



Nortel CallPilot

High Availability: Installation and Configuration

Document status: Standard Document version: 01.05 Document date: 27 April 2007

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Publication History

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.

March 2007

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

6 Publication History

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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:

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.

Chapter 2 Introduction

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"Overview of High Availability" (page 13)

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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 18).

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 platform. For more information about the hardware, see "High Availability hardware" (page 14).

 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 16).

High Availability hardware

High Availability is supported only on the 1005r platform. Two 1005r servers are required for the High Availability configuration.

The 1005r server is 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.

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



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.
- 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 193).
- 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.

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 33).

Limitations

The limitations of the High Availability system include the following:

- The two High Availability servers must be colocated. The locations of the servers are limited by the length of the DS30X cables that connect the High Availability servers to the Meridian 1 or CS 1000 switch. The maximum length of the DS30X cables is 32.8 feet or 10 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).
 - 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, the High Availability feature cannot be used with CallPilot and Contact Center integration.

Reference documents

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

NØRTEL

CallPilot Customer Documentation Map

Fundamentals			
CallPilot Fundamentals Guide (NN4	14200-100)		
Planning and Engineering			
Planning and Engineering Guide (N	IN44200-200)		
Network Planning Guide (NN44200	-Network Planning Guide (NN44200-201)		
Converging the Data Network with	VoIP Guide (NN43001-260)		
Solution Integration Guide for Com	munication Server 1000/CallPilot/Contact Center/	Telephony Manager (NN49000-300)*	
Installation and Configuration			
Upgrade and Platform Migration Gu	ide (NN44200-400)		
High Availability: Installation and Co	Infiguration (NN44200-311)		
	List Guide (NN44200-306)		
201i Server Hardware Installa	ation Guide (NN44200-301)		
- 703t Server Hardware Install	ation Guide (NN44200-304)		
— 1002rp Server Hardware Inst	allation Guide (NN44200-300)		
- 1005r Server Hardware Insta	llation Guide (NN44200-308)		
600r Server Hardware Install	ation Guide (NN44200-307)		
Configuration and Testing Guides			
T1/SMDL and CallPilot Server	r Configuration Guide (NN44200-302)		
Communication Server 1000	System and CallPilot Server Configuration Guide	(NN44200-312)	
Unified Messaging Software Inst	allation	(
Desktop Messaging and My (CallPilot Installation and Administration Guide (N	N44200-305)	
— Administration			
Administrator Guide (NN44200-601)		
 Software Administration and Mainter 	enance Guide (NN44200-600)		
Meridian Mail to CallPilot Migration Application Builder Guide (NN4420)	Utility Guide (NN44200-502)		
Reporter Guide (NN44200-603)	-102)		
Malintanana			
CollBilet Troubloshooting Reference	Cuido (NN44200 700)		
Preventative Maintenance Guide (N	NI44200-505)		
Server Maintenance and Diagnos	tics		
201i Server Maintenance and	Diagnostics Guide (NN44200-705)		
- 703t Server Maintenance and	d Diagnostics Guide (NN44200-702)		
1002rp Server Maintenance	and Diagnostics Guide (NN44200-701)		
- 1005r Server Maintenance an	nd Diagnostics Guide (NN44200-704)		
	n Diagnostics Guide (NN44200-703)	cessing Guide (207-2183-031)*	
	minumcation Server 1000/Menular 1 & Voice Pro	cessing cuide (297-2100-901)	
End User Information	End User Guides		
Unified Messaging Quick Reference Card	Multimedia Messaging User Guide	*available in summer 2007	
Unified Messaging Wallet Card	Speech Activated Messaging User Guide		
A-Style Command Comparison Card	Desktop Messaging User Guide for Microsoft Outlook		
Menu Interface Quick Reference Card	Desktop Messaging User Guide for Lotus Notes Desktop Messaging User Guide for Novell Groupwise		
Alternate Command Interface Quick Reference Card	Desktop Messaging User Guide for Internet Clients		
	Voice Forms Transcriber User Guide for My CallPilot		

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Chapter 3 Planning and engineering

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"High Availability system checklist" (page 25)

"Facility planning" (page 27)

"Switch planning" (page 28)

"Required hardware" (page 29)

Introduction

For detailed CallPilot 5.0 and 1005r 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 1005r 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

- 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.



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

Table 1

(see "Install the AutoStart Agent and Console software " (page 79)). Each network connection must be on a different subnet. Nortel recommends the following values be used for the dedicated network connections:

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 31 "High Availability Configuration Wizard" (page 76)):

 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 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

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.

High Availability system checklist

	CP Node 1 (CP1)	CP Node 2 (CP2)
Configuration Wizard: Switch	Information page	
Switch Type		
Switch Customer Number		
Switch IP Address		
Link1 TN		
Link1 Key0		
Link1 Key1		
Link2 TN		
Link2 Key0		
Link2 Key1		
Link3 TN		
Link3 Key0		
Link3 Key1		
CDN		
Configuration Wizard: Langua	ge Source Directory page	
Primary language		
Secondary language		
Configuration Wizard: CallPilo	ot Local Area Network Interfac	e 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		

	CP Node 1 (CP1)	CP Node 2 (CP2)
High Availability Configuratio	n Wizard	
Managed CLAN Host Name		
<i>Note:</i> The CLAN is the Nortel server subnet.		
Managed CLAN IP address		
Managed ELAN IP address		
<i>Note:</i> The ELAN is the ELAN subnet.		
Node 1 Host Name		
Node 2 Host Name		
Number of MPB96 Boards		
User Name		
<i>Note:</i> 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 DS30X cables must be a maximum of 32.8 feet or 10 meters long.

The two servers in the High Availability pair must be colocated, as they must be connected to the same switch. Having the servers colocated 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 32.8 feet or 10 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 colocated to ensure that all of these requirements are met.

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 connections, MGate cards, and matching switch configuration.

Two configuration are supported:

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

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

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

For a 192-channel High Availability server, each server in the pair must support 192 channels, which means there must 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.

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

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

Customer provided equipment

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

Table 5

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/600r 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 supported only on the 1005r platform. Two identical 1005r servers are required for the High Availability feature. The pair of servers are required to provide the active and standby server configuration.

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 1005r servers.

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Chapter 4 Failover overview

In this chapter

"Introduction" (page 33)

"Automatic failovers" (page 34)

"Manual failovers" (page 35)

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 34).
- 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 35).

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. 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:

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)

Table 6 Critical CallPilot services

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 189).

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 213)
- "Enabling automatic failovers (start monitoring)" (page 214)

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)

- 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 215).
Chapter 5 Install and configure the High Availability pair

In this chapter

"New system installation procedure" (page 37)

"Prepare the switch and install the 1005r servers" (page 40)

"Prepare both 1005r servers" (page 41)

"Configure CP1 and CP2 using the CallPilot Configuration Wizard" (page 48)

"Connect and verify LAN connections" (page 68)

"Run Stage 1 of the High Availability Configuration Wizard to check CP1 and CP2 configuration " (page 75)

"Install the AutoStart Agent and Console software " (page 79)

"Configure the AutoStart software" (page 109)

"Bring the Resource Groups online" (page 122)

"Test your configuration" (page 127)

"Create the CallPilot Reporter connections" (page 128)

"Add the servers to a Windows domain" (page 130)

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.

Nortel CallPilot High Availability: Installation and Configuration NN44200-311 01.05 Standard 5.0 27 April 2007 This installation assumes the following:

- The CallPilot 5.0 image on the 1005r 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 7 High Availability task list

Task	Estimated time	Procedures required to complete the task
Prepare the switch	60 minutes	 "Preparing the switch" (page 40)
Install the two 1005r servers	210 minutes per server	 "Installing the two 1005r servers" (page 40)
Prepare both 1005r servers	120 minutes per server	 – "Manually changing the server name" (page 41) (optional)
		 "Manually setting the IP parameters" (page 42) (optional)
		 "Installing the antivirus software" (page 43) (optional)
		- "Running the CallPilot Setup Wizard" (page 44)
Configure CP1 and CP2 using the CallPilot	40 minutes per server based	 "Configuring CP1 using the CallPilot Configuration Wizard" (page 49)
Contiguration Wizard	on two installed languages and three provisioned channels Allow 10 minutes for each additional language	 "Configuring CP2 using the CallPilot Configuration Wizard" (page 63)

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Task	Estimated time	Procedures required to complete the task
Connect and verify the LAN connections	30 minutes	 "Connecting and verifying LAN connections" (page 69)
		 "Modifying the hosts file" (page 72) (optional)
		 "Testing the host name resolution" (page 74)
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 75)
Install the AutoStart 5.2.2 software on CP1	10 minutes	 "Installing the AutoStart Agent and Console software on CP1" (page 79)
Configure licensing and security on CP1	10 minutes	 – "Add the node 2 administrator account to the AutoStart Console on node 1" (page 92)
Install the AutoStart 5.2.2 software on CP2	10 minutes	 – "Installing the AutoStart software on CP2" (page 95)
Configure the AutoStart	35 minutes	Configure the AutoStart software on CP1
software <i>Note:</i> All configuration is		 "Modifying the AutoStart Domain and Verification links" (page 109)
completed on CP1.		 – "Adding the Remote Mirroring Host for CP2" (page 112)
		 "Generating the AutoStart Definition File" (page 115)
		Import the AutoStart definition file on CP1
		 "Importing the AutoStart Definition file" (page 117)
		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 118)
		Add e-mail addresses to the Managed_ELAN_IP _Failure_Notif rule
		 "Adding e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule" (page 120)
Bring the Resource Groups online	10 minutes	 "Bringing the CallPilot Resource Group online on CP1" (page 122)
		 "Bringing the Resource Groups CallPilot_[CP1] and CallPilot_[CP2] online" (page 125)

Task	Estimated time	Procedures required to complete the task
Test your configuration	120 minutes	 "Testing the configuration of CP1 and CP2" (page 127)
Create the CallPilot Reporter connections	20 minutes	 "Creating the CallPilot Reporter connection" (page 129)
Add server to a Windows domain (if required)	30 minutes	 "Joining a Windows domain" (page 130)

Prepare the switch and install the 1005r servers

Before you install and configure the High Availability feature you must prepare the switch and 1005r servers. Use the following procedures to prepare the switch and install the 1005r 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—

Installing the two 1005r servers

Step	Action
1	Refer to 1005r Server Hardware Installation (NN44200-308) 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 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.

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-

Manually setting the IP parameters

Step Action

Setting the IP parameter can also be done using the CallPilot Configuration Wizard; however, DNS entries 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.

-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.

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.

Figure 4 Service Update (SU) / PEP Installation window

CallPilot Setup Wizar	d - SU/PEP Installation?
0	Service Update (SU) / PEP Installation
CALLPILOT SETUP WIZARD	If you have any SUs or PEPs that need to be installed on the server, you should install them before going any further in the setup process. By installing the most recent updates you are setting up will have all of the enhancements and improvements that have been made available since the software was released. Service Updates and PEPs can be obtained from the Enterprise Solutions PEP Library (ESPL) at http://www.nortel.com/espl
NGRTEL	
	Please select one of the following options:
	C Yes, I have updates that I want to install now
	☞ No, I do not have updates that I want to install now.
	Cancel < Back Next > Enish

- **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: <u>www.nortel.com/espl</u>

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.

Figure 5				
Performing	Platform	Validity	Check window	1

	The table that it me Dependin upgrade o	below contains information abo ets the minimum requirements in g on the results of the check yo or migrate your data to a new C	ut your server. This informa n order to run the new relea: u may need to update softw allPilot server platform as pa	tion is checked to make so se of CallPilot. vare before running the rt of the upgrade.	ure
> CALLPILOT SETUP	Platform:	TRP 1005R		1	
WIZARD	Status	Item Name	Current Value	Required Value	
	1	Software Version	5.0 (05.00.38.07)	5.0 (05.00.00.00)	
	V.	SU Version			
	V	Number of CPU	2	2	
and the second second second	1	CPU Speed (MHz)	3200	3200	
NEDTEL	V	Server BIOS Version	Version 10.00	Version 10.00	
NGALES.	V.	RAM Size (MB)	1024	1000	
	V	RAID Card	LSI 320-1	Existed	_
	V	RAID Firmware	1L37	1L37	
	V.	RAID Driver	6.45.2.32	6.45.2.32	
	1	RAID Power Console	5.00i	5.00i	
Run Platform Validity	1	Number of Logical Drives	1	1	1
Check	1	1 10-10.000	+ +0000	110000	ъĒ

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.

Figure 6 Telephony Board Validation window

Ľ	In order supporte the boar board is	to ensure the stability d. The table below di ds detected do not m in the wrong location	y of the server only certain co splays the telephony boards t atch a supported configuratio or there is an unsupported mi	nfigurations of telephor that have been detecter n, i.e. an unsupported l ixture of boards, the afi	ny boards are d on the server. If board is detected, fected boards will b
	flagged Dependi proceed	with a red X and one on ng on the results of th	or more error messages will be ne check you may need to mo	e displayed on the botto ve or remove boards be	m of the page. fore being allowed
WIZARD	Status	Slot Number	PCI Board Type	Family	
	1	1	MPB96	Nortel	
		-			
NGRTEL					
	ony board	validity check is co	omplete. Click Next to cor	ntinue.	
tesult: Telepho					
Result: Telepha					
Result: Telepho					
tesult: Telepho					
tesult: Telepho					
tesult: Telepho					
and the second se	ony board	validity check is co	omplete. Click Next to cor	itinue.	

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

Result: The Selecting Upgrade of CallPilot window appears.

Figure 7 Selecting Upgrade of CallPilot window

Calipilot Setup wizard -	Selecting Upgrade of CaliPilot	
	Selecting Upgrade of CallPilot	
> CALLPILOT SETUP WIZARD	Do you have data to restore? If you are upgrading from a previous release of CallPilot or are performing a platform m you had to run the CallPilot upgrade wizard on your original CallPilot server. In both ca data on your original system was backed up to either tape or a network share. Select one of two options below and click Next to continue.	igration ses the
NGRTEL	Please select the option below	
	No, I do not have data to restore.	
	t res, fuultave data corestore.	
	Cancel < Back Next > Enish	

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- 8 Select the No, I do not have data to restore option.
- 9 Click Next.

Result: The Finished window appears.

Figure 8

0	Finished!
CALLPILOT SETUP WIZARD	Congratulations, you have successfully completed the setup of your CallPilot server. Your final task is to configure your CallPilot server by logging in to CallPilot Manager and running the Configuration Wizard. The Configuration Wizard will prompt you for your CallPilot 5.0 keycode and serial number and then allow you to configure the server based on the contents of the keycode. When you click the Finish button, the wizard will launch an Internet Explorer window that is pointing to the CallPilot Manager web application that is installed on your server. In order to log on use the following default values: Malibox Number: 000000 Password: 124578 Server: localhost After a successful logon to CallPilot Manager, you will be forced to change the password for the After a successful (000000) Once the ground he base draged define the Canfirm tables
	Wizard link, or select Tools -> Configuration Wizard. Click Finish to exit the wizard and connect to CallPilot Manager.

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

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.

End—

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 CP1 using the CallPilot Configuration Wizard

Step Action

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

ATTENTION

Ensure that the dongle is installed on CP1.

- 1 On CP1, 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.

Figure 9 CallPilot Manger Login page

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ess 🕘 http://localhost/cpmgr/login.asp	💌 🋃 Go
	K
CALLPILOT MANAGER	
	NØRTEL
	User:
Selecting a CallPilot Server: Select a server and location from the list of	Mailbox Number:000000
preset servers, or enter the server name (or IP	Password:
address). The location field is required only if the indicated server has Network Message Service (NMS). In this case enter the name of the location where your moliflow resides.	Login
location where your manbox resides.	Server:
	Preset server list: Enter data manually
	Server: localhost
	Location:
Copyright $\oplus2006$ Nortel and its licensors. All rights reserved,	

4 Click Login.

Result: The Change User Password window appears.

and the second se	t Manager -	Password Chan	ge - Microsoft Interne	t Explorer					-10
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User 1. Er 2. Er 3. Ri	Password E Iter the cum iter a new p e-enter the n	xpired ent mailbox pa assword ew password New	ssword Current Password: New Password: Password Re-Entry.	J 					_

- **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.

Figure 11

Welcome to CallPilot Manager page

CallPilot Manager - Home - Microsoft Internet Explorer	_ 0
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Home	
Welcome to CollBillet Memory	
welcome to CaliPilot Manager	
Configuration Wizard	
This CallPilot server has not been configured.	
Run the Configuration Wizard to complete the server setup.	
You will require:	
- Keycode	
 Switch information (IP address, dsp cards, CDNs) CLAN, ELAN, eattings 	
- Language CDc	
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# # 7717	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

6 Click Configuration Wizard.

Result: The Configuration Wizard: Welcome page appears.

CallPilot Manager - Confi	guration Wizard - Microsoft Internet Explorer	_ 0
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Configuration Wizard	Welcome	
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7 Click Next.

Result: The Keycode and serial number page appears.

Figure 13

Configuration Wizard: Keycode and serial number page

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Home Tools • Hel	2 7							
Location + Configuration Wizard	Keycode and serial nur	mber						
Comiguration Wizard: K	eycode and serial	number						
Back Next Cancel	Heip							
Enter the serial number ar Serial number from softwa	id keycode that cam re feature key:	e with your	CallPilot se	erver.				
Serial number:						-		
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Warning: If the serial numi software feature key, you keycode, or software featu	ber provided with you will not be able to co ure key.	r keycode o ntinue the o	does not m configuration	atch the s n. Contac	serial numb t your dist	ier supplie ributor for a	d by the Ca a new seria	allPilot server's Il number and
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- 8 Enter the following:
 - a. In the **Serial number** field, enter the serial number of the dongle assigned to the CallPilot server.
 - b. In the **Keycode** field, enter the High Availability-enabled keycode assigned to CallPilot server.
- 9 Click Next.

Result: The Feature Verification page appears.

CallPilot Manager - Configuration Wizard - Microsoft	Internet Explorer	_ 🗆 ×
ile Edik Yew Favorikes Iools Help		an 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 19
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dress 🧃 http://localhost/cpmgr/configwizard/FeatureVerifi	cation.asp	💌 🛃 Go Links X
Feature Verification:		-
The following table contains the configuration inform expectations. If a feature is missing or a value is no keycode. Senial number: 10130179 Keycode: CEE5 2PPU LH9C 7FEC T3G3 V	ation from your keycode. Ensure that the details match your t what you expected, contact your distributor to obtain a new VFA9 LJYH F5DE	
Feature	Current Keycode	
Hardware Platform	TRP 1005r	
Switch Type	Meridian 1	
Switch Connectivity	Proprietary CTI	
Max Voice Channels	96	
Max Fax Channels	16	
Max Automated Speech Recognition Channels	16	
AppBuilder Fax	Yes	
Networking	Yes	
Network Message System	Yes	
Max Voice Message Seats	50000	
Max Fax Message Seats	40000	
Max Desktop Message Seats	40000	
Max Automated Speech Recognition Message Sea	its 40000	
Max E-mail by phone Message Seats	50000	
Max Prompt Languages	6	
Max Automated Speech Recognition Languages	3	
Storage Hours	2400	
Directory Synchronization	Yes	
Voice Forms	Yes	
Hinh Availahility	Mirroring	

- **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.

Figure 15 Configuration Wizard: Server Information

CallPilot Manager - Configuration Wizard - Microsoft Internet Explorer		- 0 >
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ocation + Configuration Wizard + Server Information		
Configuration Wizard: Server Information		
Back Next Cancel Help		
Computer Name: If you want to change the computer name that identifies your CallPilot server on the network, enter a new computer name.		
Computer Name: CP1005R 2		
Time Zone:		
Select the Time Zone in which the CallPilot server is located.		
Time Zone: (GMT-04:00) Atlantic Time (Canada)		
Dialing Information:		
Enter the area code and country code that is appropriate for the location of the CallPilot server.		
Area Code: 506		
Country Code: 1		
Ldap Search Base:		
Enter the Idap search base for the database operations of Idap component.		
Ldap search base: dc=norteLdc=ca		
Done	Local intranet	

- 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**.
- 13 Click Next option.

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

CallPilot Manager - Configura	tion Wizard - Microsoft Internet Explorer	
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Configuration Wizard: Pag	sword Information	
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Back Next Cancel Password Information: WARNING: It is a security r Please enter the new passy Administrator	Help isk to leave the default passwords. The following accounts have defau rords.	It passwords: Administrator,
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- 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



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.

Figure 18

Configuration Wizard: M1 Switch Information page

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Channel information for each L STI Board 1 (MPB96 in slot 0 Link STI01-001 Link STI01-002	Jink is displayed below. Click on a 1) Switch Type: • • Switch Customer Number: 0	link to update its v11 v11 Option 11	i channel settin	gs.		
Channel information for each L <u>STI Board 1 (MPB96 in slot 0</u> <u>Link STI01-001</u> <u>Link STI01-002</u> <u>Link STI01-003</u>	Ink is displayed below. Click on a 1) Switch Type: C Switch Customer Number: 0 Switch IP Address: 192	Ink to update its vi1 vi1 Option 11	049	gs.		
Channel information for each L <u>STI Board 1 (MPB36 in slot 0</u> <u>Link ST01-001</u> <u>Link ST01-002</u> <u>Link ST01-003</u>	Ink is displayed below. Click on a Switch Type: Switch Customer Number: Switch IP Address: [192	Ink to update its vi1 vi1 Option 11	249 . [3	gs.		
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Channel information for each L STI Board 1 (MPB36 in slot 0 Link ST01-001 Link ST01-002 Link ST01-003	Ink is displayed below. Click on a Switch Type: C 1 Switch Customer 0 Switch Customer 0 Switch IP Address: 192 STI Board MPB96 Link ST01-001 #Channel Name \$ 1 ST01-001	Ink to update its v1 v1 U1 Option 11 1 168 168 17N 4.0.0.0	249 3 849 80 800 800 800 800 800 800 800 800 800	gs. ard ID 6930432 Key1 4512	10 Channel Allocation Multimedia	
Channel information for each L <u>STI Board 1 (MPB36 in slot 0</u> <u>Link ST01-001</u> <u>Link ST01-002</u> <u>Link ST01-003</u>	Ink is displayed below. Click on a 11) Switch Type: P Switch Customer Number: Switch IP Address: 132 STI Board MPB96 Link ST01-001 # ST01-001-001 2 ST01-001-001 2 ST01-001-001	Ink to update its v1 v1 Option 11 [168 [2 v4 v1	249 3 Key0 4511 4513	gs. and ID 6930432 Key1 4512 4514	0 Channel Alscation Multimedia Multimedia	
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- **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 25) 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.

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.

Note: This is the CP1 switch-provisioning information for the switch. To obtain the CP1 switch-provisioning information, see the completed Table 3 "High Availability system checklist" (page 25).

20 Click Next.

Result: The Meridian 1 CDN Information page appears.

Figure 19

CallPilot Manager - Configuratio	n Wizard - Microsoft Internet Explorer	
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vad new CUIN entries correspon lote: The list of applications to sesignments can be changed fa nenu.	Image: Selected # CON* Application Name Image: Selected # CON* Application Name	r initial definition requires a reboot. ry Number option under the System
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va new CDN entries correspon lote: The list of applications to sissignments can be changed li nenu.	ding to all those defined on the switch. be assigned is not complete, but create entries for all CDNs now because their ter, and applications using other DNs can be added, using the Service Director New Delete Selected New Delete Selected P Copyright © 2008 Notel and Its licenses. All rights reserved.	r initial definition requires a reboot. ry Number option under the System
vad new CUN entries correspor Note: The list of applications to sksignments can be changed li nenu. Back <u>Next</u> <u>Cancel</u> <u>He</u>	ding to all those defined on the switch. be assigned is not complete, but create entries for all CDNs now because their titer, and applications using other DNs can be added, using the Service Directo New Delete Selected New Delete Selected New Delete Selected Copyright © 2008 Nodel and its licensors. All rights reserved.	r initial definition requires a reboot. ry Number option under the System
Add new CDN entries correspon Note: The list of applications to Assignments can be changed li menu.	ding to all those defined on the switch. be assigned is not complete, but create entries for all CDNs now because their titer, and applications using other DNs can be added, using the Service Directo New Delete Selected New Delete Selected Application Name New Delete Selected Application Name New Delete Selected	r initial definition requires a reboot. ry Number option under the System
Vad new CUN entries correspon Vote: The list of applications to Assignments can be changed li menu.	ding to all those defined on the switch. be assigned is not complete, but create entries for all CDNs now because their ter, and applications using other DNs can be added, using the Service Director New Delete Selected Ip Copyright © 2008 Notel and Its licensors. All rights reserved.	r initial definition requires a reboot. ry Number option under the System
Add new CDN entries correspon Note: The list of applications to Assignments can be changed li menu.	ding to all those defined on the switch. be assigned is not complete, but create entries for all CDNs now because their ter, and applications using other DNs can be added, using the Service Director New Delete Selected Ip Copyright © 2008 Nortel and its licensors. All rights reserved.	r initial definition requires a reboot. ry Number option under the System

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.

- 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 CallPilot Manager - Configuration Wizard - Microsoft Internet Explo - 🗆 × 1 Edit Yew Favorites Tools Help 🔾 Back + 🔘 - 💌 😰 🐔 🔎 Search 🔅 Favorites 🔗 🙆 - 🥾 🗔 💌 🛃 Go 🛛 Links 🏻 Address a http://localhost/cpmgr/configwizard/LanguageSource.asp 民 NORTEL CALLPILOT MANAGER Home Tools - Help -Location + Configuration Wizard + Language Source Directory Configuration Wizard: Language Source Director Back Next Cancel Help Language Source Directory: You must have a CallPilot language CD to install or upgrade prompt languages If you are using the CD-ROM drive on the CallPilot server, enter Z: as the Language CD location (Z: is the default drive letter for the CD-ROM drive on the CallPilot server; if this does not work, check the CD-ROM drive letter). If the language CD is located or copied on a mapped network drive, enter the exact path to the root directory of the CD. If you do not want to make any changes to the languages installed on the server, select Skip Language installation, and click Next to continue. Install Language Language CD Location z C Skip Language installation WARNING: You must have at least one prompt language on your server before CallPilot will be able to function. The configuration wizard can be re-run to add the language at a later point in time Rack | Novt | Cancol | Holo | Local intranet

24 Insert the CallPilot 5.0 Language CD into the CD/DVD drive on CP1.

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.

- 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 CP1 and CP2.

28 Click Next.

Result: The CallPilot Local Area Network Interface page appears.

Figure 21

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

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e Edit View Favorites Iools He	lp	-			
Back • 🕤 • 💌 👔 🏠 🔑 Searc	th 👷 Favorites 🕐 🎑 • 👹	1 23		121	
dress 📳 http://localhost/cpmgr/configwiz/	ard/CallPilotNetwork.asp			-	Go Ur
NØRTEL	CALLPILOT MAN	AGER			昆
			Pref	erences	Help Logou
lome User 🕶 System 🕶	Maintenance 🔻 Messag	ing 🔻 Tools 👻 Help 🤻	•		
ocation + Configuration Wizard + CallPilot F	Local Area Network Interface				
Configuration Wizard: CallPilot L	ocal Area Network Interfac	e			
Back Next Cancel Help					
information.		ermont intenace card and their	enter the TOP.	network	ing
information. Equipment LAN network ELAN		Customer LAN network interface card	CLAN	ne network	rng ▼
Information. Equipment LAN network interface card: IP address:		Customer LAN network interface card: IP address:			
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Information. Equipment LAN network Interface card: ELAN IP address: Subnet Mask:		Customer LAN network interface card: IP address: Subnet Mask: Gateway:			Ing
Information. Equipment LAN network Interface card: ELAN IP address: Subnet Mask: MAC Address:	×	Customer LAN network interface card: IP address: Subnet Mask: Gateway: MAC Address:			
Information. Equipment LAN network ELAN IP address: Subnet Mask: MAC Address:		Customer LAN network interface card: IP address: Subnet Mask: Gateway: MAC Address:			• • • • • • • • • • • • • • • • • • •
Information. Equipment LAN network ELAN IP address: Subnet Mask: MAC Address: High Availability Network Interface	v 	Customer LAN network interface card: IP address: Subnet Mask: Gateway: MAC Address:			
information. Equipment LAN network [ELAN interface card: [ELAN IP address: [Subnet Mask:] MAC Address: [High Availability Network Interface	v 	Customer LAN network interface card: IP address: Subnet Mask: Gateway: MAC Address:			▼

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Figure 22

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

		010	and have		122	100	1 alertin
ress en http://localhost/cpmgr/	configwizard/CallPi	lotNetwork.asp			-	2 60	LINKS
			T High Availability	mode			
High Availability Network	Interface:						
From each list below, select	t the HB1, HB2	and MIRROR netw	ork interface card and t	hen enter the TCP/IF	o networking info	rmation.	
HB1 network interface card:	HB1	×	HB2 networ	k interface card: HB2		•	
IP address:			IF	o address:			
Subnet Mask:			Sub	net Mask:			
MAC Address:		_	MAC	Address:			
MIRROR network interface card:	MIRROR	×					
IP address:			_				
Subnet Mask:							
MAC Address:	[
Back Next Cancel	Help						_
Dound thorn bourboi							

- **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.

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

CaliPilot Manager - Configuration Wizard - Microsoft Internet Explorer	
jie Edit View Favorites Iools Help	
) Back. • 🔿 - 💌 😰 🐔 🔎 Search 🔹 Favorites 🕢 🍰 - 🖧 🗔	
ddress 👌 http://localhost/cpmgr/configwizard/ReadyToSubmit.asp	💌 🛃 Go 🛛 Links
NØRTEL CALLPILOT MANAGER	昆
	Help Logout
iome Tools - Help -	0.5553787.52-87,856539978-87
Location + Configuration Wizard + Ready to Configure	
Configuration Wizard: Ready to Configure	
Back Finish Cancel Help	
Note: Applying the configuration to the CallPilot server will not require any further acti up to one hour to complete based on your server configuration.	on from you. However, the configuration process may take
Back Finish Cancel Help	
Back Finish Cancel Help	
Back Finish Cancel Help Copylight 9 2008 Notel and its licenses. All	rights reserved.
Back Finish Cancel Help Copylight © 2008 Norfel and its licencess. All	rights reserved.
Back Finish Cancel Help Copyright © 2008 Norfel and its licensess. All	rights reserved.
Back Finish Cancel Help Copyright © 2008 Nortel and its licensons. All	rights reserved.

31 Click **Finish** to start process.

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

Figure 24 Progress Information page



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



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:
 - 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.
 - 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 25) 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 25) 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.

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 25).

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.

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.

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.

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.

End-

Figure 25

Rear panel of 1005r server showing LAN connections



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Connecting and verifying LAN connections

Step Action

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 26 Network Connections - no connections

Setwork Connections				
Eile Edit View Favorites Tools Adv.	anced Help 🥂			
🕑 Back 👻 🕘 👻 🎾 Search 🜔 Folders 🛛 🕸 😥 🗙 🇐 🛄 🗸				
Address 🔍 Network Connections	🗾 🔁 Go			
LAN or High-Speed Internet	-			
HB2 Network cable unplugged Intel(R) PRO/1000 MT Dual Po	MIRROR Network cable unplugged Intel(R) PRO/1000 MT Dual Po			
CLAN Network cable unplugged Intel(R) PRO/1000 MT Dual Po	ELAN Network cable unplugged Intel(R) PRO/1000 MT Dual Po			
HB1 Network cable unplugged Intel(R) PRO/1000 MT Dual Po	Local Area Connection 6 Disabled Intel(R) PRO/1000 MT Dual Po			
Wizard				
New Connection Wizard				

- 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.



- 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.

- **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.
- **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).

Network Connections		
<u>Eile E</u> dit <u>V</u> iew F <u>a</u> vorites <u>T</u> ools Adva <u>n</u> ce	ed <u>H</u> elp	<u></u>
🔆 Back 👻 🌖 👻 🌮 🖉 Search 🌔 Folders	🕸 🌶 🗙 🍤 🖽-	
Address 🕵 Network Connections		💌 ラ Go
LAN or High-Speed Internet		4
HB2 Connected Tote/(R) PRO/1000 MT Dual Po.	MIRROR Connected Total (2) PRO(1000 MT Dual Po	
HB1 Connected	Local Area Connection 6 Disabled	
Intel(R) PRO/1000 MT Dual Po	Intel(R) PRO/1000 MT Dual Po	
Wizard		
New Connection Wizard		
3		
		1

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).

-End-

- 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 29 Open With window

en With	?
Choose the program	you want to use to open this file:
Ele: hosts	
December	
Programs	
Adobe Reader 7.0	
Internet Explorer	
Notepad	
Paint Paint	
Windows Media Playe	r
Windows Picture and	Pax Viewer
WordPad	
1	
Always use the selecte	ed program to open this kind of file
	Browne
	OK Cancel

- c. Select Notepad.
- d. Click OK.

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

- 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 25).

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 30	
🚺 hosts - Notepad	
Eile Edit Format View Help	
Copyright (c) 1993-1999 Microsoft Corp.	×
# This is a sample HOSTS file used by Micro	soft TCP/IP for Windows.
# This file contains the mappings of IP add # entry should be kept on an individual lin # be placed in the first column followed by # The IP address and the host name should b # space.	hresses to host names. Each ne. The IP address should r the corresponding host name ne separated by at least one
# Additionally, comments (such as these) ma # lines or following the machine name denot # # # # # # # # # # # # # # # # # # #	y be inserted on individual ed by a '#' symbol.
# For example: #	
# 102.54.94.97 rhino.acme.com # 38.25.63.10 x.acme.com	# source server # x client host
127.0.0.1 localhost 192.168.249.92 CP1005r2	
4	

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.

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 75).
- 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 115).

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.

vailability Configurati	on Wizard	12 P	1000	3
Managed CLAN Host Nam	ne 🗌	Number of Mi	PB96 Boards	1
Managed CLAN IP		User name		
fanaged ELAN IP		Server Works	group / Domain Name	
Node 1 Host Name	cplab239a	EMC AutoSta	ert Domain Name	
Node 2 Host Name		CLAN Test IP		
Item Host name Switch IP Addres CLAN IP Addres	Node 1	1 Node	2	- Rese

- 3 Enter the following information based on the server configuration. This information is completed in Table 3 "High Availability system checklist" (page 25):
 - 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.
 - 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.

inaged CLAN Host Name	cplabha3	Number of MPB96 Boards	3
naged CLAN IP	47.11.220.191	User name	administrator
maged ELAN IP	47.0.60.6	Server Workgroup / Domain Name	workgroup
de 1 Host Name	cplab239a	EMC AutoStart Domain Name	lab39x
de 2 Host Name	cplab239b	CLAN Test IP	47.11.220.1
Item	Node 1	Node 2	
Host name	noos i	11006.2	Be Be

Figure 32 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 33				
Stage 1 Comp	lete			
Stage 1 Complete		38	R	×
No problems have been fo	und.			
You must now exit the wiz	ard and continue with	the installatio	on/upgrade	process.
	(OK)			
	<u></u>			

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 5.2.2 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: <u>www.nortel.com/espl</u>

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 the AutoStart 5.2.2 Agent and Console software on server CP1. 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 the **EAS522_WIN-x86.exe** file to start the installation.

Result: The InstallShield Wizard dialog box appears and informs you that the AutoStart 5.2.2 software requires that the Microsoft .NET Framework be installed before you install the AutoStart software.

EMC AutoStart 5 prior to installing to Status Requirement Pending Microsoft .NE	.2.2 requires that th this application. Clic	ne following requ sk OK to begin i	uirements be installed installing these require	on your compute ements:
Status Requirement Pending Microsoft .NE				
Pending Microsoft .NE				
	T Framework 2.0 ()	(86)		

4 Click OK.

Result: The InstallShield Wizard extracts the files and then automatically installs the Microsoft .NET Framework.

Figure 35 Extracting Microsoft .NET Framework files

InstallShield Wizard

xtracting Mid	rosoft .NET Framewor	k 2.0 (x86)	
		000017000541)	

Figure 36 Installing Microsoft .NET Framework

installShie	Id Wizard MC AutoStart 5.2.2 requires that the following requirements be installed on your computer
Chabut	rior to installing this application. Click OK to begin installing these requirements:
Installing	Microsoft .NET Framework 2.0 (x86)
	Microsoft .NET Framework 2.0
	1
r	
	K Cancel

5 Wait while the InstallShield Wizard installs the Microsoft .NET Framework.

Result: The InstallShield Wizard informs you that the AutoStart 5.2.2 software is preparing to install. (This install preparation can take a few minutes.) After the preparation completes, the Welcome window appears.

Figure 37

InstallShield Wizard - Preparing to install the AutoStart 5.2.2 software





6 Click Next.

Result: The License Agreement window appears.

Figure 39 License Agreement window

EMC AutoStart 5.2.2		
License Agreement Please read the following license a	greement carefully.	where information live
EMC Corporation	End-user License	Agreement
THIS PRODUCT CONTAINS CE	ERTAIN COMPUTER PRO	OGRAMS AND
THIS end-user LICENSE AGRE with the installation of this prod read this Agreement and agree TO THIS AGREEMENT. By pri authorizing any other person to	EMENT (the "Agreement uct until you (later define TO BE BOUND BY AND oceeding with the installa do so), you and your cor	 Do not proceed as Licensee) have BECOME A PARTY tion of this product (or mpany accept this
THIS end-user LICENSE AGRE with the installation of this prod read this Agreement and agree TO THIS AGREEMENT. By pro authorizing any other person to • I accept the terms in the license ag	EMENT (the "Agreement uct until you (later define TO BE BOUND BY AND oceeding with the installa do so), you and your cor greement	Do not proceed d as Licensee) have BECOME A PARTY tion of this product (or mpany accept this <u>Print</u>
THIS end-user LICENSE AGRE with the installation of this prod read this Agreement and agree TO THIS AGREEMENT. By pro authorizing any other person to I accept the terms in the license ag I do not accept the terms in the license control the terms in the license	EMENT (the "Agreement uct until you (later define TO BE BOUND BY AND oceeding with the installa do so), you and your cor greement ense agreement	"). Do not proceed d as Licensee) have BECOME A PARTY tion of this product (or mpany accept this

- 7 Select the l accept the terms in the license agreement option.
- 8 Click Next.

Result: The Setup Type window appears.

Figure 40 Setup Type window

Setup Type	eade	EMC ²
c suits your i		where information live:
Please	ise select a setup type.	
• <u>C</u> omple	e	
1	Both the EMC AutoStart 5.2.2 Agent and Console will be installed.	d EMC AutoStart 5.2.2
C Custom		
1	Choose which program features you wan for advanced users.	nt installed. Recommended
stallShield ——		
	< <u>B</u> ack	Next > Cancel

- 9 Select the **Complete** option button.
- 10 Click Next.

Result: The Destination Folder window appears.

Enc Autostart Siziz	
Destination Folder Setup will install EMC AutoStart 5.2.2 in the following location.	EMC ² where information live
A	
It is highly recommended that you install the product in the same local	tion on all machines.
It is required that you install on a local (non-network) drive.	
It is required that you install on a local (non-network) drive. To install to a different folder, click Change and select another direct	ory.
It is required that you install on a local (non-network) drive. To install to a different folder, click Change and select another direct To install to this directory, click Next.	ory.
It is required that you install on a local (non-network) drive. To install to a different folder, click Change and select another direct To install to this directory, click Next. Install EMC AutoStart 5.2.2 to:	ory.
It is required that you install on a local (non-network) drive. To install to a different folder, click Change and select another direct To install to this directory, click Next. Install EMC AutoStart 5.2.2 to: C:\Program Files\EMC AutoStart\	ory. ⊆hange

11 Click Change.

Result: The Change Current Destination Folder dialog box appears.

Figure 42

EME AutoStart 5.2.2		0
Change Current Destination Folder Browse to the destination folder.	w	EMC ²
Look in:		
🚔 EMC AutoStart		E
Eolder name:		
dk\Program Files\EMC AutoStart\		
tallShield		

-

12 In the Folder name field, change only the drive letter from C to D. Do not change the rest of the path.

The path must be as follows: D:\Program Files\EMC AutoStart\

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

13 Click OK.

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

14 Click Next.

Result: The Domain Information window appears.

Figure 43 Domain Information window

Domain Informatio	n	EMC where information liv
Enter the name of t characters are not	he Domain (must be 8 characters o allowed)	or less, spaces and special
<u>D</u> omain Name:	lab26x	
allShield		

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 Click Next.

Result: The [AutoStart_Domain] domain first node window appears.



- 17 Select the Yes, this is the first node in the domain option.
- 18 Click Next.

Result: The EMC AutoStart 5.2.2 Licensing window appears.

Figure 45 EMC AutoStart 5.2.2 Licensing window

1C AutoStart 5.2.2	Licensing	EMC where information
Please ente Corporation	er the EMC AutoStart 5.2.2 License Key h. If you do not enter a License Key for iscrete will be installed	s obtained from EMC a Module, a 90 day
Autostart 5.2.2:	JAMEVAL	
Exchange <u>2</u> 000:	E2EVAL	
Exchange 200 <u>3</u> :	E3EVAL	
Oracle 3.1:	OWEVAL	
SQL Server 2000:	SQEVAL	

19 Enter your AutoStart 5.2.2 license key (provided with your CallPilot server) in the **AutoStart 5.2.2** field. Leave the values in the other fields unchanged.

Note: When you order the High Availability feature, the AutoStart 5.2.2 license key comes in the form of an EMC License Registration Card.

20 Click Next.

Result: The Mirroring Network Configuration window appears.

EMC AutoStart 5.2.2			
Mirroring Network Configuration			EMC where information live
To configure the disk mirroring feature, se		ladiastad ta minu	
communications. Be sure to select the san	ne network on b	oth machines in t	he mirror pair.
communications. Be sure to select the san	ne network on b	oth machines in t	he mirror pair.
communications. Be sure to select the san	ne network on b	oth machines in t	he mirror pair.
communications. Be sure to select the san	ne network on b	oth machines in t	n relaced he mirror pair.

- 21 Select the IP address that was assigned to the Mirror NIC on CP1. The default value is 193.0.0.10. If you used a different value, select that IP address.
- 22 Click Next.

Result: The Confirm Settings window appears.

Figure 47 Confirm Settings window

EMC AutoStart 5.2.2		×
Confirm Settings If you are satisfied with these settings, cl any settings, click Back.	ick Next. If you want to change	EMC ² where information lives
EMC AutoStart 5.2.2		-
Selected Feature(s): AutoStart Agent AutoStart Console Domain Name: lab26x First Primary Agent: Installing on cplab260a Agent Service Display Name: EMC AutoStart - lab26x Agent Backbone Service Display Name: EMC AutoStart - lab26x Backbone Authorized User: Administrator Target Directory:		
nstallShield	< Back	

- **23** Verify that the settings are correct.
- 24 Click Next.

Result: The Ready to Install the Program window appears.



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

Result: The Installing EMC AutoStart 5.2.2 window appears and shows the status of the installation.

Figure 49 Installing EMC AutoStart 5.2.2 window

EMC Auto	oStart 5.2.2	
Installing The proc	EMC AutoStart 5.2.2 gram features you selected are being installed.	EMC where information li
13	Please wait while the InstallShield Wizard installs EMC A may take several minutes.	AutoStart 5.2.2. This
	Status:	
	Copying new files	
tallShield -		
	< Back N	ext > Cancel

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

Figure 50



FMC AutoS	itart 5.2.2	×
EMC ²	InstallShield Wizard Completed	
L.	The InstallShield Wizard has successfully installed EMC AutoStart 5.2.2. Click Finish to exit the wizard.	
	Some program files might have been updated since EMC AutoStart 5.2.2 was released. Your Internet connection may be used to make sure that you have the latest updates.	
ſ.		
	< Back Einish Cancel	

27 Clear the **Check for program updates now** check box.

28 Click Finish.

Result: The EMC AutoStart 5.2.2 dialog box appears, prompting you to restart your system.

Figure 51



29 Click **No** if there are patches to install or click **Yes** to restart CP1.

Note: If there are patches available, install the patches and then restart CP1.

—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.

 Launch the AutoStart Console on CP1 by selecting Start > Programs > EMC AutoStart Console > EMC AutoStart Console 5.2.

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 52

AutoStart Console - Licensing/Security tab - Add Admin User

Domain	Settings Licensing	/Security	Statistics/Domain Fai	lure Detection Event	Log Isolation Settings
Lonains Domains B Modules Resource Groups C Models Processes Services Processes Processes Processes Processes Processes Processes Processes Processes Processes Node Process Processes Node Processes Processes Node Processes Processe	Current License Ini Product: License Key: License Type: Expires: New License Key: Valid User List User administrator	formation lab26x [AM 90-D Unrestric April 26, 1 [cpl	ay Evaluation Key ted SDK Site Eval 2007 Domsin/Node ab260a	Access Administrator	Ada Description Intial Windows instal
ci mygers	User Name ad Domain/Node cp Access Rights Description Ca	ministrato lab261a IIPilot Nod	r e 2	Operator C Adminis	trator

- 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.

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

Figure 53 AutoStart Console - Licensing/Security tab - Node 2 Administrator user is added

Domain	Settings Licensing	/Security Statistics/De	omain Failure Detection Eve	ent Log Isolation Settings
Domains ■ State Monitors Processes Processes Processes Processes Processes Processes Processes Prode Provies Node Aliases Prode Provies Prode Process Processes	Current License Int Product License Key: License Type: Expires: New License Key: Valid User List User administrator administrator	formation ab26x AM 90-Day Evaluation Unrestricted SDK Site I April 26, 2007 Domain/Node cplab260a cplab261a	Key Eval Access Administrator Administrator	Ads Description Initial Windows Install CallPilot Node 2
	User Name Domain/Node Access Rights Description	0 0	Jser C Operator C Adm	inistrator

7 Exit the AutoStart Console on CP1.

–End—

Install the AutoStart software on CP2

The following procedure installs the AutoStart 5.2.2 Agent and Console software on server CP2. This procedure takes approximately 10 minutes.

Installing the AutoStart software on CP2

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 you install 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 the **EAS522_WIN-x86.exe** file to start the installation.

Result: The InstallShield Wizard dialog box appears and informs you that the AutoStart 5.2.2 software requires that the Microsoft .NET Framework be installed before you install the AutoStart Software.

Figure 54 Pending install of Microsoft .NET Framework

InstallShield Wizard

Status Pending	MC AutoStart 5.2.2 requir rior to installing this applic Requirement Microsoft .NET Framew	es that the following re ation. Click OK to begin ork 2.0 (x86)	quirements be installed or n installing these requirem	n your compi ents:
				Cancel

4 Click **OK**.

Result: The InstallShield Wizard extracts the files and then automatically installs the Microsoft .NET Framework.

EM priv	d Wizard IC AutoStart 5.2.2 requires that the following requirements be installed on your compute or to installing this application. Click OK to begin installing these requirements:
Status	Requirement
Extracting	Microsoft .NET Framework 2.0 (x86)
tracting:	(88989F5C-F976-4520-9570-322617328541).dotnetfx.exe
stracting:	(88989F5C-F976-4520-9570-322617328541).dotnetfx.exe

Figure 56 Installing Microsoft .NET Framework

InstallShiel	d Wizard
EM pri	IC AutoStart 5.2.2 requires that the following requirements be installed on your computer or to installing this application. Click OK to begin installing these requirements:
Status	Requirement
Installing	Microsoft .NET Framework 2.0 (x86)
	Microsoft NET Framework 2.0
	187
	OK Cancel

5 Wait while the InstallShield Wizard installs the Microsoft .NET Framework.

Result: The InstallShield Wizard informs you that the AutoStart 5.2.2 software is preparing to install. (The install preparation can take a few minutes.) After the preparation is complete, the Welcome window appears.

Figure 57

InstallShield Wizard - Preparing to install the AutoStart 5.2.2 software



Figure 58 Welcome window



6 Click Next.

Result: The License Agreement window appears.

EMC AutoStart 5.2.2	and the second s	
License Agreement		EMC ²
Please read the following license agree	ement carefully.	where information live
EMC Corporation E	nd-user License	Agreement
THIS PRODUCT CONTAINS CERT	TAIN COMPUTER PR	OGRAMS AND
OTHER PROPRIETARY MATERIA THIS end-user LICENSE AGREEN with the installation of this product read this Agreement and agree TO TO THIS AGREEMENT. By proce authorizing any other person to do	AL, THE USE OF WH MENT (the "Agreement until you (later define D BE BOUND BY AND eeding with the installa so), you and your co	ICH IS SUBJECT TO t). Do not proceed d as Licensee) have D BECOME A PARTY ation of this product (or mpany accept this
OTHER PROPRIETARY MATERIA THIS end-user LICENSE AGREEN with the installation of this product read this Agreement and agree TO TO THIS AGREEMENT. By proce authorizing any other person to do	AL, THE USE OF WH MENT (the "Agreement until you (later define BE BOUND BY AND seding with the installa so), you and your co ment	CH IS SUBJECT TO t). Do not proceed d as Licensee) have 0 BECOME A PARTY ation of this product (or mpany accept this
OTHER PROPRIETARY MATERIA THIS end-user LICENSE AGREEN with the installation of this product read this Agreement and agree TO TO THIS AGREEMENT. By proce authorizing any other person to do I accept the terms in the license agree I do not accept the terms in the license stall5held	AL, THE USE OF WH MENT (the "Agreement until you (later define BE BOUND BY AND seding with the installa so), you and your co ment e agreement	ICH IS SUBJECT TO t'). Do not proceed d as Licensee) have D BECOME A PARTY ation of this product (or mpany accept this Print

- 7 Select the l accept the terms in the license agreement option.
- 8 Click Next.

Result: The Setup Type window appears.

Figure 60 Setup Type window

Setup Type t suits your n	eeds.			EMC ²
Plea	ise select a setup type.			mere information inve
• <u>Complet</u>	Both the EMC AutoSta Console will be installe	art 5.2.2 Agent and El ad.	//C AutoStart 5.2.	2
C Custom	Choose which progra	n features you want ir	nstalled. Recomme	ended
stallShield	ror advanced users.			
				· · · ·

- 9 Select the **Complete** option button.
- 10 Click Next.

Result: The Destination Folder window appears.

Destination Folder Setup will install EMC AutoStart 5.2.2 in the following location.	EMC ² where information live
*	
It is highly recommended that you install the product in the same local	tion on all machines.
It is required that you install on a local (non-network) drive.	
To install to a different folder, click Change and select another directo	ory.
To install to this directory, click Next.	
To install to this directory, click Next. Install EMC AutoStart 5.2.2 to:	
To install to this directory, click Next. Install EMC AutoStart 5.2.2 to: C:\Program Files\EMC AutoStart\	Change

11 Click Change.

Result: The Change Current Destination Folder dialog box appears.

Figure 62

EMC AutoStart 5.2.2	
Change Current Destination Folder Browse to the destination folder.	EMC ² where information live
Look in:	
💣 EMC AutoStart	
Folder name:	
Ender name:	
dt)Program Elles/EMC AutoStart)	
d:\Program Files\EMC AutoStart\	

12 In the Folder name field, change only the drive letter from C to D. Do not change the rest of the path.

The path must be as follows: D:\Program Files\EMC AutoStart\

ATTENTION

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

13 Click OK.

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

14 Click Next.

_...

Result: The Domain Information window appears.

Domain Informatio	on	EMO
Enter the name of the characters are not	the Domain (must be 8 characters allowed)	or less, spaces and special
<u>D</u> omain Name:	lab26x	

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 Click Next.

Result: The [AutoStart_Domain] domain first node window appears.

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

Iab26x domain first node Is this the first node in the EMC AutoStart 5.2.2 lab26x domain? Yes, this is the first node in the domain Is the re is an existing node in the domain		utoStart 5.2.2
 Is this the first node in the EMC AutoStart 5.2.2 lab26x domain? Yes, this is the first node in the domain Yeo, there is an existing node in the domain 	MC ormation liv	domain first node
 Yes, this is the first node in the domain No, there is an existing node in the domain 		s the first node in the EMC AutoStart 5.2.2 lab26x domain?
Mo, there is an existing node in the domain		Yes, this is the first node in the domain
		No, there is an existing node in the domain
stallShield		

18 Click Next.

Result: The Identify Primary Node window appears.

Figure 65 Identify Primary Node window

🕞 EMC Aut	toStart 5.2.2				×
Identify	Primary Node	•			EMC ² where information lives
Enter H	a name of the	node on which a l	Vimary Agent is	installed	
Litter u	Ensure the fo	llowing:	rinary Agent is	instancu.	
	1. This node 2. The agent	can resolve the na is running on the	ame of the prima primary node.	ry node.	
	3. The curren	t user of this nod	e has access to	the domain.	
	Primary:	cplab260a			
InstallShield	<u>y</u>				
		ļ	< <u>B</u> ack	Next >	Gancel

- **19** Enter the host name of the CP1 server in the High Availability pair in the **Primary** field.
- 20 Click Next.

Note: If you enter an invalid name for the Primary node, or the AutoStart agent is not running on the Primary node, an error message (similar to the following) is displayed. Confirm that the primary node name is correct and that the networking is configured so that the name can be resolved on the secondary node. Click **OK** to return to the Identify Primary Node window.



Note: If you forgot to add the administrator account of CP2 into the AutoStart domain as a domain administrator, the following error is displayed. Click on **OK** to return to the Identify Primary Node screen.

Figure 67 Primary Agent error

EMC A	utoStart 5.2.2	×
8	The primary agent returned the following error. Correct this problem and run the setup again. The setup will now exit.	
	Version 5.2.2 Build 106	
	[Err:10035] User Not Found [Err:8001] Access Denied	
	Version 5.2.2 Build 106	
	[Err:10035] User Not Found [Err:8001] Access Denied	
	UVersion 5.2.2 Build 106 CC [Err: 10035] User Not Found C[Err:	
InstallShiel	d	

21 Click Next.

Result: The Mirroring Network Configuration window appears.

EMC AutoStart 5.2.2	
Mirroring Network Configuration	emc ² where information live
To configure the disk mirroring feature, select a network d communications. Be sure to select the same network on bo	ledicated to mirror related oth machines in the mirror pair.

- 22 Select the IP address that was assigned to the Mirror NIC on CP2. The default value is 193.0.0.11. If you used a different value, select that IP address.
- 23 Click Next.

Result: The Confirm Settings window appears.

		1
Confirm Settings If you are satisfied with these settings, clic any settings, click Back.	k Next. If you want to change	EMC ² where information live
EMC AutoStart 5.2.2		
Selected Feature(s): AutoStart Agent AutoStart Console Domain Name:		
lab26x First Primary Agent: Installing on cplab260a Agent Service Display Name:		1
EMC AutoStart - lab26x Agent Backbone Service Display Name: EMC AutoStart - lab26x Backbone		
Authorized User: Administrator Target Directory:		<u>-</u>

- 24 Verify that the settings are correct.
- 25 Click Next.

Result: The Ready to Install the Program window appears.

Figure 70 Ready to Install the Program window

🕞 EMC AutoStart 5.2.2		×
Ready to Install the Program The wizard is ready to begin installation		EMC ² where information lives
Click Install to begin the installation.		
If you want to review or change any of exit the wizard.	your installation settings	, click Back. Click Cancel to
Install5hield	< Back	[nstall

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

Result: The Installing EMC AutoStart 5.2.2 window appears and shows the status of the installation.



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

Figure 72


- 28 Clear the **Check for program updates now** check box.
- 29 Click Finish.

Result: The EMC AutoStart 5.2.2 Installer Information dialog box appears.





30 Click No if there are patches to install or click Yes to restart CP2.

Note: If there are patches available, install the patches and then restart CP2.

—End—

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

 Launch the AutoStart Console by selecting Start > Programs > EMC AutoStart Console > EMC AutoStart Console 5.2.



WARNING

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

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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.

Figure 74

AutoStart Console - Failure Detection and Mirroring tab

Domain	Node Properties Failure Detect	tion and Mirroring Agent Sta	tistics
Domains Hab26x Hodules Resource Groups Calabitation Processes Services Process Proxies Process Process Proxies Process Process Proxies Process Process Proxies Process Process Process Proxies Process Process Process Proxies Process Process Proces	Configure Mirror Setting Local Mirror Address 193.0.0 Remote Mirror Host I onnew Paths Defined for Node Network Usage Domain Verification Domain Domain Usage: Domain Local IP Address: 47.0.30.3	10 Local IP Address 192.00.10 193.00.10 194.00.10 47.030.3 47.11.220.138 est Point-to-point: Add Path Est Path S	Destination IP Address -Muticast-

- 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.

Figure 75 AutoStart Console - Failure Detection and Mirroring tab - Adding path

EMC AutoStart Console - Versit File Action View Help	on 5.2.2		
+ × 실 🕸 🖲			
Domain	Node Properties Failure Detec	ction and Mirroring Agent Statistic	s
Domains Hab250x Resource Groups Collaborations Collaborations Processes	Configure Mirror Setting Local Mirror Address 193.0.0 Remote Mirror Host Informa-		×
Process Proxies	Paths Defined for Node		
Process Proxies Node Proxies Node Proxies Data Sources P Addresses NCs NCs NCs NCs Unity Processes	Network Usage Domain Verification Domain Verification Verification	Local IP Address 192.0.0.10 193.0.0.0 194.0.0.10 47.0.30.3 47.11.220.133	Destination IP Address
 State Monitors Triggers 	Usage: Verification Local IP Address: 47.11.220. (* Multic	n 138 est C Point to point. • Add Path Rath X De	elete Path

- I. 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.
- 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.
- I. 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

- 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.)

Figure 76 AutoStart Console - Failure Detection and Mirroring tab - Local Mirror Address

• A GE & •			
Domain	Node Properties Failure Dete	ection and Mirroring Agent Statisti	cs
Domains ☐ tab26x	Configure Mirror Setting Local Mirror Address 193.0 Remote Mirror Host Innone	011	
Services Process Province	Paths Defined for Node		
Onde Proxies	Network Linace	Local IP Address	Destination IP Address
Node Allases	Domain	192.0.0.11	<multicast></multicast>
P Addresses NCs NCs NC Groups Utity Processes Rules State Monitors Transes	Domain Domain Domain Usage: Domain	1950.0.11 194.0.0.11 47.0.30.5 47.11.220.174	
in Triggera	Local IP Address: 192.0.0.1	1	×
		Add Path	velete Path

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

EMC AutoStart Console - Vers	ion 5.2.2		
File Action View Help			
+ × 👍 🕸 🔘			
Domain	Node Properties Failure	Detection and Mirroring Agent Statisti	cs
Jomains ■ Iab26x Resource Groups Podes Podes Processes Services Processes Processes Node Proces Node Proces Pata Sources Pata Sources	Configure Mirror Setting Local Mirror Address 19 Remote Mirror Host cr Paths Defined for Node Network Usage Domain Domain Domain	3 0 0.11 ab260a Local IP Address 192 0 0.11 193 0 0.11 194 0 0.11 47 0 30 5	Destination IP Address Multicast>
Utility Processes Rules State Monitors Triggers	Local IP Address: 1920	47.11.220.174 n 0.11 Auticest C Point-to-point Auticest Manager Concert	

Figure 77

- 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.

Figure 78 AutoStart Console - Failure Detection and

AutoStart Console - Failure Detection and Mirroring tab - Verify Lo	cal
and Remote Mirrors	

Domain	Node Properties Failure Detect	tion and Mirroring Agent Statistic	s
lomains ⇒ lab26x P Modules — Resource Groups — ↓ Nodes → ↓ Nodes → ↓ Processes — Services	Configure Mirror Setting Local Mirror Address 193.0.0 Remote Mirror Host cplab.20	110 Ste	
Process Proxies Onde Proxies	Paths Defined for Node		Destination ID Address
Pada Sources IP Addresses ⊕ ● NICs ⊕ NIC Groups ⊕ Utility Processes ⊕ Rules	Verification Domain Verification Verification	193.0.0.10 194.0.0.10 47.0.30.3 47.11.220.138	«Mulicast»
 State Monitors Triggers 	Usage: Domain		2
	Local IP Address: 192.0.0.10	ant C Doint to point	2
	+	Add Path	elete Path
	1	Land Oreners at	(ab)

- **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.

The information that was previously entered is automatically loaded and the node information validation is automatically rerun. Elaura 70

	[asha1]				1.	-
Managed LLAN Host Name	Chuait		Number of MPB96 Board	s	μ.	-
Managed CLAN IP	47.11.220.20	6	User name		administrator	
Managed ELAN IP	47.0.30.6		Server Workgroup / Domain Name		workgroup	
Node 1 Host Name Cplab260a			EMC AutoStart Domain Name		lab26x	
Node 2 Host Name	cplab261a		CLAN Test IP		47.11.220.1	
Stage 1			Sta	sge 2		
ptep it det node informe	abon S	Step 2: Validate Nod.	e Information	Step 3: G	enerate Definition	n File
Item	Non S	itep 2: Validate Nodi Ide 1	Node 2	Step 3: G	enerate Definition	Rese
Item CLAN Subnet Mass CLAN Subnet CLAN Default Gate	Non 5 k 25 way 47	itep 2: Validate Nod ide 1 5.255.255.0 11.220.0 .11.220.1	Node 2 255.255.255.0 47.11.220.0 47.11.220.1	Step 3: G	enerate Definition	Rese
Item CLAN Subnet Masi CLAN Subnet CLAN Default Gate CLAN Default Gate CLAN IP Address	No k 25 way 47 ca 47	de 1 5.255.255.0 11.220.0 11.220.1 notel.com 0.30.3	Node 2 255.255.255.0 47.11.20.0 47.11.20.0 47.11.20.1 ca.notel.com 47.0.30.5	Step 3: G	enerate Definition	Rese
Item CLAN Subnet Mass CLAN Subnet CLAN Denait ELAN IP Address ELAN Subnet Mass ELAN Subnet	Nor S No k 25 47 9way 47 ca 47 k 25 47 k 47	blep 2. Validate Nod- 5.255.255.0 11.220.0 11.220.1 11.220.1 11.220.1 5.255.255.240 0.30.0	Node 2 255 255 255 0 47,11,220,0 47,11,220,1 ca.notel.com 47,0,30,5 255,255,240 47,0,30,0	Step 3: G	enerate Definition	Rese
Item CLAN Subnet Masi CLAN Subnet Masi CLAN Subnet CLAN Default Gab ELAN Default Gab ELAN Subnet Masi HBI Subnet Masik HBI Subnet Masik Mirror IP Address Mirror Subnet Masik	Notek 255 k 255 sway 47 sway 47 k 255 k 25	Step 2: Validate Nod 3de 1 5 255 255 0 11 220 0 11 220 1 11 220 1 11 220 1 12 20 1 12 5 25 25 20 1 10 5 25 5 25 0 10 5 25 5 5 0 10 5 25 5 25 5 25 5 0 10 5 25 5 25 5 25 5 5 5 5 5 5 5 5 5 5 5 5	Node 2 255 255 255 0 47.11.220.0 47.11.220.1 ca.notel.com 47.0.30.5 255.255 255 240 47.0.30.11 255.255 255 0.11 255.255 255 0.11 255.255 255 0.01 193.00.11 255.255 255 0	Step 3: G	enerate Definition	Rese
Item CLAN Subnet Masi CLAN Subnet Masi CLAN Subnet CLAN Default Gate CLAN Default Gate ELAN IP Address HB1 Subnet Masi HB1 Subnet Masi HB2 IP Address HB2 Subnet Masi HB2 IP Address HB2 Subnet Masi HB2 IP Address HB2 Subnet Masi HB2 IP Address	k 255 k 255 sway 47 k 255 k 255 k 255 19 25 19 25 19 25 19 25 19 25 19 25 19	Step 2: Validate Nod 5255 255.0 11.220.0 11.220.1 notel.com 0.30.3 5255 255.240 0.30.0 2.00.10 5.255.255.0 3.0.0.10 5.255.255.0 3.0.0.10 5.255.255.0 4.0.0.10 5.255.255.0 v.enabled	Node 2 255 255 255 0 47.11.220.0 47.11.220.1 ca.notel.com 47.0.30.5 255 255 255 240 47.0.30.0 192.00.11 255 255 255 250 193.00.11 255 255 255 255 0 193.00.11 255 255 255 255 0 194.00.11 255 255 255 255 0 194.00.11 255 255 255 0 HA enabled	Step 3: G	enerate Definition	Rese
Item CLAN Subnet Masi CLAN Subnet Masi CLAN Subnet CLAN Default Gat ELAN IP Address ELAN Subnet Masi HBI Subnet Masik Mirror IP Address Mirror IP Address Mirror IP Address HBI Subnet Masik HB2 IP Address HB2 Subnet Masik HB2 Reature EMC Agent Service EMC Agent Service	No. S N. 47 sway 47 dynay 47 k 25 19 25 10 10 10 10 10 10 10 10 10	Step 2: Validate Nod Jode 1 5: 255: 255: 0 :11: 220: 0 :11: 220: 1 :nordel.com 0: 30: 3 5: 255: 255: 240 0: 30: 0 2: 00: 10 5: 255: 255: 0 3: 00: 10 5: 255: 255: 0 4: 00: 10 5: 255: 255: 0 4: 00: 10 5: 255: 255: 0 uming ming	Node 2 255 255 255 255 0 47,11 220.0 47,11 220.0 47,0 30.5 255 255 255 255 20 255 255 255 20 132.0.011 255 255 255 20 133.0.011 255 255 255 0 134.0.011 255 255 255 0 HA enabled Burning Burning	Step 3: G		Rete

- 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 80 Phase 2 Complete
Phase 2 Complete
The definition file has been successfully generated. The definition file will be imported into the EMC AutoStart Console later in the configuration process
You must now exit the wizard and continue with the installation/upgrade process.
CK

- 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.

–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.



WARNING

During the Import process the AutoStart Console does not respond.

- **7** Verify that the AutoStart definition file was successfully imported by doing the following:
 - 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
- UnloadTSP
- UnloadTSPOnStandbyServer
- 5 Select the **DisableAOS** Utility Process.

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

Figure 81

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

EMC AutoStart Console - Version 5.2 File Action View Help	2		<u>×</u>
+ = © × •			
Domain Domain Domain Domain Hodules Hodul	Settings Options Script Settings Name: KillServices Description: Kill All CP Servic Execution Environment Operation Type: Batch Cor Operation Type: Batch Cor Operation Type: Batch Cor Operation Type: Batch Cor Operation Science Cor Valid Node List C All Nodes C Selected List Login Info Domain: Workgroup	es vmand Selected Nodes	Available Nodes Cplab260a Cplab261a
	User Name: administrato	or Confirm:	

- 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.

—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 82 Rules - Managed_ELAN_IP_Failure_Notif

Domain	Settings Rule Script	
Domains Definition of the second of the se	Settings Rule Name: Managed_ELAN_P_Failure_Notif Description: Triggers To Drive Rule Managed_ELAN_P_Failure	Available Triggers CCR_Failed MAP_Failed Node_Status_Changed Tuble Cyne Failed
Process Provies Process Provies Node Aliases D Data Sources P O Data Sources A7.11.2206 A7.030.6 NICS NICS NICS NICS Croups Cutty Processes Rules CCR_FALED D trableAOS	Rule Variable Variable: Value:	Value t. Delete
MAP_FAILED Mansged ELAN_P_Fail TIME_Svc_FAILED APE_Failed Svc_Dae_Failed O Svc_Dae_Failed	Corr Trace Level Lowest - less verbose On Trace Output Output sent to Event L	og end CLI

4 Select the **Rule Script** tab.

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



Domain Domain Domains Indicate	Settings Rule Script Go To Line: # Managed ELAN IP Failure Notification Rule # Managed ELAN IP Failure Notification Rule # This rule is associated with a threshold trigger. Each time # the trigger goes off this rule will send a message to the # list of recipients listed below. # To use this rule simply fill in values for GrecipientList. For examt # to have the report sent to user1 and user2@legato.com you would # specify the recipientList as follows:
lomains ▲ Isb25t: Modules Resource Groups. B-© CalPlot _ D-© CalPlot_cplab251a D-© CalPlot_cplab250a D-© C	Go To Line: 1 Proport. Proport. Check Syntax # Managed ELAN IP Failure Notification Rule # # This rule is associated with a threshold trigger. Each time # the trigger goes off this rule will send a message to the # list of recipients listed below. # # To use this rule simply fill in values for GrecipientList. For exam # to have the report sent to user1 and user2@legato.com you would # specify the recipientList as follows:
P Addresses P Addresses 47 11 220 206 47 13 220 206 47 0 30.6 NCs NCs NCs NCs Oxcesses Note Oxcesses Nds CCR_FALED OsablaAOS MAP_FALED MAP_FALED MAP_FALED MAP_Faled Svc_Dae_Failed Svc_Dae_Failed Svc_Stam_Failed Svc_Stam_Failed StateMantform	<pre># # grecipientList = ("user1\@legato.com", "user2\@legato.com"); # # # CONFIGURATION SECTION ####################################</pre>

- 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 183).

-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>**.

En Autoscare Con	sole - Version 5.2.2	10					_ 0
He Action Yew Hel	P						
• × = = • •							
Domain		Settings Opt	ions Advanced	versionly tracking Status			
Commits Commits	Apt Ceste Lyw Re Ceste Lyw Re Ceste Lyw Re Ceste Current Ceste C	Santar of Head Monitoring Sta Monitoring Sta Monitoring Sta Resource Group area Group Serve Create Control Con	Chi-Funet Chi-Funet Chi-Salte Chi-Sa	Control Contr	Defacted Defacted Stoped Unasigned Stoped Unasigned Stoped Stoped Stoped Stoped Stoped Stoped	Diate Second Sec	Node
		-			George 🖉 General 🐠	tiela	

Figure 84 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.

EMC AutoStart Cons	ole - Version 5.2.2	2					
File Action View Help	p						
+ × 🖩 🖀 🕨 🏽	0 40						
Domain		Settings Options Advan	ced	Availability Tracking	g Status		
Domains Modules Modules Modules Modules CalPiot_c CalPiot_c	ups plab250a plab251a a a ch Complete 13%	Status of Resource Group Monitoring State: Group State: Status of Resource Group Name drvE Synch Complete ASA 47.0.30.6 C7.11.220.206 C0:HAL-Monitor LowEN) Elem 13%	Conline Conli	Prefer Colab25	red Nodes I0a I1a Node cplab260a cplab260a cplab260a cplab260a cplab260a cplab260a cplab260a cplab260a	
Addresses	At least one mirror or repaired. If a server is take volume is being in volume may not b Misroring Speed (4)	Volume in being initialized in down while a mirror nhalaced or repared, the se available to the cluster. all volumes): 28.07 MB/sec		Service Service Utility Process Service Service Service Service Service	Running Running Running Running Running Running Running Running	cplab260a cplab260a cplab260a cplab260a cplab260a cplab260a cplab260a cplab260a	_
-		<u>.</u>	_	✓ Apply ØC	ancel 🥑 Help		12

Figure 85 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.

EMC AutoStart Console - Version 5.	2.2			-	
File Action View Help					
+ X 🖩 🖀 🕨 🚑 Ø					
Domain	Settings Options Advanced	Availability Tracking	g Status		_
Domains	Status of Resource Group				_
😑 lab26x			Preferr	ed Nodes	
Modules	Maniforing State	Enabled	Conish260	la	_
E Sesource Groups	monator ang Stores.	Linderou	Colab26	1.	
D CalPiot			- cpratzo		
CalPiot_cplab260a	Group State	Online			
E GalPiot_cplab261a	Group state.	Crimic			
E O Nodes					
- Cplab260a	Status of Resource Group Elem	ients			
cplab261a	Name	Тур Туре	State	Node	
Processes	Q drvE	Data Source	Attached	cplab260a	
Services	GrvF	Data Source	Attached	cplab260a	
T O Node Dravies	I ASA	Service	Running	cplab260a	
Node Aliases	47.0.30.6	P	Assigned	cplab260a	
E O Data Sources	Q 47.11.220.206	IP	Assigned	cplab260a	
O dryE	CP-HAL-Monitor	Service	Running	cplab260a	
- O drvF	LoadDN	Utility Process		***	
O IP Addresses	CP-AOS-SVC	Service	Running	cplab260a	
🕀 🕥 NICs	CP-LDAP-Svc	Service	Running	cplab260a	
NIC Groups	LoadTSP	Utility Process		***	
Utility Processes	Telephony	Service	Running	cplab260a	
Rules	CP-Svc-Daemon	Service	Running	cplab260a	
State Monitors	CP-SVC-Manager	Service	Running	cpiao260a	
Triggers	CP-Mutimedia-Volume-1	Service	Running	cplab260a	
	CP M dimedia Volume 102	Service	Running	cplab260a	
	Co-multimedide volume-res	501760	rouning	0,0002000	
	4				1
		V Apply 0.0	ancel 🥑 Help		

Figure 86 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>**.

Bit dots Setting: Option Performal Nodes	EMC AutoStart Console - Version	52.2				_ 6
Comman Setting: Options: Advanced: Advanced: Setting: Setting Setting: Options: Advanced: Advanced: Setting: Setting Setting: Options: Advanced: Advanced: Setting: Setting Setting: Options: Setting: Options: Setting: Options: Setting: Options: Setting: Options: Setting: Options: Setting: Option: Setting: Setting: Option: Setting: Option: Se	He Action Yew Help					
Setting Option Setting Option Performed Nodes Status Status Status Status Status Performed Nodes Status	• X = = • • 4 0					
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- **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.

Figure 88 AutoStart Console - Verify status of both CallPilot_[CP1] and CallPilot_[CP2] Resource Groups Set Console - Version 5.2.2 - 0 × File Action View Help + X 🖩 🖀 🕨 🚑 Ø Domain Settings Options Advanced Availability Tracking Status Status of Resource Group Domains alab26x Preferred Nodes F Modules C Enabled Cplab261a Monitoring State:



–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.



WARNING

Do not attempt to failover from CP1 to CP2 until the mirroring started in "Bringing the CallPilot Resource Group online on CP1" (page 122) is complete.

For more information, see "Initiating a manual failover" (page 215).

- 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

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 215).

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.

–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.
- Launch the AutoStart Console on CP1 by selecting Start > Programs > EMC AutoStart Console > EMC AutoStart Console
 5.2.

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.
 - 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 213).
- 8 Take the CallPilot resource group offline on CP1. See "Taking the CallPilot resource group offline" (page 211).
- 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 89

Computer Name Changes

omputer Name Changes	1	T	?)
You can change the name and the computer. Changes may affect acc	membership ess to netwo	o of this ork resour	ces.
Computer name:			
CPLAB260A			
Full computer name: CPLAB260A. Member of		More	ə
• Domain:			1.3
CPDev.nortel.local			
© <u>W</u> orkgroup: WORKGROUP			
	OK	Can	cel

- 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.

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.

EMC AutoStart Console - Version 5.2. File Action View Help	2	- 🗆 🗵
+ = 0 × •		
Domain	Settings Options Script	
Domains ⇒ Isb2bx	Settings Name: KillServices Description: Kill All CP Services Execution Environment Operation Operation Parameters: Valid Node List Selected List Contemport Conferm User Name: administrator Directory: D:WorkerData/HA;HA_DB_Scripts	

Figure 90 AutoStart Console - Utility Processes

- c. Click Apply.
- **17** Repeat Step 10 for each of the remaining Utility Processes.
- **18** On CP1, enable monitoring. See "Enabling automatic failovers (start monitoring)" (page 214).
- **19** Bring the CallPilot resource group online on CP1. See "Bringing the CallPilot resource group online" (page 209).

—End—

Chapter 6 Maintaining a High Availability system

In this chapter

"CallPilot Configuration Wizard" (page 135)

"Working with domains and workgroups" (page 175)

"EMC AutoStart Agent and Console" (page 182)

"Support" (page 235)

This chapter outlines the procedures used to maintain 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.

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 136).
- To change a computer name, see Figure 89 "Computer Name Changes" (page 131).
- To change the administrator account password, see "Administrator account changes" (page 140).

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).

- b. Launch the AutoStart Console.
- Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 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 138).

h. Click Next.

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 140).

- j. Click Next.
- k. Click Finish to complete the Configuration Wizard.
- I. Perform a manual failover. For more information, see "Initiating a manual failover" (page 215).

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).

- **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 213).
 - 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 138).

h. Click Next.

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 140).

- j. Click Next.
- k. Click Finish to complete the Configuration Wizard.
- Perform a manual failover. For more information, see "Initiating a manual failover" (page 215).

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 214).

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 138).)
- Servers in a Windows domain (For more information, see "Changing the name of a server in a Windows domain" (page 139).)

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.

- 1 Disable the AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 2 Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 211).
- 3 Uninstall the AutoStart Agent and AutoStart Console, including their patches on both nodes. For more information, see "Uninstall the AutoStart software" (page 228).
- 4 Change the computer name. For more information, see "Manually changing the server name" (page 41).

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 75)
 - to "Testing the configuration of CP1 and CP2" (page 127)

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 213).
- 2 Take the AutoStart resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 211).

Note: This takes the CallPilot Server out of service.

- **3** Remove the server from the Windows domain.
- 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 41).
- 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 228)
 - "Reinstall the AutoStart software" (page 234)
 - "Configure the AutoStart software" (page 109)
- **14** Bring the Resource group online. For more information, see "Bringing the CallPilot resource group online" (page 209).
- **15** Reenable the AutoStart monitoring after all CallPilot services are up. For more information, see "Enabling automatic failovers (start monitoring)" (page 214).

-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 pair from the domain to a workgroup. For more information, see "Joining a workgroup" (page 176).
- 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).

b. Launch the AutoStart Console.

- Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 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.
- I. 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.
- o. Perform a manual failover. For more information, see "Initiating a manual failover" (page 215).

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).

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 213).
- 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.
- I. Click Next.

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.
- Change the administrator password for each of the Utility Processes. For more information, see "Changing the Utility Processes administrator password" (page 164).
- p. Perform a manual failover. For more information, see "Initiating a manual failover" (page 215).

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 214).

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).

- b. Launch the AutoStart Console.
- Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 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 215).

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

- I. 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).

- **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 213).
 - 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 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 215).

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

- I. 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 214).

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 204). Then use the following procedure to complete the change of the switch IP Address.

- Changing the TNs
- 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).

- b. Launch the AutoStart Console.
- Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).

- 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 215).

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

- I. 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).

- **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 213).
 - 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 215).

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

- I. 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 214).
- 5 Test new or changed TNs or CDNs to ensure system functionality.

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).

- b. Launch the AutoStart Console.
- Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 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.
- 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.

- I. Click Next.
- m. Click Finish to complete the Configuration Wizard.
- n. Perform a manual failover. For more information, see "Initiating a manual failover" (page 215).

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).

- **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 213).
 - 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 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.

- I. Click Next.
- m. Click Finish to complete the Configuration Wizard.

n. Perform a manual failover. For more information, see "Initiating a manual failover" (page 215).

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 214).

—End—

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 157).

Use the procedures in this section to change the following:

- "ELAN or CLAN IP address changes" (page 151)
- "HB1, HB2, and Mirroring IP address changes" (page 153)

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 213).

2 Take the resource group CallPilot offline.

For more information, see "Taking the CallPilot resource group offline" (page 211).

- 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:
 - 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 Restart the node.
- 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.)
- 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 209)) and then enable AutoStart Monitoring (see "Enabling automatic failovers (start monitoring)" (page 214).

–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.

Nortel CallPilot High Availability: Installation and Configuration NN44200-311 01.05 Standard 5.0 27 April 2007 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 228)
- "Reinstall the AutoStart software" (page 234).

Changing the HB1, HB2, and Mirroring IP addresses

Step	Ac	tion				
1	Ur inf	Uninstall the AutoStart on both High Availability servers. For more information, see "Uninstall the AutoStart software" (page 228).				
2	Mo Wi	ove the dongle to the server where you will run Configuration zard to perform the IP address change and wait 3 minutes.				
3	Us Ca	e the Windows Services utility to manually start the following IIPilot 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				
4	Lo fol	g on to CallPilot Manager and run the Configuration Wizard as lows:				
	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.

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 68) and complete the following procedures:

- "Connecting and verifying LAN connections" (page 69)
- "Modifying the hosts file" (page 72) (optional)
- "Testing the host name resolution" (page 74)
- 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 75).

- Install the AutoStart Software on CP1.
 For more information, see "Installing the AutoStart Agent and Console software on CP1" (page 79).
- **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 92).

11 Install the AutoStart software on CP2.

For more information, see "Installing the AutoStart software on CP2" (page 95).

- **12** To configure the AutoStart software, do the following:
 - a. Configure the AutoStart software.

For more information, see "Configure the AutoStart software" (page 109).

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 109).

ii. Add the Remote Mirroring Host for the new 1005r server (CP2).

For more information, see "Adding the Remote Mirroring Host for CP2" (page 112).

b. Generate the AutoStart Definition File.

For more information, see "Generating the AutoStart Definition File" (page 115).

c. Import the AutoStart Definition File.

For more information, see "Importing the AutoStart Definition file" (page 117).

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 118).

13 Bring the Resource Groups online.

For more information, see "Bring the Resource Groups online" (page 122).

a. Bring the CallPilot Resource Group online on CP1.

For more information, see "Bringing the CallPilot Resource Group online on CP1" (page 122).

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 125).

14 Create the CallPilot Reporter connections. For more information, see "Creating the CallPilot Reporter connection" (page 129).

—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 157).)
- Managed CLAN IP address (See "Changing the Managed CLAN IP address" (page 158).)
- Managed ELAN IP address (See "Changing the Managed ELAN IP address" (page 160).)

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 213).
- **3** Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 211).
- 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**.
 - e. Under Shutdown Sequence, select the Managed CLAN IP address and click **Delete**.
- 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. Select the Settings tab.
 - d. Click Delete Interface.
- 6 Create the new Managed CLAN IP resource by doing the following:
 - a. Expand [AutoStart_Domain] > IP Addresses.

×

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b. Right-click IP Addresses and select Create New IP Address.

Result: The New Manage IP Address window appears.

Mew Manageu IP Address	5	
Settings Network Path Testing	3	
IP Information		
Name Service Entry:	ন	Get IP from Name Service
Description:		
Subnet Mask:	(Op	tional/Advanced)
Target Interfaces (Optional/Ad	lvanced)	
The second s		

Node p1005r

Interface p1005r:HB1

Base Address: 192.0.0.4

c. Under IP Information, clear the Get IP from Name Service check box.

👔 Help

+ Set Interface

Apply

X Delete Interface

X Close

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 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 the Startup Sequence, select the new Managed CLAN IP address and click **Edit**.
 - 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 209).
- **9** Enable the AutoStart Monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 214).

-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 213).
- 2 Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 211).

- **3** 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**.
 - e. Under Shutdown Sequence, select the Managed ELAN IP address and click **Delete**.
- 4 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. Select the Settings tab.
 - d. Click Delete Interface.
- 5 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.

Figure 92

New Managed IP Addre	255		
ettings Network Path Test	ing		
P Information			
Name Service Entry:		I⊄ Get I	P from Name Service
Description:		j	
Subnet Mask:		(Optional	/Advanced)
Target Interfaces (Optional/	Advanced)		
A10400 - 1000			
Node	Target Interface		Base IP
Node p1005r	Target Interface		Base IP
Node Node p1005r	Target Interface	3	Base IP
Node Node p1005r Interface p1005r:HB1	Target Interface	3	Base IP
Node Node p1005r Interface p1005r:HB1 Base Address: 192.0.0.4	Target Interface	3	Base IP
Node p1005r Interface p1005r:HB1 Base Address: 192.0.0.4	Target Interface	ete Interfac	Base IP

- 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.
- 6 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

- 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 the Startup Sequence, select the Managed ELAN IP address and click **Edit**.
- 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.
- 7 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.
- 8 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.
- 9 Detach drive E.
 - a. In the AutoStart Console, select the [AutoStart_Domain] > Data Sources.
 - b. Right-click drive E.
 - c. Select Detach Data Source.
- **10** Bring the resource group online. For more information, see "Bringing the CallPilot resource group online" (page 209).
- **11** Enable the AutoStart Monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 214).

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.

Figure 93		
Change the	administrator	password

File Action Yiew Help	Silil	
+ 3 © × ►		
Domain	Settings Options Script	
Domains ⇒ tab26x ⇒ Modules ⇒ © Resource Groups ⇒ © CalPict ⇒ © CalPict cplab261e ⇒ © CalPict cplab261e ⇒ © CalPict cplab260a	- Settings Name: DisableAOS Description:	
	Execution Environment Operation Type: Batch Command Operation	I
Node Allases Orda Sources Orda Sources	Parameters: Velid Node List C All Nodes C Selected List	es Available Nodes
	Login Info	
(1) Triggers	User Name: administrator	Confirm:
< ×	Directory: D: WortenDetaWAWA_DB_	stripts

- 4 Click Apply.
- 5 Repeat the preceding steps for each of the remaining utilities in the Utility Processes list.



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.

Increasing software licenses on a pair of CallPilot 5.0 1005r 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 213).

- 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.

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.
- I. 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.

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 214).
- 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 209).



Increase CallPilot channel capacity by adding MPB96 boards

If the pair of 1005r 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.

Increasing channel capacity by adding MPB96 boards in a pair of CallPilot 5.0 1005r High Availability servers

Step Action

- **1** Disable AutoStart Monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 2 Take the CallPilot resource group offline. For more information, see "Take a resource group offline" (page 210).
- **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 75).
- **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 75).
- **15** Import the new definition file on the AutoStart Console.

For more information, see "Importing the AutoStart Definition file" (page 196).

- **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.

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.
- I. 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.
- q. Click Next.

Result: The CallPilot Local Area Network Interface screen appears.

- 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:
 - 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.

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.
- I. 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.

- 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 209).

—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.

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 213).
- 2 Take the CallPilot resource group offline on CP1. For more information, see "Taking the CallPilot resource group offline" (page 211).
- **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 94 Computer Name Changes

Computer Name Changes	200	E	? ×
You can change the name and the m computer. Changes may affect acces	nembership ss to networ	of this k resourc	es.
Computer name:			
CPLAB260A			
Full computer name: CPLAB260A.			
	J	<u>M</u> ore.	
Member of			
Domain:			-7
J © <u>W</u> orkgroup:			_
WORKGROUP_NAME			
	0K 1	Cont	
		Lanc	

- 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.

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.

Figure 95 AutoStart Console - Utility Processes

Domain	Settings Options Script	
Domains Sector International Sector	Settings Name: KillServices Description: Kill All CP Services Execution Environment Operation Type: Batch Command Operation Parameters: -Vaid Node List C All Nodes C Selected List Login Info Demain: workgroup User Name: administrator Directory: D:WorkefDetaWAXHA_DB_St	Available Nodes Available Nodes Colab260a Colab260a Colab261a Password Confine Teast

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 214).
- **13** Bring the CallPilot resource group online on CP1. For more information, see "Bringing the CallPilot resource group online" (page 209).

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.

Manually changing the password of the local administrator account or the domain administrator account

Step	Action				
1	Or	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).			
	b.	Launch the AutoStart Console.			
	C.	Stop monitoring on the CallPilot resource group. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).			
2	On CP1, press Ctrl+Alt+Del to display the Windows Security window.				
3	Click Change Password.				
	Re	sult: The Change Password window appears.			
4	En	ter the User Name of the administrator account.			
5	Fro	om 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 215).

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

- 11 Restart CP1.
- **12** Move the dongle to CP2.

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

- **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 213).
- 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 164).
- **23** Perform a manual failover on CP2. For more information, see "Initiating a manual failover" (page 215).

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 214).

—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 183)
- "Work with resource groups" (page 208)
- "Software operations" (page 216)

AutoStart maintenance

Use the procedures in this section to perform maintenance tasks within the EMC AutoStart software.

- "Configure the AutoStart notification settings" (page 183)
- "Add e-mail addresses to the Managed_ELAN_IP_Failure_Notif rule" (page 186)
- "Configure failover on the Path Test failures of the Managed ELAN IP address" (page 189)
- "License administration" (page 191)
- "Check the status of the servers and failovers using AutoStart" (page 192)
- "Import and export of the AutoStart Definition file" (page 195)
- "Recreate the AutoStart definition file" (page 198)
- "Change the Switch IP address in AutoStart Console" (page 204)

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

for the domain that you want to monitor.

Step	Action
1	From the AutoStart Console, select Domains > [AutoStart_Domain]

2 Select the **Settings** tab.

EMC AutoStart Console - Versio	in 5.2.2		
le Action Yiew Help			_
• × • • • 2 🗹 🔟			
Domain	Settings Licensing/Security Statistics/Doma	n Failure Detection Event Log Isolation Settings	
omains	Settings	Set Domain Isolation Sci	rints
ab26x	Domain Name: lab26x	User Mode: User	*
T Modules	Descelation		_
CalPict	Description.		
E CalPilot_cplab261a	Node List: cplab260a, cplab261a		
E CalPilot_cplab260a	Domain Port: 8042	Connect At Console Startup	
ONDES	N. AND CO.		
cplab261a	Notricetton		
Processes	SMTP Server		_
E O Services	Simily Server.]		
Process Proxies			
• Wode Proxies	SNMP Gateway.		_
Node Allases			
- O drvE			_
O drvF	SNMP Community:		
E O IP Addresses			
47.11.220.206	Attributes		
F 9 NCs	Attribute	Value	
Cplab260a HB1	FT_MAX_CUSTOM_RULE_INTERP_COUNT	1	
cplab260acMIRROR	FT_MAX_RG_RULE_INTERP_COUNT	3	
cplab260a:HB2			
Cplab260acELAN			
cplab250a; CLAN			_
Colab261a MIRROR	Attribute:		
Cplab261a:HB2			
cplab261a;ELAN			
cplab261a:CLAN	Value:		
E ANC Groups			
Colley Processes Rules		SH DAME	
E State Monitors			
Triogers			_

Figure 96

- Under the Notification area, enter the SMTP Server, SMTP 3 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.

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 (see Options tab - User Notification Settings). 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.

Figure 97 **Options tab - User Notification Settings** Section 2.2.2 - 0 × File Action View Help + X II I > • 4 4 0 Domain Settings Options Advanced Availability Tracking Status Options omains. - Ish26x Hodules Resource Groups CalPict_cplab261a Auto Node Group Failover Auto Failback to First Node in Preferred Node List E CallPilot_cplab260a E O Nodes Cplab260a Processes User Notification Settings E Services Process Proxies F- Node Provies Thatify on State Changes T Notify on Node Group Failove Node Aliases E O Data Sources O drvE O drvF P Addresses 47.11.220.206
 47.0.30.6 Send Email to (space separated): E O NICs cplab260a:HB1
 cplab260a:MIRROR Controls Cplab260a:HB2 Cplab260a:ELAN Delay After Domain Startup 45 seconds Cplab260a:CLAN Cplab261a.HB1 cplab261a:MIRROR Cplab261a:HB2 Times In 300 seconds Process Will Be Restarted Up To 3 cplab261a:ELAN Cplab261a CLAN NIC Groups
 Utility Processes When Shutdown Attempts Exceed 3 Reboot ٠ Rules
 State Monitors Triggers 0 Appl 💡 Help

- **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 215).

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 211).
- 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.

Figure 98				
Rules - Managed	ELAN	IP_	_Failure_	Notif

Domain	Settings Rule Script			
omains = lab25x • Modules • CalPlot • CalPlot_cplab251e • CalPlot_cplab261e • CalPlot_cplab260e	Settings Rule Name: Managed_ELAN_IP_I Description: Triggers To Drive Rule	[*] ailure_Notif	Available Triggers	
Copes Cope Copes Co	Rule Variables	*	CCR_Failed IMAP_Failed Node_Status_Changed TME_Sum_Failed	۲ ۲
Node Proxies Node Alasse Node Alasse Pode Alasse P Addresses P Addresses 47.11.20.206 47.11.20.206 NICs NICs NICs NIC Groups Utity Processes Rules CCR_FALED CONTRACT	Rule Variable	Set Deter	Value	
DisableAOS MAP_FAILED Mansped ELAN P TIME_Svc_FAILED	Falure	ess verbose		<u>.</u>

5 Select the **Rule Script** tab.

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

	ngt To Line: 1 Period Provide the Syntax N IP Failure Notification Rule s associated with a threshold trigger. Each time goes off this rule will send a message to the ipients listed below. rule simply fill in values for grecipientList. For examp report sent to user1 and user2@legato.com you would
Domain Domains Domain	npt o To Line: 1 Perport. Proved Syntax N IP Failure Notification Rule s associated with a threshold trigger. Each time goes off this rule will send a message to the ipients listed below. rule simply fill in values for GrecipientList. For examp report sent to user1 and user2@legato.com you would
Domains HetaDor HetaDor Head A for the form of the	o To Line: 1 Provide the point of the superior
Ar J 30.5	recipientList as follows: ist = ("user1\@legato.com", "user2\@legato.com");

Figure 99 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 209).
- 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 183).

—End—	
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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 211).
- 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).

EMC AutoStart Console - Version	5.2.2 <u>- C ×</u>
File Action View Help	
+ × 🖩 🖀 🕨 🕮 Ø	
Domain	Settings Options Advanced Availability Tracking Status
Domains Ial225: Hodules Por Resource Groups Por CalPiot_cplab250a Por CalPiot_cplab251a Por CalPiot_cplab261a Por CalPiot_cplab26	Name: CaliPlict Description: Preferred Node List Selected Nodes Add Startup Sequence Startup Sequence </th

Figure 100 Settings tab - Managed ELAN IP address

6 Click Edit.

Result: The IP Address Properties window appears.

Figure 101 IP Address Properties

Managed IP Re	source Grou	p Properties			
Jama: 47.0.20	6				
varne: 47.0.50					
Failure Respo	onse Settings				
Relocate	Resource Gr	oup on Path F	ailed State		
Relocate	Resource Gr	oup on Unass	ianed State	,	
				92 	
	✓ Apply	@ Cancel	Help	X Close	
			and the second second		

- 7 Select the check boxes for both of the following options:
 - Relocate Resource Group on Path Failed State

- Relocate Resource Group on Unassigned State
- 8 Click Apply.
- 9 Click **Apply** again on the Settings tab.

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 Console > EMC AutoStart Console 5.2 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.

EMC AutoStart Console - Versio File Action View Help	n 5.2.2			
+ × ⊳ ⊛ ≥ ₫ Ш				
Domain	Settings Licensing/Set	scurity Statistics/Domain Fr	alure Detection Event Log	Isolation Settings
omains ■ Modules ■ Resource Groups ■ CalPiot cplab261a ■ CalPiot_cplab261a ■ CalPiot_cplab260a ■ CalPiot_cplab260a ■ Oxdes Processes ■ Services ■ Services ■ Node Provies ■ Node Provies ■ Node Provies ■ Node Provies ■ Oxde Sources	-Current License Infor Product: Tel License Key: A License Type: Un Expires: Ap New License Key:	Nation 190-Day Evaluation Key restricted SDK Site Eval nil 22, 2007 MM/MADD-SYRDDN ER/MC8	3377	* * *
P Addresses	Valid User List	T	T. Constant	
B Hit Groups ⊕ Utility Processes ⊕ Rules ⊕ State Monitors ⊕ Triggers	administrator administrator administrator	cplab261a cplab260a sccsdev001	Administrator Administrator Administrator	Initial Windows install user
	User Name Domain/Node Access Rights Description	ر م ال	ser C Operator C Admir	nistrator
		★ Add ✓ Apply	Madity X Detete	

Figure 102 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.



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

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.

EMC AutoStart Console - Version	5.2.2				-10
e Action Yiew Help					
XEEPO	1 1 1				
omain	Settings Options Advan	ced Availability Tracking	Status		
mains	Status of Resource Group				
Hauzon		1	Pret	erred Nodes	
Resource Groups	Monitoring State:	Enabled	Scolab2	260a	
			cplab2	61a	
E CalPict colab261a					
E CalPict colab260a	Group State:	Online			
P O Nodes			J.		
Colab260a	Status of Resource Group	Elements			
Colab261a			1	1	
Processes	Name	Type	State	Node	
Services	Q drvE	Data Source	Attached	cplab260a	-
Process Proxies	9 drvF	Data Source	Attached	cplab260a	
Onde Proxies	ASA .	Service	Running	cpleb260a	
Node Aliases	47.0.30.6	P	Assigned	cplab260a	
E O Data Sources	47.11.220.206	P	Assigned	cplab260a	
- O drvE	CP-HAL-Monitor	Service	Running	cplab260a	
- o drvF	LoadDN	Utility Process			
- O IP Addresses	CP-AOS-SVC	Service	Running	cplab260a	
47.11.220.206	CP-LDAP-SVC	Service	Running	cplab260a	
47.0.30.6	Load ISP	Utility Process			
	Telephony CO. Co. Down	Service	Running	cplab260a	
cplab260a:HB1	CP-SVC-Daemon	Service	Running	cplab260a	
cplab260a: MIRROR	CP-SVC-Manager	Service	Running	cplab260a	
cplab260a:HB2	CP-Multimedia-Volum	Service	Running	cplab200a	
cplab260a:ELAN	CP-Multimedia-Volum	Service	Running	cplab260a	
cplab260a:CLAN	CP-Multimedia-Volum	Service	Running	cpiao260a	*
cplab261acHB1					
cplab261a: MIRROR					
cplab261a:HB2					
cplab261a:ELAN					
cplab261a:CLAN					
HC Groups					
 Utility Processes 					
Rules					
State Monitors					
Triggers	P	Summer 1	a		

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 8		
Status of Resource	Group fields	

Field name	Status	Description
Monitoring	Enabled	Automatic failover is enabled.
State	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 9 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

On the AutoStart Console, expand Domain > [AutoStart_Domain]
 > NICs.

EMC AutoStart Console - Versi	on 5.2.2				
File Action Yiew Help					
C Há HÌ HÌ					
Domain	Network Interface	Base IP	Current State	Usage	NIC Group
Domains	Cplab260a:HB1	192.0.0.10	Alive	Usable	192.0.0.0
E lab26x	Cplab260a: MIRROR	193.0.0.10	Alive	Usable	193.0.0.0
Modules	Cplab260a:HB2	194.0.0.10	Alive	Usable	194.0.0.0
Resource Groups	Cplab260a:ELAN	47.0.30.3	Alive	Usable	47.0.30.0
CalPict	Cplab260a CLAN	47.11.220.138	Alive	Usable	47.11.220.0
CalPiot colab261a	Cplab261a;HB1	192.0.0.11	Alive	Usable	192.0.0.0
E GalPilot colab260a	Cplab261a:MIRROR	193.0.0.11	Alive	Usable	193.0.0.0
E O Nodes	Cplab261a:HB2	194.0.0.11	Alive	Usable	194.0.0.0
Colab260a	Cplab261a:ELAN	47.0.30.5	Alive	Usable	47.0.30.0
O colab261a	Cplab261a:CLAN	47.11.220.174	Alive	Usable	47.11.220.0
Drocesses					
P Q Services					
Diseases Districts					
Process Provies					
Node Proxies					
Node Alidses					
Data Sources					
O drvE					
C C C C C					
P Addresses					
47.11.220.206					
47.0.30.6					
cplab260a;HB1					
cplab260a: MIRROR					
cplab260a:HB2					
cplab260a/ELAN					
cplab260a:CLAN					
cplab261a:HB1					
cplab261a:MIRROR					
cplab261a:HB2					
cplab261a/ELAN					
cplab261a:CLAN					
NIC Groups					
Utility Processes					
Rules					
E State Monitors					
(i) Trianaus					

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.

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 105 Import Domain Information

VI BA CT				
X POCCU				
main	Settings Lk	ensing/Security St	atistics/Domain Failure Detection Event Log Isolation Settings	
NAMES	Type	Time	Message	
E f A Ones New Description	(III a could	[14:06 AM Jan	utilproc "LosdDN" Crested	÷
B-	CONHO	14:06 AM Jan .	utiproc "LosdTSP" Created	
X HEIDIN COMMEDIA		14:06 AM Jan .	utiproc "UnloadTSP" Created	
Connect to Soman	Chi+T	14:06 AM Jan .	utilproc "UnioedTSPOnStandbyServer" Created	
Disconnect from Dor	nain Ctrl+D	14:05 AM Jan .	process "CP-ResourcePackage-4" Created	
8+		14:05 AM Jan .	config "CP-ResourcePackage-4" Created	
 Import Domain Infor 	mation ctri+I	14:05 AM Jan .	process "CP-ResourcePackage-5" Created	
Export Domain Infor	mation Ctrl+E	14:05 AM Jan .	config "CP-ResourcePackage-5" Created	
Vew Event Los	ChrisE	14:05 AM Jan .	process "CP-ResourcePackage-6" Created	
T SHITCHS	111	14:05 AM Jan .	config "CP-ResourcePackage-6" Created	
Process Provies	1 info	11:14:05 AM Jan .	process "CP-ResourcePackage-7" Created	
1 Q Node Provies	1 Info	11:14:05 AM Jan .	config "CP-ResourcePackage-7" Created	
Node Alianes	1 info	11:14:05 AM Jan .	process "CP-ResourcePackage-8" Created	
E O Deta Sources	O into	11:14:05 AM Jan	config "CP-ResourcePackage-8" Created	
O du E	G info	11:14:05 AM Jan	process "CP-SLEE-Svc" Created	
O du f	O nto	11-14:05 AM Jan	config "CP-SLEE-Svc" Created	
	O into	11:14:05 AM Jan	process "CP-Syc-Daemon" Created	
Q 47 41 220 200	O Info	11-14-05 AM Jan	config "CP-Syc-Daemon" Created	
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Cplab260a HB1	in the second	11.14.05 AM Inc.	and The Surf Created	
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Cplab260x ELAN	No.	11.14:05 AM Jan .	consig -cpasozeue+r (+- Created	
 cplab260arCLAN 	1 North	11.14.05 AM JM1.	blocess .cbierzone-ui in-221. cliested	
cplab261a/HB1	1 neo	11.14.05 AM Jan .	contg. cpac/bue/ril IP-SSL* Created	
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cplab261a HB2	1 Pino	11:14:05 AM Jan .	contg "cptab260a-IS-Admin-Svc" Created	
cplab261a/ELAN	1 info	11:14:05 AM Jan .	process "opleb260a-WWW" Created	
cplab261a CLAN	1 Info	11:14:05 AM Jan .	config "cplab260a-VWWV" Created	
E NC Groups	•		Carriero	2
IE Utilty Processes			Errors Only IF Live Update IF Rule Tracing	
E Rules				
E State Monitors			Clear Events Save Events	
E Triggers				
			V Basiv @Genori M Help	

Result: The Import dialog box appears.

Figure 106 Import dialog box



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 107 Export Domain Information

Constrain Type Time Message Image: State Demain Coll+O 140 65 AM Jim. Lignor 1 workTh* Criented Image: State Demain Coll+O 140 65 AM Jim. Lignor 1 workTh* Criented Image: State Demain Coll+O Coll+O Lignor 1 workTh* Criented Image: State Demain Coll+O Coll+O Lignor 1 workTh* Criented Image: State Demain Coll+O Coll+O Lignor 1 workTh* Criented Image: State Demain Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Criented Image: State Demain Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Criented Image: State Demain Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Criented Image: State Demain Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Criented Image: State Demain Information Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Criented Image: State Demain Information Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Criented Image: State Demain Information Coll+O Lignor 1 workTh* Criented Lignor 1 workTh* Cri	ver Created Created mated Created Created Created Created Created Created Created
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47.0.30.6 Info 11.14:05 AM Jan process "CP-Svc-Manager" Create	d
NCs 11:14:05 AM Jan config "CP-Svc-Manager" Created	
Cplab260aHB1 II.14.05 AM Jan process "CP-Time-Svc" Created	
O cplab260a MRROR 11:14:05 AM Jan config "CP-Time-Svc" Created	
Cplab260a HB2 Info 11.14.05 AM Jan process "cplab260a-FTP" Created	
Cplab260s ELAN 11:14:05 AM Jan config "cplab260s FTP" Created	
Cplab260x CLAN 11:14:05 AM Jan process "cplab260a-HTIP-SSL" Cr	exted
Cplab261a HB1 1114 05 AM Jan contig "cplab260a HTTP-SSL" Cred	eed A Countral
Cplat261a MRROR 11.14.05 AM Jan process "cplat250a-IS-Admin-Svo	Curence Constant
Chab261aH82	ureixed
Cpieb261a ELAN TIT 14 US AM Jan process Cpieb260a MMAM Created	N
cpieczola CLAN	1
In N. Oroups	
Errors Or	IV IV Live Update 1 Rule Tracing
E State Mondare	ear Events 🔲 Save Events
T Transit	
1 HWH /	asiv Oldwood Mittee

Result: The Export dialog box appears.

Export			
Look in:	See Local Disk (D:)	- E	
asrlex CTServer DSP inetpub Nortel Program F SQLANY	iles		
ile <u>n</u> ame:			Export
iles of type:	All Files	*	Cancel

- **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 211).

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**.

EMC AutoStart Co	isole - Version 5.2.2					
re Fron Ten La						
	di tidin (C)					
oman		Settings Options Advanced	Availability Tracking Status			
omeins		Status of Resource Group				
17 10020X		and a second second second			referred Nodes	
Modules	100.000	Monitoring State:	Enabled	 cplat 	260a	
P-O DIRON	oups			 cplek 	261a	
E CalPi	+ Create New Resource	Group Chi+Insert	(5 million)			
E O CalPi			G Offine			
E O Nodes	Leiete Current Resou	rce wroup Con+Delete	224			
F Services	Control Associations	CDHHM YOUP Den	ieras		122112	
Process Prox	Stop Monitoring	Ctrl+Shift+M	Type	State	Node	
E O Node Pro:	Bring Online	•	Deta Source	Detsched	***	-
Node Alieses	Cale Office	Ctrl+Shift+O	Data Source	Detached		
🕀 😡 Date Sou	CH. Refer Ma Bacharta G	enter in	Service	Stopped		
- @ drvE		220	P	Unassigned		
- @ drvf	O Sobit Resource Grauc	Coperation CorteA		Unassigned		
E O P Addresse	0	CPRONE MONO	Service	stopped		
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B Rules		Q Telephony	Service	Stopped		
Q APE FR	led .	Q CP-Svc-Daemon	Service	Stopped	***	
O COR FA	LED	CP-Svc-Manager	Service	Slopped	***	
O beside	405	CP-Mutimedia-Volume-1	Service	Stopped	***	
0.000	Enlad	CP-Mutmedia-Volume-102	Service	Stopped		
-O Sic Ma	n Faleri	CP-Mutimedia-Volume-103	Service	Stopped	***	
O THE S	C FALED	1~				1.1
E State Monitors						
E Triggers						
			the solution			
			1. Atr.	Concellent Help		

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**.

File Action View Help		_			<u>=101</u>
Domain	Resource Group	State	Monitoring	Node	Start/Stop Time
Somethin ■ the Solar ■ the S	s Source + definition of the source of the source + see + + + + + + + + + + + + + + + + + +	Online Source	Evalued	cpaa,zoo	m Apr 20 00.25 43 800 30 Fn Apr 20 00.37 00 807 20

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).

				_ 6 3
File Action View Help				
+ × ⊳ ø				
Domain	Settings Rule Script			
lomeins ■ tel26x ■ Modules ● @ Resource Croups ● @ CalPiot_cplab261a ● @ Nodes	Settings Pule Name: DisableAOS Description:			
Processes				
Process Provies Process Provies Node Provies Node Alases Date Sources	Node_Status_Changed	*	Available Triggers APE_Failed CCR_Failed MAP_Failed Corr_Data_Failed	1
B- O NCs	Frue Vanables			
Clarky Processes Rules Action Action	Critinaet Criticaete Critica Critica Criticaete			
Intriggers	Disable the selected rule	set Other		
	Trace Level Covert - Inst vertices			<u>+</u>
	C On Trace Output Chipsit samt to Event Log and CLI			<u>×</u>

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.

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 112 Import Domain Information

Domain	Domain	Name	Connect To
Coments bioconserves bioconserves connect so connect connect so connect connect so connect proof Connect in proof	Consum In Cati-Fo Contri-Cati-Fo Cati-Fo Monitoria Cati-Fo Monitoria Cati-Fo Monitoria Cati-Fo Monitoria Cati-Fo Monitoria Cati-Fo Monitoria Cati-Fo Cati-Fo Monitoria Cati-Fo Cati-Fo Monitoria Cati-Fo Monitoria Cati-Fo Monitor	J Name B620tr	connect to cpiel/200e
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Tonnaction acts/slickad to occur			

Result: The Import dialog box appears.

26 Under the D:\Nortel\HA\ToolkitInstaller2.0 folder, select the new definition file, and then click Import.

Figure 113 Import dialog box

CallPilot-N CallPilot-N CallPilot-N CallPilot-N CallPilot-N CallPilot-N CallPilot-N CallPilot-N CallPilot-N	Irroring-Single-Template tpl Irroring-Single-Template tpl.bk Irroring-Single def Irroring-Single pl Irroring-Single_good.def Irroring-Single_orig.def Irroring-Template.tpl	CalPilot-Mirroring-Templat CalPilot-Mirroring.pl HADefaults.dat install.bat install.pl values.dat	te tpl.lok
le nemer	CallPlint Mirroring Single det		Import

- 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. Figure 114

EMC AutoStart Console - Versio	n 5.2.2				
• × = = • = = 0					
Domain	Settings Options Advanced	stability Tracking Status			
Iomáins Eileo25x B Modules CalPiot_cpiab260a B C CalPiot_cpiab260a B C CalPiot_cpiab261a	Status of Resource Group Monitoring State Group State	Creatiled	Preferre O cplab.260a O cplab.261a	ed Nodes	
E O Nodes	Status of Resource Group Element		1		
III Services	Name	Type	State	Node	
B → D look Proves Hold Alland → O and Sources → O and C → O a		Data Source Data Source Service P P P P Service Utility Process Service Service Service Service Service Service Service Service	Detached Detached Stopped Unastgred Unastgred Biopped Stopped Stopped Stopped Stopped Stopped Stopped	445 446 446 446 446 446 446 446 446 446	4
- CCR_Failed - MAP_Failed - Managed_ELAN_P_Failure - Node_Status_Changed - Svc_Dise_Failed		<u> </u>	av Ølana 🕅 Heb		

- 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 118).
- **30** Bring the CallPilot resource group online. See "Bringing the CallPilot resource group online" (page 209).



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.

 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 213).
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.

EMC AutoStart Console - Versi	on 5.2.2	_ [] ×
+ X		
Domain	NC Group Details Testing Options	
Domains ■ tab2bx P Modules CalPiot CalPiot_cplab261a CalPiot_cplab260a CalPiot_cplab260a CalPiot_cplab260a CalPiot_cplab260a Colpab261a Processes Process	Test Repetitions before Failure 1 times Test IP Ping Timeout 10 seconds Test Interval 30 -NC Group Test IPs 70.30.1 47.0.30.5	¥ seconds
	IP Address 47 . 0 . 30 . 1	
	+ Add P Address X Delete P Address	

- 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.

Figure 116 Isolation Settings tab

Domain	Settings Licensing/Security Statistics/Domain Failure Detection Event Log Isolation Settings	
lomains	Network Isolation Addresses	_
E-leb26x	Pådress	T
Modules	47.030.1	t
Resource Groups	47.0.30.3	T
E CalPict colab261a	47.0.30.5	ŀ
E CalPict colab260a	47.11.220.1	ļ
E O Nodes		
cplab260a		
Cplab261a	IP Address 47 . 0 . 30 . 1	
Processes	a constraint of the state	
E Services		
Process Proxies		
Node Aliases	🕂 Add P Address 🗙 Delete IP Address	
Otata Sources		
O P Addresses	Isolation Script	
E O NICs	Go To Line 1 Planort If Evnort Check Surfax	
E NIC Groups		
192.0.0.0	t de la companya de la compa	
193.0.0.0	# This script will then be run when a node becomes isolated if you have	
194.0.0.0	# defined some isolation addresses under Failure Detection Settings.	
47.0.30.0	# This script will be called with 1 parameter -	
E Utility Processes	# PRIMARY - if it is running on a primary node	
E Rules	# SECONDARY - if it is running on a secondary node	
State Monitors	#	
Triggers		
	#	
	# Determine what applications are running on this node and shut them down	
	# as quickly as possible because they will be migrated to a node that	
	# is not isolated.	
	al	d
		-

- 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.

Figure 117

EME AutoStart Console - Versi	on 5.2.2	_ [] ×
File Action View Help		
+ × ▶ ●		
Domain	Settings Network Path Testing	
Domains ■ tab26x ■ Modules ■ CalPilot ■ CalPilot ■ CalPilot_cplab261a ■ CalPilot_cplab260a ■ CalPilot_	Test Interval S seconds Operation Timeout S seconds -P Addresses to Test P Address 47.0:30:1 P Address 47.0:0 Detect P Address Compared P Addres Compared P Addres Compared P Addres Compared P Addre	

- 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.



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 209)
- "Take a resource group offline" (page 210)
- "Perform failovers and monitoring" (page 212)

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 118 CallPilot resource group - Bring Online

		Settings Options A	dvanced Ave	alability Tracking	Status		
mains Intr26x I Modules I P Resource G I P P Stillet	oups	Status of Resource	Group	Disabled	Pret	erred Nodes 60a 61a	
E CalP	+ Create Nev	Resource Group	Ctrl+Insert	Ottline			
Nodes Opint Opint Processes Oservices Process Pro: Process Pro: Node Pro	X Delete Curr	ent Resource Group	Ctrl+Delete				
	Son Monto	iource uroup	COMM	Tune	Chate	Ninda	- 11
	Bring Color		SHARE SHEETING	niah260a	lached	888	
	Cong Grane		Children Lo	O mish261a	lached		1
	- Incolum	1	CONSOLUTIO .	C C PROCOTO	-wepped	***	
Node Aliaser	Bills Belocate R	esource Group			Unassigned		
E - O Data Sou	O Abort Reso	urce Group Operation	Co1+A		Unassigned		
E O P Addresse	5	The Contraction was	001460	• •	Stopped		
R ONCS		LOSGEN	Utility Pr	ocess			
III NIC Groups		Q CRIDAR SW	Service		Stopped		
Utility Processes	· 1	LowITSP	LBAR Pr		Stoppen		
Rules		O Telephony	Service		Stopped		
State Monitors		O CP-Svc-Daemon	Service		Stopped		
ter triggers		O CP-Svc-Manager	Service		Stopped		
		O CP-Mutimedia-Vo	olum Service		Stopped		
		CP-Mutimedia-Vo	olum Service		Stopped	888	
		O CP-Mutimedia-Vo	olum Service		Stopped		

4 Wait until the **Group State** turns green and shows Online. This can take a few minutes.



End	
—LII0—	

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.

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 120 CallPilot resource group - Take Offline



4 Wait until the Group State turns gray and shows Offline. This can take a few minutes.



Figure 121

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.

_ @ ×

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.

plab261a HB2 plab261a ELAN

- **3** Right-click **Resource Groups > CallPilot**.
- 4 From the shortcut menu, select **Stop Monitoring**.

Figure 122 Stop Monitoring EMC AutoStart Console - Version 5.2.2 Settings Options Advanced Availability Tracking Statut sce Ge Cplab261 O En nitoring State O Onin Relocate Re 04 drvE
 drvF 47.11.220.206
 47.0.30.6 lah260a HB2 plab/260m FLAN cpiab260a CLAN
 cpiab260a CLAN
 cpiab261a HB1
 cpiab261a MRROR

8 Triggers		<u>v</u>	Ante Oliverat Migap	
Start 🕖 🦽	EMC AutoStart Consol	MAS Trace Window		R 🖬 🔌 🗞 4:59 PM

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.

		- 1
_	n	
		_

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.

Figure 123

- **3** Right-click **Resource Groups > CallPilot**.
- 4 From the shortcut menu, select **Monitor Resource Group**.

Monitor Resource Group Length Console - Version 5.2.2 _ @ × × = = > = = = 0 Settings Options Advanced Availability Tracking Statut ain urce Group Colab260a Monitoring State + Create ! Ctrl+Insert rce Group O Onin O Call Mon Take Office Child Shift and Relocate Re ce Group drvE
 drvF P Addresses
 47.11.220.206
 47.0.30.6 ab260x ELAN pinb260a CLAN cplab261 a HB1
 cplab261 a MR9 plab261a HB2 plab261a ELAN plab261a CLAN State Monitore W O Groot M Help R 🛛 🔊 🛸 5:00 PM Real Consol... I MAS Trace Window 1 Start 🕞 🦽

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	124
Ctatura	4-6

X II II P II II O					
omain	Settings Options Advanced Av	alability Tracking Status			
omskins ∃ telo26×	Status of Resource Group		Preterred	Nodes	
Modules O Resource Groups O.O.	Monitoring State:	Contraction Contraction	 Q cpleb260a Q cpleb261a 		
B O Cal + Greate Me B O Cal D O Cal Q Perfec Car D Ordes Montes Re	W Resource Group Ctrl+Insert Tent Resource Group Ctrl+Delete Insorce Group Ctrl+M	Orane			
Copie Stop Monit	toring Ctrl+Shift+M	Tune	State	Note	
B → Servee Process Pr Conserve Process Pr Conserve Other Servee Other Serveee Other Servee Other Serveee	e Och493/the0 Resource Group Or Create Sport Son Or Create Sport Son Or Create Sport Son Or Create Sport Son Or Create	Data Source Data Source Catalocita Catalocita Service Lillip Process Service Service Service Service Service Service Service Service Service Service Service	Albeched Albeched Running Assgned Assgned Running Running Running Running Running Running Running Running Running Running Running	cgbb2006	
Bules B State Monitors B Triggers		<u>v*4</u> 2	tir Øgenor 🕅 1940		

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 125 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 216)
- "Uninstall the AutoStart software" (page 228)
- "Reinstall the AutoStart software" (page 234)
- "EMC software updates (AutoStart Agent/Console)" (page 235)

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.

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 the EAS522_WIN-x86.exe file to start the installation.

Result: The InstallShield Wizard dialog box appears and informs you that the AutoStart 5.2.2 software requires that the Microsoft .NET Framework be installed before installing the AutoStart Software.

Figure 126 Pending install of Microsoft .NET Framework

InstallShield Wizard
EMC AutoStart 5.2.2 requires that the following requirements be installed on your computer prior to installing this application. Click OK to begin installing these requirements:
Status Requirement
Pending Microsoft .NET Framework 2.0 (x86)
Cancel

4 Click OK.

Result: The InstallShield Wizard extracts the files and then automatically installs the Microsoft .NET Framework.

EMC AutoStart 5.2.2 requires that the following requirements be installeprior to installing this application. Click OK to begin installing these requi	d on your computer rements:
Status Bequirement	
ridgeronion	
Extracting Microsoft .NET Framework 2.0 (x86)	
stracting: {88989F5C-F976-4520-9570-322617328541}.dotnetfx.exe	

Figure 128 Installing Microsoft .NET Framework

nstallShield	l Wizard
EM pric	IC AutoStart 5.2.2 requires that the following requirements be installed on your computer or to installing this application. Click OK to begin installing these requirements:
Status	Requirement
Installing	Microsoft .NET Framework 2.0 (x86)
	Microsoft .NET Framework 2.0
	0.0
-	

5 Wait while the InstallShield Wizard installs the Microsoft .NET Framework.

Nortel CallPilot High Availability: Installation and Configuration NN44200-311 01.05 Standard 5.0 27 April 2007 **Result:** The InstallShield Wizard informs you that the AutoStart 5.2.2 software is preparing to install. (This install preparation can take a few minutes.) The Setup Type window then appears.

Figure 129

InstallShield Wizard - Preparing to install the AutoStart 5.2.2 software



Figure 130 Setup Type

🙀 EMC AutoSta	rt 5.2.2		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	×
Setup Type t suits your ne	eeds.		when	EMC ² re information lives
Plea	se select a setup type.			
C <u>C</u> omplet	e			
1	Both the EMC AutoSt Console will be install	art 5.2.2 Agent and E ed.	MC AutoStart 5.2.2	
• Custom				
1	Choose which progra for advanced users.	m features you want i	nstalled. Recommend	ed
InstallShield				
		< <u>B</u> ack	Next >	Cancel

- 6 Select the **Custom** option.
- 7 Click Next.

Result: The Custom Setup window appears.

8 Click the Agent drop-down list and then select **This feature will not be available**.

EML AutoStart 5.2.2	
ustom Setup Select the program features you want installed.	where information live
lick on an icon in the list below to change how a featu	re is installed.
AutoStart	Feature Description AutoStart Agent
- Wyenk	
This feature will be installed on	local hard drive. s, will be installed on local hard drive.
This feature will be installed on R This feature, and all subfeature This feature will not be available	ocal hard drive. s, will be installed on local hard drive.
This feature will be installed on	local hard drive. s, will be installed on local hard drive.
This feature will be installed on	local hard drive. s, will be installed on local hard drive.

Result: The Custom Setup window shows a red X next to the Agent option.

Figure 132	
Agent will not be installed	

EML AutoStart 5.2.2	
Custom Setup Select the program features you want installed.	where information live
lick on an icon in the list below to change how a feature i	s installed.
AutoStart	Feature Description AutoStart Agent
	This feature requires OKB on your hard drive.

9 Click Next.

EMC AutoStart 5.2.2	- 1	
Destination Folder Setup will install EMC AutoStart 5.2.2 in the I	following location.	EMC ² where information live
It is highly recommended that you install the	product in the same loc	ation on all machines.
It is required that you install on a local (non-	network) drive.	
It is required that you install on a local (non- To install to a different folder, click Change a	network) drive. and select another direct	tory.
It is required that you install on a local (non- To install to a different folder, click Change a To install to this directory, click Next.	network) drive. and select another direct	tory.
It is required that you install on a local (non- To install to a different folder, click Change a To install to this directory, click Next. Install EMC AutoStart 5.2.2 to:	network) drive. and select another direct	ory.
It is required that you install on a local (non- To install to a different folder, click Change a To install to this directory, click Next. Install EMC AutoStart 5.2.2 to: C:\Program Files\EMC AutoStart\	network) drive. and select another direct	cory.
It is required that you install on a local (non- To install to a different folder, click Change a To install to this directory, click Next. Install EMC AutoStart 5.2.2 to: C:\Program Files\EMC AutoStart\ stallShield	network) drive. and select another direct	cory.

Result: The Destination Folder window appears.

- **10** Click **Change** and change the drive letter from C to D (if required).
- 11 Click Next.

Result: The Confirm Settings window appears.

EMC AutoStart 5.2.2	
Confirm Settings	EMC ²
If you are satisfied with these settings, click Next. If you want to any settings, click Back.	change where information live
EMC AutoStart 5.2.2	
5elected Feature(s): AutoStart Console Authorized User: Administrator Host Name: cplab225a	

12 Click Next.

Result: The Ready to Install the Program window appears.

Figure 135 Ready to Install the Program

🕞 EMC AutoStart 5.2.2	X
Ready to Install the Program The wizard is ready to begin installation.	EMC ² where information lives
*	
Click Install to begin the installation.	
If you want to review or change any of your installation set exit the wizard.	ttings, click Back. Click Cancel to
InstallShield	
< <u>B</u> ack	Install Cancel

Nortel CallPilot High Availability: Installation and Configuration NN44200-311 01.05 Standard 5.0 27 April 2007 13 Click Install.

Result: The Installing EMC AutoStart 5.2.2 window appears.

14 Wait for the installation to complete.

Result: The InstallShield Wizard Completed window appears.

Figure 137 InstallShield Wizard Completed with check box selected



15 Clear the **Check for program updates now** check box.

Figure 138

InstallShield Wizard Completed with check box cleared



16 Click **Finish**.

–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:

- 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 225).
- 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 227).

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.
- 2 Expand Domains.
- 3 Select the Licensing/Security tab.

Figure 139

EMC AutoStart Console - Versi	on 5.2.2				- 0
le Action Yiew Help					
• X 🕨 🖲 🔁 🗹 🔟					
omain	Settings Licensing/Securi	ty Statistics/Domain Failure D	etection Event Log	Isolation Settings	
komain mains ■ 52005 ■ Resource Groups ■ CallPlot ■ CallPlot	Settings Licensing/Securi - Current License Informatio Product: [lab.26. License Key: [AM 90 License Type: Unrest Expires: April 22 New License Key: [- Vaild User List User administrator administrator administrator User Name [Domain/Node [Access Rights	tv Statistica/Domain Failure D in -Day Evaluation Key ricted SDK Site Eval 2, 2007 Domain/Node cplats/261a cplats/261a cplats/260a	Access Administrator Administrator Operator C Adm	Isolation Settings	rs install user
	Description	+ Aas + Ma	plify 🗙 Delete		
	1				

- 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.

EMC AutoStart Console - Versio	in 5.2.2				_0
e Action Yiew Help					
• X 🕨 🖲 🏝 🖆 🔟					
omain	Settings Licensing/Sec	urity Statistics/Domain Fe	ilure Detection Event Log	Isolation Settings	
mains	Current License Inform	ation			
T Modules	Product lab	26×		*	
E 🔍 Resource Groups					
CalPict CalPict colab261a	License Key: AM	90-Day Evaluation Key		×	
E O CalPiot_cplab260a	Lineare Trace Line	advided CDI/ City Fund			
O Nodes	License Type: Unr	estricted SUK Site Eval			
Services	Expires: Apr	122, 2007			
Process Proxies					
Node Aliases	New License Key:				🕂 Add
O Data Sources	Valid User List				
Addresses NICs	Valid User List	Damain Alasta		Description	
E-NC Groups	administrator	cplab261a	Administrator	Description	
Utility Processes Rules	administrator	cplab260a	Administrator	Initial Windo	ws install user.
E State Monitors					
tei Triggers					
	User Name adminis	strator			
	1000 1000 1000 1000 1000 1000 1000 100				
	Domain/Node sccsde	ev001			
	Access Rights	C Us	er 🗘 Operator 🛈 Admir	istrator	
	Description				
		+ Add	+ Moplify X Delete		
	111				

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.

Shew Domai	n	
Settings Licen	sing/Security Stat	istics/Domain Failure Detection Event Log Isolation Settings
Settings		
Domain Name:	lab26x	User Mode: User
Description:	-	
Node List:	cplab260a, cplab2	261 aj
Domain Port:	8042	Connect At Console Startup

- 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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21 A A

Uninstalling the AutoStart software

Ste	р	Acti	on

- 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 210).
- **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 (that is, 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 Scroll down and select **EMC AutoStart 5.2.2** from the list.

Figure 142 Add or Remove Programs - EMC AutoStart 5.2.2

Currently installed programs and updates:	Show updates	Sort by: Name	
Adobe Reader 7.0.9		Size	65.1
冕 CallPilot		Size	5.9
CallPilot Manager			
🊒 EMC AutoStart 5.2.2		Size	82.9
Click here for support information.		Used	occasio
		Last Used On	1/22/3
To change this program, click Change.			Cha
Intel(R) PRO Network Connections Drivers			
IveReg (Symantec Corporation)		Size	1.8
(LiveUpdate 3.0 (Symantec Corporation)		Size	5.8
Microsoft .NET Framework 2.0		Size	88.3
1 M5XML 4.0 SP2 (KB927978)		Size	2.5
Power Console Plus Package		Size	3.2
18 Server Appliance Kit		Size	10.2
🐉 Symantec AntiVirus Client		Size	14.2
B Symantec pcAnywhere		Size	32.7
U.S. Robotics 56K Faxmodern USB		Size	0.5
R Windows Server 2003 - Software Updates			

9 Click Change.

The EMC AutoStart 5.2.2 Maintenance Installation window appears.



10 Click Next.

Result: The Removal Method window appears.

Figure 144

EML AutoStart 5.2.2		
Removal Method		EMC ²
Select the removal type.		where information live
/hat features would like to remove?		
AutoStart Agent		
Do Nothing		
I OMDIELEV LIDIOSCAR EMIL MI	tostatt Adent	
	courcelle riger is	
Completely remove EN	1C AutoStart configuration (mo	dules, etc.)
Completely remove EN	IC AutoStart configuration (mo	odules, etc.)
Completely remove EM	1C AutoStart configuration (mo	dules, etc.)
Completely remove EN AutoStart Console Do Nothing	IC AutoStart configuration (mo	udules, etc.)
Completely remove EN AutoStart Console Do Nothing Completely Uninstall EMC Au	1C AutoStart configuration (mo toStart 5.2 Console	odules, etc.)
Completely remove EN AutoStart Console Do Nothing Completely Uninstall EMC Au collshield	1C AutoStart configuration (mo toStart 5.2 Console	odules, etc.)

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- 11 In the Removal Method window, select the following:
 - a. Under AutoStart Agent, select **Completely Uninstall EMC** AutoStart Agent.

Result: The Completely remove EMC AutoStart configuration (modules, etc.) check box appears.

- b. Select Completely remove EMC AutoStart configuration (modules, etc.) check box.
- c. Under AutoStart Console, select **Completely Uninstall EMC** AutoStart 5.2 Console.
- d. Click Next.

If the AutoStart Console is in use, the following message appears. Click **OK** to dismiss the message.

Figure 145





Result: The Remove the Program window appears.



12 Click Remove.

Result: The Stop Services Now? window appears.

Figure 147 Stop Services Now?



13 Click Yes to stop the AutoStart services.

Result: An EMC AutoStart dialog box appears and displays the status of the services being stopped.



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- 🗆 X

EMC⁻ where information lives

After the services are stopped, the Uninstalling EMC AutoStart window appears and displays the status of the uninstallation of the software.

Figure 14 Uninstalli	9 ng EMC AutoStart 5.2.2
FMC Auto	oStart 5.2.2
Uninstalli	ng EMC AutoStart 5.2.2
The prog	ram features you selected are being uninstalled.
P	Please wait while the InstallShield Wizard installs EMC Auto may take several minutes.

13	Please wait while the InstallShield Wizard installs EMC AutoStart 5.2.2. This may take several minutes.
	Status:
	Removing files
	88888
InstallShield -	
	< Back Next > Cancel

The InstallShield Wizard Completed window appears after the uninstall process is complete.



14 Click Finish.

Result: The EMC AutoStart 5.2.2 Installer Information dialog box appears.

eme a	utoStart 5.2.2		
į	You must restart your syste changes made to EMC Auto Click Yes to restart now or I later.	em for the configuration Start 5.2.2 to take effi No if you plan to restar	n ect. t
	Zantananananananan	(

15 Click Yes to restart the node.

—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.

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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 229), 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 79).
- 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.

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.

Installing 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 installed.

- 1 On CP1, do the following:
 - a. Launch the AutoStart Console.
 - b. Stop monitoring.

For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).

c. Take the resource group offline (shutting down CallPilot).

For more information, see "Taking the CallPilot resource group offline" (page 211).

- d. Wait for the CallPilot resource group 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.
- 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.
 - 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.

- **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.
- ii. Right-click the drive you want to connect.
- iii. Select Attach Data Source.
- c. 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).

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.

- **3** On CP1, do the following:
 - a. Launch the AutoStart Console.
 - b. Start monitoring (to enable automatic failovers).

For more information, see "Enabling automatic failovers (start monitoring)" (page 214).

c. Bring the resource group online (starting up CallPilot).

For more information, see "Bringing the CallPilot resource group online" (page 209).

Result: Both servers are updated with the PEPs.

-End—

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.



Figure 152 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.

Action
Dial into the active High Availability server using PCAnywhere Remote Modem.
Launch the AutoStart Console.
Select Domains > [AutoStart_Domain] > Utility Processes > UnloadTSPOnStandbyServer.
Right-click UnloadTSPOnStandbyServer and then select Start Utility Process from the shortcut menu.
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
Wait approximately 5 minutes for the script to complete running on the standby High Availability server.
Dial into the standby High Availability server using the PCAnywhere Remote Modem.
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—
have to connect or reconnect the USB modem to the active High bility server after the High Availability system is running (that is, lot is in service [the CallPilot resource group is online]), you must one of the following methods to make the PCAnywhere Host launch rly:

Dialing into the standby High Availability server

- 1. Take the CallPilot resource group offline. For more information, see "Taking the CallPilot resource group offline" (page 211).
- 2. Connect the USB modem.

- 3. Bring the CallPilot resource group online. For more information, see "Bringing the CallPilot resource group online" (page 209).
- 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 215).
- 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.

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.

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.

Scheduling :	an archive ba	ackup
--------------	---------------	-------

Step	Action
1	Ensure that a backup device exists. For more information, see "Creating a backup device (network disk)" (page 242).
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:\Nor- tel\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.

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**.

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 247).

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 242).
- 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.

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 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). A new 1005r server comes with the CallPilot 1005r 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).
- 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 5.2.2 on CP1.
- 6. Configure licensing and security on CP1.
- 7. Install the AutoStart 5.2.2 software on CP2.
- 8. Configure the AutoStart software.
- 9. Bring the Resource Groups online.
- 10. Test your configuration.
- 11. Create the CallPilot Reporter connections.
- 12. 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.



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). For more information, see Local networking settings.

ATTENTION

In the following procedure, the active (working) server is referred to as CP1. The standby server that is being reimaged or replaced is referred to as CP2.

Reimaging or replacing one of the High Availability servers

Step Action

- 1 Use the AutoStart Console on CP1 to disable monitoring. For more information, see "Disabling automatic failovers (stop monitoring)" (page 213).
- 2 Disconnect the network cables from CP2 (the server to be reimaged or replaced).
- 3 If the existing CP2 server is being reused, load the CallPilot 1005r 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 CP2 server with a new server, see the *1005r* Server Hardware Installation (NN44200-308). A new 1005r server comes with the CallPilot 1005r image preinstalled from the factory.

4 Install the antivirus software on CP2.

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 CP2, run the Setup Wizard and apply any CallPilot PEPs and SUs.

SUs and PEPs are found in the Enterprise Solutions PEP Library (ESPL) at <u>www.nortel.com/espl</u>.

- 6 Log on to CallPilot Manager on CP2.
- 7 On CP2, run the Configuration Wizard to configure the server. For more information, see "Configuring CP2 using the CallPilot Configuration Wizard" (page 63).
- 8 Restart the CP2 server.
- 9 Connect all the network cables to CP2. For more information, see "Connecting and verifying LAN connections" (page 69).
- **10** On CP2, install the AutoStart Agent and Console software (including any required patches) by entering the node name of CP1 (the unchanged High Availability server). Follow the steps in "Installing the AutoStart software on CP2" (page 95).

Note: You must enter the local host name of the active 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 CP1 (the unchanged High Availability server). For more information, see "Taking the CallPilot resource group offline" (page 211).
- 12 On CP1, use the AutoStart Console to select **Resource Groups** > CallPilot and then expand the CallPilot resource group.

EMC AutoStart Console - Version	5.2.2
File Action View Help	
+ × 🖀 🖬 🕨 🕮 🖉	
Domain	Settings Options Advanced Availability Tracking Status
omains ■ lab2bx Produces Processes Proc	Name: Califilit Description: Preterred Node List Selected Nodes Collab260a Collab261a

- a. Click the Settings tab.
- b. Under 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.
- 13 On CP1, 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.

EMC AutoStart Co	onsole - Version 5.2.	2		_101 ×
File Action View I	Help			
	20 -			
Domain		Settings Advanced Status		
Domains		Selected Nodes for DataSource		
E lab26x		Node	Status	T
Modules		cplab261a	Detached	
Resource (sroups	cplab260a	Detached	
Processes				
Services				
Process Proxie	BS			
Node Proxi	es			
Node Aliases		Results		
	100			
- drv	+ Create New Data	Source		
🗄 🔘 IP Addr	The Copy a Data Sour			
I S NICs	Dalaha Ormanh D			
HINC Groups	A Delete Current Da	ata source controlete		
Other Proce	Attach Data Sour	ce •		
	Delete the	current Data Source +D		
Triggers	💯 Query Data Source	te 🕨		
	Restart Mirror			
		1	Gear Results 🔛 Save Results	
			Timored 4 minutes	
		Temporarily Override Operation	Timeout Timinutes	
			Correct Of Correct Of Land	

- 14 On CP1, use the AutoStart Console to select the first node (expand [AutoStart_Domain] > Nodes > CP1) 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 CP1, 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 **None**
 - c. Click Apply.
- **16** Restart both servers.
- 17 On CP1, use the AutoStart Console to select the first node (expand [AutoStart_Domain] > Nodes > CP1) and do the following:
 - a. Select the Failure Detection and Mirroring tab.

- b. Under **Configure Mirror Settings**, change the **Remote Mirror Host** value to **CP2**.
- c. Click Apply.
- **18** On CP1, 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 **CP1**
 - c. Click Apply.
- **19** On CP1, recreate drive E (drvE) and drive F (drvF) and select the CP1 (the unchanged High Availability 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.

Domain	Data Source	Type		Attach State		Attanin Movie	
Dominie Bud2bin Persource Groups Persource Groups Persource Groups Persource Groups Persource Groups Persource Groups Persource Groups Personal Confect Personal Provides Personal Provides Pe	Source State	EMC Ministry for Windows Composite Data Source ChC Ministry Ministry Philip Source Forma Windows Makenski Shared Shared Dak Device For Win Ventas Volume Manager For	Settings Ladvarder	Ing for Windows Do	dows Target Nod Target Nod Target Nod Target Onv target Onv	e: [cptab2616 e: [cptab2616 e: [c710001 MB E: 10001 MB DK Parameters: [# bog	× ×

c. In the New EMC Mirroring for Windows Data Source window, do the following:

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Figure 155 Create New Data Source - EMC Mirroring for Windows
- i. Under the Description area, enter the **Data Source Name** (for example, drvE) and **Description** (for example, drive E).
- Under the Drive Selection area, select [Name_of_CP1] (unchanged 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 [Name_of_CP2] (new server) from the Target Node drop-down list and drive E from the Target Drive drop-down list.
- iv. Click Apply.
- v. Click **OK** to dismiss the warning message.
- d. Repeat the previous three steps for drive F.
- 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 156 Data Source Properties

Name: drvE	•
Relocate Resource Group on D	etached State
Relocate Resource Group on N	lo Response State
Attach Settings	Detach Settings
Attach Timeout 60 minutes	
	Detach Timeout 60 seconds
Parallel Attach	

- **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.

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** On CP1, bring the CallPilot resource group online. For more information, see "Bringing the CallPilot Resource Group online on CP1" (page 122).
- **33** On CP1, 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 125).
- **34** On CP1, enable AutoStart monitoring. For more information, see "Enabling automatic failovers (start monitoring)" (page 214).
- 35 If you have scheduled backups configured, do the following:
 - a. On CP2, browse to the shared D:\Nortel\Data\backup\Devices folder of CP1 and copy the contents of the Devices folder.
 - b. On CP2, paste the contents in to the Devices folder on CP2.
 - c. On CP2, browse to the shared D:\Nortel\Data\backup\Definitions folder of CP1 and copy the contents of the Definitions folder.
 - d. On CP2, paste the contents in to the Definitions folder on CP2.

-End—

Chapter 7 Upgrades, migrations, and feature expansion

In this chapter

"Introduction" (page 255)

"Feature Expansion: Adding the High Availability feature to an existing CallPilot 5.0 1005r server" (page 259)

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 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 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 server" (page 259)

to introduce a second 1005r server and to configure the two 1005r servers as a High Availability pair.

Scenario 2: If you have a CallPilot 5.0 1005r 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 server" (page 259) to introduce a second 1005r server and configure the two 1005r 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 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 server, as all of the required hardware comes preinstalled from the factory.

The procedure is the same as the new system installation procedure documented in Chapter 5 "Install and configure the High Availability pair" (page 37), with the following exception.

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 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 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 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 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 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)
- 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 server

A CallPilot High Availability system consists of two 1005r 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 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 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 server running CallPilot 5.0 to an existing 1005r server 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 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 server that is being added (a new server that has CallPilot 5.0 installed from the factory).

Feature expansion task list

Took List, High Availability fasture expansion

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.

Task List. Thigh Availability feature expansion			
Task	Estimated time	Procedures	
Prepare the switch	60 minutes	See "Preparing the switch" (page 260	
Install the new 1005r server (CP2)	210 minutes	See "Installing the new 1005r server (CP2)" (page 261)	

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Table 10

Task	Estimated time	Procedures	
Record the current server configuration from CP1	5 minutes	See "Recording the current 1005r server configuration (CP1)" (page 262)	
Run the Upgrade Wizard on the existing 1005r server (CP1)	160 minutes depending on system and database size	See "Running the Upgrade Wizard on CP1" (page 263)	
Prepare the new 1005r server (CP2)	10 minutes	See "Prepare the new 1005r server (CP2)" (page 266)	
Run the Setup Wizard on the new 1005r server (CP2)	210 minutes (includes restore time)	See "Running the Setup Wizard on CP2" (page 267)	
Configure CP1 using the CallPilot Configuration Wizard	40 minutes	See "Configuring CP1 using the Configuration Wizard" (page 271)	
Configure CP2 using the CallPilot Configuration Wizard	40 minutes	See "Configuring CP2 using the Configuration Wizard" (page 275)	
Complete the High Availability feature configuration	215 minutes	See "Completing the High Availability feature configuration" (page 279)	

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)
- 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 server (CP2)

A second 1005r server is required to complete the High Availability pair. The following procedure assumes that this 1005r 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).
 - 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 1005r servers.

ATTENTION

Do not connect the HB1, HB2, and MIRROR crossover LAN cables at this time.

4 Connect the peripheral equipment to both servers.

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.

Record the current 1005r 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 existing 1005r 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 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.

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 server (CP1) to generate a backup that can be restored on the new 1005r server CP2.

Nortel CallPilot High Availability: Installation and Configuration NN44200-311 01.05 Standard 5.0 27 April 2007 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

 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.

- 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.

CAUTION

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.



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.

Nortel CallPilot High Availability: Installation and Configuration NN44200-311 01.05 Standard 5.0 27 April 2007 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:

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\IPCON-FIGURATION.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 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 41).

• 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 42).

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 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:
 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.

Running the Setup Wizard on CP2

Step Action

- 1 Log on to the new CallPilot 1005r 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:

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.

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	the Setup Wizard continues.
57400	<i>Note:</i> 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:
 - 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.
- 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. <i>Note:</i> 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**.

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	Ac	tion			
1	Or Ma	On the existing CallPilot 1005r 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.

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.

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 server (CP1) will be reused as the Managed ELAN/CLAN IP address for the pair of server in the new High Availability configuration.

- 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 Ol	(to	configure	CallPilot.
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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—

Configure CP2 using the Configuration Wizard

Configuring CP2 using the Configuration Wizard

Step	Action			
1	On the new CallPilot 1005r server (CP2), log on to CallPilot Man			
	a.	When the Windows log on screen appears, log on with the current password.		
	b.	Launch Internet Explorer.		
	C.	Enter http:// <server address="" ip="" name="" or="">/cpmgr in the URL address box.</server>		
		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.

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 Enter the same **serial number** and **keycode** that was used for CP1.
- 7 Click Next.

Result: The Feature Verification screen appears.

8 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.

9 On the Server Information screen, enter the new host name for CP2 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.

Note: You must change the computer name of CP2 so that the current name can be reused as the Managed computer name for the High Availability pair.

10 Click Next.

Result: The Password Information screen appears.

- 11 If prompted, change the default password to the same password that is used on CP1. Store this password in a safe location.
- 12 Click Next.

Result: The Multimedia Allocation screen appears.

- **13** Verify the number of MPB boards and, if applicable, DSP cards, and ensure that they match the hardware installed in the CallPilot server.
- 14 Change the **Port Allocations** as required.
- 15 Click Next.

Result: The Switch Information screen appears.

- 16 Change the switch configuration so that it matches the TNs that are assigned to the MGate cards to which CP2 is connected.
- **17** Verify the CDN configuration.

Note: The CDN must be the same as the CDN used on CP1.

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.

18 Click Next.

Result: The Language Source Directory screen appears.

19 Select the **Skip Language CD Validation** option.

Result: The CallPilot Local Area Network Interface screen appears.

20 Use the Language Prompts CD to reinstall languages. When the CallPilot 5.0 Image was installed on the server, all languages were removed.

ATTENTION

Ensure the language source directory contains CallPilot 5.0 Language Prompts. Voice prompts from a previous release of CallPilot do not work.

- **21** Put the CallPilot 5.0 Language Prompts CD in the CD or DVD drive and select the **Install Language** option button.
- 22 In the Language CD Location box, enter the path to the CallPilot 5.0 Language Prompts CD and click Next.

Result: The Language Installation screen appears.

23 Choose the languages that you want to install for the Prompts option, the Automated Speech Recognition option, and the Primary and Secondary languages, and then click **Next**.

Note: The same languages that are installed on CP1 must be installed on CP2. Ensure that the Primary and Secondary languages are the same as CP1.

Result: The CallPilot Local Area Network Interface screen appears.

- 24 On the CallPilot Local Area Network Interface screen, do the following:
 - a. Change the ELAN and CLAN IP address values to the new values.

Note: The previous ELAN and CLAN IP address values from the existing CallPilot 1005r server will be reused as the Managed ELAN/CLAN IP address and host name for the pair of servers in the new High Availability configuration.

b. 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.

c. 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 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

25 Click Next.

Result: The Ready to Configure screen appears.

26 Click Finish.

Result: A dialog box prompts you to confirm the configuration.

27 Click **OK** to configure CallPilot.

Result: The configuration is applied to the server. This task can take from 10 to 40 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.

28 Click **OK** to dismiss the dialog box.

Result: The system returns you to the main CallPilot Manager screen.

- **29** Log off CallPilot Manager and close the Web browser.
- 30 Restart CP2.



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 68) and complete the following procedures:

- "Connecting and verifying LAN connections" (page 69)
- "Modifying the hosts file" (page 72) (optional)
- "Testing the host name resolution" (page 74)
- **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 75).

3 Install the AutoStart Software on CP1.

For more information, see "Installing the AutoStart Agent and Console software on CP1" (page 79).

4 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 92).

5 Install the AutoStart software on CP2.

For more information, see "Installing the AutoStart software on CP2" (page 95).

- **6** To configure the AutoStart software, do the following:
 - a. Configure the AutoStart software.

For more information, see "Configure the AutoStart software" (page 109).



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 109).

ii. Add the Remote Mirroring Host for the new 1005r server (CP2).

For more information, see "Adding the Remote Mirroring Host for CP2" (page 112).

b. Generate the AutoStart Definition File.

For more information, see "Generating the AutoStart Definition File" (page 115).

c. Import the AutoStart Definition File.

For more information, see "Importing the AutoStart Definition file" (page 117).

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 118).

7 Bring the Resource Groups online.

For more information, see "Bring the Resource Groups online" (page 122).

a. Bring the CallPilot Resource Group online on CP1.

For more information, see "Bringing the CallPilot Resource Group online on CP1" (page 122).

 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 125).

- 8 Create the CallPilot Reporter connections. For more information, see "Creating the CallPilot Reporter connection" (page 129).
- **9** If required, add the servers to a Windows domain. See "Joining a Windows domain" (page 130).

—End—

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Publication: NN44200-311 Document status: Standard Document version: 01.05 Document date: 27 April 2007

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