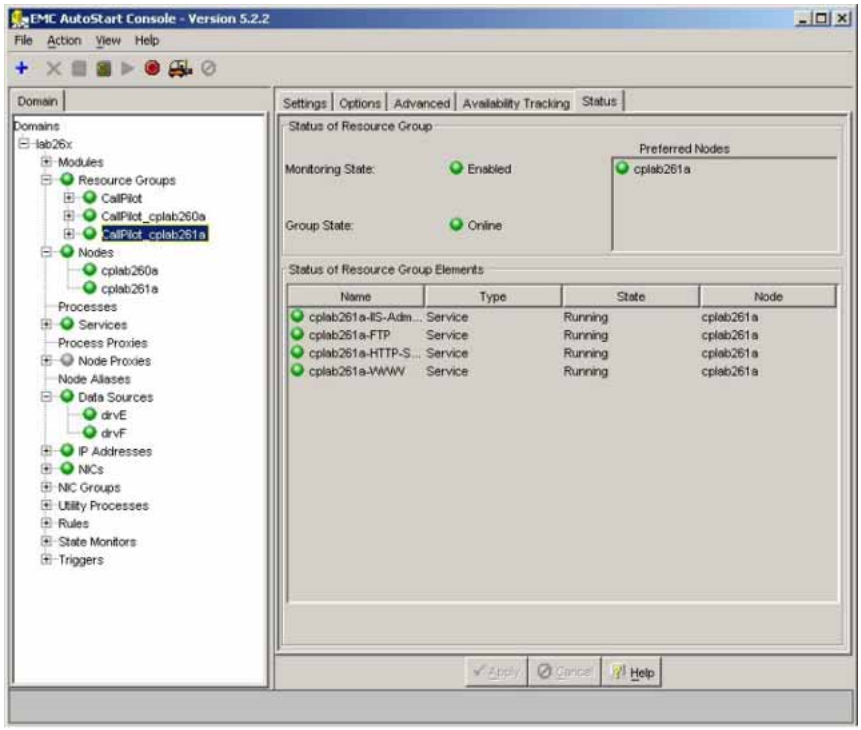
a. Right-click **CallPilot_[CP2]**.

b. Select the **Bring Online** option, and then select **<CP2 node name>**.

4 Verify that both Resource Groups are green and show a **Group State** of Online.

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Figure 79
AutoStart Console - Verify status of both CallPilot_[CP1] and CallPilot_[CP2] Resource Groups



—End—

Test your configuration

Use the following procedure to test the configuration of CP1 and CP2.

Testing the configuration of CP1 and CP2

Step	Action
1	Verify that server CP1 is running and accepting calls. Test the server CP1 to make sure that all channels and DSP resources are working correctly.
2	Using the AutoStart console, manually cause a failover by relocating the Resource Group CallPilot to server CP2.

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WARNING
Do not attempt to failover from CP1 to CP2 until the mirroring started in "Bringing the CallPilot Resource Group online on CP1" (page 119) is complete.

For more information, see "Initiating a manual failover" (page 220).

3 Ensure that server CP2 takes over and can accept calls.

4 Move the dongle from server CP1 to server CP2.

5 Test the server CP2 to make sure that all channels and DSP resources are working correctly.

Note: At this point server CP2 is running as the active server and CP1 is the standby server.

—End—

Create the CallPilot Reporter connections

CallPilot Reporter connects to the pair of High Availability servers using the Managed (virtual) host name. After CallPilot Reporter first connects to the pair of servers, the active server returns the Managed host name, rather than the actual host name of the active server. Because the Managed host name is returned (and not the actual host name of the active server), CallPilot Reporter is unaware that it is connected to a pair of High Availability servers.

Any reports generated are based on the Managed host name, independent of which server is currently the active server. Both High Availability servers must first register with the CallPilot Reporter to make the CallPilot Reporter work with the High Availability system.

Note: If you are not performing a new installation of CallPilot 5.0 High Availability system, a backup of CallPilot Reporter must be performed prior this procedure and the backup must be restored on the Reporter stand-alone PC right after this registration. This note applies only to the following:

- upgrading to CallPilot 5.0 High Availability system
- changing the computer name of the Reporter stand-alone PC
- using a new Reporter stand-alone PC

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ATTENTION

To make both High Availability servers register with CallPilot Reporter, perform the following manual procedure the very first time you connect the CallPilot Reporter to a CallPilot 5.0 High Availability system.

For CallPilot Reporter, the failover process is the same as if a server goes down and then comes back into service (even though the active server goes down and the standby server comes into service as the new active server). The CallPilot Reporter recovery mechanism pings the Managed host name and automatically reconnects when the server comes back into service. Because the database is mirrored from the active High Availability to the standby High Availability server, CallPilot Reporter can download any additional Operational Measurements (OM) that are buffered during the failover process.

Use the following the following procedure the first time you bring up the High Availability system and register it to the CallPilot Reporter Server.

Creating the CallPilot Reporter connection

Step	Action
1	Ensure that CallPilot Reporter is online.
2	Connect CallPilot Reporter to the High Availability system using the Managed host name (where CP1 is the active server and CP2 is the standby server).
3	Perform a manual failover. See "Initiating a manual failover" (page 220). **Result:** The active server (CP1) goes down and the standby server (CP2) comes into service as the new active server.
4	Wait for CP2 to become the active server and ensure that the server is ready to accept calls.
5	In CallPilot Reporter, click **Log out and Erase**.
6	Log back on to CallPilot Reporter.
7	Ensure that CallPilot Reporter is online. **Result:** CallPilot Reporter creates a record using the Managed host name and places all incoming data from the active High Availability server (it does not matter which High Availability server in the pair) under that record.

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—End—

Add the servers to a Windows domain

This following procedure is optional. It is only required if the CallPilot servers will be members of a Windows domain. Nortel recommends using the Windows default workgroup to first configure the High Availability system, and then join the customer domain after the High Availability system is working (if the system has to join the domain). If the CallPilot 5.0 High Availability system is installed and configured under a workgroup, use the following procedure to join a domain.

Note: Adding the CallPilot 5.0 High Availability system into a domain makes the system dependent on the domain controller, the DNS server, and the CLAN connection. If the system lost the connection to the domain controller after joining a domain (which can be caused by losing the CLAN connection), then the CallPilot 5.0 High Availability system cannot properly perform failovers because of domain user validation failure. (The domain user information is needed for the AutoStart Utilities to run after joining a domain.) However, for a CallPilot 5.0 High Availability system in a workgroup, the loss of the CLAN connection has no impact to the failover performance. Nortel does not recommend that you add your CallPilot 5.0 High Availability system into a domain unless it must be part of the domain.

Joining a Windows domain

Step	Action

This procedure assumes that CP1 is the active server and CP2 is the standby server.

1. Log on to CP1.
2. Launch the AutoStart Console on CP1 by selecting **Start > Programs > EMC AutoStart > EMC AutoStart Console 5.3 SP3**.

   Result: The AutoStart Console appears.
3. Select the **[AutoStart_Domain]**.
4. Select the **Licensing/Security** tab.
5. In the **Valid User List** area, enter the following information:
   a. In the **User Name** field, enter **administrator**.
   b. In the **Domain/Node** field, enter the Windows domain name that the CallPilot system will be joining.

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c. For the **Access Rights** option, select the **Administrator** option button.

d. In the **Description** field, enter Windows domain.

6 Click **Add**.

Result: A row is added to the Valid User List.

7 On CP1, stop monitoring. See "Disabling automatic failovers (stop monitoring)" (page 218).

8 Take the CallPilot resource group offline on CP1. See "Taking the CallPilot resource group offline" (page 216).

9 On CP1, do the following:

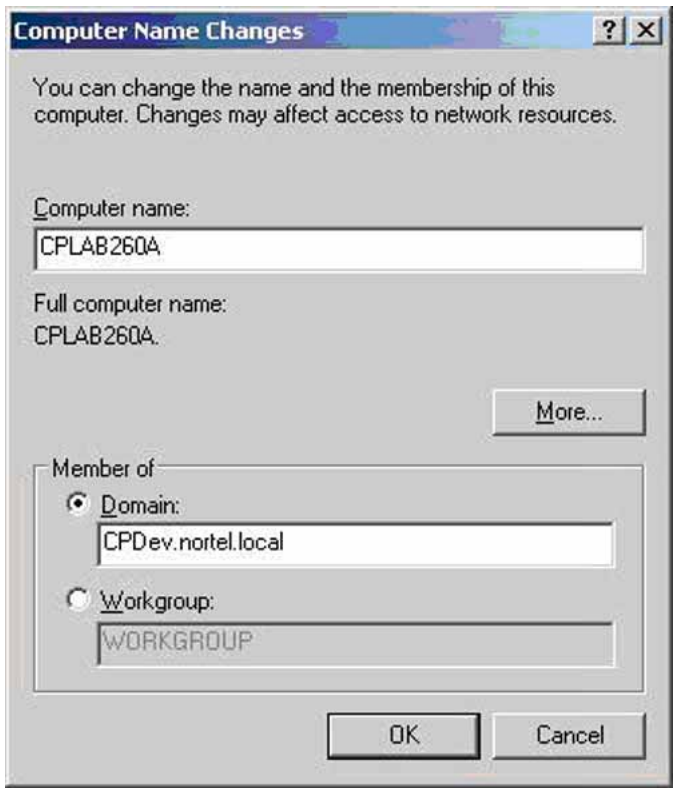
a. Right-click **My Computer**.

Result: The System Properties window appears.

b. Select the **Computer Name** tab and click **Change**.

Result: The Computer Name Changes window appears.

Figure 80
Computer Name Changes



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c. In the **Member of** section, select the **Domain** option.

d. Enter the name of the domain and click **OK**.

Result: The Domain Administrator Privileges window appears.

e. Enter the domain administrator and password.

Contact your network administrator for this information.

Result: The Welcome to Domain window appears.

f. Click **OK**.

Result: A warning window appears prompting you to restart the computer in order for changes to take effect.

g. Click **OK**.

Result: The System Properties window appears.

h. Click **OK**.

Result: The System Settings Changes window appears prompting you to restart the computer.

i. Click **Yes** to restart CP1.

j. Log on to CP1 using the domain user account which is a member of the Domain Administrators group.

10 On CP2, do the following:

a. Right-click **My Computer**.

Result: The System Properties window appears.

b. Select the **Computer Name** tab and click **Change**.

Result: The Computer Name Changes window appears.

c. In the **Member of** section, select the **Domain** option.

d. Enter the name of the domain and click **OK**.

Result: The Domain Administrator Privileges window appears.

e. Enter the domain administrator and password.

Contact your network administrator for this information.

Result: The Welcome to Domain window appears.

f. Click **OK**.

Result: A warning window appears prompting you to restart the computer in order for changes to take effect.

g. Click **OK**.

Result: The System Properties window appears.

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h. Click **OK**.

Result: The System Settings Changes window appears prompting you to restart the computer.

i. Click **Yes** to restart CP2.

j. Log on to CP2 using the domain user account which is a member of the Domain Administrators group.

11 On CP1, launch the **AutoStart Console** window.

12 Expand **Domains**.

13 Expand **[AutoStart_Domain]**. (This is the domain name created when the AutoStart agent was installed.)

14 Expand **Utility Processes**.

Result: The Utility Processes are displayed:

- DisableAOS
- KillServices
- LoadDN
- LoadTSP
- UnloadTSP
- UnloadTSPOnStandbyServer

15 Select the **DisableAOS** Utility Process.

16 Select the **Settings** tab and to the following:

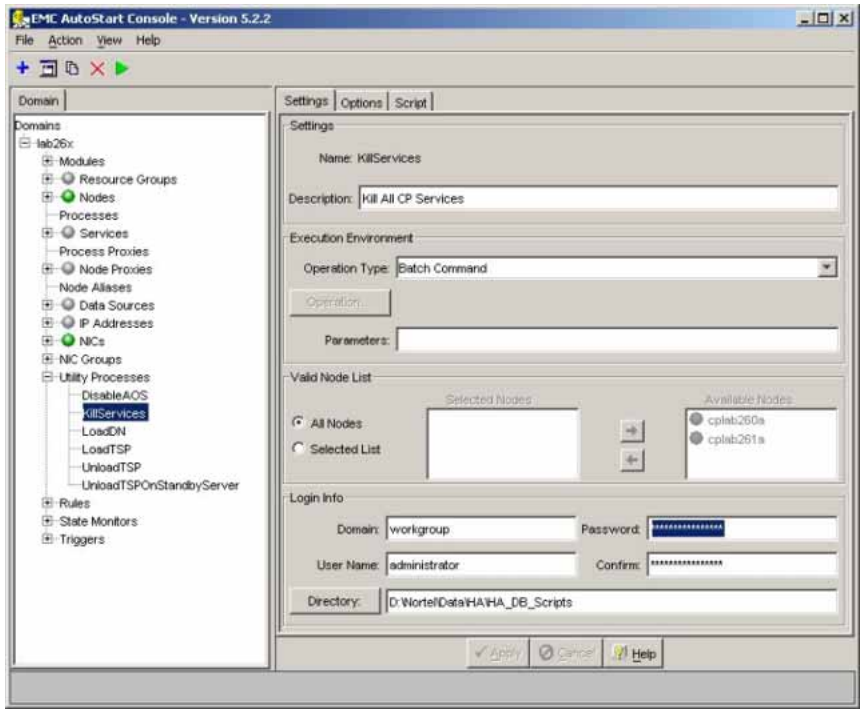
a. Update the **Domain**, **User Name**, and **Directory** fields.

- Domain must be the Windows domain that the CallPilot servers are on (if applicable) or the Windows workgroup in which the servers are located.
- User name must be the domain administrator account for selected domain.
- The default directory is D:\Nortel\Data\HA\HA_DB_Scripts.

b. In the **Login Info** section, enter the password for the Windows administrator account in the **Password** and **Confirm** fields.

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Figure 81
AutoStart Console - Utility Processes



c. Click **Apply**.

17 Repeat Step 16 for each of the remaining Utility Processes.

18 On CP1, enable monitoring. See "Enabling automatic failovers (start monitoring)" (page 219).

19 Bring the CallPilot resource group online on CP1. See "Bringing the CallPilot resource group online" (page 214).

—End—

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Chapter 6
Maintaining a High Availability system

In this chapter

"CallPilot Configuration Wizard" (page 133)

"Working with domains and workgroups" (page 180)

"EMC AutoStart Agent and Console" (page 187)

"Support" (page 235)

"RAID splitting for HA systems" (page 268)

"CallPilot Manager, Channel Monitor" (page 272)

This chapter outlines the procedures used to maintain a High Availability system.

> ***Note:*** It is good practice and highly recommended to split RAID on both nodes prior to performing any maintenance activities on a High Availability system.

CallPilot Configuration Wizard

The EMC AutoStart software stores some information (including host names and IP addresses) from both servers in a High Availability pair to provide the data mirroring and failover mechanisms. As a result, when changing the configuration of a server using the Configuration Wizard, additional steps are required to ensure that the pair of servers continues to function correctly. Use the following procedure for rerunning the Configuration Wizard after the system is configured.

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Change the Server Information

The Server Information page of the Configuration Wizard can be used to change the computer name, time zone, dialing information, LDAP search base and the administrator account password

- To change the time zone, dialing information, or LDAP search base, see "Changing the Server Information" (page 134).
- To change a computer name, see Figure 80 "Computer Name Changes" (page 128).
- To change the administrator account password, see "Administrator account changes" (page 138).

Changing the Server Information

Step Action

Use this procedure to change the time zone, dialing information, and LDAP search base.

1 On CP1 (the active High Availability server) do the following:

a. Ensure the dongle is plugged into CP1. If the dongle is not on CP1, move it to CP1 and wait for three minutes.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

b. Launch the AutoStart Console.

c. Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP1 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Server Information** check box.

Result: The Server Information window appears.

g. If necessary, change the **Time Zone**, **Dialing Information**, or **LDAP Search Base**.

Note: Do not change the computer name using this procedure, see "Computer name changes" (page 136).

h. Click **Next**.

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Result: The Password Information window appears.

i. Select the **Leave password unchanged** option.

Note: Do not the change the password using this procedure, see "Administrator account changes" (page 138).

j. Click **Next**.

k. Click **Finish** to complete the Configuration Wizard.

l. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

m. After the CallPilot resource group is online on CP2, restart CP1.

2 Move the dongle to CP2.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

3 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drive E and drive F are online and show green in the AutoStart Console.

c. If required, disable monitoring for the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP2 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Server Information** check box.

Result: The Server Information window appears.

g. If necessary, change the **Time Zone**, **Dialing Information**, or **LDAP Search Base**.

Note: Do not change the computer name using this procedure, see "Computer name changes" (page 136).

h. Click **Next**.

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Result: The Password Information window appears.

i. Select the **Leave password unchanged** option.

Note: Do not change the password using this procedure, see "Administrator account changes" (page 138).

j. Click **Next**.

k. Click **Finish** to complete the Configuration Wizard.

l. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

m. After the CallPilot resource group is online on CP1, restart CP2.

4 On CP1, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP2 and both drvE and drvF are online/green in the AutoStart Console.

c. Enable monitoring for the CallPilot resource group. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

Computer name changes

After the AutoStart software is installed, it is possible to change the name of either of the servers in a High Availability pair. However, to do so you must uninstall and reinstall the AutoStart software after making the change. Use the procedures in this section to change the computer name of the following types of servers:

- Servers in a workgroup (For more information, see "Changing the name of a server in a workgroup" (page 136).)
- Servers in a Windows domain (For more information, see "Changing the name of a server in a Windows domain" (page 137).)

Changing the name of a server in a workgroup

Step Action

Use the following procedure to change the computer name of a High Availability server that is in a workgroup.

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1 Disable the AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

2 Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 216).

3 Uninstall the AutoStart Agent and AutoStart Console, including their patches on both nodes. For more information, see "Uninstall the AutoStart software" (page 231).

4 Change the computer name. For more information, see "Manually changing the server name" (page 46).

ATTENTION
The computer name must contain only alphanumeric characters. Nonalphanumeric characters (such as a hyphen [-]) are not supported.

5 Restart both nodes.

6 Reinstall AutoStart Agent and Console and configure the High Availability system by performing all the tasks and procedures:

- from "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83)
- to "Test your configuration" (page 124)

Note: You do not have to perform all the steps in the testing procedure. Stop after you have performed the manual failover.

—End—

Changing the name of a server in a Windows domain

Step	Action

Use the following procedure to change the computer name of a High Availability server that is in a Windows domain.

1 From the AutoStart Console, stop monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

2 Take the AutoStart resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 216).

Note: This takes the CallPilot Server out of service.

3 Remove the server from the Windows domain.

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4 Set the server back to WORKGROUP using a domain account that has permissions to do so.

5 Restart the server.

6 After the server restarts, log on as an administrator.

7 Change the server name. For more information, see "Manually changing the server name" (page 46).

8 Restart the server.

9 After the server restarts, log on as an administrator.

10 Rejoin the domain.

11 Restart the server.

12 After the server restarts, log on using the CallPilot High Availability server domain account.

13 Uninstall, reinstall, and reconfigure the AutoStart software. For more information, see the following:

- "Uninstall the AutoStart software" (page 231)
- "Reinstall the AutoStart software" (page 234)
- "Configure the AutoStart software" (page 106)

14 Bring the Resource group online. For more information, see "Bringing the CallPilot resource group online" (page 214).

15 Reenable the AutoStart monitoring after all CallPilot services are up. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

Administrator account changes

Use the following procedure to change the administrator password of a High Availability system using the Configuration Wizard.

Changing the administrator password of High Availability system using the Configuration Wizard

Step	Action
1	If the High Availability system is currently on a workgroup, proceed to the next step. Otherwise, move the CallPilot 5.0 High Availability

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pair from the domain to a workgroup. For more information, see "Joining a workgroup" (page 181).

2 On CP1 (the active High Availability server) do the following:

a. Ensure the dongle is plugged into CP1. If the dongle is not on CP1, move it to CP1 and wait for 3 minutes.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

b. Launch the AutoStart Console.

c. Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP1 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Server Information** check box.

Result: The Server Information window appears.

g. Click **Next**.

Result: The Password Information window appears.

h. Select the **Change the password** option.

Result: When this option is selected, three additional password options appear.

i. Enter the **Current password**.

j. Enter the **New password**.

k. Reenter the new password in the **Confirm the password** field.

l. Click **Next**.

Result: A warning message appears informing you to change the password on the other High Availability server (CP2) and to also change the administrator password for the AutoStart Utility Processes.

m. Click **OK** to dismiss the warning message.

n. Click **Finish** to complete the Configuration Wizard.

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o. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

p. After the CallPilot resource group is online on CP2, restart CP1.

3 Move the dongle to CP2.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

4 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drvE and drvF are green/online in the AutoStart Console.

c. If required, disable monitoring for the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP2 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Server Information** check box.

Result: The Server Information window appears.

g. Click **Next**.

Result: The Password Information window appears.

h. Select the **Change the password** option.

Result: When this option is selected, three additional password options appear.

i. Enter the **Current password**.

j. Enter the **New password**.

k. Reenter the new password in the **Confirm the password** field.

l. Click **Next**.

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Result: A warning message appears informing you to change the password on the other High Availability server (CP1 - which you have already completed) and to also change the administrator password for the AutoStart Utility Processes.

m. Click **OK** to dismiss the warning message.

n. Click **Finish** to complete the Configuration Wizard.

o. Change the administrator password for each of the Utility Processes. For more information, see "Changing the Utility Processes administrator password" (page 163).

p. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

q. After the CallPilot resource group is online on CP1, restart CP2.

5 On CP1, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP2 and both drvE and drvF are online/green in the AutoStart Console.

c. Enable monitoring for the CallPilot resource group. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

Change the Media Allocation

Use the following procedure to modify the MPB96 board or DSP resource settings.

Changing the Media Allocation

Step	Action

1 On CP1 (the active High Availability server) do the following:

a. Ensure the dongle is plugged into CP1. If the dongle is not on CP1, move it to CP1 and wait for 3 minutes.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

b. Launch the AutoStart Console.

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c. Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP1 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Media Allocation** check box.

Result: The Media Allocation window appears.

g. Select the MPB96 board to be modified.

h. Change the DSP resources as required.

i. Click **Next**.

j. Click **Finish** to complete the Configuration Wizard.

k. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

l. After the CallPilot resource group is online on CP2, restart CP1.

2 Move the dongle to CP2.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

3 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drvE and drvF are green/online in the AutoStart Console.

c. If required, disable monitoring for the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP2 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

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Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Media Allocation** check box.

Result: The Media Allocation window appears.

g. Select the MPB96 board to be modified.

h. Change the DSP resources as required.

i. Click **Next**.

j. Click **Finish** to complete the Configuration Wizard.

k. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

l. After the CallPilot resource group is online on CP1, restart CP2.

4 On CP1, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP2 and both drvE and drvF are online/green in the AutoStart Console.

c. Enable monitoring for the CallPilot resource group. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

Change the Switch Configuration

Use the following procedure to change the switch configuration on a working CallPilot 5.0 High Availability system. This procedure can be used to change the following in the Switch Configuration:

- Changing the Switch Information (switch type, customer number, and switch IP address)

ATTENTION

If you are changing the switch IP Address, you must first change the switch IP address in the AutoStart Console. For more information, see "Change the Switch IP address in AutoStart Console" (page 209). Then use the following procedure to complete the change of the switch IP Address.

- Changing the TNs

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- Changing the CDNs

Changing the Switch Configuration

Step	Action

CP1 is the active High Availability server and CP2 is the standby High Availability server.

1 On CP1 (the active High Availability server) do the following:

a. Ensure the dongle is plugged into CP1. If the dongle is not on CP1, move it to CP1 and wait for 3 minutes.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

b. Launch the AutoStart Console.

c. Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP1 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Switch Configuration** check box.

Result: The Meridian 1 Switch Information window appears.

g. If required, change the Switch Type, Switch Customer Number, or Switch IP Address.

ATTENTION
Before changing the Switch IP Address in the Configuration Wizard, you must have changed the IP address in the AutoStart Console.

h. If required, change or add the TNs on CP1 and click **Next**.

i. If required, change or add the CDNs on CP1 and click **Next**.

j. Click **Finish** to complete the Configuration Wizard.

k. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

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Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

l. After the CallPilot resource group is online on CP2, restart CP1.

2 Move the dongle to CP2.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

3 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drvE and drvF are green and show as online in the AutoStart Console.

c. If required, disable monitoring for the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP2 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Switch Configuration** check box.

Result: The Meridian 1 Switch Information window appears.

g. If required, change the Switch Type, Switch Customer Number, or Switch IP Address.

ATTENTION
Before changing the Switch IP Address in the Configuration Wizard, you must have changed the IP address in the AutoStart Console.

h. If required, change or add the TNs on CP2 and click **Next**.

i. If required, change or add the CDNs on CP2 and click **Next**.

j. Click **Finish** to complete the Configuration Wizard.

k. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

l. After the CallPilot resource group is online on CP1, restart CP2.

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4 On CP1, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP2 and both drvE and drvF are online/green in the AutoStart Console.

c. Enable monitoring for the CallPilot resource group. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

5 Test new or changed TNs or CDNs to ensure system functionality.

—End—

Install a new language

Use the following procedure to install additional languages or speech recognition on the High Availability system.

Installing a new language

Step	Action
1	On CP1 (the active High Availability server) do the following:

a. Ensure the dongle is plugged into CP1. If the dongle is not on CP1, move it to CP1 and wait for 3 minutes.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

b. Launch the AutoStart Console.

c. Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP1 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Language Installation** check box.

Result: The Language Source Directory window appears.

g. Insert the Language Source CD into the DVD drive.

h. Ensure the **Install Language** option is selected.

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i. Ensure that the **Language CD Location** is set to **z:**.

j. Click **Next**.

Result: The Language Installation window appears.

k. On the Language Installation page, do the following:

i. Select Languages and Automated Speech recognition to be installed.

ii. If required, change the Primary Language or select Secondary Languages.

Note: The Secondary Language is optional.

ATTENTION
The same languages must be installed on CP1 and CP2.

l. Click **Next**.

m. Click **Finish** to complete the Configuration Wizard.

n. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

o. After the CallPilot resource group is online on CP2, restart CP1.

2 Move the dongle to CP2.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

3 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drvE and drvF are online/green in the AutoStart Console.

c. If required, disable monitoring for the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

d. Log on to CallPilot Manager on CP2 and start the Configuration Wizard.

e. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

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Result: The Configuration Wizard: Express Configuration List screen appears.

f. Select the **Language Installation** check box.

Result: The Language Source Directory window appears.

g. Insert the Language Source CD into the DVD drive.

h. Ensure the **Install Language** option is selected.

i. Ensure that the **Language CD Location** is set to **z:**.

j. Click **Next**.

Result: The Language Installation window appears.

k. On the Language Installation page, do the following:

i. Select Languages and Automated Speech recognition to be installed.

ii. If required, change the Primary Language or select Secondary Languages.

Note: The Secondary Language is optional.

ATTENTION
The same languages must be installed on CP1 and CP2.

l. Click **Next**.

m. Click **Finish** to complete the Configuration Wizard.

n. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

o. After the CallPilot resource group is online on CP1, restart CP2.

4 On CP1, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP2 and both drvE and drvF are online/green in the AutoStart Console.

c. Enable monitoring for the CallPilot resource group. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

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Change the Network Interface Card configuration and network settings

To provide the Managed IP service that is used to make the pair of High Availability servers appear as one server to the external network, the AutoStart software must know the local IP addresses of the ELAN Subnet and Nortel Server Subnet (CLAN) of the pair of servers. If changes are made to the ELAN Subnet IP address and Nortel Server Subnet IP address on either server after the AutoStart software is installed, the AutoStart software no longer works correctly. Depending on the state of the server when the change is made, this can cause a failover to the standby server or it can break the failover process.

ATTENTION

Before changing any IP address or host name, Nortel recommends that you take note of the IP addresses and host name. It is good practice to save them to a safe location just in case you need them again (for example, if you need to recover the server).

The IP addresses and host names are in the following locations:

- ELAN or CLAN IP addresses—Run the command **`ipconfig /all`** command to check the current IP addresses.
- Managed host name—Navigate to the E:\Nortel\HA folder and open the AutoStart_Configuration.ini file to find the Managed host name. The Managed host name is mapped to the Managed CLAN IP address.
- Managed ELAN IP address (Virtual ELAN IP address)—This IP address is also saved in the E:\Nortel\HA\AutoStart_Configuration.ini file.

All of the configuration data (including Managed ELAN/CLAN IP addresses) required by the AutoStart software is also saved in a customized AutoStart definition file. This definition file is in the following folder: D:\Program Files\[AutoStart_Domain]\Module\Tool Kit 2.0.

Depending on your system, the AutoStart definition file has a different name, as follows:

- For systems with one MPB96 board, the definition file is called CallPilot-Mirroring-Single.def.
- For systems with three MPB96 boards, the definition file is called CallPilot-Mirroring.def.

Local networking settings

The following procedures are used to change the local IP settings on either of the two servers that make up a CallPilot High Availability pair.

Note: These procedures do not apply to the Managed ELAN and CLAN IP settings. For more information, see "Managed networking settings" (page 156).

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Use the procedures in this section to change the following:

- "ELAN or CLAN IP address changes" (page 150)
- "HB1, HB2, and Mirroring IP address changes" (page 152)

ELAN or CLAN IP address changes You can use this procedure to change the local ELAN or CLAN IP address on either one of the servers in a High Availability configuration after the AutoStart software is installed.

Changing the ELAN or CLAN IP address

Step	Action
1	Disable the AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).
2	Take the resource group CallPilot offline. For more information, see "Taking the CallPilot resource group offline" (page 216).
3	Attach drive E and drive F to the node whose ELAN IP address or CLAN IP address has to be changed. Perform the following for drive E and drive F: a. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**. b. Right-click the drive you want to connect. c. Select **Attach Data Source**.
4	Use the Windows Services utility to manually start the following CallPilot services individually and in the following order: • Adaptive Server Anywhere - DB_SQLANY • CallPilot HAL Monitor • CallPilot LDAP • CallPilot AOS • CallPilot Multimedia Volume 1 • CallPilot Multimedia Volume 102 • CallPilot Multimedia Volume 103 • CallPilot Multimedia Cache
5	Log on to CallPilot Manager and run the Configuration Wizard as follows:

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a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking **Tools > Configuration Wizard**.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

b. Select **OK** to dismiss the dialog box.

Result: The Configuration Wizard: Configuration Mode screen appears.

c. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

d. Select the **Network Interface Card Configuration (ELAN and CLAN)** check box.

e. Change the ELAN or CLAN network setting as required.

f. Click **Next**.

Result: The Ready to Configure screen appears.

g. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

h. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information.

After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

i. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

j. Log off CallPilot Manager and close the Web browser.

6 If prompted, restart the server after the Configuration Wizard is complete.

7 Update the name resolution mechanism. (Update the DNS/WINS/hosts file information on both nodes if they are used, especially for the CLAN IP address, which normally is mapped to the node name on the DNS server.)

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8 Launch the AutoStart Console and do the following:

a. Expand the node list in the AutoStart Console.

b. From the **Paths Defined for Node** list, delete the Verification links that use the previous ELAN or CLAN IP addresses.

c. Create new Verification links that will use the new ELAN or CLAN IP addresses.

9 If the ELAN IP or CLAN IP addresses on another node also have to be changed, repeat step 3 to step 8 on that node as well.

10 Bring the CallPilot resource group online (see "Bringing the CallPilot resource group online" (page 214)) and then enable AutoStart Monitoring (see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

HB1, HB2, and Mirroring IP address changes



WARNING
Nortel recommends that you do not change the IP address used for the Heartbeat (HB1), Heartbeat backup (HB2), or Mirroring links after the AutoStart software is installed.

If the Heartbeat (HB1), Heartbeat backup (HB2), or Mirroring link IP addresses are changed, you must uninstall and reinstall the AutoStart software on both servers as part of changing the IP addresses. For more information, see the following:

- "Uninstall the AutoStart software" (page 231)
- "Reinstall the AutoStart software" (page 234).

Changing the HB1, HB2, and Mirroring IP addresses

Step	Action
1	Uninstall the AutoStart on both High Availability servers. For more information, see "Uninstall the AutoStart software" (page 231).
2	Move the dongle to the server where you will run Configuration Wizard to perform the IP address change and wait 3 minutes.
3	Use the Windows Services utility to manually start the following CallPilot services individually and in the following order:

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- Adaptive Server Anywhere - DB_SQLANY
- CallPilot HAL Monitor
- CallPilot LDAP
- CallPilot AOS
- CallPilot Multimedia Volume 1
- CallPilot Multimedia Volume 102
- CallPilot Multimedia Volume 103
- CallPilot Multimedia Cache

4 Log on to CallPilot Manager and run the Configuration Wizard as follows:

a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking Tools > Configuration Wizard.

Result: A dialog box appears prompting you to choose either an Express or Standard setup.

b. Select **OK** to dismiss the dialog box.

Result: The Configuration Wizard: Configuration Mode screen appears.

c. Select the **CallPilot Individual Feature Configuration (Express Mode)** option and then click **Next**.

Result: The Configuration Wizard: Express Configuration List screen appears.

d. Select the **Network Interface Card Configuration (ELAN and CLAN)** check box.

e. Change the IP addresses as required.

f. Click **Next**.

Result: The Ready to Configure screen appears.

g. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

h. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information.

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After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

i. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

j. Log off CallPilot Manager and close the Web browser.

5 Restart the server.

6 Repeat the previous steps if the same IP change is required on the other High Availability server.

7 Connect the LAN.

For more information, see "Connect and verify LAN connections" (page 75) and complete the following procedures:

- "Connecting and verifying LAN connections" (page 76)
- "Modifying the hosts file" (page 80) (optional)
- "Testing the host name resolution" (page 82)

8 Check the configuration of CP1 and CP2.

For more information, see "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83).

9 Install the AutoStart Software on CP1.

For more information, see "Installing the AutoStart Agent and Console software on CP1" (page 86).

10 Add the CP2 Administrator account to the AutoStart Console.

For more information, see "Add the node 2 administrator account to the AutoStart Console on node 1" (page 94).

11 Install the AutoStart software on CP2.

For more information, see "Installing the AutoStart Agent and Console software on CP2" (page 96).

12 To configure the AutoStart software, do the following:

a. Configure the AutoStart software.

For more information, see "Configure the AutoStart software" (page 106).

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WARNING
You must wait for both servers under Domains > [AutoStart_Domain] > Nodes to appear green before making any changes in the AutoStart Console. Failure to do so can result in the loss configured information for verification links upon the next restart.

i. Modify the AutoStart Domain and Verification links.

For more information, see "Modifying the AutoStart Domain and Verification links" (page 106).

ii. Add the Remote Mirroring Host for the new 1005r or 1006r server (CP2).

For more information, see "Adding the Remote Mirroring Host for CP2" (page 109).

b. Generate the AutoStart Definition File.

For more information, see "Generating the AutoStart Definition File" (page 112).

c. Import the AutoStart Definition File.

For more information, see "Importing the AutoStart definition file" (page 114).

d. Add the Windows administrator account password for the AutoStart Utility Processes.

For more information, see "Adding the Windows administrator account password for the AutoStart Utility Processes" (page 115).

13 Bring the Resource Groups online.

For more information, see "Bring the Resource Groups online" (page 119).

a. Bring the CallPilot Resource Group online on CP1.

For more information, see "Bringing the CallPilot Resource Group online on CP1" (page 119).

b. Bring the CallPilot_[CP1] and CallPilot_[CP2] Resources Groups online.

For more information, see "Bringing the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online" (page 122).

14 Create the CallPilot Reporter connections. For more information, see "Creating the CallPilot Reporter connection" (page 126).

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—End—

Managed networking settings

After the AutoStart software is installed, it is possible to change the Managed networking settings, which include the following settings:

- Managed CLAN host name (See "Changing the Managed CLAN host name" (page 156).)
- Managed CLAN IP address (See "Changing the Managed CLAN IP address" (page 156).)
- Managed ELAN IP address (See "Changing the Managed ELAN IP address" (page 159).)

Changing the Managed CLAN host name

Step	Action
1	Ensure DNS or host files are updated with new Managed CLAN host name.
2	Replace the old Managed host name with the new Managed host name in the AutoStart_Configuration.ini file by doing the following: a. Navigate to the **E:\Nortel\HA** folder. b. Double-click the **AutoStart_Configuration.ini** file to open the file. c. Edit the **VirtualHostname** with the new Managed CLAN host name. d. Save the file.

—End—

Changing the Managed CLAN IP address

Step	Action
	This procedure changes only the Managed CLAN IP address. (It does not change the physical CLAN IP settings.)
1	Change the Managed host name mapping to the new Managed CLAN IP address on your DNS server or in the appropriate hosts file.
2	Disable the AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

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3 Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 216).

4 Open the AutoStart Console and delete the Managed CLAN IP resources in the Startup and Shutdown sequences by doing the following:

a. Expand **[AutoStart_Domain] > Resource Groups**.

b. Select the **CallPilot** resource group.

c. Select the **Settings** tab.

d. Under Startup Sequence, select the Managed CLAN IP address and click **Delete**. Verify the adapter from the shutdown sequence is also deleted.

5 On the AutoStart Console, delete the Managed CLAN IP resource in the IP resource list by doing the following:

a. Expand **[AutoStart_Domain] > IP Addresses**.

b. Select the Managed CLAN IP address.

c. Click **Delete the current IP address** .

6 Create the new Managed CLAN IP resource by doing the following:

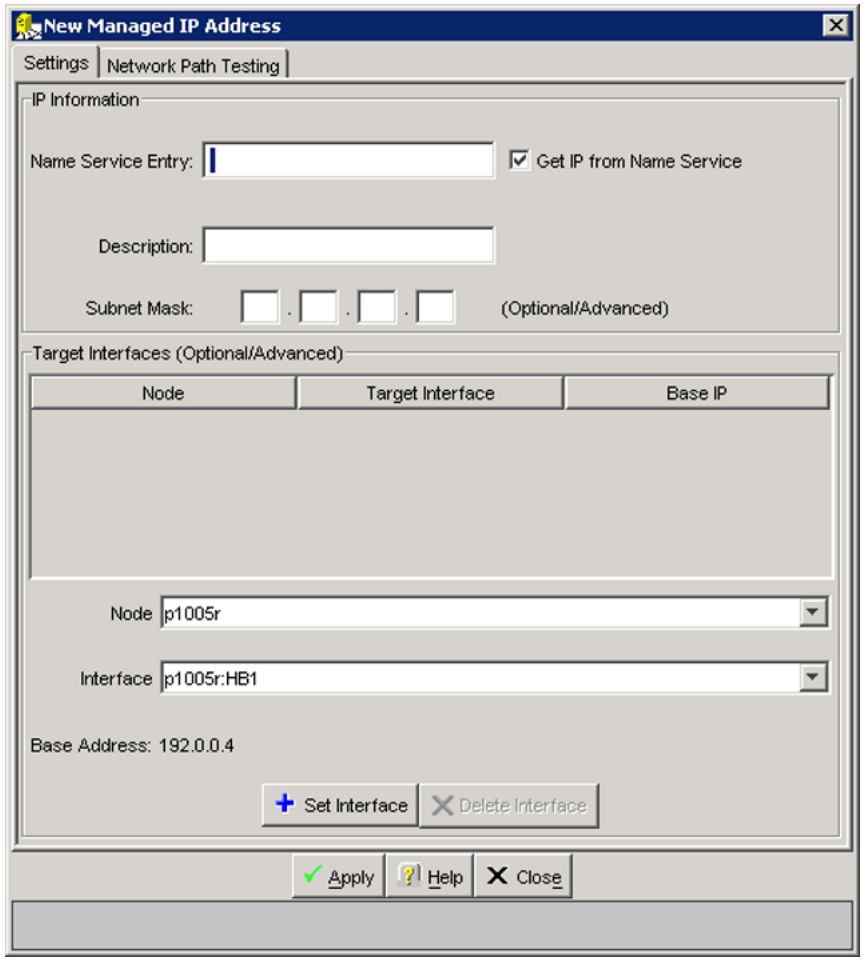
a. Expand **[AutoStart_Domain] > IP Addresses**.

b. Right-click **IP Addresses** and select **Create New IP Address**.

Result: The New Manage IP Address window appears.

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Figure 82
New Managed IP Address



c. Under IP Information, clear the **Get IP from Name Service** check box.

Result: The IP address field appears.

d. Enter the new Managed CLAN IP address and subnet mask.

e. Select the **Network Path Testing** tab.

f. Enter the test IP address of the new Managed CLAN IP address.

g. Click **Add IP Address**.

h. Click **Apply**.

7 On the AutoStart Console, add the new Managed CLAN IP resource into the Startup and Shutdown sequences of the CallPilot resource

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group. Using the arrows, move the Managed CLAN IP back to its original location, which is:

- directly after the Managed ELAN IP in the Startup Sequence list
- directly before the Managed ELAN IP in the Shutdown Sequence list

a. Expand **[AutoStart_Domain] > Resource Groups > CallPilot**.

b. Select the **Settings** tab.

c. Under Startup Sequence select new CLAN address, select**IP** from the drop down list and click **Add**.

d. Clear the **Failure Response Settings** check boxes.

e. Click **Apply**.

f. Under the Startup Sequence, select the new Managed CLAN IP address and move it directly below the Managed ELAN IP address.

g. Under the Shutdown Sequence, select the new Managed CLAN IP address and move it directly above the Managed ELAN IP address.

h. Click **Apply**.

8 Bring the CallPilot resource group online. For more information, see "Bringing the CallPilot resource group online" (page 214).

9 Enable the AutoStart Monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

Changing the Managed ELAN IP address

Step	Action

This procedure changes only the Managed ELAN IP address. (It does not change the physical ELAN IP settings.)

1 Disable the AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

2 Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 216).

3 Open the Managed_ELAN_IP_Failure trigger and remove Managed ELAN IP from the Selected Items.

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4. Click **Apply.**

5. Open the AutoStart Console and delete the Managed ELAN IP resources in the Startup and Shutdown sequences by doing the following:

   a. Expand **[AutoStart_Domain] > Resource Groups**.

   b. Select the **CallPilot** resource group.

   c. Select the **Settings** tab.

   d. Under Startup Sequence, select the Managed ELAN IP address and click **Delete**. Verify the adapter from the shutdown sequence is also deleted.

6. On the AutoStart Console, delete the Managed ELAN IP resource in the IP resource list by doing the following:

   a. Expand **[AutoStart_Domain] > IP Addresses**.

   b. Select the Managed ELAN IP address.

   c. Click **Delete the current IP address**.

7. Create the new Managed ELAN IP resource by doing the following:

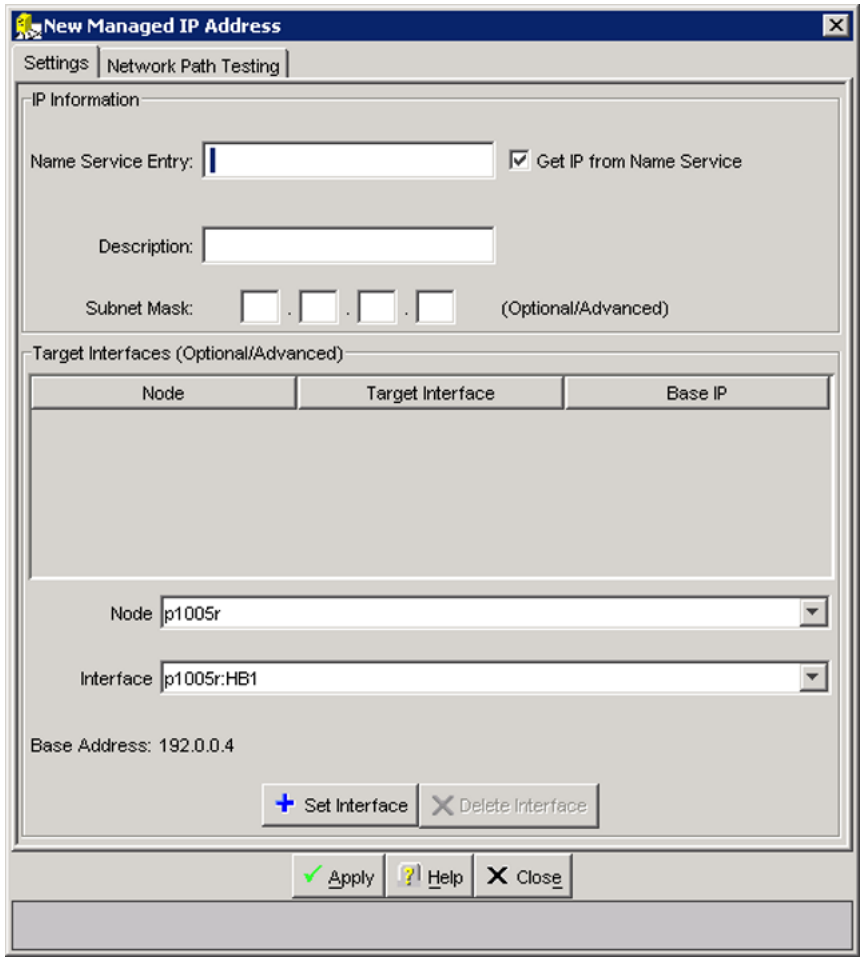
   a. Expand **[AutoStart_Domain] > IP Addresses**.

   b. Right-click **IP Addresses** and select **Create New IP Address**.

      Result: The New Manage IP Address window appears.

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Figure 83
New Managed IP Address



c. Under IP Information, clear the **Get IP from Name Service** check box.

d. Enter the new Managed ELAN IP address and subnet mask.

e. Enter the switch IP address as the Test Path of the new Managed ELAN IP address.

f. Click **Apply**.

8 On the AutoStart Console, add the new Managed ELAN IP resource into the Startup and Shutdown sequences of the CallPilot resource group. Ensure that the Managed ELAN IP address resource is in its original location, which is:

- directly before the Managed CLAN IP address on the Startup sequence

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- directly after the Managed CLAN IP address on the Shutdown sequence

a. Expand **[AutoStart_Domain] > Resource Groups > CallPilot**.

b. Select the **Settings** tab.

c. Under Startup Sequence select new ELAN address, select **IP** from the drop down list and click **Add**.

d. Clear the **Failure Response Settings** check boxes.

e. Click **Apply**.

f. Under the Startup Sequence, select the Managed ELAN IP address and move it directly above the Managed CLAN IP address.

g. Under the Shutdown Sequence, select the Managed ELAN IP address and move it directly below the Managed CLAN IP address.

h. Click **Apply**.

9 Attach drive E to one of the High Availability servers.

a. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

b. Right-click drive E.

c. Select **Attach Data Source**.

10 Replace the old Managed ELAN IP address with the new Managed ELAN IP address in the AutoStart_Configuration.ini file that is in the E:\Nortel\HA folder.

11 Detach drive E.

a. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

b. Right-click drive E.

c. Select **Detach Data Source**.

12 Open the Managed_ELAN_IP_Failure trigger and move Managed ELAN IP to the Selected Items.

13 Click **Apply.**

14 Bring the resource group online. For more information, see "Bringing the CallPilot resource group online" (page 214).

15 Enable the AutoStart Monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

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—End—

Change the administrator account password for the Utility Processes

The administrator passwords must be the same on both High Availability servers.

On the active server, you can use either the Windows utility or the Configuration Wizard to change the administrator password after the AutoStart Monitoring is disabled. However, on the standby server, you must use the Windows utility to change the administrator passwords.

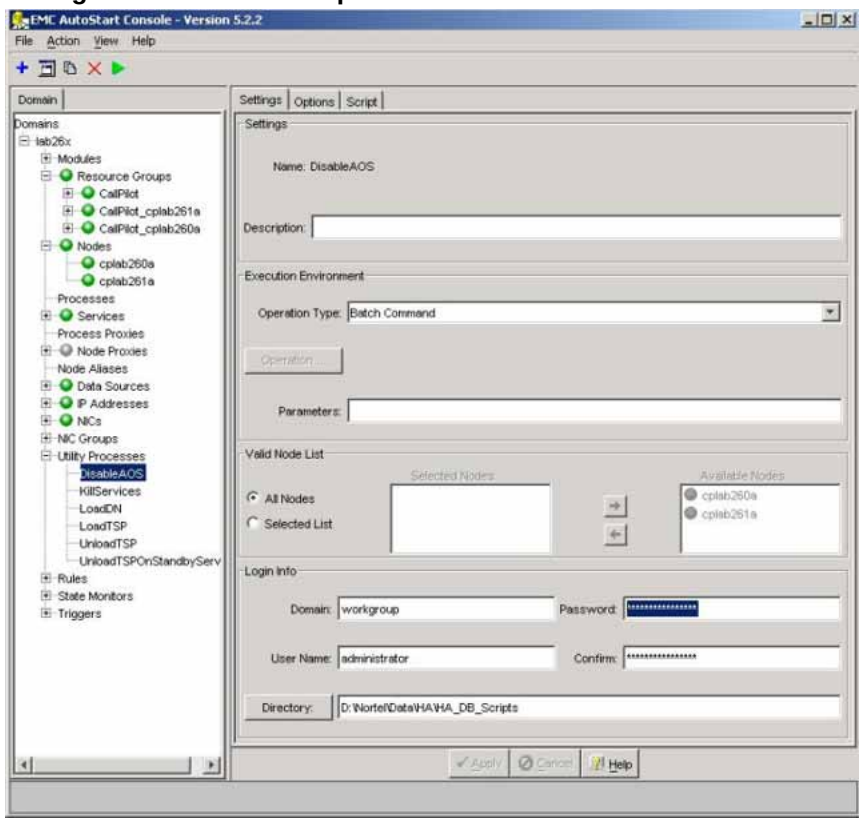
When the administrator password is changed on both servers, you must also update the administrator password used by the AutoStart utilities in the AutoStart Console as described in the following procedure.

Changing the Utility Processes administrator password

Step	Action
1	On the AutoStart Console, expand **[AutoStart_Domain] > Utility Processes**. **Result:** The Utility Processes are displayed: • DisableAOS • KillServices • LoadDN • LoadTSP • UnloadTSP • UnloadTSPOnStandbyServer
2	Click one of the utilities to open the utility. **Result:** The **Settings** tab for that utility appears.
3	In the **Login Info** area, enter the new the administrator password in the **Password** and **Confirm** fields.

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Figure 84
Change the administrator password



4 Click **Apply**.

5 Repeat the preceding steps for each of the remaining utilities in the Utility Processes list.

—End—

Increase software licenses

The following procedure provides the steps for adding additional seats (using a new keycode) to a pair of High Availability servers.

Only one server in the pair is in service at a time, and therefore, both servers share one dongle. As a result, they both have the same serial number and share the same keycode. The information in the keycode is stored in the CallPilot database so it is automatically mirrored to the standby server.

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Increasing software licenses on a pair of CallPilot 5.0 1005r or 1006r High Availability servers

Step	Action

1 Use the AutoStart Console to stop monitoring (to disable automatic failovers).

For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

2 On the active CallPilot server (CP1), log on to CallPilot Manager.

a. Launch Internet Explorer.

b. Enter **http://<Active Server Name (CP1) or IP address>/cpmgr** in the URL address box.

Result: The CallPilot Manager Logon Web page appears.

c. Log on using your existing CallPilot logon information. Enter information into the following:

- **Mailbox Number**—Enter your existing mailbox number.
- **Password**—Enter your password.
- **Server**—Specify the name or the IP address of the CallPilot server that you want to configure. (The server name may have changed during the upgrade or platform migration.)

Note: When you launch Internet Explorer, you may see a dialog box that says "M/S IE Enhanced Security config is currently enabled on your server. This advanced level of security reduces risk." Nortel recommends that you do not lower the security level. Nortel also recommends that you do not select the check box to not show the message again. If you do lower the security level and you try to access a Web site off the server, it may be blocked by the security setting. You do not receive a warning, but a blank screen appears.

d. Click **Login**.

3 Run the Configuration Wizard and enter the new keycode.

a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking Tools > Configuration Wizard.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

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b. Select **OK** to dismiss the dialog box.

   Result: The Configuration Wizard: Configuration Mode screen appears.

c. Select the **CallPilot System Configuration (Standard Mode)** option and then click **Next**.

   Result: The Configuration Wizard: Welcome screen appears.

d. On the Welcome screen, click **Next**.

   Result: The Keycode and serial number screen appears.

e. Enter your **Serial number** and the new **Keycode**. This new keycode includes the increased licenses.

f. Ensure that the Serial number and Keycode are correct, and then click **Next**.

   Result: The Feature Verification screen appears.

g. Ensure that the details on the Feature Verification screen match your expectations and click **Next**.

   Note: If a feature is missing or is not what you expected, acquire a new keycode from your Nortel distributor.

   Result: The Server Information screen appears.

h. Verify the information on the Server Information screen, modify it if necessary, and then click **Next**.

   Result: The Password Information screen appears.

i. Select the **Leave the password unchanged** option. (If prompted, change the default password. Store the password in a safe location.)

j. Click **Next**.

   Result: The Multimedia Allocation screen appears.

k. Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server. Verify the Port Allocations.

l. Click **Next**.

   Result: The Switch Information screen appears.

m. Ensure that the following settings are correct on the Switch Information screen and click **Next**.

   Result: The CDN Information screen appears.

n. Verify the CDN configuration and click **Next**.

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Result: The Language Source Directory screen appears.

o. Select the **Skip Language Installation** option.

p. Click **Next**.

Result: The CallPilot Local Area Network Interface screen appears.

q. Verify the settings on the CallPilot Local Area Network Interface page. Do not change any settings. Ensure that the **High Availability mode** check box is selected and the HB1, HB2, and MIRROR information is correct.

r. Click **Next**.

Result: The Ready to Configure screen appears.

s. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

t. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information.

After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

u. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

v. Log off CallPilot Manager and close the Web browser.

4 If prompted, restart the server after the Configuration Wizard is complete.

5 Use the AutoStart Console to start monitoring (to enable automatic failovers). For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

6 Ensure that the CallPilot resource group is online. If it is not online, bring the resource group online (which starts up CallPilot). For more information, see "Bring a resource group online" (page 214).

—End—

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Increasing software licenses and CallPilot channel capacity on a pair of CallPilot 5.0 1005r or 1006r High Availability servers.

Step	Action

1 Use the AutoStart Console to stop monitoring (to disable automatic failovers). For more information, see "Disabling automatic failovers (stop monitoring)" (page 218)

2 On the active CallPilot server (CP1), log on to CallPilot Manager.

a. Launch Internet Explorer.

b. Enter **http://<Active Server Name (CP1) or IP address>/cpgmr** in the URL address box.

Result: The CallPilot Manager Logon Web page appears.

c. Log on using your existing CallPilot logon information. Enter information into the following:

- **Mailbox Number**—Enter your existing mailbox number.
- **Password**—Enter your password.
- **Server**—Specify the name or the IP address of the CallPilot server that you want to configure. (The server name may have changed during the upgrade or platform migration.)

ATTENTION

When you launch Internet Explorer, you may see a dialog box that says "M/S IE Enhanced Security config is currently enabled on your server. This advanced level of security reduces risk." Nortel recommends that you do not lower the security level. Nortel also recommends that you do not select the check box to not show the message again. If you do lower the security level and you try to access a Web site off the server, it may be blocked by the security setting. You do not receive a warning, but a blank screen appears.

d. Click Login.

3 Run the Configuration Wizard and enter the new keycode.

a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking Tools > Configuration Wizard.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

b. Select **OK** to dismiss the dialog box.

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Result: The Configuration Wizard: Configuration Mode screen appears.

c. Select the **CallPilot System Configuration (Standard Mode)** option and then click **Next**.

Result: The Configuration Wizard: Welcome screen appears.

d. On the Welcome screen, click **Next**.

Result: The Keycode and serial number screen appears.

e. Enter your **Serial number** and the new Keycode. This new **keycode** includes the increased licenses and channels.

f. Ensure that the Serial number and Keycode are correct, and then click **Next**.

Result: The Feature Verification screen appears.

g. Ensure that the details on the Feature Verification screen match your expectations and click **Next**.

ATTENTION

If a feature is missing or is not what you expected, acquire a new keycode from your Nortel distributor.

Result: The Server Information screen appears.

h. Verify the information on the Server Information screen, modify it if necessary, and then click **Next**.
Result: The Password Information screen appears.

i. Select the **Leave the password unchanged** option. (If prompted, change the default password. Store the password in a safe location.)

j. Click **Next**.

Result: The Multimedia Allocation screen appears.

k. Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server. Verify the Port Allocations.

l. Click **Next**.
Result: The Switch Information screen appears.

m. Add additional switch TNs and ensure that the settings are correct on the Switch Information screen and click **Next**.
Result: The CDN Information screen appears.

n. Verify the CDN configuration and click **Next**.

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Result: The Language Source Directory screen appears.

o. Select the **Skip Language Installation** option.

p. Click **Next**.

Result: The CallPilot Local Area Network Interface screen appears.

q. Verify the settings on the CallPilot Local Area Network Interface page. Do not change any settings. Ensure that the **High Availability mode** check box is selected and the HB1, HB2, and MIRROR information is correct.

r. Click **Next**.

Result: The Ready to Configure screen appears.

s. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

t. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information. After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

u. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

v. Log off CallPilot Manager and close the Web browser.

w. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

x. After the CallPilot resource group is online on CP2, restart CP1.

4 Move the dongle to CP2. For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

5 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drvE and drvF are green and show as online in the AutoStart Console.

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c. If required, disable monitoring for the CallPilot resource group.

For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

6 On the active CallPilot server (CP2), log on to CallPilot Manager.

a. Launch Internet Explorer.

b. Enter **http://<Active Server Name (CP2) or IP address>/cpmgr** in the URL address box.

Result: The CallPilot Manager Logon Web page appears.

c. Log on using your existing CallPilot logon information. Enter information into the following:

- **Mailbox Number**— Enter your existing mailbox number.
- **Password**— Enter your password.
- **Server**— Specify the name or the IP address of the CallPilot server that you want to configure. (The server name may have changed during the upgrade or platform migration.)

ATTENTION

When you launch Internet Explorer, you may see a dialog box that says "M/S IE Enhanced Security config is currently enabled on your server. This advanced level of security reduces risk." Nortel recommends that you do not lower the security level. Nortel also recommends that you do not select the check box to not show the message again. If you do lower the security level and you try to access a Web site off the server, it may be blocked by the security setting. You do not receive a warning, but a blank screen appears.

d. Click **Login**.

7 Run the Configuration Wizard and enter the new keycode.

a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking Tools > Configuration Wizard.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

b. Select **OK** to dismiss the dialog box.

Result: The Configuration Wizard: Configuration Mode screen appears.

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c. Select the **CallPilot System Configuration (Standard Mode)** option and then click **Next**.

Result: The Configuration Wizard: Welcome screen appears.

d. On the Welcome screen, click **Next**.

Result: The Keycode and serial number screen appears.

e. Enter your **Serial number** and the new **Keycode** (if required). This new keycode includes the increased licenses and channels.

f. Ensure that the Serial number and Keycode are correct, and then click **Next**.

Result: The Feature Verification screen appears.

g. Ensure that the details on the Feature Verification screen match your expectations and click **Next**.

ATTENTION
If a feature is missing or is not what you expected, acquire a new keycode from your Nortel distributor.

Result: The Server Information screen appears.

h. Verify the information on the Server Information screen, modify it if necessary, and then click **Next**.
Result: The Password Information screen appears.

i. Select the **Leave the password unchanged** option. (If prompted, change the default password. Store the password in a safe location.)

j. Click **Next**.

Result: The Multimedia Allocation screen appears.

k. Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server. Verify the Port Allocations.

l. Click **Next**.

Result: The Switch Information screen appears.

m. Add additional switch TNs and ensure that the settings are correct on the Switch Information screen and click **Next**.

Result: The CDN Information screen appears.

n. Verify the CDN configuration and click **Next**.

Result: The Language Source Directory screen appears.

o. Select the **Skip Language Installation** option

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p. Click **Next**.

Result: The CallPilot Local Area Network Interface screen appears.

q. Verify the settings on the CallPilot Local Area Network Interface page. Do not change any settings. Ensure that the **High Availability mode** check box is selected and the HB1, HB2, and MIRROR information is correct.

r. Click **Next**.

Result: Result: The Ready to Configure screen appears.

s. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

t. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information.

After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

u. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

v. Log off CallPilot Manager and close the Web browser.

w. Perform a manual failover. For more information, see "Initiating a manual failover" (page 220).

Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

x. After the CallPilot resource group is online on CP1, restart CP2.

8 Use the AutoStart Console to start monitoring (to enable automatic failovers). For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

Increase CallPilot channel capacity by adding MPB96 boards

If the pair of 1005r or 1006r servers each have one MPB96 board installed, the servers can be upgraded to have three MPB96 boards. This hardware expansion is required if the servers each have one MPB96 board installed and you want to increase capacity to a value greater than 96 MPUs or 96 channels. Three MPB96 boards have 192 channels and 288 MPUs.

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Increasing channel capacity by adding MPB96 boards in a pair of CallPilot 5.0 1005r or 1006r High Availability servers

Step	Action
1	Disable AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).
2	Take the CallPilot resource group offline. For more information, see "Take a resource group offline" (page 215).
3	Disable the DisableAOS rule on the AutoStart Console.
4	Power down both servers.
5	Install the two additional MPB96 boards in each server in the High Availability pair on the field.
6	Connect all the required cables.
7	Power on both servers.
8	On CP1, open Windows Explorer.
9	Navigate to the D:\Nortel\HA\Toolkit Installer 2.0 folder.
10	Run the command HighAvailabilityConfigurationWizard.exe. **Result:** The High Availability Configuration Wizard appears.
11	In the **Number of MPB96 boards** field, select **3**.
12	Fill the remaining fields on the High Availability Configuration Wizard using Step 3 in "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83).
13	On CP1, attach drive E and drive F to the High Availability server. Perform the following steps for both drive E and drive F. a. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**. b. Right-click the drive you want to connect. c. Select **Attach Data Source**.
14	Perform step 4 of the High Availability Configuration Wizard. For more information, see "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83).
15	Import the new definition file on the AutoStart Console.

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For more information, see "Importing the AutoStart Definition file" (page 201).

16 Update the AutoStart Utilities logon information (that is, update the passwords for each utility as a result of reimporting the new definition file).

17 On CP1, use the Windows Service utility to manually start the following CallPilot services individually and in the following order:

- Adaptive Server Anywhere - DB_SQLANY
- CallPilot HAL Monitor
- CallPilot LDAP
- CallPilot AOS (Enable the CallPilot AOS service first)
- CallPilot Multimedia Volume 1
- CallPilot Multimedia Volume 102
- CallPilot Multimedia Volume 103
- CallPilot Multimedia Cache

18 Move the dongle to the CP1 server (if the dongle is not already on the server).

19 Run the CallPilot Configuration Wizard to change the switch configuration to match the switch settings.

Result: The Configuration Wizard unloads the CallPilot Database tables again (which were previously unloaded).

a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking **Tools > Configuration Wizard**.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

b. Select **OK** to dismiss the dialog box.

Result: The Configuration Wizard: Configuration Mode screen appears.

c. Select the **CallPilot System Configuration (Standard Mode)** option and then click **Next**.

Result: The Configuration Wizard: Welcome screen appears.

d. On the Welcome screen, click **Next**.

Result: The Keycode and serial number screen appears.

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e. Verify your **Serial number** and **Keycode** and then click **Next**.

Result: The Feature Verification screen appears.

f. Ensure that the details on the Feature Verification screen match your expectations and click **Next**.

Note: If a feature is missing or is not what you expected, acquire a new keycode from your Nortel distributor.

Result: The Server Information screen appears.

g. Verify the information on the Server Information screen, modify it if necessary, and then click **Next**.

Result: The Password Information screen appears.

h. Select the **Leave the password unchanged** option. (If prompted, change the default passwords. Store passwords in a safe location.)

i. Click **Next**.

Result: The Multimedia Allocation screen appears.

j. Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server.

k. Change the **Port Allocations** as required.

l. Click **Next**.

Result: The Switch Information screen appears.

m. Ensure that the following settings are correct:

- Ensure the switch type and the switch IP addresses are correct.
- If you are expanding the number of channels, configure the new channels from this screen.
- After you configure the channels, click **Next**.

Result: The CDN Information screen appears.

n. Verify the CDN configuration.

If you need to make changes, do the following:

i. Click **New** to add a new CDN.

Result: The system prompts you for the CDN and the name of the application to dedicate to the CDN.

ii. Specify the **CDN**, choose the application, and then click **OK**.

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Result: The system returns you to the CDN Information page.

o. Click **Next**.

Result: The Language Source Directory screen appears.

p. Select the **Skip Language Installation** option.

q. Click **Next**.

Result: The CallPilot Local Area Network Interface screen appears.

r. Verify the information on the CallPilot Local Area Network Interface page. Do not change any settings. Ensure that the **High Availability mode** check box is selected and that the HB1, HB2, and MIRROR information is correct.

s. Click **Next**.

Result: The Ready to Configure screen appears.

t. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

u. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information.

After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

v. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

w. Log off CallPilot Manager and close the Web browser.

20 Restart the CP1 server.

21 On CP2, attach drive E and drive F to CP2 from the AutoStart Console. Perform the following for both drive E and drive F:

a. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

b. Right-click the drive you want to connect.

c. Select **Attach Data Source**.

22 On CP2, use the Windows Service utility to manually start the following CallPilot services individually and in the following order:

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- Adaptive Server Anywhere - DB_SQLANY
- CallPilot HAL Monitor
- CallPilot LDAP
- CallPilot AOS (Enable the CallPilot AOS service first)
- CallPilot Multimedia Volume 1
- CallPilot Multimedia Volume 102
- CallPilot Multimedia Volume 103
- CallPilot Multimedia Cache

23 Move the dongle to CP2.

24 Run the CallPilot Configuration Wizard to change the switch configuration to match the switch settings.

Result: The Configuration Wizard unloads the CallPilot Database tables again (which were previously unloaded).

a. On the main CallPilot Manager screen, click the **Configuration Wizard** icon.

Tip: You can also start the Configuration Wizard by clicking **Tools > Configuration Wizard**.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

b. Select **OK** to dismiss the dialog box.

Result: The Configuration Wizard: Configuration Mode screen appears.

c. Select the **CallPilot System Configuration (Standard Mode)** option and then click **Next**.

Result: The Configuration Wizard: Welcome screen appears.

d. On the Welcome screen, click **Next**.

Result: The Keycode and serial number screen appears.

e. Verify your **Serial number** and **Keycode**.

Result: The Feature Verification screen appears.

f. Ensure that the details on the Feature Verification screen match your expectations and click **Next**.

Note: If a feature is missing or is not what you expected, acquire a new keycode from your Nortel distributor.

Result: The Server Information screen appears.

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g. Verify the information on the Server Information screen, modify it if necessary, and then click **Next**.

Result: The Password Information screen appears.

h. Select the **Leave the password unchanged** option. (If prompted, change the default passwords. Save the password in a safe location.)

i. Click **Next**.

Result: The Multimedia Allocation screen appears.

j. Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server.

k. Change the **Port Allocations** as required.

l. Click **Next**.

Result: The Switch Information screen appears.

m. Ensure that the following settings are correct:

- Ensure the switch type and the switch IP addresses are correct.
- If you are expanding the number of channels, configure the new channels from this screen.
- After you configure the channels, click **Next**.

Result: The CDN Information screen appears.

n. Verify the CDN configuration.

If you need to make changes, do the following:

i. Click **New** to add a new CDN.

Result: The system prompts you for the CDN and the name of the application to dedicate to the CDN.

ii. Specify the **CDN**, choose the application, and then click **OK**.

Result: The system returns you to the CDN Information page.

o. Click **Next**.

Result: The Language Source Directory screen appears.

p. Select the **Skip Language Installation** option.

Result: The CallPilot Local Area Network Interface screen appears.

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q. Verify the information on the CallPilot Local Area Network Interface page. Do not change any settings. Ensure that the **High Availability mode** check box is selected and that the HB1, HB2, and MIRROR information is correct.

r. Click **Next**.

Result: The Ready to Configure screen appears.

s. Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

t. Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete. The Configuration Wizard displays progress information.

After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

u. Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

v. Log off CallPilot Manager and close the Web browser.

25 Restart the CP2 server.

26 Ensure that both servers are completely started.

27 Bring the CallPilot resource group online on either of the two High Availability servers. For more information, see "Bringing the CallPilot resource group online" (page 214).

—End—

Working with domains and workgroups

Use the procedures in this section to work with domains and workgroups.

Moving from a domain to a workgroup

If the CallPilot 5.0 High Availability system must be moved to a workgroup (from a domain), use the following procedure to join a workgroup.

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Joining a workgroup

Step	Action

This procedure assumes that CP1 is the active server and CP2 is the standby server.

1 On CP1, launch the AutoStart Console and stop monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

2 Take the CallPilot resource group offline on CP1. For more information, see "Taking the CallPilot resource group offline" (page 216).

3 On CP1, do the following:

a. Right-click **My Computer**.

Result: The System Properties window appears.

b. Select the **Computer Name** tab and click **Change**.

Result: The Computer Name Changes window appears.

Figure 85
Computer Name Changes



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c. In the **Member of** section, select the **Workgroup** option.

d. Enter the name of the workgroup and click **OK**.

Result: The Domain Administrator Privileges window appears.

e. Enter the domain administrator and password.

Contact your network administrator for this information.

Result: The Welcome to Workgroup window appears.

f. Click **OK**.

Result: A warning window appears prompting you to restart the computer in order for changes to take effect.

g. Click **OK**.

Result: The System Properties window appears.

h. Click **OK**.

Result: The System Settings Changes window appears prompting you to restart the computer.

i. Click **Yes** to restart CP1.

j. Log on to CP1 using the domain user account which is a member of the Workgroup Administrators group.

4 On CP2, do the following:

a. Right-click **My Computer**.

Result: The System Properties window appears.

b. Select the **Computer Name** tab and click **Change**.

Result: The Computer Name Changes window appears.

c. In the **Member of** section, select the **Workgroup** option.

d. Enter the name of the workgroup and click **OK**.

Result: The Workgroup Administrator Privileges window appears.

e. Enter the workgroup administrator and password.

Contact your network administrator for this information.

Result: The Welcome to Workgroup window appears.

f. Click **OK**.

Result: A warning window appears prompting you to restart the computer in order for changes to take effect.

g. Click **OK**.

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Result: The System Properties window appears.

h. Click **OK**.

Result: The System Settings Changes window appears prompting you to restart the computer.

i. Click **Yes** to restart CP2.

j. Log on to CP2 using the domain user account which is a member of the Domain Administrators group.

5 On CP1, launch the **AutoStart Console** window.

6 Expand **Domains**.

7 Expand **[AutoStart_Domain]**. (This is the domain name created when the AutoStart agent was installed.)

8 Expand **Utility Processes**.

Result: The Utility Processes are displayed:

- DisableAOS
- KillServices
- LoadDN
- LoadTSP
- UnloadTSP
- UnloadTSPOnStandbyServer

9 Select the **DisableAOS** Utility Process.

10 Select the **Settings** tab and to the following:

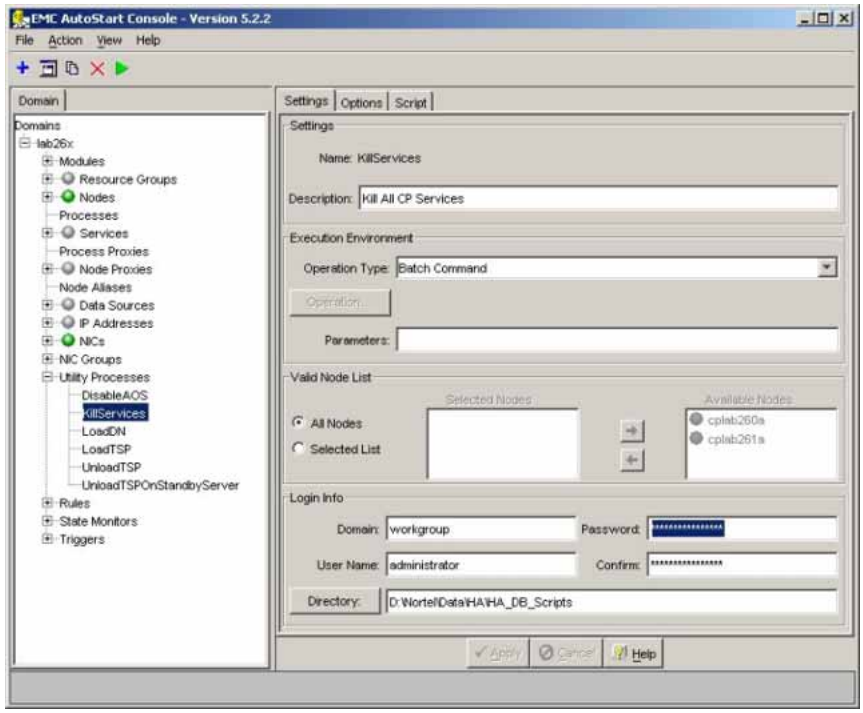
a. Update the **Domain**, **User Name**, and **Directory** fields.

- Domain must be the Windows domain that the CallPilot servers are on (if applicable) or the Windows workgroup in which the servers are located.
- User name must be the domain administrator account for selected domain.
- The default directory is D:\Nortel\Data\HA\HA_DB_Scripts.

b. In the **Login Info** section, enter the password for the Windows administrator account in the **Password** and **Confirm** fields.

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Figure 86
AutoStart Console - Utility Processes



c. Click **Apply**.

11 Repeat Step 10 for each of the remaining Utility Processes.

12 On CP1, enable monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

13 Bring the CallPilot resource group online on CP1. For more information, see "Bringing the CallPilot resource group online" (page 214).

—End—

Manually change the administrator password

If you must change the password of the local administrator account or the password of the domain administrator account, the password must be changed on both High Availability servers.

Use the following procedure if you must change the password of the local administrator account or the password of the domain administrator account. The administrator password must be the same on both servers in the High Availability pair.

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Manually changing the password of the local administrator account or the domain administrator account

Step	Action
1	On CP1 (the active High Availability server) do the following: a. Ensure the dongle is plugged into CP1. If the dongle is not on CP1, move it to CP1 and wait for 3 minutes. For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320). b. Launch the AutoStart Console. c. Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).
2	On CP1, press **Ctrl+Alt+Del** to display the Windows Security window.
3	Click **Change Password**. **Result:** The Change Password window appears.
4	Enter the **User Name** of the administrator account.
5	From the **Log on to** field, select one of the following: • If on a workgroup, select the local host name of the computer. For example, P1005r (this computer). • If on a domain, select the domain name associated with the computer. For example, nortel.innlab.com ***Note:*** If you are on a domain, both the local host name and the domain name are available in the **Log on to** drop-down list. Select the name you want to change.
6	Enter the **Old Password**.
7	Enter the **New Password**.
8	Reenter the new password in the **Confirm New Password** field.
9	Click **OK**.
10	Perform a manual failover on CP1. For more information, see "Initiating a manual failover" (page 220). **Result:** The CallPilot resource group is automatically brought online on the standby High Availability server (CP2).

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11 Restart CP1.

12 Move the dongle to CP2.

For more information about the dongle, see *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320).

13 On CP2, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP1 and both drvE and drvF are green/online in the AutoStart Console.

c. If required, disable monitoring for the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

14 On CP2, press **Ctrl+Alt+Del** to display the Windows Security window.

15 Click **Change Password**.

Result: The Change Password window appears.

16 Enter the **User Name** of the administrator account.

17 From the **Log on to** field, select one of the following:

- If on a workgroup, select the local host name of the computer. For example, P1005r (this computer).
- If on a domain, select the domain name associated with the computer. For example, nortel.innlab.com

Note: If you are on a domain, both the local host name and the domain name are available in the **Log on to** drop-down list. Select the name you want to change.

18 Enter the **Old Password**.

19 Enter the **New Password**.

20 Reenter the new password in the **Confirm New Password** field.

21 Click **OK**.

22 Change the administrator password for each of the Utility Processes. For more information, see "Changing the Utility Processes administrator password" (page 163).

23 Perform a manual failover on CP2. For more information, see "Initiating a manual failover" (page 220).

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Result: The CallPilot resource group is automatically brought online on the standby High Availability server (CP1).

24 After the CallPilot resource group is online on CP1, restart CP2.

25 On CP1, do the following:

a. Launch the AutoStart Console.

b. Wait until node CP2 and both drvE and drvF are online/green in the AutoStart Console.

c. Enable monitoring for the CallPilot resource group. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

—End—

EMC AutoStart Agent and Console

The EMC AutoStart software is used to maintain a High Availability system. This section includes the following:

- "AutoStart maintenance" (page 187)
- "Work with resource groups" (page 213)
- "Software operations" (page 221)

AutoStart maintenance

Use the procedures in this section to perform maintenance tasks within the EMC AutoStart software.

- "Configure the AutoStart notification settings" (page 188)
- "Add e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule" (page 191)
- "Configure failover on the Path Test failures of the Managed ELAN IP address" (page 194)
- "License administration" (page 196)
- "Check the status of the servers and failovers using AutoStart" (page 197)
- "Import and export of the AutoStart Definition file" (page 200)
- "Recreate the AutoStart definition file" (page 203)
- "Change the Switch IP address in AutoStart Console" (page 209)

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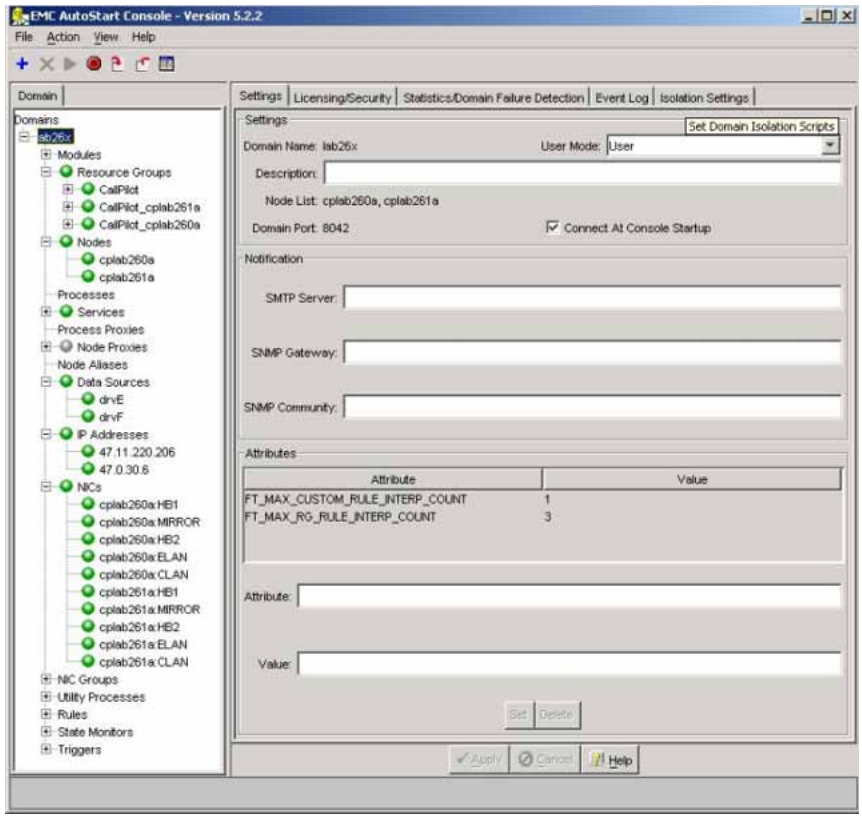
Configure the AutoStart notification settings

The AutoStart software can provide e-mail notification for failovers and resource group state changes. The Simple Mail Transfer Protocol (SMTP) server domain must first be configured for recipients to receive notification that a failover or state change has occurred.

Configuring the SMTP Server for a domain

Step	Action
1	From the AutoStart Console, select **Domains > [AutoStart_Domain]** for the domain that you want to monitor.
2	Select the **Settings** tab.

Figure 87
Setting the SMTP server attribute value



3	Under the **Notification** area, enter the **SMTP Server**, **SMTP Gateway**, and **SMTP Community**.
4	Under the **Attributes** area, click the attribute to edit.
5	In the **Value** field, enter the name of the SMTP server.

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For example, mail.servername.com.

6 Repeat for each attribute.

7 Click **Apply**.

Result: When the SMTP server is in the domain attributes, the **Send Email To** text box (on the Options tab) becomes active. However, this value does not become active until the agents are restarted.

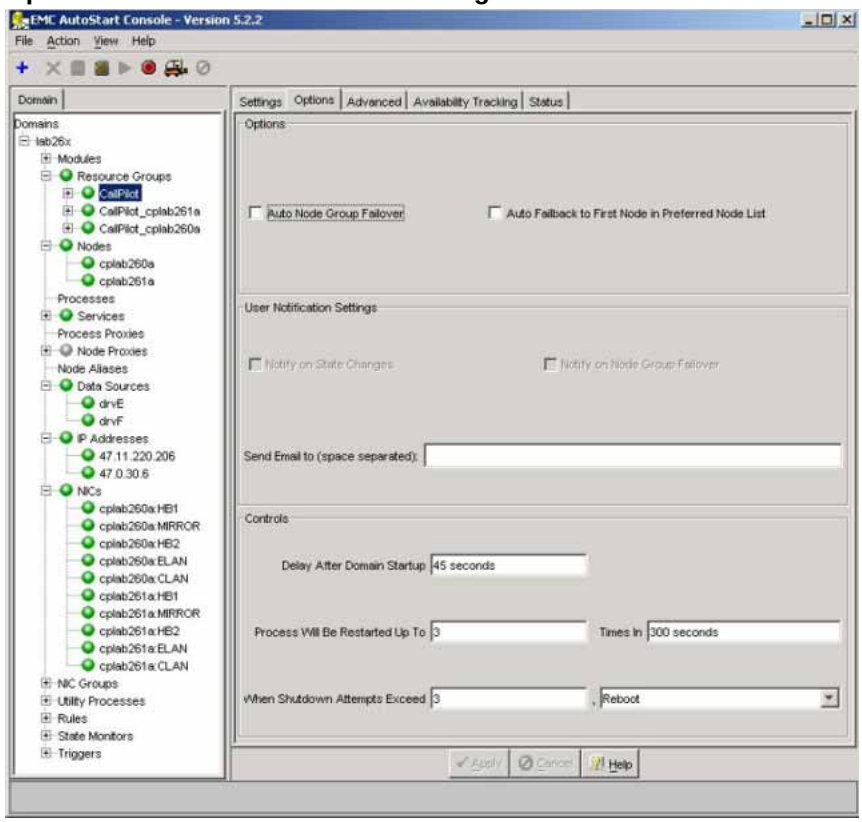
—End—

Configuring the User Notification Settings

Step	Action
1	Expand **Domains > [AutoStart_Domain] > Resource Groups > CallPilot**.
2	Select the **Options** tab.

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Figure 88
Options tab - User Notification Settings



3 To receive a notification e-mail that the state of a resource group has changed, do the following:

a. In the **Send Email to** field, enter the e-mail addresses of those who must receive notification that a failover has occurred.

b. Under the **User Notification Settings**, select the **Notify on State Change** check box.

4 To receive a notification e-mail when a node group failover occurs, do the following:

a. In the **Send Email to** field, enter the e-mail addresses of those who must receive notification that a failover has occurred.

b. Under the **User Notification Settings**, select the **Notify on Node Group Failover** check box.

5 Click **Apply**.

6 Perform a manual failover to test if notification is received.

See "Initiating a manual failover" (page 220).

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—End—

Add e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule

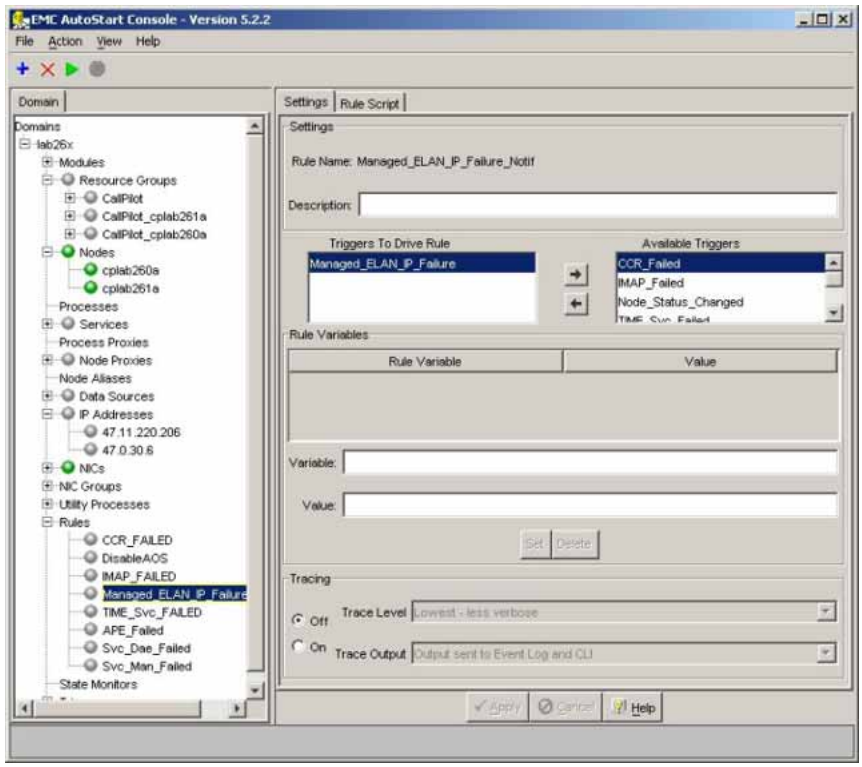
Use the following procedure to add e-mail addresses into the script of the Managed_ELAN_IP_Failure_Notif rule so that the AutoStart software can send out notification e-mail to the administrators when the Path Test failure of the Managed ELAN IP occurs.

Adding e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule after the system is configured

Step	Action
1	Open the AutoStart Console.
2	Take the CallPilot resource group offline (if it is online). See "Taking the CallPilot resource group offline" (page 216).
3	On the left pane of the AutoStart Console, expand **Rules**.
4	Select **Managed_ELAN_IP_Failure_Notif**. **Result:** The Settings tab for the Managed_ELAN_IP_Failure_Notif rule appears.

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Figure 89
Rules - Managed_ELAN_IP_Failure_Notif

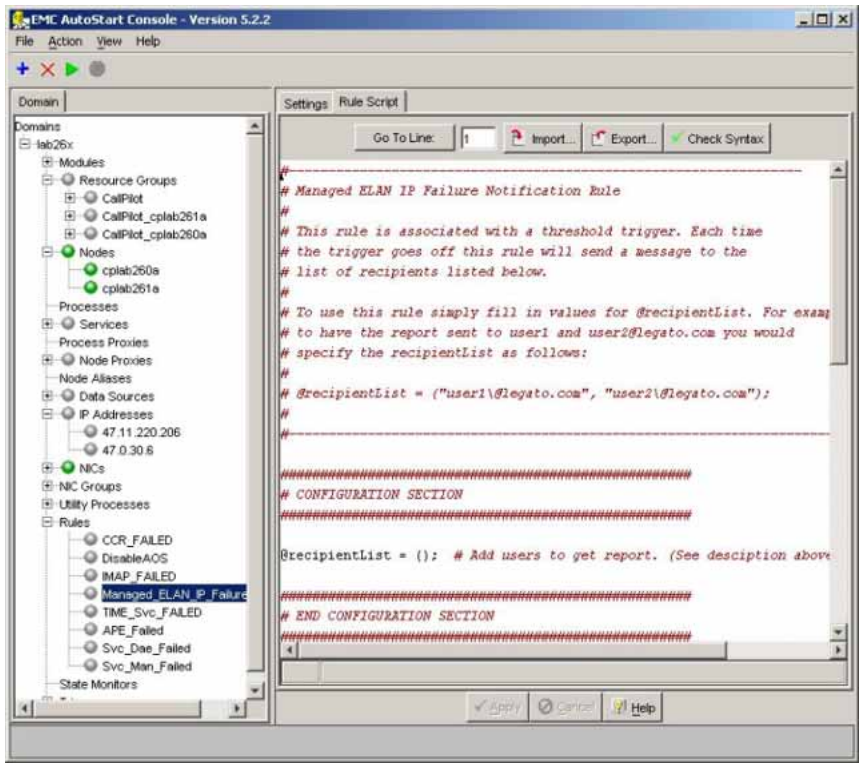


5 Select the **Rule Script** tab.

Result: The rule script appears in the right pane of the AutoStart Console.

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Figure 90
Rule Script tab for Managed_ELAN_IP_Failure_Notif rule



6 Look for the **@recipientList = ()** line in the rule script.

7 Add the recipient's e-mail address in the parenthesis () of the @recipientList line. You must add the backslash symbol (\) before the at symbol (@) in the e-mail address.

If multiple e-mail addresses are added, separate each e-mail address by a comma (,).

8 Click **Apply**.

9 Bring the CallPilot resource group online (if it was taken offline at the beginning of this procedure). See "Bringing the CallPilot resource group online" (page 214).

10 Configure the Simple Mail Transfer Protocol (SMTP) server so that the AutoStart software can provide e-mail notification for failovers and resource group state changes. The SMTP server domain must first be configured for recipients to receive notification that a failover or state change has occurred. See "Configuring the SMTP Server for a domain" (page 188).

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—End—

Configure failover on the Path Test failures of the Managed ELAN IP address

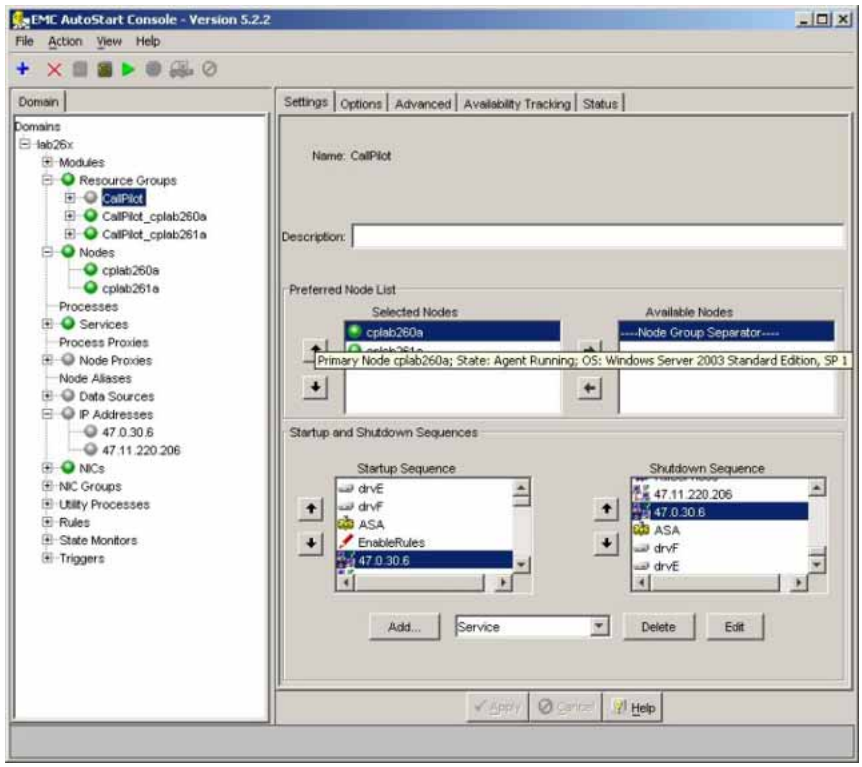
There is a small chance (less than 1%) that the Midnight Audit will trigger a failover because of the very short switch ELAN down time if the High Availability system connects to a Meridian 1 51/61/81 switch instead of Meridian 1 Option 11C. Use the following procedure to configure failovers on the Path Test failures of the Managed ELAN IP address.

Configuring failovers on the Path Test failures of the Managed ELAN IP address

Step	Action
1	Open the AutoStart Console.
2	Expand **Resource Groups**.
3	Take the CallPilot resource group offline. See "Taking the CallPilot resource group offline" (page 216).
4	For the CallPilot resource group, select the **Settings** tab.
5	Select the **Managed ELAN IP address**. For example, 47.0.30.6 (as shown in the following figure).

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Figure 91
Settings tab - Managed ELAN IP address



6 Click **Edit**.

Result: The IP Address Properties window appears.

Figure 92
IP Address Properties



7 Select the check boxes for both of the following options:

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- **Relocate Resource Group on Path Failed State**
- **Relocate Resource Group on Unassigned State**

8 Click **Apply**.

9 Click **Apply** again on the Settings tab.

—End—

License administration

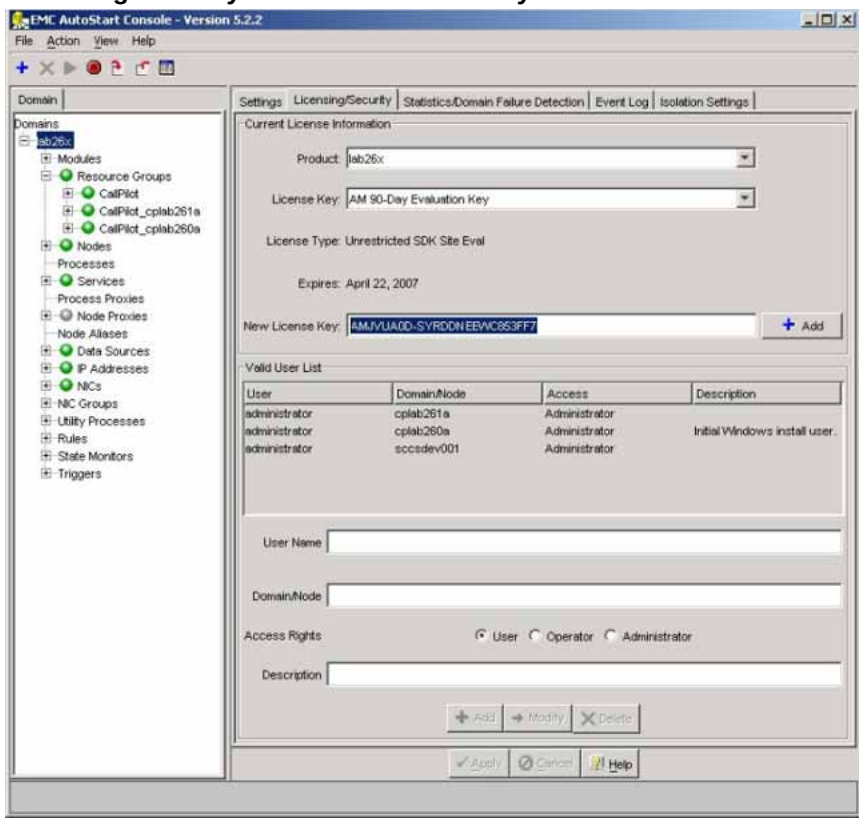
During the installation process, the AutoStart software is configured to use an AutoStart license key that is provided by Nortel with the CallPilot software. Use the following procedure to update the license key.

Updating the license key

Step	Action
1	On the CallPilot server, click **Start > Programs > EMC AutoStart > EMC AutoStart Console 5.3 SP3** to start the AutoStart Console. **Result:** The AutoStart Console appears.
2	On the AutoStart Console window, click **Domains > [AutoStart_Domain]**.
3	Select the **Licensing/Security** tab.
4	In the **New License Key** field, enter the new license key.

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Figure 93
Licensing/Security tab - New License Key



5 Click **Add**.

Result: The new license key is added to the list in the License Key field.

6 From the **License Key** list, select the newly entered license key.

7 Click **Apply**.

—End—

Check the status of the servers and failovers using AutoStart

Use the following procedures to check the status of the following:

- Server and failover status
- HB1, HB2, and Mirroring link status

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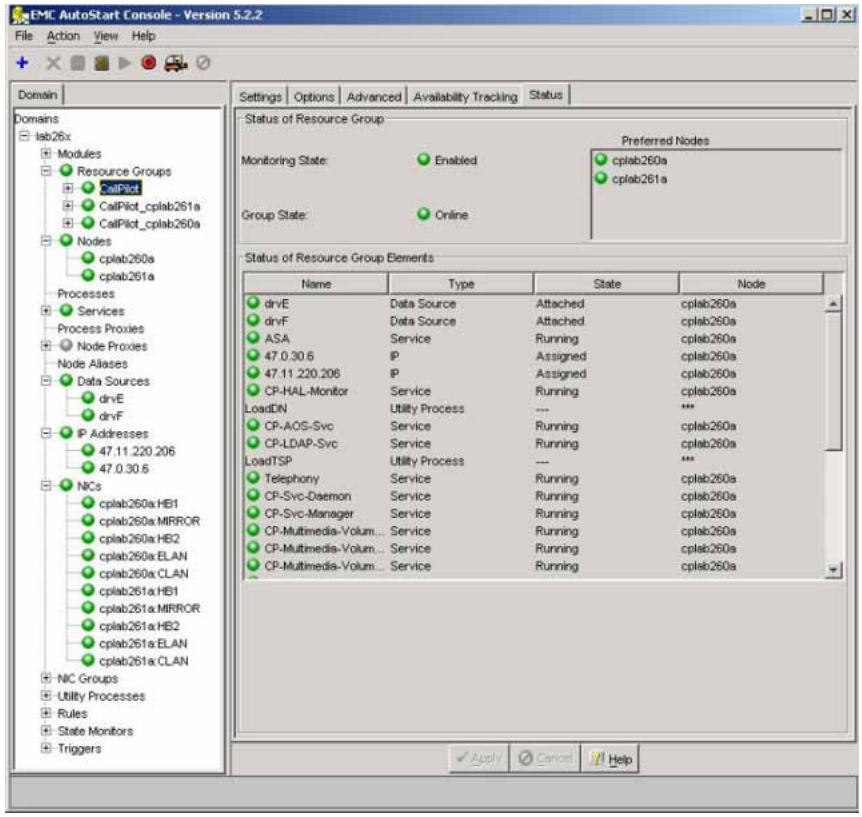
Checking the status of the servers and failovers

Step	Action

1 On the Console window, expand **Domains > [AutoStart_Domain] > Resource Groups > CallPilot**.

2 Select the **Status** tab.

Figure 94
Status tab



Result: The fields in the Status of Resource Group area show the status of the system. The AutoStart Console users both icons and text to show system status (as described in the following two tables).

Table 9
Status of Resource Group fields

Field name	Status	Description
Monitoring State	Enabled	Automatic failover is enabled.
	Disabled	Automatic failover is disabled.
	Unknown	AutoStart is unable to determine the failover status.

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Field name	Status	Description
Group State	Online	All resources under the current group on the current active server are up and working.
	Offline	All resources under the current group on the current active server are down.
	Online pending	Some resources under the current group on the current active server are up; however, some services are in either starting or stopping status.
Preferred Nodes		This area shows all the CallPilot servers and their overall status.

Status icons are displayed for each object to indicate the status of the object. The color of the icon describes the state of the object.

Table 10
Light status

Light	Status
Green	The object is online and in a working state.
Blue	The object is in a starting state.
Yellow	The object is in a warning state.
Yellow with a question mark	The object is entering warning state.
Red	The object has failed.
Red with a question mark	The object is failing.
Gray	The object is offline.

In the **Status of Resource Group Elements** area, the **Node** column shows on which server the CallPilot services are up and working. Usually this column shows one CallPilot server node name (active CallPilot server name) for all the resource group elements (although the node names do not have to be the same).

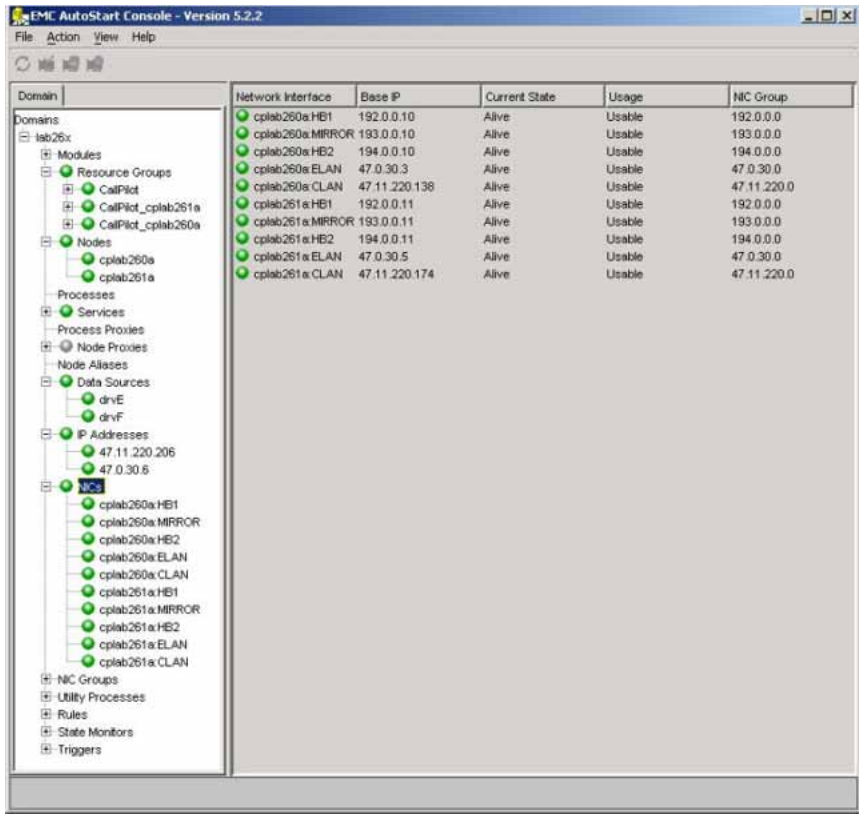
—End—

Checking the status of the HB1, HB2, and Mirroring links

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Step	Action
1	On the AutoStart Console, expand **Domain > [AutoStart_Domain] > NICs**.

Figure 95
NICs



2	View the information in the right pane to check the status of the HB1, HB2, and Mirroring links. The status of the CLAN and ELAN is also displayed.

—End—

Import and export of the AutoStart Definition file

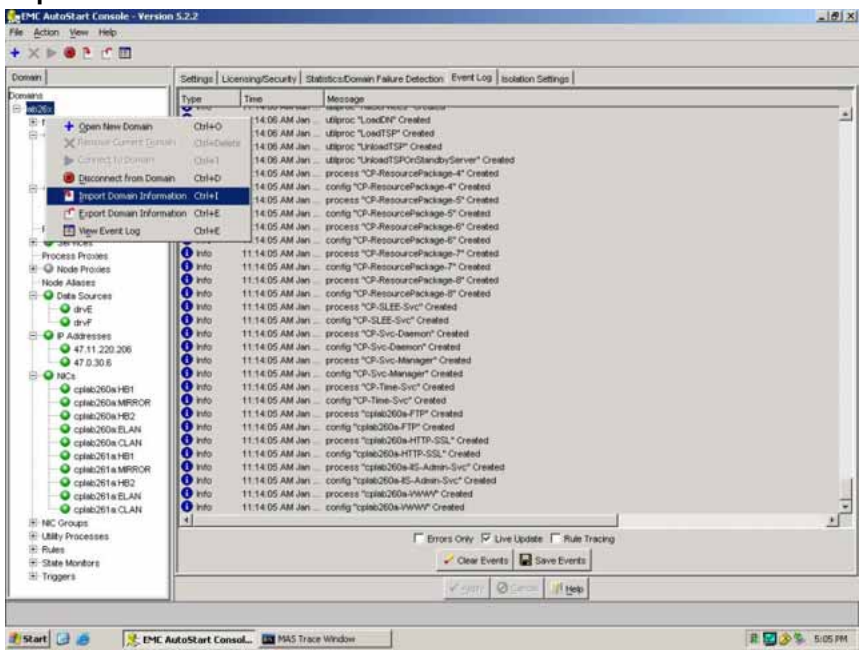
As part of the AutoStart configuration, the administrator imports the customized AutoStart Definition file on the AutoStart Console. It is also possible to export the AutoStart configuration data into a definition file as a backup after the AutoStart configuration. This section describes the procedures for importing and exporting the AutoStart Definition file.

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Importing the AutoStart Definition file

Step	Action
1	On the AutoStart Console window, expand **Domains**.
2	Right-click the **[AutoStart_Domain]** and select **Import Domain Information** from the shortcut menu.

Figure 96
Import Domain Information



Result: The Import dialog box appears.

Figure 97
Import dialog box



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3 Navigate to the **D:\Nortel\HA\ToolkitInstaller2.0** folder (if that folder is not already open by default).

4 Select one of the following AutoStart definition files:

- **CallPilot-Mirroring-Single.def** (for systems with one MPB96 board)
- **CallPilot-Mirroring.def** (for systems with three MPB96 boards)

5 Click **Import**.

Result: The import process takes up to one minute to complete.

—End—

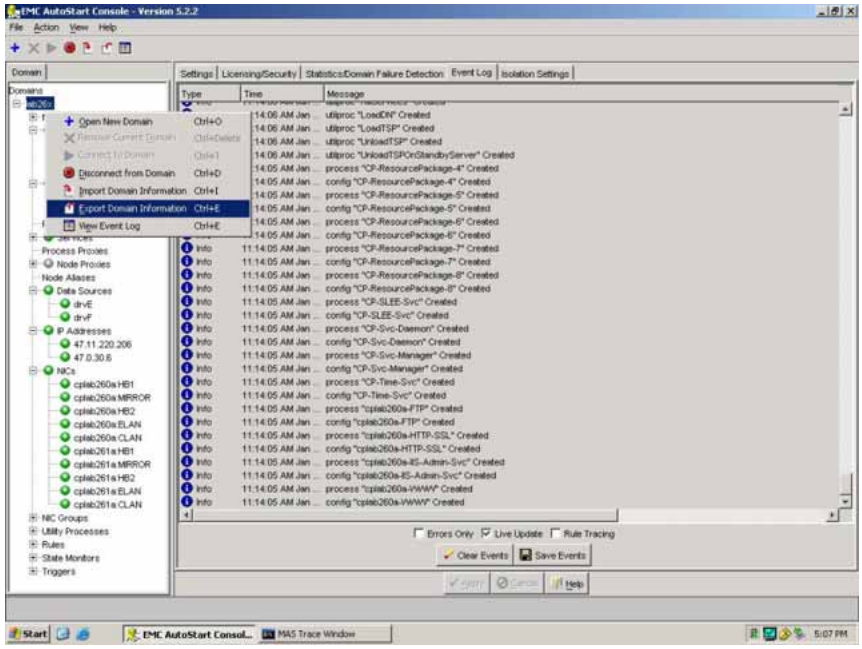
Exporting the AutoStart Definition file

Step	Action

1 On the AutoStart Console window, expand **Domains**.

2 Right-click your **[AutoStart_Domain]** and select **Export Domain Information** from the shortcut menu.

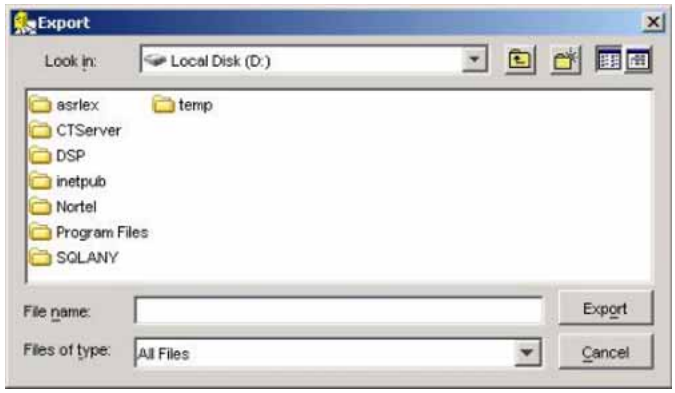
Figure 98
Export Domain Information



Result: The Export dialog box appears.

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Figure 99
Export dialog box



3 Select the location and file name for the new definition file to be created.

4 Click **Export** to export the AutoStart configuration data into the new definition file.

—End—

Recreate the AutoStart definition file

Use the following procedure to recreate the AutoStart Definition file. To do this, you must do the following on the fully configured and running CallPilot 5.0 High Availability system:

- run the High Availability Wizard (HighAvailabilityConfigurationWizard.exe under D:\Nortel\HA)
- reimport the new definition file into AutoStart Console (*.def under D:\Nortel\HA\ToolkitInstaller2.0)

For example, you must use this procedure after installing the CallPilot 5.0 PEP, which replaces the AutoStart definition template files used to generate the definition file on the working CallPilot 5.0 High Availability systems.

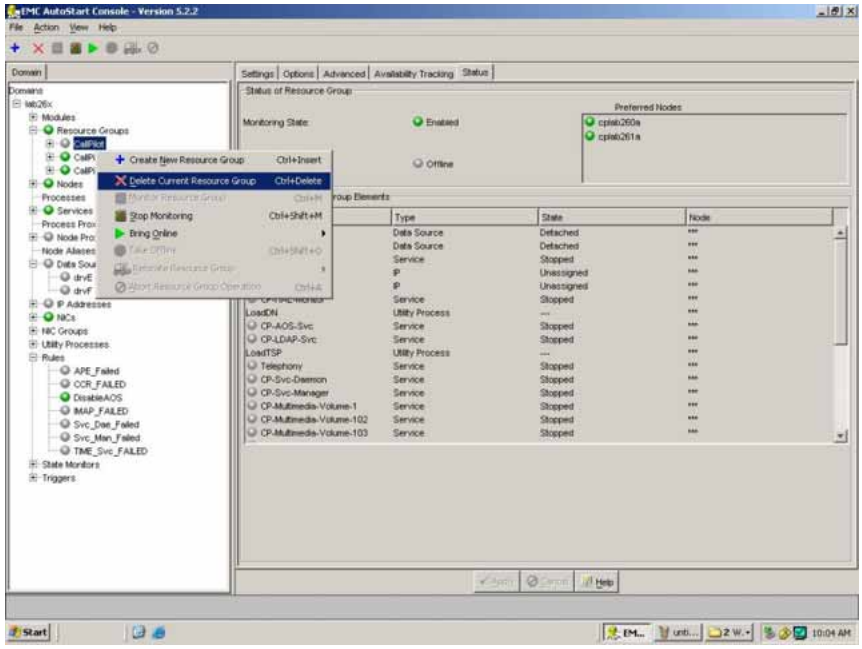
Recreating the AutoStart definition file

Step	Action
1	Open the AutoStart Console on the High Availability server which had the original definition file previously imported into AutoStart.
2	Take the CallPilot resource group offline (if it is online). See "Taking the CallPilot resource group offline" (page 216).

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3 In the left pane of the AutoStart Console, expand **Resource Groups**, right click the **CallPilot** resource group, and then click **Delete Current Resource Group**.

Figure 100
Delete CallPilot resource group



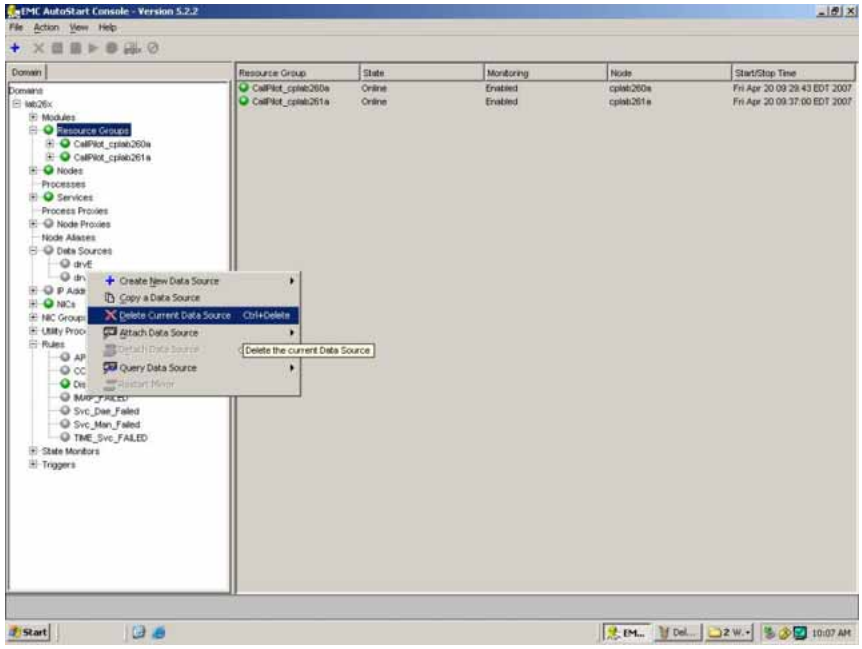
Result: The Confirm Delete of Resource Group window appears.

4 Click **Yes** to confirm the deletion of the CallPilot resource group.

5 In the left pane of the AutoStart Console, expand **Data Sources**, right click **drvE**, and then click **Delete Current Data Source**.

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Figure 101
Delete drvE



Result: The Confirm Delete of Datasource window appears.

6 Click **Yes** to confirm the deletion of drvE.

7 In the left pane of the AutoStart Console, expand **Data Sources**, right click **drvF**, and then click **Delete Current Data Source**.

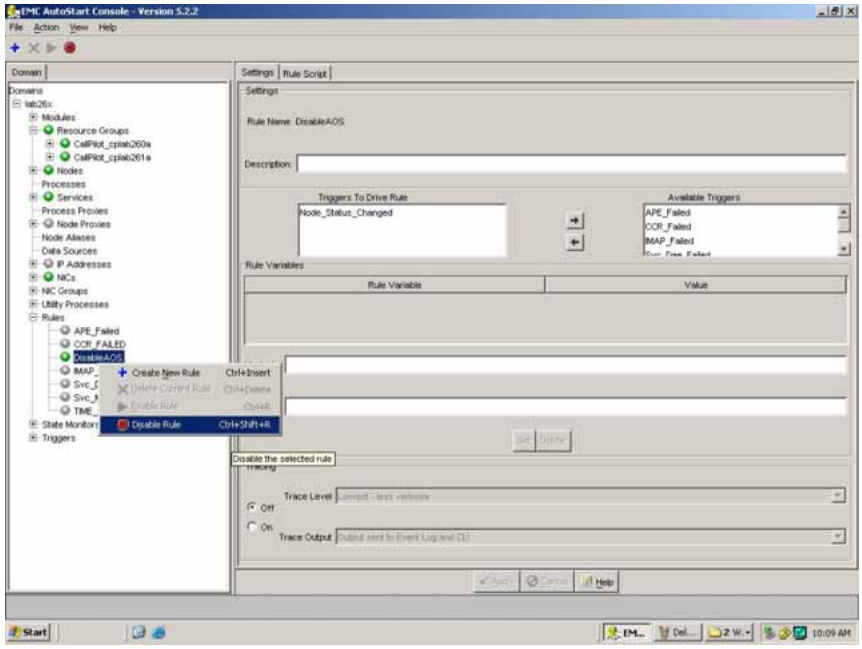
Result: The Confirm Delete of Datasource window appears.

8 Click **Yes** to confirm the deletion of drvF.

9 In the left pane of the AutoStart Console, expand **Rules**, right click **DisableAOS**, and then click **Disable Rule** if the rule Disable Rule is enabled (in green).

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Figure 102
Disable Rule



Result: The Confirm Disable of Rule window appears.

10 Click **Yes** to confirm the disabling of the rule.

11 Navigate to D:\Nortel\HA folder.

12 Launch HighavailabilityConfigurationWizard.exe.

Result: The High Availability Configuration Wizard appears.

13 Click the **Reset** button in the High Availability Configuration Wizard.

Note: Do not close High Availability Configuration Wizard at this time. If you close High Availability Configuration Wizard, you must reenter the data requested by the High Availability Configuration Wizard.

14 Click **Step 1: Get Node Information**.

15 Click **Step 2: Validate Node Information**.

Result: The Stage 1 Complete window appears if there are errors.

16 On the Stage 1 Complete window, click **OK**.

17 Close the High Availability Configuration Wizard.

Result: The Confirm Exit Request window appears.

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18 Click **Yes**.

19 Navigate to D:\Nortel\HA folder.

20 Launch HighavailabilityConfigurationWizard.exe.

Result: The High Availability Configuration Wizard appears.

21 Click **Step 3: Generate Definition File**.

Result: The Phase 2 Complete window appears when the definition file has been successfully generated.

22 Click **OK**.

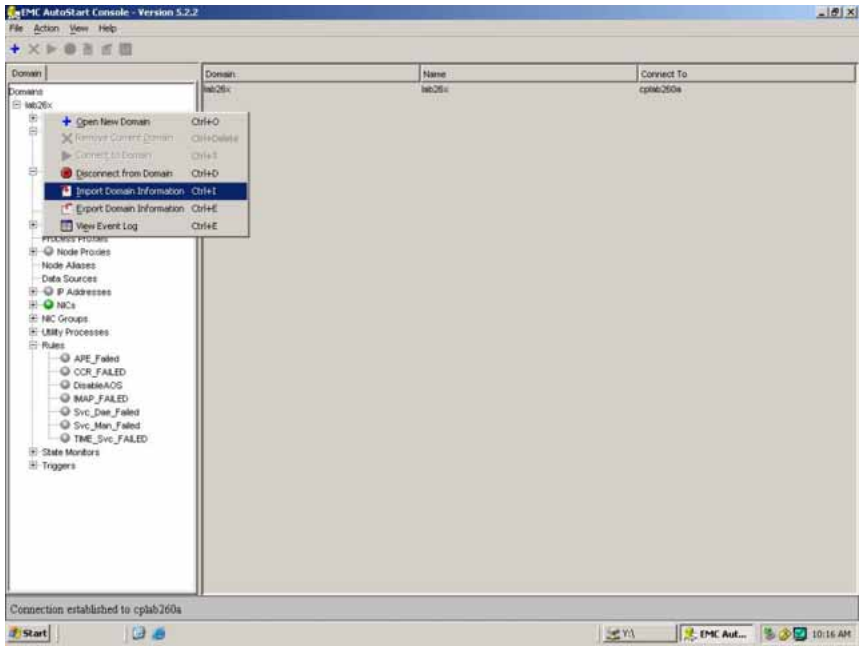
23 Close the High Availability Configuration Wizard.

Result: The Confirm Exit Request window appears.

24 Click **Yes**.

25 In the AutoStart Console, right click the **[AutoStart_Domain] name** and then click **Import Domain Information**.

Figure 103
Import Domain Information



Result: The Import dialog box appears.

26 Under the **D:\Nortel\HA\ToolkitInstaller2.0** folder, select the new definition file, and then click **Import**.

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Figure 104
Import dialog box



27 Wait for approximately one minute.

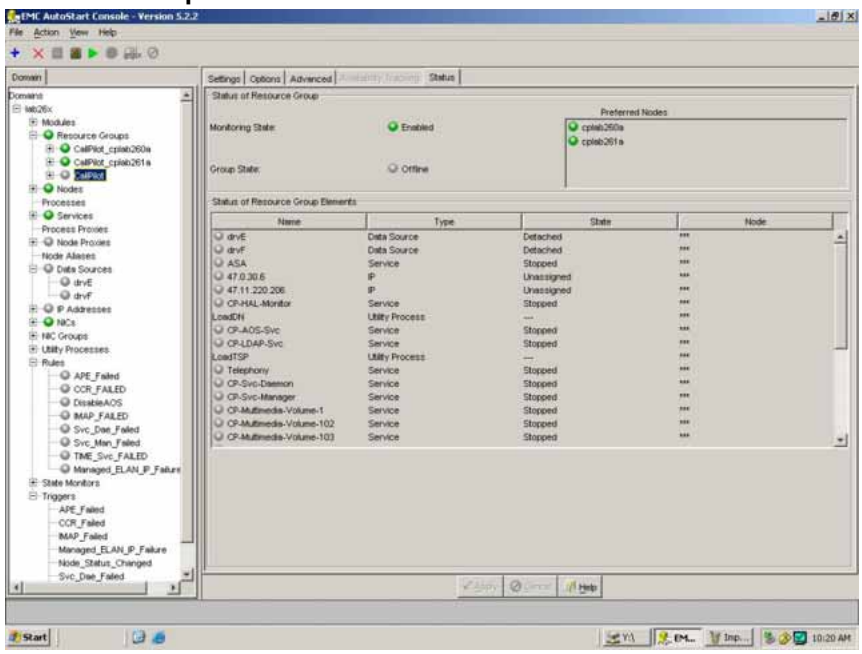
28 Verify that the import was successful:

- the drvE and drvF data sources are created.
- the CallPilot resource group is created
- no error message or warning message appears in the information bar at the bottom of the AutoStart Console

Also check that any new items or new settings introduced by the new definition file are created. For example, the new trigger Managed_ELAN_IP_Failure and the new rule Managed_ELAN_IP_Failure_Notif.

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Figure 105
Successful import



29 In the left pane of the AutoStart Console, expand **Utility Processes**, and update the **Login Information** (Password, Domain name, and User name) on the Settings tab of each utility process under Utility Processes (DisableAOS, KillServices, LoadDN, LoadTSP, UnloadTSP, and UnloadTSPOnSandbyServer). See "Adding the Windows administrator account password for the AutoStart Utility Processes" (page 115).

30 Bring the CallPilot resource group online. See "Bringing the CallPilot resource group online" (page 214).

—End—

Change the Switch IP address in AutoStart Console

If the switch IP address is changed, you must update the switch IP address in multiple locations:

- The switch IP address used in NIC Group Test IP on the Testing Options page of the ELAN NIC group.
- The switch IP address used on the Network Isolation Addresses list on the Isolation Settings page of the AutoStart domain.

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- The switch IP address used in the list IP Addresses to Test on the Network Path Testing page of the Virtual ELAN IP Address (Managed ELAN IP Address) on AutoStart Console.

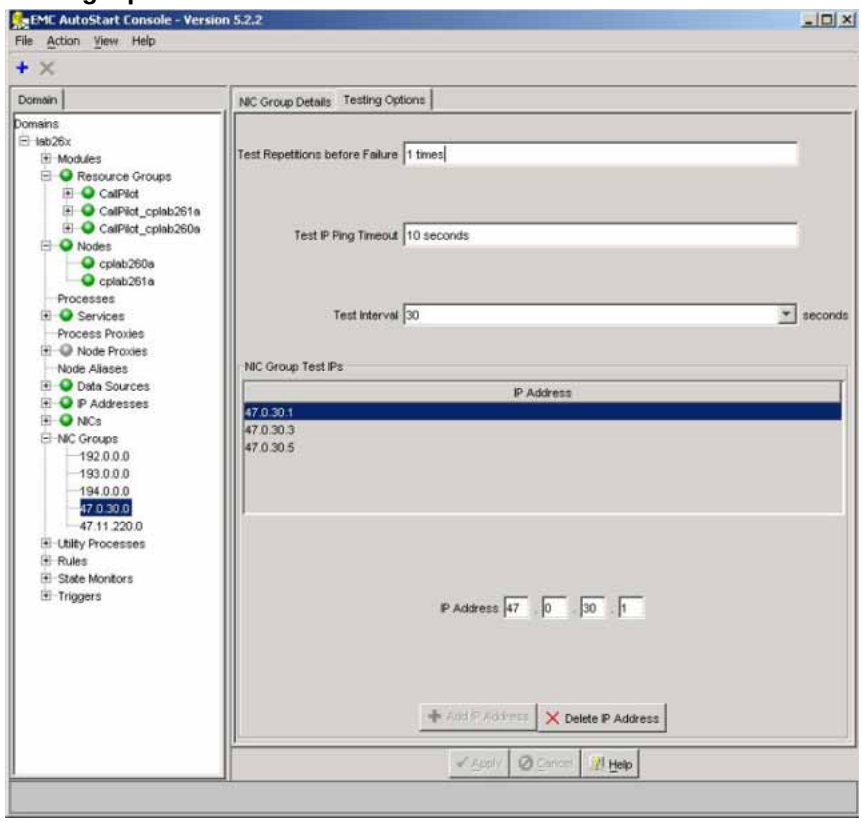
If the switch IP has to be changed, you must use the following procedure to update the switch IP on a CallPilot 5.0 High Availability system.

Changing the switch IP address

Step	Action
1	Disable the monitoring on the AutoStart Console. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).
2	Change the ELAN IP address on the switch.
3	Expand **NIC Groups** on the left pane of the AutoStart Console.
4	Select the NIC group with the ELAN subnet IP address.
5	Click the **Testing Options** tab. **Result:** The Testing Options page appears.
6	In the **NIC Group Test IPs** area, select the NIC Group Test IP address that has the old switch IP address.

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Figure 106
Testing Option tab



7 Click **Delete IP Address** to delete the old IP address.

8 Enter the new switch **IP Address**.

9 Click **Add IP Address**.

10 Click **Apply**.

11 In the AutoStart Console, select the [AutoStart_Domain].

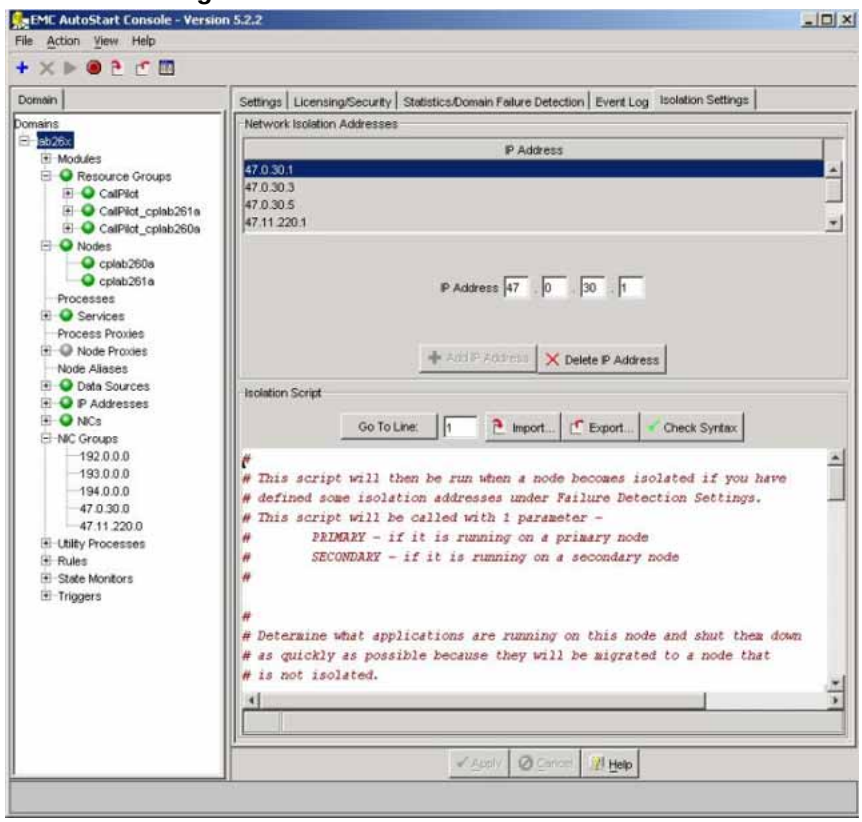
12 Click the **Isolation Settings** tab.

Result: The Isolation Settings page appears.

13 In the **Network Isolation Addresses** area, select the old switch IP address from the IP Address list.

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Figure 107
Isolation Settings tab



14 Click **Delete IP Address**.

15 Enter the new switch **IP Address**.

16 Click **Add IP Address**.

17 Click **Apply**.

18 In the AutoStart Console, expand **IP Addresses**.

19 Click the IP Address that is the Managed ELAN IP address.

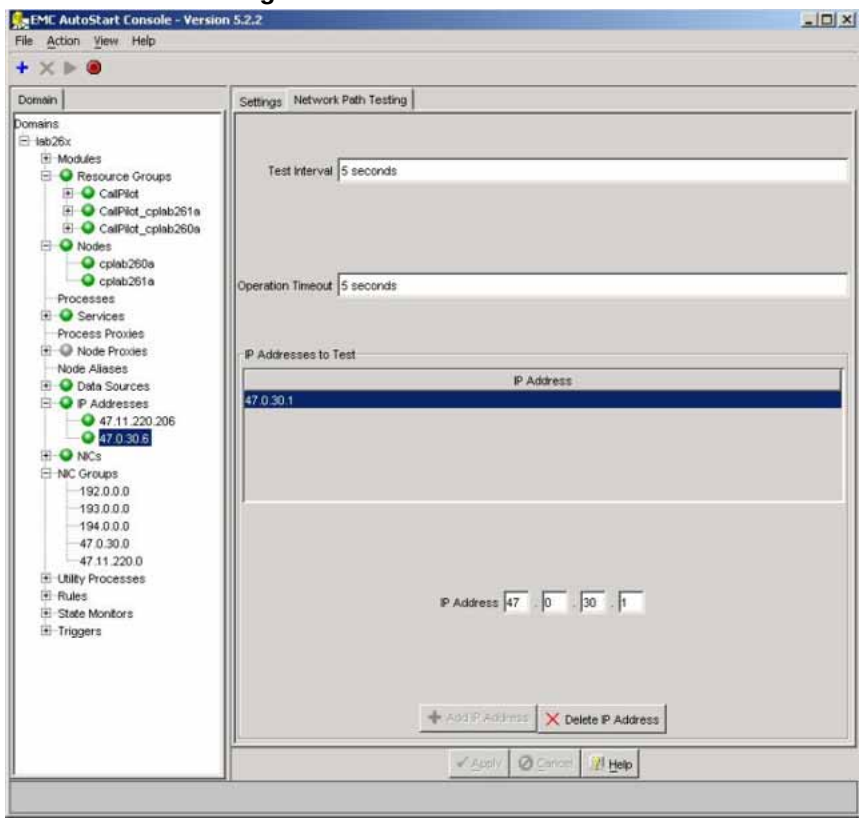
20 Click the **Network Path Testing** tab.

Result: The Network Path Testing page appears.

21 In the **IP Address to Test** area, select the old switch IP address from the IP Address list.

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Figure 108
Network Path Testing tab



22 Click **Delete IP Address** to delete the old IP address.

23 Enter the new switch **IP Address**.

24 Click **Add IP Address**.

25 Click **Apply**.

—End—

Work with resource groups

A resource group is a collection of resources (such as CallPilot services, disks, scripts) that must be managed as a group.

This section includes the following procedures:

- "Bring a resource group online" (page 214)
- "Take a resource group offline" (page 215)
- "Perform failovers and monitoring" (page 217)

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Bring a resource group online

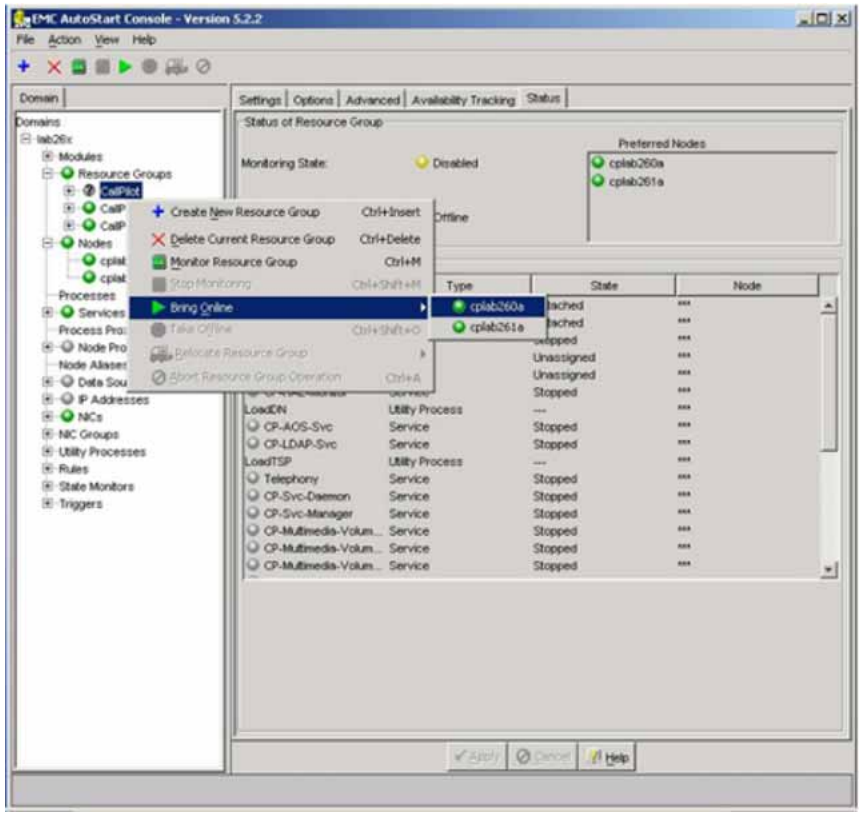
You must bring all the AutoStart resource groups online to make the CallPilot 5.0 High Availability system work after importing the AutoStart definition file (which is imported to configure AutoStart environment).

Use the following procedure to bring a resource group online by bringing the CallPilot resource group online.

Bringing the CallPilot resource group online

Step	Action
1	On the AutoStart Console window, select **Domains > Resource Groups**.
2	Right-click the **CallPilot** resource group.
3	From the shortcut menu, select the **Bring Online** option, and then select the **node name** on which the CallPilot resource group will be brought up.

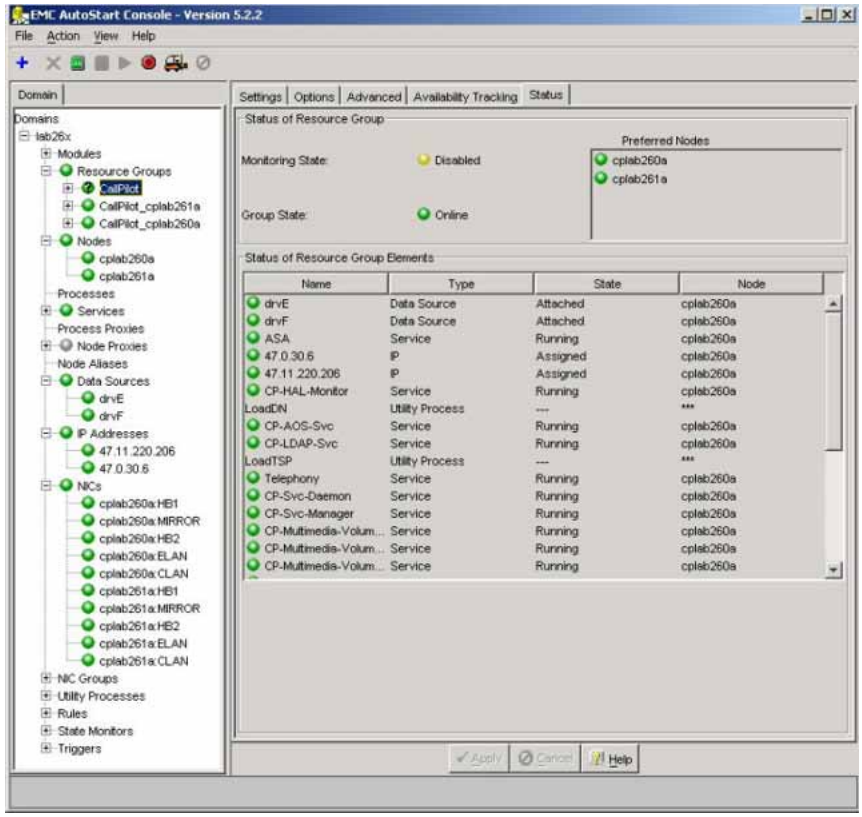
Figure 109
CallPilot resource group - Bring Online



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4 Wait until the **Group State** turns green and shows Online. This can take a few minutes.

Figure 110
CallPilot resource group is online



—End—

Take a resource group offline

The failover CallPilot resource group CallPilot is occasionally taken offline for maintenance. After the CallPilot resource group is taken offline, the following occurs:

- There is no access to the mirrored drives (that is, no access to the CallPilot database and MMFS volumes).
- All services are stopped.
- The Windows operating system continues to function (along with IIS and WWW).

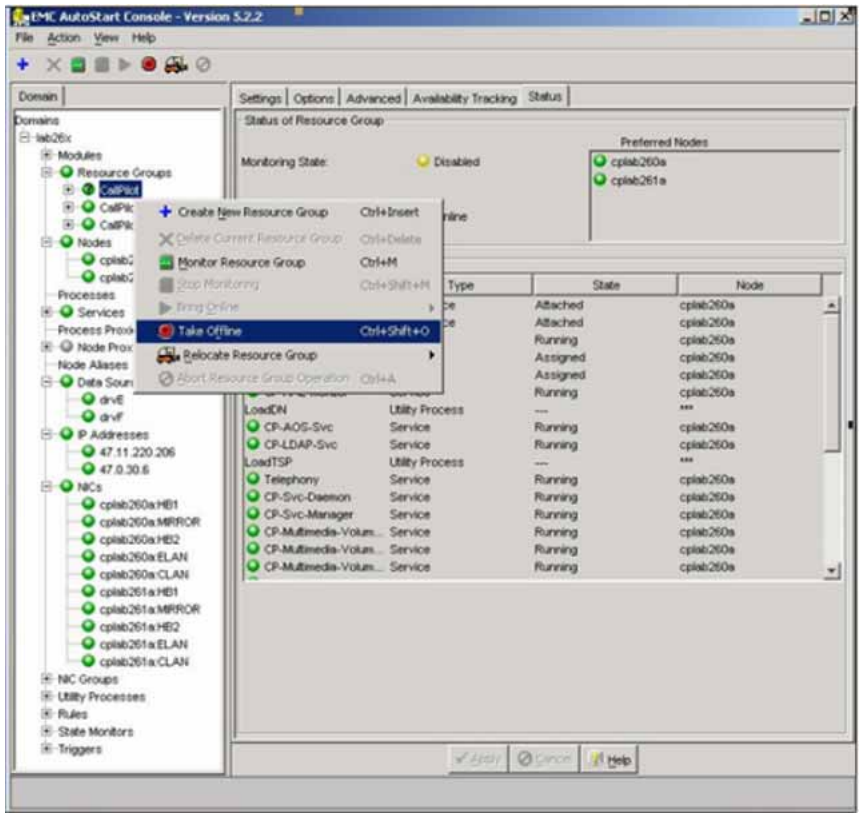
Use the following procedure to take a resource group offline by taking the CallPilot resource group offline.

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Taking the CallPilot resource group offline

Step	Action
1	On the AutoStart Console window, select **Domains > Resource Groups**.
2	Right-click the **CallPilot** resource group.
3	From the shortcut menu, select the **Take Offline** option.

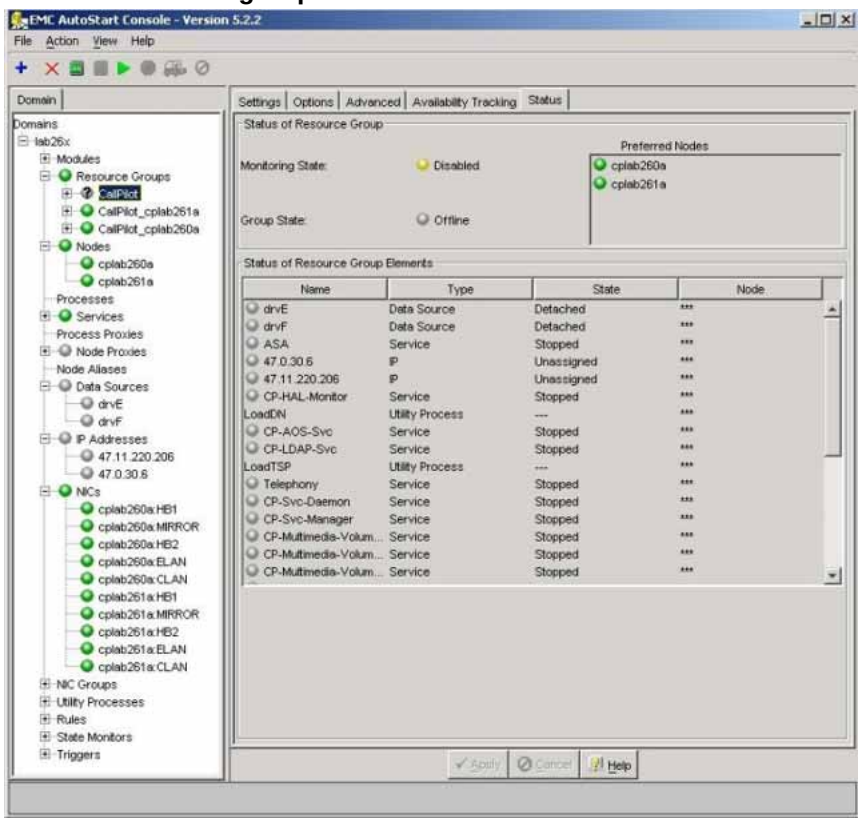
Figure 111
CallPilot resource group - Take Offline



4 Wait until the Group State turns gray and shows Offline. This can take a few minutes.

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Figure 112
CallPilot resource group is offline



—End—

Perform failovers and monitoring

Use the procedures in this section to enable and disable automatic failovers, and to initiate a manual failover.

Automatic failovers

When performing maintenance on the active or standby server, it can be necessary to temporarily disable automatic failovers from the active to the standby CallPilot server. You can later enable the automatic failover.

Using the AutoStart console software, you can disable and enable automatic failovers by performing the following procedures.

Disabling an automatic failover is the same as stopping monitoring, and enabling an automatic failover is the same as starting monitoring.

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Disabling automatic failovers (stop monitoring)

Step	Action

Assumption: This procedures assumes that automatic failovers are currently enabled.

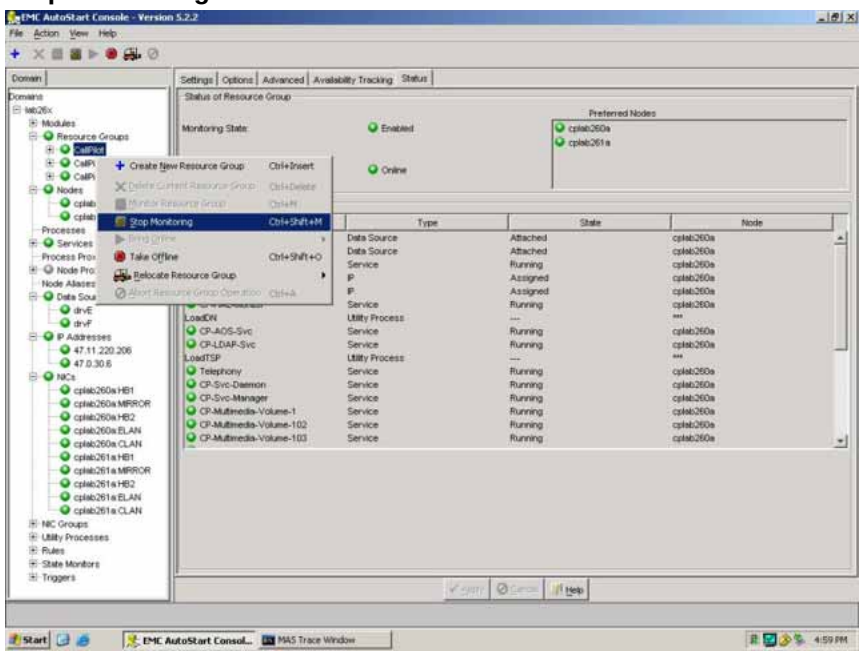
1 On AutoStart Console window, expand **Domains > [AutoStart_Domain] > Resource Groups** and then select **CallPilot**.

2 Click the **Status** tab.

3 Right-click **Resource Groups > CallPilot**.

4 From the shortcut menu, select **Stop Monitoring**.

Figure 113
Stop Monitoring



Result: On the Status tab, the **Monitoring State** turns to yellow and shows a status of Disabled. On the Domains pane, the **Resource Groups > CallPilot** changes to a green light with a black question mark. The automatic failover is disabled.

—End—

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Enabling automatic failovers (start monitoring)

Step	Action

Assumption: This procedure assumes that automatic failovers are currently disabled.

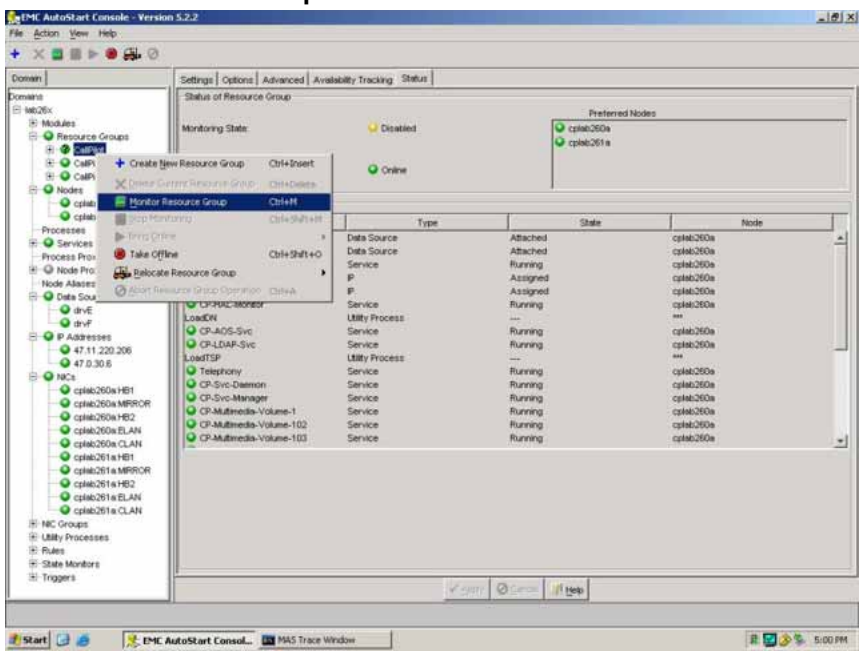
1 On the AutoStart Console window, expand **Domains > [AutoStart_Domain] > Resource Groups** and then select **CallPilot**.

2 Click the **Status** tab.

3 Right-click **Resource Groups > CallPilot**.

4 From the shortcut menu, select **Monitor Resource Group**.

Figure 114
Monitor Resource Group



Result: On Status tab, the **Monitoring State** turns to green and shows a status of Enabled. On the Domains pane, the **Resource Groups > CallPilot** changes to green. The automatic failover is enabled.

—End—

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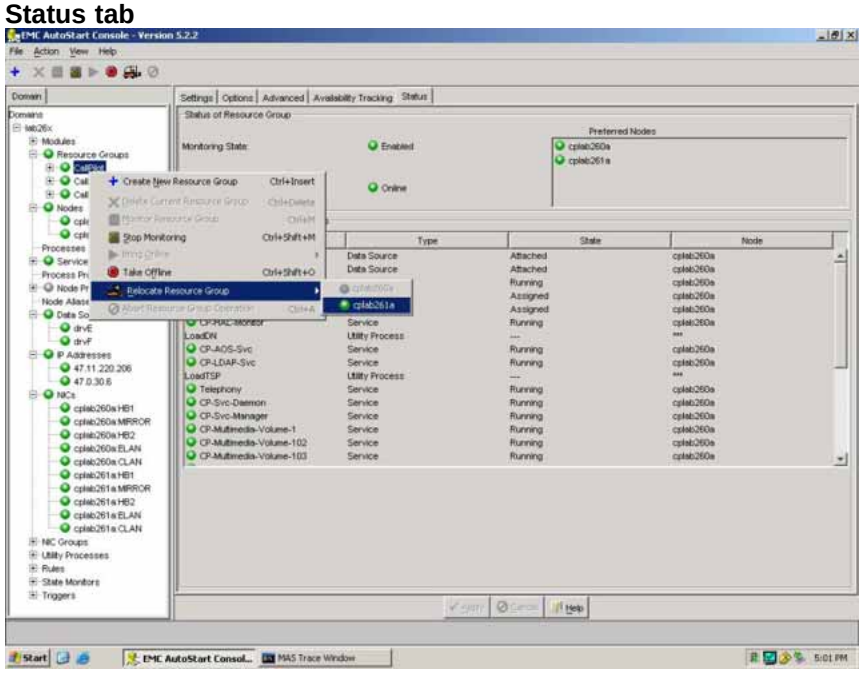
Manual failovers

If you are the administrator, you can perform a manual failover if there is a problem on the active CallPilot server that is not detected by the automatic failover rules.

Initiating a manual failover

Step	Action
1	On the AutoStart Console window, expand **Domains > [AutoStart_Domain] > Resource Groups** and then select **CallPilot**.
2	Click the **Status** tab. **Result:** The Status tab shows the status of the Resource Groups. For this procedure, the CallPilot server cplab261a is used as an example. Notice that this server is active (green and shows Online).
3	Right-click **Resource Groups > CallPilot**.
4	On the shortcut menu, select **Relocate Resource Group**, and then select the **<standby CallPilot server>**. (This server is the standby CallPilot server.)

Figure 115
Status tab

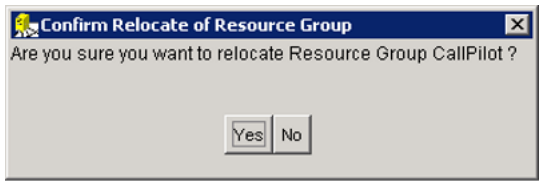


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Note: This action stops the CallPilot services on the active server. This action also puts the standby server in service (that is, makes it the active server).

Result: The Confirm Relocated of Resource Group dialog box appears.

Figure 116
Confirm Relocate of Resource Group



5 Click **Yes**.

Result: The failover starts in seconds. It takes more than 10 minutes to finish the failover to the standby server if the CallPilot Diagnostic Tools are enabled, or less than 5 minutes if the CallPilot Diagnostic Tools are disabled. (Start > Programs > CallPilot > System Utilities > Diagnostic Tools)

—End—

Software operations

Use the following procedures to install, uninstall, and reinstall the EMC AutoStart software.

- "Install the AutoStart Console on a stand-alone PC" (page 221)
- "Uninstall the AutoStart software" (page 231)
- "Reinstall the AutoStart software" (page 234)
- "EMC software updates (AutoStart Agent/Console)" (page 234)

Install the AutoStart Console on a stand-alone PC

The AutoStart Console is used to administer the AutoStart Agent that provides the mirroring and heartbeat signals between the active and standby CallPilot servers. The AutoStart Console also provides the managed (virtual) IP service that is used on the CLAN and ELAN to mask the fact that there are two different servers.

By default, the AutoStart Console software is installed on both CallPilot servers. However, it is possible to install the AutoStart Console software on a stand-alone PC.

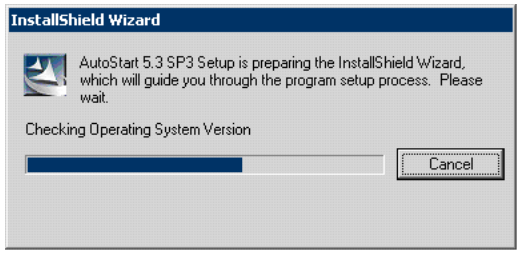
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After the AutoStart Console is installed on a stand-alone PC, it can be used to manage multiple pairs of CallPilot High Availability servers (that is, multiple AutoStart domains). Use the following procedure to install the AutoStart Console software on a stand-alone PC for administration of the Nortel server subnet (CLAN).

Installing the AutoStart Console on a stand-alone PC

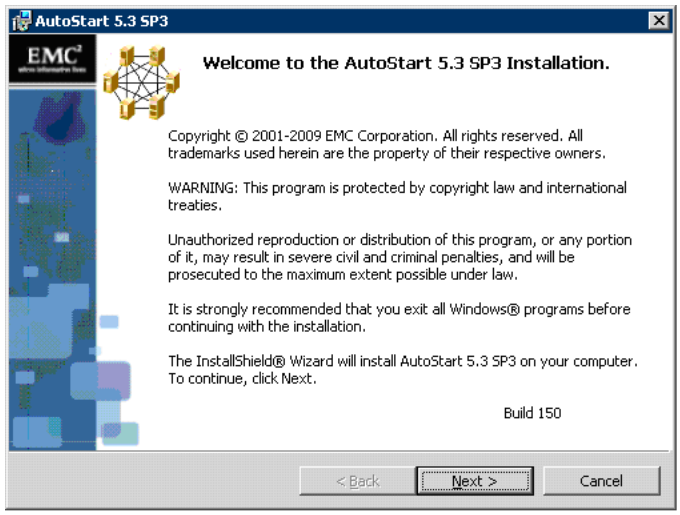
Step	Action
1	Insert the **CallPilot Application CD**.
2	Navigate to the **Z:\EMC** folder on the CallPilot Application CD.
3	Double-click **EMC_AutoStart_5.3_SP3_Update.exe** to unpack the archive in the**D:\temp** folder. **Result:** Three files are unpacked into the D:\temp\EMC_AutoStart_5.3_SP3_Update folder: EAS53_WIN_x86.exe, **EAS53SP3_WIN_x86.exe,** EMC AutoStart Update Process.pdf
4	Double-click **EAS53SP3_WIN_x86.exe** to start the installation. **Result:** The installShield Wizard informs you that AutoStart 5.3 SP3 software is preparing to install (install preparation can take a few minutes). After preparation is complete, the Welcome window appears.

Figure 117
InstallShield Wizard - Preparing to install AutoStart 5.3 SP3 software



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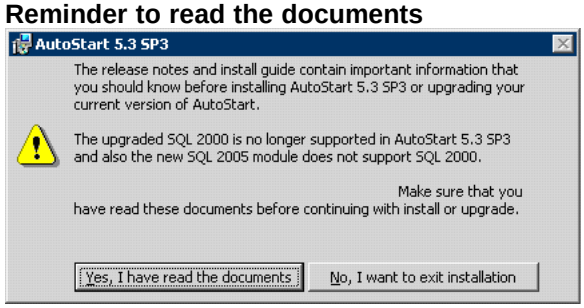
Figure 118
Welcome window



5 Click **Next**.

Result: AutoStart 5.3 SP3 reminder to read the documents appears.

Figure 119
Reminder to read the documents



6 Click **Yes, I have read the documents.**

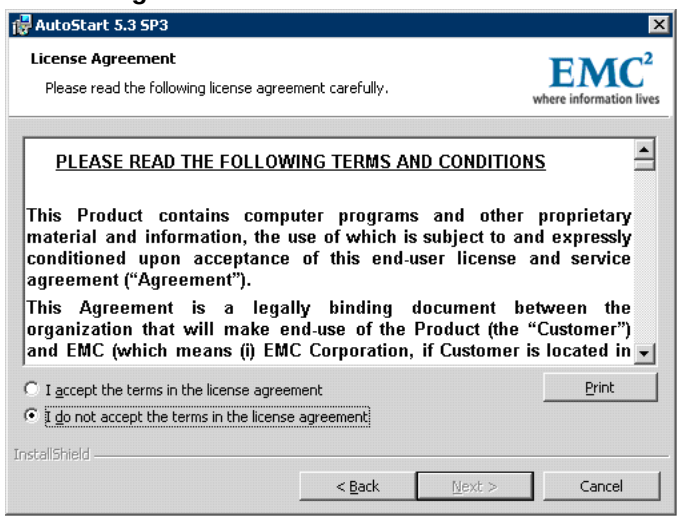
Result: AutoStart 5.3 SP3 reminder is closed.

7 Click **Next** on the Welcome window.

Result: The License Agreement window appears.

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Figure 120
License Agreement window

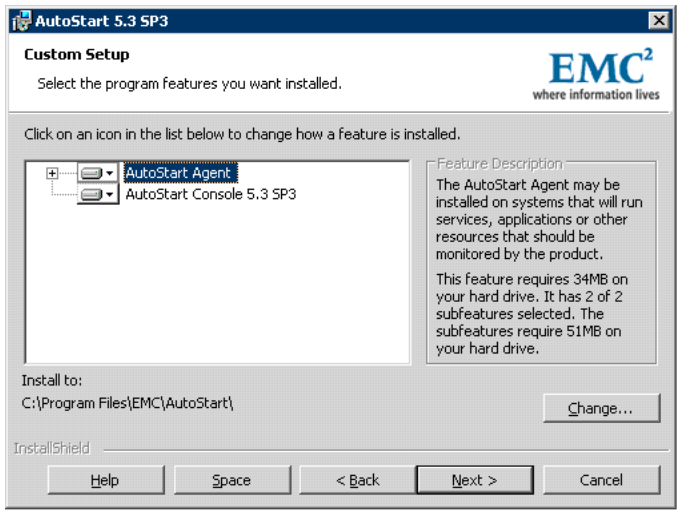


8 Select the **I accept the terms in the license agreement** option.

9 Click **Next**.

Result: The Custom Setup window appears.

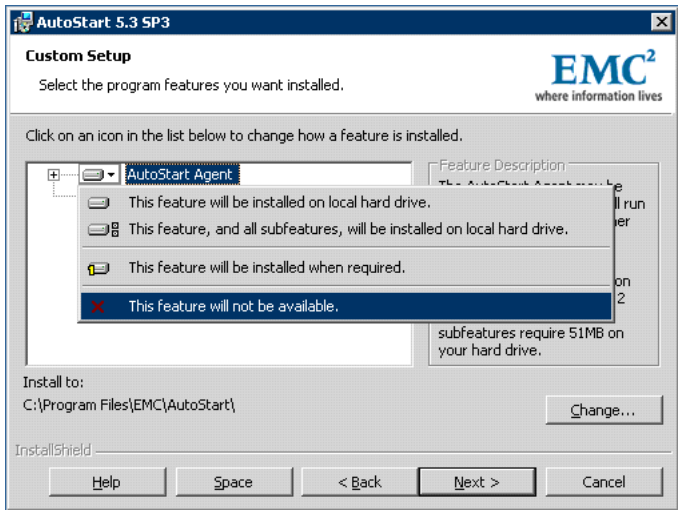
Figure 121
Custom Setup window



10 Click the **AutoStart Agent** drop-down list and then select **This feature will not be available**.

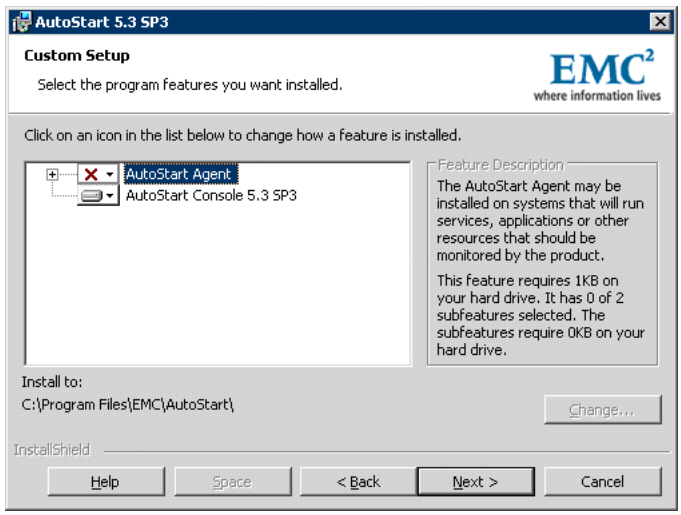
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Figure 122
Custom Setup - AutoStart Agent configuration



Result: The Custom Setup window shows a red X next to AutoStart Agent option.

Figure 123
Custom Setup - AutoStart Agent will not be installed



11 Select the**AutoStart Console 5.3 SP3** from the list.

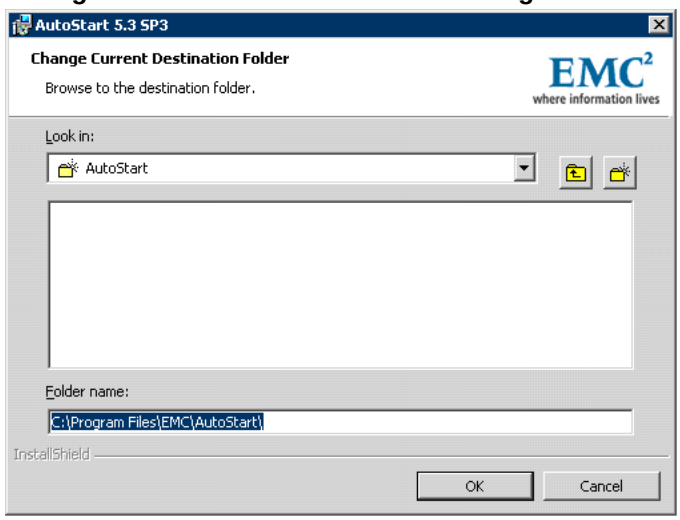
Result: The Change button is highlighted.

12 Click the**Change** button to change the installation path.

Result: The Change Current Destination Folder dialog box appears.

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Figure 124
Change Current Destination Folder dialog box



13 In the **Folder name** field, change the drive letter from C to D, change the path to: **D:\Program Files\EMC AutoStart**

> **ATTENTION**
> You must install the software in the D:\Program Files\EMC AutoStart\ directory or the software does not work correctly.

14 Click **OK**

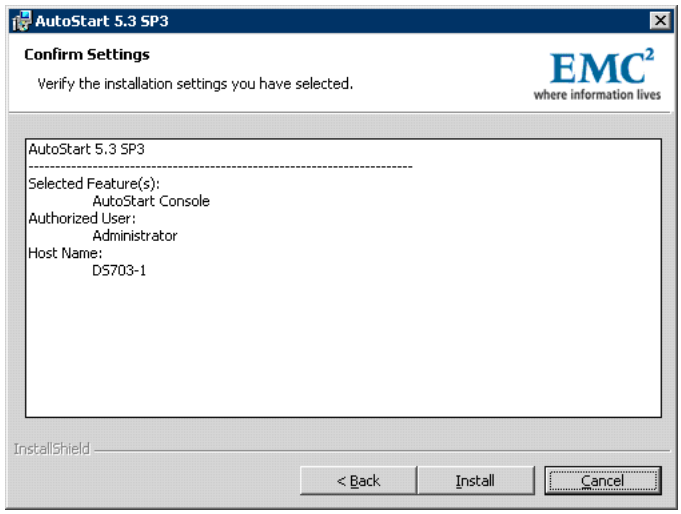
Result: The Change Current Destination Folder dialog box closes and you are returned to the Custom Setup window, which shows the correct installation path.

15 Click **Next**

Result: The Confirm Settings window appears.

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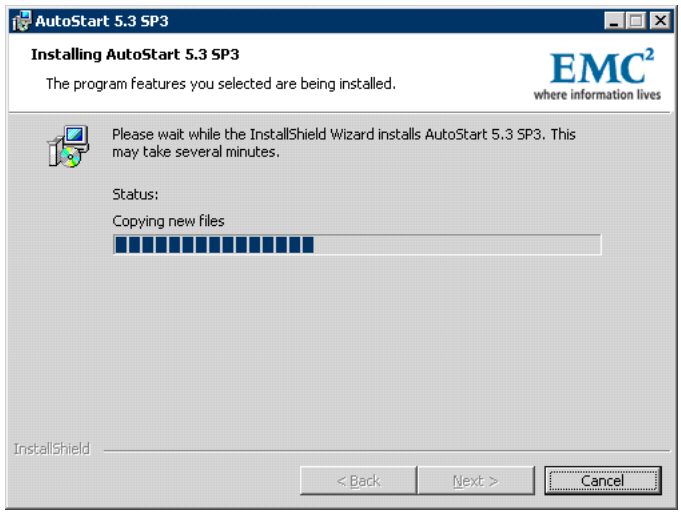
Figure 125
Confirm Settings window



16 Click **Install.**

Result: The Installing AutoStart 5.3 SP3 window appears.

Figure 126
Installing AutoStart 5.3 SP3

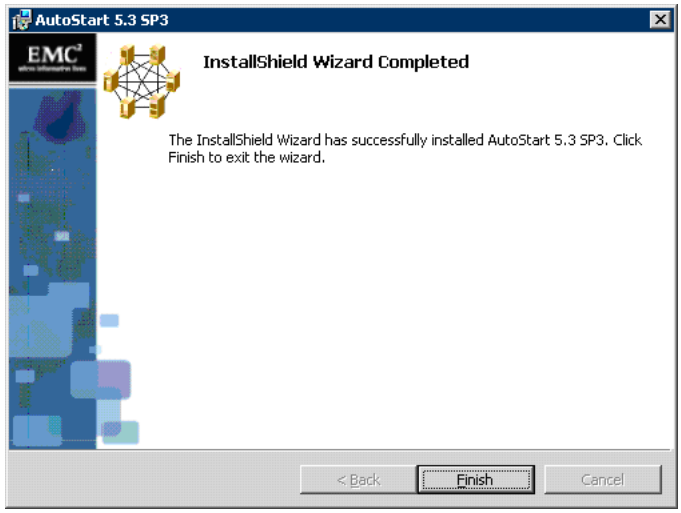


17 Wait for the installation to complete.

Result: The InstallShield Wizard Completed window appears.

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Figure 127
InstallShield Wizard Completed window



18 Click **Finish**

19 Delete the folder **D:\temp\EMC_AutoStart_5.3_SP3_Update.**

—End—

In order for the AutoStart Console (on the stand-alone PC) to manage an AutoStart domain (that is, a pair of CallPilot High Availability servers), the user ID used to log on to the stand-alone PC must be registered in the AutoStart domain that is to be managed. To do this, you must do the following:

1. Add the user ID into the Valid User List of the AutoStart domain on the AutoStart Console installed on one of the High Availability servers. For more information, see "Adding a user ID to the AutoStart domain" (page 228).
2. After the user ID is registered, create a connection to the pair of High Availability servers by launching the AutoStart Console on the stand-alone PC and enter the AutoStart domain name and node names. For more information, see "Adding a remote AutoStart domain to the AutoStart Console" (page 230).

Adding a user ID to the AutoStart domain

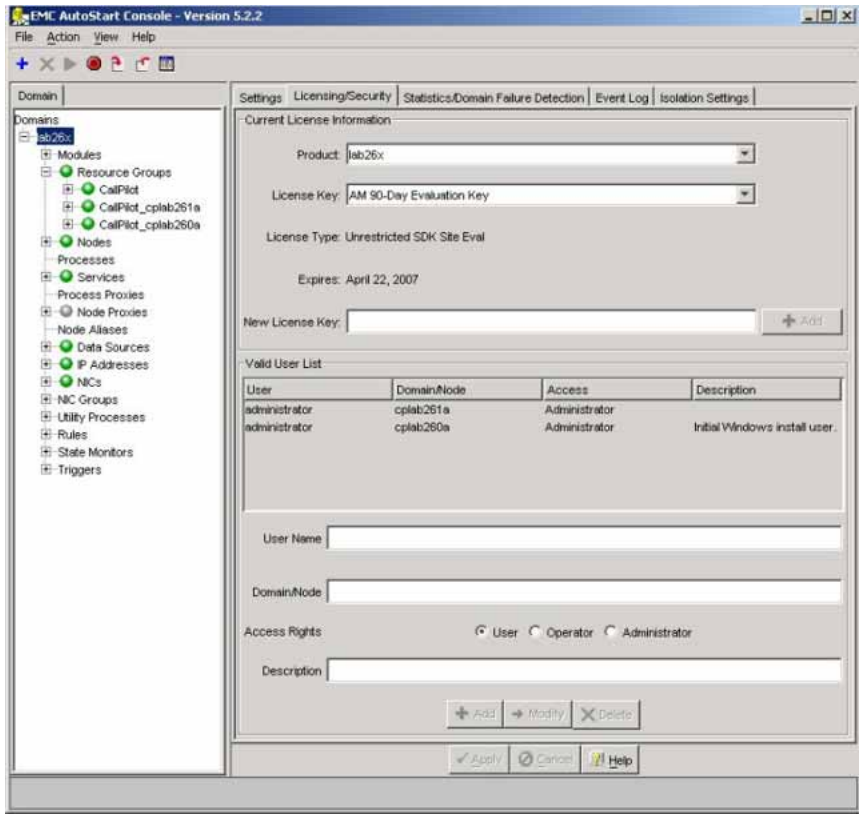
Step	Action
1	Launch the AutoStart Console on either of the two servers that are members of the AutoStart domain.

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2 Expand **Domains**.

3 Select the **Licensing/Security** tab.

Figure 128
Licensing/Security tab



4 In the **User Name** field, enter the user ID of the user who must be given access to the AutoStart domain.

5 In the **Domain/Node** field, enter one of the following:

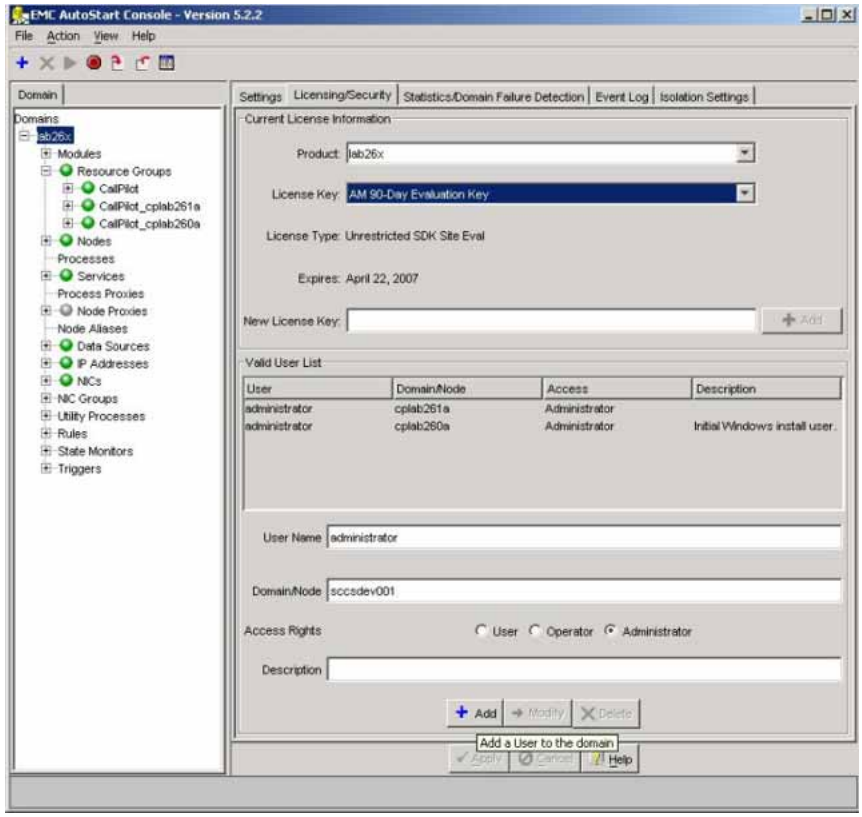
- The Windows domain name, if the user has a Windows domain user ID.
- The server name that the user ID is defined on, if the user is not a member of a Windows domain.

6 For the Access Rights field, select either the **User**, **Operator**, or **Administrator** option.

7 Click **Add**.

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Figure 129
Add user



Result: The user is added to the Valid User List.

—End—

Adding a remote AutoStart domain to the AutoStart Console

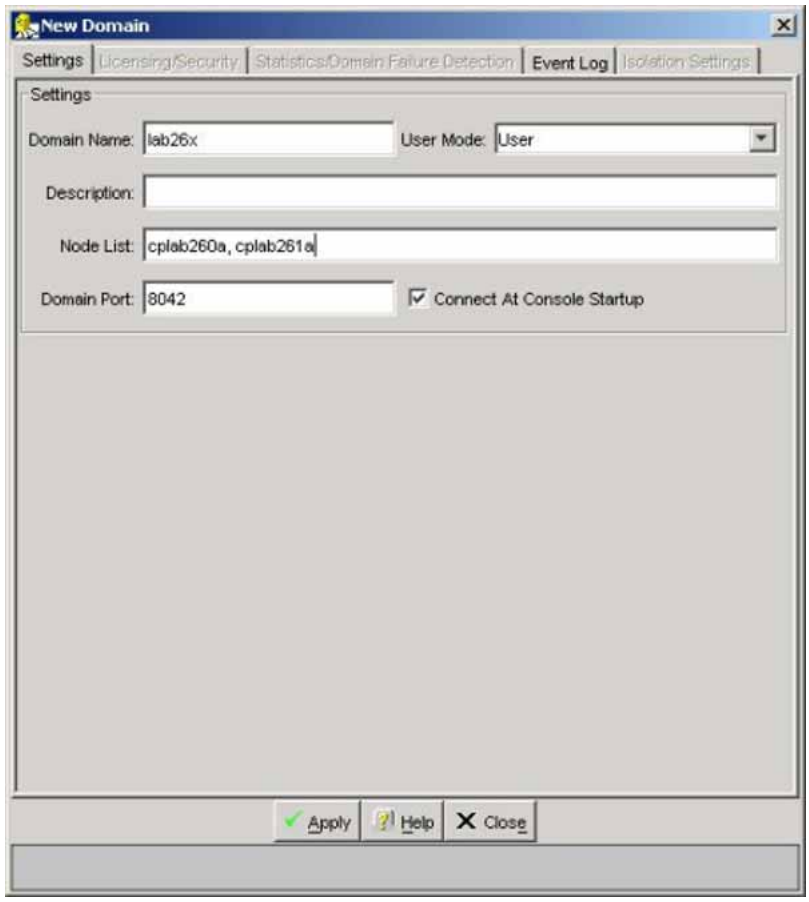
Step	Action
1	Launch the AutoStart Console that is installed on the stand-alone PC.

Result: The New Domain dialog box appears.

Note: If the AutoStart Console does not launch automatically, select **Action > Open New Domain** to display the New Domain dialog.

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Figure 130
New Domain



2 In the **Domain Name** field, enter the name of the AutoStart domain to which you want to connect.

3 In the **Node List** field, enter a comma-separated list of the two node names that are members of the AutoStart domain to which you want to connect.

4 Click **Apply**.

Result: The AutoStart Console window updates and the newly added AutoStart domain is connected using the user ID that is currently logged on to the stand-alone PC.

—End—

Uninstall the AutoStart software

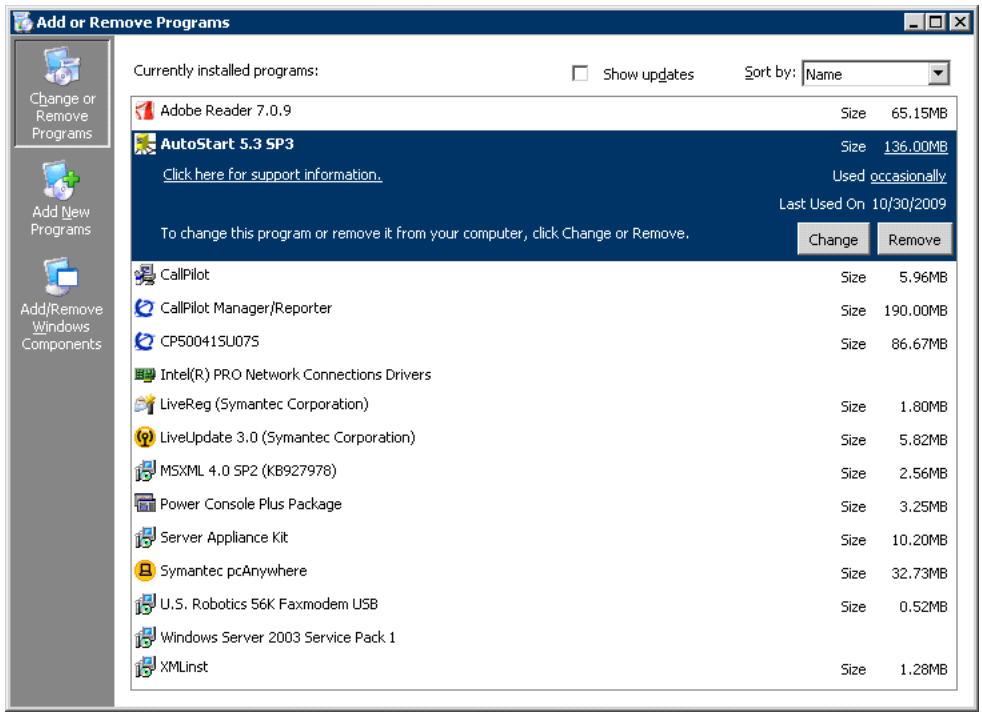
Use the following procedure if you must uninstall the AutoStart software.

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Uninstalling the AutoStart software

Step	Action
1	Launch the AutoStart Console.
2	In the AutoStart Console, take the CallPilot resource group offline. For more information, see "Take a resource group offline" (page 215).
3	Remove the CallPilot resource group by doing the following: a. Right-click the CallPilot Resource group. b. Select **Remove Current Resource Group**.
4	Delete the data sources (drive E and drive F).
5	Close the AutoStart Console.
6	Click **Start > Settings > Control Panel**.
7	Double-click the **Add/Remove Programs** icon in the Control Panel. **Result:** The Add or Remove Programs window appears.
8	Select **AutoStart 5.3 SP3** from the list.

Figure 131
Add or Remove Programs - AutoStart 5.3 SP3

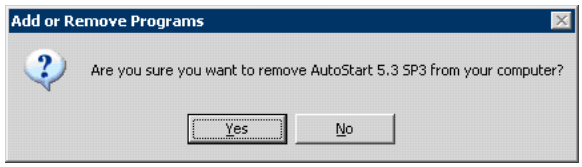


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9 Click **Remove**.

Result: The Add or Remove Programs conformation window appears.

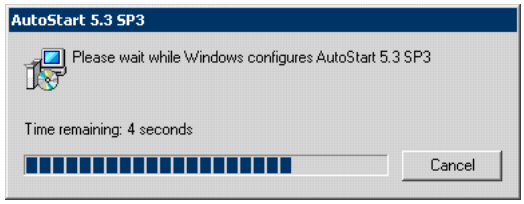
Figure 132
Add or Remove Programs – confirmation window



10 Click **Yes**

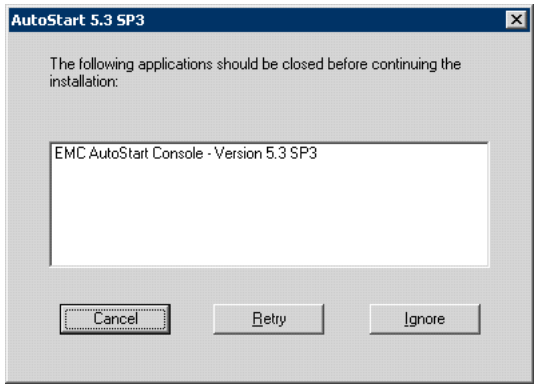
Result: Uninstalling EMC AutoStart window appears and displays the progress of uninstallation.

Figure 133
AutoStart 5.3 SP3 Installer - Status of uninstallation



If the AutoStart Console is in use, the following message appears. Close the AutoStart Console and click **Retry** to continue.

Figure 134
AutoStart 5.3 SP3 Installer - AutoStart Console is in use

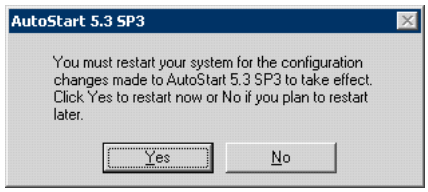


11 The AutoStart 5.3 SP3 Installer Information dialog box appears.

12 Click **Yes** to restart the node.

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Figure 135
AutoStart 5.3 SP3 Installer Information



—End—

Reinstall the AutoStart software

Use the following procedure if you must uninstall and then reinstall the AutoStart software. This procedure must be completed on both servers in the High Availability pair.

Reinstalling the AutoStart software

Step	Action

This procedure must be used on each node of a CallPilot High Availability pair.

1 Uninstall the AutoStart patches by doing the following:

a. Rerun each patch.

b. Select the **Remove** option.

2 Uninstall the AutoStart Console by following the procedure "Uninstalling the AutoStart software" (page 232), which first deletes the AutoStart Data Sources.

3 Reinstall the AutoStart Agent and Console, including their patches. For more information, see "Install the AutoStart Agent and Console software " (page 86).

4 Restart the server.

—End—

EMC software updates (AutoStart Agent/Console)

Nortel must approve all EMC AutoStart updates. Do not apply any software updates unless the update is provided by Nortel. Contact your support organization for more information.

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All of the required EMC software is included on the CallPilot 5.0 Applications CD. This version of the EMC software is tested and verified to work correctly with the CallPilot 5.0 High Availability feature. The EMC software on the CallPilot server must not be updated or patched unless the new software or patch is tested and validated by Nortel.

Support

Install PEPs

To ensure that the pair of CallPilot servers functions correctly, both CallPilot servers must be running the same PEPs and Service Updates (SUs). Due to the mirroring software, the mirrored drives cannot be accessed on the standby server. As a result, PEPs that impact the database or MMFS must be installed on the active CallPilot server.

This section includes the procedure for installing PEPs.

ws

Step	Action

In this procedure, CP1 is the active server and CP2 is the standby server. This process causes the servers to go out of service while the PEPs are installed.

ATTENTION

Please make sure that both nodes are in the green status on the Nodes list of the AutoStart Console.

1 On CP1, do the following:

a. Launch the AutoStart Console.

b. Stop monitoring for CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups.

For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

c. Take CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups offline (shut down CallPilot).

For more information, see "Taking the CallPilot resource group offline" (page 216).

d. Wait for all resource groups to go offline.

e. Attach the mirror drives, drive E and drive F (Note: Repeat the steps i, ii, iii on drive E and drive F) to CP1 so that the disks can be accessed from CP1.

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ATTENTION
Attaching and detaching drives can take a few minutes.

i. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

ii. Right-click the drive you want to connect.

iii. Select **Attach Data Source**.

f. Install the PEPs.

Note: The PEP code is enhanced so that it starts any CallPilot services that it needs to have running (for example, the database).

g. Detach the data source.

i. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

ii. Right-click the drive/data source.

iii. Select **Detach Data Source**.

h. Restart the server (if required).

Result: CP1 now has the new software, registry settings, and database updates. Because the resource group is offline and monitoring is disabled, CallPilot does not automatically restart after the restart.

ATTENTION
Wait till the CP1 is turned to green on the Nodes list of the AutoStart Console.

2 On CP2, do the following:

a. Launch the AutoStart Console.

b. Attach the mirror drives (drive E and drive F) to CP2 so the disks can be accessed from CP2.

ATTENTION
Attaching and detaching drives can take a few minutes.

i. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

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ii. Right-click the drive you want to connect.

iii. Select **Attach Data Source**.

c. Install the PEPs.

ATTENTION
The PEP code is enhanced so that it starts any CallPilot services that it needs to have running (for example, the database).

d. Restart the server (if required).

Result: CP2 now has the new software, registry settings, and database updates. Because the resource group is offline and monitoring is disabled, CallPilot does not automatically restart after the restart.

ATTENTION
Please refer to the CP5.0 DTR or the PEP README files to see whether or not there is any additional procedure which has to be done before the next step or bringing the resource group CallPilot online.

3 On CP1, do the following:

a. Launch the AutoStart Console.

b. Start monitoring for CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups (to enable automatic failovers).

For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

c. Bring CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups online (start up CallPilot).

For more information, see "Bringing the CallPilot resource group online" (page 214).

Result: Both servers are updated with the PEPs.

—End—

Uninstall PEPs

To ensure that the pair of CallPilot servers functions correctly, both CallPilot servers must be running the same PEPs and Service Updates (SUs). Due to the mirroring software, the mirrored drives cannot be accessed on the standby server. As a result, PEPs that impact the database or MMFS must be uninstalled from the active CallPilot server.

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This section includes the procedure for uninstalling PEPs.

Uninstalling PEPs

Step	Action

In this procedure, CP1 is the active server and CP2 is the standby server. This process causes the servers to go out of service while the PEPs are uninstalled.

1 On CP1, do the following:

a. Launch the AutoStart Console.

b. Stop monitoring for CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups.

For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).

c. Take CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups offline (shut down CallPilot). For more information, see "Taking the CallPilot resource group offline" (page 216).

d. Wait for all resource groups to go offline.

e. Attach the mirror drives (drive E and drive F) to CP1 so that the disks can be accessed from CP1.

Note: Attaching and detaching drives can take a few minutes.

- In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.
- Right-click the drive you want to connect.
- Select **Attach Data Source**.

f. Uninstall the PEPs.

Note: The PEP code is enhanced so that it starts any CallPilot services that it needs to have running (for example, the database).

g. Detach the data source.

- In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.
- Right-click the drive/data source.
- Select **Detach Data Source**.

h. Restart the server (if required).

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Result: CP1 now does not have the software, registry settings, and database updates. Because the resource group is offline and monitoring is disabled, CallPilot does not automatically restart after the restart.

2 On CP2, do the following:

a. Launch the AutoStart Console.

b. Attach the mirror drives (drive E and drive F) to CP2 so the disks can be accessed from CP2.

Note: Attaching and detaching drives can take a few minutes.

- In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.
- Right-click the drive you want to connect.
- Select **Attach Data Source**.

c. Uninstall the PEPs.

Note: The PEP code is enhanced so that it starts any CallPilot services that it needs to have running (for example, the database).

d. Restart the server (if required).

Result:CP2 now does not have the software, registry settings, and database updates. Because the resource group is offline and monitoring is disabled, CallPilot does not automatically restart after the restart.

3 On CP1, do the following:

a. Launch the AutoStart Console.

b. Start monitoring for CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups to enable automatic failovers. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

c. Bring CallPilot, CallPilot_[CP1] and CallPilot_[CP2] resource groups online (start up CallPilot). For more information, see "Bringing the CallPilot resource group online" (page 214).

Result:PEPs are uninstalled from both the servers.

—End—

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Microsoft Hotfixes

Microsoft Hotfixes generally affect only the base operating system. Hotfixes may or may not require a restart.

- If the hotfix does not require a restart, the hotfix can be installed in parallel on the active and the standby CallPilot servers.
- If the hotfix does require a restart, the installation process requires a failover, which temporarily takes the CallPilot server out of service.

Remote support

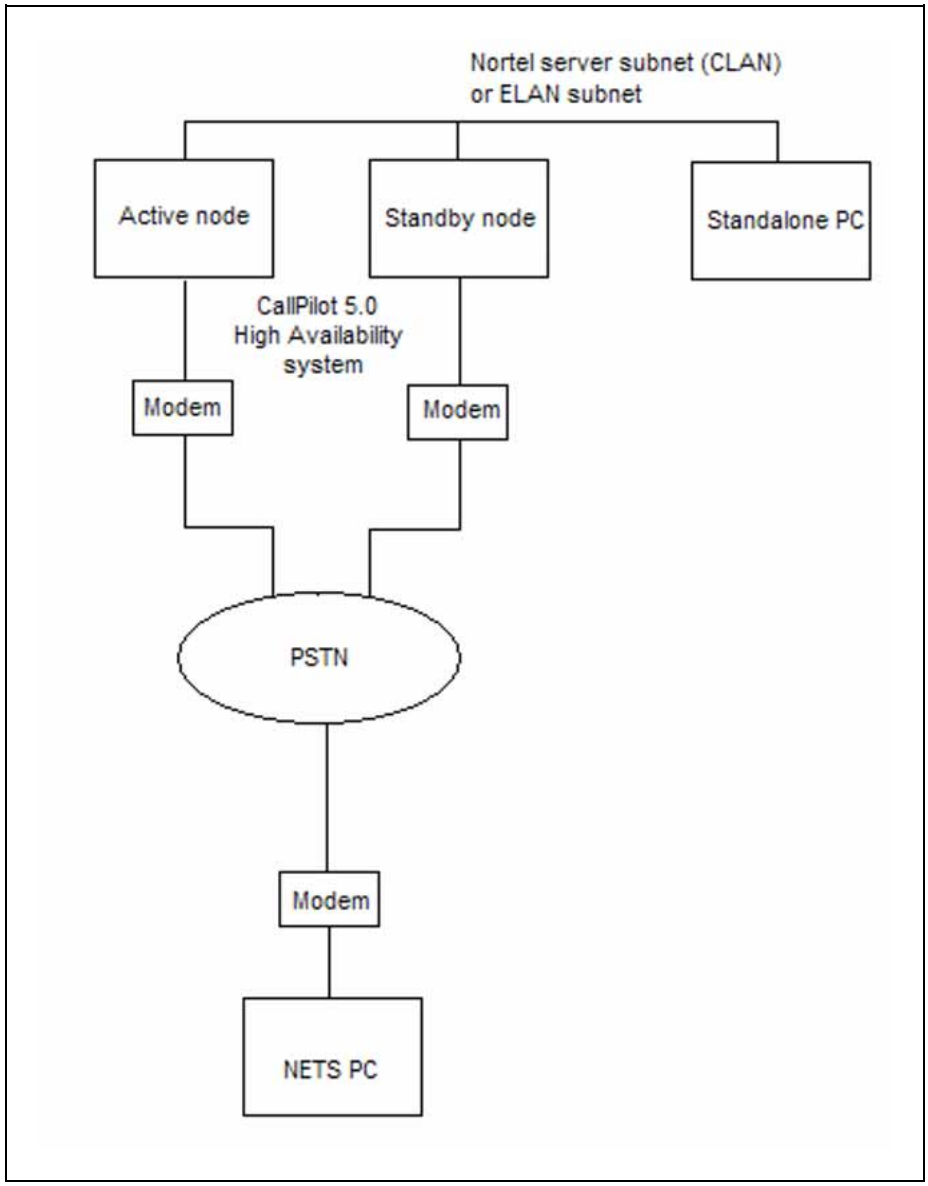
USB modem dial-in

CallPilot 5.0 High Availability systems support the PCAnywhere Remote Modem-to-Modem dial-in connection without field assistance. CallPilot 5.0 High Availability systems do not support PCAnywhere Remote TCP/IP because the Routing and Remote Access Services (RRAS) are stopped and their Startup Type is set to Disabled and Manual.

The following diagram shows the remote support setup for High Availability systems.

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Figure 136
Remote support setup for High Availability



You can dial directly into the active High Availability server (through the USB modem) using PCAnywhere Remote Modem on the remote PC. The PCAnywhere Host on the active High Availability server is launched and is waiting for the incoming modem calls.

However, to dial into the standby High Availability server, you must use the following procedure.

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Dialing into the standby High Availability server

Step	Action
1	Dial into the active High Availability server using PCAnywhere Remote Modem.
2	Launch the AutoStart Console.
3	Select **Domains > [AutoStart_Domain] > Utility Processes > UnloadTSPOnStandbyServer**.
4	Right-click **UnloadTSPOnStandbyServer** and then select **Start Utility Process** from the shortcut menu.
5	Select the host name of the standby High Availability server. This utility does the following on the standby High Availability server: • unloads the TSP • stops the PCAnywhere Host • starts the telephony server (TAPI) • restarts the PCAnywhere Host
6	Wait approximately 5 minutes for the script to complete running on the standby High Availability server.
7	Dial into the standby High Availability server using the PCAnywhere Remote Modem.
8	After the dial-in session finishes, the server must be restarted so that the Standby HA server is clean and ready to accept the coming failover.

—End—

If you have to connect or reconnect the USB modem to the active High Availability server after the High Availability system is running (that is, CallPilot is in service [the CallPilot resource group is online]), you must follow one of the following methods to make the PCAnywhere Host launch properly:

Method 1:

1. Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 216).
2. Connect the USB modem.

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3. Bring the CallPilot resource group online. For more information, see "Bringing the CallPilot resource group online" (page 214).
4. Using **Windows Device Manger**, right click **Modems** and then select **Scan for hardware changes**.

Method 2:

1. Manually trigger a failover by shutting down the server. For more information, see "Initiating a manual failover" (page 220).
2. Using **Windows Device Manger**, right click **Modems** and then select **Scan for hardware changes**.

Remote Access tools

The following tools can be used to access the servers in the CallPilot 5.0 High Availability system:

- WebEx (Customer assistance is required. An Internet Explorer browser security setting must be changed.)
- VPN (Access permission is required.)
- Remote Desktop (Normally blocked by enterprise gateways. Nortel does not recommend this tool to access the active High Availability server.)
- PCAnywhere (Normally blocked by enterprise gateways.)

Backup and restore

For the High Availability system, the backup device must be defined on both the active and the standby servers. If the backup device is not defined and a failover occurs, scheduled backups do not run on the standby server.

If you must remotely connect to CallPilot Manager to perform a backup, Nortel recommends that you use the Managed CLAN host name or the Managed CLAN IP address to connect to a server in the High Availability pair.

On a CallPilot 5.0 High Availability system, use the following procedures to:

- create a backup device
- schedule an archive backup
- perform a full system backup

Note: The following procedure is not required if you must create a full-system backup to a tape on a CallPilot 5.0 High Availability system. Backing up to tape requires that a tape drive must be physically attached to each High Availability server to ensure that scheduled backups can run after a failover.

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Creating a backup device (network disk)

Step	Action

For this procedure, CP1 is the active server and CP2 is the standby server.

1 Ensure that the dongle is on CP1 (which is the active server of the High Availability pair).

2 On CP1, log on to CallPilot Manager.

3 Select **System > Backup/Restore**.

Result: The Backup/Restore window appears.

4 From the **Select a task** drop-down list, select **Maintain and configure backup devices**.

5 Under Backup Devices, click **Add Device**.

Result: The Backup Device window appears.

6 On the Backup Device window, do the following:

a. Enter a unique **Device Name**.

b. Enter the **Path** to the backup device.

c. Verify that the **Type** field is set to **Disk**.

d. Under the **Connect to network folder as** area, enter the **User name** and **User Password**. Then reenter the password in the **Confirm Password** field.

This is user name and password to access the path/folder where the backup is located.

e. Click **Save**.

Result: The <Device Name>.dev file is created in the D:\Nortel\Data\backup\Devices folder.

7 On CP1 (the active server), navigate to folder **D:\Nortel\Data\backup**.

8 Right-click the **Devices** folder and select **Sharing and Security**.

Result: The Devices Properties window opens.

9 Select the **Sharing** tab.

10 Select the **Share this folder** option.

11 Click **Permissions**.

Result: The Permission for Devices window opens.

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12 Enter a **Share name** for the shared folder.

Write down the name of this shared folder as it is used in a later step.

13 Under **Groups or User Names**, select **Everyone**.

14 Under **Permissions for Everyone**, select the **Allow** check box for the **Read** row.

15 Click **OK**.

Result: The Permission for Devices window closes and the Properties window for the Devices folder appears.

16 Click **OK**.

Result: The Devices Properties window closes.

17 On CP2 (the standby server), right-click **My Computer** and select **Map Network Drive**.

Result: The Map Network Drive window opens.

18 Select an available **Drive** letter.

19 In the **Folder** field, map the shared folder (D:\Nortel\Data\backup\Devices) on CP1 by entering the following:

\\<Computer name of CP1>\<Share name of D:\Nortel\Data\backup\Devices on CP1>

20 Click **OK**.

21 On CP2, from the mapped drive that was just created, copy the new <Device Name>.dev file you just created on CP1 to D:\Nortel\Data\backup\Devices folder on CP2 (the standby server).

22 On CP2 (the standby server), right-click **My Computer** and select **Disconnect Network Drive**.

Result: The Disconnect Network Drives window opens.

23 Select mapped network drive and click **OK**.

—End—

Use the following procedure to create a scheduled archive backup.

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Scheduling an archive backup

Step	Action
1	Ensure that a backup device exists. For more information, see "Creating a backup device (network disk)" (page 244).
2	On CP1, log on to CallPilot Manager.
3	Select **System > Backup/Restore**. **Result:** The Backup/Restore window appears.
4	From the **Select a task** drop-down list, select **Review and schedule backup**.
5	Under **Scheduled Backups**, click **Add Backup**. **Result:** The Add New Backup Schedule window appears.
6	From the **Backup Type** drop-down list, select the type of archive backup.
7	Under **Device Name**, select the backup device.
8	If applicable, select the **Additional Options**.
9	Click **Next**.
10	Select the **backup frequency**.
11	Select the **Month**, **Date** and **Time** for the scheduled backup.
12	Enter a **Description** for the backup.
13	Click **Next**. **Result:** The Confirm Backup Schedule window appears.
14	Click **Finish**. **Result:** The Backup/Restore window appears and shows the newly scheduled backup under Scheduled Backups.
15	On CP1 (the active server), navigate to folder **D:\Nortel\Data\backup**.
16	Right-click the **Definitions** folder and select **Sharing and Security**. **Result:** The Definitions Properties window opens.
17	Select the **Sharing** tab.
18	Select the **Share this folder** option.

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19 Click **Permissions**.

Result: The Permission for Definitions window opens.

20 Enter a **Share name** for the shared folder.

Write down the name of this shared folder as it is used in a later step.

21 Under **Groups or User Names**, select **Everyone**.

22 Under **Permissions for Everyone**, select the **Allow** check box for the **Read** row.

23 Click **OK**.

Result: The Permission for Definitions window closes and the Properties window for the Definitions folder appears.

24 Click **OK**.

Result: The Definitions Properties window closes.

25 On CP2 (the standby server), right-click **My Computer** and select **Map Network Drive**.

Result: The Map Network Drive window opens.

26 Select an available **Drive** letter.

27 In the **Folder** field, map the shared folder (D:\Nortel\Data\backup\Definitions) on CP1 by entering the following:

\\<Computer name of CP1>\<Share name of D:\Nortel\Data\backup\Definitions on CP1>

28 Click **OK**.

29 On CP2, from the mapped drive that was just created, copy the new <backup_options>.bsp files you just created on CP1 to D:\Nortel\Data\backup\Definitions folder on CP2 (the standby server).

The .bsp files created depend on the type of backup that you selected.

30 On CP2 (the standby server), right-click **My Computer** and select **Disconnect Network Drive**.

Result: The Disconnect Network Drives window opens.

31 Select mapped network drive and click **OK**.

—End—

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Use the following procedure to perform a full system backup on the active High Availability server. This single backup is used to restore both High Availability servers. For more information on restoring, see "Restoring the High Availability system" (page 249).

ATTENTION

If your system is backed up to tape, the backup is saved only on the tape drive for the active High Availability server. Since both High Availability servers have physical tape drives attached, you must track which server was active when the backup occurred. When you perform the restore from tape, this ensures that you are using the most current backup.

Performing a full system backup of the High Availability system

Step	Action

CP1 is the active is the active server and CP2 is the standby server.

1. Ensure that a backup device exists for CP1 and CP2. For more information, see "Creating a backup device (network disk)" (page 244).
2. On CP1, log on to CallPilot Manager.
3. Select **System > Backup/Restore**.

   Result: The Backup/Restore window appears.
4. From the **Select a task** drop-down list, select **Review and schedule backup**.
5. Under **Scheduled Backups**, click **Add Backup**.

   Result: The Add New Backup Schedule window appears.
6. From the **Backup Type** drop-down list, select **Full System Backup**.
7. Under **Device Name**, select the backup device for CP1.
8. If applicable, select the **Additional Options**.
9. Click **Next**.
10. Under **Select the backup frequency**, select how often you want the backup to occur.
11. Select the current **Month**, **Date** and **Time** for the full system backup.
12. Enter a **Description** for the backup.
13. Click **Next**.

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Result: The Confirm Backup Schedule window appears.

14 Click **Finish**.

Result: The Backup/Restore window appears and shows the newly scheduled backup for CP1 under Scheduled Backups.

15 If you want to perform the backup immediately, complete the following steps. Otherwise, the backup occurs at the scheduled date and time.

a. Select the check box adjacent to the name of the backup.

b. Click **Backup Now**.

Result: A message appears asking you to start the backup.

c. Click **OK** to start the full system backup.

—End—

Restoring the High Availability system

If your High Availability system fails due to database corruption or an unforeseen disaster (causing both CP1 and CP2 to be unavailable), you must use the following guidelines to restore your system:

- If the existing CP1 and CP2 servers are being reused, then load the CallPilot 1005r or 1006r image onto each server. For more information, see the *Software Administration and Maintenance Guide* (NN44200-600) for information on recovering system software.
- If you are replacing the CP1 and CP2 servers with new servers, see the *1005r Server Hardware Installation* (NN44200-308) or *1006r Server Hardware Installation* (NN44200-320). The new server comes with the appropriate CallPilot image preinstalled from the factory.
- If database corruption occurs, you must reimage both High Availability servers and then restore the two servers from a full system backup.

The following task list provides a high-level overview of restoring the High Availability system:

1. Run the Setup Wizard on CP1 and CP2.
   - On CP1, when prompted to perform a restore, select the full system backup.
   - On CP2, when prompted to perform a restore, select the full system backup.
2. Run the Configuration Wizard on CP1 and CP2. If required, update the switch information (such as TNs and CDNs).

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3. Connect and verify the LAN connections.
4. Run Stage 1 of the High Availability Configuration Wizard to check the configuration of CP1 and CP2.
5. Install the AutoStart software on CP1.
6. Install the AutoStart 5.2.2 on CP1.
7. Install the AutoStart software on CP2.
8. Configure licensing and security on CP1.
9. Install the AutoStart 5.2.2 software on CP2.
10. Configure the AutoStart software.
11. Bring the Resource Groups online.
12. Test your configuration.
13. Create the CallPilot Reporter connections.
14. Add server to a Windows domain (if required).

Reimage or replace a server in the High Availability pair

Use the following procedure to reimage a server or to replace a server in the High Availability pair.

ATTENTION

For the purpose of the following procedure, the servers from High Availability pair are referred to as **existing** server and **replacement** server. Where existing server is used, it refers to the server in the HA pair which is in service and is not being replaced. Where replacement server is used, it refers to the new server which is replacing a failed server in the pair.



WARNING

The server that is reimaged or replaced must maintain the same TCP/IP networking information (such as IP addresses and local host name) in order for the High Availability pair to operate correctly.

When the reimaged or replaced server is running, you can change the local host name, local ELAN/CLAN parameters (such as IP address and host name), or HB1/HB2/Mirror parameters (such as IP addresses).

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Reimaging or replacing one of the High Availability servers

Step	Action
1	Use the AutoStart Console on the existing server to disable monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218).
2	Disconnect the network cables from the failed server (the server to be reimaged or replaced).
3	If the failed server is being reused, load the appropriate CallPilot image onto the server. For more information, see the *Software Administration and Maintenance Guide* (NN44200-600) for information on recovering system software. If you are replacing the failed server with a new server, see either the *1005r Server Hardware Installation* (NN44200-308) or the *1006r Server Hardware Installation* (NN44200-320). A new server comes with the matching CallPilot image preinstalled from the factory.
4	Install the antivirus software on the replacement server if necessary. ***Note:*** For more information about the antivirus software packages that have been approved by Nortel for CallPilot, see the *P-2007-0101-Global : CallPilot Support for Anti-Virus Applications* bulletin.
5	On the replacement server, run the Setup Wizard and apply any CallPilot PEPs and SUs. SUs and PEPs are found in the Enterprise Solutions PEP Library (ESPL) at www.nortel.com/espl.
6	Log on to CallPilot Manager on the replacement server.
7	On the replacement server, run the Configuration Wizard to configure the server. For more information, see "Configuring the replacement server using the Configuration Wizard" (page 294).
8	Restart the replacement server.
9	Connect all the network cables to the replacement server. For more information, see "Connecting and verifying LAN connections" (page 76).
10	On the replacement server, install the AutoStart Agent and Console software (including any required patches) by entering the node name of the existing server. Follow the steps in "Install the AutoStart software on CP1" (page 86) .

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Note: You must enter the local host name of the existing CallPilot server when installing the AutoStart software.

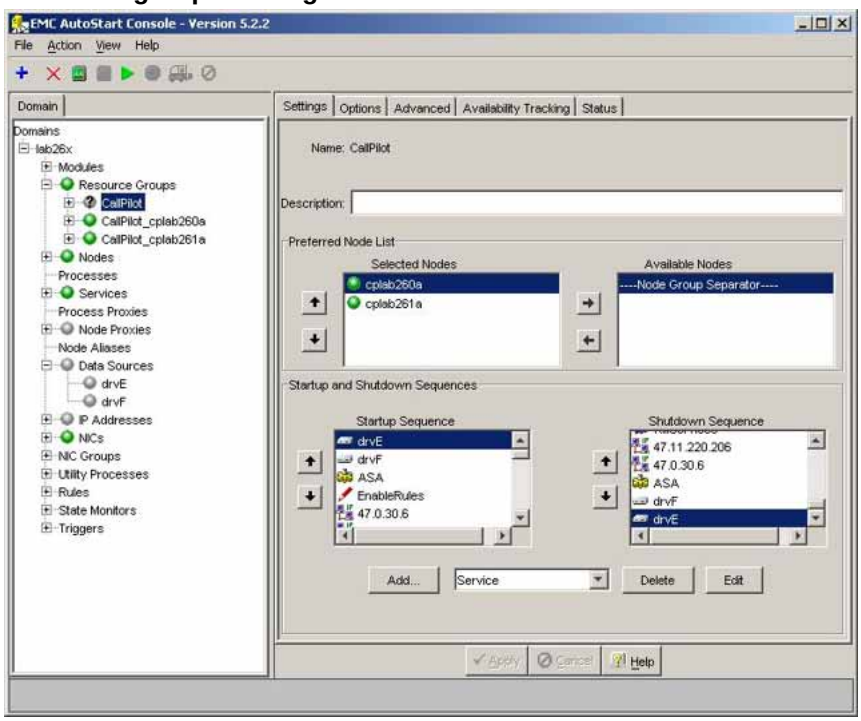
ATTENTION

The following step takes your CallPilot High Availability system offline. Your CallPilot system will not process calls.

11 Take the CallPilot resource group offline on the existing server. For more information, see "Taking the CallPilot resource group offline" (page 216).

12 On the existing server, use the AutoStart Console to select **Resource Groups > CallPilot** and then expand the CallPilot resource group.

Figure 137
Resource group: Settings tab



a. Click the **Settings** tab.

b. Under the**Startup Sequence**, do the following:

   i. Select drive E (**drvE**) and then click **Delete**.

   ii. Select drive F (**drvF**) and then click **Delete**.

c. Click **Apply**.

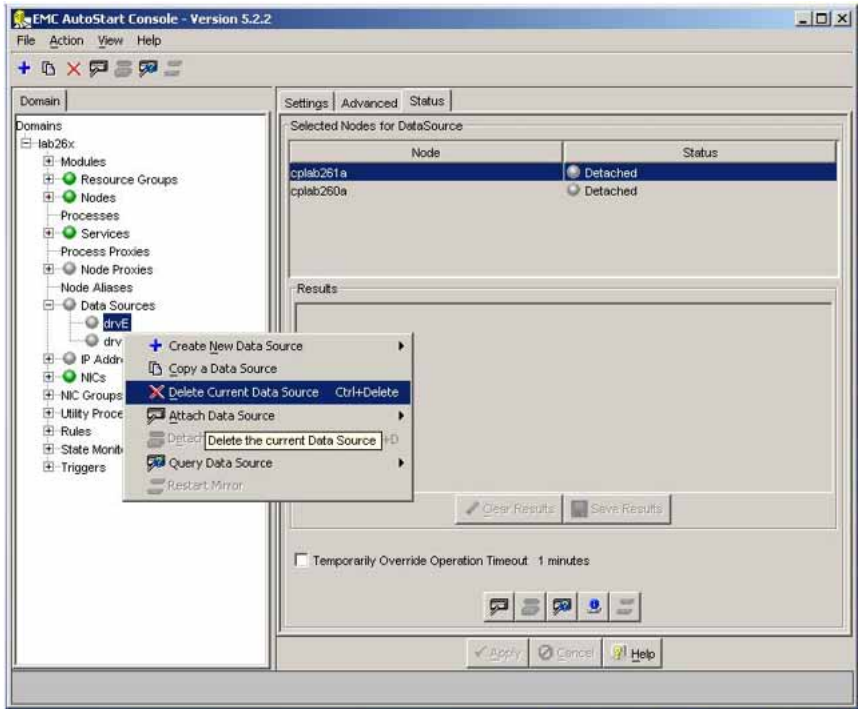
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13 On the existing server, use the AutoStart Console to expand **Data Sources**.

a. Right-click the **drvE** Data Resource and then click the **Delete Current Data Source** option to delete drive E.

b. Right-click the **drvF** Data Resource and then click the **Delete Current Data Source** option to delete drive F.

Figure 138
Delete Current Data Source



14 On the existing server, use the AutoStart Console to select the first node (expand [AutoStart_Domain] > Nodes > existing server) and do the following:

a. Select the **Failure Detection and Mirroring** tab.

b. Under **Configure Mirror Settings**, change the **Remote Mirror Host** value to **None**.

c. Click **Apply**.

15 On the existing server, use the AutoStart Console to select the second node (expand [AutoStart_Domain] > Nodes > replacement server) and do the following:

a. Select the **Failure Detection and Mirroring** tab.

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b. Under **Configure Mirror Settings**, change the **Remote Mirror Host** value to **None**.

c. Click **Apply**.

16 Restart both servers.

17 On the existing server, use the AutoStart Console to select the first node (expand [AutoStart_Domain] > Nodes > existing server) and do the following:

a. Select the **Failure Detection and Mirroring** tab.

b. Under **Configure Mirror Settings**, change the **Remote Mirror Host** value to **the hostname of replacement server**.

c. Click **Apply**.

18 On the existing server, use the AutoStart Console to select the second node (expand [AutoStart_Domain] > Nodes > CP2) and do the following:

a. Select the **Failure Detection and Mirroring** tab.

b. Under **Configure Mirror Settings**, change the **Remote Mirror Host** value to **the hostname of existing server**.

c. Click **Apply**.

19 On the existing server, recreate drive E (drvE) and drive F (drvF) and select **the existing server as the source node**:

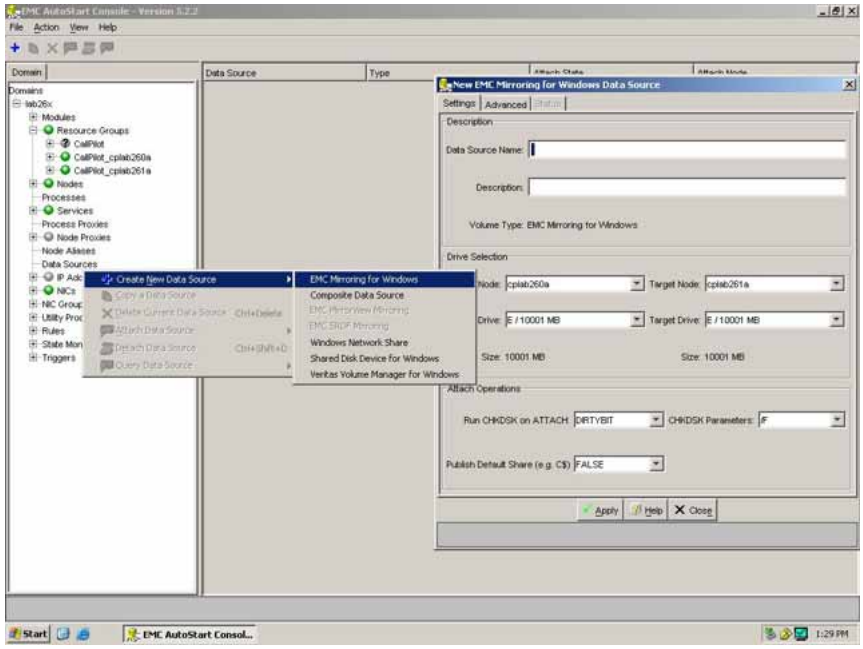
a. Right-click **Data Sources** on AutoStart Console.

b. Select **Create New Data Source > EMC Mirroring for Windows**.

Result: The New EMC Mirroring for Windows Data Source appears.

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Figure 139
Create New Data Source - EMC Mirroring for Windows



c. In the New EMC Mirroring for Windows Data Source window, do the following:

   i. Under the Description area, enter the **Data Source Name** - drvE and **Description** - drive E.

   ii. Under the Drive Selection area, select **hostname of existing server** from the **Source Node** drop-down list and **drive E** from the **Source Drive** drop-down list.

   iii. Under the Drive Selection area, also select the **hostname of replacement server** from the **Target Node** drop-down list and **drive E** from the **Target Drive** drop-down list.

   iv. Click **Apply**.

   v. Click **Yes** to dismiss the warning message.

d. Right-click **Data Sources** on AutoStart Console.

e. Select **Create New Data Source > EMC Mirroring for Windows**. **Result:** The New EMC Mirroring for Windows Data Source appears.

f. In the New EMC Mirroring for Windows Data Source window, do the following:

   i. Under the Description area, enter the**Data Source Name - drvF** and **Description** - drive F.

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ii. Under the Drive Selection area, select the **hostname of existing server** from the **Source Node** drop-down list and **drive F** from the **Source Drive** drop-down list.

iii. Under the Drive Selection area, also select the **hostname of replacement server** from the Target Node drop-down list and **drive F** from the **Target Drive** drop-down list.

iv. Click **Apply**.

v. Click **Yes** to dismiss the warning message.

20 Select **Resource Groups > CallPilot**.

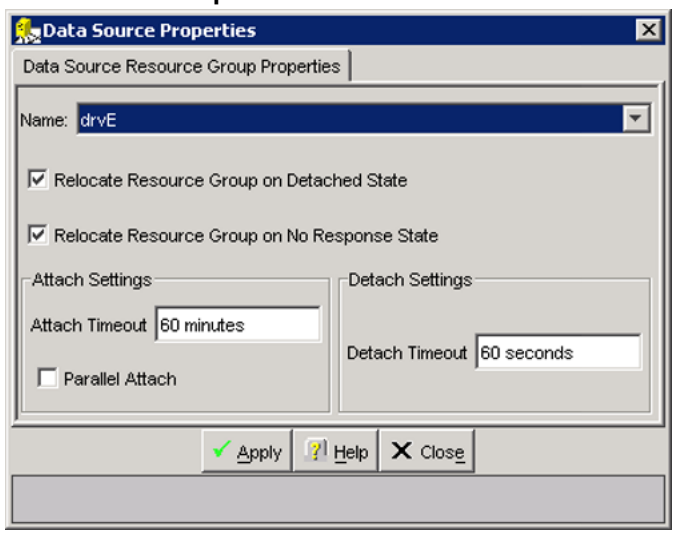
21 Select the **Settings** tab.

22 Under the **Startup and Shutdown Sequences** area, select **Data Source** from the drop-down list which adjacent to the Add button.

23 Click **Add**.

Result: The Data Source Properties window appears.

Figure 140
Data Source Properties



24 From the **Name** drop-down list, select **drvE** and leave all other fields with the default selections.

25 Click **Apply**.

26 Under the **Startup and Shutdown Sequences** area, select **Data Source** from the drop-down list which adjacent to the Add button.

27 Click **Add**.

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Result: The Data Source Properties window appears.

28 From the **Name** drop-down list, select **drvF** and leave all other fields with the default selections.

29 Click **Apply**.

30 Click **Apply** (on the Settings tab).

31 Under the **Startup and Shutdown Sequences** area, do the following:

a. Under **Startup Sequence**, use the Up arrow to move drvE and drvF to the top of the Startup Sequence list.

b. Under **Shutdown Sequence**, use the Down arrow to move drvE and drvF to the bottom of the Shutdown Sequence list.

32 Click **Apply**.

33 Attach drive E and drive F to **the existing server**. Perform the following for both drives:

a. In the AutoStart Console, select the **[AutoStart_Domain] > Data Sources**.

b. Right-click the drive you want to connect.

c. Select **Attach Data Source**.

Result: The data sources (drive E and drive F) are in the warning state and their icons are yellow.

Note: A message is displayed informing you that the data source is being mirrored and the status of data source is updated to show the progress of synchronization. It can take between 30 minutes to 2 hours for the data sources to be mirrored between the two servers.

34 Wait while the data sources are mirrored and have **Attached** status.

35 Detach drive E and drive F. Perform the following for both drives:

a. In the AutoStart Console, select **[AutoStart_Domain] > Data Sources**.

b. Right-click the drive you want to detach.

c. Select **Detach Data Source**.

Result: Data Sources are detached.

36 On the existing server, use the AutoStart Console to bring the CallPilot resource group online (if they are not already online). For

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more information, see "Bringing the CallPilot Resource Group online on CP1" (page 119).

37 On the existing server, use the AutoStart Console to bring the remaining resource groups online (if they are not already online). For more information, see "Bringing the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online" (page 122).

38 On the existing server, use the AutoStart Console to enable AutoStart monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

39 If you have scheduled backups configured, do the following:

a. On the replacement server, browse to the shared D:\Nortel\Data\backup\Devices folder of the existing server and copy the contents of the Devices folder.

b. On the replacement server, paste the contents in to the Devices folder on the replacement server.

c. On the replacement server, browse to the shared D:\Nortel\Data\backup\Definitions folder of the existing server and copy the contents of the Definitions folder.

d. On the replacement server, paste the contents in to the Definitions folder on the replacement server.

—End—

Installing the AutoStart software on the replacement server

The following procedure installs AutoStart 5.3 SP3 Agent and Console software on the replacement server. This procedure takes approximately 10 minutes.

ATTENTION

The computer name must be set before you Install the AutoStart software. The software requires the computer name. The computer name must contain only alphanumeric characters. Non-alphanumeric characters (such as a hyphen [-]) are not supported.

If you want to change the computer name after installing the server you must uninstall and then reinstall the AutoStart software.

Installing the AutoStart software on the replacement server

Step	Action
1	Insert the **CallPilot Application CD**.

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2 Navigate to the **Z:\EMC** folder on the CallPilot Application CD.

3 Double-click the **EMC_AutoStart_5.3_SP3_Update.exe** to unpack the archive to the **D:\temp** folder.

Result: These files are unpacked into the D:\temp\EMC_AutoStart_5.3_SP3_Update folder: EAS53_WIN_x86.exe EAS53SP3_WIN_x86.exe EMC AutoStart Update Process.pdf.

4 Double-click the **EAS53SP3_WIN_x86.exe** file to start the installation.

Result: InstallShield Wizard informs you that AutoStart 5.3 SP3 software is preparing to install (install preparation can take a few minutes). After preparation is complete, Welcome window Appears.

Figure 141
InstallShield Wizard - Preparing to install AutoStart 5.3 SP3 software

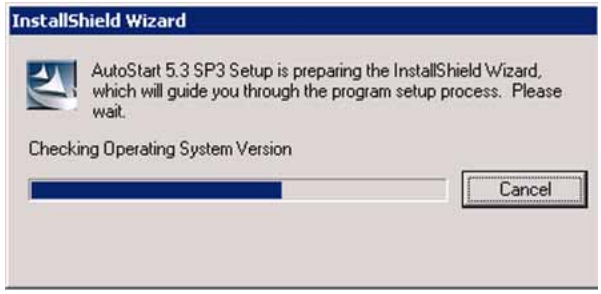
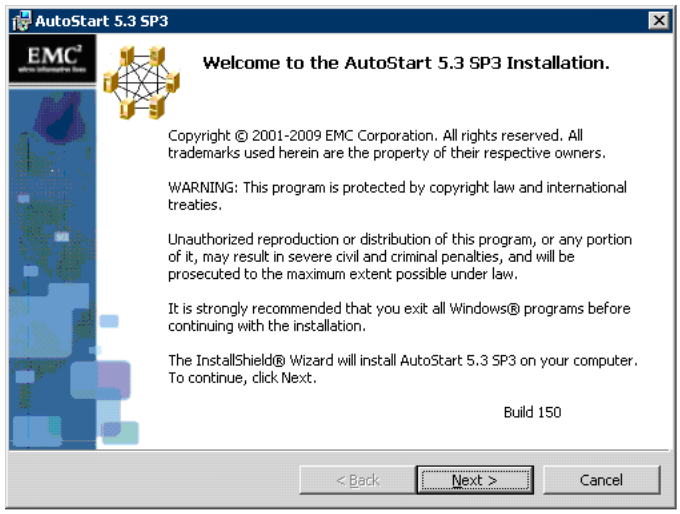


Figure 142
Welcome window

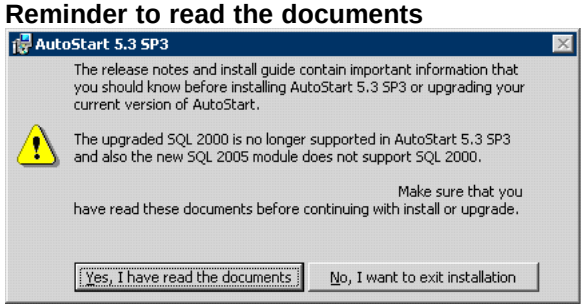


5 Click **Next**.

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Result: AutoStart 5.3 SP3 reminder to read the documents appears.

Figure 143
Reminder to read the documents



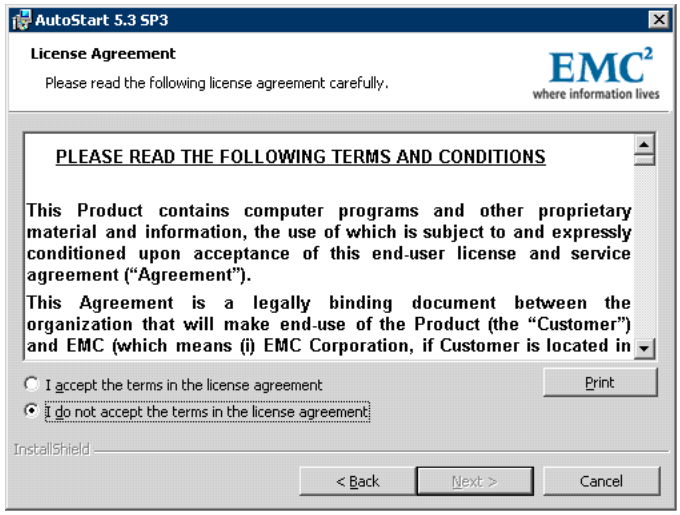
6 Click **Yes, I have read the documents**.

Result: AutoStart 5.3 SP3 reminder is closed.

7 Click **Next** on the Welcome window.

Result: The License Agreement window appears.

Figure 144
License Agreement window



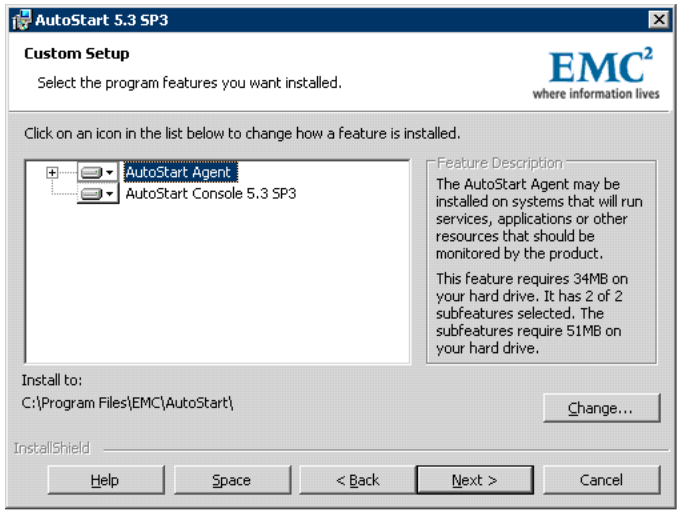
8 Select the **I accept the terms in the license agreement** option.

9 Click **Next**.

Result: The Custom Setup window appears.

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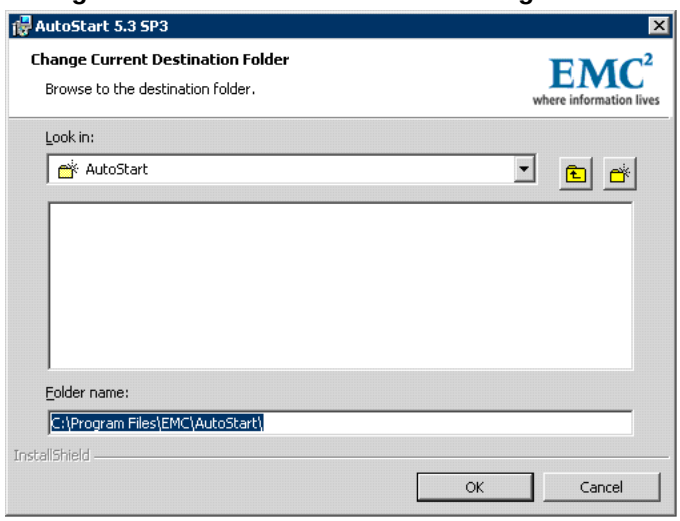
Figure 145
Custom Setup window



10 Click **Change** to change the instalation path.

Result: The Change Current Destination Folder dialog box appears.

Figure 146
Change Current Destination Folder dialog box



11 In the **Folder name** field, change the drive letter from C to D, change the path to **D:\Programs Files\EMC AutoStart**.

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ATTENTION

You must install the software in the **D:\Program Files\EMC AutoStart** directory or the software does not work correctly.

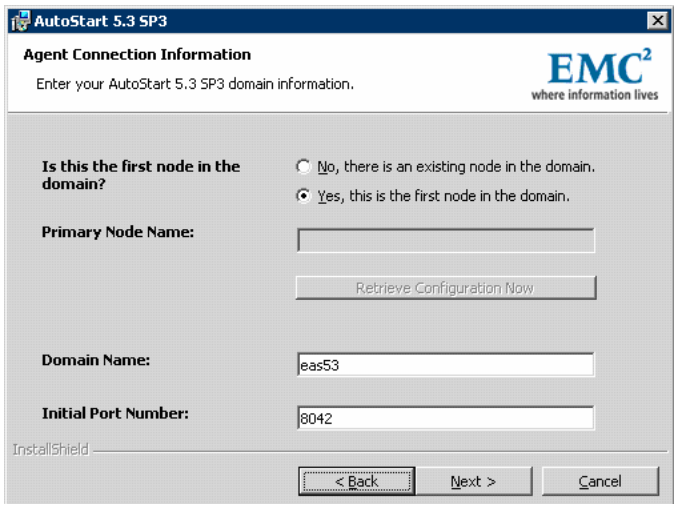
12 Click **OK**.

Result: Change Current Destination Folder dialog box closes and you are returned to Custom Setup window, which shows the correvt installation path.

13 Click **Next**.

Result: The Agent Connection Information window appears.

Figure 147
Agent Connection Informaiton window

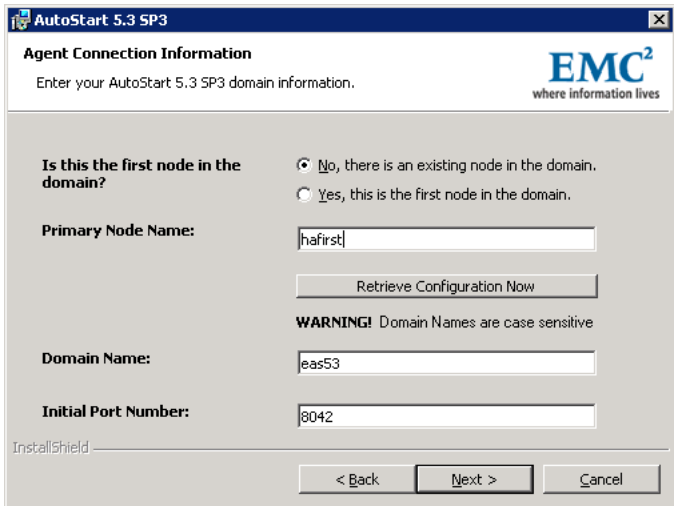


14 Select **No, there is an existing node in the domain** option button.

Result: The field **Primary Node Name** is highlighted.

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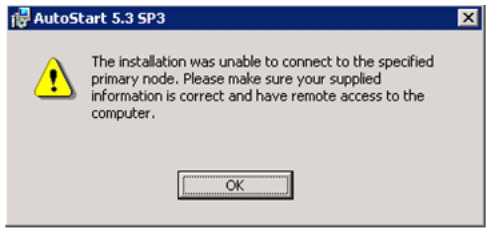
Figure 148
Agent Connection Information window - There is an existing node in the domain



15 Enter the host name of the existing server in **Primary Node Name** field.

Note: "Retrieve Configuration Now" button can be pressed to see if Primary Node is accessible.
If a primary node is accessible, Domain Name field will be filled automatically. Two next steps (16, 17) can be skipped.
If a primary node is not accessible for some reason, the following error message appears:

Figure 149
AutoStart 5.3 SP3 warning message



Press **OK** to close the warning message; resolve the issue and proceed with the AutoStart 5.3 SP3 installation.

16 Enter the EMC AutoStart **Domain Name**. The AutoStart Domain Name must be the same name that you entered in the High Availability Configuration Wizard.

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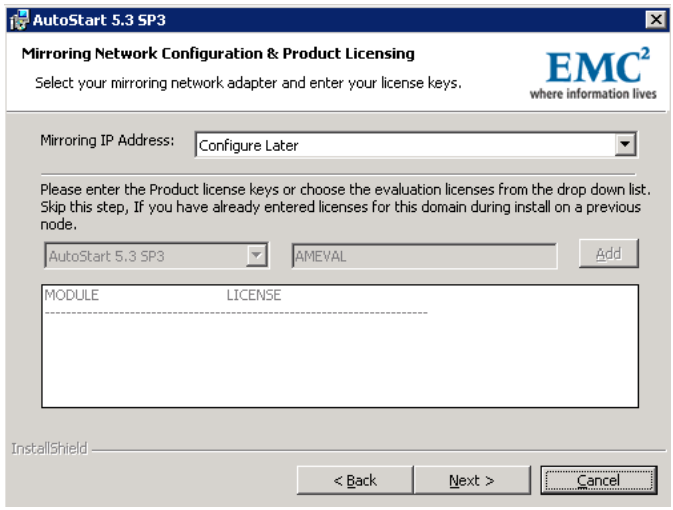
Note: This document uses [AutoStart_Domain]. This value must be replaced with your AutoStart domain name.

17 Leave the **Initial Port Number** unchanged.

18 Click **Next**.

Result: The Mirroring Network Configuring and Product Licensing window appears. The list of licenses is disabled.

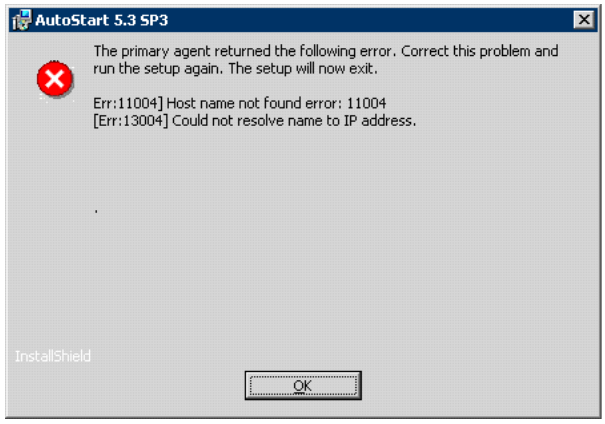
Figure 150
Mirroring Network Configuration and Product Licensing window



Note: If you enter an invalid **Primary Node Name**, or the AutoStart Agent is not running on the specified node, an error message is displayed (similar to the following). Confirm that the Primary Node Name is correct and that the network is configured so that the name can be resolved on another node. Click **OK** to return to the Agent Connection Information window.

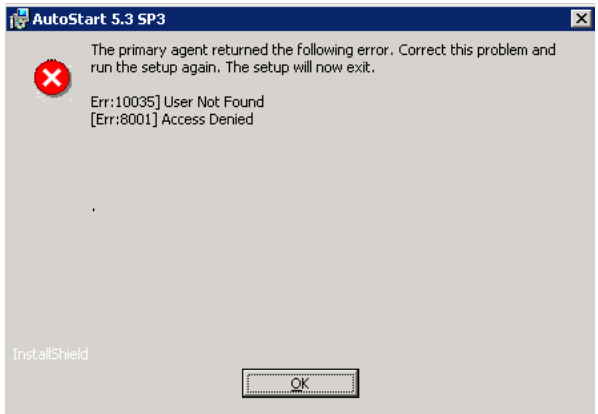
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Figure 151
Error: Invalid name or agent not running on Primary node



Note: If the administrator account of the replacement server does not exist in the AutoStart domain, the following error is displayed. Click **OK** to return to the Agent Connection Information window.
Configure licensing and security on the existing server according to the chapter "Add the node 2 administrator account to the AutoStart Console on node 1 " (page 94).

Figure 152
Primary Agent error

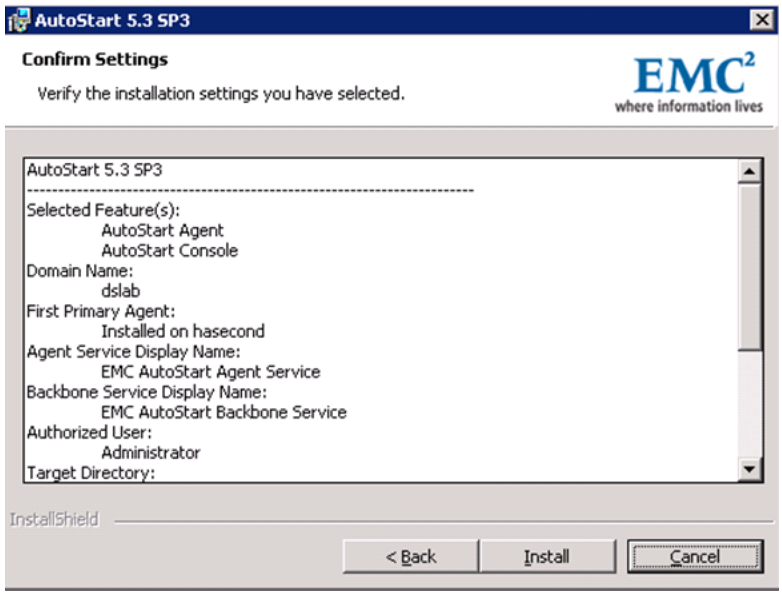


19 In the field **Mirroring IP Address**, select the IP address that was assigned to the Mirror NIC on the replacement server. The default value is **Configure Later**.

20 Click **Next** to continue.

Result: Confirm Settings window appears.

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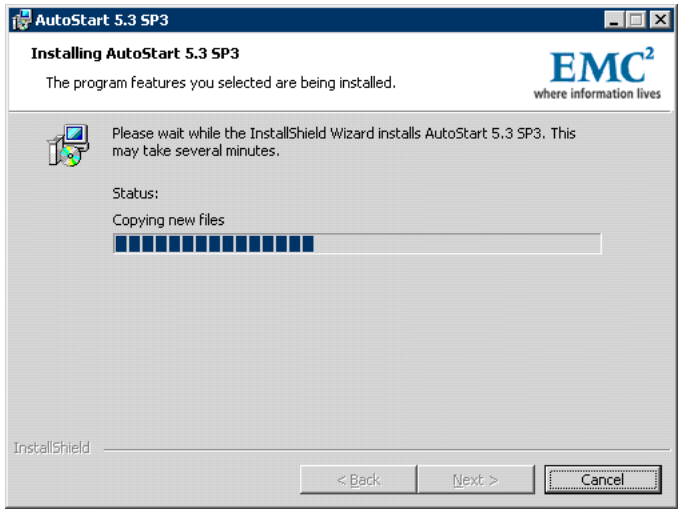


21 Verify that the settings are correct.

22 Click **Install** to start the installation of the AutoStart Agent and Console software.

Result: the Installing AutoStart 5.3 SP3 window appears and shows the status of installation.

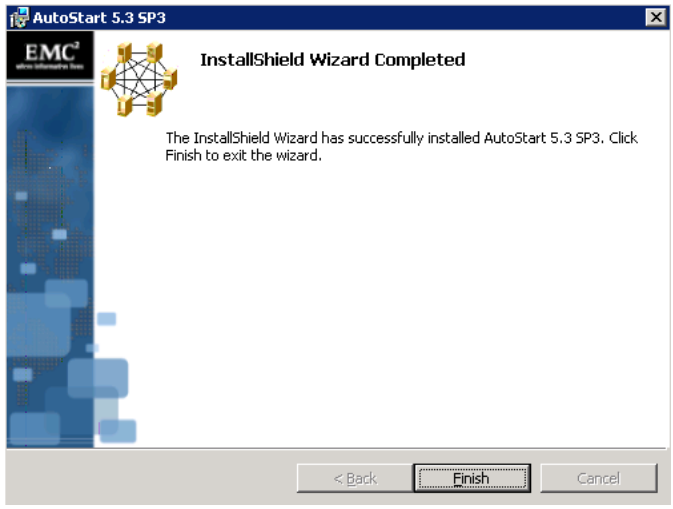
Figure 153
Installing AutoStart 5.3 SP3 window



23 Wait until the installation is complete and InstallShield Wizard Completed window appears.

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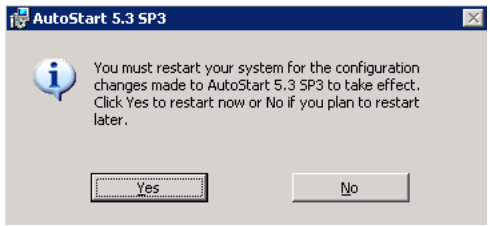
Figure 154
InstallShield Wizard Completed window



24 Click **Finish**.

Result: The AutoStart 5.3 SP3 Installer Information dialog box appears.

Figure 155
AutoStart 5.3 SP3 dialog box



25 Click **No** if there are patches to install or click **Yes** to restart the replacement server.

Note: If there are any patches available for AutoStart 5.3 SP3 software, install the patches and then restart the replacement server.

26 Delete the directory **EMC_AutoStart_5.3_SP3_Update** from **D:\temp**.

—End—

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RAID splitting for HA systems

ATTENTION

Verifying consistency on the drives step must be performed on both nodes before any operations with RAID. See either *1005r Server Maintenance and Diagnostics* (NN44200-704) or *1006r Server Maintenance and Diagnostics* (NN44200-709) for details.

To perform any maintenance procedure

Step	Action
1	Split the RAID as described in "Splitting the RAID on a 1005r server" (page 268).
2	Perform intended maintenance actions.
3	Perform synchronization of the RAID if no error or abnormal issues were encountered as described in "Synchronize the RAID on a 1005r server after a successful maintenance procedure" (page 270)or return the system back to it's original configuration if something has gone wrong as described in "Synchronize the RAID on a 1006r server after an unsuccessful maintenance procedure" (page 270).

—End—

Splitting the RAID on a 1005r server

Ensure that your system is in full working order and the RAID hardware configuration is set up properly. See *1005r Server Maintenance and Diagnostics* (NN44200-704) for details.

ATTENTION

As an added precaution, Nortel recommends that you perform a full system backup prior to performing a RAID-split. For more information about system backups, see the CallPilot Manager online Help.

Split the RAID on a 1005r server

Step	Action
1	On the active CP server, do the following: a. Launch the AutoStart Console b. Stop monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 218)

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c. Take the resource group CallPilot offline (shutting down CallPilot). For more information, see "Taking the CallPilot resource group offline" (page 216)

d. Wait for the resource group CallPilot to go offline

2 On the active CP server, load the MegaRAID console. Select **Start > Programs > PowerConsole Plus > MegaRAID client**

3 Ensure that **Access Mode > Full Access** is selected.

4 Click **OK**. The MegaRAID Power Console Plus window appears.

5 Ensure all drives are in ONLINE state (marked green).

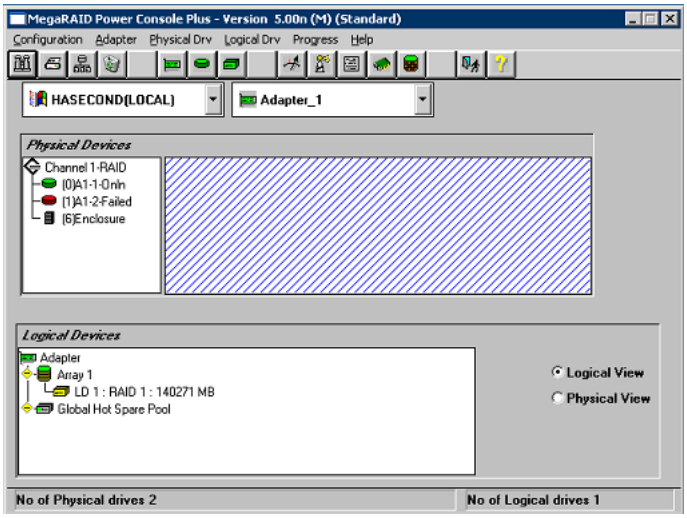
6 In the Physical Devices section, right-click the second drive. The drives are displayed as follows: (0)A1-1-Onln (1)A1-2-Onln

7 Select **Tools>Fail Drive** from the shortcut menu. A message appears advising that marking the online drive Failed results in changes.

8 Ignore the warning and click **OK**. The drive status changes to FAILED and the color of the icon changes to red (for example, A01-2-Failed).

At this point, the RAID is split, and the backup drive marked as FAILED is no longer written to. See Figure 156 "RAID split" (page 269).

Figure 156
RAID split



9 Perform steps 2-8 on standby CP server.

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—End—

Synchronize the RAID on a 1005r server after a successful maintenance procedure

Step	Action
1	On the active CP server (without shutting down the server), from Windows, click **Start > Programs > Power Console Plus > MegaRAID client**. ***Note:*** Ensure that **Access Mode > Full Access** is selected.
2	Click **OK**. The MegaRAID Power Console Plus window appears.
3	In the Physical Devices section, right-click the hard disk drive that is marked FAILED. Example: A01-2-Failed. **ATTENTION** Do not make the failed drive online at this point, or data corruption can occur. If you failed the wrong drive by mistake, you must select rebuild to bring it back into service.
4	From the right mouse shortcut menu, select **Rebuild**. When the rebuild is complete, the drive status changes to ONLINE and the icon colour changes to green.
5	Repeat steps 1-4 on standby CP server.

—End—

ATTENTION
This process can take up to 6 hours. If the server reboots during the rebuild process, the rebuild continues when the server restarts. However, a power down or reboot is **not** recommended during the rebuild process.

Synchronize the RAID on a 1006r server after an unsuccessful maintenance procedure

Step	Action
1	Power down one of the CP servers.

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ATTENTION
Do not use the Power Console for the following procedure, or data corruption can occur.

2 Restart the other CP server and enter the Ctrl+M utility when prompted during system bootup.

3 From the **Management** menu, select **Objects** and press **Enter**.

4 Select **Objects > Physical Drive** and press **Enter**.

5 Select **FAIL Drive** for the drive that is online (A01-1-Onln). The drive is displayed as failed.

6 Select the second drive (previously taken offline as the backup drive and marked failed) and make it ONLINE. Ignore the warning message. The second drive is now marked ONLINE and the first drive is marked failed.

7 Exit the utility and press **Ctrl+Alt+Delete** to reboot the server. The system boots up to the original configuration before the PEP installation.

8 On the CP Server, perform the following steps:

a. Launch the AutoStart Console.

b. Start monitoring (to enable automatic failovers). For more information, see "Enabling automatic failovers (start monitoring)" (page 219).

c. Bring the resource group online (starting up CallPilot). For more information, see "Bringing the CallPilot resource group online" (page 214).

d. Test call processing functionality after the CP server boots into service.

9 Repeat steps 2-7 on the offline CP server.

10 Once both servers are confirmed to be online, open the Windows MegaRAID console and rebuild the failed drive using the same process described in "Synchronize the RAID on a 1005r server after a successful maintenance procedure" (page 270). The system is now back to it's original configuration.

—End—

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CallPilot Manager, Channel Monitor

The status of channels in Channel Monitor is specific to each CallPilot node in a High Availability pair, and is not synchronized between the nodes. In addition, the status is saved to each node's independent data, which can create unexpected conditions during Resource Group operations, such as bringing the CallPilot Resource Group online, relocating the CallPilot Resource Group (manual failover), and after system defined automatic failovers.

For example, if all channels are stopped on the active CallPilot node during a maintenance activity, such as during a Feature Expansion procedure, the channel status is saved to the node's independent data (not synchronized between nodes).

When the Resource Group is brought online or relocated via a failover to a CallPilot node, the channels will be enabled or disabled depending on the information in the node's independent data, which was saved from the last status change when the node was in service. Channels can be enabled through Channel Monitor in CallPilot Manager if necessary. The status change (enabled) will be saved to the node's independent data.

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Chapter 7
Upgrades, migrations, and feature expansion

In this chapter

"Introduction" (page 273)

"Feature Expansion: Adding the High Availability feature to an existing CallPilot 5.0 1005r or 1006r " (page 277)

Introduction

For the High Availability feature, there are minimal differences between the upgrade and platform migration procedures and the new system installation procedure. The main differences are:

- You must restore data from a backup as part of the upgrade or platform migration.
- You must restore data on both of the servers in the pair when performing the upgrade. Restoring the data is required to ensure that all of the registry settings in the backup (for example, the LDAP search base) are restored correctly.
- You must modify and add settings in Configuration Wizard (for example, NIC card settings).

Scenario 1: If you are upgrading or migrating to a CallPilot 5.0 1005r or 1006r server and are adding the High Availability feature, do the following:

1. Follow the instructions in *CallPilot Upgrade and Platform Migration Guide* (NN44200-400) to upgrade or migrate your server to a CallPilot 1005r or 1006r server running CallPilot 5.0.

   Note: Do not enable the High Availability feature when running the Configuration Wizard.

2. Follow the instructions outlined in "Feature Expansion: Adding the High Availability feature to an existing CallPilot 5.0 1005r or 1006r " (page

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277) to introduce a second 1005r or 1006r server and to configure the two servers as a High Availability pair.

Scenario 2: If you have a CallPilot 5.0 1005r or 1006r server and are adding the High Availability feature, follow the instructions outlined in "Feature Expansion: Adding the High Availability feature to an existing CallPilot 5.0 1005r or 1006r " (page 277) to introduce a second server and configure the two identical servers as a High Availability pair.

After you make any changes to a High Availability configuration, the changes must be transparent to the end users, including any existing CallPilot Reporter, CallPilot Manager, Desktop, My CallPilot and Application Builder installations, as well as the switch. To ensure this transparency, the ELAN IP address, CLAN IP address, and host name used by the original CallPilot server must be used as the new Managed (virtual) IP address for the pair of High Availability servers. Because the Managed IP addresses and host name are visible to the outside world, by reusing the current IP addresses and host name, the changes to the server configuration are invisible to the applications. New ELAN IP address, CLAN IP address, and host names are required for both the original CallPilot server and the new CallPilot server. All IP address and host name changes must be made before you import the AutoStart definition file in order for the software to work correctly.

If you have an existing CallPilot 5.0 1005r or 1006r server (running in a non-High Availability configuration) you can perform a feature expansion to include the High Availability feature. No additional hardware is required to add the High Availability feature to a 1005r or 1006r server, as all of the required hardware comes preinstalled from the factory.

Note: Application Builder is a graphical program that you use to create CallPilot applications that callers access as dialable services. Application Builder is installed on a customer provided PC. In the past (non-HA configuration) we have been able to access Application Builder over a remote TCP/IP connection utilizing RRAS. In the HA environment each 1005r or 1006r server requires its own unique host name, ELAN IP address, and CLAN IP address. In addition, the pair of servers are assigned a Managed (or virtual) host name, Managed ELAN IP address, and Managed CLAN IP address to make the pair of servers look like a single CallPilot server to the end clients. This new architecture does not make it possible to access application builder over a TCP/IP connection.

The procedure is the same as the new system installation procedure documented in Chapter 5 "Install and configure the High Availability pair" (page 41), with the following exception.

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ATTENTION

Before installing the AutoStart software on the existing server, new IP addresses (CLAN and ELAN) and a new host name must be assigned to the existing CallPilot 1005r or 1006r server.

Providing a new host name and IP addresses is required to reuse the existing host name and IP addresses as the Managed host name and IP addresses. As a result, any existing users or applications can continue to access the 1005r or 1006r server without requiring configuration changes.

Guidelines

This section provides a basic overview of the tasks required to perform an upgrade or migration. Read this list and then proceed to the *CallPilot Upgrade and Platform Migration Guide* (NN44200-400) for detailed procedures.

1. On your current system (pre-release 5.0) take note of all networking information: host name, CLAN IP address, ELAN IP address, installed PEPs/SU, and installed languages.

   The networking information (host name and IP addresses) is required when entering in the Managed CLAN host name, Managed CLAN IP address, and Managed ELAN IP. (Estimated time: 10 minutes)

2. Install the CallPilot 5.0 Upgrade Wizard on the pre-release 5.0 system, which will be upgraded or migrated. (Estimated time: 15 minutes)

3. Run the CallPilot Upgrade Wizard.

   During the Upgrade Wizard you are asked to perform a full backup. If a backup is done to disk (that is, backed up to a network location), then it is possible to restore both CP1 and CP2 at the same time, which saves time to be in service. (Estimated time: 40 to 160 minutes depending on system and database size)

4. Upgrade only—Once the Upgrade Wizard is completed and a full back up is performed, install the CallPilot 1005r or 1006r Release 5 image on CP1. The second 1005r (CP2) comes preinstalled with Release 5.0 from the factory. Log on to the CP1 and CP2 servers using the default login user name and password (administrator / Bvw250). (Estimated time: 40 minutes)

   Migration and Upgrade—The CallPilot 1005r or 1006r Release 5.0 image comes preinstalled at factory. Log on to both CP1 and CP2 system using default login user name and password (administrator / Bvw250) (Estimated time: 0 minutes)

5. On both CallPilot servers (CP1 and CP2), configure new computer names and IP addresses for the CLAN. The computer names and IP addresses are new as the current CLAN host names and IP addresses

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are reused as the Managed CLAN host name and IP address for the High Availability pair. Otherwise, proceed to next step. (This would be required in order to perform a system restore from disk [network drive]). (Estimated time: 10 minutes)

6. Run the CallPilot Setup Wizard on CP1 and CP2. (Estimated time: 30 minutes per server; includes PEP installation)
7. When prompted to perform a restore, select Yes. Both CP1 and CP2 can be restored at the same time if you are restoring from a disk (that is, a network location). Otherwise, CP1 must be completely restored before CP2 can be restored. (Estimated time: 180 minutes per server)
8. Run the Configuration Wizard on CP1. Do not enable High Availability during network configuration (ensure that the High Availability mode check box is not selected). Restart CP1 when prompted. (Estimated time: 40 minutes)

   If you are performing the restore from tape, CP2 can begin the restore at this point.
9. On CP1, you can begin testing to ensure voice services and channels are properly working. (Estimated time: 120 minutes)
10. Run the Configuration Wizard on CP2. Do not enable High Availability during network configuration (ensure that the High Availability mode check box is not selected). Restart CP2 when prompted. (Estimated time: 40 minutes)
11. If testing was satisfactory on CP1, run the Configuration Wizard again on CP1 and enable the High Availability feature, add the new network parameters, and restart when prompted. (Estimated time: 10 minutes)

    Note: To do this, you can use the CallPilot Individual Feature Configuration [Express Mode] and select Network Interface Card Configuration check box.
12. Run the Configuration Wizard again on CP2 and enable the High Availability feature, add the new network parameters, and restart when prompted. (Estimated time: 10 minutes)

    Note: To do this, you can use the CallPilot Individual Feature Configuration [Express Mode] and select Network Interface Card Configuration check box.
13. Run Stage 1 of the High Availability Configuration Wizard. For the Managed CLAN host name, Managed CLAN IP address, and Managed ELAN IP address, use the host name and IP addresses that you noted in item 1 (that is, the host name and IP addresses from the pre-release 5.0 system). (Estimated time: 5 minutes)

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14. On CP1, install the EMC AutoStart software and add the administrator account of CP2. (Estimated time: 15 minutes)
15. Install the EMC AutoStart software on CP2. (Estimated time: 10 minutes)
16. Configure the EMC AutoStart software on CP1. All the configuration is done from CP1. (Estimated time: 30 minutes)
17. Run Stage 2 of the High Availability Configuration Wizard. (Estimated time: 5 minutes)
18. Complete the EMC AutoStart configuration. (Estimated time: 5 minutes)
19. Bring the CallPilot resource group online. (Estimated time: 10 minutes)
20. Bring the CP1 and CP2 resource groups online. (Estimated time: 5 minutes)
21. Test the system. (Estimated time: 120 minutes)
22. Create the CallPilot Report connections. (Estimated time: 20 minutes)
23. If required, join the Windows domain. (Estimated time: 30 minutes)

Feature Expansion: Adding the High Availability feature to an existing CallPilot 5.0 1005r or 1006r server

A CallPilot High Availability system consists of either two 1005r or two 1006r servers that work as peers. At any time, one server is active while the other server is in standby mode.

If you have a CallPilot 5.0 1005r or 1006r server (running in a non-High Availability configuration), a feature expansion can be performed to add the High Availability feature to the server. However, a second 1005r or 1006r server (running CallPilot 5.0 with the High Availability feature) is required to complete the High Availability system.

Use the procedures in this section to do the following:

- Add a second 1005r or 1006r server running CallPilot 5.0 to an existing 1005r or 1006r server, respectively, running CallPilot 5.0.
- Configure the two servers as a High Availability pair.

For the purposes of this section, the servers are referred to as CallPilot server 1 (CP1) and CallPilot server 2 (CP2) where:

- CP1 is the existing 1005r or 1006r server. (CP1 must be running CallPilot 5.0 or must have been upgraded or migrated to run CallPilot 5.0.)
- CP2 is the new 1005r or 1006r server that is being added (a new server that has CallPilot 5.0 installed from the factory).

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Feature expansion task list

The following table outlines the tasks and procedures that must be completed to add the High Availability feature. Ensure that you complete each task in the ordered presented.

Table 11
Task List: High Availability feature expansion

Task	Estimated time	Procedures
Prepare the switch	60 minutes	See "Preparing the switch" (page 278)
Install the new 1005r or 1006r server (CP2)	210 minutes	See "Installing the new 1005r server (CP2)" (page 279)
Record the current server configuration from CP1	5 minutes	See "Recording the current 1005r or 1006r server configuration (CP1)" (page 280)
Run the Upgrade Wizard on the existing 1005r or 1006r server (CP1)	160 minutes depending on system and database size	See "Running the Upgrade Wizard on CP1" (page 281)
Prepare the new 1005r or 1006r server (CP2)	10 minutes	See "Prepare the new 1005r or 1006r server (CP2)" (page 284)
Run the Setup Wizard on the new 1005r or 1006r server (CP2)	210 minutes (includes restore time)	See "Running the Setup Wizard on CP2" (page 286)
Configure CP1 using the CallPilot Configuration Wizard	40 minutes	See "Configuring CP1 using the Configuration Wizard" (page 290)
Configure CP2 using the CallPilot Configuration Wizard	40 minutes	See "Configuring the replacement server using the Configuration Wizard" (page 294)
Complete the High Availability feature configuration	215 minutes	See "Completing the High Availability feature configuration" (page 299)

Prepare the switch

The switch configuration must be completed before the High Availability feature can be implemented.

Preparing the switch

Step	Action
1	Configure the Meridian 1 or CS 1000 switch. For detailed information, see the following: • *Meridian 1 and CallPilot Server Configuration* (NN44200-302)

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- *Communication Server 1000 and CallPilot Server Configuration* (NN44200-312)

Note 1: Both High Availability servers must use the same Control Directory Number (CDN).

Note 2: Server CP2 requires dedicated MGate cards in the switch to function correctly. Both the number of MGate cards and the switch configuration must be the same as for the existing CallPilot server CP1.

2 Prepare the switch by adding additional MGate cards as required.

3 Program the switch as necessary.

—End—

Install the new 1005r or 1006r server (CP2)

A second server is required to complete the High Availability pair. The following procedure assumes that this 1005r or 1006r server has come from the factory with CallPilot 5.0 and the High Availability feature installed.

Installing the new 1005r server (CP2)

Step	Action
1	Refer to the following documents to perform the steps outlined in this procedure. • *1005r Server Hardware Installation* (NN44200-308). or *1006r Server Hardware Installation* (NN44200-320) • *Installation and Configuration Task List* (NN44200-306)
2	Unpack the server.
3	Install CP2 in the same rack as CP1. Ensure that the two servers are close enough so that they can be connected by the crossover LAN cables for the HB1, HB2, and MIRROR connections. The cables must be long enough to connect the two servers.

ATTENTION
Do not connect the HB1, HB2, and MIRROR crossover LAN cables at this time.

4 Connect the peripheral equipment to both servers.

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The peripheral equipment includes the monitor, keyboard, and mouse.

5 Power on the CP2 server.

Result: The server starts and the Windows 2003 Mini-Setup runs. During the Windows 2003 Mini-Setup, the server automatically restarts twice.

—End—

Record the current 1005r or 1006r server configuration (CP1)

To ensure that end users can access the pair of High Availability servers and that they do not require any changes to their systems, the following information for the server (CP1) must be recorded and then reused as the managed networking parameters:

- existing computer name
- ELAN IP address
- CLAN IP address
- installed PEPs and SUs
- installed languages

Recording the current 1005r or 1006r server configuration (CP1)

Step	Action
1	Record the current computer name. The computer name will be used as the Managed computer name of the High Availability pair.
2	Record the current ELAN IP address. The ELAN IP address will be used as the Managed ELAN IP address of the High Availability pair.
3	Record the current CLAN IP address. The CLAN IP address will be used as the Managed CLAN IP address of the High Availability pair.
4	Record the IDs of any PEPs and SUs that are installed on the current server. The same PEPs and SUs must be installed on both servers in the High Availability pair.
5	Record the languages that are installed on the current server.

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The same languages must be installed on both servers in the High Availability pair.

—End—

Run the Upgrade Wizard on the existing server (CP1)

The Upgrade Wizard must be run on the existing 1005r or 1006r server (CP1) to generate a backup that can be restored on the new 1005r or 1006r server CP2.

For Scenario 1, you do not have to perform the following procedure because a backup was created when you ran the Upgrade Wizard during your upgrade or migration process.

For Scenario 2, you must complete the following procedure.

Running the Upgrade Wizard on CP1

Step	Action
1	Launch the CallPilot 5.0 Upgrade Wizard by clicking **Start > Programs > CallPilot > Upgrade Wizard**. ***Note:*** While the CallPilot 5.0 Upgrade Wizard runs, all screen information is written to the log file in the following folder: D:\Nortel\Data\UpgradeWizard.log **Result:** The CallPilot 5.0 Upgrade Wizard - Welcome screen appears.
2	On the CallPilot 5.0 Upgrade Wizard - Welcome screen, click **Next**. **Result:** The Platform Validity Check screen appears, which lists the software and hardware currently on the system, and evaluates the status of each item.
3	Click **Next** to continue. **Result:** The CallPilot 5.0 Upgrade Wizard checks your software version.
4	Wait while the CallPilot 5.0 Upgrade Wizard analyzes your platform. **Result:** The Platform Validation screen appears.
5	Click **Next**. **Result:** The Checking Computer Name screen appears.
6	Click **Next**. **Result:** The Checking Free Disk Space screen appears.

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7 Click **Next** to determine if your data is valid and can be upgraded to CallPilot 5.0.

8 Click **Next** to validate your data.

Result: The Performing Data Validity Check screen appears. A process bar shows how much of the data has been validated.

9 Click **Next**.

Result: The Serial Number and Key Code screen appears.

You need your CallPilot 5.0 keycode, serial number, and image CDs or DVDs to proceed.

10 Click **Next** to verify your CallPilot keycode.

Result: The Feature Verification - Success screen appears.

11 Check your installed features against the screen list.

If a feature is missing from your new keycode, contact your distributor to obtain a new keycode.

12 Click **Next** to verify that your image CD or DVD matches your CallPilot platform.

Result: The Validate Image Media screen appears.

13 Insert the CallPilot 5.0 Image CD or DVD into the CD or DVD drive, enter **Z:** as the drive letter, and click **Next**.

14 Wait while the wizard checks that the inserted CD or DVD is valid for your platform.

Note: If the CD or DVD is not valid, the wizard blocks the rest of the upgrade process and you must contact your distributor (channel partner) to obtain the correct CD or DVD.

Result: The Optional Language CD validation screen appears.

15 Select the **Skip Language CD Validation** option.

ATTENTION
You must use a CallPilot 5.0 Language CD when configuring a CallPilot 5.0 system. An earlier release (pre-5.0 Language CD) cannot be used.

16 Click **Next**.

Result: The Select Backup Medium screen appears.

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CAUTION
ANY MESSAGES RECEIVED AFTER BACKUP BEGINS ARE LOST
The backup takes from 1 to 3 hours to complete and consumes considerable CPU resources. Any messages that come in while the backup is running are not included in the backup. To avoid losing any user messages, Nortel recommends that you courtesy down the system prior to starting the backup.

17 Select the type of backup medium for your CallPilot data.

- If you choose to back up to tape:

  ATTENTION
  This process overwrites the existing data on the tape.

  Insert the tape into the tape drive and click **Next** to start the backup immediately. Proceed to the next step.

- If you choose to back up to disk:

  Click **Next** to choose the backup device. The Full System Backup - Select Backup Devices screen appears. Click **List Devices**.

  Result: The screen displays the backup devices that are defined on your CallPilot server.

  — If no devices are listed, log on to CallPilot Manager and define your backup devices (**System > Backup/Restore > Maintain and configure backup devices**). Click **List Devices** again. Select the backup device you want to use and click **Next** to start the backup.

  — If the list is populated, select the appropriate backup device and click **Next** to start the backup.

18 When the **Perform System Backup** screen appears, click **Start Backup**.

19 After the progress bar shows the percentage complete and displays the status, do the following:

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IF	THEN
errors occur	• follow the displayed link and examine the log file for errors. • contact your distributor (channel partner) if you need assistance to resolve the errors. • click the **Restart** button to restart the backup process.
no errors occur	• click **Next**.

20 After the backup is complete, eject the tape from the tape drive (if the data was backed up to a tape).

ATTENTION

Failure to remove the tape from the drive adds an hour or more to the restore process.

21 Click **Next**.

22 Click **Finish** to close the CallPilot 5.0 Upgrade Wizard.

23 Print or record the IP information in the file **D:\Nortel\Data\IPCONFIGURATION.txt**.

Note: You need the IP information if your backup is on a network drive, or if you are downloading PEPs from the network prior to the restore process. You also need this IP information to configure your Embedded LAN (ELAN) subnet and Nortel server subnet after the restore process. The IPCONFIGURATION.txt file is saved as part of your backup and is available after the restore.

24 Restart CP1.

—End—

Prepare the new 1005r or 1006r server (CP2)

The following procedures may be required depending upon your setup configuration.

- Manually change the server name. (The CallPilot Configuration Wizard can also be used to change the server name.)

  For more information, see "Manually changing the server name" (page 46).

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- Manually set the IP parameters. (The CallPilot Configuration Wizard can also be used to set the IP parameters.)

  For more information, see "Manually setting the IP parameters" (page 47).

  Note: The procedures listed in the preceding bullets are performed under the following circumstances:

  1. If you are restoring from a network location. In order to perform a restore the CLAN IP address must first be set.
  2. If you are using a DNS as part of your network solution, then the DNS entries must be manually completed.

- Check the Primary DNS suffix.
- Install antivirus software on both servers. (optional)

  For more information about the antivirus software packages that are approved by Nortel for CallPilot, see the *P-2007-0101-Global : CallPilot Support for Anti-Virus Applications* bulletin.

Run the Setup Wizard on CP2

Run the Setup Wizard on the new 1005r or 1006r server (CP2), restoring the data from the backup created by the Upgrade Wizard that was run on CP1.



CAUTION
Ensure you use the backup created from the CallPilot 5.0 Upgrade Wizard for the following reasons:

1. The backup provides the most current view of the system.
2. The CallPilot 5.0 Upgrade Wizard corrects the data prior to the backup.
3. Using an earlier backup can result in issues encountered during the restore process.
4. The backup from the CallPilot 5.0 Upgrade Wizard includes the CallPilot 5.0 Upgrade Wizard logs so that they can be brought forward to CallPilot 5.0. These logs can be used by Nortel Enterprise Technical Support (NETS) to troubleshoot the system.

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Running the Setup Wizard on CP2

Step	Action

1 Log on to the new CallPilot 1005r or 1006r server after the Windows Mini-Setup is complete. The default password for the Administrator account is **Bvw250**.

2 The Setup Wizard automatically launches if you log on to an unconfigured CallPilot server. A CallPilot server, freshly upgraded to CallPilot 5.0, is not configured. You can also launch the Setup Wizard manually by clicking **Start > Programs > CallPilot > Setup Wizard**.

Result: The CallPilot Setup Wizard welcome screen appears.

Note: If you exit after a successful restore and before the Setup Wizard is finished, you can continue or restart the Setup Wizard.

If your backup is on a network drive or you are downloading PEPs from the network, you must restore your network settings:

a. Specify the **IP address** and **subnet mask** for the Nortel server subnet. Do not change your computer name unless necessary.

b. Specify the **gateway** for the Nortel server subnet (CLAN).

c. Restart the system (if prompted by Windows).

d. Log on to the CallPilot server. The default password for the Administrator account is set to Bvw250.

If your backup is on tape, continue to the next step.

3 Read the information displayed on the screen and click **Next**.

Result: The Service Update (SU) / PEP Installation screen appears.

ATTENTION

If you downloaded PEPs, close the wizard, install the PEPs, and restart if required. When the system is in service, restart the wizard and select **No** on the Installing SU/PEP screen. If your PEPs are on CD, continue with Step 4.

4 If Service Updates (SUs) or PEPs are available, you must install the same SUs and PEPs that are installed on CP1. Select **Yes** or **No** and click **Next**.

- If you choose Yes, install SU/PEPs:

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Result: The Installing SU/PEP screen appears.

1. Install all the required SUs and PEPs.

   Note: After you install all the SUs and PEPs, restart (if required).

2. If no restart was required, click **Next** to continue. Otherwise, restart the server.

- If you choose No, do not install SU/PEPs now:

  Result: The Platform Validity Check screen appears.

5 View the items on the Platform Validity Check screen and click **Next**.

Note: If your server does not meet the minimum hardware and software requirements for the upgrade, contact your support organization.

Result: The Telephony Board Validation screen appears.

6 If the system detects an error, an error message appears. You cannot continue with the Setup Wizard. Do the following:

a. Power off the system.

b. Install the boards in the correct locations.

c. Restart the system.

d. Log on to Windows and restart the Setup Wizard.

e. Continue to the next step.

If your board configuration is correct, click **Next** to continue to the next step.

Note: The following synchronization and disk space checks only pause for display if the checks fail. Results of the checks are written to the setup log.

7 The Setup Wizard performs a disk space check. There must be enough free disk space to restore your backed up data.

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IF the disk	THEN
does not have enough free space	• the Checking Free Disk Space screen appears. • free up space on drive D by removing unnecessary files. • follow the link on the screen and use the instructions to free up enough space, and then click **Next**. • the wizard performs another check and if there is still not enough space, the Checking Free Disk Space screen reappears. • If there still is not enough free disk space, exit the wizard and call your support organization.
has enough free space	• the Setup Wizard continues. ***Note:*** Results of the disk space check are written to the Setup Wizard log.

ATTENTION

The data restoration takes from 1 to 3 hours to complete.

Only use the backup created by the CallPilot 5.0 Upgrade Wizard.

8 On the **Selecting Upgrade of the CallPilot** screen, choose **Yes** to continue with the restore process. Do not choose No.

Result: The Restore Medium Selection screen appears.

9 Choose the medium on which your backup is stored.

- If you choose to restore from disk:

  Result: The Choose Remote Disk screen appears.

  1. Find the remote disk to restore from and click on it.
  2. Click **Next** to continue.

- If you choose to restore from tape:

  1. Make sure the tape is firmly in the tape drive and click **Next**. (If a tape is already in the drive, remove it and reinsert it. Otherwise, a tape list can take up to two hours.)

     Result: The List Backups screen appears.

  2. Click **List Backups** to view a list of valid backups on your backup medium.

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3. The available backups appear in the List of Backups table.
4. Select the backup that you want to use for the restore and click **Next**.

   Result: The Performing Restore screen appears. The CallPilot services are shut down and the Wizard automatically starts the restore operation. The progress bar shows the percentage complete and the number of errors.

10 Determine if the restoration was successful.

IF the restoration	THEN
was not successful	• review the log files. • Click **Retry** to start the restoration again. • If you are still not successful, contact your support organization.
was successful	• click **Next** to continue.

Result: The Ready to Upgrade Database screen appears.

11 Click **Next** to start the database upgrade.

The warning screens for the Unsupported SMTP authentication option and the Unsupported IMAP authentication option can appear (same screens as in the Upgrade Wizard). Click **Next** through those screens and the database upgrade starts.

Result: The database upgrade starts and the Upgrading Data screen appears.

IF the database upgrade is	THEN
not successful	• click **Upgrade Database** to try again. ***Note:*** If subsequent attempts to upgrade the database are not successful, contact your support organization.
successful	• the Setup Wizard continues.

12 Click **Next** to complete the Setup Wizard.

Result: The Finished screen appears.

13 Read the information displayed on the Finished screen and click **Finish**.

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Result: A screen appears warning you that the system restarts automatically.

14 Click **OK**.

Result: The system restarts.

—End—

Configure CP1 using the Configuration Wizard

Configuring CP1 using the Configuration Wizard

Step	Action

1 On the existing CallPilot 1005r or 1006r server (CP1), log on to CallPilot Manager:

a. After the Windows log on screen appears, log on with the current password.

b. Launch Internet Explorer.

c. Enter **http://<server name or IP address>/cpmgr** in the URL address box.

Result: The CallPilot Manager Logon Web page appears.

d. Log on using your existing CallPilot logon information. Enter information into the following:

- **Mailbox Number**—Enter your existing mailbox number (000000).
- **Password**—Enter your existing password for mailbox 000000.
- **Server**—Specify the name or the IP address of the CallPilot server that you want to configure. (The server name may have changed during the upgrade or platform migration.)

Note: When you launch Internet Explorer, you may see a box that says "M/S IE Enhanced Security config is currently enabled on your server. This advanced level of security reduces risk." Nortel recommends that you do not lower the security level. Nortel also recommends that you do not select the check box to not show the message again. If you do lower the security level and you try to access a Web site off the server, it may be blocked by the security setting. You do not receive a warning but a blank screen appears.

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e. Click **Login**.

Result: The system may prompt you to change the password for the Administrator mailbox.

f. If prompted, do not change the password.

Result: The main CallPilot Manager screen appears.

2 Click the **Configuration Wizard** icon.

Result: A dialog box appears, prompting you to choose either an Express or Standard setup.

3 Select **CallPilot System Configuration (Standard Mode)**.

4 Click **OK**.

Result: The Configuration Wizard: Welcome screen appears.

Note: Because the CallPilot system is not yet configured, an error dialog box can appear while you run the Configuration Wizard. Disregard the error message by closing the dialog box, and continue the configuration procedure.

5 On the Welcome screen, click **Next**.

Result: The Keycode and serial number screen appears.

6 If you have a new CallPilot 5.0 keycode with the High Availability feature included, enter the **serial number** and new **keycode**.

If your CallPilot 5.0 keycode includes the High Availability feature (but High Availability is not yet enabled), click **Next**.

Result: The Feature Verification screen appears.

7 Ensure that the details on the Feature Verification screen match your expectations and click **Next**.

Note: If a feature is missing or is not what you expected, acquire a new keycode from your Nortel distributor.

Result: The Server Information screen appears.

8 On the Server Information screen, enter the new host name in the **Computer Name** field.

ATTENTION

The computer names of the High Availability servers must contain only alphanumeric characters. Nonalphanumeric characters (such as a hyphen [-]) are not supported.

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Note: You must change the computer name of CP1 so that the current name can be reused as the Managed computer name for the High Availability pair.

9 Click **Next**.

Result: The Password Information screen appears.

10 Select **Leave the Password Unchanged**.

11 Click **Next**.

Result: The Multimedia Allocation screen appears.

12 Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server.

13 Change the **Port Allocations** as required.

14 Click **Next**.

Result: The Switch Information screen appears.

15 Verify the CDN configuration.

If you need to make changes, do the following:

a. Click **New** to add a new CDN.

Result: The system prompts you for the CDN and the name of the application to dedicate to the CDN.

b. Specify the **CDN**, choose the application, and then click **OK**.

Result: The system returns you to the CDN Information page.

16 Click **Next**.

Result: The Language Source Directory screen appears.

17 Select the **Skip Language CD Validation** option.

18 Click **Next**.

Result: The CallPilot Local Area Network Interface screen appears.

19 On the CallPilot Local Area Network Interface screen, do the following:

a. Make note of the current ELAN and CLAN IP addresses.

Note: These ELAN and CLAN IP address values from the existing CallPilot 1005r or 1006r server (CP1) will be reused as the Managed ELAN/CLAN IP address for the pair of server in the new High Availability configuration.

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b. Change the ELAN and CLAN IP address values to the new values.

c. Select the **High Availability mode** check box.

Note: To enable High Availability, a proper keycode is required and the High Availability Mode check box must be selected.

d. Enter IP information for the **HB1**, **HB2**, and **MIRROR** network interface cards.

The following table shows the suggested default values for HB1, HB2, and MIRROR on CP1. If you do not use these suggested values, ensure that you use your new values throughout the configuration.

Network Interface Card (NIC)	IP Address	Subnet Mask
Heartbeat 1 (HB1)	192.0.0.10	255.255.255.0
Heartbeat 2 (HB2)	194.0.0.10	255.255.255.0
MIRROR	193.0.0.10	255.255.255.0

20 Click **Next**.

Result: The Ready to Configure screen appears.

21 Click **Finish**.

Result: A dialog box prompts you to confirm the configuration.

22 Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 5 to 10 minutes to complete, depending on the number of languages installed and the number of programmed DSP cards. The Configuration Wizard displays progress information.

After the configuration is applied to the server, a dialog box reminds you to restart the server for the configuration to take effect.

23 Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

24 Log off CallPilot Manager and close the Web browser.

25 Restart CP1.

—End—

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Configuring the replacement server using the Configuration Wizard

ATTENTION

If you must go back into the Configuration Wizard at any time to correct any entries, note that the Database, LDAP, and AOS services must be started to gain access to CallPIlot Manager.
The D:\Nortel\HA folder contains a file called stat_svr.bat that automatically starts any necessary services. This script can be run to start the required services.

ATTENTION

Ensure that the dongle is installed on the replacement server.

Configuring the replacement server using the Configuration Wizard

Step	Action

Time required: 20 minutes (assuming one language is installed).

1 Launch the Internet Explorer Web browser on the replacement server.

2 In the address field, enter the following URL to start CallPilot Manager: **http://localhost/cpmgr**.

Result: The CallPilot Manager Logon Web page appears.

3 Log on to CallPilot Manager using the administrator mailbox and default password created from the CallPilot Setup Wizard:.

a. Under the **User** area, enter the following:

i. The administrator mailbox number is 000000.

ii. The default password is 124578.

b. Under the **Server** area, enter the **localhost** in the **Server** field.

4 Click **Login**.

Result: Change User Password window appears.

5 Change the password for 000000 administrator mailbox if necessary by doing the following:

a. Enter the **Current Password**.

b. Enter the **New Password**.

c. Reenter the new password in **New Password Re-entry** field.

d. Click **Save**.

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Result: Welcome to CallPilot Manager page appears.

6 Click **Configuration Wizard**.

Result: Configuration Wizard: Welcome page appears.

7 Click **Next**.

Result: The Keycode and serial number page appears.

8 Enter the following:

a. In the **Serial number** field, enter the serial number of the dongle assigned to the CallPilot server. The serial number entered for the replacement server must be the same as the serial number entered for the existing server.

b. In the **Keycode** field, enter the High Availability enabled keycode assigned to the CallPilot server. The keycode entered for the replacement server must be the same as the keycode entered for the existing server.

9 Click **Next**.

Result: The Feature Verification page appears.

10 Ensure that all parameters are correct and that the High Availability feature is set to Mirroring.

11 Click **Next**.

Result: The Server Information page appears.

12 On the Server Information page, do the following:

a. In the **Computer Name** field enter the CallPilot server name.

b. In the **Time Zone** field, select the correct time zone.

c. Under **Dialog Information**, enter the **Area Code** and **Country Code**.

d. Enter **LDAP search base**. For example, **dc=nortel,dc=ca**.

Note: All values on the Server Information page for the replacement server must be the same as for the existing server. Use Table 3 "High Availability system checklist" (page 29) that you completed for both nodes.

13 Click **Next** option.

Result: The Password Information page appears and **Change the password** option is selected.

14 On the Password Information page, do the following:

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a. In **New Password** field, enter the new password.
The new password entered for the replacement server must be the same as the password used on the existing server.

b. In **Confirm the new password** field, reenter the new password.
The new password entered for the replacement server must be the same as the password used on the existing server.

c. Click **Next**.

Result: A warning message appears.

15 Click **Ok** to dismiss the warning message.

Result: Password Information page reappears.

16 Click **Next**.

Result: The Multimedia Allocation page appears.

17 Configure the MPB96 settings.

18 Click **Next**.

Result: M1 Switch Information page appears.

19 Configure the switch information:

a. Select the **Switch Type**. Switch Type must be the same for both nodes.

b. Enter the **Switch Customer Number**. Switch Customer Number must be the same for both nodes.

c. Enter the **Switch IP Address**. Switch IP Address must be the same for both nodes. See the Table 3 "High Availability system checklist" (page 29) containing the information for both nodes.

d. Provision the channels as follows:

Note 1: To automatically provision a number of channels you can enter the information for one channel, select the number of channels required, and then click **Fill**. The Configuration Wizard automatically datafills the channels, and increments the TNs, ACD Position ID, and SCN.

Note 2: The number of TNs configured on both nodes must be the same.

Note 3: To obtain switch-provisioning information, see the completed Table 3 "High Availability system checklist" (page 29).

i. Select a channel.

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Result: The Channel Detail window appears.

ii. Enter the TN, ACD Position ID, and SCN.

iii. Ensure that Channel Allocation is set to Multimedia.

iv. Click **Ok**.

Result: The Meridian 1 Switch Information window appears again.

v. Continue the provisioning of channels until complete.

20 Click **Next**.

Result: The Meridian 1 CDN Information page appears.

21 Click **New** to add a new CDN.

Result: The CDN Details page appears.

ATTENTION

The CDNs must be the same on both nodes.

22 On the CDN Details page, do the folllowing:

a. In the **CDN** field, enter the new CDN.

b. Select the **Application Name** (Voice Messaging or Multimedia Messaging).

c. Click **Ok**.

Result: The new CDN is added and CDN information page reappears.

23 Click **Next**.

Result: The Language Source Directory page appears.

24 Insert the CallPilot 5.0 Language CD in the CD/DVD drive on the replacement server.

ATTENTION

You must use a CallPilot 5.0 Language CD.
Language CDs from previous CallPilot releases are not compatible with CallPilot 5.0. The Configuration Wizard checks the version of the Language CD and blocks the use of the CD if it is not a CallPilot 5.0 CD.

25 On the Language Source Directory Select page, do the following:

a. Select the **Install Language** option.

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b. In the **Language CD Location** field, enter the directory location of the Language disk or file. Typically, CallPilot uses drive Z (therefore, enter Z:).

26 Click **Next**.

Result: The Language Installation page appears.

27 On the Language Installation page, do the following:.

a. Select Languages and Automated Speech recognition to be installed.

b. Select Primary and Secondary Languages.

Note: The Secondary Language is optional.

ATTENTION

The same languages must be installed on both nodes. Ensure that the Primary and Secondary languages are also the same on both nodes.

28 Click **Next**.

Result: The CallPilot Local Area Network Interface page appears.

29 On the CallPilot Local Area Network Interface page, do the following:

a. Select the network interface card from the drop-down list.

Result: The MAC addres, IP address, and Subnet mask values are updated for the network interface card.

b. Change the **ELAN** and **CLAN** IP information (**IP address** and **Subnet Mask**).

c. Select the **High Availability mode** check box to display the High Availability Network Interfaces.

Note: To enable High Availability, a proper keycode is required and the High Availability Mode check box must be selected. The keycode has the ability to enable High Availability; however, the feature does not have to be enabled and can be done at a later date.

d. Enter IP information for the **HB1**, **HB2**, and **MIRROR** network interface cards.

The following table shows the suggested default values for HB1, HB2, and MIRROR on both servers. If you do not use these suggested values, ensure that you use your new values throughout the configuration.

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Network Interface Card (NIC)	CP#1 IP	CP#2 IP	Subnet Mask
Heartbeat 1 (HB1)	192.0.0.10	192.0.0.11	255.255.255.0
Heartbeat 2 (HB2)	194.0.0.10	194.0.0.11	255.255.255.0
MIRROR	193.0.0.10	193.0.0.11	255.255.255.0

30 Click **Next**.

Result: The Ready to Configure page appears.

31 Click **Finish** to start process.

Result: The system starts the configuration process and Progress Information page appears.

32 After the process is complete, a dialog box reminds you to restart the server for the configuration to take effect.

33 Click **OK** to dismiss the dialog box. Restart the replacement server.

—End—

Complete the High Availability configuration process

Use the following procedure to guide you through the remainder of the High Availability configuration process.

Completing the High Availability feature configuration

Step **Action**

1 Connect the LAN.

For more information, see "Connect and verify LAN connections" (page 75) and complete the following procedures:

- "Connecting and verifying LAN connections" (page 76)
- "Modifying the hosts file" (page 80) (optional)
- "Testing the host name resolution" (page 82)

2 Check the configuration of CP1 and CP2.

For more information, see "Running Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration" (page 83).

3 Install the AutoStart Software on CP1.

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For more information, see "Installing the AutoStart Agent and Console software on CP1" (page 86).

4 Add the replacement server Administrator account to the AutoStart Console.

For more information, see "Add the node 2 administrator account to the AutoStart Console on node 1" (page 94).

5 Install the AutoStart software on CP2.

For more information, see "Installing the AutoStart Agent and Console software on CP2" (page 96).

6 To configure the AutoStart software, do the following:

a. Configure the AutoStart software.

For more information, see "Configure the AutoStart software" (page 106).



WARNING
You must wait for both servers under Domains > [AutoStart_Domain] > Nodes to appear green before making any changes in the AutoStart Console. Failure to do so can result in the loss of configured information for verification links upon the next restart.

i. Modify the AutoStart Domain and Verification links.

For more information, see "Modifying the AutoStart Domain and Verification links" (page 106).

ii. Add the Remote Mirroring Host for the new 1005r or 1006r server (CP2).

For more information, see "Adding the Remote Mirroring Host for CP2" (page 109).

b. Generate the AutoStart Definition File.

For more information, see "Generating the AutoStart Definition File" (page 112).

c. Import the AutoStart Definition File.

For more information, see "Importing the AutoStart definition file" (page 114).

d. Add the Windows administrator account password for the AutoStart Utility Processes.

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For more information, see "Adding the Windows administrator account password for the AutoStart Utility Processes" (page 115).

7 Bring the Resource Groups online.

For more information, see "Bring the Resource Groups online" (page 119).

a. Bring the CallPilot Resource Group online on CP1.

For more information, see "Bringing the CallPilot Resource Group online on CP1" (page 119).

b. Bring the CallPilot_[CP1] and CallPilot_[CP2] Resources Groups online.

For more information, see "Bringing the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online" (page 122).

8 Create the CallPilot Reporter connections. For more information, see "Creating the CallPilot Reporter connection" (page 126).

9 If required, add the servers to a Windows domain. See "Joining a Windows domain" (page 127).

—End—

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Nortel CallPilot

High Availability: Installation and Configuration

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Publication: NN44200-311
Document status: Standard
Document version: 01.18
Document date: 23 April 2010

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