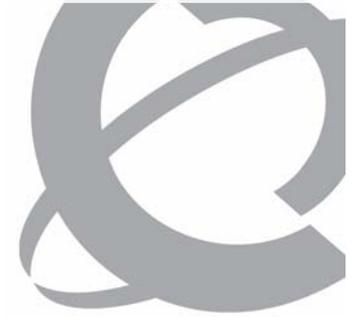




# What's New With CallPilot Release 5.0 – Installation and Configuration

> COURSE 6407F





## Course Objective

- > After completing the course, the student will be able to:
- Identify CallPilot hardware platforms supported with Release 5.0.
  - List new installation features introduced with CallPilot Release 5.0.
  - List supported upgrade paths for CallPilot Release 5.0.
  - Describe upgrade procedures required to upgrade legacy CallPilot servers to Release 5.0.
  - Describe procedure used to implement the new High Availability feature introduced with CallPilot Release 5.0.
  - Describe the security enhancements introduced with CallPilot Release 5.0.



# Course Lessons

- Lesson 1 - CallPilot Release 5.0 Supported Hardware Platforms
- Lesson 2 - CallPilot Release 5.0 Installation and Upgrade Enhancements
- Lesson 3 - CallPilot Release 5.0 High Availability
- Lesson 4 - CallPilot Release 5.0 Security Enhancements



# CallPilot Release 5.0 Supported Hardware Platforms

>Lesson 1





# Lesson Objectives

- > After this lesson, you will be able to:
- List CallPilot Servers supported at Release 5.0.
  - Identify features and capacities on new hardware platforms introduced with CallPilot Release 5.0 .

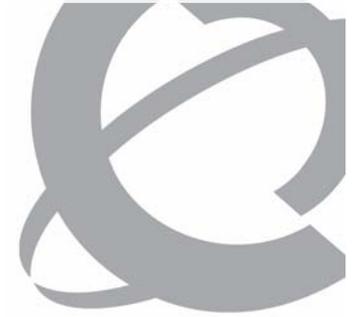


# Supported Hardware Platforms

# CallPilot Release 5.0

## Supported Hardware Platforms

### CallPilot Servers



#### > Legacy Hardware Platforms:

- 201i
- 703t
- 1002rp

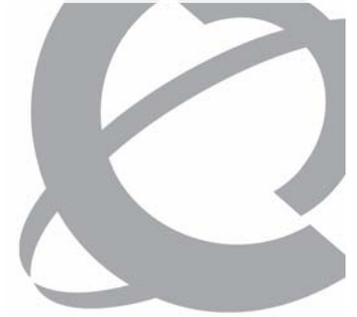
#### > New Hardware Platforms:

- 600r
- 1005r

# CallPilot Release 5.0

## Supported Hardware Platforms

### RoHS Compliancy



#### > European Union RoHS Directive:

- Bans placing new electrical and electronic equipment containing more than agreed levels of certain hazardous materials on the European Union market including:
  - Lead
  - Cadmium
  - Mercury
  - Hexavalent chromium
  - Polybrominated biphenyl (PBB)
  - Polybrominated diphenyl ether (PBDE) flame retardants

> Both the 600r and the 1005r hardware platforms are RoHS compliant.

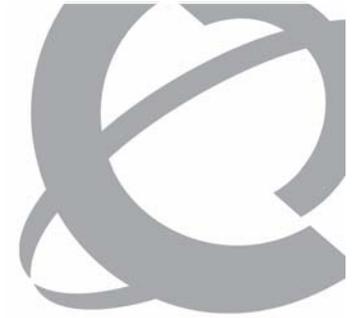


# The CallPilot 600r Server

# CallPilot Release 5.0

## Supported Hardware Platforms

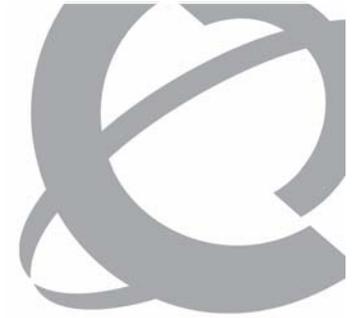
### 600r: Simple and Compact Low End Server



#### > Platform Description:

- A hardened long life Carrier Grade NEBS server
- Industry standard 1U rack mount
- Cost effective alternative to the aging 201i
- Simplified installation and serviceability
- Supported on CS 1000 / M1 PBX only
- Clearance and weight:
  - Front: 2 in
  - Rear: 3.6 in
  - Sides: 1 in
  - Dimensions (DxWxH): 20x17x1.75 inches
  - Weight 23 pounds or 10.43 KG





# CallPilot Release 5.0

## Supported Hardware Platforms

### 600r: Simple and Compact Low End Server

#### > Platform Components:

- Based on Intel's "Chesnee" carrier grade NEBS compliant server
- 1U Rack Mounted Chassis
- Single P4 3.0 GHz/800MHz FSB w/ HT
- 512MB DDR 400MHz RAM
- Single 3.5" Ultra 320 10K 73GB SCSI HD
- One U320 embedded with external VHDCI Wide SCSI for optional external Tandberg SLR 75 tape drive
- Built in DVD-ROM/CDRW drive
- Embedded Dual 10/100/1000Mbps
- Single Full Length Full Height PCI-X 3.3V or 5V card slot
- Single 250W auto sensing 110/220V AC power supply
- Six variable speed fans directly dependant on server load
  - Dual redundant processor fans
  - DIMM fan
  - PCI-X card fan



# CallPilot Release 5.0

## Supported Hardware Platforms

### 600r: Simple and Compact Low End Server



#### >Keycode Capacities:

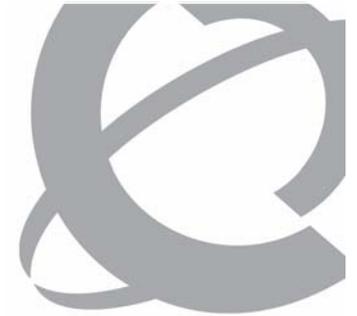
- 1200 Storage hours
- 96 Channels
- 96 MPUs
- 50,000 Mailboxes
- 5000 Remote user/directory entry references
- 15,500 voice mail users
- 20,000 voice mail & desktop users
- Six Voice prompt languages
- Three Speech Rec. Languages



# CallPilot Release 5.0

## Supported Hardware Platforms

### 600r: Simple and Compact Low End Server



**600r / 201i Hardware Comparison**

Platform Features	600r (Intel)	201i
Form Factor	Rack 1U	M1 “inskins” Proprietary
Memory	512MB DDR 400MHz	256MB PC66 (66MHz)
Processor	P4 3.0GHz/800MHz FSB w/ HT	Celeron 300A/66MHz FSB
Storage Protocol	One U320 embedded with external VHDCI Wide SCSI	Parallel ATA66
Media	DVD-ROM/CDRW Built-in	External DVD-ROM
Tape Drive	Optional External Tandberg SLR75 (read compatible down to SLR4)	Optional External SLR5
Floppy Drive	N/A	N/A

# CallPilot Release 5.0

## Supported Hardware Platforms

### 600r: Simple and Compact Low End Server



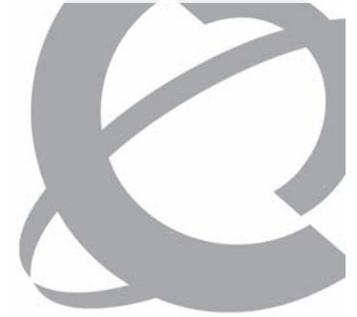
**600r / 201i Hardware Comparison**

Platform Features	600r (Intel)	201i
Hard Drive	Single 3.5" Ultra 320 10K 73GB SCSI HD	Ultra ATA 2.5" 7200 60GB Laptop Drive
Ethernet	Embedded Dual 10/100/1000Mbps	Embedded Dual 10/100Mbps
Slots	Single Full Length Full Height PCI-X 3.3V or 5V Slot	N/A
Power supply	Single 250W auto sensing 110/220V AC	40 Watts Total – 8 Embedded
System fans	6 fans (dual redundant (4) for processor, DIMM fan and PCI-X Card Fan)	None

# CallPilot Release 5.0

## Supported Hardware Platforms

600r: Simple and Compact Low End Server



**600r / 201i Hardware Comparison**

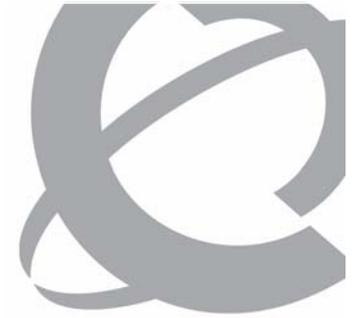
Platform Features	600r (Intel)	201i
Embedded CP DSP Channels	N/A	1 (8 channels)
Maximum CP DSP Channels	96	40
I/O	Video, Mouse, Keyboard, VHDCI SCSI, USB, NIC, COM,	Video, Mouse, Keyboard, Narrow SCSI, Dual NIC, COM



# The CallPilot 1005r Server

# CallPilot Release 5.0

## Supported Hardware Platforms



### 1005r Rack-mount Server

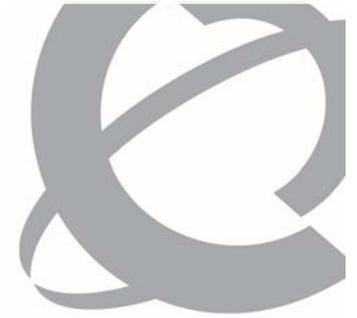
#### > Platform Description:

- A hardened long life Carrier Grade NEBS server
- Industry standard 2U rack mount
- RoHS compliant but also addresses the North American CS 1000 / Meridian 1 1002rp market
- Also addresses the existing 703t Market due to its low cost and high demand for rack mount servers
- Supported on CS 1000 / M1 PBX only
- Clearance and weight:
  - Front: 2 in
  - Rear: 3.5 in
  - Sides: 1 in
  - Dimensions (DxWxH):  
20x17x3.45 inches
  - Weight: 37.5 lbs or 17 KG (min config)  
48.5 lbs or 22 KG (maximum config)



# CallPilot Release 5.0

## Supported Hardware Platforms



### 1005r Rack-mount Server

#### > Platform Components:

- Based on Intel's Langley/Irwindale carrier grade NEBS compliant server
- 2U Rack Mounted Chassis
- Dual Xeon Processor 3.2Ghz @800MHz FSB
- Chipset E7520 with 800MHz FSB
- Six DIMM slots – DDR2-400 SDRAM memory - four modules populated for a total of 2GB organized as 1GB redundant
- Integrated dual channel U320 SCSI with external bus connection for SLR75 tape drive
- 2x 10/100/1000 embedded NICs on system board



# CallPilot Release 5.0

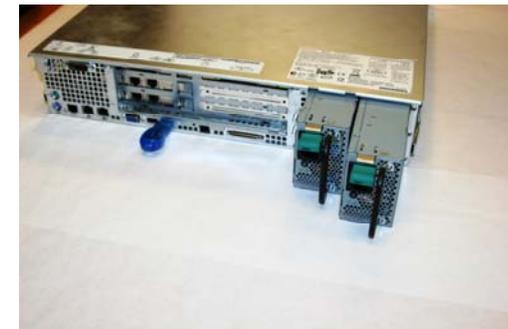
## Supported Hardware Platforms

### 1005r Rack-mount Server



#### > Platform Components (Continued):

- Six PCI slots (3xFullSize 3xLowProfile):
  - 3 x Low Profile accommodating 1 RAID card and two double NIC cards
  - 3 x Full Size accommodating up to 3 MPB96 cards
- PCI RAID card LSI320-1 as standard
- Dual 147GB U320 SCSI 15k rpm hot swap hard drives
- “No Tool Removable” Slim DVD/CDRW combo bay
- Dual redundant hot swappable 500W power supplies
- Serviceable system and processor fans
- Remote H/W monitoring option /  
Local hardware monitoring standard via embedded Intel ISM



# CallPilot Release 5.0

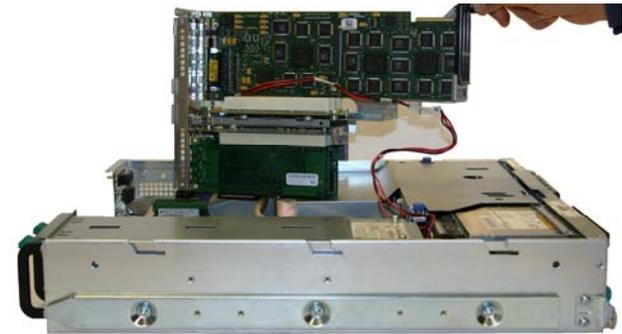
## Supported Hardware Platforms



### 1005r Rack-mount Server

#### > Keycode Capacities:

- 2400 Storage hours
- 96 or 192 Channels\*
- 96 or 288 MPUs\*
- 50,000 Mailboxes
- 5000 Remote user/directory entry references
- 15,500 voice mail users\*
- 20,000 voice mail & desktop users\*
- Six Voice prompt languages
- Three Speech Rec. Languages
- Supported on CS 1000 / M1 PBX only



\* Engineering maximum for High Capacity Feature

# CallPilot Release 5.0

## Supported Hardware Platforms



### 1005r Rack-mount Server

#### 1005r / 1002rp / 703t Hardware Comparison

Platform Features	1005r (Intel based)	1002rp (Radisys/ Trenton Tech)	703t (Intel based)
<b>Form Factor</b>	Rack 2U	Rack 4U	Tower
<b>Memory</b>	1GB Redundant DDR-2 400	512MB PC133	512MB 266DDR
<b>Processor</b>	Dual Xeon 3.2GHz/800MHz FSB	Dual Pentium III 866MHz	Single (Dual capable) Intel Xeon 2.0GHz with Hyper treading technology
<b>SCSI Adapter</b>	One U320 embedded with external connection	1 On board one Ultra SCSI	One Adaptec U320
<b>RAID</b>	Standard Add-On LSI320-1	Standard Add-On LSI320-2 or LSI1600	Standard Add-On LSI320-2 or LSI1600

# CallPilot Release 5.0

## Supported Hardware Platforms



### 1005r Rack-mount Server

**1005r / 1002rp / 703t Hardware Comparison**

Platform Features	1005r (Intel based)	1002rp (Radisys/ Trenton Tech)	703t (Intel based)
DVD/CDRW	IDE Standard	IDE standard	IDE standard
Tape Drive	Optional External Tandberg SLR75  (backward read compatible down to SLR4)	Standard Internal Tandberg SLR75  (backward read compatible down to SLR4)	Standard Internal Tandberg SLR75  (backward read compatible down to SLR4)
Floppy Drive	N/A	Standard	Standard
Hard Drive	2 x 15Krpm 147GB Ultra320 SCSI	6 x 36/73GB Ultra 160 SCSI	2 x 36GB Ultra 320 SCSI

# CallPilot Release 5.0

## Supported Hardware Platforms



### 1005r Rack-mount Server

**1005r / 1002rp / 703t Hardware Comparison**

Platform Features	1005r (Intel based)	1002rp (Radisys/ Trenton Tech)	703t (Intel based)
<b>Ethernet</b>	Embedded Dual 10/100/1000Mbps	Embedded Dual 10/100Mbps	ELAN 10/100Mbps CLAN 10/100/1000 Mbps Both embedded
<b>Slots</b>	3 Full Size PCI-X 3 Small Profile PCI-X	12 PCI 32/33 (9 usable) 7 ISA and 1 PICMG	2 PCI 32/33 4 PCIX 64/100
<b>Power supply</b>	AC only Dual redundant hot swap 500W auto sensing 110/220V	AC/DC 500W hot swap auto sensing 110/220V	AC 450W(M1) auto sensing 110/220V

# CallPilot Release 5.0

## Supported Hardware Platforms



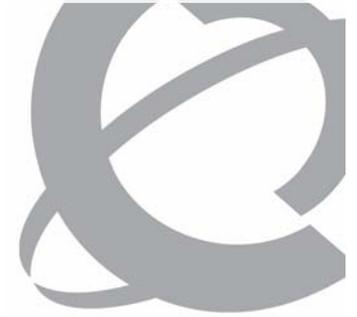
### 1005r Rack-mount Server

#### 1005r / 1002rp / 703t Hardware Comparison

Platform Features	1005r (Intel based)	1002rp (Radisys/ Trenton Tech)	703t (Intel based)
<b>System fans</b>	4 FRU system fans also servicing processors	Two hot swap plus one for each processor. Processor fans are not replaceable.	Four plus one for the processor, all FRU
<b>I/O</b>	VGA, 1 Serial 3USB, 2IDE embedded, 1 Ext SCSI	VGA, 2 Serial one Parallel, 2 IDE embedded	VGA, 4 USB, 2 Serial, 1 Parallel, 2IDE embedded
<b>Alarm and error reporting</b>	Through SEL	N/A	Through SEL



# The High Capacity Feature



# CallPilot Overview

## 1005r Rack-mount Server – High Capacity

### > High Capacity Feature:

- Three MPB96 cards installed in the full sized PCI card slots
  - 192 Voice Channels
  - 96 Fax Channels
  - 48 Speech Rec Channels
- In any combination with a maximum of 288 MPUs
- Up to 15,500 Voice Mail users
- Up to 20,000 Voice & Desktop Messaging users



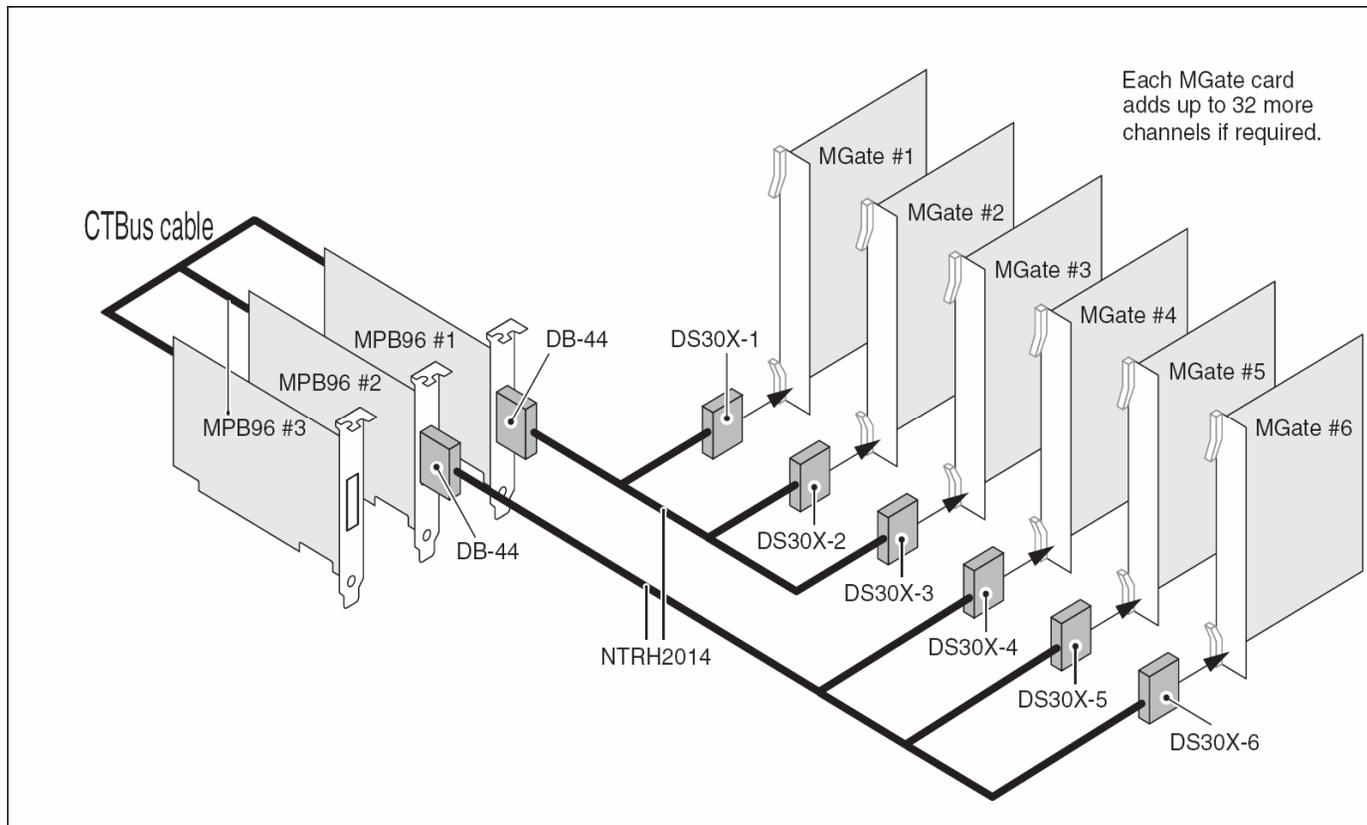
# CallPilot Release 5.0 Supported Hardware Platforms



## 1005r Rack-mount Server – High Capacity

### > High Capacity Feature:

- Six MGate cards installed in the switch





# The High Availability Feature

# CallPilot Release 5.0

## Supported Hardware Platforms



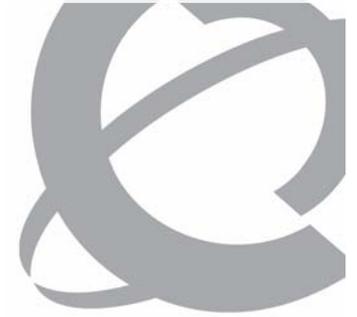
### 1005r Rack-mount Server – High Availability

#### > High Availability Feature – Introduction

- Pair of CallPilot 1005r servers provisioned to look to the customer as a single server.
- Servers run in an Active / Standby configuration. If the active server has a problem, the standby server takes over.
- Servers are co-located and are connected to the same switch.
- Each server has its own dedicated connection to the switch (that is, MGate cards and DS30 cables).

# CallPilot Release 5.0

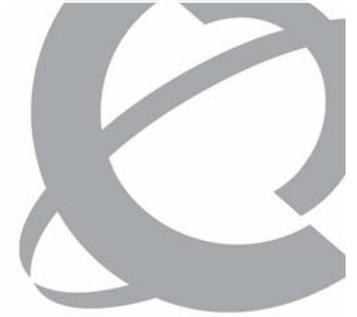
## Supported Hardware Platforms



### 1005r Rack-mount Server – High Availability

#### > High Availability Feature – Limitations

- Load balancing is not supported. Only one of the servers in the pair is active at any one time.
- Geographic redundancy is not supported. The servers must be co-located and be connected to the same switch.
- Failover is not instantaneous. As the secondary server is brought into service, there can be up to 15 minutes of down time depending on the server configuration.



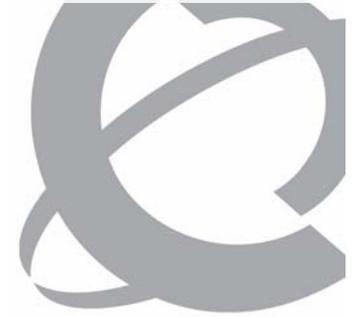
# CallPilot Release 5.0

## Supported Hardware Platforms

### 1005r Rack-mount Server – High Availability

#### > High Availability Feature – Software

- Third party software, EMC AutoStart Agent and Console software is installed and configured on both CallPilot servers.
  - Provides managed IP services that lets a pair of servers look like one server on the ELAN subnet and Nortel Server subnet.
  - Uses additional dedicated LAN connections to provide heart beat and mirroring connections between the servers.
  - Keeps the hard drives on both servers synchronized by mirroring data from the active server to the standby server so that no data is lost in the event of a failover.
  - Monitors the status of both servers in the High Availability pair.
  - Performs an automatic failover to the standby server in the event that a failure condition is detected on the active server.
  - Provides a mechanism for administrator-initiated (manual) failovers.



# CallPilot Release 5.0

## Supported Hardware Platforms

### 1005r Rack-mount Server – High Availability

#### > High Availability Feature – Failover

- Automatic failover from the active server to standby server is supported for a limited number of cases:
  - A reboot or shut down of the active server
  - Loss of connection on the ELAN at the TCP/IP level
  - Failure of one, or more, of the critical CallPilot services
- After an automatic failover, the new standby server must be checked to investigate the cause of the failover and ensure that the server is ready to resume service.
- At any time the system administrator can initiate a manual failover through the EMC AutoStart Console software.

# CallPilot Release 5.0

## Supported Hardware Platforms



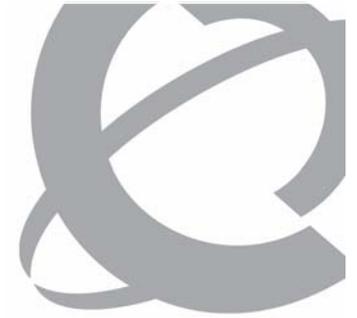
### 1005r Rack-mount Server – High Availability

#### > High Availability Feature – Services

- The services shown in the chart are monitored by the EMC AutoStart software.
- If a service stops and cannot be restarted, it triggers an automatic failover to the Standby server.

**Note:** Services that are managed by the EMC AutoStart software are no longer managed by the CallPilot Service manager.

Controlled by AutoStart
Adaptive Server Anywhere - DB_SQLANY
CallPilot AOS Service
CallPilot HAL Monitor
CallPilot LDAP Service
CallPilot Multimedia Volume 1
CallPilot Multimedia Volume 102
CallPilot Multimedia Volume 103
CallPilot Resource Package 1
CallPilot Resource Package 2
CallPilot Resource Package 3
CallPilot Blue Call Router
CallPilot MWI
CallPilot Call Channel Router
CallPilot SLEE Service
CallPilot Notification Service
CallPilot MTA Service
CallPilot Maintenance Service
Provider
CallPilot IMA



# CallPilot Release 5.0

## Supported Hardware Platforms

### 1005r Rack-mount Server – High Availability

#### > High Availability Feature – Failover Time

- Failovers are not instantaneous.
- Time is required for:
  - Services to shutdown on the Active server
  - DSP Diagnostics to be run on the Standby server
  - Services to start on the Standby server
  - Switch resources to be acquired
- Failover time can be reduced by disabling DSP diagnostics.

Failover Time		
	DSP Diagnostics Enabled	DSP Diagnostics Disabled
1 MPB96 Board (96 Channel – 96 MPU)	10 Minutes	7 Minutes
3 MPB96 Boards (192 Channel – 288 MPU)	15 Minutes	7 Minutes



# Knowledge Check

## Question 1

Which two CallPilot server platforms can be purchased for new system installations with CallPilot Release 5.0?

- a) 201i
- b) 600r
- c) 703t
- d) 1005r

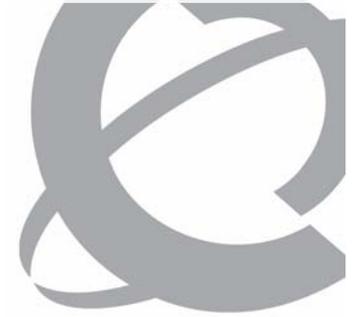


# Knowledge Check

## Question 1

Which two CallPilot server platforms can be purchased for new system installations with CallPilot Release 5.0?

- a) 201i
- b) 600r
- c) 703t
- d) 1005r

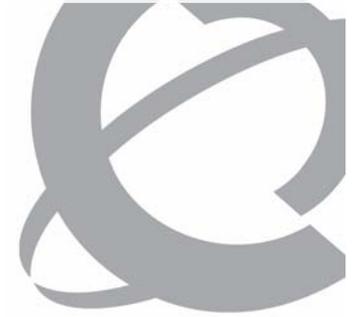


# Knowledge Check

## Question 2

Which CallPilot servers meet the requirements of the European Union RoHS Directive?

- a) 201i
- b) 600r
- c) 703t
- d) 1005r

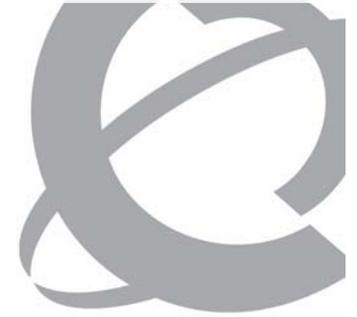


# Knowledge Check

## Question 2

Which CallPilot servers meet the requirements of the European Union RoHS Directive?

- a) 201i
- b) 600r
- c) 703t
- d) 1005r



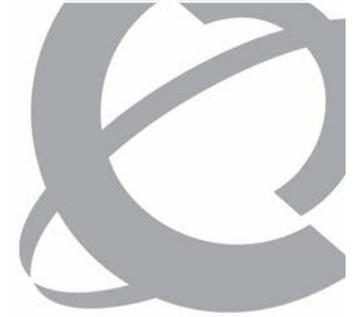
# Knowledge Check

## Question 3

True or False

The High Capacity feature is available on both the 600r server and the 1005r server.

- a) True
- b) False



# Knowledge Check

## Question 3

True or False

The High Capacity feature is available on both the 600r server and the 1005r server.

- a) True
- b) **False**



# Knowledge Check

## Question 4

When the High Availability feature is implemented, can the two CallPilot 1005r servers be located in separate geographic locations?

- a) Yes
- b) No



# Knowledge Check

## Question 4

When the High Availability feature is implemented, can the two CallPilot 1005r servers be located in separate geographic locations?

- a) Yes
- b) No



# CallPilot Release 5.0 Installation and Upgrade Enhancements

>Lesson 2





## Lesson 2 Objective

> After this lesson, you will be able to:

- List new Installation features introduced with CallPilot Release 5.0.
- Identify the supported upgrade paths to CallPilot Release 5.0.
- Describe the CallPilot Release 5.0 upgrade process.
- Describe the CallPilot Release 5.0 installation process.



# New Installation Features

# CallPilot Release 5.0 Installation and Upgrade Enhancements

## New Language Prompts



> New language prompts were created for CallPilot Release 5.0.

- Language installation must be performed.

The screenshot shows a Windows-style dialog box titled "Configuration Wizard: Language Source Directory". At the top, there are four buttons: "Back", "Next", "Cancel", and "Help". The main content area contains the following text:

**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

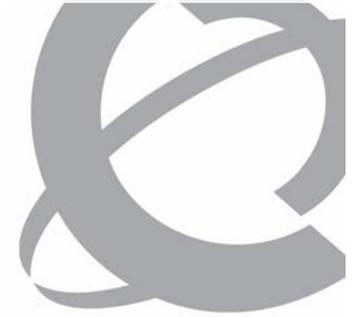
Skip Language installation

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.

At the bottom of the dialog box, there are four buttons: "Back", "Next", "Cancel", and "Help".

# CallPilot Release 5.0

## Installation and Upgrade Enhancements



### 1000 NMS Locations – Overview

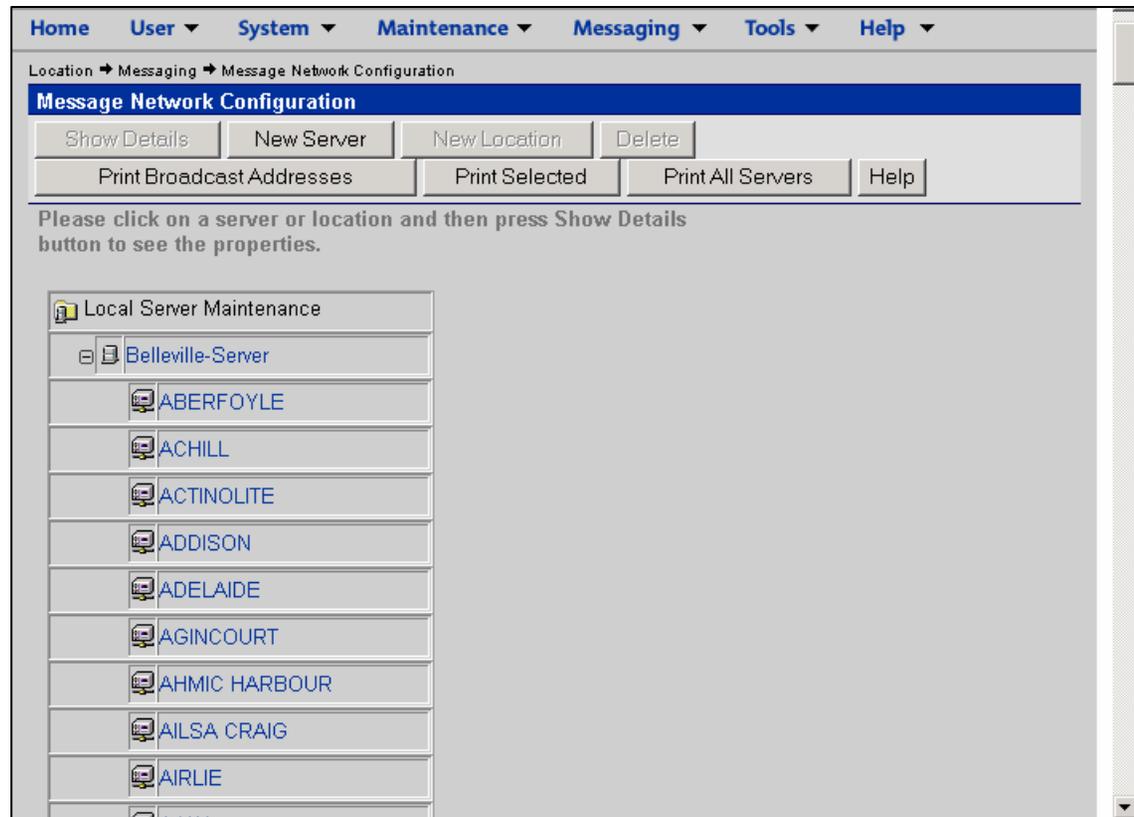
- > Enhancement to previous limit of 60 NMS locations
- > Can define up to 1000 NMS locations per CallPilot server
- > Location ID ranges from 0 to 999:
  - System always sets Prime Location ID value to 0.
  - Satellite Locations range from 1 – 999.
- > When the network tree is expanded, all location names are displayed.
  - Location names are sorted alphabetically.
- > Maintained under:  
    Messaging -> Message Network Configuration

# CallPilot Release 5.0 Installation and Upgrade Enhancements



## 1000 NMS Locations – Message Network Configuration

> The Message Network Configuration page scrolls down to display all location names.



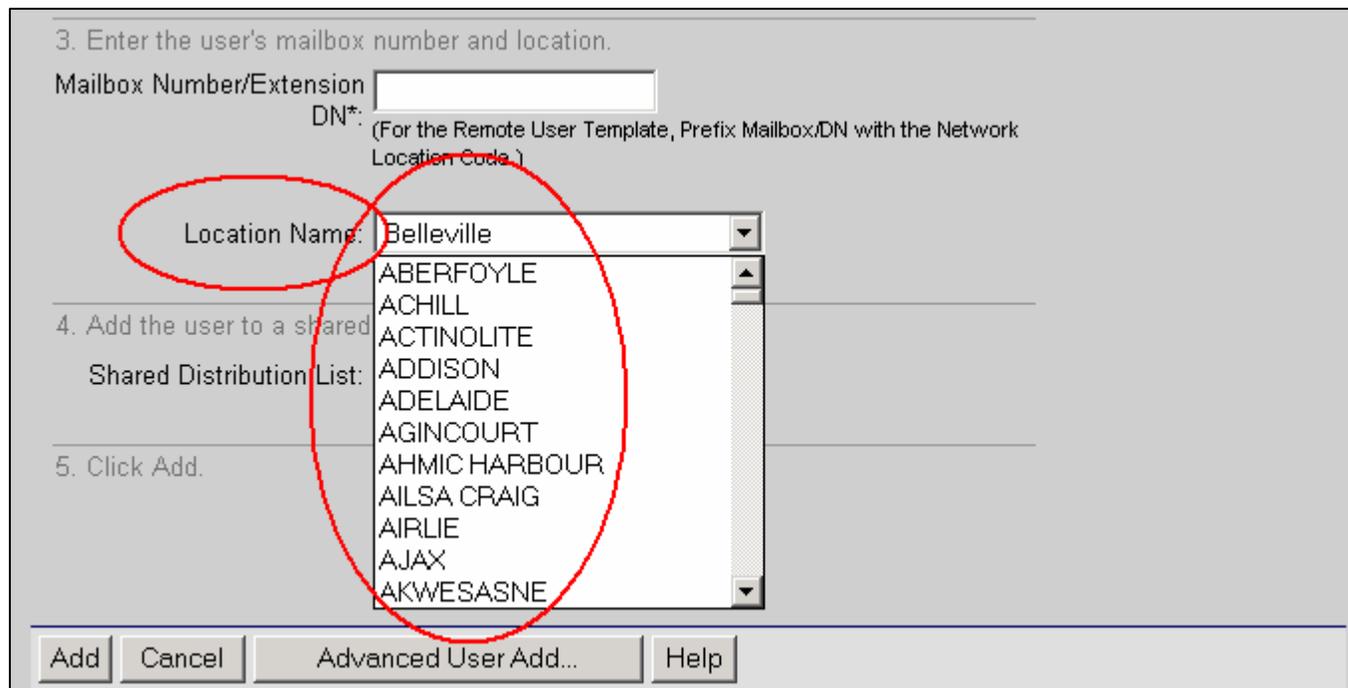
# CallPilot Release 5.0

## Installation and Upgrade Enhancements



### 1000 NMS Locations – Affected Screen Displays (1 of 2)

> When adding or modifying users, the Location Name drop-down list displays up to 1000 locations.



# CallPilot Release 5.0 Installation and Upgrade Enhancements



## 1000 NMS Locations – Affected Screen Displays (2 of 2)

> Location ID drop-down list on Message Network Configuration page displays 1-999.

A screenshot of the CallPilot web interface showing the 'Satellite Location Properties' configuration page. The page title is 'Server: CP Richardson Satellite Location Properties: Opt 11 Irving'. The 'General' section contains fields for 'Name' (Opt11 Irving), 'Description', and 'Location ID'. The 'Location ID' field is a drop-down menu currently showing '1', with a red rounded rectangle highlighting the list of options from 989 to 999. Below this are fields for 'Spoken Name Recorded', 'ESN Dialing Plan for this Location', 'CDP Dialing Plan for this Location', and 'Mailbox Addressing Follows Dialing Plan'. The 'Dialing and Addressing' section includes 'Mailbox Prefixes'.

# CallPilot Release 5.0

## Installation and Upgrade Enhancements

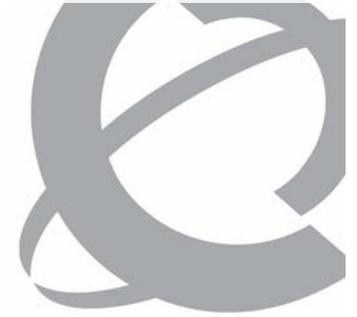


### 1000 NMS Locations – Networking with Older Systems

- > Networking with older systems does not fully support 1000 locations.
  - Administrator at older systems cannot configure 1000 locations on the older systems.
  - Users on the older systems cannot send to locations with IDs higher than 59.
  - Users on older systems can receive from locations with IDs greater than 59, but the envelope for those locations are identified as deleted sites because location numbers not in the networking list are assumed to have been deleted.
  - Recipients at locations with IDs greater than 59 are tagged as belonging to deleted locations.

# CallPilot Release 5.0

## Installation and Upgrade Enhancements



### New Hard Disk Drive Requirements

#### > Minimum drive size requirements:

- 201i, 1 x 20 GB (new)
- 600r, 1 x 70 GB
- 703t (RAID), 2 x 36 GB
- 1002rp (RAID), 6 x 36 GB (new)
- 1005r (RAID), 2 x 140 GB

#### > New disk volume allocation:

- C: OS + page file + CP Mgr
- D: CallPilot server
- E: Database
- F: MMFS/Appbuilder Apps

**Note:** The new disk volume allocation requirements apply to all supported CallPilot servers except the 201i.

# CallPilot Release 5.0

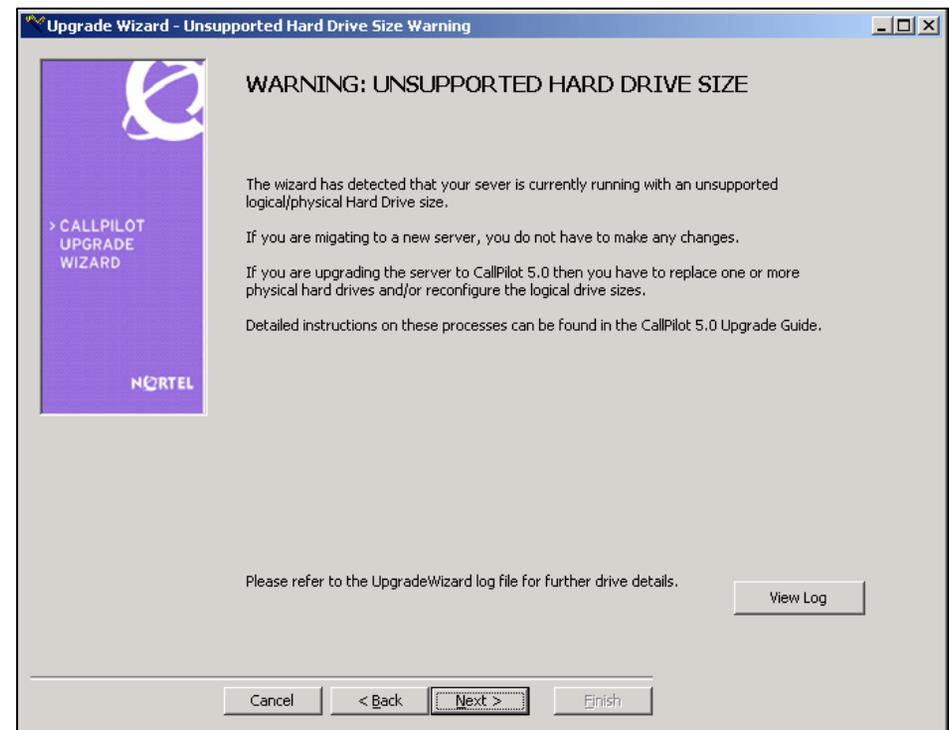
## Installation and Upgrade Enhancements

### New Hard Disk Drive Requirements



> Hard disk drive replacement is required when the Upgrade wizard warns that the drive is too small.

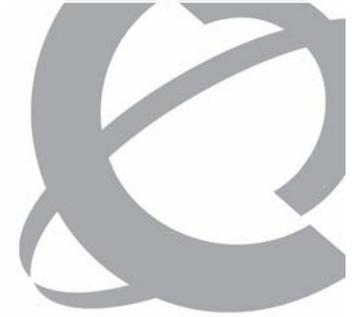
- Complete Upgrade wizard to create a database backup.
- For 201i:
  - Before imaging, replace drive.
  - Install new image.
  - Complete the Setup Wizard and restore the database.
- For 1002rp:
  - Before imaging, replace drive.
  - Reconfigure RAID.
  - Install CP5.0 S/W image.
  - Complete the Setup Wizard and restore the database.



# CallPilot Release 5.0

## Installation and Upgrade Enhancements

### New Keycode Enabled Features



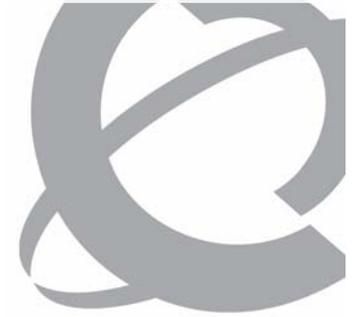
> CallPilot Release 5.0 introduces two new keycode controlled features:

- Voice Forms:
  - CallPilot Voice Forms feature is based on the Meridian Mail Voice Forms feature.
  - A Voice Form provides an electronic equivalent of a paper form.
  - A Voice Form can be a standalone application or can be integrated with other CallPilot applications.
  - Voice Forms can be used to collect information from external sources such as customers or potential clients or from internal sources such as employees.
- High Availability:
  - 1005r server
  - CS 1000 / Meridian 1 PBX connectivity only
  - Not supported with Contact Center integration

# CallPilot Release 5.0

## Installation and Upgrade Enhancements

### New Keycode Enabled Features



**Configuration Wizard: Feature Verification**

Back Next Cancel Help

**Feature Verification:**

The following table contains the configuration information from your keycode. Ensure that the details match your expectations. If a feature is missing or a value is not what you expected, contact your distributor to obtain a new keycode.

Serial number: TRAINING  
Keycode: A1A1 B2B2 C3C3 D4D4 E5E5 F6F6 G7G7 H8H8

Status	Feature	Current Keycode	Previous Keycode	Number Used
✓	Hardware Platform	IPE 201i	IPE 201i	
✓	Switch Type	Meridian 1	Meridian 1	
✓	Switch Connectivity	Proprietary CTI	Proprietary CTI	
✓	Max Voice Channels	12	12	
✓	Max Fax Channels	2	2	
✓	Max Automated Speech Recognition Channels	2	2	
✓	AppBuilder Fax	Yes	Yes	
✓	Networking	Yes	Yes	
✓	Network Message System	Yes	Yes	
✓	Max Voice Message Seats	100	100	14
✓	Max Fax Message Seats	100	100	12
✓	Max Desktop Message Seats	100	100	12
✓	Max Automated Speech Recognition Message Seats	100	100	12
✓	Max E-mail by phone Message Seats	100	100	12
✓	Max Prompt Languages	6	6	
✓	Max Automated Speech Recognition Languages	3	3	
✓	Storage Hours	350	350	
✓	Directory Synchronization	Yes	Yes	
✓	Voice Forms	Yes	Yes	
✓	High Availability	None	None	

Back Next Cancel Help

# CallPilot Release 5.0

## Installation and Upgrade Enhancements

### Sybase Database Upgrade



- > The database was upgraded to Sybase 9.0.2 from 7.0.2 to:
  - Maintain support for the product.
  - Take advantage of better error recovery.
- > The upgrade is integrated into the CallPilot 5.0 installation and will be transparent to all users.

# CallPilot Release 5.0

## Installation and Upgrade Enhancements

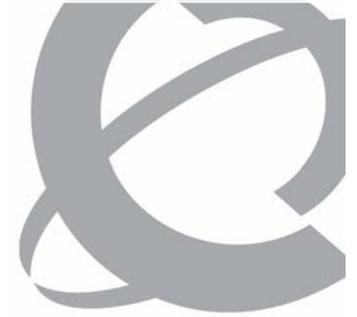


### Decouple Server Database from Server Name

- > In previous releases, the Computer Name had to match the server name in the database.
  - Names were checked in the Installation and Configuration process to verify.
  - If Computer Name was changed in Windows functionality, the database would not be accessible.
- > With Release 5.0, the server name in the database is decoupled from the Computer name.
  - All access to the database is now done through the database name only.
  - Change implemented to accommodate the High Availability feature.

# CallPilot Release 5.0

## Installation and Upgrade Enhancements



### License Reduction – Overview

- > When upgrading to a new release of CallPilot, the number of reserved seats can now be reduced.
- > A new keycode can reduce the number of reserved seats to a minimum of the number of currently used seats.
- > When running the Upgrade wizard or the Configuration wizard, the number of currently used seats is compared to the number of seats allowed by the keycode.
- > Reduction applies to voice, desktop, fax, email by phone and speech activated messaging.

# CallPilot Release 5.0

## Installation and Upgrade Enhancements

### License Reduction – Server Settings



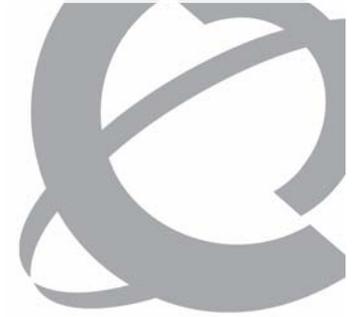
> On the Server Settings page, select **Resources** from the View Server Settings for a drop-down list to view keycode values installed in the server and the number of resources currently used by the system.

The screenshot shows the 'Server Settings' page in the CallPilot web interface. The navigation menu at the top includes 'Home', 'User', 'System', 'Maintenance', 'Messaging', and 'Tools'. The breadcrumb trail indicates the current location is 'System > Server Settings'. A 'Help' button is visible. Below the breadcrumb, a message states 'The following options describe your systems configuration.' and a dropdown menu is set to 'Resources'. The main content area is titled 'Resources' and contains a table with two columns: 'Resource' and 'Number Used'. The table lists various system resources and their current usage. A red rounded rectangle highlights the table.

Resource	Description	Number Used
Number of Channels	40	
Number of Voice Channels	12	
Number of Fax Channels	2	
Number of Speech Recognition Channels	2	
Number of DSP Ports	4	
Number of Mailboxes	100	14
Number of Fax Messaging Mailboxes	100	12
Number of Desktop Messaging Mailboxes	100	12
Number of Speech Recognition Mailboxes	100	12
Hours of Storage	350	
Number of Prompt Languages	6	2
Number of Speech Recognition Languages	3	2
Number of Networking Sites	500	4
Number of NMS Locations (including prime location)	1000	2
Number of temporary remote users	5000	0
Number of TTS users	100	12
Number of TTS languages	10	1
Number of TTS channels	20	
Voice Service provided by ACCESS	1	
Operating system	1	



# Supported Upgrade/Migration Paths to CallPilot Release 5.0



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Minimum Supported Software

- > Minimum supported software upgrade/migration paths to CallPilot Release 5.0:
- CallPilot Release 2.02 – 02.01.27.05 with SU4
  - CallPilot Release 2.5 – 02.50.06.14 with SU2
  - CallPilot Release 3.0 – 03.03.06.02 (GA) or greater
  - CallPilot Release 4.0 – 04.04.04.00 (GA) or greater

# CallPilot Release 5.0

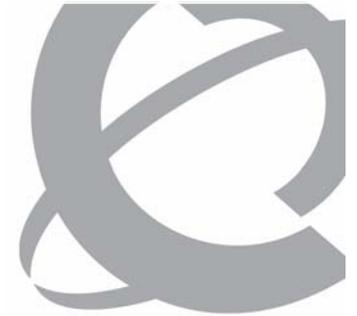
## Supported Upgrade/Migration Paths



### Supported Server Platforms – CS 1000 / Meridian 1

> CallPilot CS 1000 / Meridian 1 server platforms supported for upgrade / migration to Release 5.0.

Supported Upgrade / Migration Paths									
CS 1000 / Meridian 1		Destination							
		200i	201i	600r	702t	703t	1001rp	1002rp	1005r
Source	200i			yes					yes
	201i		yes	yes					yes
	600r			yes					yes
	702t			yes					yes
	703t					yes			yes
	1001rp								yes
	1002rp							yes	yes
	1005r								yes



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Supported Server Platforms – T1/SMDI

> CallPilot T1/SMDI server platforms supported for upgrade / migration to Release 5.0.

Supported Upgrade / Migration Paths									
T1/SMDI		Destination							
		200i	201i	600r	702t	703t	1001rp	1002rp	1005r
Source	200i								
	201i								
	600r								
	702t								
	703t								
	1001rp							yes	
	1002rp							yes	
	1005r								



# Knowledge Check

## Question 1

How many NMS locations are supported with CallPilot Release 5.0?

- a) 50
- b) 100
- c) 750
- d) 1000



# Knowledge Check

## Question 1

How many NMS locations are supported with CallPilot Release 5.0?

- a) 50
- b) 100
- c) 750
- d) 1000



# Knowledge Check

## Question 2

When upgrading a 201i server to CallPilot Release 5.0, what is the required hard drive size?

- a) 1 x 20 GB
- b) 1 x 70 GB
- c) 2 x 36 GB
- d) 2 x 140 GB

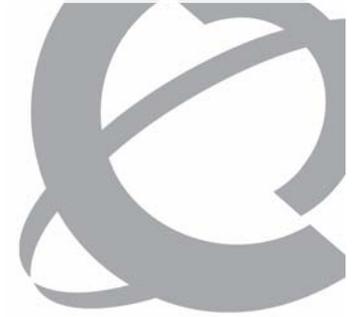


# Knowledge Check

## Question 2

When upgrading a 201i server to CallPilot Release 5.0, what is the required hard drive size?

- a) 1 x 20 GB
- b) 1 x 70 GB
- c) 2 x 36 GB
- d) 2 x 140 GB

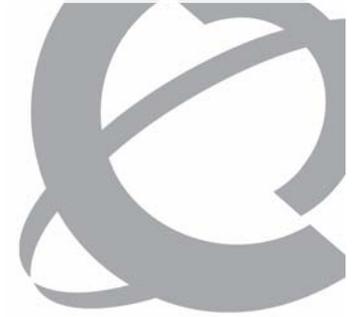


# Knowledge Check

## Question 3

You are planning an upgrade to CallPilot Release 5.0 on a 1002rp server connected to a CS 1000 system. Which hardware platform(s) support this upgrade?

- a) 600r
- b) 703t
- c) 1002rp
- d) 1005r



# Knowledge Check

## Question 3

You are planning an upgrade to CallPilot Release 5.0 on a 1002rp server connected to a CS 1000 system. Which hardware platform(s) support this upgrade?

- a) 600r
- b) 703t
- c) 1002rp
- d) 1005r



# The CallPilot Release 5.0 Upgrade Wizard



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Introduction

- > Download the latest version of the CallPilot 5.0 Upgrade Wizard from Nortel in the Enterprise Solutions PEP Library (ESPL) at <http://www.nortel.com/espl>.
- > Download and unzip the CallPilot 5.0 Upgrade Wizard PEP to the D:\temp\UpgradeWizard directory.
- > If Web access is not available, a version of the CallPilot 5.0 Upgrade Wizard is available on the SU/PEP CD.

**Note:** You can download and run the CallPilot 5.0 Upgrade Wizard remotely without a technician on-site.

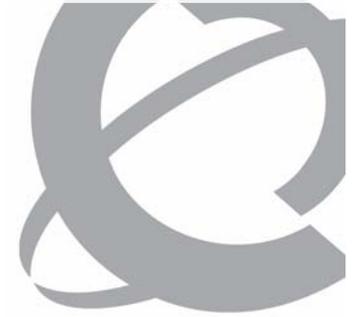


# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Introduction (Continued)

- > The CallPilot 5.0 Upgrade Wizard checks to verify that your CallPilot system is ready for an upgrade; it does not make any changes to your system.
- > The CallPilot 5.0 Upgrade Wizard performs the following tasks:
  - Platform validation (software and hardware)
  - Data validation
  - Keycode validation
  - System backup



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Introduction (Continued)

- > The CallPilot 5.0 Upgrade Wizard has several optional exit points that you can use to perform the upgrade preparation tasks in three phases:
- Phase 1 – Check for platform and software validity in advance of the actual upgrade.
  - Phase 2 – Validate your existing data prior to the upgrade.
  - Phase 3 – Complete the wizard to fully prepare for upgrade.

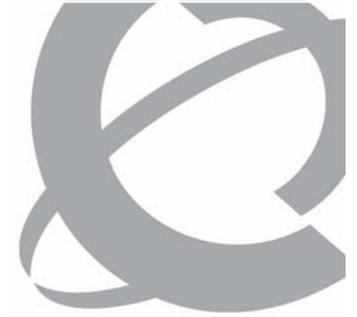


# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Introduction (Continued)

- > Do not launch or run programs or utilities during the upgrade.
- > Do not use Windows Explorer to copy files or to scan disk drives during an upgrade as this can cause the upgrade to fail.
- > You can run the CallPilot 5.0 Upgrade Wizard while the CallPilot 2.02 (2.01.27.05), 2.5, 3.0, or 4.0 system is fully operational.
- > You can exit the wizard at any point, make the necessary changes to CallPilot, and rerun the CallPilot 5.0 Upgrade Wizard without harming your system.



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

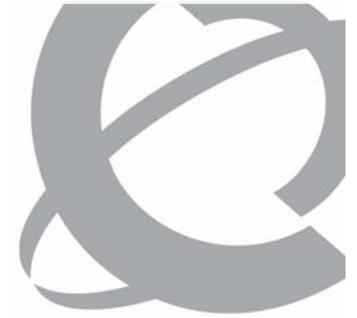
### Upgrade Wizard Installation

1. Download and unzip the CallPilot 5.0 Upgrade Wizard PEP to the D:\temp\UpgradeWizard directory.
2. Navigate to the **D:\temp\UpgradeWizardInstaller** folder and double-click the **UpgradeWizardInstaller.exe** file.
3. The Welcome screen appears.

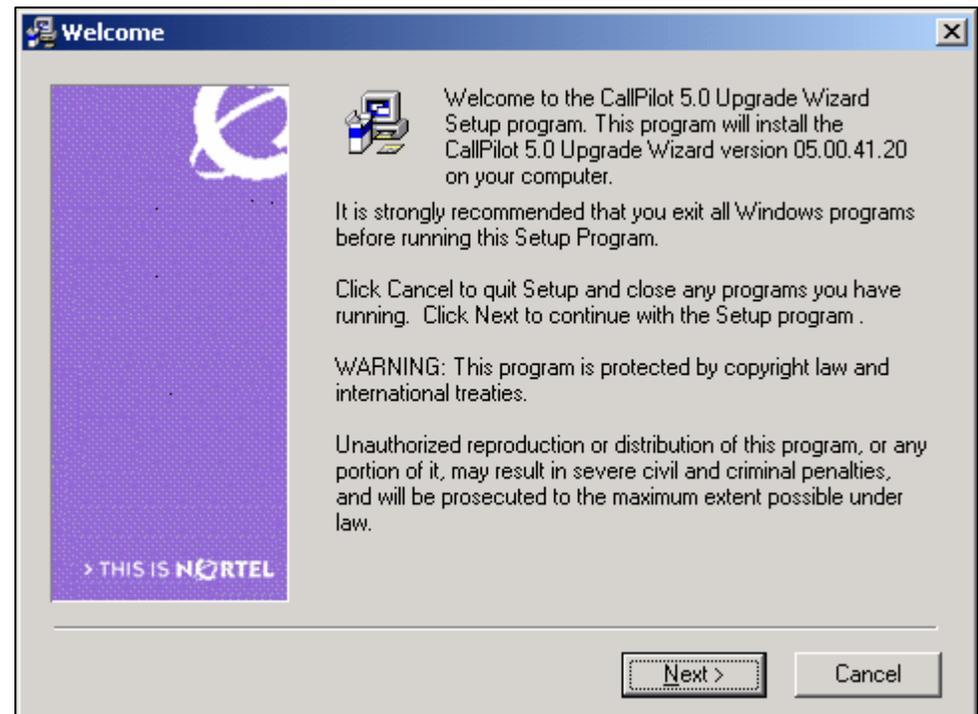
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Installation (Continued)



4. Read the information on the Welcome screen and exit any open Windows programs.
5. Click **Next** to continue.



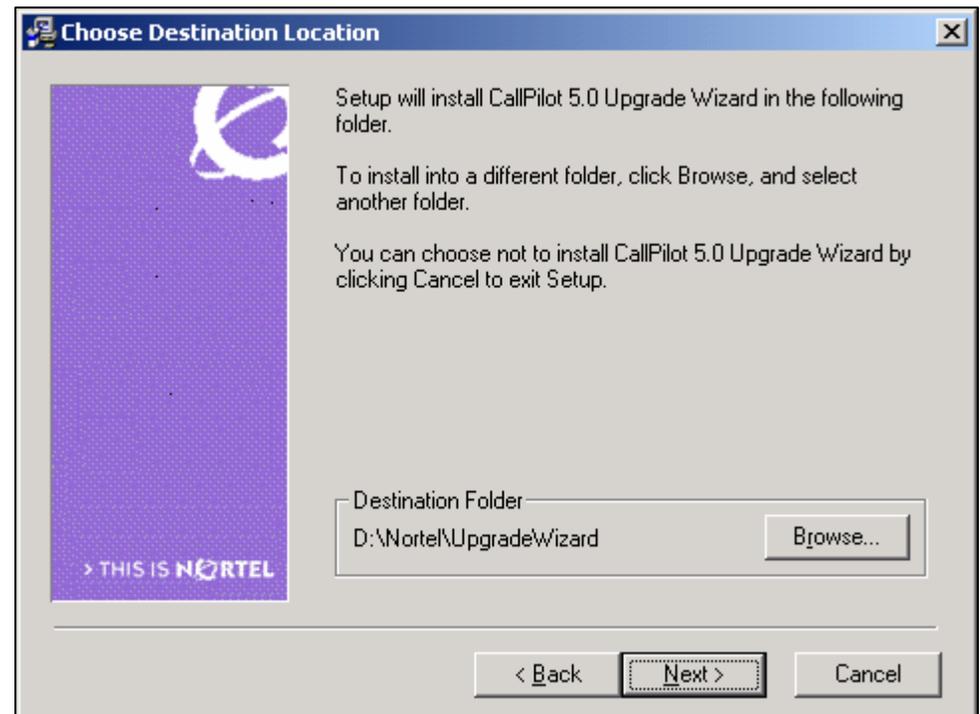
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Upgrade Wizard Installation (Continued)

6. The Choose Destination Location window appears.
7. If the suggested destination folder is not suitable, click **Browse** and choose a different location for the CallPilot 5.0 Upgrade Wizard installation.
8. Click **Next** to continue.



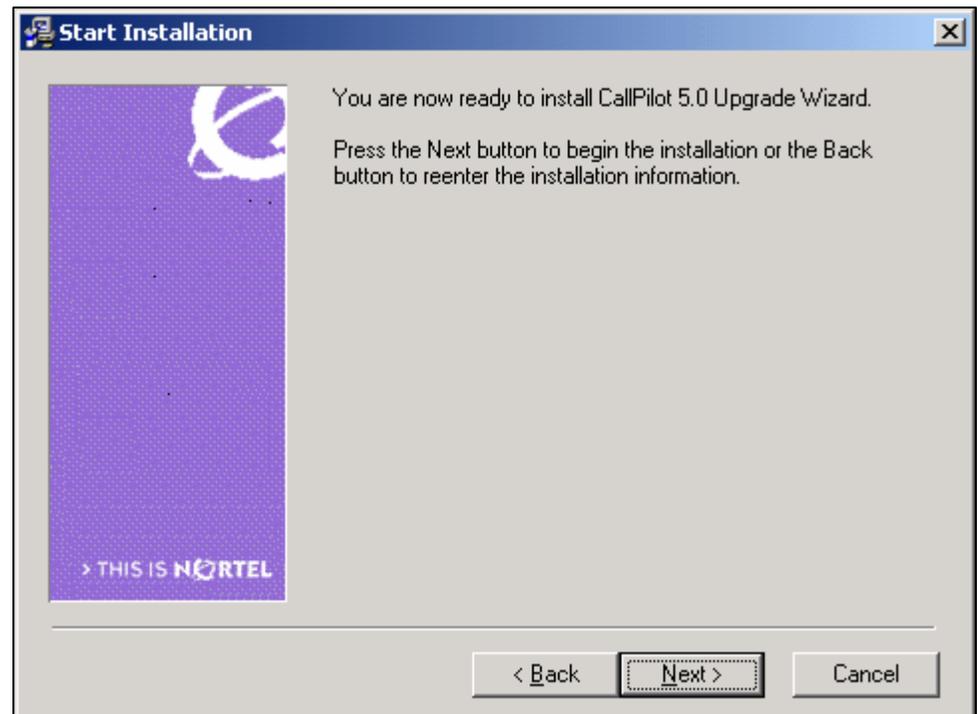
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Installation (Continued)



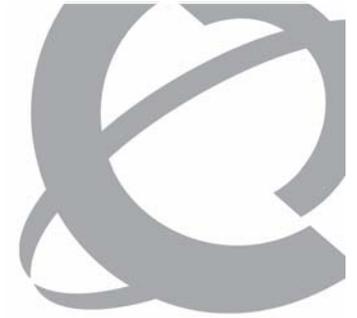
9. The Start Installation screen appears.
10. Click **Next** to continue.



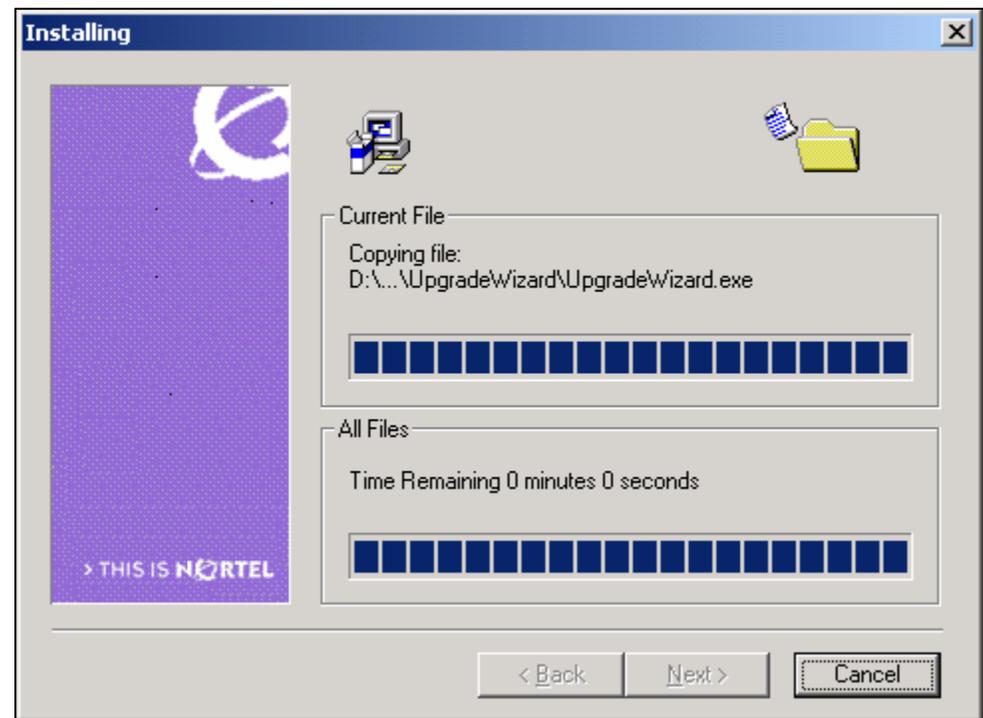
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Installation (Continued)

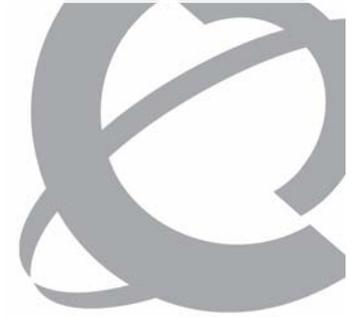


11. The system installs the CallPilot 5.0 Upgrade Wizard on the CallPilot server.



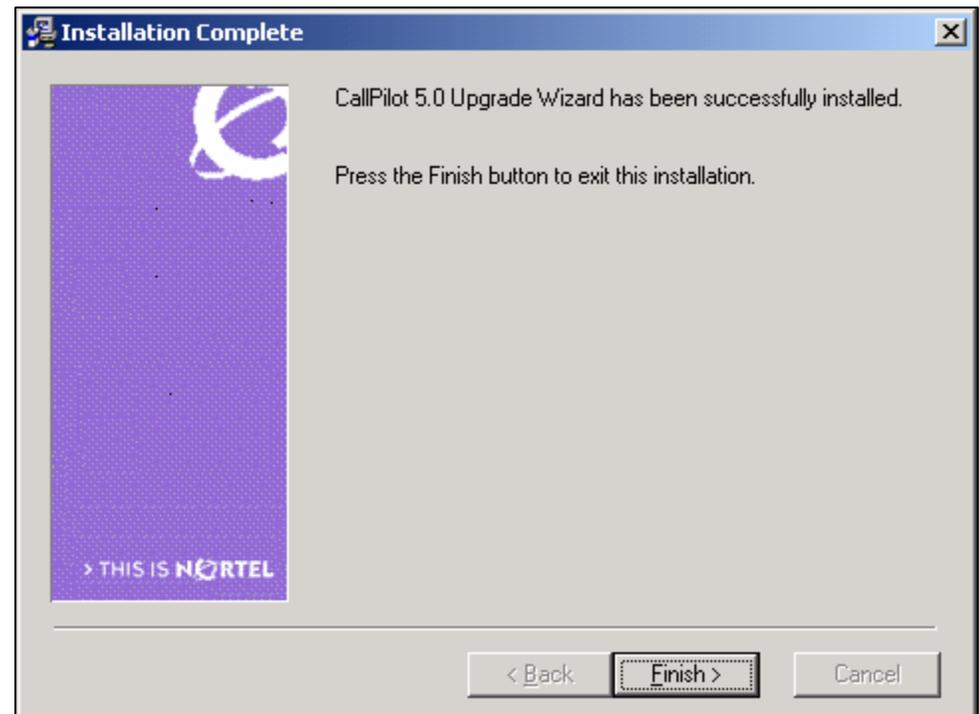
# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Upgrade Wizard Installation (Continued)



12. When the installation is complete, the Installation Complete window appears.

13. Click **Finish**.



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Flowchart Legend



**Proceed / Next**



**Normal Screen**



**Warning Error Screen**



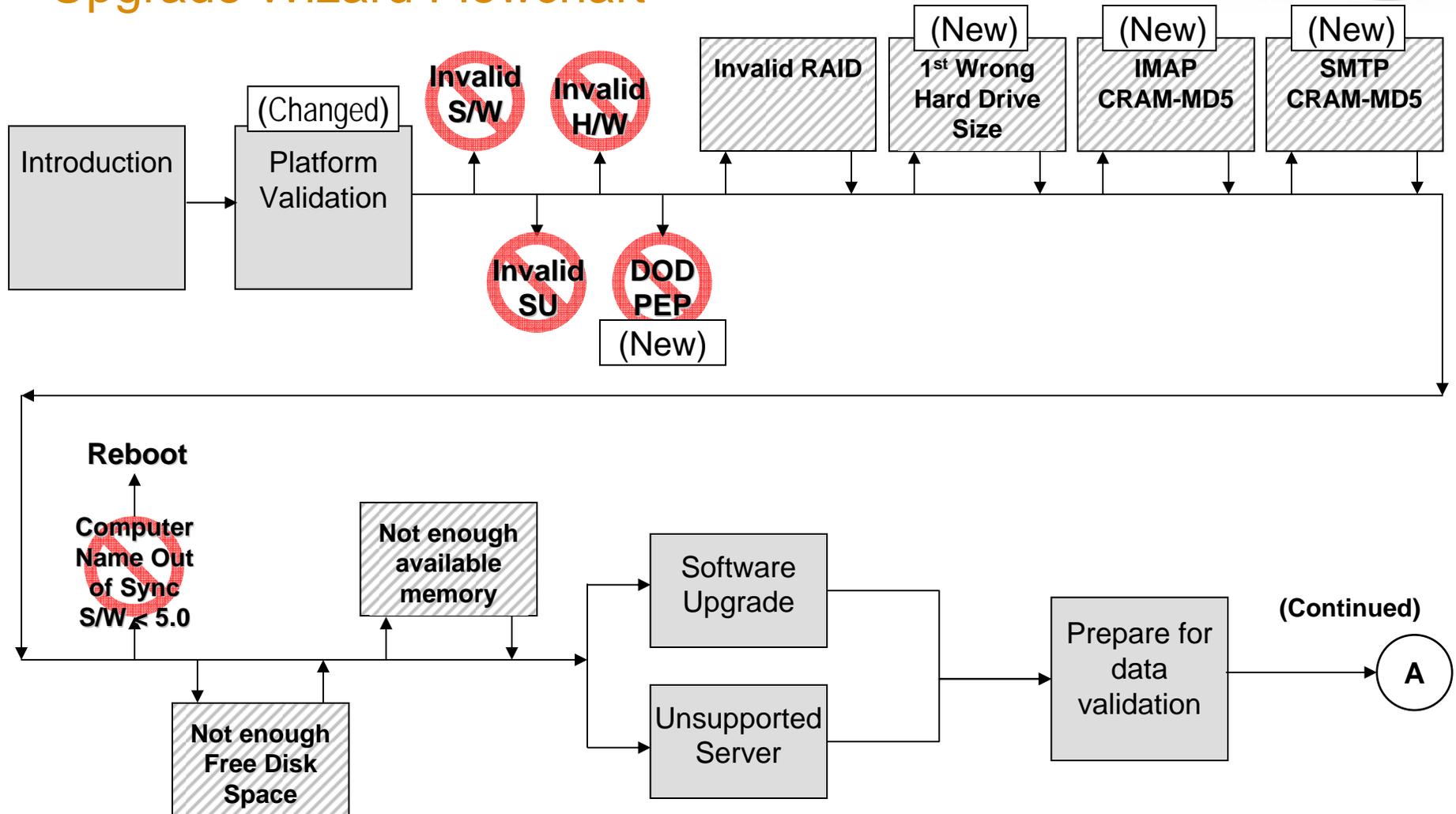
**Blocking Error Screen**

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



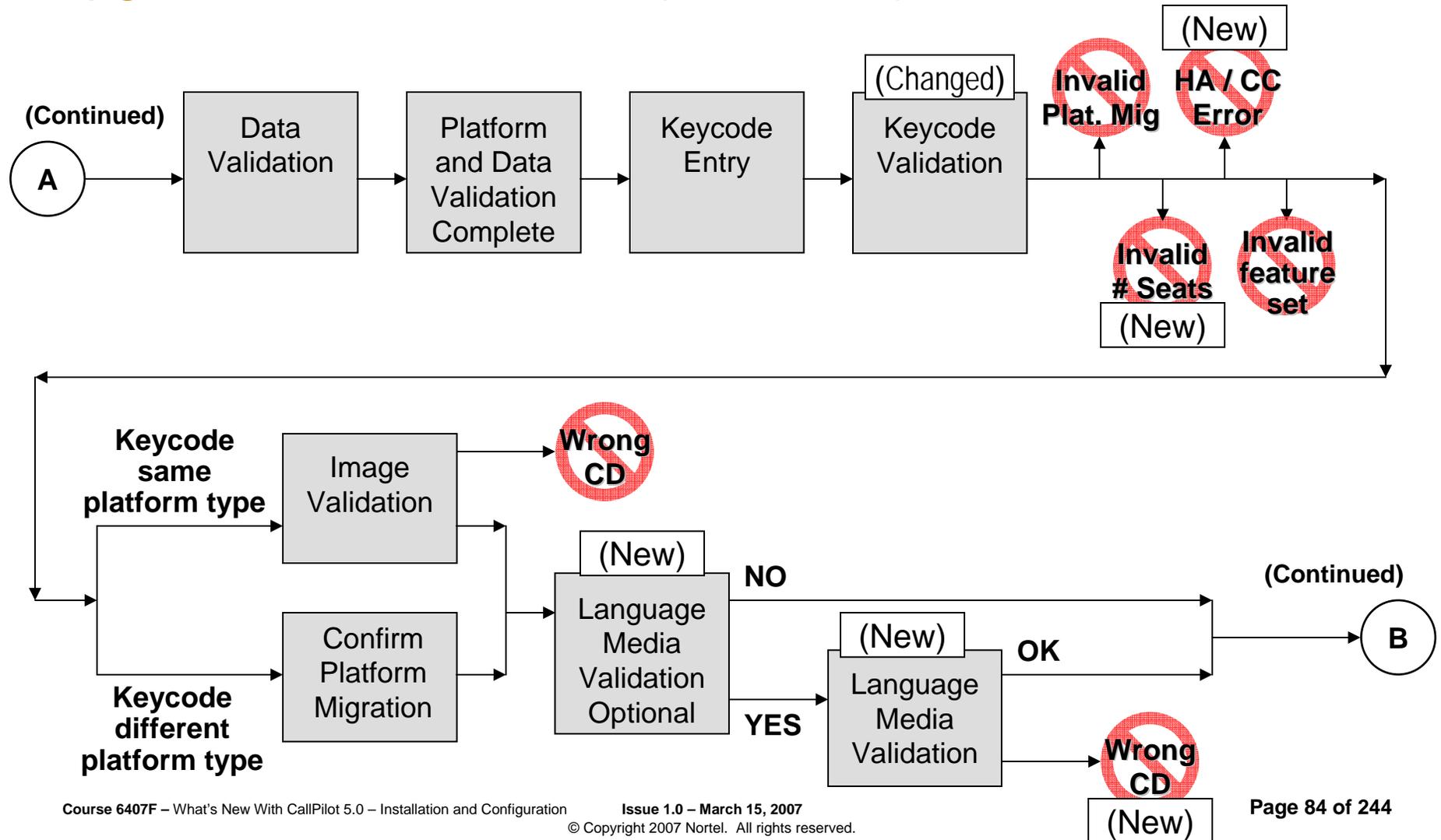
### Upgrade Wizard Flowchart



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

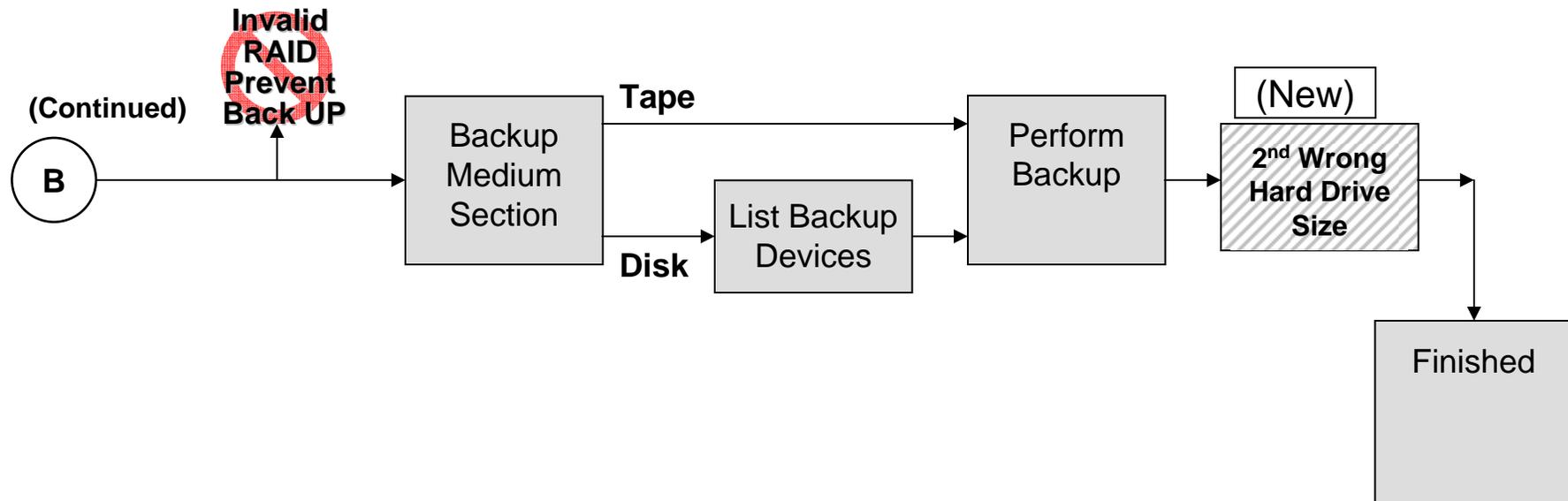
### Upgrade Wizard Flowchart (Continued)



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Upgrade Wizard Flowchart (Continued)



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Running the CallPilot Release 5.0 Upgrade Wizard

- > Launch the CallPilot 5.0 Upgrade Wizard by clicking **Start > Programs > CallPilot > Upgrade Wizard.**
- > While the CallPilot 5.0 Upgrade Wizard runs, all screen information is written to the log file at `D:\Nortel\Data\UpgradeWizard.log`.

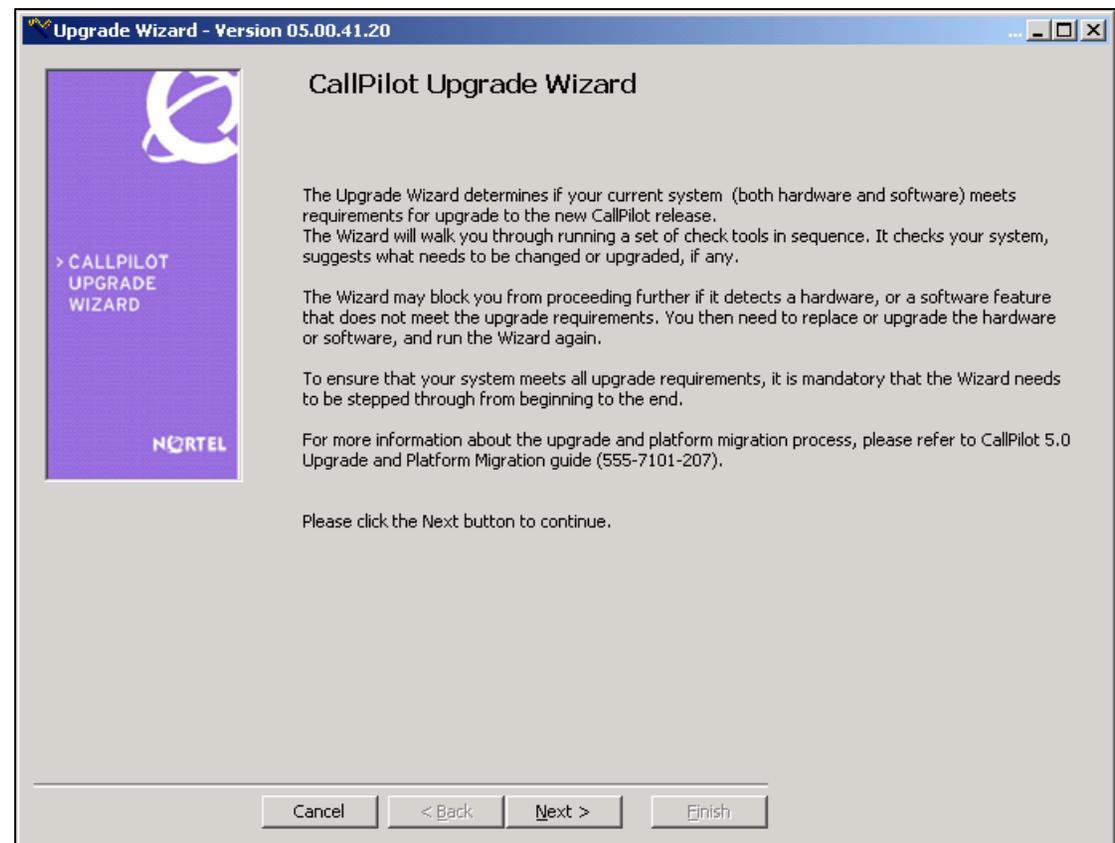
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > Upgrade Wizard - Welcome screen
  - Click **Next** to determine if your hardware and software can be upgraded to CallPilot 5.0.



# CallPilot Release 5.0 Supported Upgrade/Migration Paths



## Running the CallPilot Release 5.0 Upgrade Wizard

- > The Platform Validity Check screen lists the software and hardware currently on the system and evaluates the status of each item.
- > Changes include physical drive size checking for the 703t, 1002rp and 1005r.

**Changed for CallPilot 5.0**

Upgrade Wizard - Platform Validity Check

Performing Platform Validity Check

The following table contains information about your platform. It determines if the platform meets hardware and software requirements for upgrade to the latest release of CallPilot.

Platform: TRP 1002RP Platform Migration required: **No**

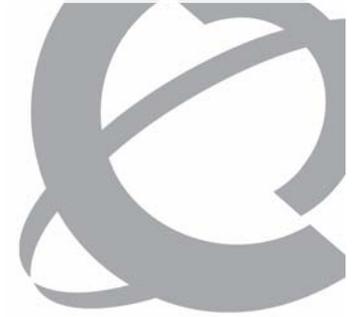
Status	Item Name	Current Value	Required Value
✓	Logical Disk 0 (MB)	36000	36000
✓	Logical Disk 1 (MB)	36000	36000
✓	Logical Disk 2 (MB)	36000	36000
✗	Number of Physical Drives	5	6
✗	Phys Disk Ch0 ID0 (MB)	34330	50000
✗	Phys Disk Ch0 ID1 (MB)	34330	50000
✗	Phys Disk Ch0 ID2 (MB)	34330	50000
✗	Phys Disk Ch1 ID0 (MB)	0	50000
✗	Phys Disk Ch1 ID1 (MB)	34330	50000
✗	Phys Disk Ch1 ID2 (MB)	34330	50000

Result: **One or more issues have been detected. Click Next for more information.**

Buttons: Cancel, < Back, Next >, Finish

# CallPilot Release 5.0

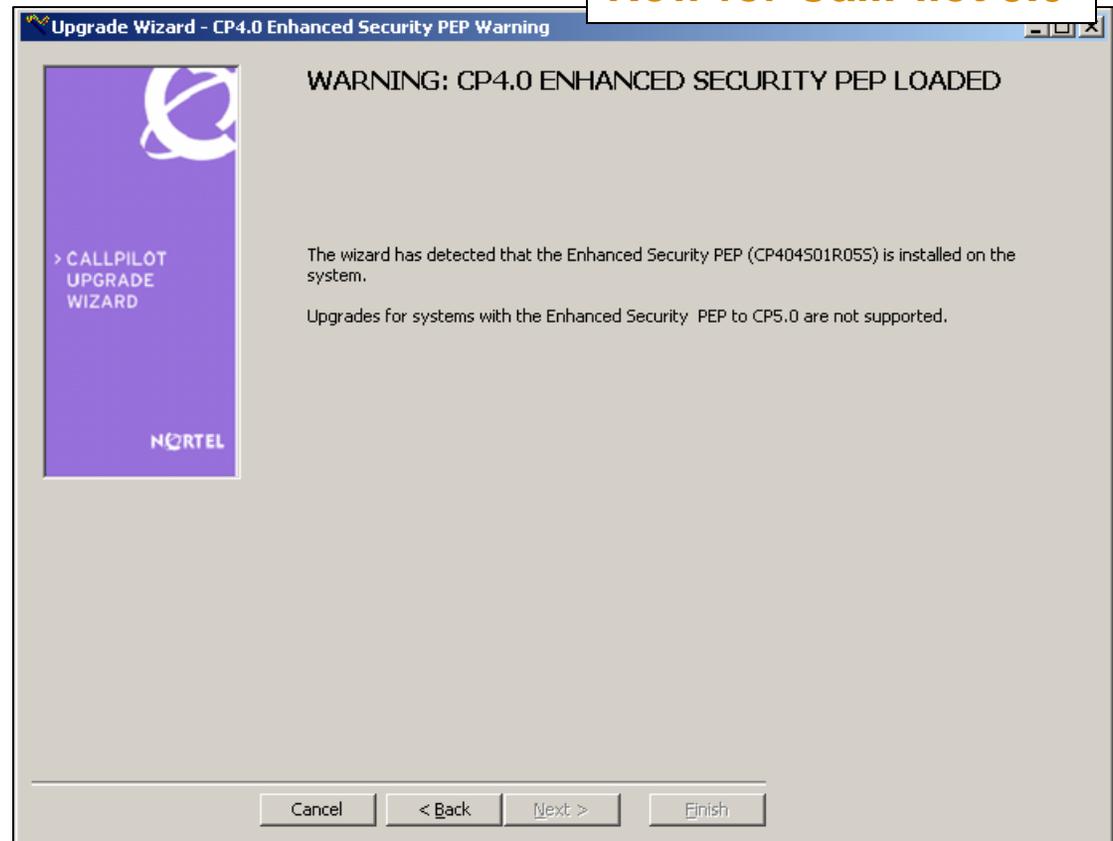
## Supported Upgrade/Migration Paths



### Upgrade Wizard Changes for Release 5.0

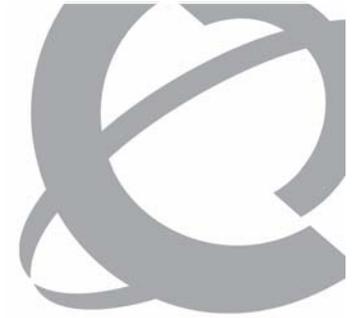
- > New Upgrade Wizard CallPilot 4.0 Enhanced Security PEP - Blocking Error screen

**New for CallPilot 5.0**

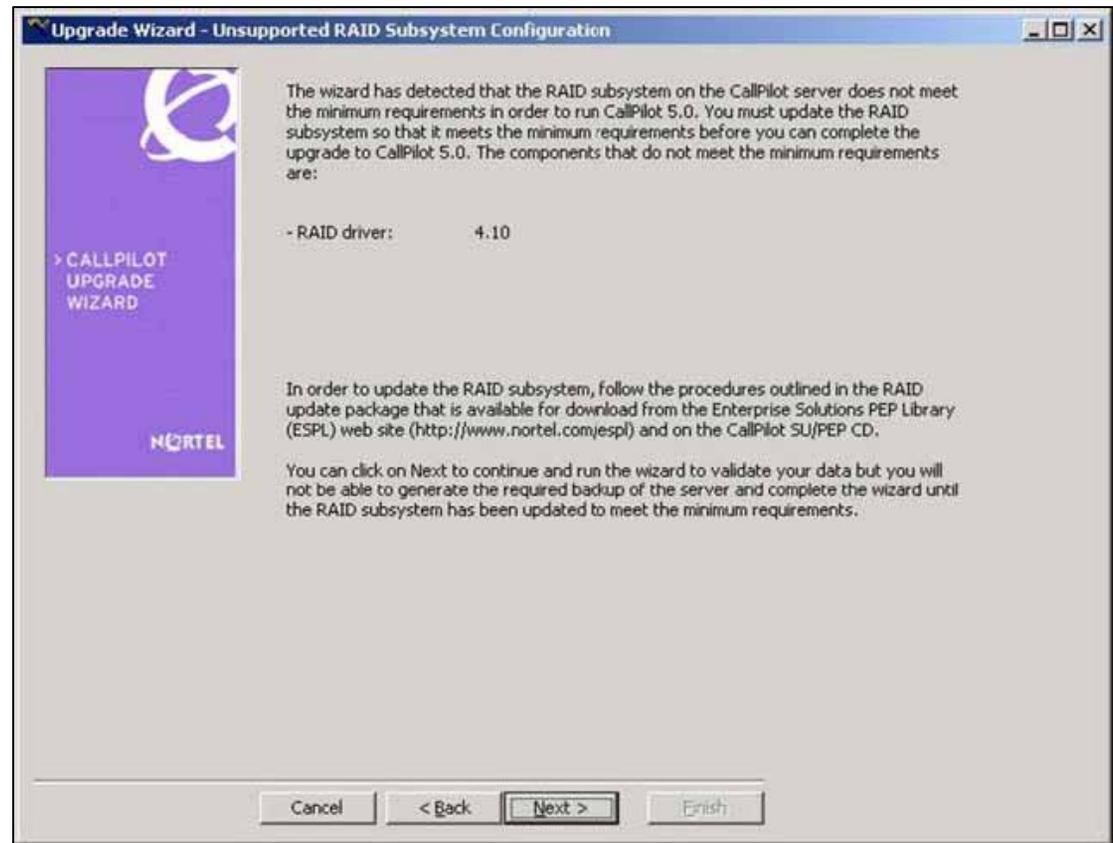


# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



- > Upgrade Wizard  
Unsupported RAID  
Subsystem  
Configuration –  
Warning screen  
(after Platform  
Validation screen)



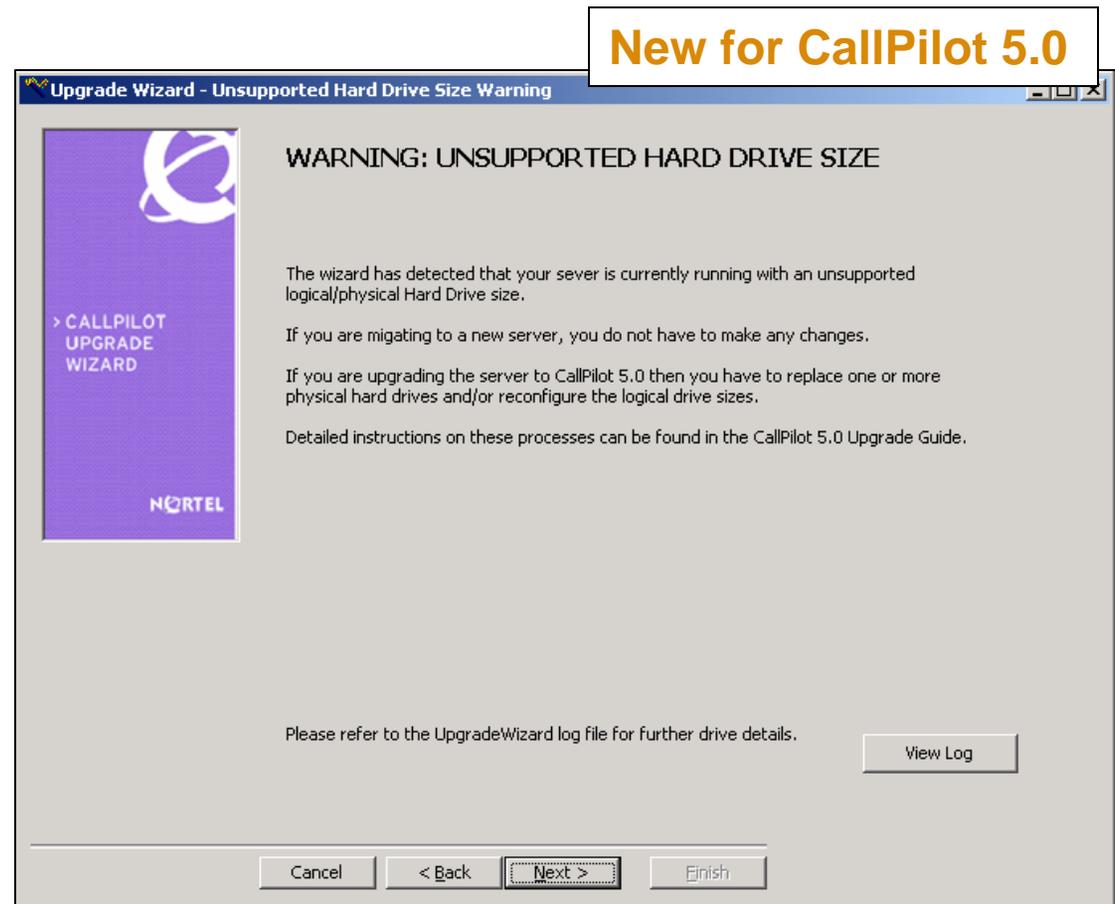
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > New Upgrade Wizard 1st Hard Drive Size – Warning screen (after Platform Validation screen)



# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



> New Unsupported IMAP Authentication Option – Warning screen.

- The IMAP CRAM-MD5 Challenge Response option is selected and is no longer supported on CP5.0.



# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



> New Unsupported SMTP Authentication Option – Warning screen.

- The SMTP CRAM-MD5 Challenge Response option is selected and is no longer supported on CP5.0.

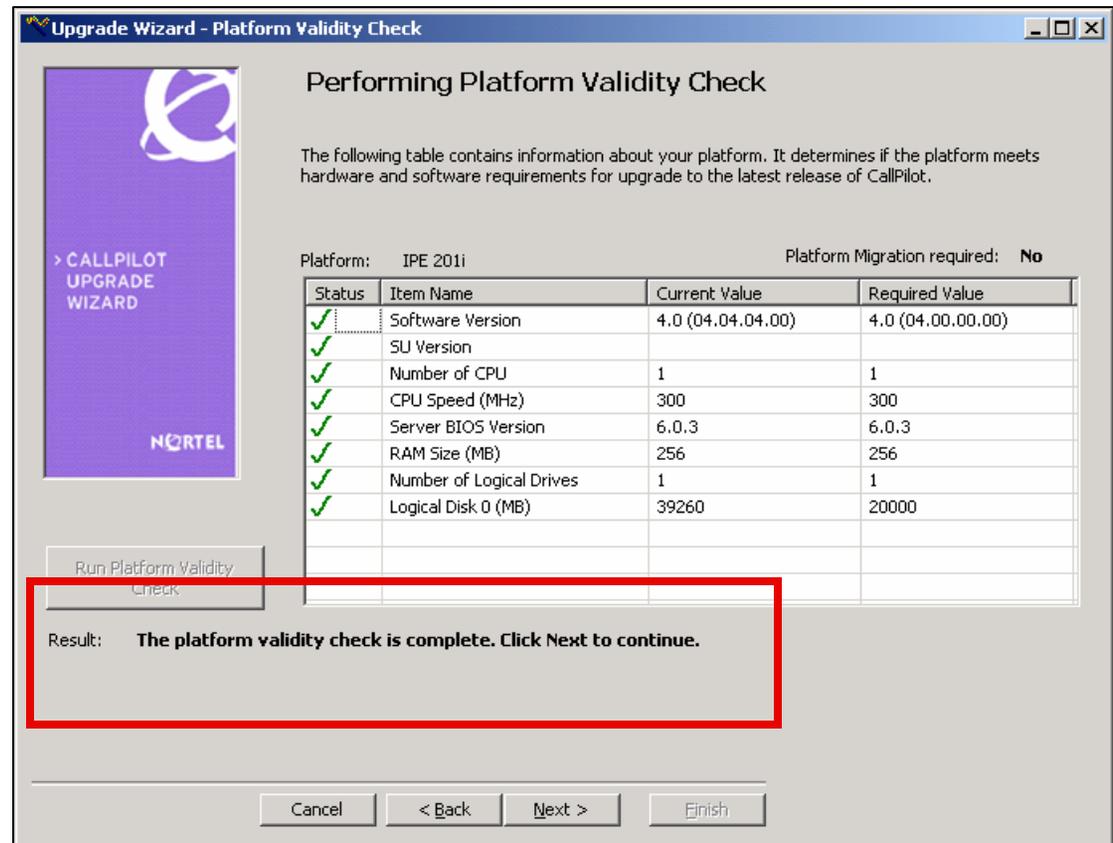


# CallPilot Release 5.0 Supported Upgrade/Migration Paths



## Running the CallPilot Release 5.0 Upgrade Wizard

- > Optional Exit Point:
  - When the platform and software validity check is complete, the CallPilot 5.0 Upgrade Wizard confirms that your hardware and software meet the requirements for an upgrade. You can do one of the following:
    1. Exit the wizard by clicking **Cancel**.
    2. Click **Next** to continue to the next step.



# CallPilot Release 5.0

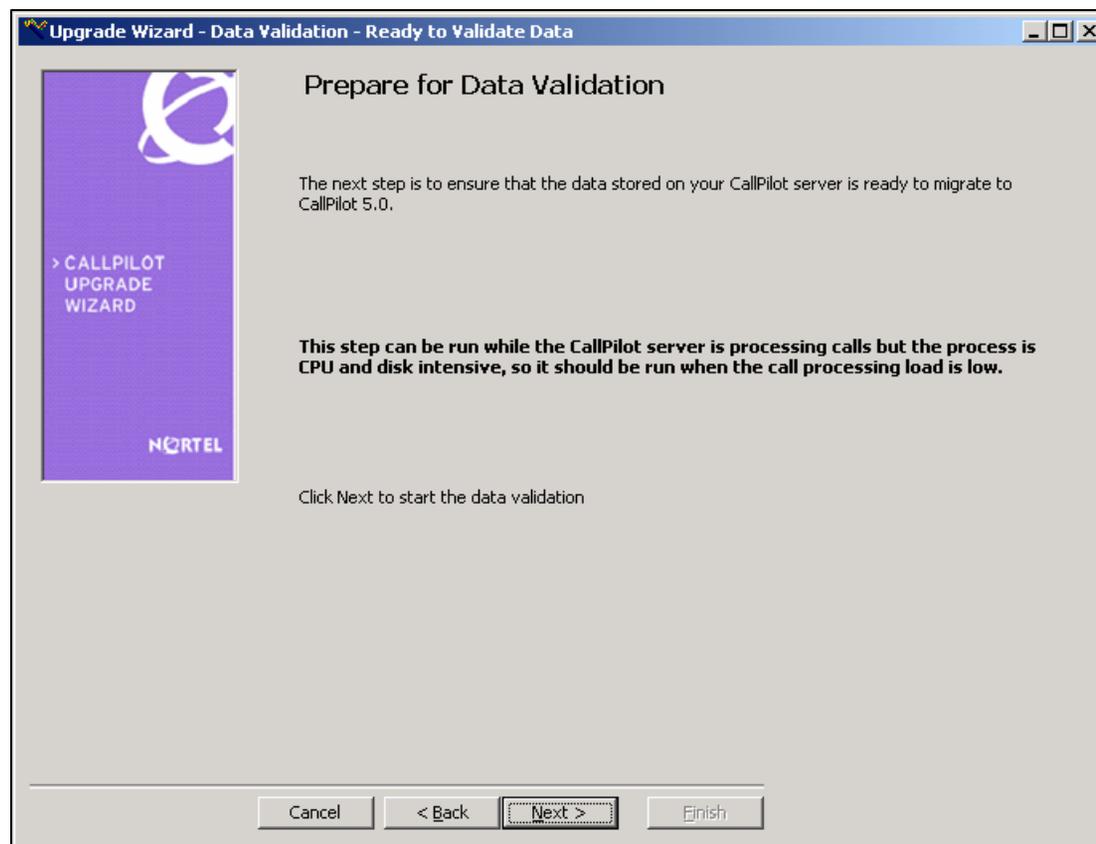
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### > Prepare for Data Validation screen:

- You can run this next step while the CallPilot server is processing calls, but the validation check uses considerable CPU resources. Nortel recommends that you validate your data when the call processing load is low.



# CallPilot Release 5.0

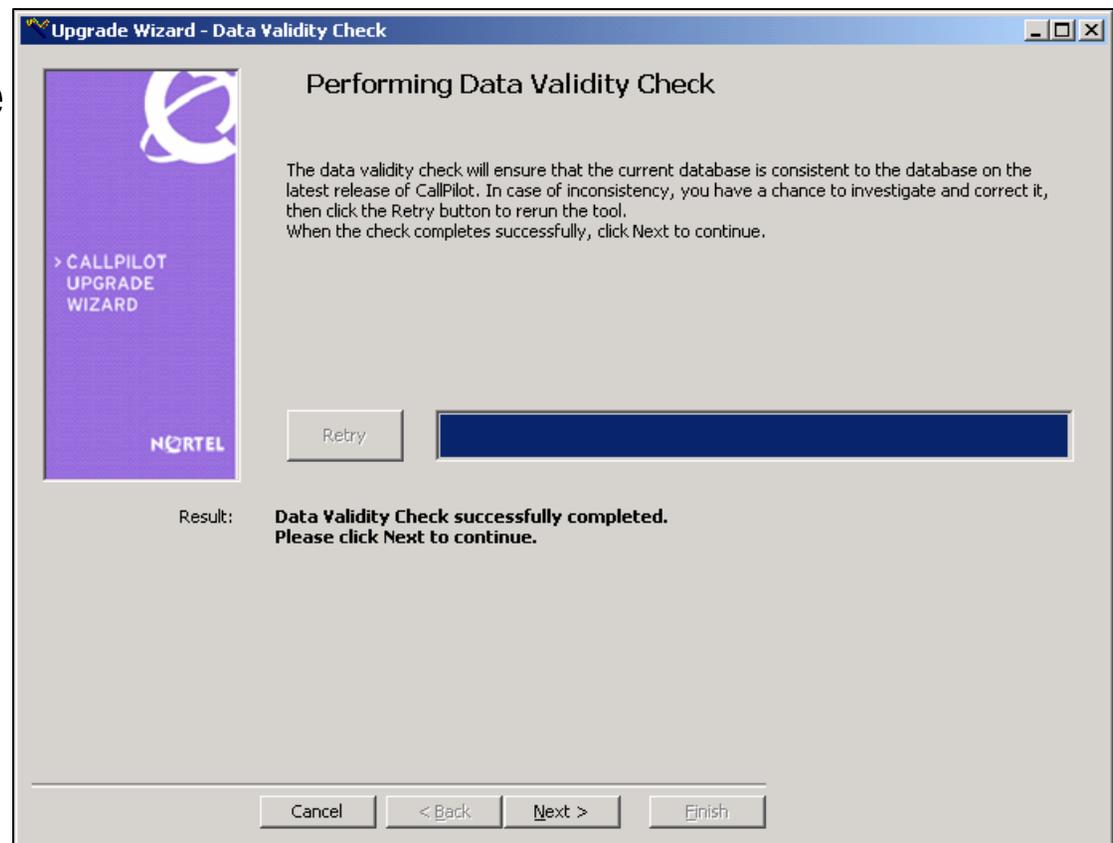
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



> The data validity check ensures that the current database is consistent with the database requirements of the latest CallPilot release.

- In case of inconsistency, you have a chance to investigate and correct the problem.
- You can click the Retry button to re-run the tool.



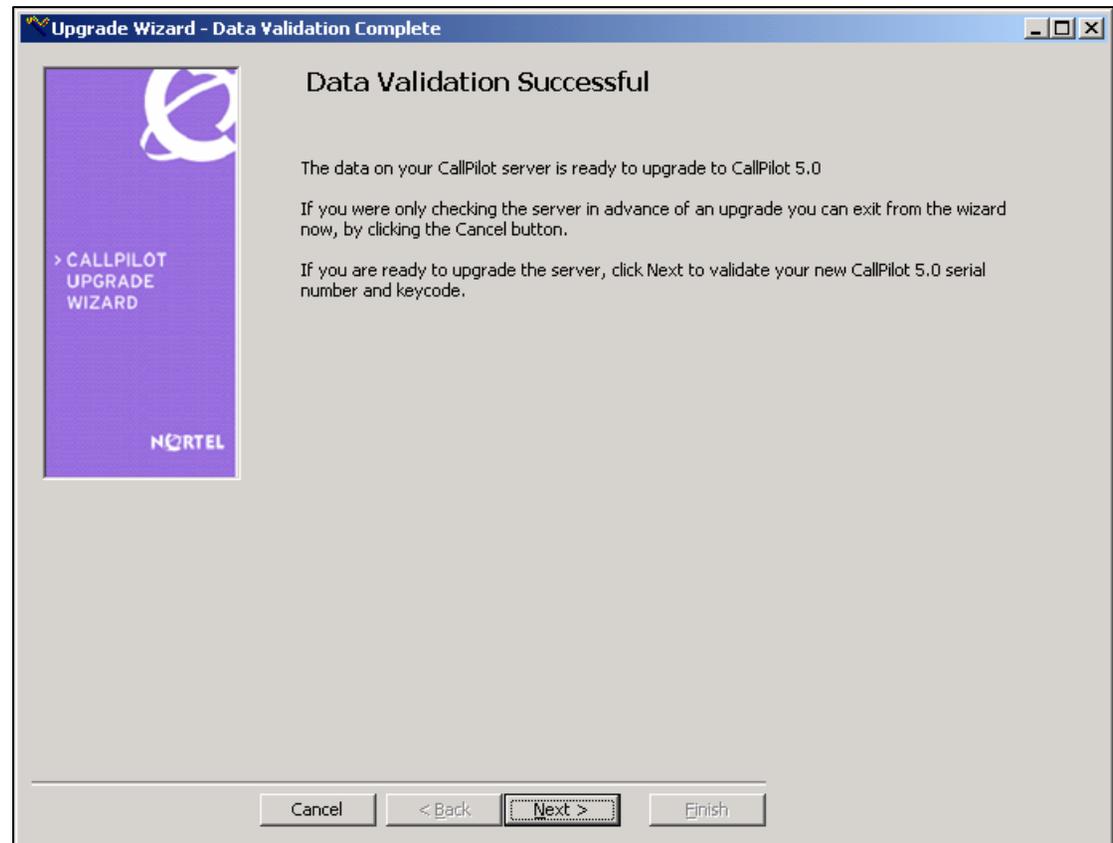
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > Optional Exit Point:
  - The wizard confirms that your data can be upgraded.
  - In the next step, you must insert the Image CD / DVD in the drive. If you are running the wizard remotely, you must exit at this point.
    1. Exit the wizard by clicking **Cancel**.
    2. Click **Next** to continue to the next step.



# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



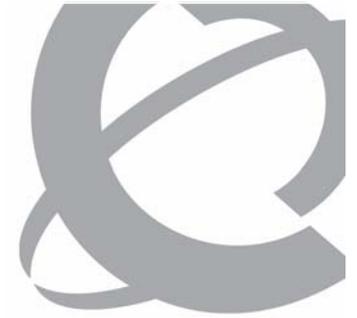
> Serial Number and Key Code screen:

- Enter your serial number and new CallPilot 5.0 keycode.
- Click **Next** to continue.

The screenshot shows a window titled "Upgrade Wizard - Serial Number & Key Code". On the left is a purple sidebar with the CallPilot logo and the text "> CALLPILOT UPGRADE WIZARD" and "NORTEL". The main area is titled "Serial Number and Key Code" and contains the following text: "Enter your new CallPilot 5.0 serial number and key code." Below this, it says "Serial number from software feature key: TRAINING". There is a text box for "Serial Number:" containing "TRAINING". Below that is a "Key Code:" section with eight input boxes containing "A1A1", "B2B2", "C3C3", "D4D4", "E5E5", "F6F6", "G7G7", and "H8H8". At the bottom are four buttons: "Cancel", "< Back", "Next >", and "Finish".

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Running the CallPilot Release 5.0 Upgrade Wizard

- > Keycode Verification screen:
  - New Used column for seats.

Changed for CallPilot 5.0

Feature Verification

The following table contains the configuration information from your keycode. Ensure that the details match your expectations. If a feature is missing or a value is not what you expected, contact your distributor to obtain a new key code.

Serial number: **TRAINING** Platform Migration: **No**  
Key code: **A1A1 B2B2 C3C3 D4D4 E5E5 F6F6 G7G7 H8H8**

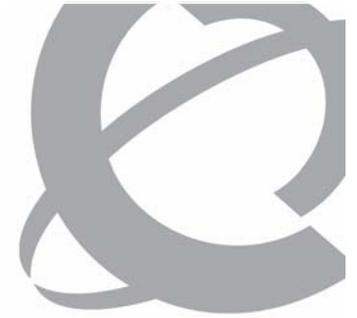
Status	Feature	Current Keycode	New Keycode	Used
✓	Hardware Platform	201i	201i	
✓	Switch Type	M1	M1	
✓	Switch Connectivity	Proprietary CTI	Proprietary CTI	
✓	Voice Channels	12	12	
✓	Fax Channels	2	2	
✓	ASR Channels	2	2	
✓	TTS Channels	20	20	
✓	Conference Channels	0	0	
✓	Directory Sync	Yes	Yes	
✓	AppBuilder	Yes	Yes	
✓	Networking	Yes	Yes	
✓	NMS	Yes	Yes	

Result: **Keycode Validation is complete. Click Next to continue.**

Cancel < Back Next > Finish

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Running the CallPilot Release 5.0 Upgrade Wizard

#### > Keycode

Verification screen:

- Added new Voice Forms and High Availability

Changed for CallPilot 5.0

Feature Verification

The following table contains the configuration information from your keycode. Ensure that the details match your expectations. If a feature is missing or a value is not what you expected, contact your distributor to obtain a new key code.

Serial number: **TRAINING** Platform Migration: **No**  
Key code: **A1A1 B2B2 C3C3 D4D4 E5E5 F6F6 G7G7 H8H8**

Status	Feature	Current Keycode	New Keycode	Used
✓	Voice Forms	No	Yes	
✓	HA/GR	None	None	
✓	Voice Seats	100	100	20
✓	Fax Seats	100	100	10
✓	Desktop Seats	100	100	10
✓	ASR Seats	100	100	10
✓	TTS Seats	100	100	10
✓	TTS Languages	10	10	
✓	Prompt Languages	6	6	
✓	ASR Languages	3	3	
✓	Storage Hours	350	350	

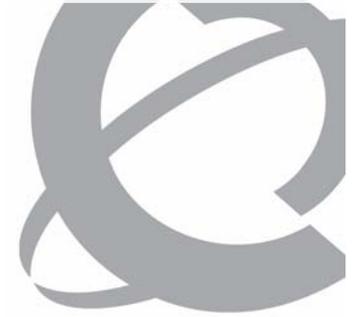
Result: **Keycode Validation is complete. Click Next to continue.**

Cancel < Back Next > Finish

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

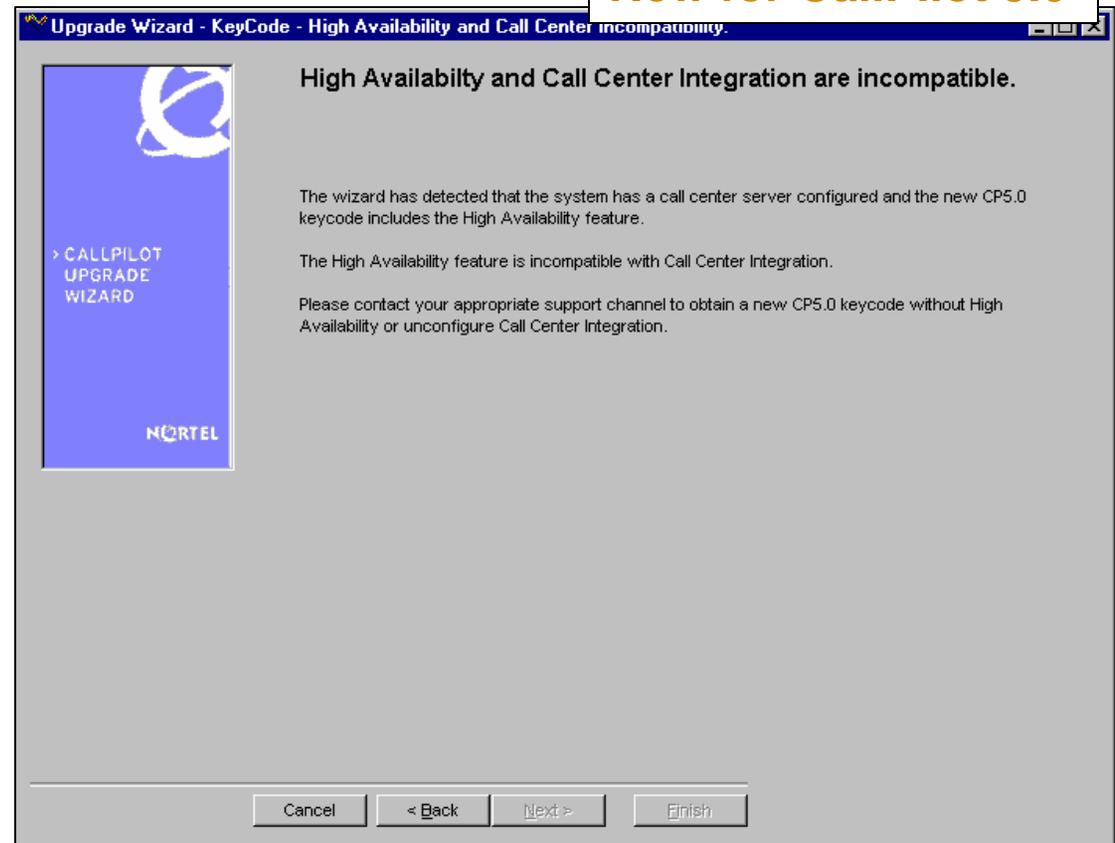
### Running the CallPilot Release 5.0 Upgrade Wizard



#### > High Availability and Contact Center:

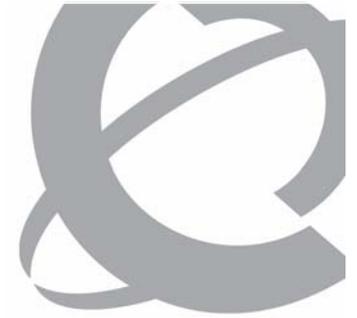
- Blocking Error screen

**New for CallPilot 5.0**



# CallPilot Release 5.0

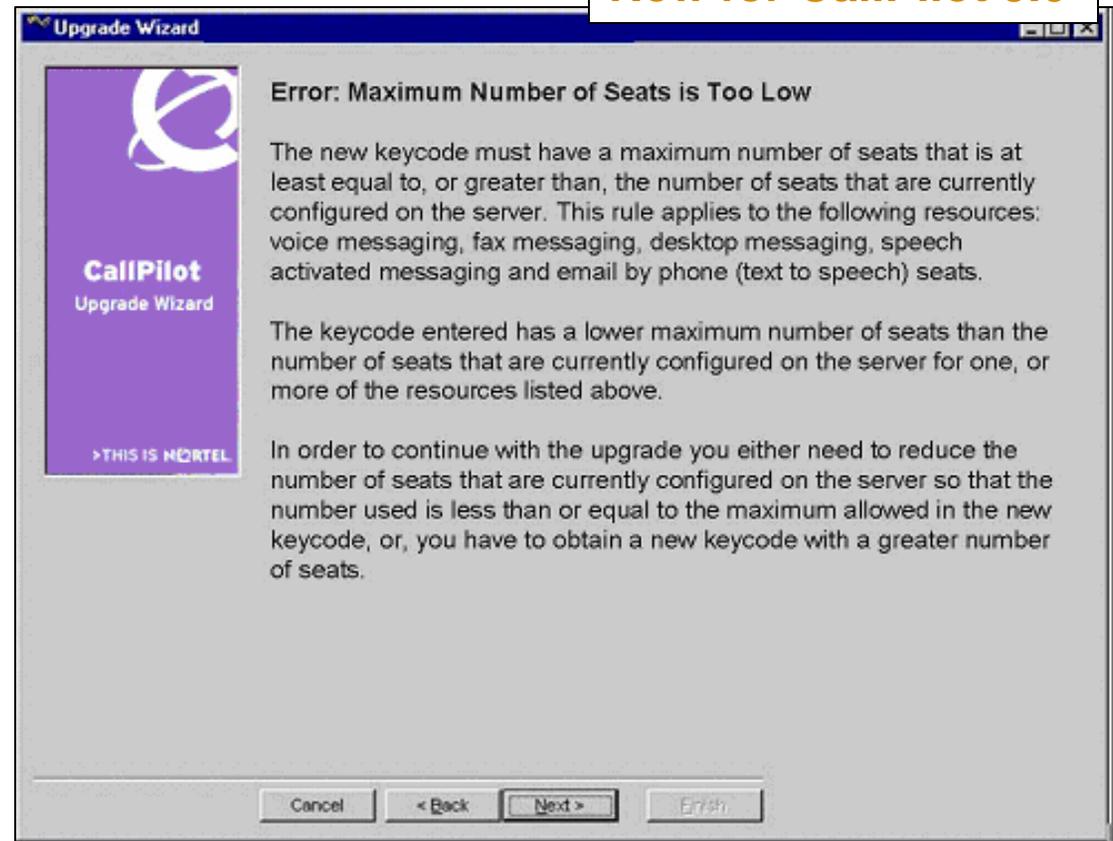
## Supported Upgrade/Migration Paths



### Running the CallPilot Release 5.0 Upgrade Wizard

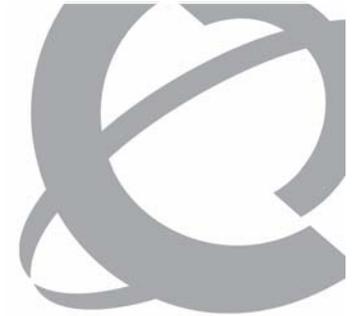
- > Maximum Number of Seats is Too Low
  - Blocking error screen

New for CallPilot 5.0



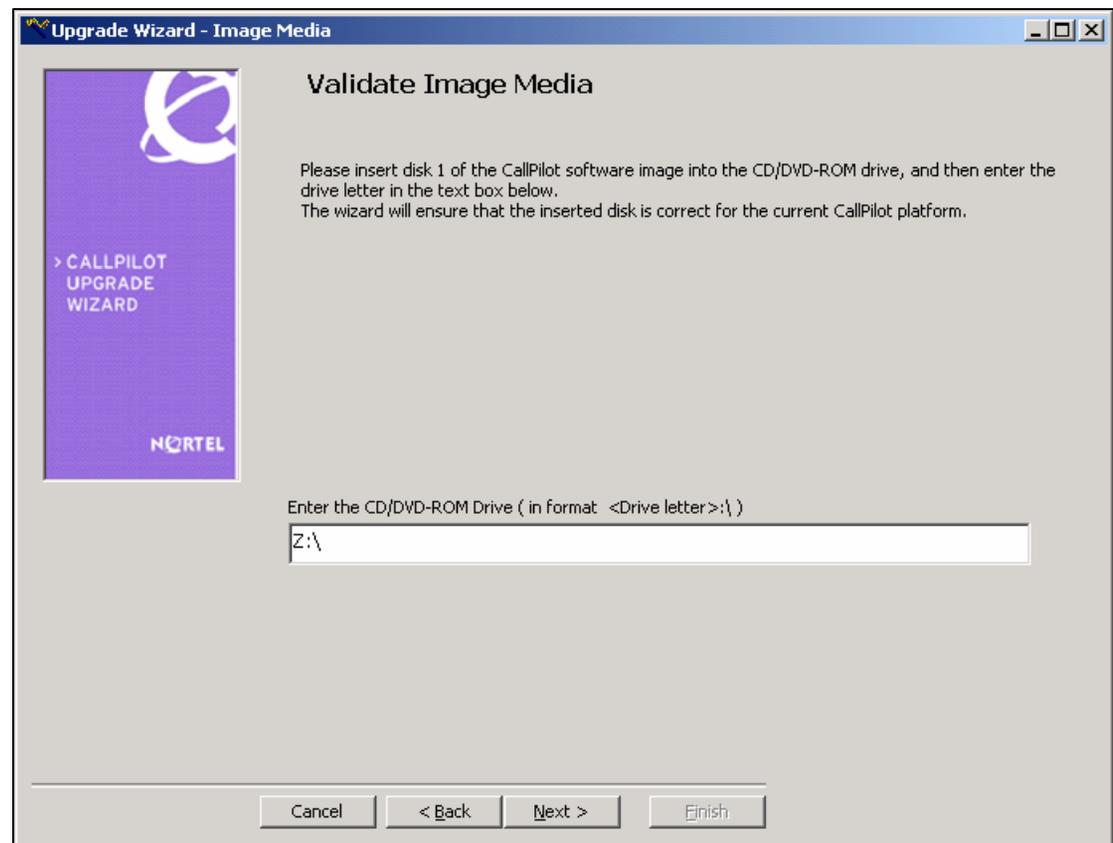
# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



### > Validate Image Media screen:

- Insert the CallPilot 5.0 Image CD or DVD into the CD or DVD drive, and enter **Z:\** as the drive letter.
- Click **Next** and wait while the wizard checks that the inserted CD or DVD is valid for your platform.



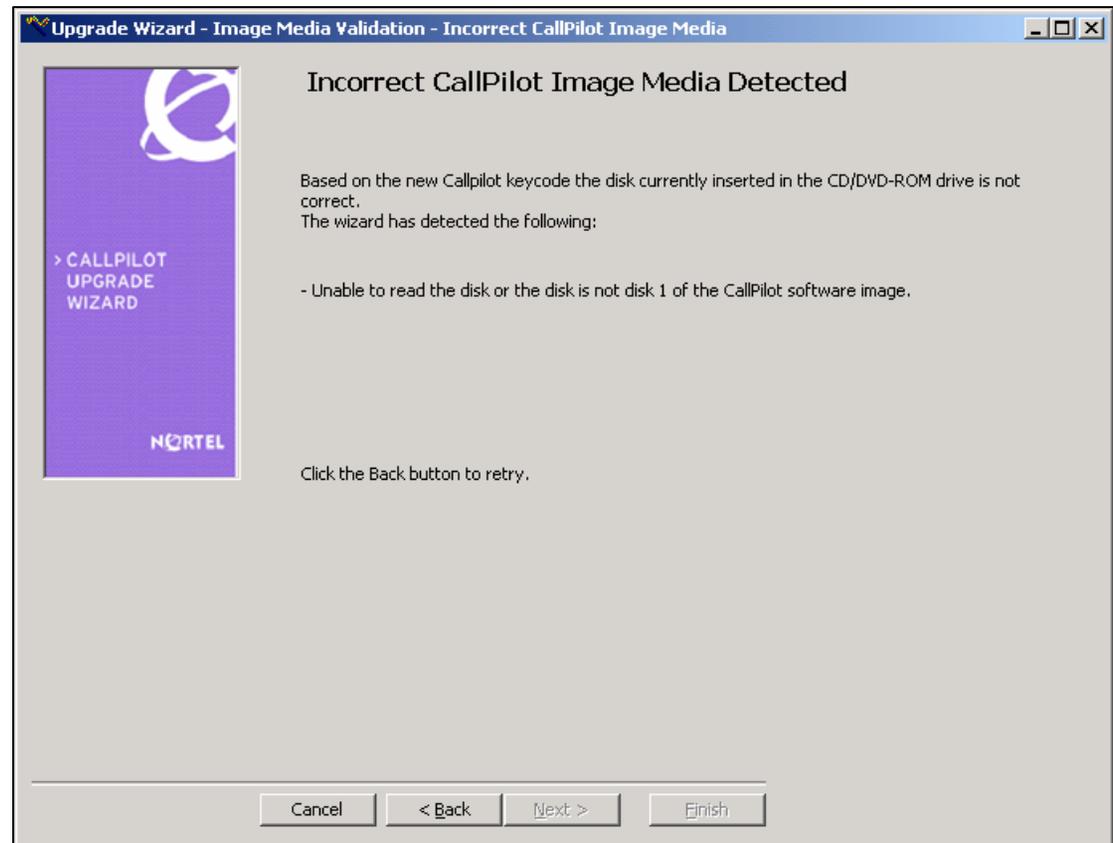
# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



### > Incorrect CallPilot Image Media Detected

- Blocking Error screen



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



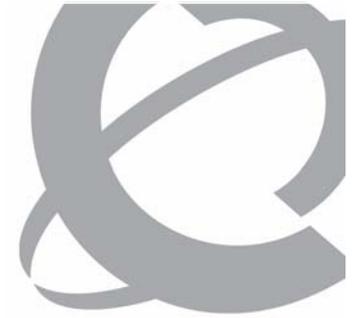
### Running the CallPilot Release 5.0 Upgrade Wizard

> Optional Language CD Validation screen



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Running the CallPilot Release 5.0 Upgrade Wizard

- > Language CD Validation screen

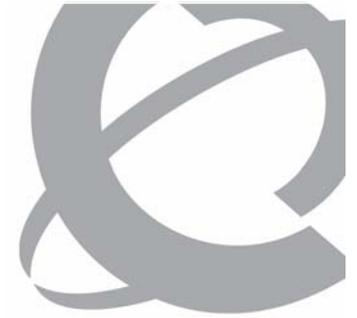
**New for CallPilot 5.0**



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### > Invalid Language CD:

- Blocking Error screen

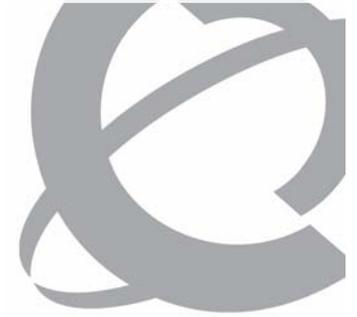
**New for CallPilot 5.0**



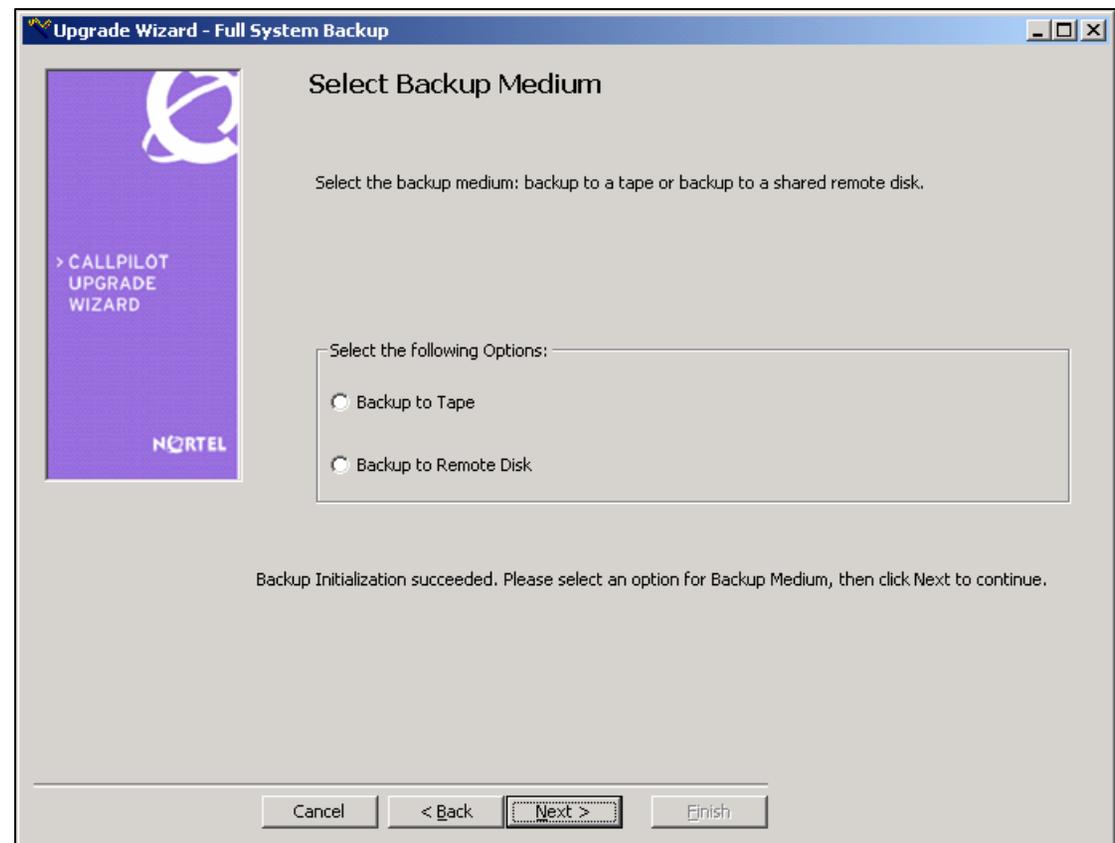
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > Select Backup Medium screen
- > Optional Exit Point:
  - Do not proceed to the next step until you are ready to take the system offline and complete the upgrade.
    - To exit, click **Cancel**.
    - To continue, select the type of backup medium and click **Next**.



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### **CAUTION**

#### **ANY MESSAGES RECEIVED AFTER BACKUP BEGINS ARE LOST DURING THE SYSTEM UPGRADE**

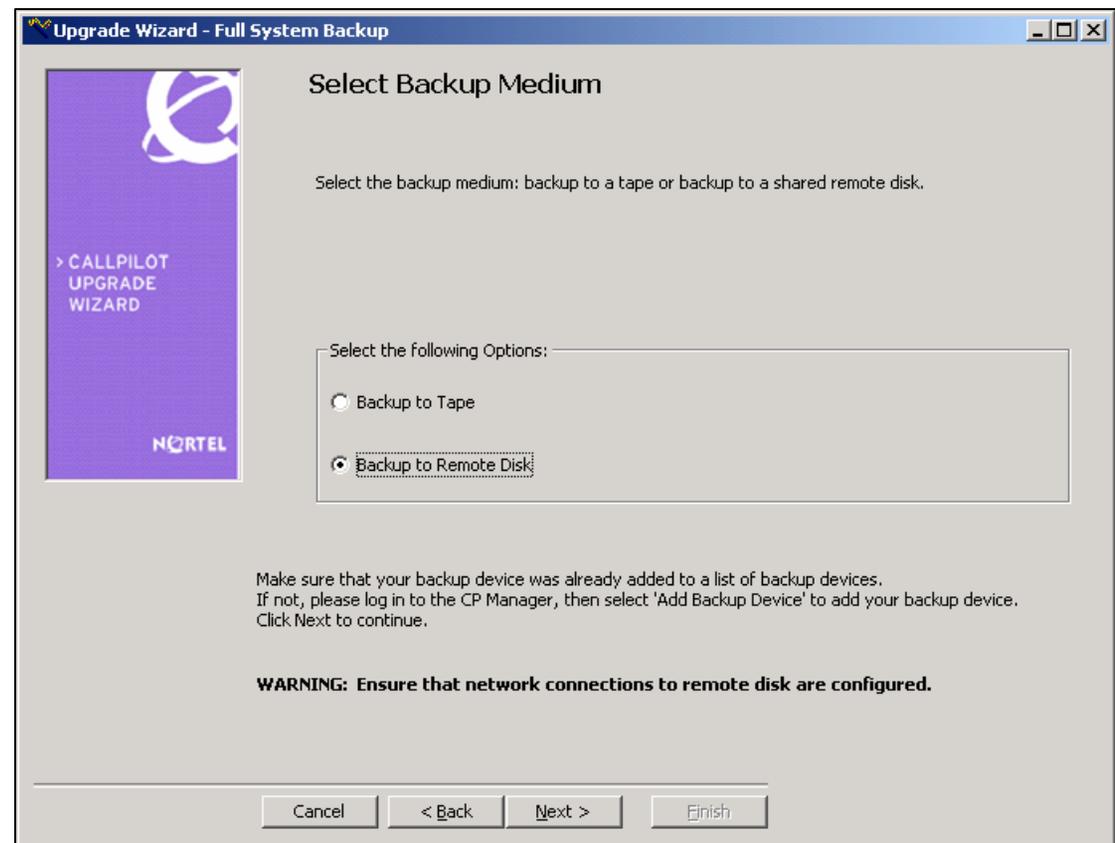
The backup takes from 1 to 3 hours to complete and consumes considerable CPU resources. Any messages that come in while the backup is running are not included in the backup. To avoid losing any user messages, Nortel recommends that you courtesy down the system prior to starting the backup.

# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



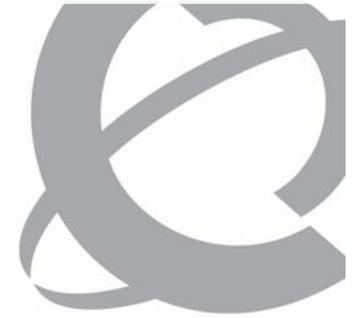
- > Select Backup Medium screen.
- > Backup to Remote Disk:
  - **WARNING:** Ensure that the network connections to remote disk are configured.



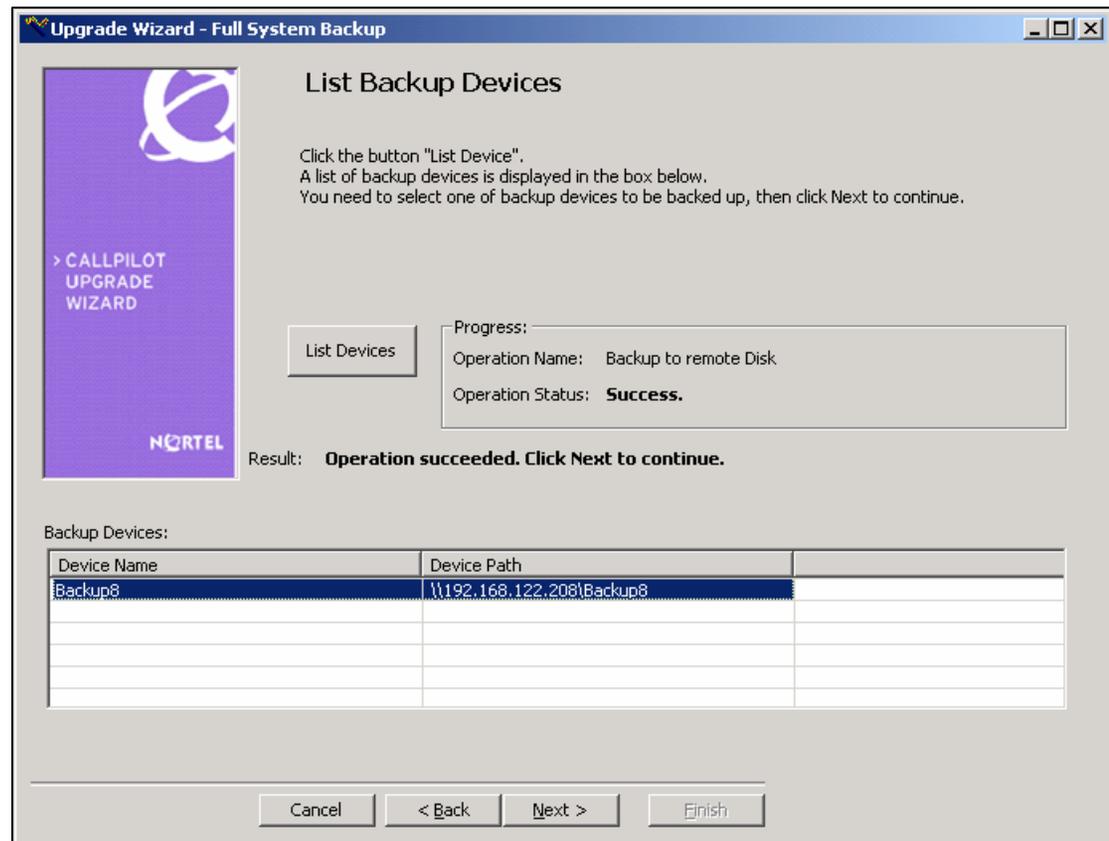
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > List Backup Devices screen:
  1. Click the **List Devices** button.
  2. Select backup device and click **Next** to continue.
  3. When the **Perform System Backup** screen appears, click **Start Backup**.



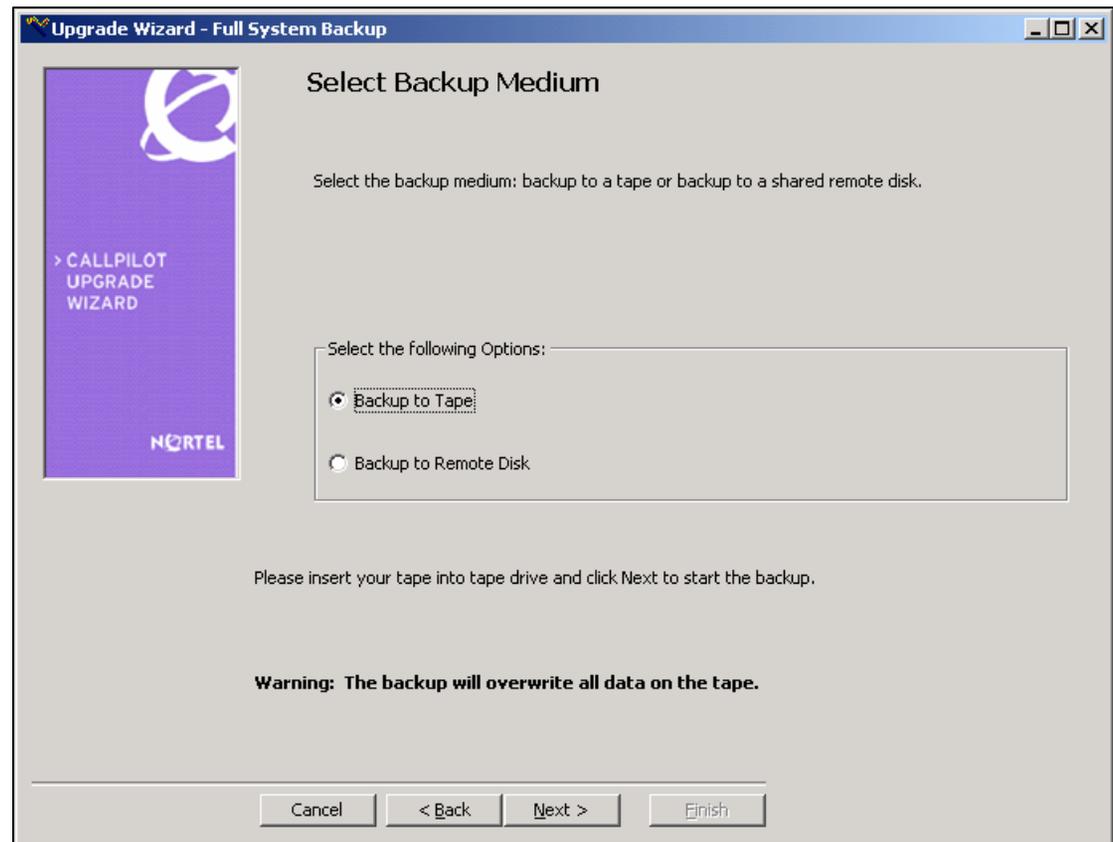
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > Select Backup Medium screen.
- > Backup to Tape:
  - Insert the tape into the tape drive and click **Next** to start the backup.
  - **Warning: The backup overwrites all data on the tape.**



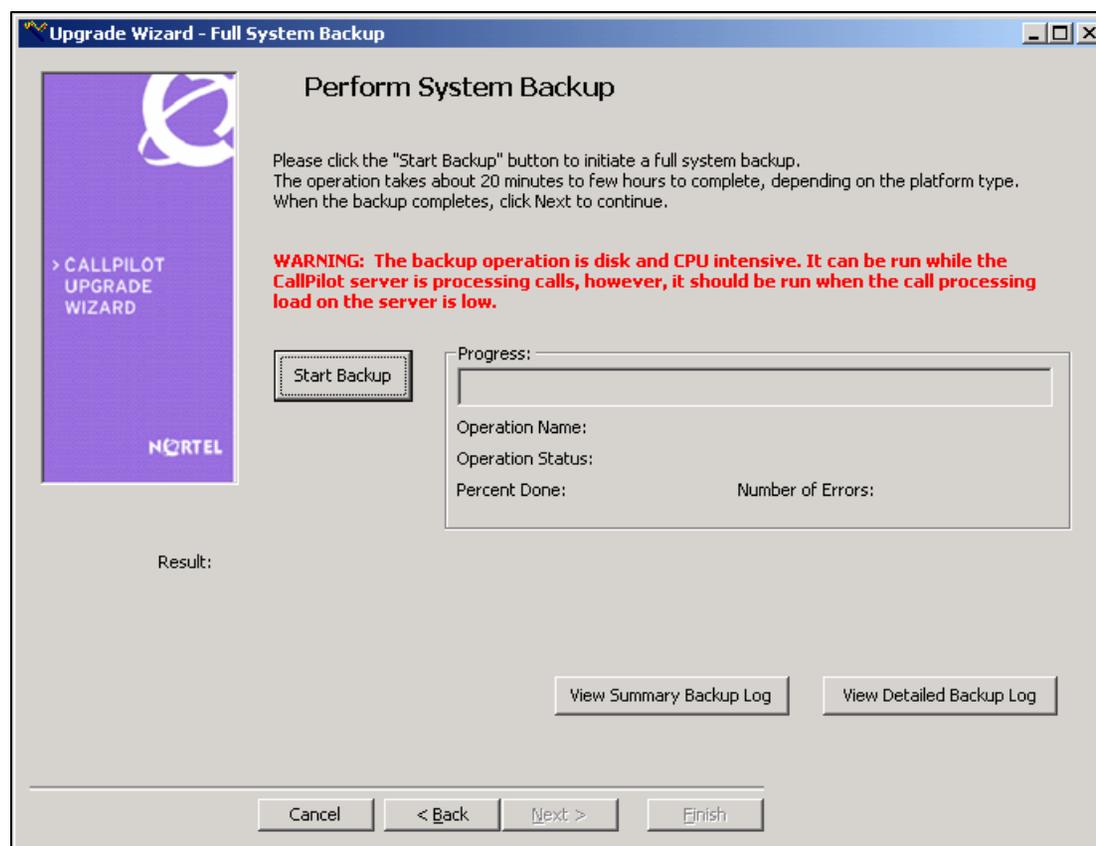
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > Perform System Backup screen:
  1. Click the **Start Backup** button.
  2. When the backup completes, click **Next** to continue.
  - **Warning: The backup operation is disk and CPU intensive.**



# CallPilot Release 5.0

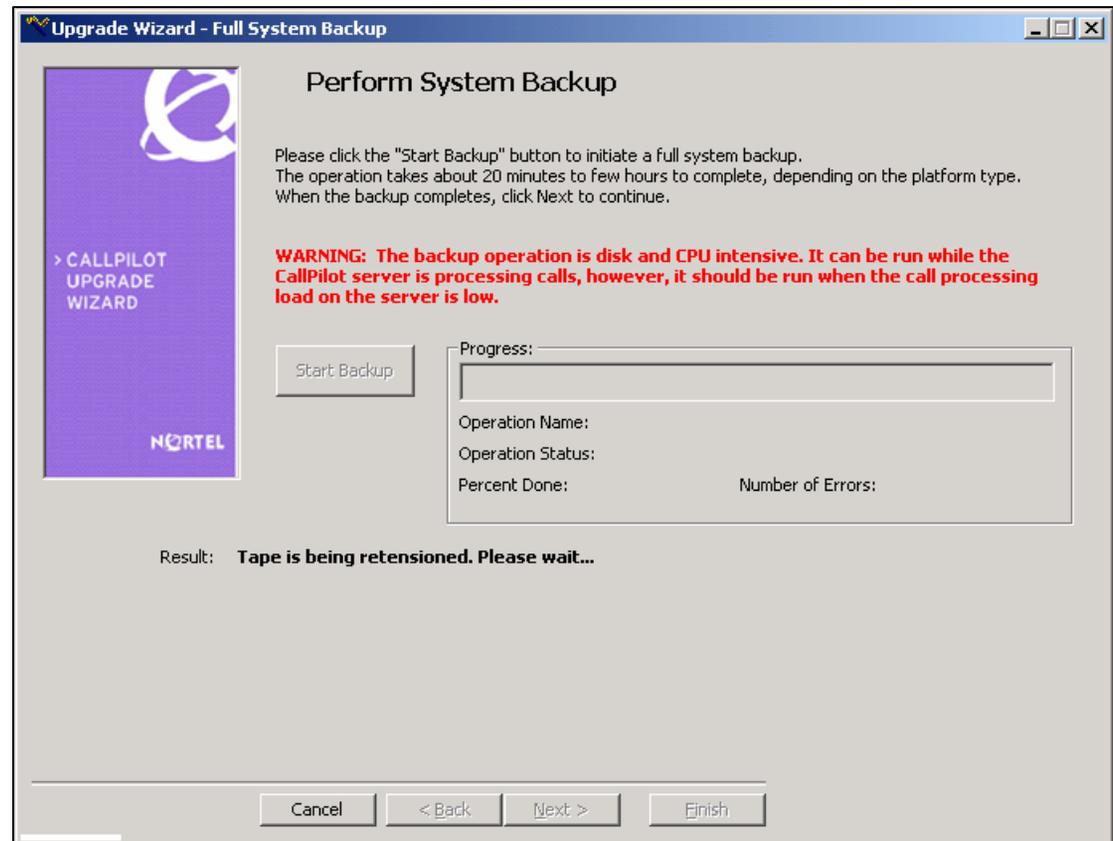
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### > Perform System Backup screen:

- Tape is being retensioned.



# CallPilot Release 5.0

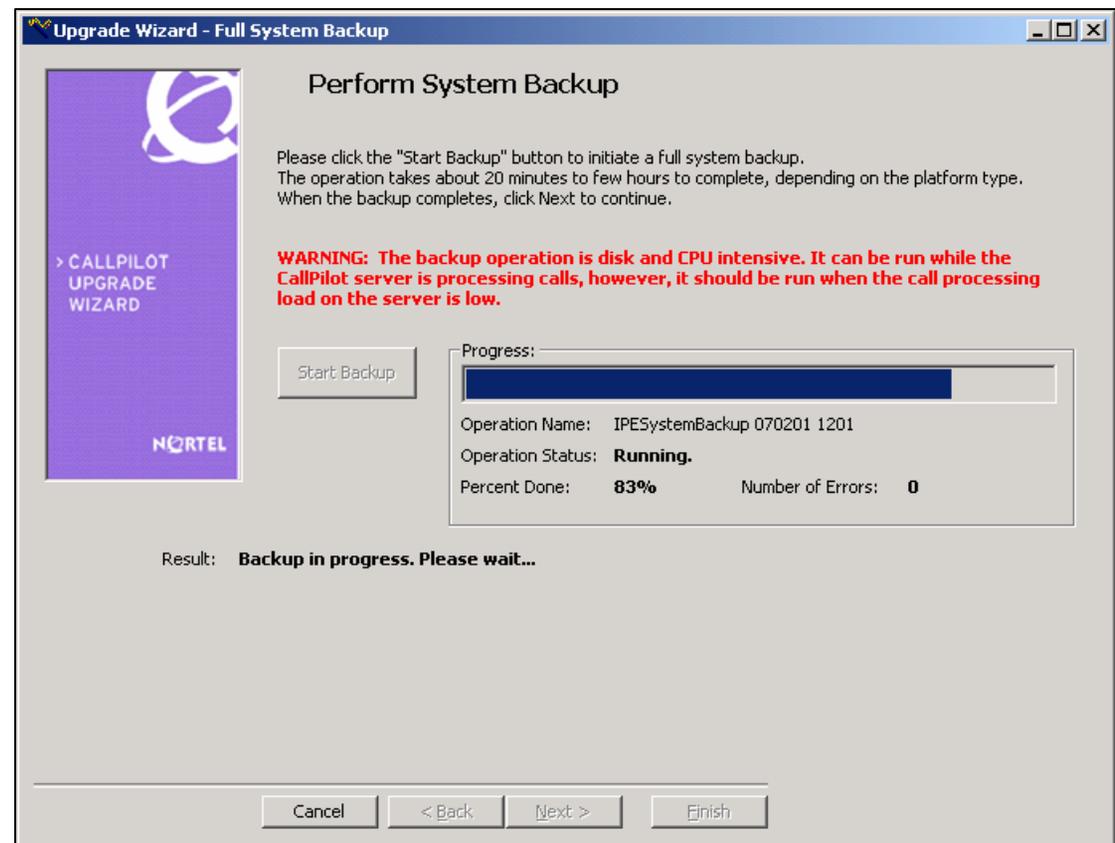
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### > Perform System Backup screen:

- Progress:, Operation Status:, Percent Done:, and Number of Errors are displayed.



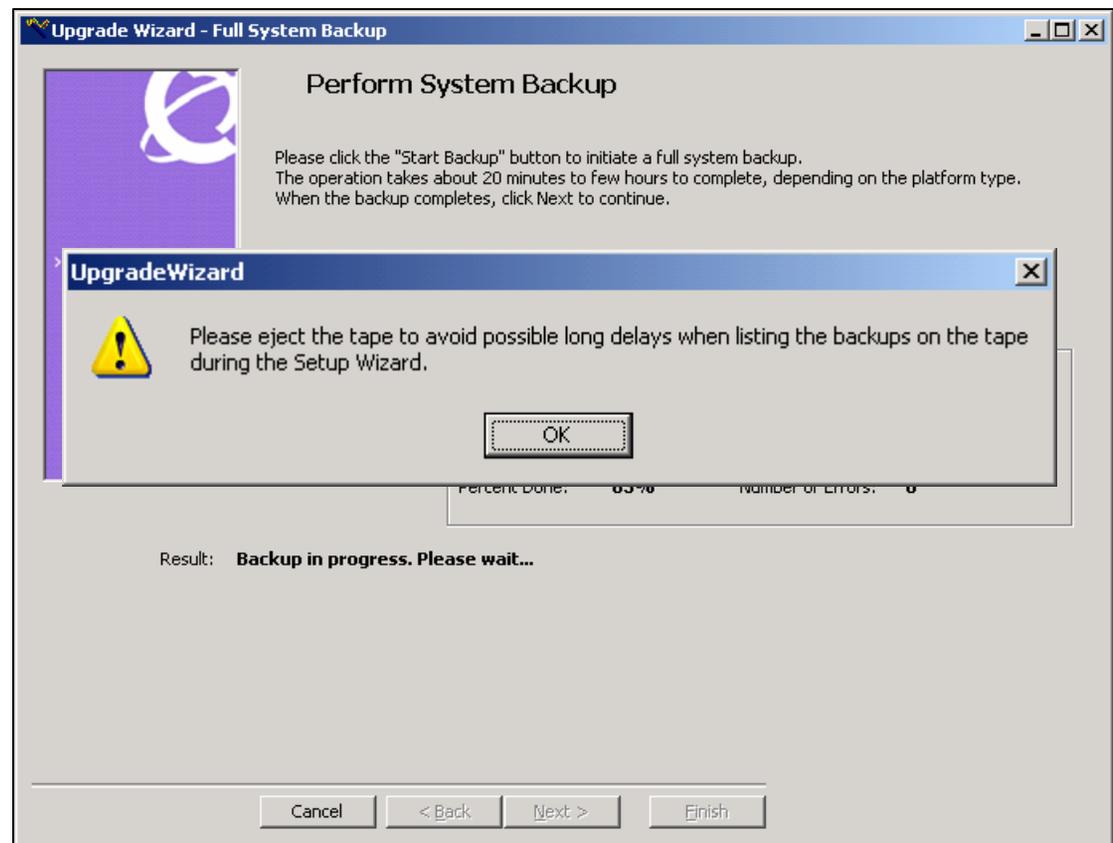
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



- > Perform System Backup screen:
  - Eject tape message



# CallPilot Release 5.0

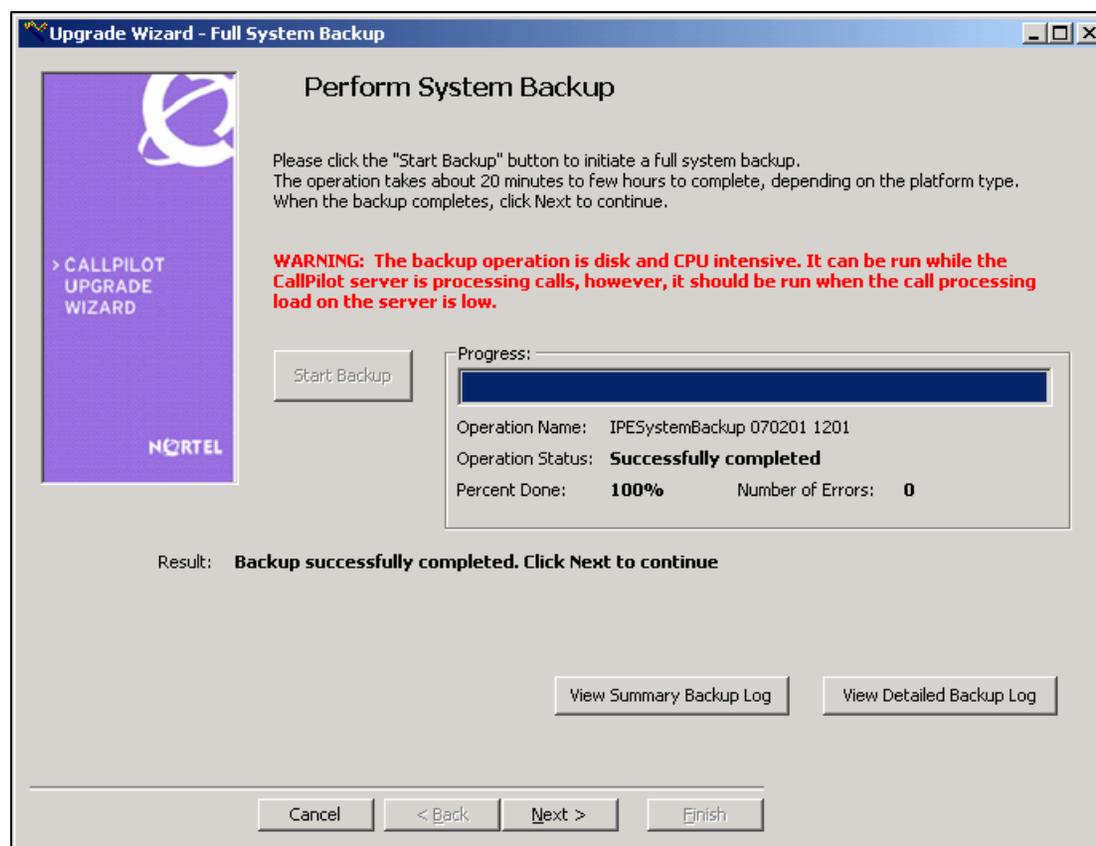
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### > Perform System Backup screen:

- Result: Backup successfully completed.
- Click **Next** to continue.

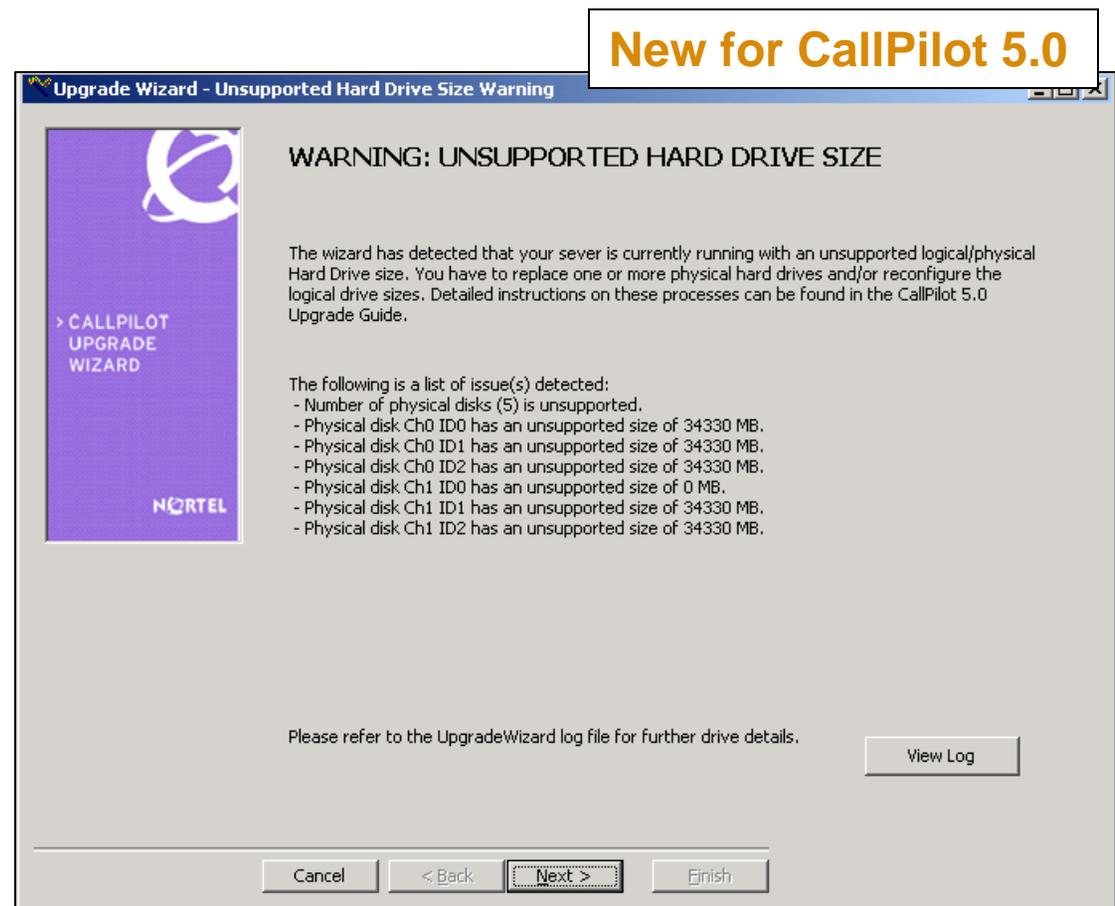


# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Upgrade Wizard



> Upgrade Wizard  
Second Hard Drive  
Size – Warning  
screen  
(after backup and  
before Finish  
screen)



# CallPilot Release 5.0

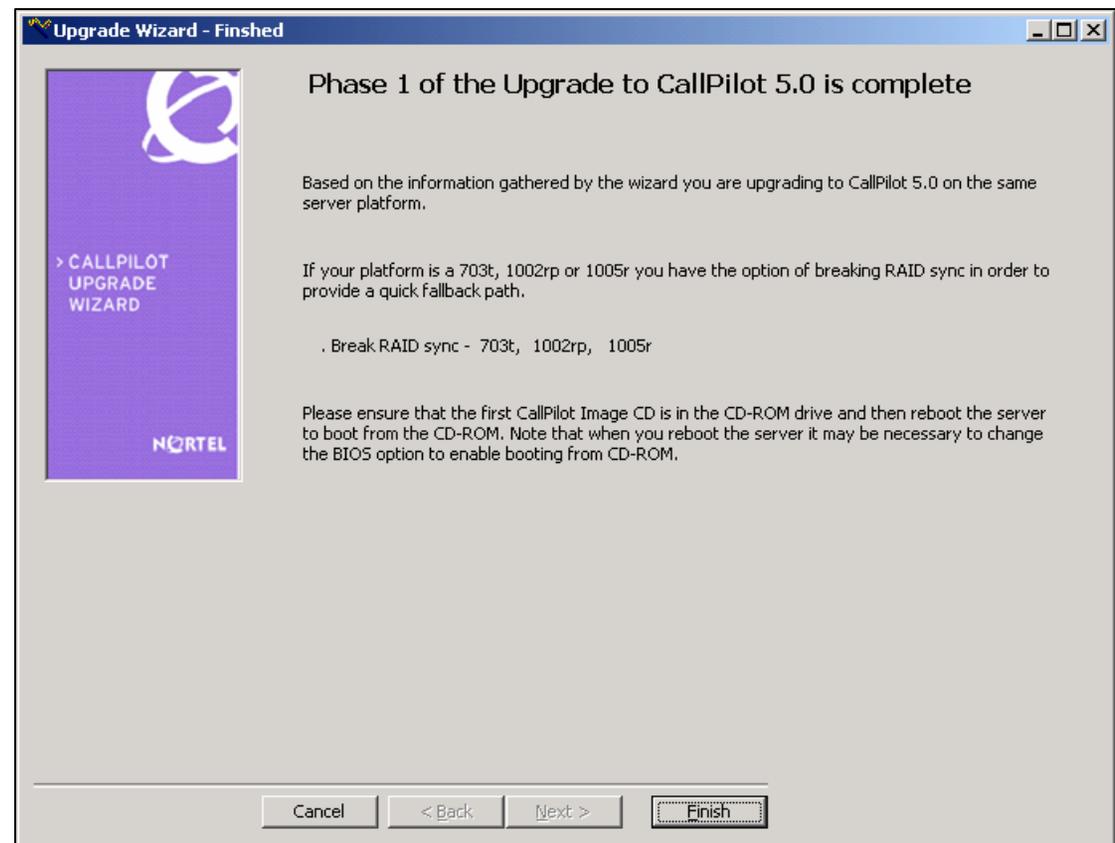
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Upgrade Wizard



#### > Upgrade Wizard Finished screen:

- Final screen in the upgrade wizard.
- Click **Finish** to close the CallPilot 5.0 Upgrade Wizard.





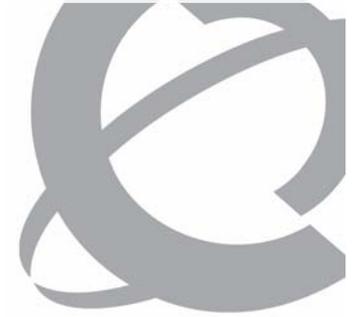
# Knowledge Check

## Question 4

True or False

You must shut down the CallPilot server to run the Upgrade Wizard.

- a) True
- b) False



# Knowledge Check

## Question 4

True or False

You must shut down the CallPilot server to run the Upgrade Wizard.

- a) True
- b) False



# Knowledge Check

## Question 5

The CallPilot 5.0 Upgrade Wizard has several optional exit points that you can use to perform the upgrade preparation tasks in three phases. During which phase does the wizard validate your existing data prior to the upgrade?

- a) Phase 1
- b) Phase 2
- c) Phase 3
- d) The wizard does not perform this task

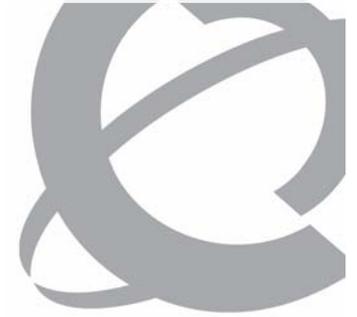


# Knowledge Check

## Question 5

The CallPilot 5.0 Upgrade Wizard has several optional exit points that you can use to perform the upgrade preparation tasks in three phases. During which phase does the wizard validate your existing data prior to the upgrade?

- a) Phase 1
- b) Phase 2
- c) Phase 3
- d) The wizard does not perform this task



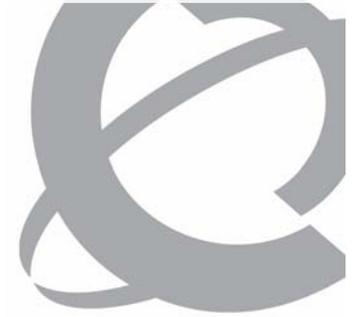
# Knowledge Check

## Question 6

True or False

When running the Release 5.0 Upgrade Wizard, you must validate the Release 5.0 Language Prompts CD.

- a) True
- b) False



# Knowledge Check

## Question 6

True or False

When running the Release 5.0 Upgrade Wizard, you must validate the Release 5.0 Language Prompts CD.

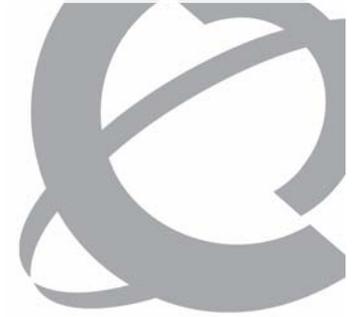
- a) True
- b) **False**



# The CallPilot Release 5.0 Setup Wizard

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Setup Wizard Introduction

- > You can only run the CallPilot Release 5.0 Setup Wizard on a system containing a Release 5.0 software image.
  - An existing system where a CallPilot Release 5.0 image was installed as part of an upgrade.
  - A new CallPilot Release 5.0 system received from Nortel for platform migration.
- > The Setup Wizard rechecks for platform and software validity, and then upgrades and restores the database.
  - The Setup Wizard first prompts you to install any outstanding PEPs.
  - The Setup Wizard checks the software and hardware components of your system to ensure that data can be safely restored from the backup onto the server.
  - After a successful system check, the Setup Wizard restores your backed up data from the backup made by the CallPilot 5.0 Upgrade Wizard and then performs a database conversion.

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Setup Wizard Caution



#### **CAUTION**

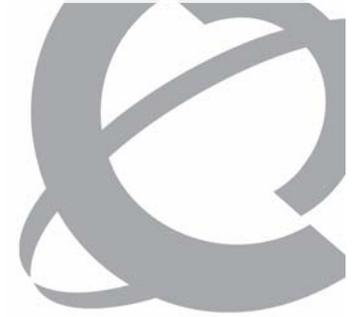
**Ensure you use the backup created from the CallPilot 5.0 Upgrade Wizard for the following reasons:**

1. It provides the most current view of the system.
2. The CallPilot 5.0 Upgrade Wizard corrects the data prior to the backup. This ensures a clean backup and a smooth upgrade.
3. Using an earlier backup tape can result in issues encountered during the restore and upgrade process under CallPilot 5.0.
4. The backup from the CallPilot 5.0 Upgrade Wizard includes the CallPilot 5.0 Upgrade Wizard logs so that they are brought forward to CallPilot 5.0. These logs can be used by NETS in the rare event of an upgrade failure.

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Setup Wizard IP Network Settings

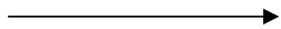


- > If your backup is on a network drive or you are downloading PEPs from the network, you must restore your network settings:
  1. Specify the **IP address** and **subnet mask** for the Nortel server subnet. Do not change your computer name unless necessary.
  2. Specify the **gateway** for the Nortel server subnet.
  3. Restart the system (if prompted by Windows) and log on to the CallPilot server.

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Setup Wizard Flowchart Legend



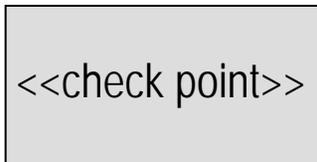
**Proceed / Next**



**Optional Proceed / Next**



**Normal Screen**



**If user quits Wizard at this point they have option to restart Wizard at this point. Prompted at Wizard start up.**



**Warning Error Screen  
Allowed to Proceed**

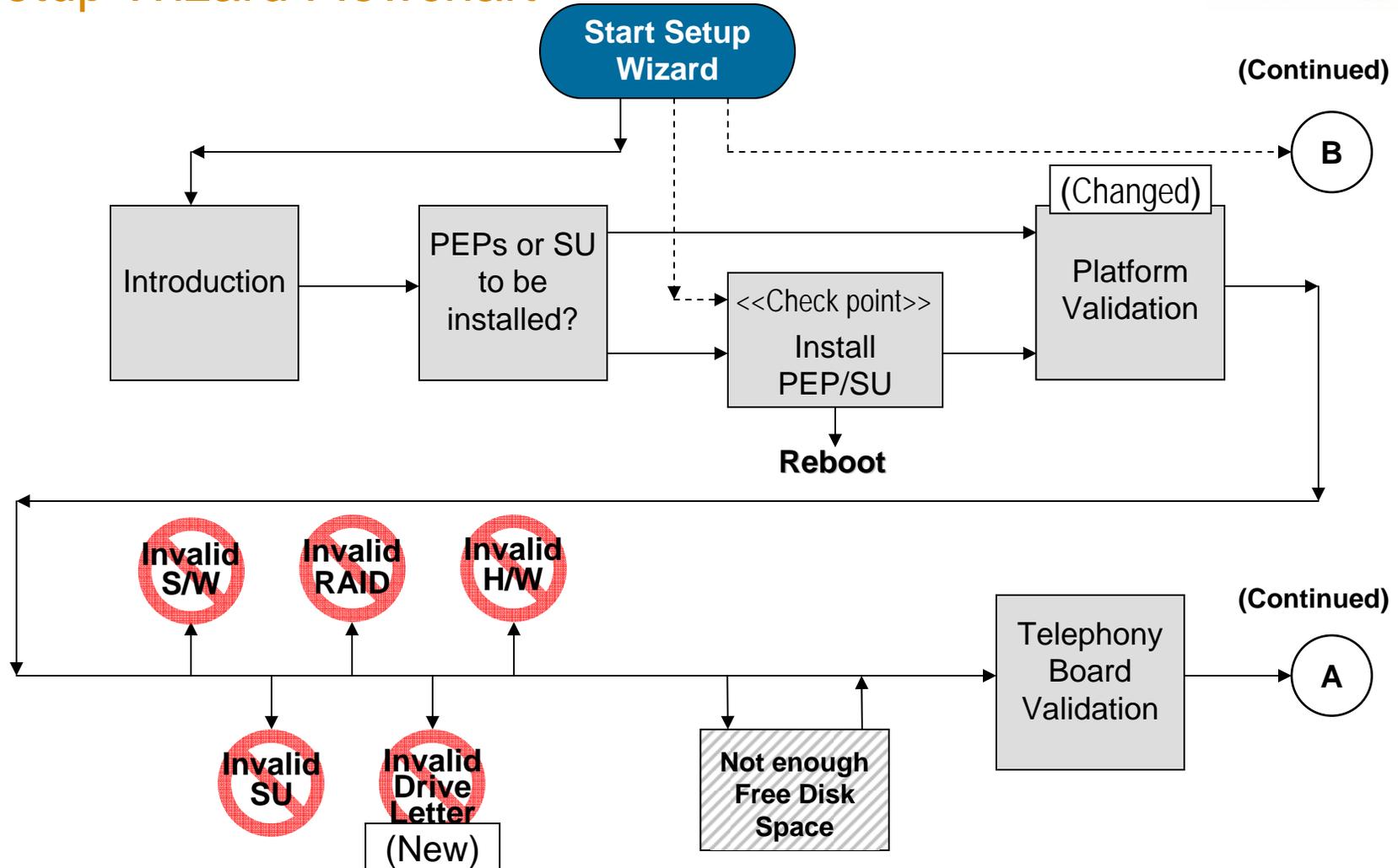
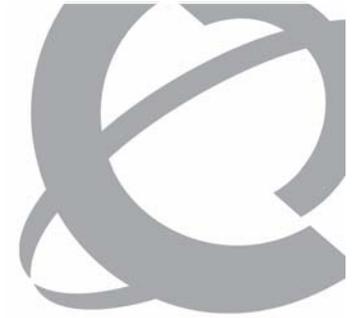


**Blocking Error Screen  
Not Allowed to Proceed**

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Setup Wizard Flowchart

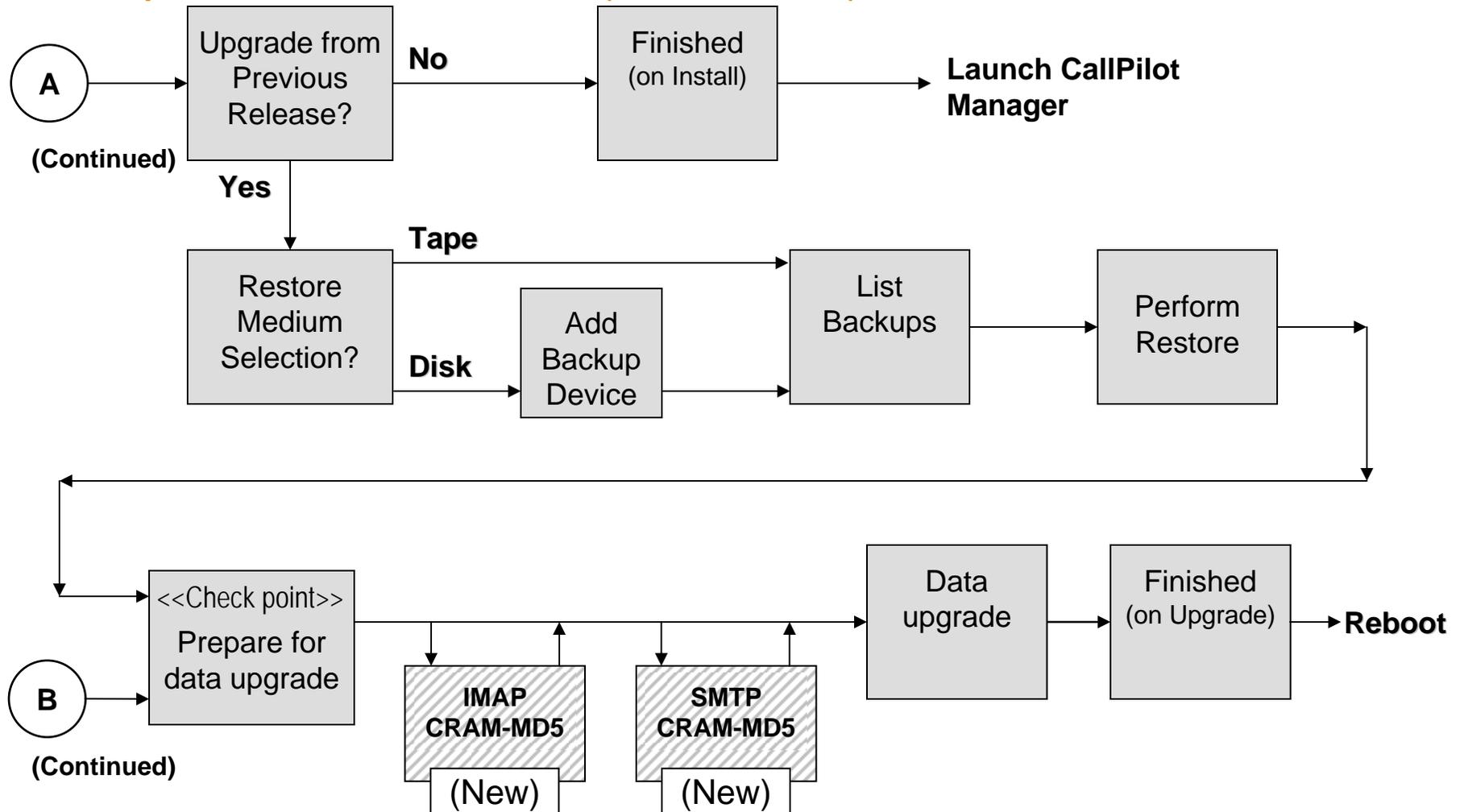




# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Setup Wizard Flowchart (Continued)





# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Accessing the Setup Wizard

> To access the CallPilot 5.0 Setup Wizard:

- Log on to the CallPilot server when the Windows Server 2003 mini-setup process is completed. The default password for the Administrator account is Bvw250.
  - If you log on to an unconfigured CallPilot server the Setup Wizard launches automatically. A CallPilot server, freshly upgraded to CallPilot 5.0, is not configured.
  - To manually launch the Setup Wizard:  
**Start > Programs > CallPilot > Setup Wizard**



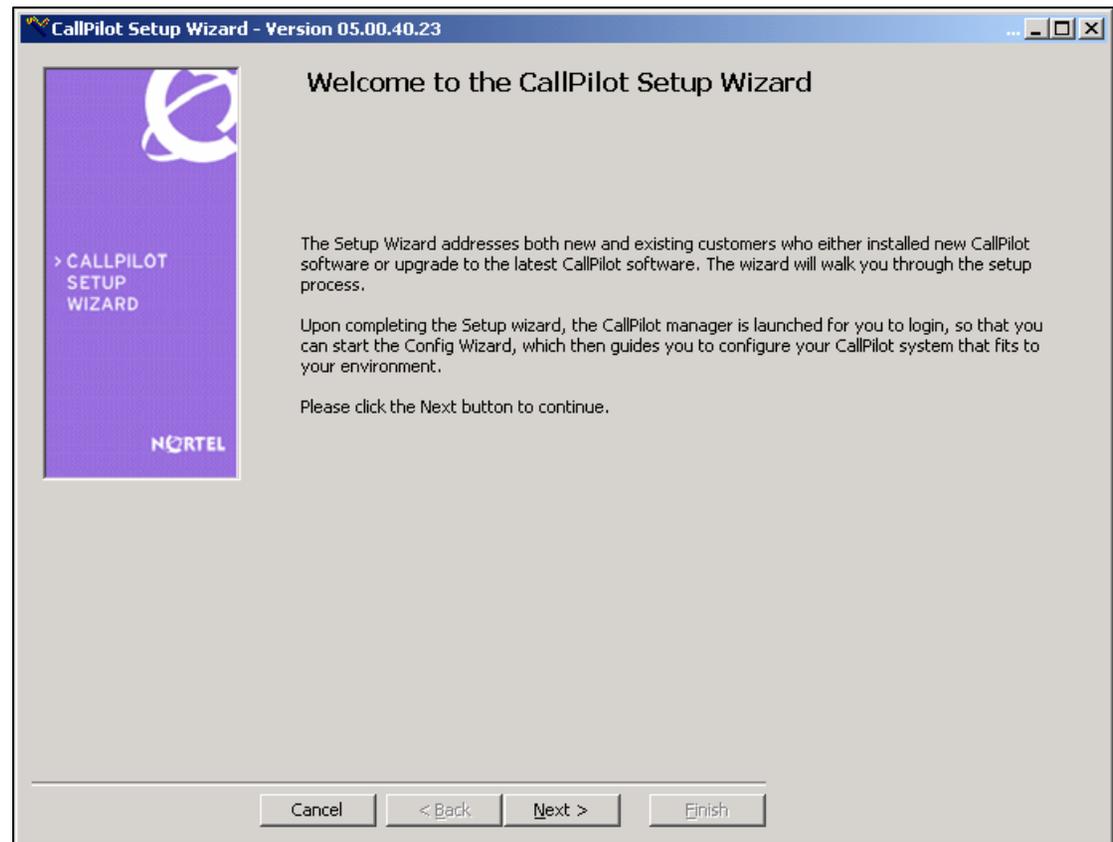
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



- > Setup Wizard
- Welcome screen:
- Click **Next** to continue.



# CallPilot Release 5.0

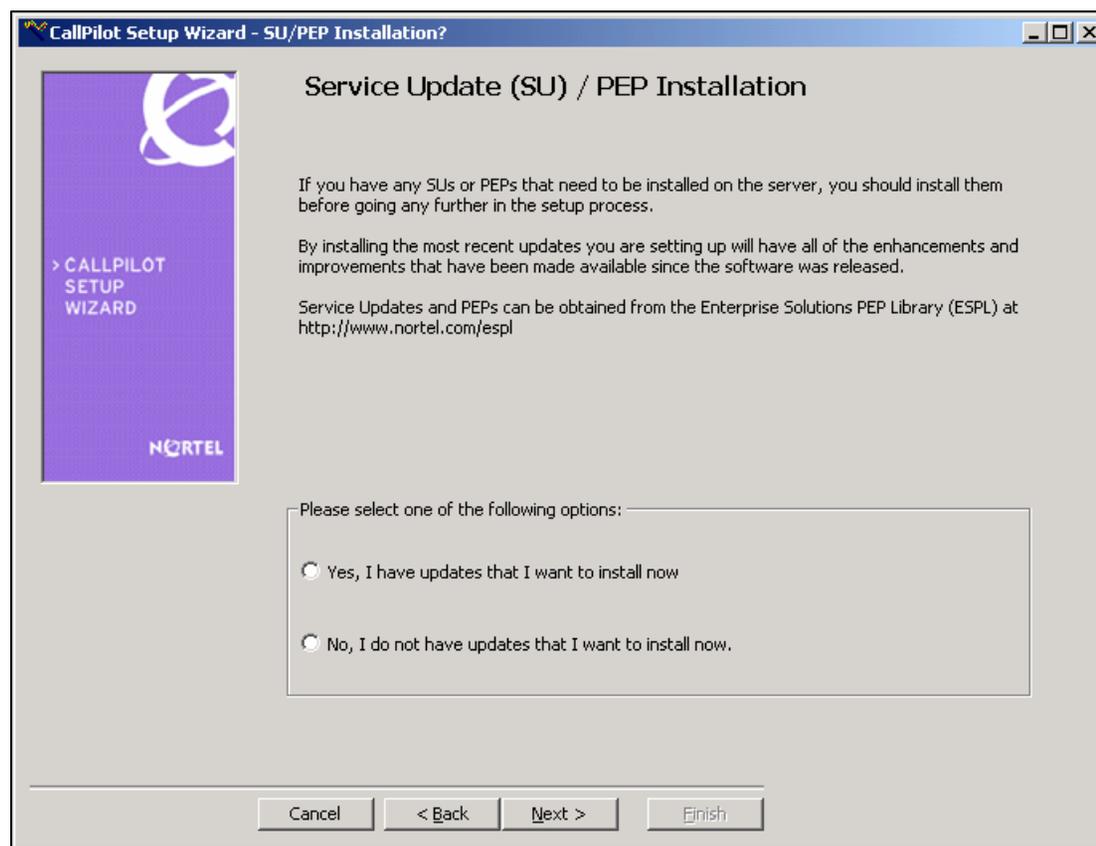
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard SU/PEP Installation? screen:

- If you have SUs or PEPs to install:
  - Select **yes**.
  - Install the SU/PEP
  - Reboot the server (if required)
  - Restart the wizard
- If you do not have SUs or PEPs to install:
  - Select **No**.
  - Click **Next** to continue.



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard Platform Validity Check screen:

- Ensure that all items pass.
- Click **Next** to continue.

**Changed for CallPilot 5.0**

The screenshot shows the 'CallPilot Setup Wizard - Platform Validity Check' window. The title bar includes the text 'CallPilot Setup Wizard - Platform Validity Check'. The main content area is titled 'Performing Platform Validity Check' and contains a table of server specifications. A callout box in the top right corner of the window highlights the text 'Changed for CallPilot 5.0'. The table lists various system parameters with their current and required values. All items in the table have a green checkmark in the 'Status' column, indicating they all pass the check. Below the table, a 'Result:' section states 'The platform validity check is complete. Click Next to continue.' At the bottom of the window, there are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'. A 'Run Platform Validity Check' button is also visible on the left side of the window.

Platform: IPE 201i

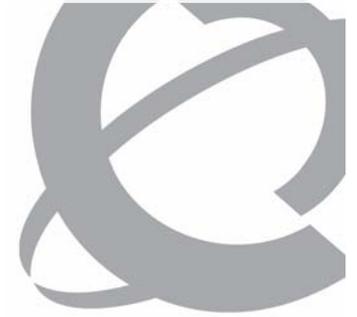
Status	Item Name	Current Value	Required Value
✓	Software Version	5.0 (05.00.40.23)	5.0 (05.00.00.00)
✓	SU Version		
✓	Number of CPU	1	1
✓	CPU Speed (MHz)	300	300
✓	Server BIOS Version	6.0.3	6.0.3
✓	RAM Size (MB)	256	256
✓	Number of Logical Drives	1	1
✓	Logical Disk 0 (MB)	39260	20000

Result: **The platform validity check is complete. Click Next to continue.**

Buttons: Cancel, < Back, Next >, Finish

# CallPilot Release 5.0

## Supported Upgrade/Migration Paths



### Running the CallPilot Release 5.0 Setup Wizard

- > Setup Wizard Platform Validity Check screen with errors shown:

- Correct all issues and rerun the wizard.

**Changed for CallPilot 5.0**

Platform: TRP 1002RP

Status	Item Name	Current Value	Required Value
✓	Logical Disk 0 (MB)	36000	36000
✓	Logical Disk 1 (MB)	36000	36000
✓	Logical Disk 2 (MB)	36000	36000
✗	Number of Physical Drives	5	6
✗	Phys Disk Ch0 ID0 (MB)	34330	50000
✗	Phys Disk Ch0 ID1 (MB)	34330	50000
✗	Phys Disk Ch0 ID2 (MB)	34330	50000
✗	Phys Disk Ch1 ID0 (MB)	0	50000
✗	Phys Disk Ch1 ID1 (MB)	34330	50000
✗	Phys Disk Ch1 ID2 (MB)	34330	50000
✓	Drive Letter Assignment	C:\ D:\ E:\ F:\ Z:\	C:\ D:\ E:\ F:\ Z:\

Result: **One or more issues have been detected. Click Next for more information.**

# CallPilot Release 5.0

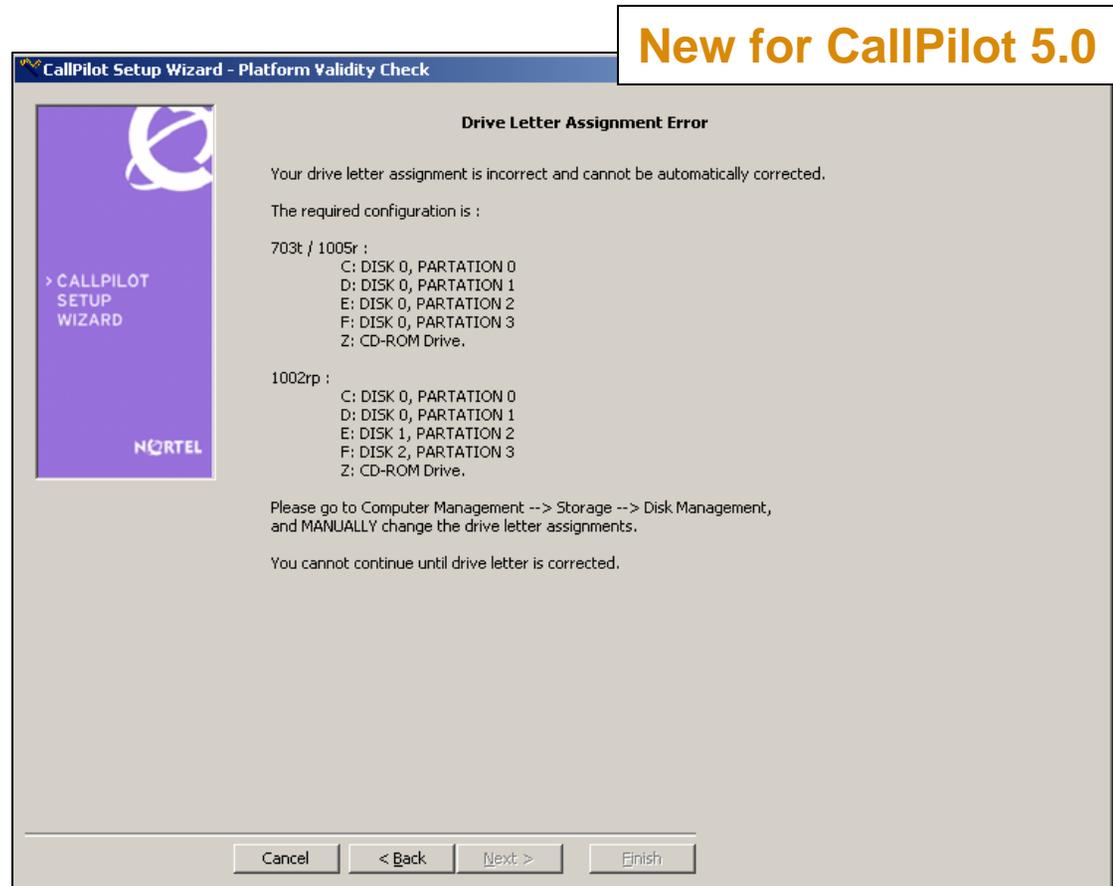
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



- > Setup Wizard Drive Letter Assignment Error –Blocking Error screen

**New for CallPilot 5.0**



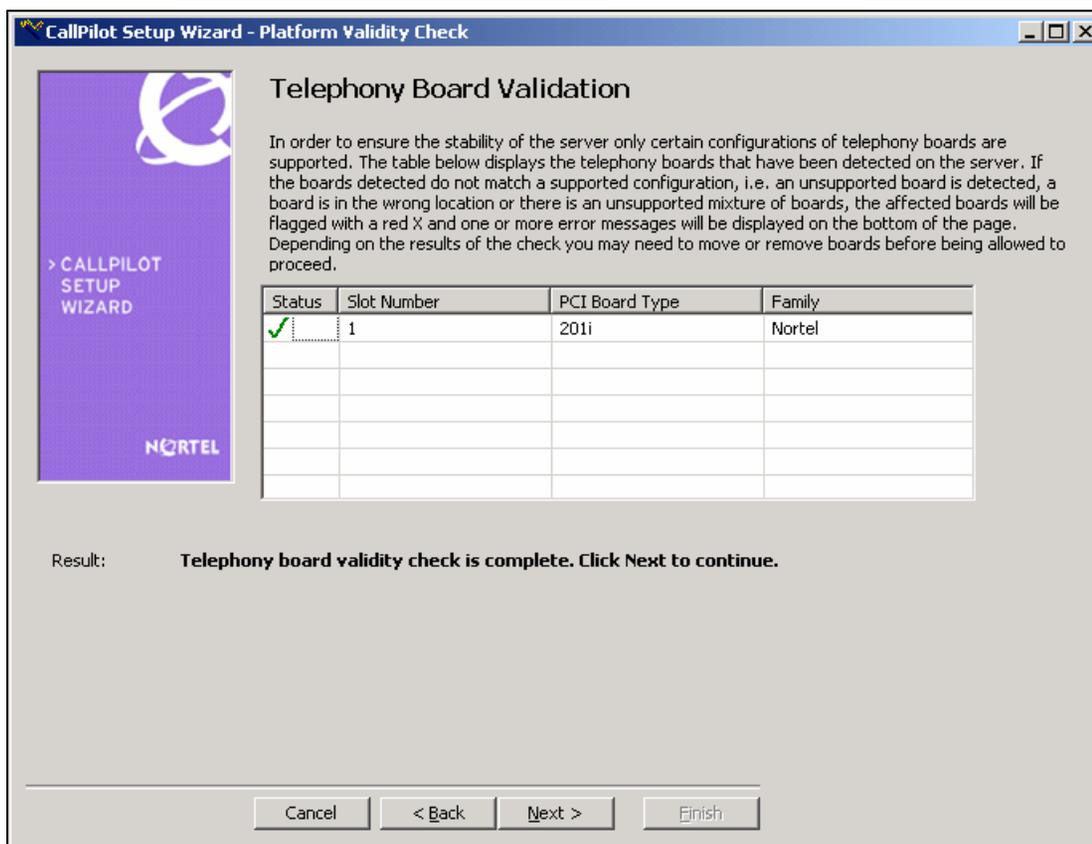
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard

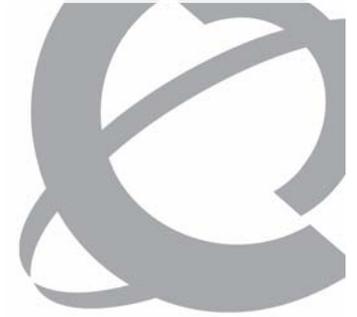


- > Setup Wizard  
Telephony Board  
Validation screen:
- 201i server
  - If all results are OK, click **Next** to continue.



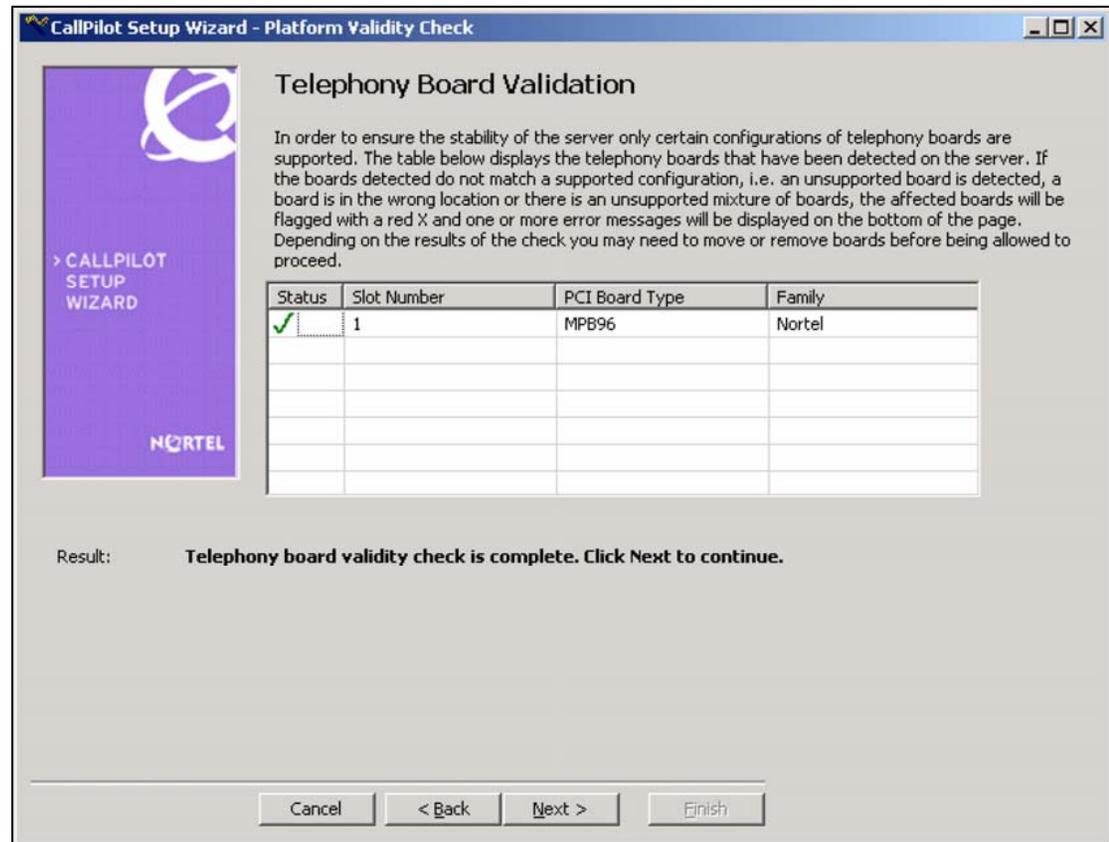
# CallPilot Release 5.0 Supported Upgrade/Migration Paths

## Running the CallPilot Release 5.0 Setup Wizard



### > Setup Wizard Telephony Board Validation screen:

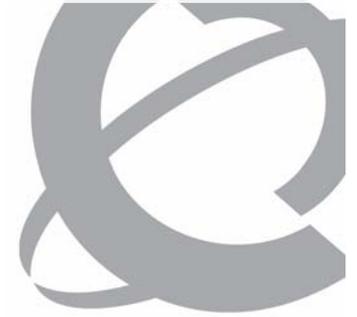
- Server with single MPB96 card.
- If all results are OK, click **Next** to continue.



# CallPilot Release 5.0

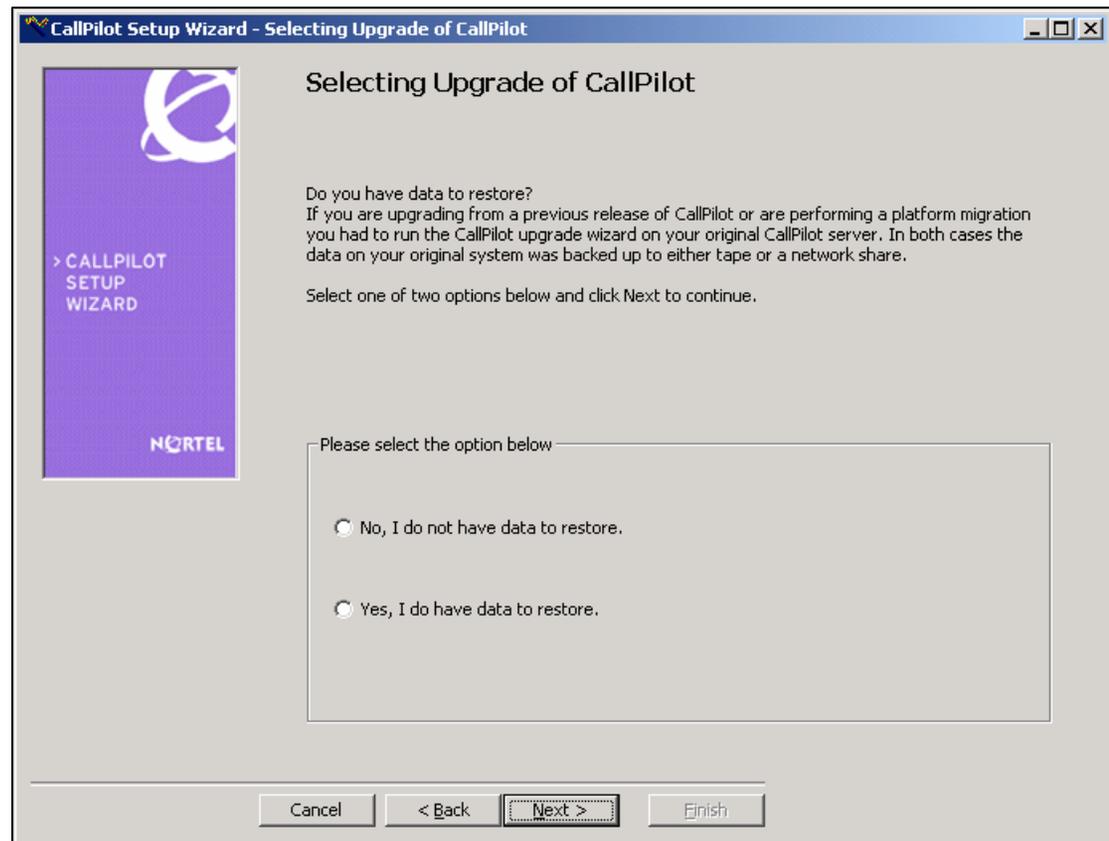
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard Selecting Upgrade of CallPilot screen:

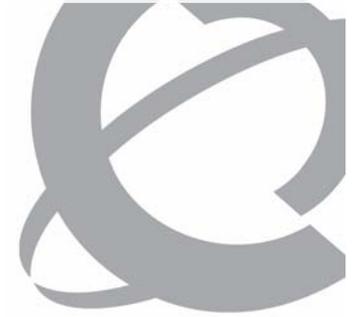
- Click to select:
  - **No, I do not have data to restore.**
  - **Yes, I do have data to restore.**
- Click **Next** to continue.



# CallPilot Release 5.0

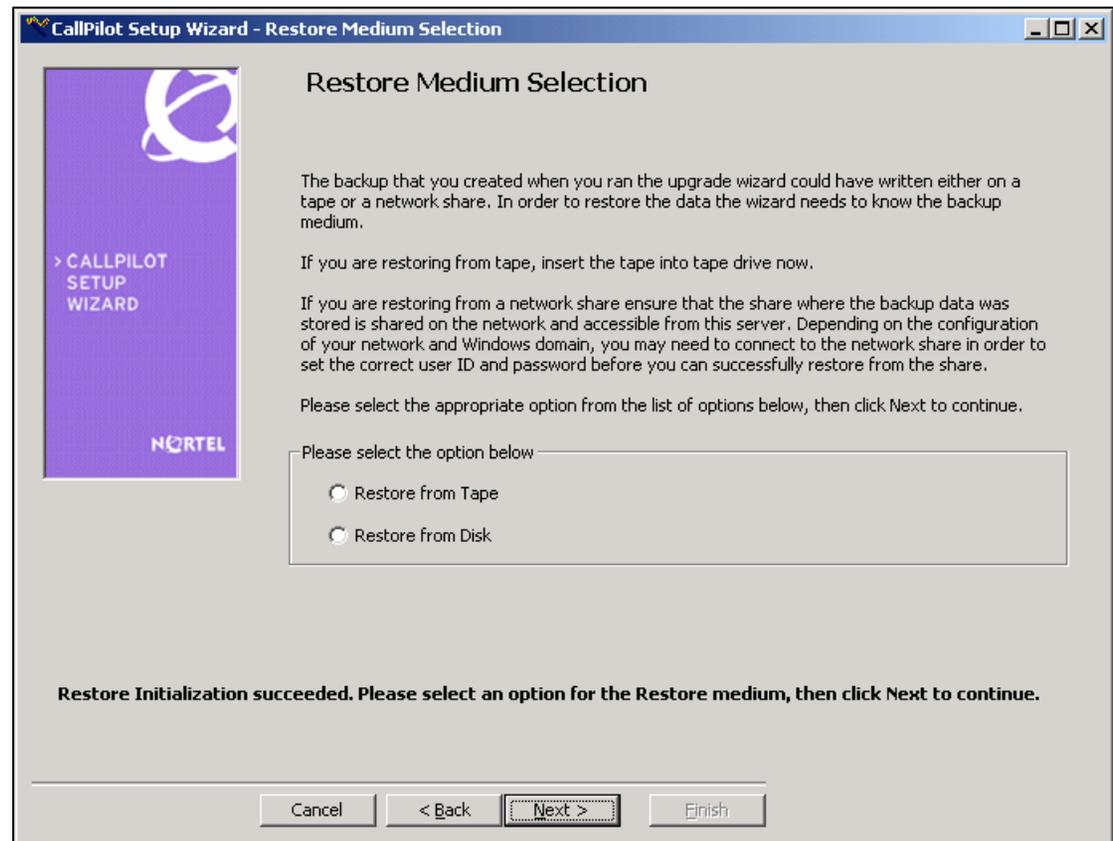
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard Restore Medium Selection screen:

- Click to select:
  - **Restore from Tape.**
  - **Restore from Disk.**
- Click **Next** to continue.



# CallPilot Release 5.0

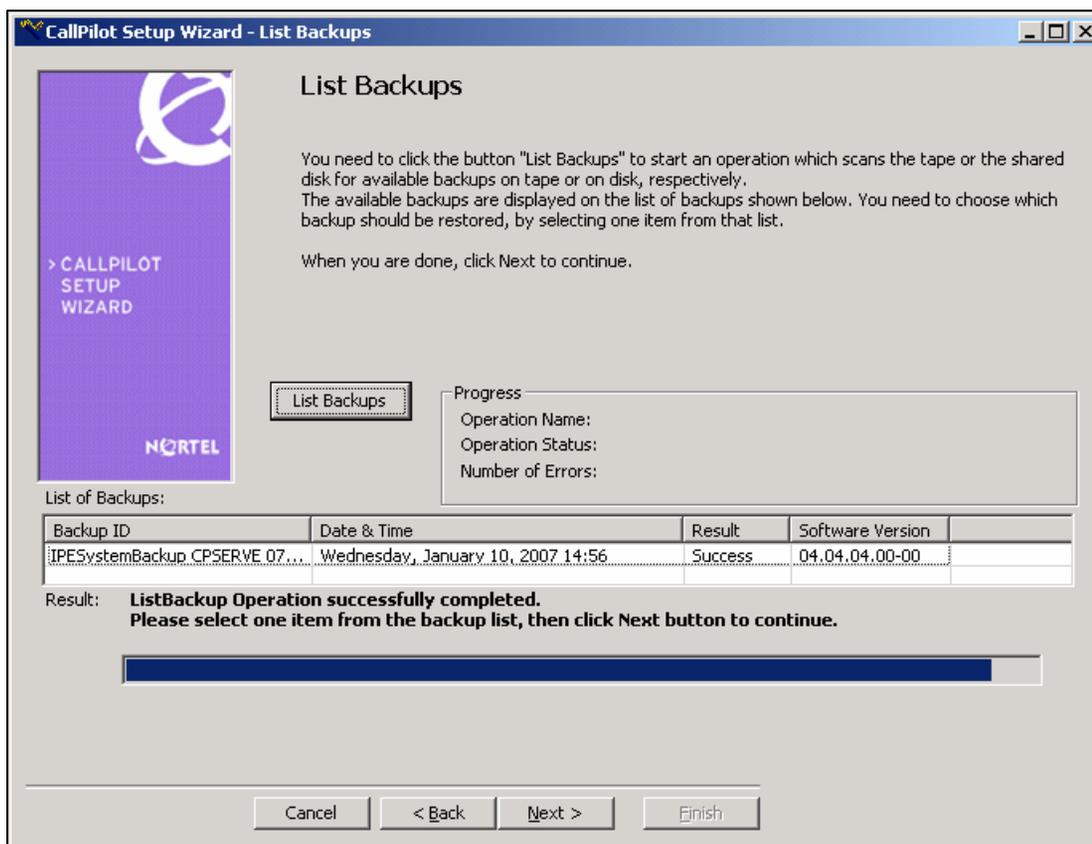
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



> Setup Wizard List Backups screen:

1. Click the **List Backups** button.
2. Select a backup from the list.
3. Click **Next** to continue.



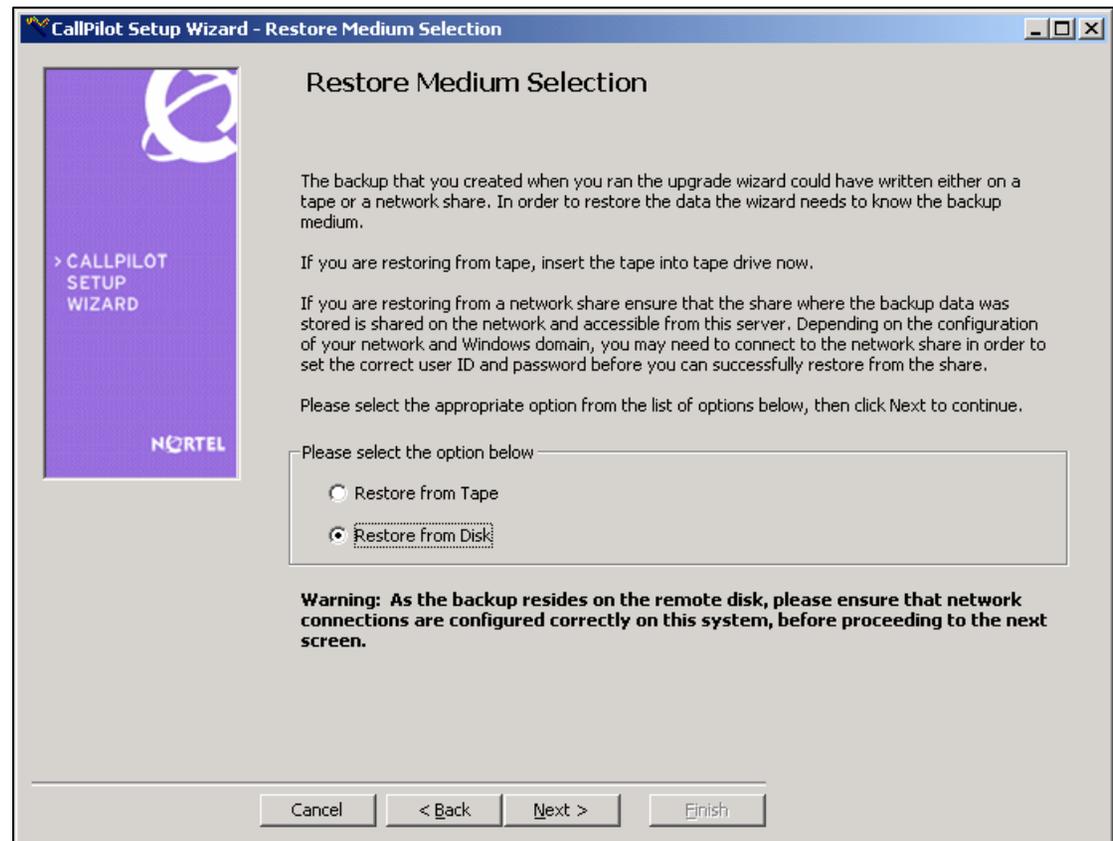
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



- > Setup Wizard
- Restore Medium Selection screen with Restore from Disk selected.



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard Add Backup Device screen:

- Enter the following information about the remote drive location:
  - **Device Name**
  - **Device Directory Path**
  - **User ID**
  - **Password**
- Click **Next** to continue.

The screenshot shows the 'CallPilot Setup Wizard - Add Backup Device' window. On the left is a purple sidebar with the CallPilot logo and the text '> CALLPILOT SETUP WIZARD' and 'NORTEL'. The main area is titled 'Add Backup Device' and contains the following text:

In order to restore from a backup that was made to a network share (remote disk), the wizard needs to know where your backup data is stored on the remote system.

Please enter the directory path on the remote system where your backup data is stored. The path must be in UNC format: \\<remote computer name>\<directory path>. For example \\cpsystem-1\backup2 02.

You must ensure that the share where the backup data was stored is shared on the network and accessible from this server. Depending on the configuration of your network and Windows domain, you may need to specify the correct User ID and password before you can successfully restore from the share.

When you are done, click Next to continue.

Below the text are four input fields:

- 'Enter Device Name:' with the text 'RemoteDisk' entered.
- 'Enter Device Directory Path:' with the text '\\172.16.52.167\backup' entered.
- 'User-ID:' with the text 'administrator' entered.
- 'Password:' with the text '\*\*\*\*\*' entered.

At the bottom of the window are four buttons: 'Cancel', '< Back', 'Next >', and 'Finish'.

# CallPilot Release 5.0

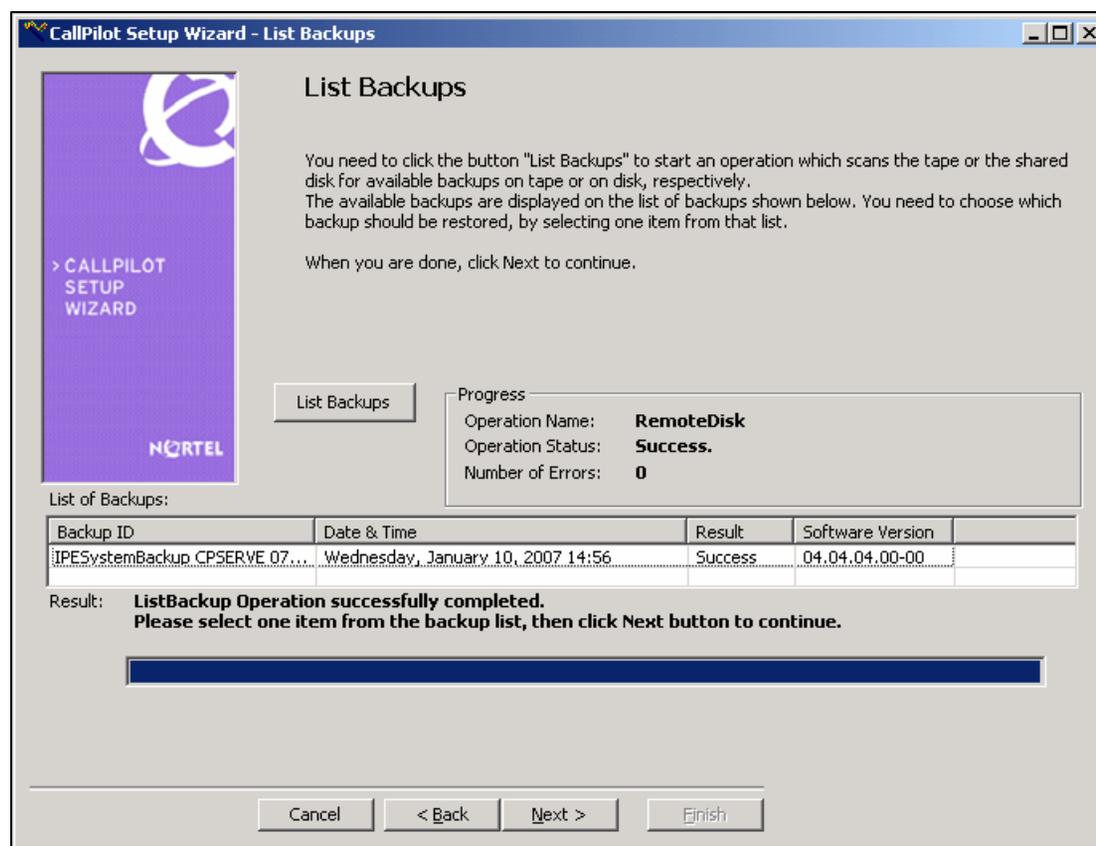
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard List Backups screen:

- Click the **List Backups** button.
- Select a backup from the list.
- Click **Next** to continue.



# CallPilot Release 5.0

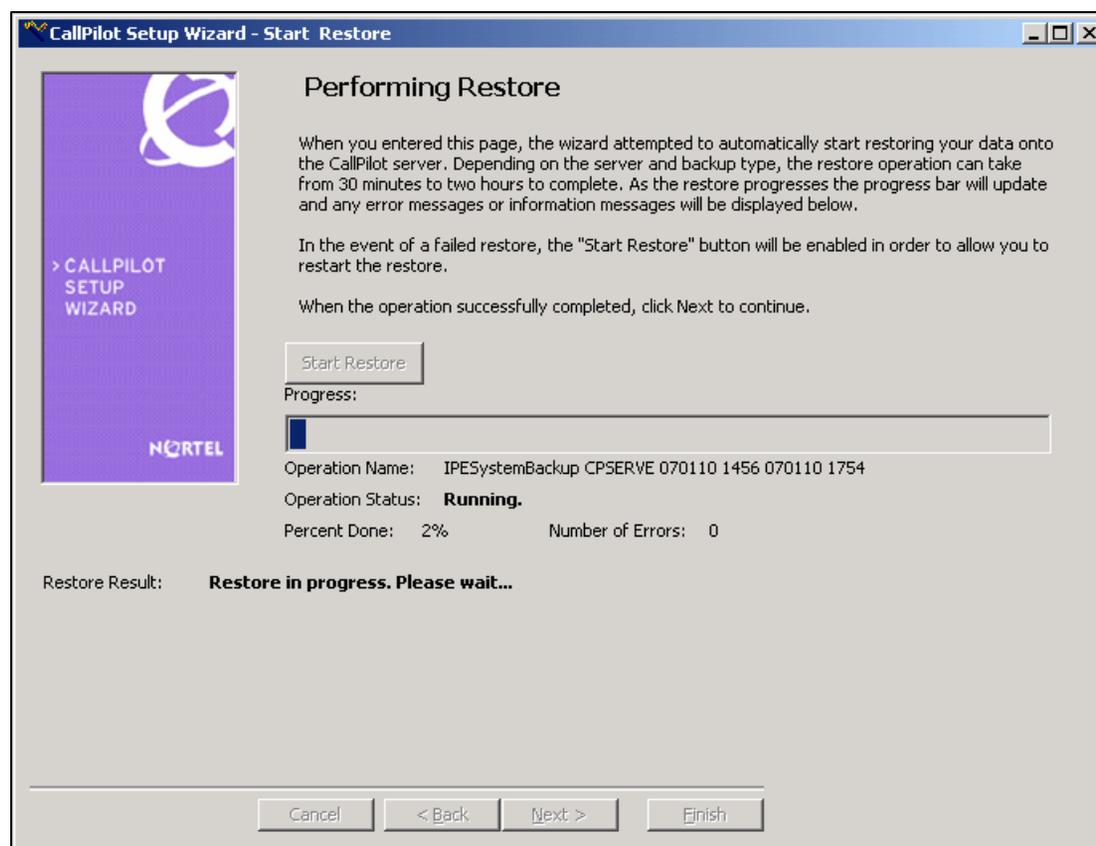
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard Performing Restore screen:

- CallPilot services are shut down.
- The wizard automatically starts the restore operation.
- The progress bar shows the percent complete and the number of errors.



# CallPilot Release 5.0

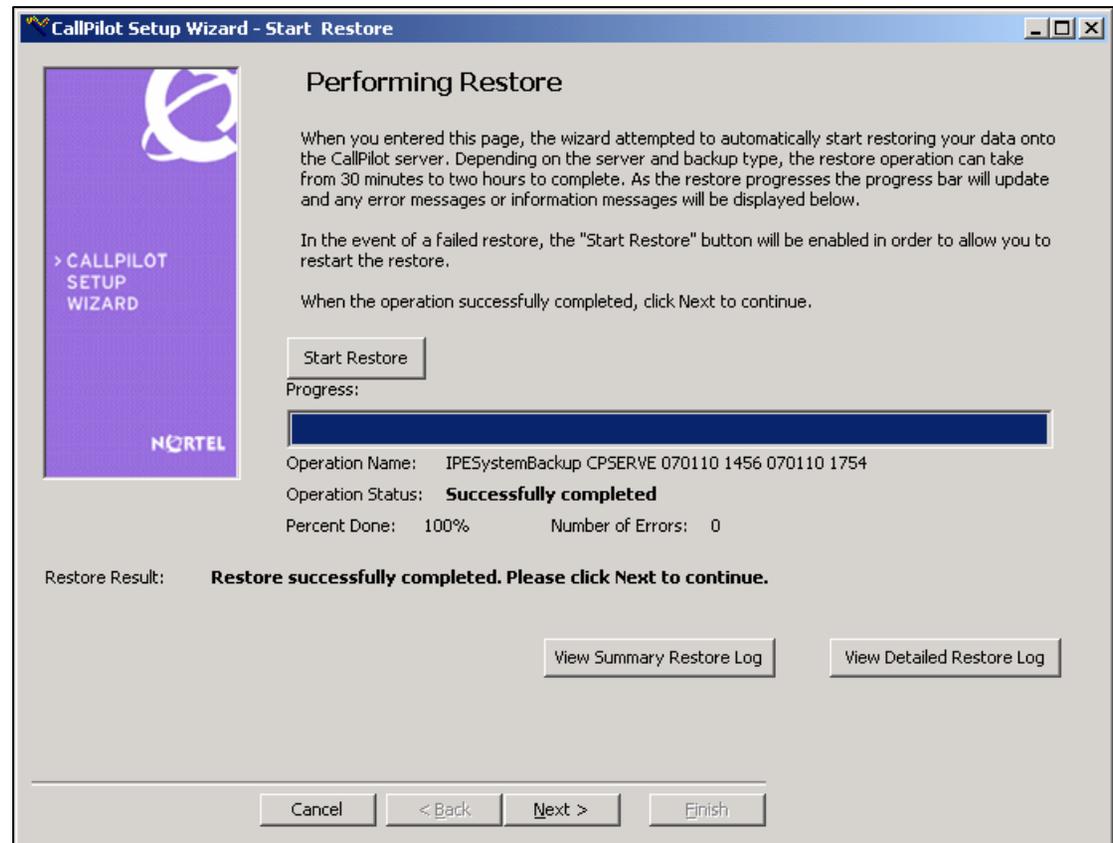
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



> Setup Wizard  
Performing Restore  
screen with  
Operation Status  
Successfully  
completed:

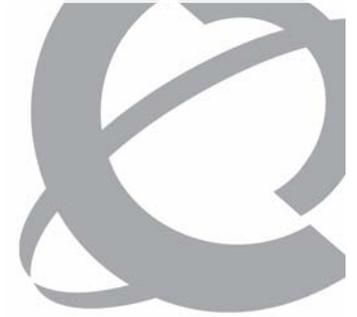
- Click **View Log** buttons to view restore logs.
- Click **Next** to continue.



# CallPilot Release 5.0

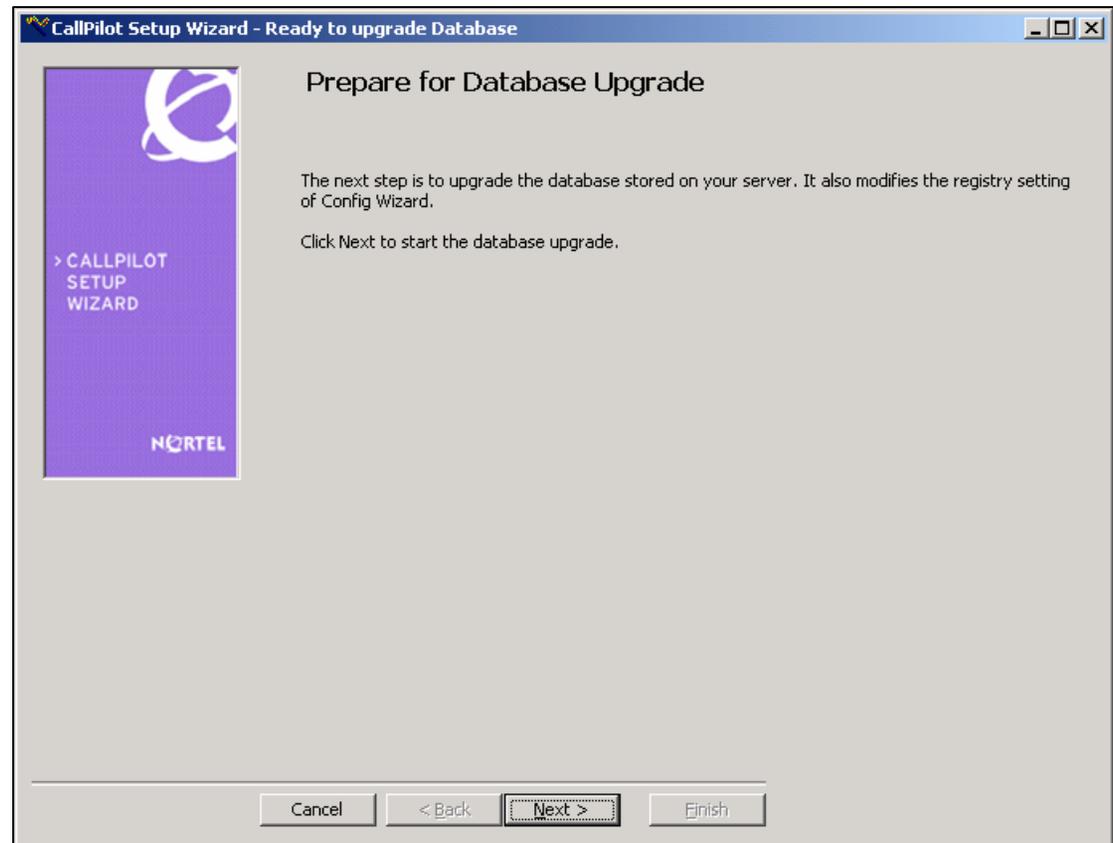
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



> Setup Wizard  
Prepare for  
Database Upgrade  
screen:

- Click **Next** to start the database upgrade.



# CallPilot Release 5.0

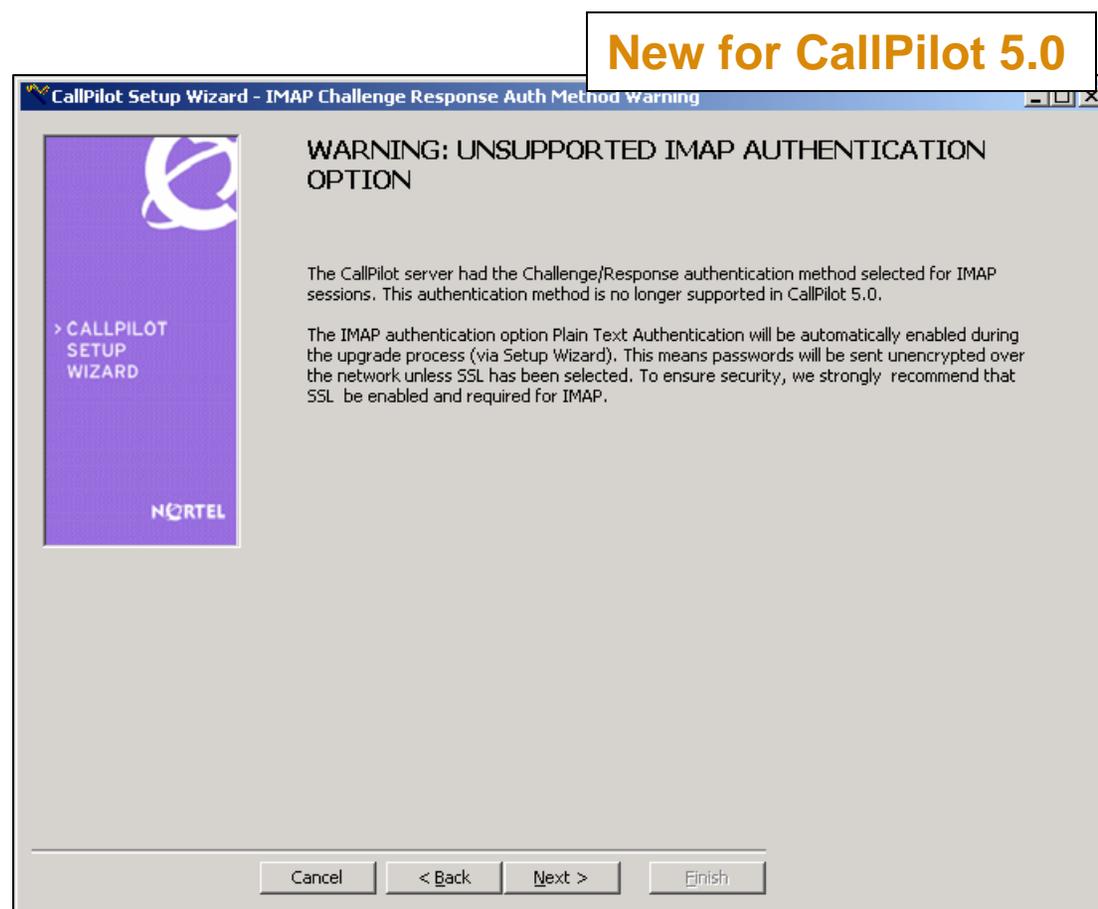
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



> Setup Wizard  
Unsupported IMAP  
Authentication –  
Warning screen:

- Click **Next** to continue.



# CallPilot Release 5.0

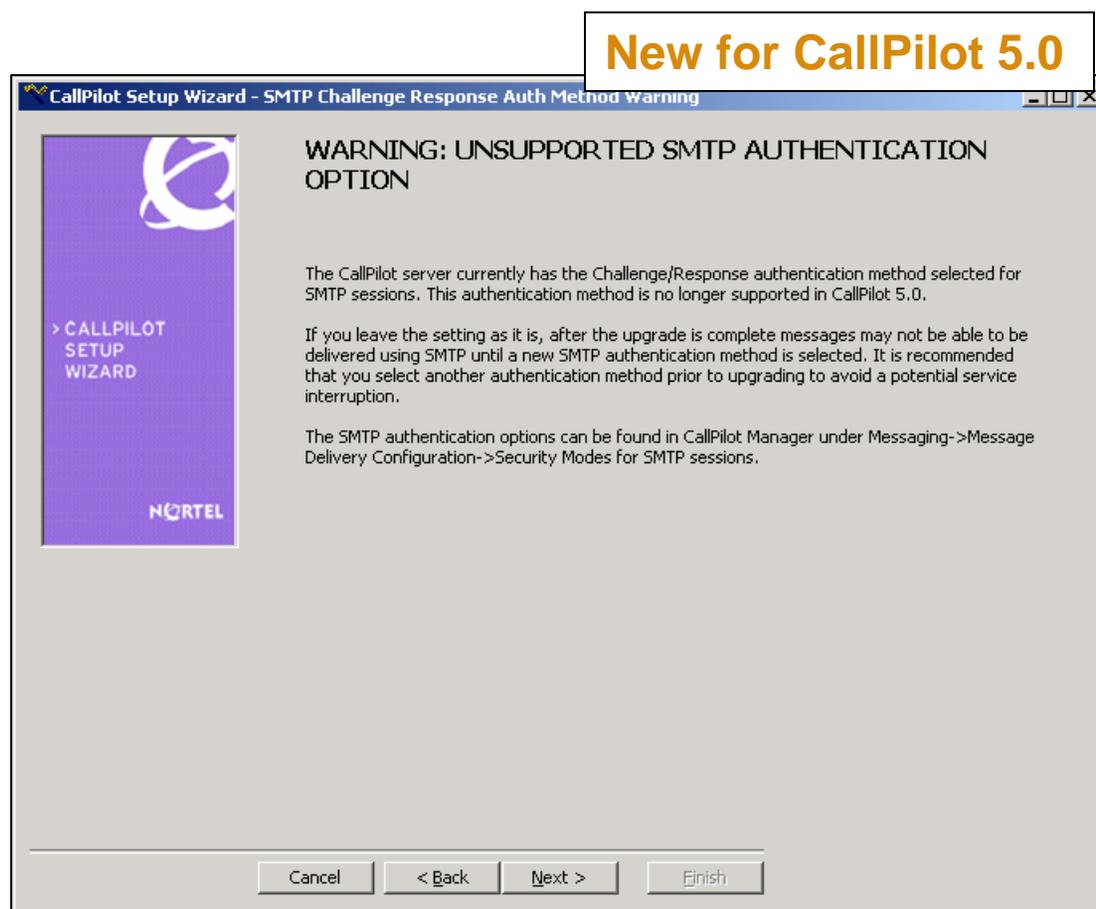
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



> Setup Wizard  
Unsupported SMTP  
Authentication –  
Warning screen:

- Click **Next** to continue.



# CallPilot Release 5.0

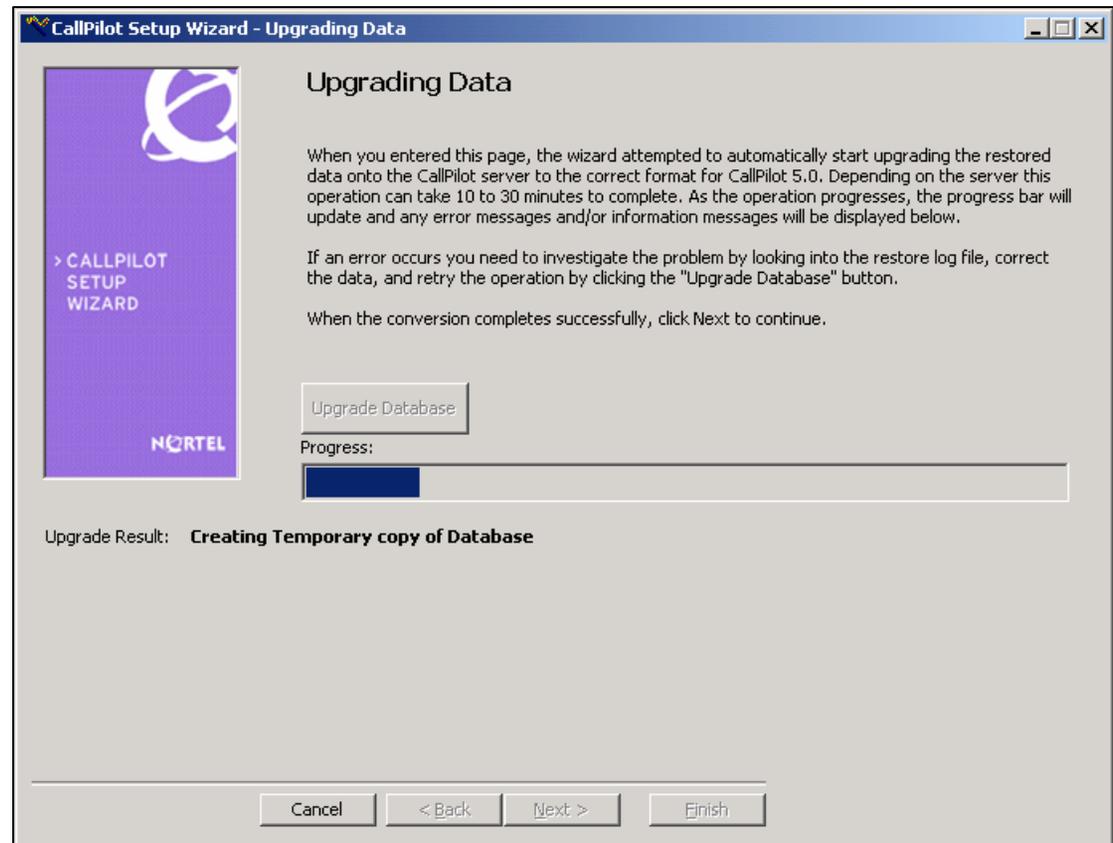
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



#### > Setup Wizard Upgrading Data screen:

- When the conversion completes successfully, click **Next** to continue.



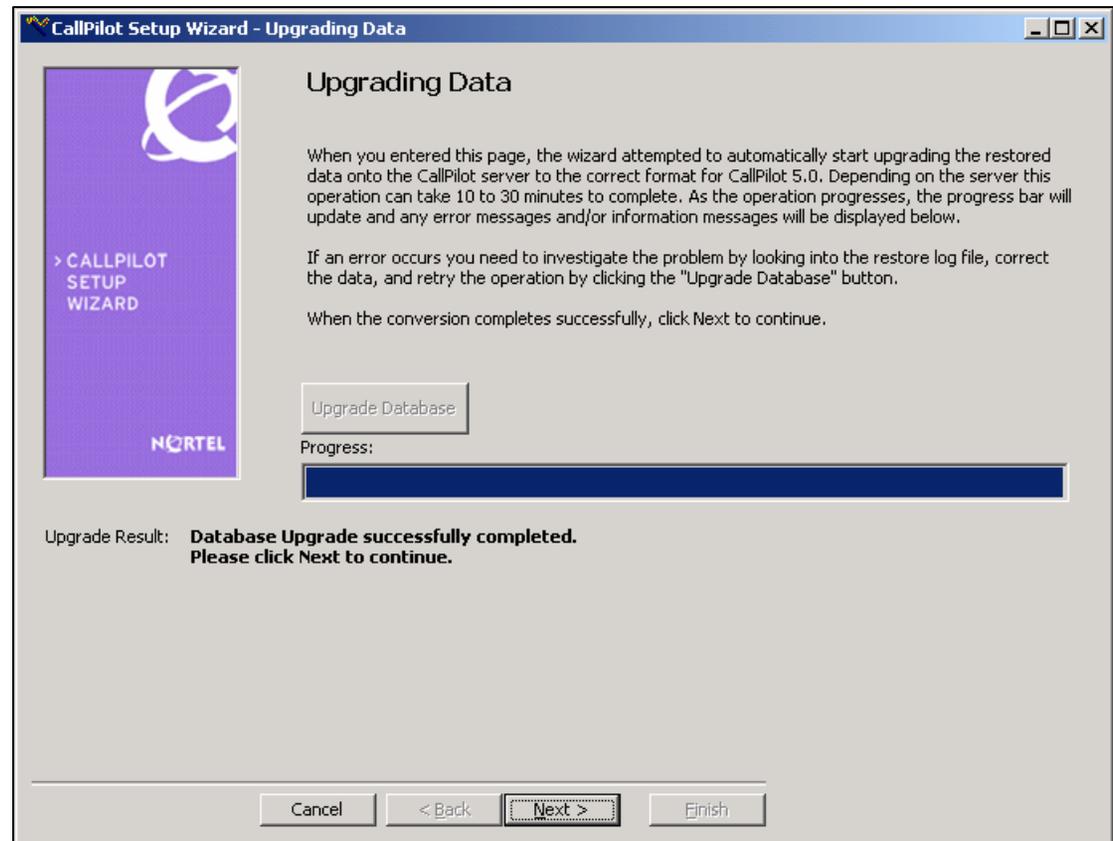
# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



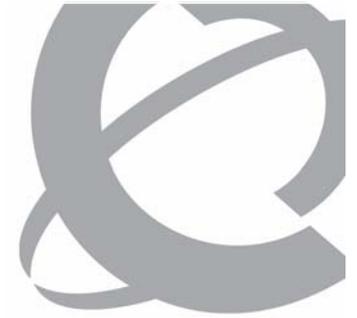
- > Setup Wizard  
Upgrading Data  
screen with  
upgrade  
successfully  
completed:
  - Click **Next** to  
continue.



# CallPilot Release 5.0

## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



> Setup Wizard  
Finished screen:

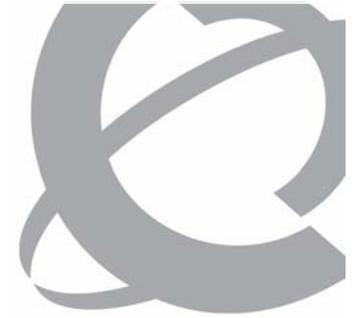
- Click **Finish** to exit the wizard.



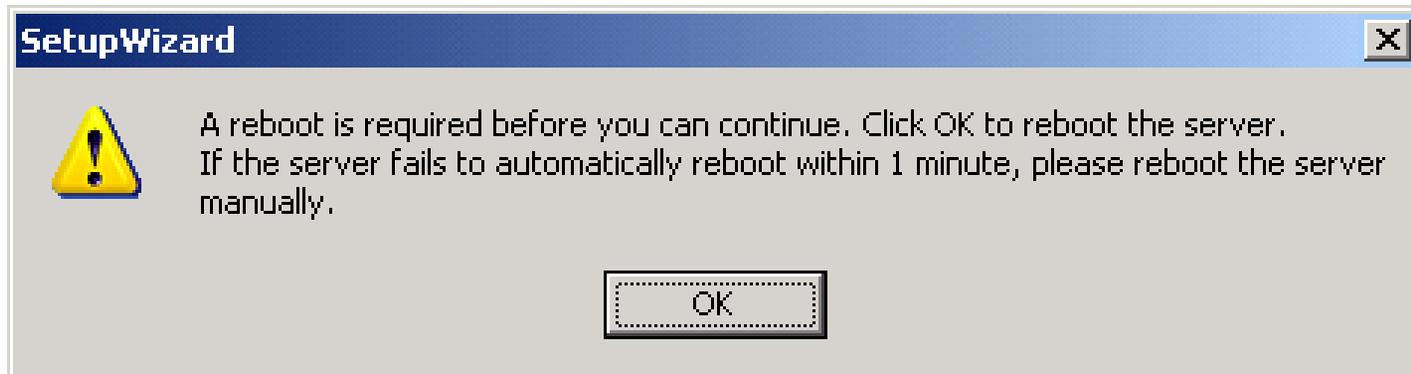
# CallPilot Release 5.0

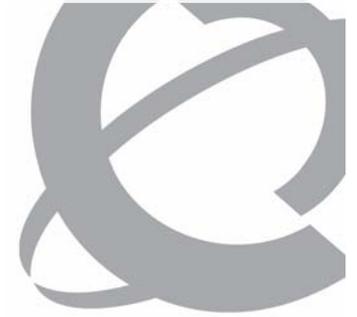
## Supported Upgrade/Migration Paths

### Running the CallPilot Release 5.0 Setup Wizard



- > Setup Wizard reboot required message:
  - Click **OK** to reboot the server.



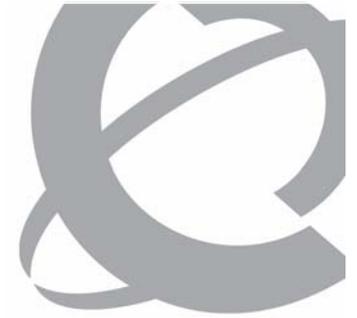


# Knowledge Check

## Question 7

Why should you use the backup created from the CallPilot 5.0 Upgrade Wizard when restoring data with the Setup Wizard?

- a) It provides the most current view of the system.
- b) The CallPilot 5.0 Upgrade Wizard corrects the data prior to the backup.
- c) Using an earlier backup tape can result in issues encountered during the restore and upgrade process .
- d) The backup from the CallPilot 5.0 Upgrade Wizard includes the CallPilot 5.0 Upgrade Wizard logs.

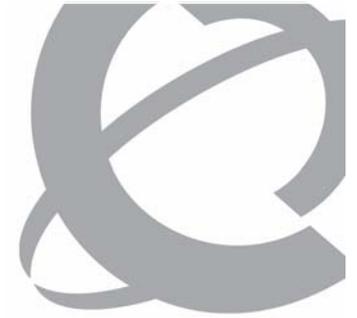


# Knowledge Check

## Question 7

Why should you use the backup created from the CallPilot 5.0 Upgrade Wizard when restoring data with the Setup Wizard?

- a) It provides the most current view of the system.
- b) The CallPilot 5.0 Upgrade Wizard corrects the data prior to the backup.
- c) Using an earlier backup tape can result in issues encountered during the restore and upgrade process .
- d) The backup from the CallPilot 5.0 Upgrade Wizard includes the CallPilot 5.0 Upgrade Wizard logs.



# Knowledge Check

## Question 8

When running the Setup Wizard on a CallPilot 703t server with the hard disk drive size, partitioning, and disk volume allocation configured as:

C: DISK 0, PARTITION 0

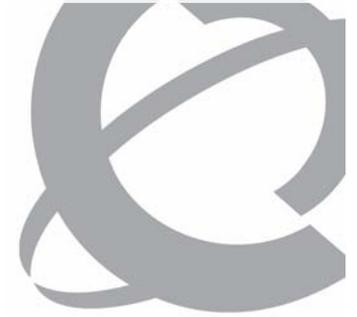
D: DISK 0, PARTITION 1

E: DISK 0, PARTITION 2

F: DISK 0, PARTITION 3

Will the Drive Letter Assignment Error Blocking Error screen be invoked?

- a) Yes
- b) No



# Knowledge Check

## Question 8

When running the Setup Wizard on a CallPilot 703t server with the hard disk drive size, partitioning, and disk volume allocation configured as:

C: DISK 0, PARTITION 0

D: DISK 0, PARTITION 1

E: DISK 0, PARTITION 2

F: DISK 0, PARTITION 3

Will the Drive Letter Assignment Error Blocking Error screen be invoked?

a) Yes

b) No

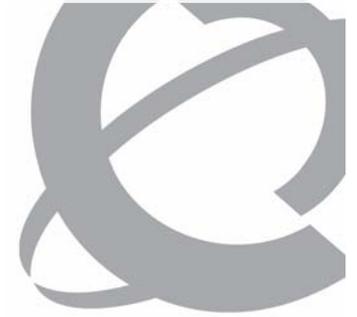


# Knowledge Check

## Question 9

When restoring data from a backup that was made to a network share (remote disk), what is the correct format for the device directory path of the remote drive location that you enter on the Add Backup Device screen?

- a) \\<IP address>\< remote computer name >
- b) \\<domain name>\< remote computer name >
- c) \\<remote computer name>\<directory path>
- d) \\<domain name>\<directory path>



# Knowledge Check

## Question 9

When restoring data from a backup that was made to a network share (remote disk), what is the correct format for the device directory path of the remote drive location that you enter on the Add Backup Device screen?

- a) \\<IP address>\< remote computer name >
- b) \\<domain name>\< remote computer name >
- c) \\<remote computer name>\<directory path>
- d) \\<domain name>\<directory path>



# Implementing the CallPilot Release 5.0 High Availability Feature

> Lesson 3





## Lesson 3 Objectives

- > After this lesson, you will be able to describe the procedure used to implement the new High Availability feature introduced with CallPilot Release 5.0.



# CallPilot Release 5.0 High Availability Feature Overview



# Implementing the High Availability Feature

## High Availability Feature Overview

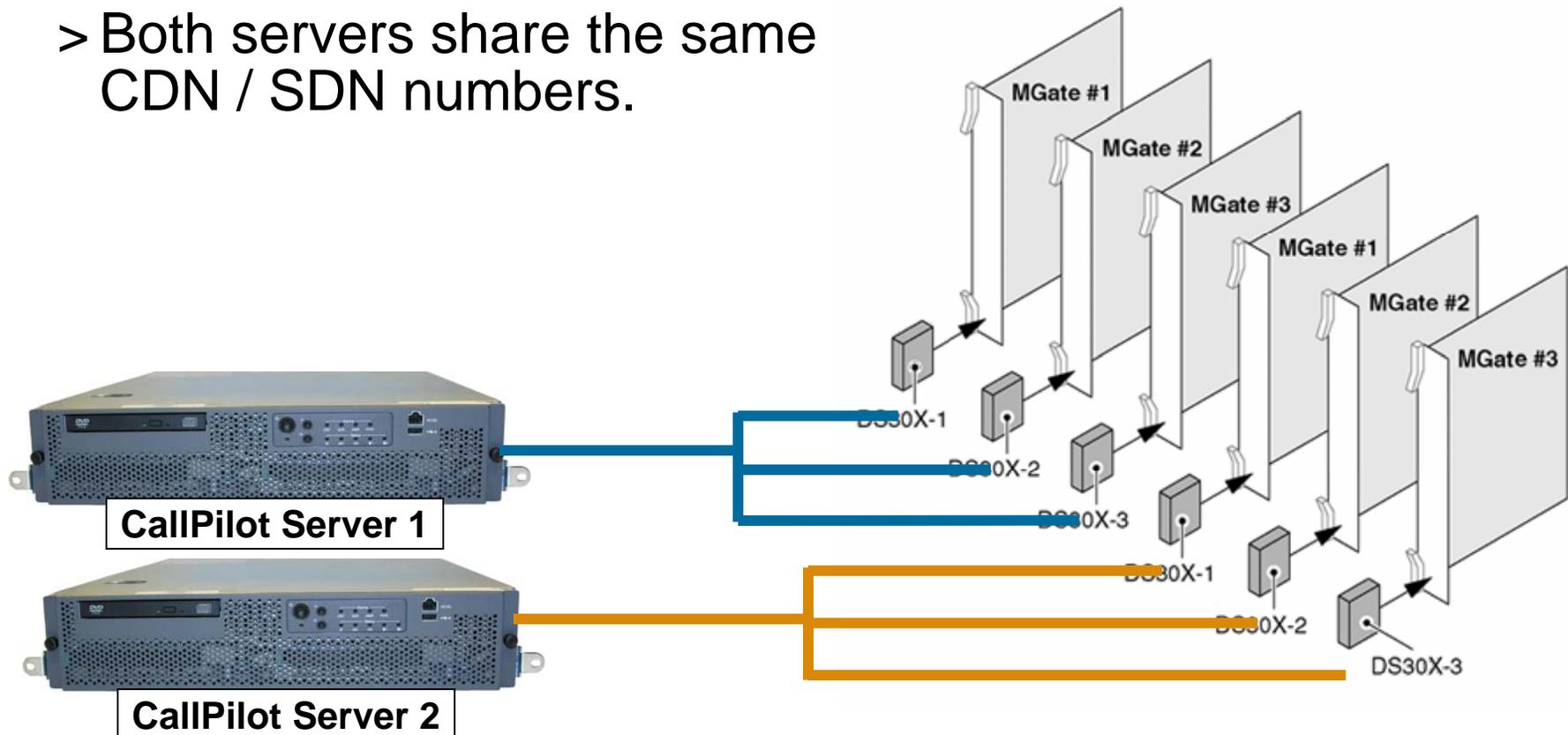
- > Keycode enabled feature available only on the 1005r.
  - When a keycode with the high availability feature is installed on a server, the feature can be enabled or disabled, which lets a server have the feature but run as a regular server until the second server is ready.
  - Each high availability pair of servers shares the same serial number and keycode.
  - New dedicated LAN connections (HB1, HB2 and MIRROR) are used. Connections are made with crossover LAN cables.
  - Only one dongle is provided with a pair of servers, it is normally installed on the active server.
  - In the event of a failure, the dongle must be moved from the failed server to the new active server before administration (add / change / delete) operations can be performed.
  - The standby server can come into full service before the dongle is moved.



# Implementing the High Availability Feature

## High Availability Switch Requirements

- > Each server has a dedicated DS30 connection to its own set of MGate cards in the PBX.
- > Both servers share the same CDN / SDN numbers.





# Implementing the High Availability Feature

## High Availability Software Overview

- > Third party software, EMC AutoStart agent and console, is used to manage the state of the servers and to mirror data between the servers.
  - AutoStart agent software is installed on the CallPilot servers.
  - AutoStart console is installed on an administration PC with network access to the servers.
  - Provides managed IP services that lets a pair of servers look like one server on the network.
  - Makes use of additional dedicated LAN connections to provide heart beat and mirroring connections between the servers.



# Implementing the High Availability Feature

## High Availability and CallPilot Services

- > If the high availability feature is installed and enabled on a server, the services managed by AutoStart are left in manual state – not automatic.
- > CallPilot System Ready Indicator still functions as the service state and is still monitored by the CallPilot System Manager.

Service	Non High Availability	Active Server	Standby Server
Adaptive Server Anywhere - DB_SQLANY	Automatic	Manual	Manual
CallPilot AOS Service	Automatic	Manual	Disabled
CallPilot HAL Monitor	Automatic	Manual	Manual
CallPilot LDAP Service	Automatic	Manual	Manual
CallPilot Multimedia Volume 1	Automatic	Manual	Manual
CallPilot Multimedia Volume 102	Automatic	Manual	Manual
CallPilot Multimedia Volume 103	Automatic	Manual	Manual
CallPilot Multimedia Cache	Automatic	Manual	Manual
CallPilot Resource Package 1	Automatic	Manual	Manual



# Implementing the High Availability Feature

## High Availability and CallPilot Services (Continued)

Service	Non High Availability	Active Server	Standby Server
CallPilot Resource Package 2	Automatic	Manual	Manual
CallPilot Resource Package 3	Automatic	Manual	Manual
CallPilot Blue Call Router	Automatic	Manual	Manual
CallPilot Call Channel Router	Automatic	Manual	Manual
CallPilot SLEE Service	Automatic	Manual	Manual
CallPilot Notification Service	Automatic	Manual	Manual
CallPilot MTA Service	Automatic	Manual	Manual
CallPilot ACCESS Protocol Emulator	Automatic	Manual	Manual
CallPilot Service Daemon	Automatic	Manual	Manual
CallPilot Service Manager	Automatic	Manual	Manual
CallPilot MWI Service	Automatic	Manual	Manual
CallPilot Maintenance Service Provider	Automatic	Manual	Manual
CallPilot IMAP Service	Automatic	Manual	Manual
CallPilot IMA Service	Automatic	Manual	Manual
CallPilot Time Service	Automatic	Manual	Manual
Telephony	Automatic	Manual	Manual
Remote Access Connection Manager	Automatic	Manual	Manual
Remote Access Auto Connection Manager	Disabled	Disabled	Disabled



# Implementing the High Availability Feature

## High Availability Disk Mirroring Requirements

- > Location of data on servers changed to support data mirroring between the two CallPilot servers:
  - Database, MMFS, appbuilder applications, etc.
  - New layout moves the customer data to the E:\ and F:\ drives
  - Mirrored drives on the standby server can not be accessed while the active server is running

Previous Drive Configuration		Release 5.0 Drive Configuration	
Drive:	Files:	Drive:	Files:
C:\	OS + CP Manager	C:\	OS + CP Manager
D:\	CallPilot S/W + DB + VS1 + Prompts	D:\	CallPilot S/W
E:\	VS102 + Appbuilder	E:\	DB
F:\	VS103 + Appbuilder	F:\	VS1 + VS102 + VS103 + Appbuilder + Prompts



# Implementing the High Availability Feature

## High Availability Server Configuration Requirements

- > Windows administrator account names and passwords must be the same on both servers.
- > The VPIM prefix and LDAP search base must be the same on both servers.
- > The FQDN on both servers must be set to the Managed Host name.
- > The computer names of the servers must contain only alphanumeric characters.
- > The same remote backup device must be defined on both servers (through CallPilot Manager).

**Note:** Changes to any of the IP configuration (IP address or host name) is difficult once the AutoStart software is installed.



# Implementing the High Availability Feature

## Managed (Virtual) IP

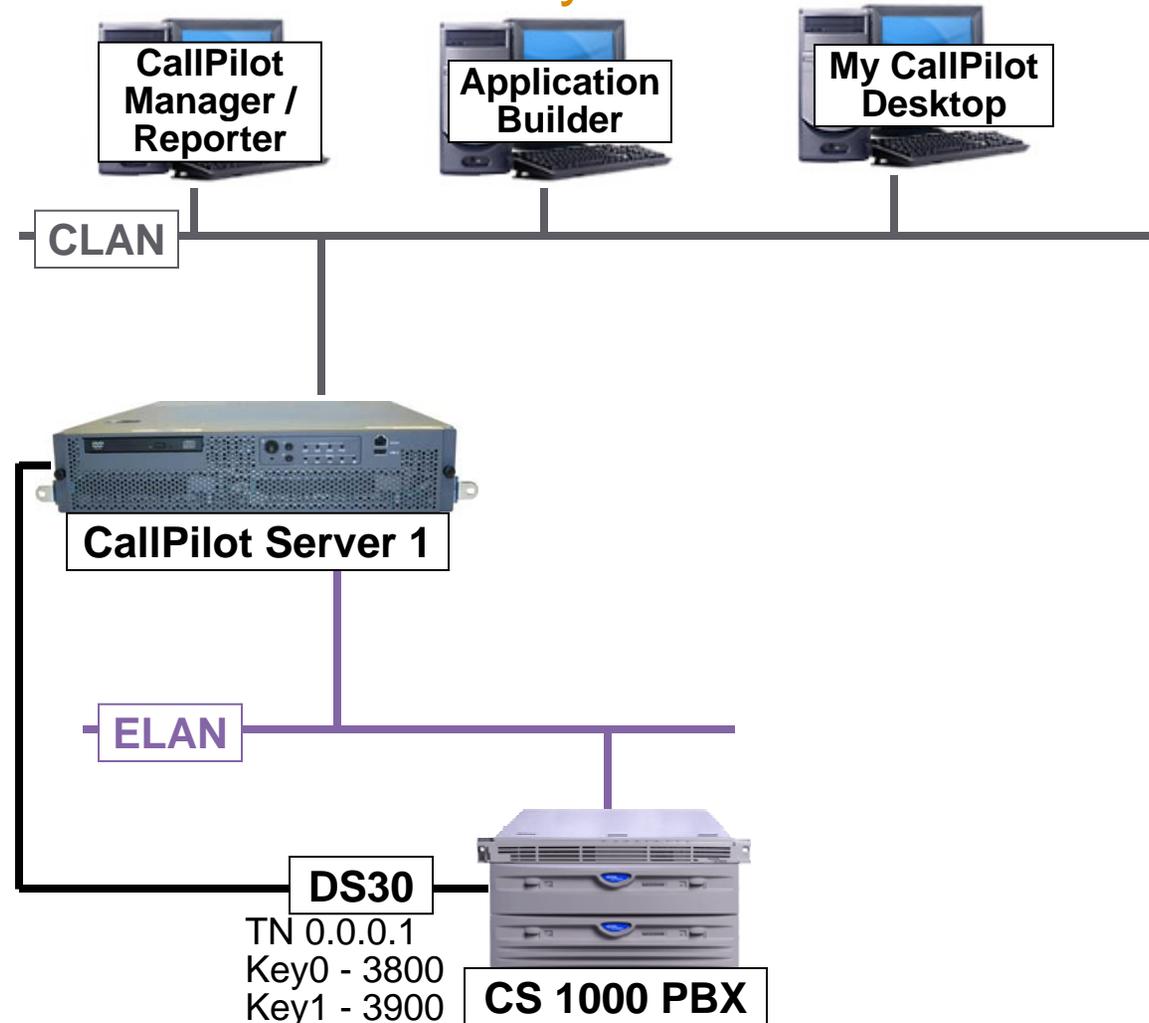
- > Client applications are not aware that there are two CallPilot servers:
  - Client applications connect to the managed IP address / host name.
  - Each CallPilot server still has its own ELAN and CLAN IP addresses and host names, but they are not used by the clients.
  - The EMC AutoStart software routes requests made to the managed IP / hostname to the currently active server in the pair.

CallPilot HA Pair		CallPilot Server #1		CallPilot Server #2	
Parameter	Value	Parameter	Value	Parameter	Value
Managed Host Name	CPHA	Host Name	CP1	Host Name	CP2
Managed ELAN IP	47.0.10.3	ELAN IP	47.0.10.1	ELAN IP	47.0.10.2
Managed CLAN IP	47.0.220.3	CLAN IP	47.0.220.1	CLAN IP	47.0.220.2



# Implementing the High Availability Feature

## Basic CallPilot Physical Connections

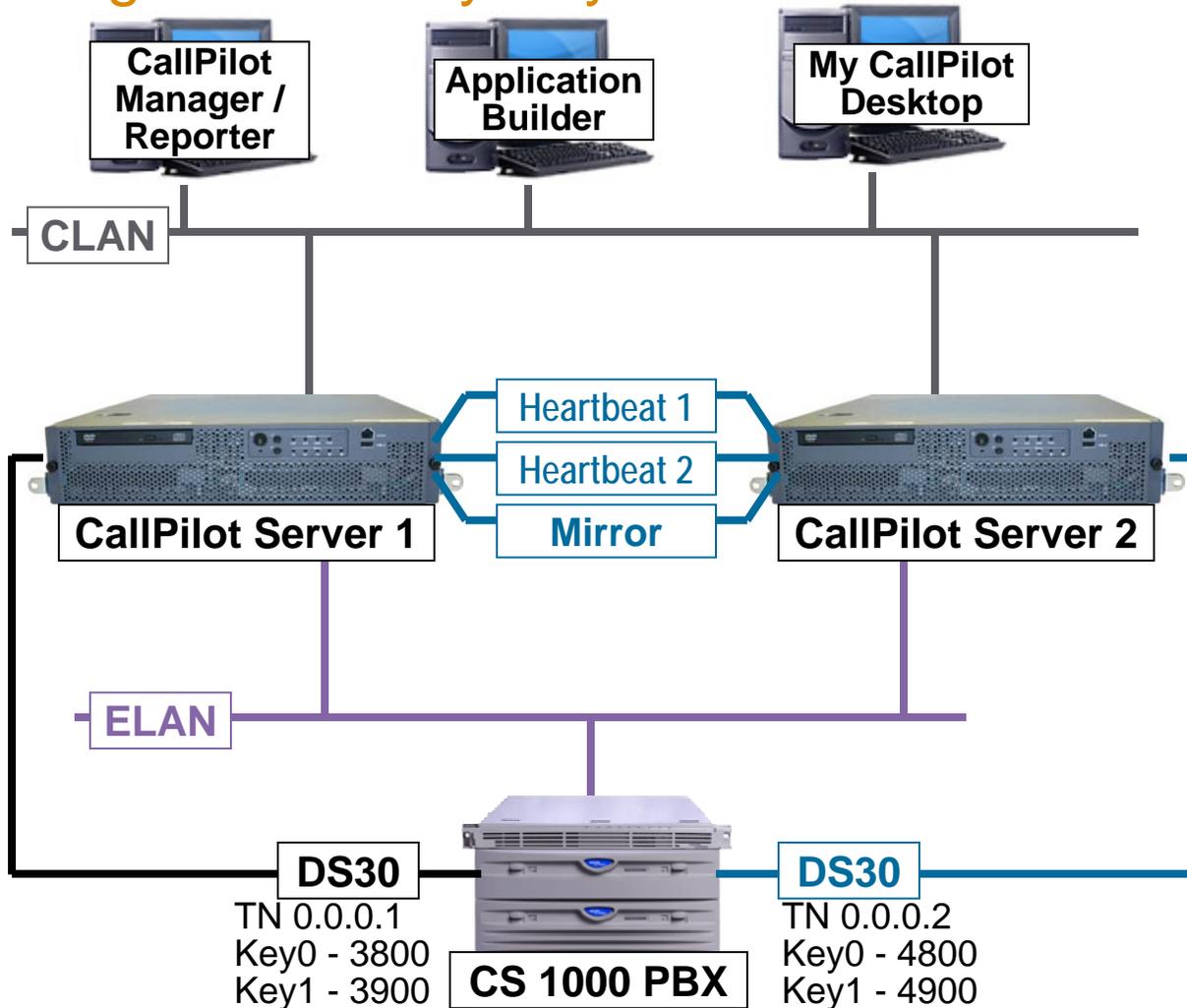


CallPilot Server #1	
Parameter	Value
Host Name	CP1
ELAN IP	47.0.10.1
CLAN IP	47.0.220.1



# Implementing the High Availability Feature

## High Availability Physical Connections



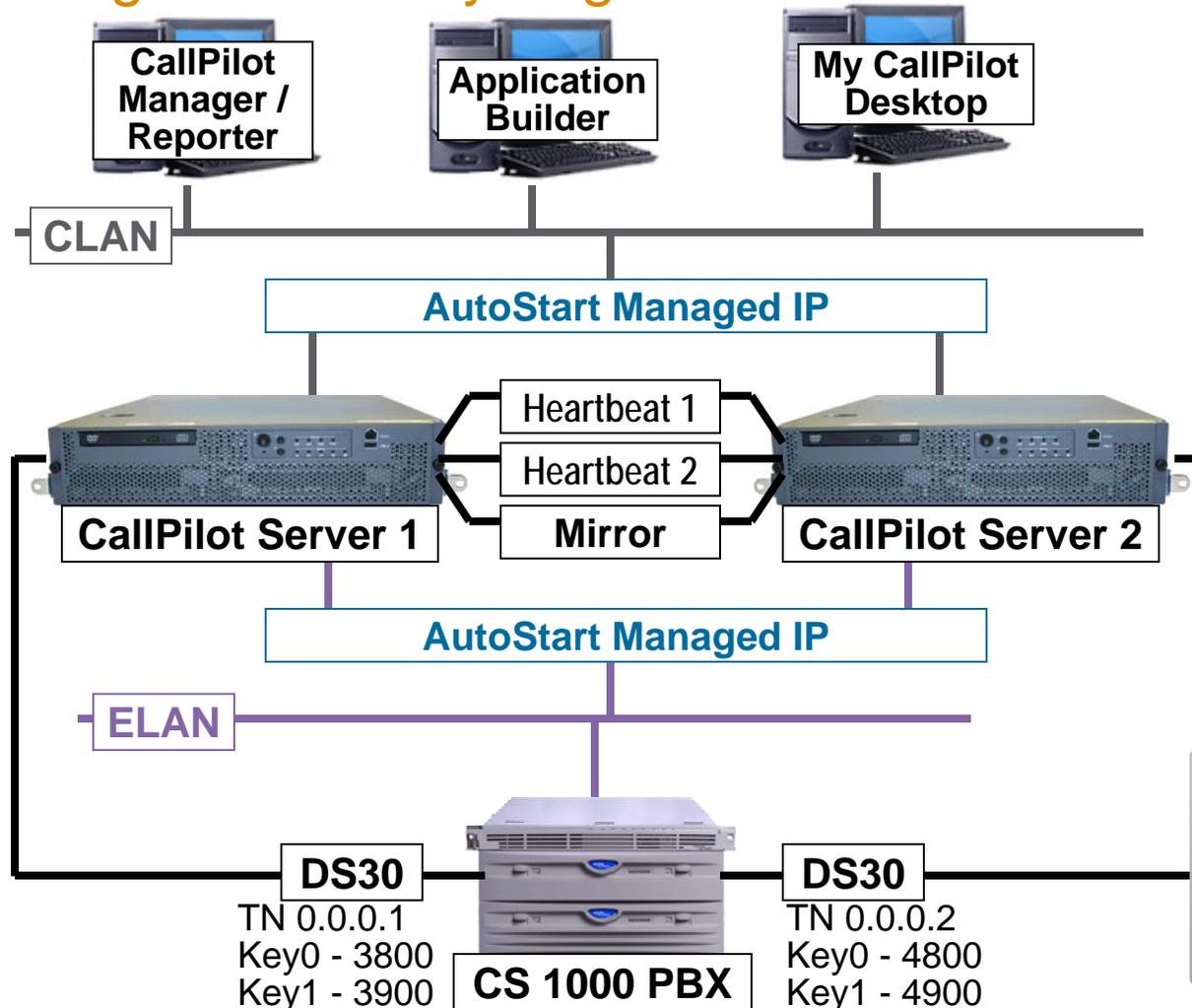
CallPilot Server #1	
Parameter	Value
Host Name	CP1
ELAN IP	47.0.10.1
CLAN IP	47.0.220.1
HB 1 IP	193.0.0.10
HB 2 IP	192.0.0.10
Mirror IP	194.0.0.10

CallPilot Server #2	
Parameter	Value
Host Name	CP2
ELAN IP	47.0.10.2
CLAN IP	47.0.220.2
HB 1 IP	193.0.0.11
HB 2 IP	192.0.0.11
Mirror IP	194.0.0.11



# Implementing the High Availability Feature

## High Availability Logical Connections



**CallPilot Server #1**

Parameter	Value
Host Name	CP1
ELAN IP	47.0.10.1
CLAN IP	47.0.220.1
HB 1 IP	193.0.0.10
HB 2 IP	192.0.0.10
Mirror IP	194.0.0.10

**CallPilot Server #2**

Parameter	Value
Host Name	CP2
ELAN IP	47.0.10.2
CLAN IP	47.0.220.2
HB 1 IP	193.0.0.11
HB 2 IP	192.0.0.11
Mirror IP	194.0.0.11

**CallPilot HA Pair**

Parameter	Value
Managed Host Name	CP1
Managed ELAN IP	47.0.10.3
Managed CLAN IP	47.0.220.3



# The EMC AutoStart Console

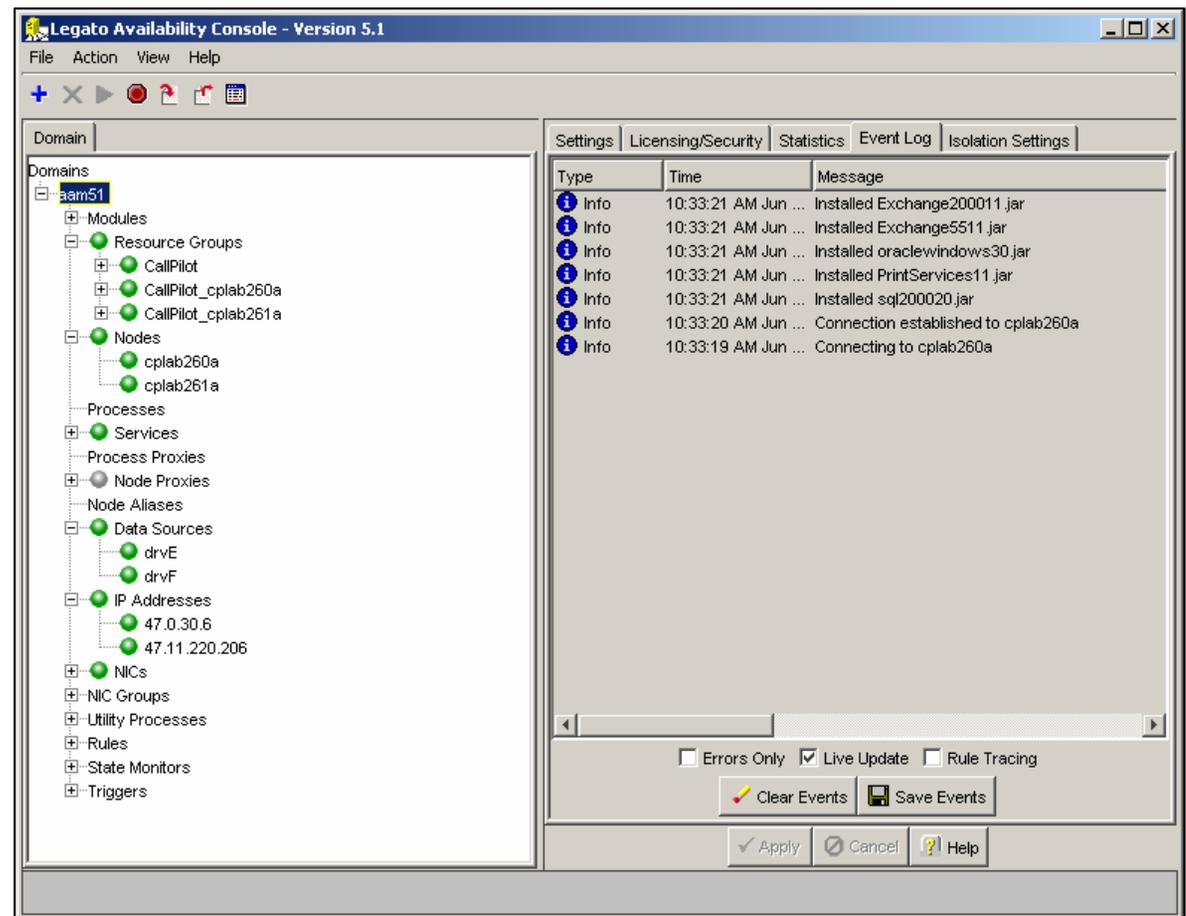


# Implementing the High Availability Feature

## The EMC AutoStart Console

### > The AutoStart Console:

- Management tool
- Used to configure and monitor the AutoStart software.
- Installed on both CallPilot servers.
- Can also be installed on a stand alone PC for remote management.



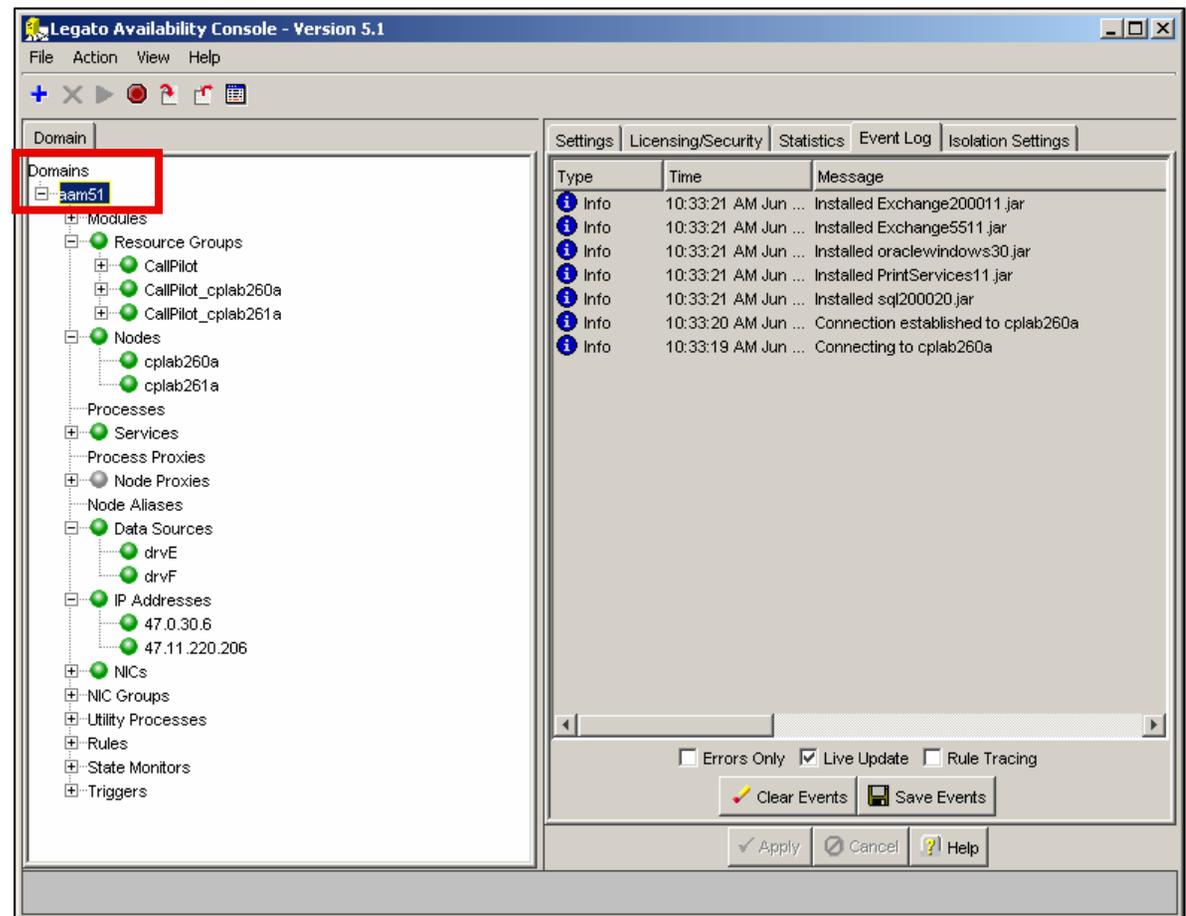


# Implementing the High Availability Feature

## The EMC AutoStart Console (Continued)

> On the AutoStart Console:

- Each CallPilot High Availability server pair on a network must have a unique AutoStart domain name.
- The AutoStart domain name is set when the AutoStart software is installed.



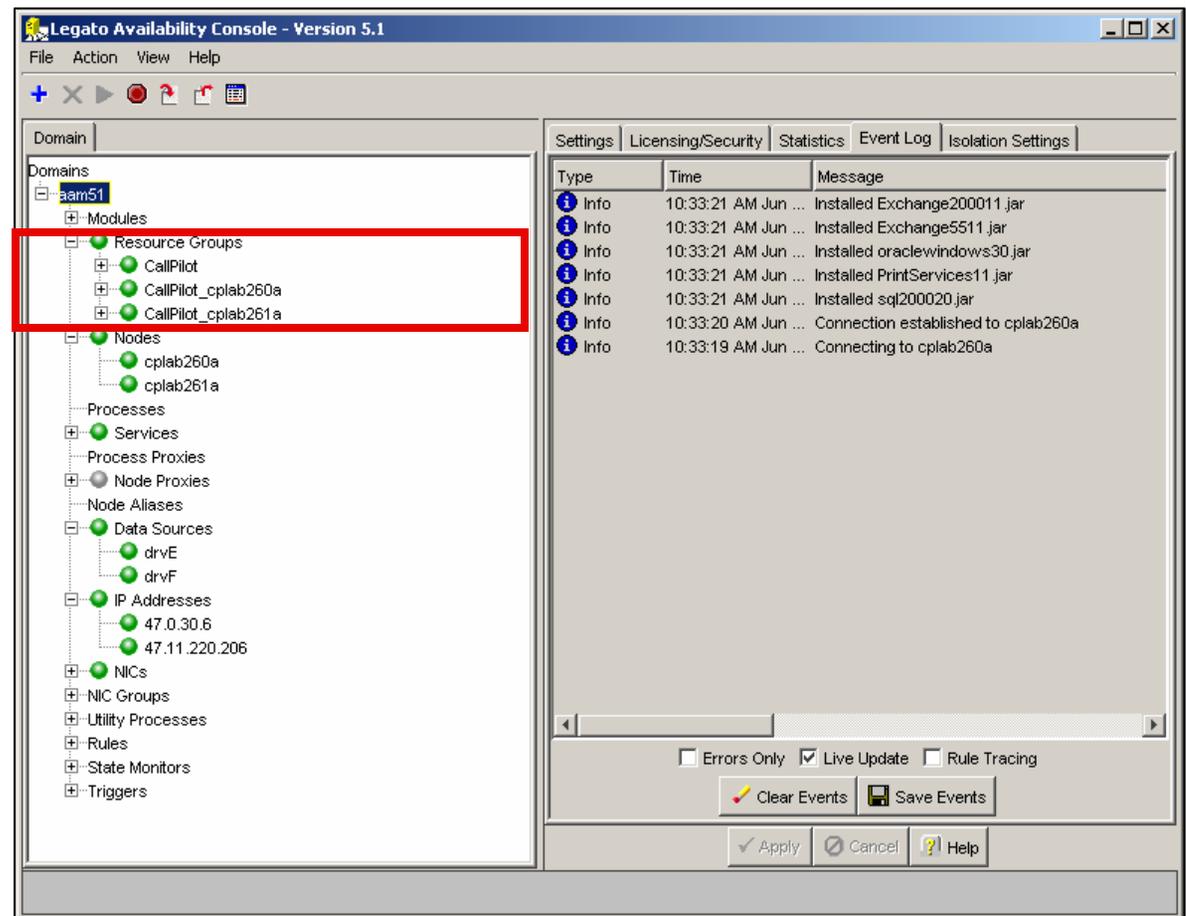


# Implementing the High Availability Feature

## The EMC AutoStart Console (Continued)

> On the AutoStart Console:

- Resource Groups:
  - CallPilot – Group of services that can only run on one server at a time.
  - CallPilot\_cplab260a – Group of services running on node cplab260a.
  - CallPilot\_cplab261a – Group of services running on node cplab261a.



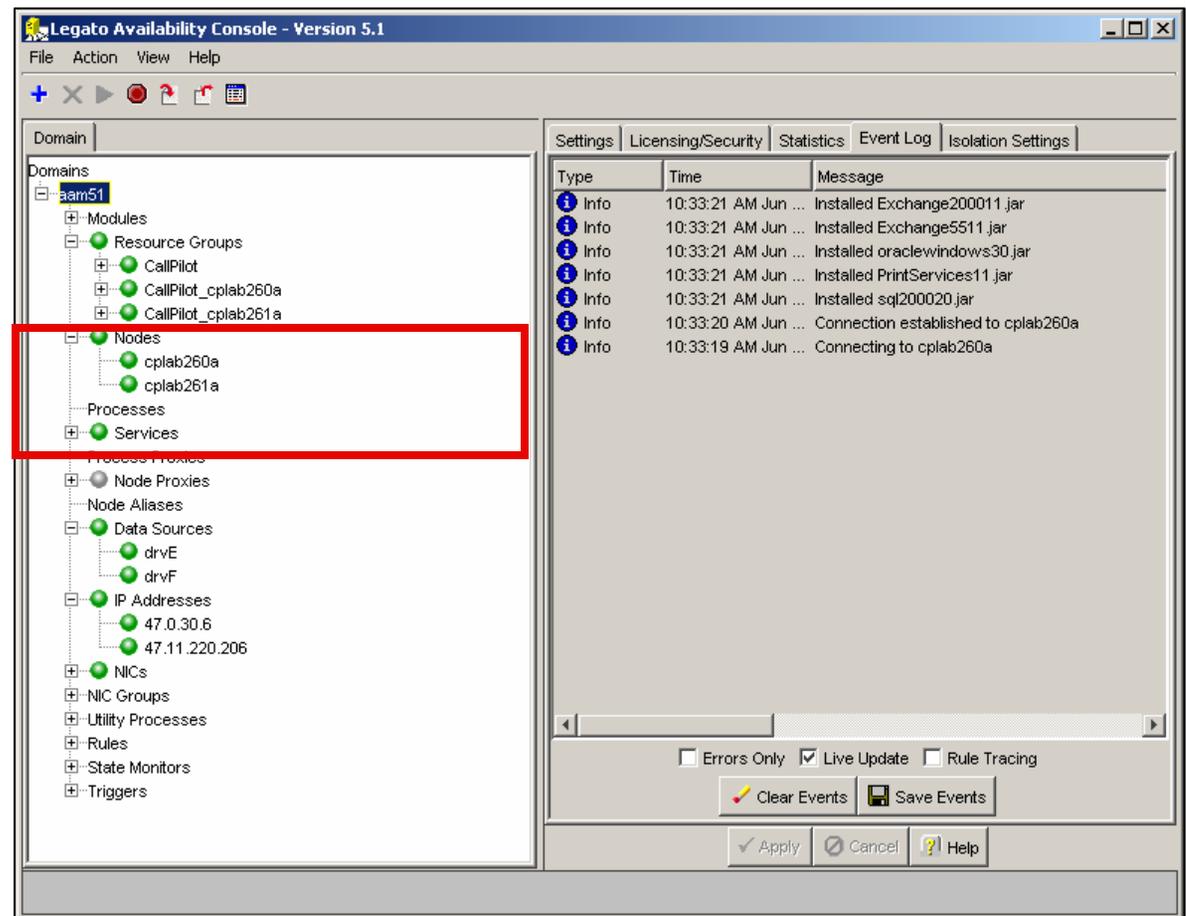


# Implementing the High Availability Feature

## The EMC AutoStart Console (Continued)

> On the AutoStart Console:

- Nodes:
  - cplab260a
  - Cplab261a
- Services:
  - List of all the services and what node they are currently running on



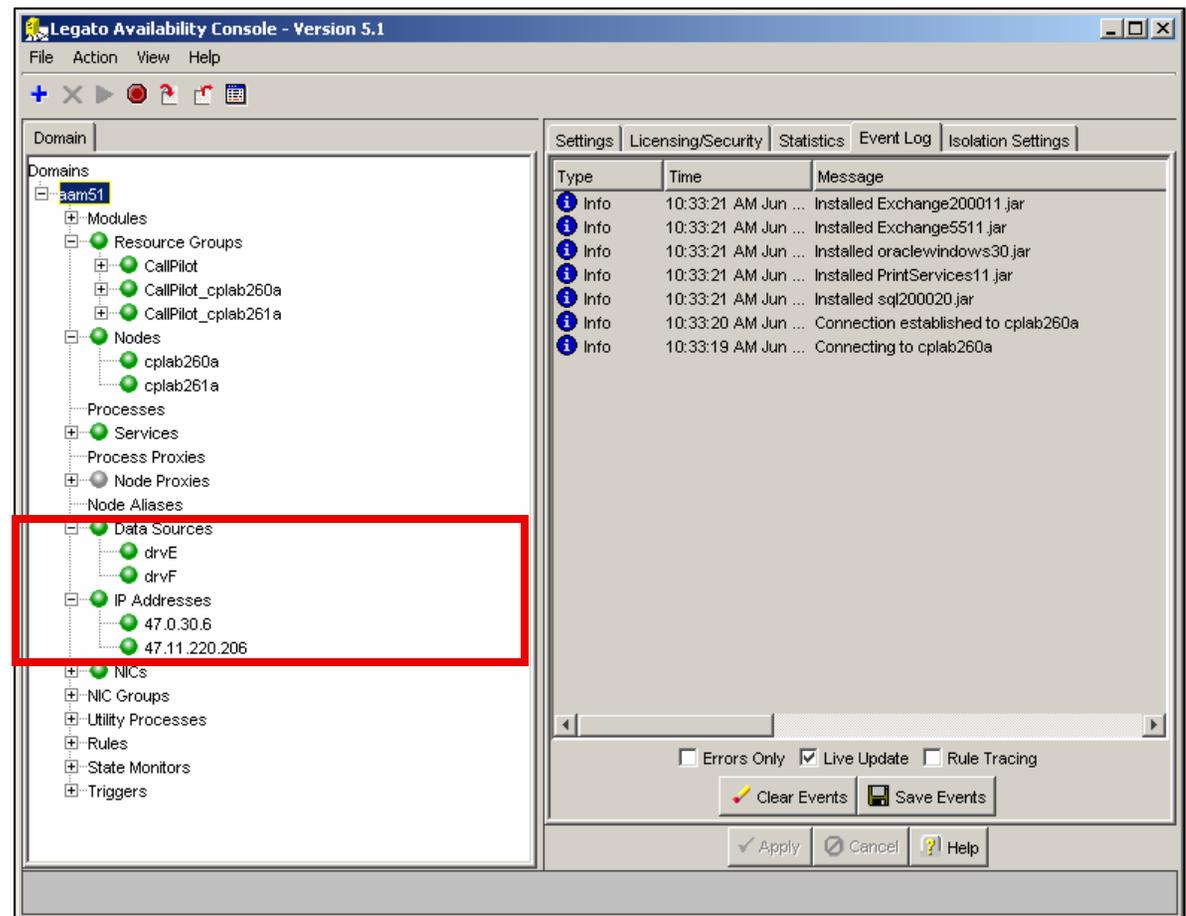


# Implementing the High Availability Feature

## The EMC AutoStart Console (Continued)

> On the AutoStart Console:

- Data Sources:
  - drvE – Mirror for drive E:
  - drvF – Mirror for drive F:
- IP Addresses:
  - Managed (virtual) ELAN
  - Managed (virtual) CLAN



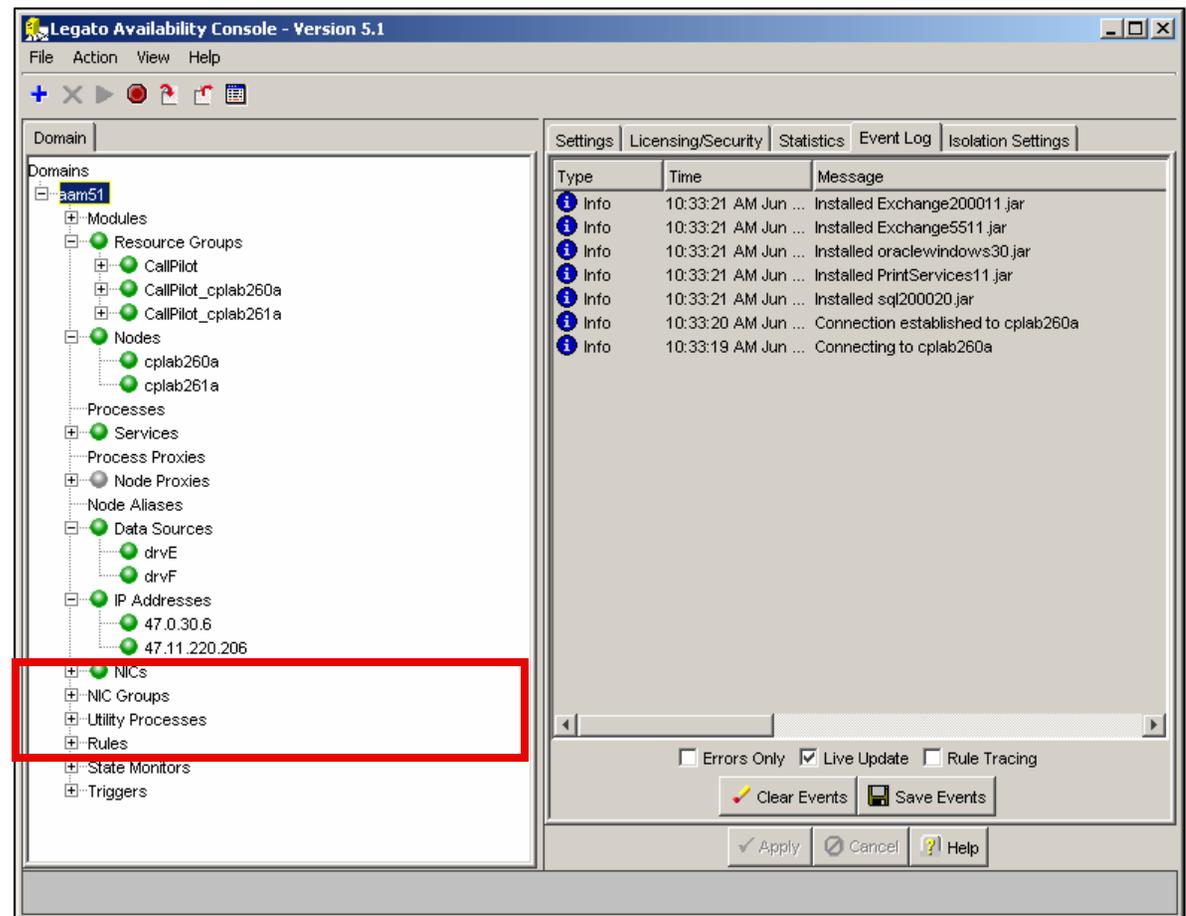


# Implementing the High Availability Feature

## The EMC AutoStart Console (Continued)

### > On the AutoStart Console

- NICS:
  - IP address and status of each NIC on both nodes.
- Utility Processes:
  - Custom utilities used by AutoStart during failover.
- Rules:
  - Custom rules used by AutoStart.



# Implementing the High Availability Feature

## Checking High Availability Status



> On the AutoStart Console:

1. Expand the domain -> Resource Groups.
2. Select CallPilot.
3. Click the Status tab.

The screenshot shows the Legato Availability Console interface. The left pane displays a tree view of the domain structure, with 'Resource Groups' expanded and 'CallPilot' selected. The right pane shows the 'Status' tab for the 'CallPilot' resource group. The 'Monitoring State' is 'Enabled' and the 'Group State' is 'Online'. The 'Preferred Nodes' are 'cplab260a' and 'cplab261a'. Below this, a table lists the 'Status of Resource Group Elements'.

Name	Type	State	Node
drvE	Data Source	Attached	cplab261a
drvF	Data Source	Attached	cplab261a
ASA	Service	Running	cplab261a
47.0.30.6	IP	Assigned	cplab261a
47.11.220.206	IP	Assigned	cplab261a
CP-HAL-Monitor	Service	Running	cplab261a
EnableAOS	Utility Process	---	***
LoadDN	Utility Process	---	***
Telephony	Service	Running	cplab261a
CP-AOS-Svc	Service	Running	cplab261a
CP-LDAP-Svc	Service	Running	cplab261a
CP-Svc-Daemon	Service	Running	cplab261a
CP-Svc-Manager	Service	Running	cplab261a
CP-Multimedia-Volu...	Service	Running	cplab261a
CP-Multimedia-Volu...	Service	Running	cplab261a
CP-Multimedia-Volu...	Service	Running	cplab261a



# Implementing the High Availability Feature

## Checking High Availability Status (Continued)

> On Status tab under Status of Resource Group

- **Monitoring State:**
  - **Enabled:** automatic failover enabled
  - **Disabled:** automatic failover disabled
  - **Unknown:** AutoStart is unable to determine the status.

Legato Availability Console - Version 5.1

File Action View Help

Settings Options Advanced Availability Tracking Status

Domain

Domains

- aarm51
  - Modules
    - Resource Groups
      - CallPilot
      - CallPilot\_cplab260a
      - CallPilot\_cplab261a
    - Nodes
      - cplab260a
      - cplab261a
    - Processes
      - Services
      - Process Proxies
      - Node Proxies
      - Node Aliases
    - Data Sources
      - drvE
      - drvF
    - IP Addresses
      - 47.0.30.6
      - 47.11.220.206
    - NICs
    - NIC Groups
    - Utility Processes
    - Rules
    - State Monitors
    - Triggers

Status of Resource Group

Monitoring State:  Enabled

Group State:  Online

Preferred Nodes

- cplab260a
- cplab261a

Status of Resource Group Elements

Name	Type	State	Node
<input checked="" type="radio"/> drvE	Data Source	Attached	cplab261a
<input checked="" type="radio"/> drvF	Data Source	Attached	cplab261a
<input checked="" type="radio"/> ASA	Service	Running	cplab261a
<input checked="" type="radio"/> 47.0.30.6	IP	Assigned	cplab261a
<input checked="" type="radio"/> 47.11.220.206	IP	Assigned	cplab261a
<input checked="" type="radio"/> CP-HAL-Monitor	Service	Running	cplab261a
EnableAOS	Utility Process	---	---
LoadDN	Utility Process	---	---
<input checked="" type="radio"/> Telephony	Service	Running	cplab261a
<input checked="" type="radio"/> CP-AOS-Svc	Service	Running	cplab261a
<input checked="" type="radio"/> CP-LDAP-Svc	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Svc-Daemon	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Svc-Manager	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Multimedia-Volu...	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Multimedia-Volu...	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Multimedia-Volu...	Service	Running	cplab261a

Apply Cancel Help



# Implementing the High Availability Feature

## Checking High Availability Status (Continued)

> On Status tab under Status of Resource Group

- Group State:
  - **Online:** all resources are up and working.
  - **Offline:** all resources are down.
  - **Online pending:** some resources are up but some services are either starting or stopping.

Legato Availability Console - Version 5.1

File Action View Help

Settings Options Advanced Availability Tracking Status

Domain

Domains

- [-] aam51
  - [-] Modules
    - [-] Resource Groups
      - CallPilot
      - CallPilot\_cplab260a
      - CallPilot\_cplab261a
    - [-] Nodes
      - cplab260a
      - cplab261a
    - [-] Processes
    - [-] Services
    - [-] Process Proxies
    - [-] Node Proxies
    - [-] Node Aliases
    - [-] Data Sources
      - drvE
      - drvF
    - [-] IP Addresses
      - 47.0.30.6
      - 47.11.220.206
    - [-] NICs
    - [-] NIC Groups
    - [-] Utility Processes
    - [-] Rules
    - [-] State Monitors
    - [-] Triggers

Status of Resource Group

Monitoring State:  Enabled

Group State:  Online

Preferred Nodes

- cplab260a
- cplab261a

Status of Resource Group Elements

Name	Type	State	Node
<input checked="" type="radio"/> drvE	Data Source	Attached	cplab261a
<input checked="" type="radio"/> drvF	Data Source	Attached	cplab261a
<input checked="" type="radio"/> ASA	Service	Running	cplab261a
<input checked="" type="radio"/> 47.0.30.6	IP	Assigned	cplab261a
<input checked="" type="radio"/> 47.11.220.206	IP	Assigned	cplab261a
<input checked="" type="radio"/> CP-HAL-Monitor	Service	Running	cplab261a
EnableAOS	Utility Process	---	***
LoadDN	Utility Process	---	***
<input checked="" type="radio"/> Telephony	Service	Running	cplab261a
<input checked="" type="radio"/> CP-AOS-Svc	Service	Running	cplab261a
<input checked="" type="radio"/> CP-LDAP-Svc	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Svc-Daemon	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Svc-Manager	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Multimedia-Volu...	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Multimedia-Volu...	Service	Running	cplab261a
<input checked="" type="radio"/> CP-Multimedia-Volu...	Service	Running	cplab261a

Apply Cancel Help



# Implementing the High Availability Feature

## Checking High Availability Status (Continued)

> On Status tab under Status of Resource Group:

- Preferred Nodes:
  - **Green light:** server is in working state.
  - **Red light:** server is in sleeping state.
  - **Yellow light:** server is in either starting or stopping status.

Legato Availability Console - Version 5.1

File Action View Help

Settings Options Advanced Availability Tracking Status

Status of Resource Group

Monitoring State: ● Enabled

Group State: ● Online

Preferred Nodes

- cplab260a
- cplab261a

Status of Resource Group Elements

Name	Type	State	Node
<span style="color: green;">●</span> drvE	Data Source	Attached	cplab261a
<span style="color: green;">●</span> drvF	Data Source	Attached	cplab261a
<span style="color: green;">●</span> ASA	Service	Running	cplab261a
<span style="color: green;">●</span> 47.0.30.6	IP	Assigned	cplab261a
<span style="color: green;">●</span> 47.11.220.206	IP	Assigned	cplab261a
<span style="color: green;">●</span> CP-HAL-Monitor	Service	Running	cplab261a
EnableAOS	Utility Process	---	***
LoadDN	Utility Process	---	***
<span style="color: green;">●</span> Telephony	Service	Running	cplab261a
<span style="color: green;">●</span> CP-AOS-Svc	Service	Running	cplab261a
<span style="color: green;">●</span> CP-LDAP-Svc	Service	Running	cplab261a
<span style="color: green;">●</span> CP-Svc-Daemon	Service	Running	cplab261a
<span style="color: green;">●</span> CP-Svc-Manager	Service	Running	cplab261a
<span style="color: green;">●</span> CP-Multimedia-Volu...	Service	Running	cplab261a
<span style="color: green;">●</span> CP-Multimedia-Volu...	Service	Running	cplab261a
<span style="color: green;">●</span> CP-Multimedia-Volu...	Service	Running	cplab261a

Apply Cancel Help



# Implementing the High Availability Feature

## Checking High Availability Status (Continued)

> Check status of the HB1 / HB2 / Mirroring links:

- Click to select the Domain -> NICs.
- Status of HB1 / HB2 / Mirroring / ELAN / CLAN shown in right-hand window.

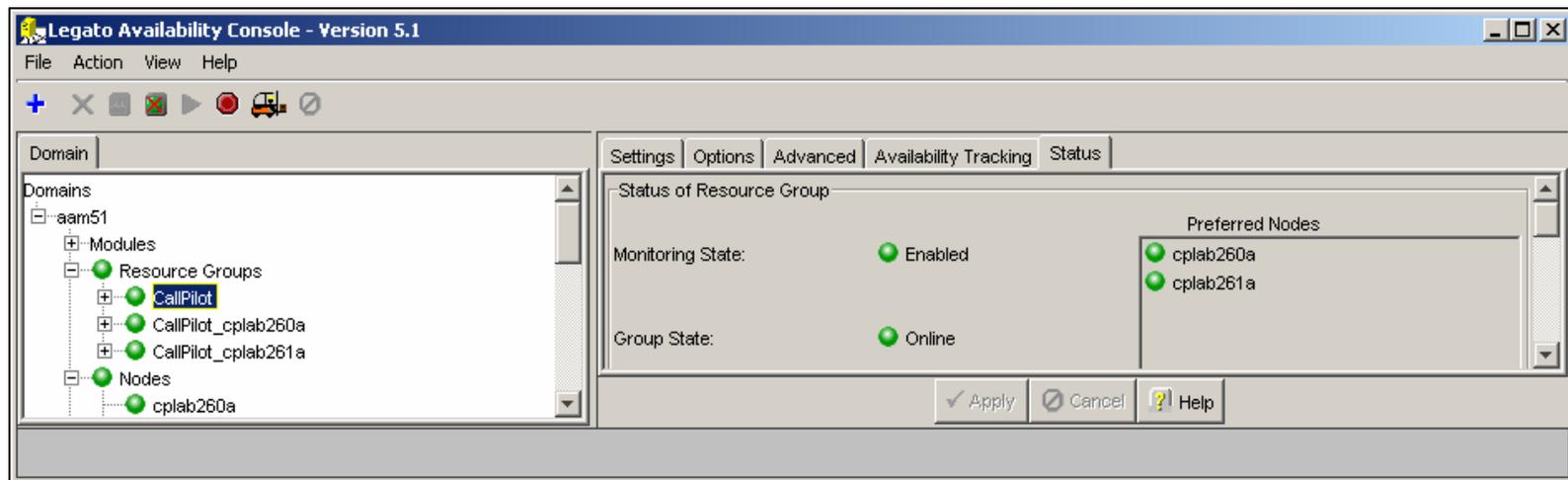
Network Interface	Base IP	Current State	Usage	NIC Group
cplab260a:HB1	192.0.0.10	Alive	Usable	192.0.0.0
cplab260a:MIRR...	193.0.0.10	Alive	Usable	193.0.0.0
cplab260a:HB2	194.0.0.10	Alive	Usable	194.0.0.0
cplab260a:ELAN	47.0.30.3	Alive	Usable	47.0.30.0
cplab260a:CLAN	47.11.220.138	Alive	Usable	47.11.220.0
cplab261a:HB1	192.0.0.11	Alive	Usable	192.0.0.0
cplab261a:MIRR...	193.0.0.11	Alive	Usable	193.0.0.0
cplab261a:HB2	194.0.0.11	Alive	Usable	194.0.0.0
cplab261a:ELAN	47.0.30.5	Alive	Usable	47.0.30.0
cplab261a:CLAN	47.11.220.174	Alive	Usable	47.11.220.0



# Implementing the High Availability Feature

## Automatic Failover

- > Expand Domain ->Resource Groups, select CallPilot, and open the Status tab
  - To enable automatic failovers:
    1. Right-click **Resource Groups->CallPilot**.
    2. Click **Monitor Resource Group**.
  - To disable automatic failovers:
    1. Right-click **Resource Groups->CallPilot**.
    2. Click **Stop Monitoring**.

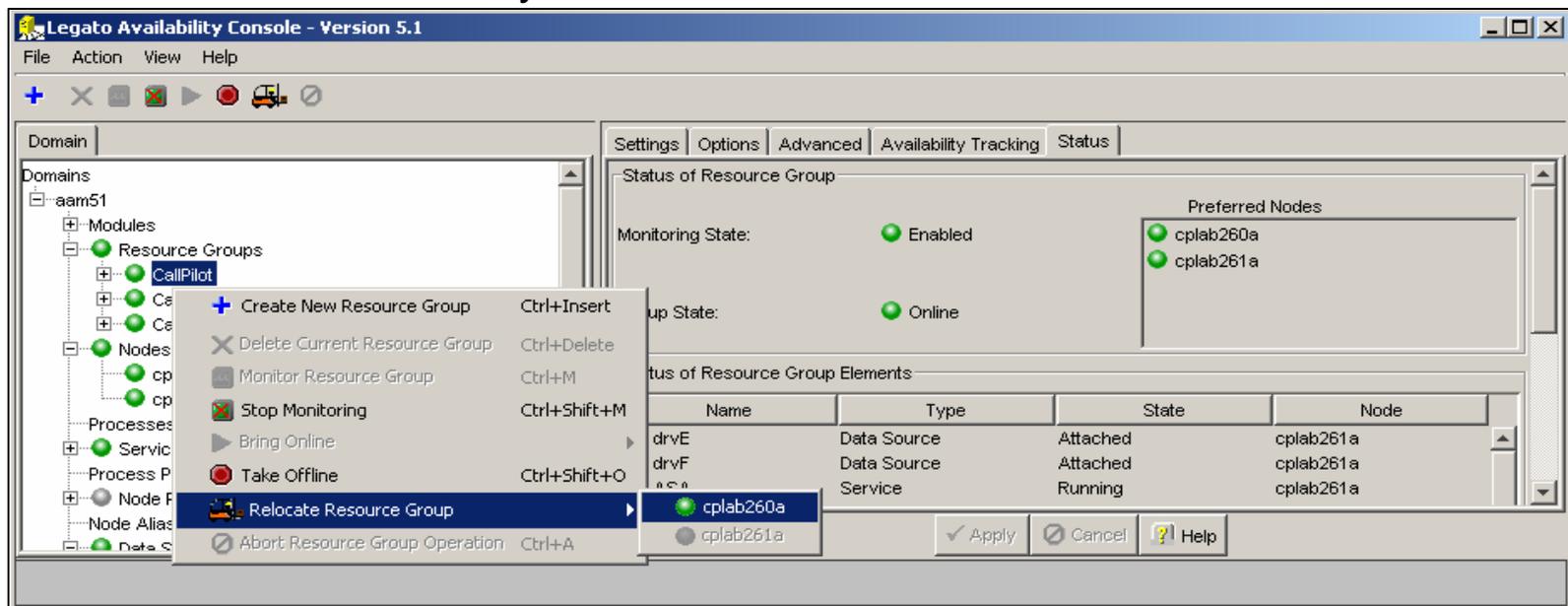




# Implementing the High Availability Feature

## Manual Failover

- > Expand Domain ->Resource Groups, select CallPilot, and open the Status tab:
  - To implement a manual failover:
    1. Right-click **Resource Groups->CallPilot**.
    2. Click **Relocate Resource Group**.
    3. Select the standby node.





# Implementing the High Availability Feature

## Manual Failover Details

- > When an administrator initiates a manual failover, the EMC AutoStart software performs the following tasks:
  - On the active CallPilot server (cp1) :
    - Stops the services in the CallPilot resource group.
    - Detaches the Managed ELAN and CLAN IP addresses.
    - Stops the database service.
    - Detaches the mirrored drives (data source drvE and drvF).
  - On the standby CallPilot server (cp2):
    - Attaches the mirrored drives (data source drvE and drvF).
    - Starts the database service.
    - Attaches the Managed ELAN and CLAN IP addresses.
    - Loads the server specific configuration (i.e. TN) into the database.
    - Start the services in the CallPilot resource group



# Installing CallPilot Release 5.0 with the High Availability Feature



# Implementing the High Availability Feature

## Installing CallPilot with High Availability

### > Factory installed:

- CallPilot 5.0 image
- Two additional dual port NIC cards
- Drives are partitioned as part of image installation

### > The EMC AutoStart software is not factory installed.

- Must be installed by the customer.
- Located on the CallPilot Applications CD.



# Implementing the High Availability Feature

## Installing CallPilot with High Availability (Continued)

### > CallPilot High Availability installation steps:

- Install MGate cards and configure the switch.
- Install CP1 and CP2 into a rack; dongle on CP1.
- Power on both CP1 and CP2 and run through the mini-setup.
- Run the setup wizard on both servers, install any PEPs if required.
- On CP1, run the config wizard.
- On CP2, run the config wizard.
- Connect the HB1, HB2 and MIRROR crossover LAN cables between CP1 and CP2.
- Verify LAN connections.



# Implementing the High Availability Feature

## Installing CallPilot with High Availability (Continued)

### > Continue the CallPilot High Availability installation:

- Connect and verify ELAN and CLAN connections on both servers.
- On CP1, run the High Availability Configuration Wizard (stage 1):
  - Verify the configuration of the two servers in the High Availability pair.
- Install the AutoStart agent and console on CP1 and reboot CP1.
- On CP1, launch the AutoStart Console and enter the administrator account and password into the Licensing/Security tab.
- Install the AutoStart agent and console on CP2 and reboot CP2.
- On CP1, run the High Availability Configuration Wizard (stage 2):
  - Verify the AutoStart software installation.
  - Generate the definition file that is used to provide configuration information to the AutoStart Console.



# Implementing the High Availability Feature

## Installing CallPilot with High Availability (Continued)

- > Complete the CallPilot High Availability installation:
  - On CP1, launch AutoStart Console and configure AutoStart:
    - Import AutoStart definition file.
    - Configure utility processes with the administrator account and password.
    - Attach the mirrored drives (drvE and drvF) to CP1. This will take about 45 minutes as the data from CP1 is mirrored onto CP2.
    - Add the managed ELAN IP and managed host name into the E:\Nortel\HA\Autostart\_Configuration.ini file.
  - Bring CP1 into service (in the AutoStart console):
    - Bring resource group CallPilot into service.
    - Bring resource group CallPilot\_CP1 into service.
    - Bring resource group CallPilot\_CP2 into service.



# Implementing the High Availability Feature

## Installing CallPilot with High Availability (Continued)

### > Verify the CallPilot High Availability installation:

- Ensure that CP1 comes into service and answers calls.
- Test CP1 to make sure all channels / DSPs are functioning.
- Use the AutoStart Console to initiate a manual failover to CP2.
- Verify that CP2 comes into service and answers calls.
- Move the dongle from CP1 to CP2.
- Test CP2 to make sure all channels / DSPs are functioning.
- Shutdown and restart CP1 to ensure that it is ready to take over in the event of a failover.
- Use the AutoStart Console to enable monitoring to enable automatic failovers.

**Note:** At this point, server CP2 is now the Active Server and CP1 is the Standby Server.



# Implementing the High Availability Feature

## Upgrading the CallPilot High Availability Pair

> Perform the following steps to upgrade a CallPilot High Availability pair:

- Run the Upgrade Wizard on the Active Server to generate a fresh backup.
- Install the new CallPilot image on the Active Server.
- Run the Setup Wizard and restore the data on the Active Server.
- Install the new CallPilot image on the Standby Server.
- Run the Setup Wizard and restore the data on the Standby Server.
- Follow the remainder of the installation procedures to re-install and re-configure the AutoStart software.



# Implementing the High Availability Feature

## Day to Day Management

### > The Configuration Wizard and High Availability:

- AutoStart stores information from both servers including host names and IP address.
- Information is used to support data mirroring and to administer the High Availability pair.
- When using the Configuration Wizard to change a server's configuration, additional steps are required to ensure that the High Availability pair continues to function.



# Day to Day Management of the CallPilot Release 5.0 High Availability Feature



# Implementing the High Availability Feature

## Day to Day Management

- > General procedure for use of the Configuration Wizard with a CallPilot High Availability pair:
  - Use the AutoStart Console to stop monitoring / disable automatic failovers.
  - Run the CallPilot Configuration Wizard to change the CallPilot server settings as required.
  - Reboot the server and wait for the server to come into service.
  - Use the AutoStart Console to start monitoring / enable automatic failovers.
  - Exceptions to this general procedure include:
    - Changing the server Host Name
    - Changing IP addresses for the ELAN, CLAN, HB1, HB2, and Mirror network connections
    - Changing Account passwords
  - Refer to the CallPilot 5.0 High Availability: Installation and Configuration guide for detailed instructions.



# Implementing the High Availability Feature

## PEP Management Overview

- > Both CallPilot servers must have identical PEPs and Service Updates installed.
- > Mirrored drives on the standby server can not be accessed while monitoring is enabled.
- > Any PEP or SU that impacts the database or MMFS can only be installed on an Active CallPilot server.



# Implementing the High Availability Feature

## PEP Management Overview

**Note:** In the PEP / SU installation procedure on the next several slides, there are two servers, the Active Server that is identified as CP1 and the Standby Server that is identified as CP2. The two servers change roles during the PEP installation process. This process assumes that the AutoStart Console is only being run on the two CallPilot servers. It could also be run on a standalone administration PC. This process causes the Active Server to go out of service for the time that it takes to perform a failover.

During the failover process, all CallPilot services are not available.



# Implementing the High Availability Feature

## Installing Non-database PEPs

- > Perform the following tasks on CP1 (Active Server):
  - Launch the AutoStart Console.
  - Stop monitoring to disable automatic failovers.
- > Perform the following tasks on CP2 (Standby Server):
  - Install the PEPs.
  - Reboot the server as required.
  - Log in to Windows.
  - Launch the AutoStart Console.
  - Enable monitoring to enable automatic failovers.
  - Initiate a manual failover.
  - Wait for the failover to complete and CP2 to come into service.
- > CP2 is now the new Active Server and CP1 becomes the new Standby Server.



# Implementing the High Availability Feature

## Installing Non-database PEPs (Continued)

- > Perform the following tasks on CP1 (now the Standby Server):
  - Install the PEPs
  - Reboot the server as required
- > At this point, both servers are updated to the latest PEP. CP2 is now running as the Active Server and CP1 is the Standby Server.



# Implementing the High Availability Feature

## Installing Database PEPs

- > Perform the following tasks on CP1 (Active Server):
  - Launch the AutoStart Console.
  - Stop monitoring to disable automatic failovers.
  - Take the resource group offline shutting down CallPilot.
  - Attach the mirror drives (drive E and drive F) to CP1 so that the disks can be accessed from CP1.
  - Install the PEPs.
  - Reboot the server as required.
  
- > 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 reboot.



# Implementing the High Availability Feature

## Installing Database PEPs (Continued)

- > Perform the following tasks on CP2 (Standby Server):
  - Launch the AutoStart Console.
  - Attach the mirror drives, drive E and drive F to CP2 so the disks can be accessed from CP2
  - Install the PEPs
  - Reboot the server as required
  
- > 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 reboot.



# Implementing the High Availability Feature

## Installing Database PEPs (Continued)

- > Perform the following tasks on CP1 (Active Server):
  - Launch the AutoStart Console.
  - Start monitoring to enable automatic failovers.
  - Bring the resource group online starting up CallPilot.
- > Both servers are now updated with the PEPs and the High Availability pair are back online.



# Implementing the High Availability Feature

## Installing Microsoft Hot Fixes

- > Microsoft Hot Fixes generally affect only the base operating system.
- > Hot Fixes may or may not require a reboot.
  - If the hot fix does not require a reboot, then the hot fix can be installed in parallel on the active and the standby CallPilot servers.
  - If the hot fix does require a reboot, then the installation process requires a failover which temporarily takes the CallPilot server out of service. The installation process is the same as for non-database PEPs.



# Implementing the High Availability Feature

## Backup and Restore on the High Availability Pair

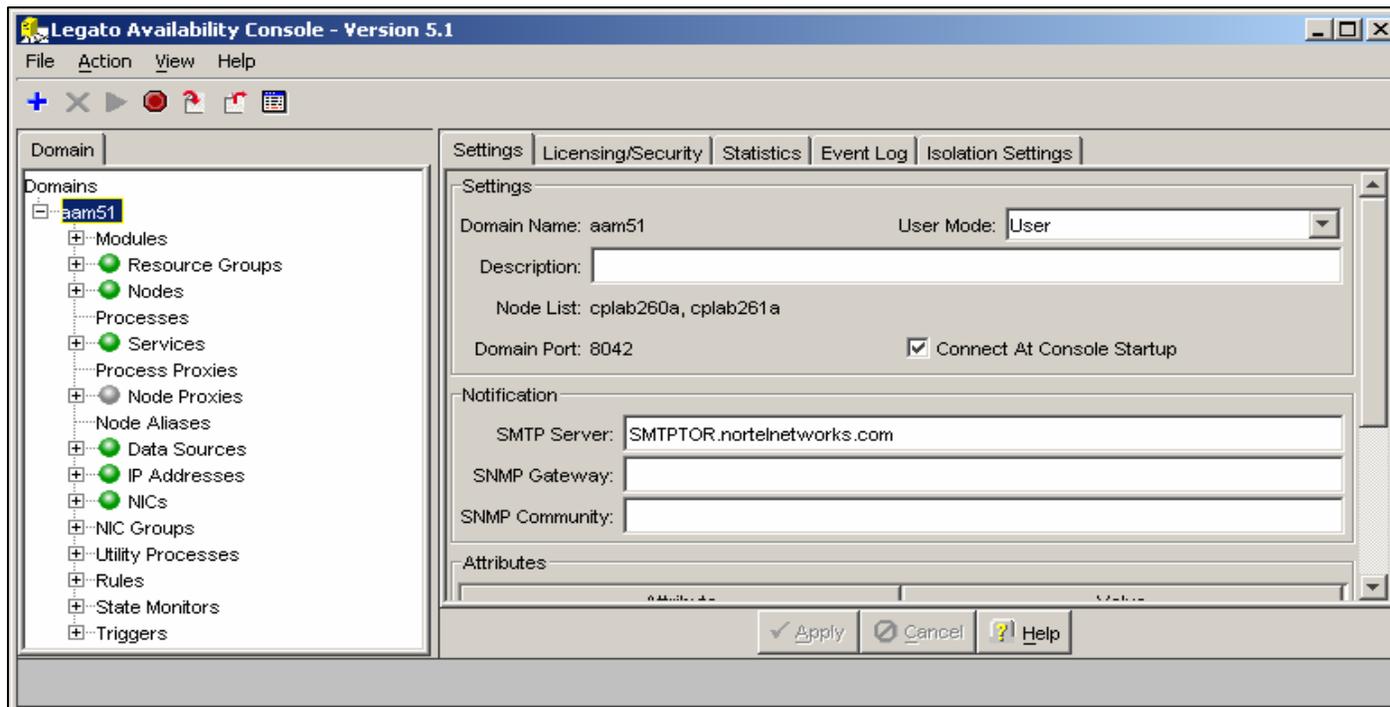
- > Backups must be run on the Active Server:
  - The Standby Server can not access the mirrored drives.
- > Backup scheduling functions are the same as on a normal CallPilot server with the following limitations:
  - If backing up to a mapped network drive, the drive location must be configured on both servers.
  - If backing up to a external SCSI Tape Drive, the drive must be physically connected to which ever server is currently the Active Server.



# Implementing the High Availability Feature

## Remote Notification - Email

- > The EMC AutoStart software supports both email notification of events and SNMP:
  - Email notification is configured by entering the SMTP server information in the AutoStart Console under the domain Settings tab.





# Implementing the High Availability Feature

## Remote Notification – Email (Continued)

- > Enter email address for the Resource Groups on the Options tab in User Notification settings.

Legato Availability Console - Version 5.1

File Action View Help

Domains

- aam51
  - Modules
  - Resource Groups
    - CallPilot
    - CallPilot\_cplab260a
    - CallPilot\_cplab261a
  - Nodes
  - Processes
  - Services
  - Process Proxies
  - Node Proxies
  - Node Aliases
  - Data Sources
  - IP Addresses
  - NICs

Settings Options Advanced Availability Tracking Status

Options

- Auto Node Group Failover
- Auto Failback to First Node in Preferred Node List

User Notification Settings

- Notify on State Changes
- Notify on Node Group Failover

Send Email to (space separated): gaubew@nortel.com

Controls

- Delay After Domain Startup: 45
- Process Will Be Restarted Up To: 3
- When Shutdown Attempts Exceed: 2

From: Domain aam51 [AAM]  
Sent: Friday, June 16, 2006 10:10 AM  
To: Gaube, Wilfred [BVW:9M13:EXCH]  
Subject: Resource Group CallPilot is in the Online Pending state.  
Cause - Resource Group relocated  
Message sent: 06/16/06 10:08:25



# Knowledge Check

## Question 1

When installing a CallPilot High Availability pair, how are the HB1, HB2 and MIRROR dedicated LAN connections completed?

- a) They are connected to the ELAN subnet.
- b) They are connected to the Nortel Server Subnet.
- c) The connections are made with crossover LAN cables.
- d) HB1, HB2 and MIRROR are not used with the High Availability feature.



# Knowledge Check

## Question 1

When installing a CallPilot High Availability pair, how are the HB1, HB2 and MIRROR dedicated LAN connections completed?

- a) They are connected to the ELAN subnet.
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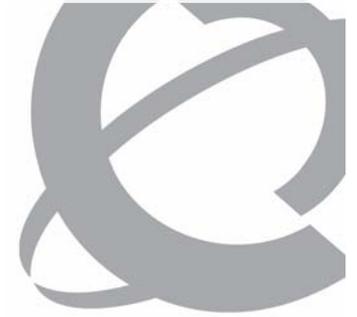
# Knowledge Check

## Question 2

True or False

When configuring the CallPilot High Availability pair, the FQDN on both servers must be set to match the Managed Host Name.

- a) True
- b) False



# Knowledge Check

## Question 2

True or False

When configuring the CallPilot High Availability pair, the FQDN on both servers must be set to match the Managed Host Name.

- a) True
- b) False

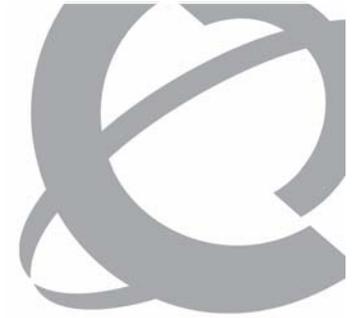


# Knowledge Check

## Question 3

When installing the CallPilot High Availability pair, where is the EMC AutoStart Console software located?

- a) EMC AutoStart Console software is downloaded from Nortel website
- b) EMC AutoStart Console software is provided separately on its own CD
- c) EMC AutoStart Console software is installed on the 1005r Factory Image
- d) EMC AutoStart Console software is located on the CallPilot Applications CD



# Knowledge Check

## Question 3

When installing the CallPilot High Availability pair, where is the EMC AutoStart Console software located?

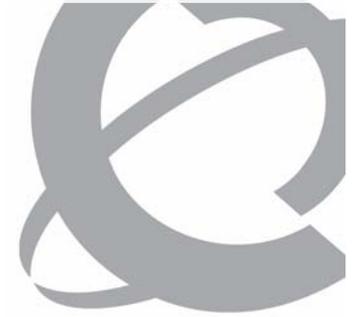
- a) EMC AutoStart Console software is downloaded from Nortel website
- b) EMC AutoStart Console software is provided separately on its own CD
- c) EMC AutoStart Console software is installed on the 1005r Factory Image
- d) **EMC AutoStart Console software is located on the CallPilot Applications CD**



# CallPilot Release 5.0 Security Enhancements

> Lesson 4





## Lesson 4 Objectives

- > After this lesson, you will be able to describe the security enhancements introduced with CallPilot Release 5.0.



# CallPilot 5.0 Security Enhancements

## Release 5.0 Security Enhancements Overview

### > CallPilot Release 5.0 Security Enhancements:

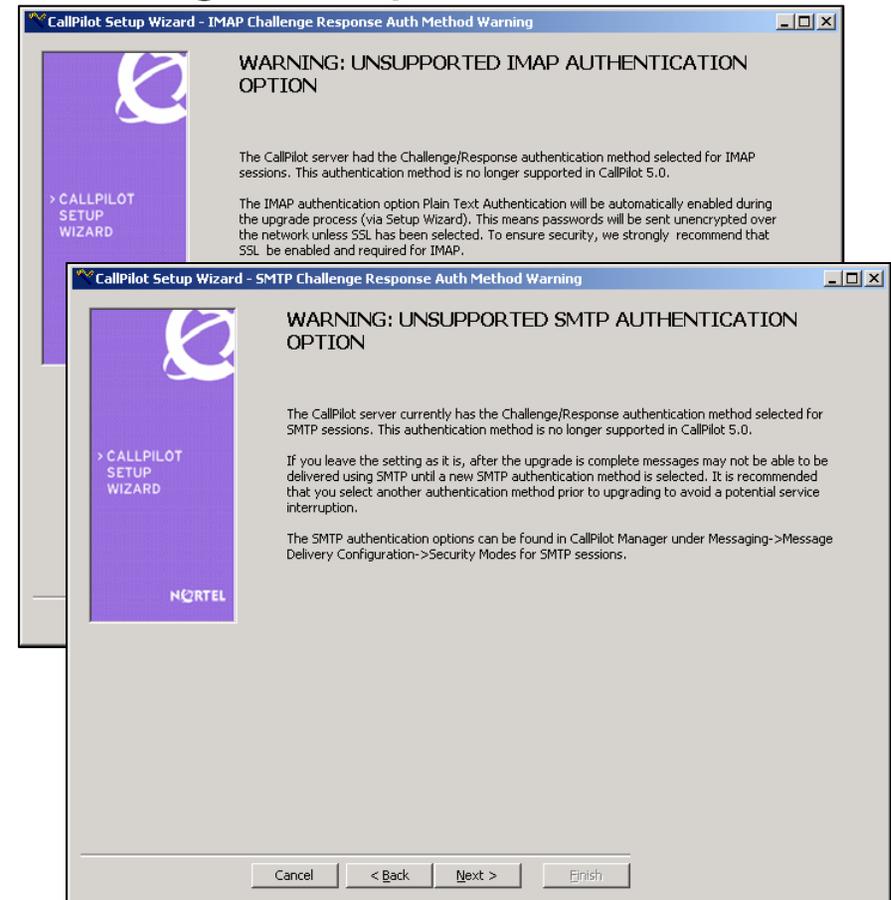
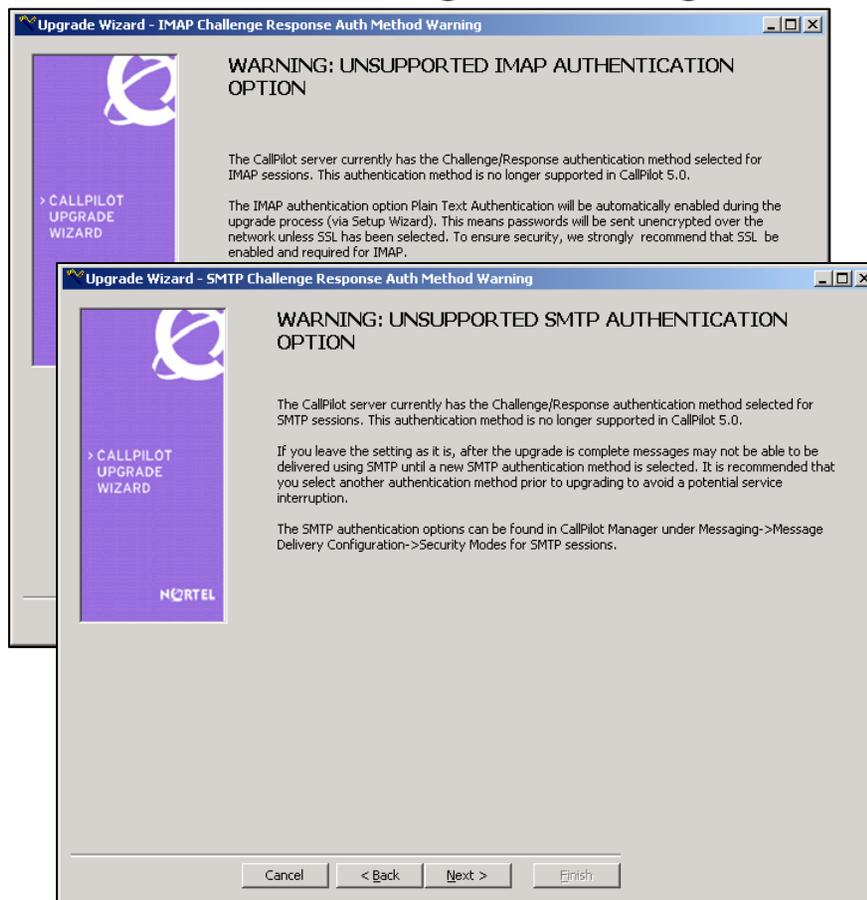
- Upgrade and Set-up Wizard – Warning messages due to Challenge/Response authentication removal
- Configuration Wizard – Removal of unnecessary Windows accounts
- CallPilot Manager – Authentication options reduced and master key reset moved
- Reporter – New Administrator Action Report entries
- Event Log – New information messages
- My CallPilot – Last login and invalid login attempts
- CallPilot Desktop – Last login and invalid login attempts
- App Builder – SSL Default and removal of Userid/Password storage
- Database – Enhanced password encryption
- Operating System – Additional hardening



# CallPilot 5.0 Security Enhancements

## Upgrade and Setup Wizards – Challenge/Response

### > New warning messages for Challenge/Response





# CallPilot 5.0 Security Enhancements

## Configuration Wizard – Removal of Accounts

> Removal of NGenSys, NGenDist and NGenDesign

The image displays two screenshots of the CallPilot Manager Configuration Wizard, specifically the 'Password Information' step. Both screenshots show the 'Administrator' section with two radio button options: 'Leave the password unchanged' and 'Change the password'. In the left screenshot, 'Leave the password unchanged' is selected. In the right screenshot, 'Change the password' is selected, and three text input fields are visible: 'Current password:', 'New password:', and 'Confirm the new password:'. The interface includes a purple header with the Nortel logo and 'CALLPILOT MANAGER', a navigation menu with 'Home', 'User', 'System', 'Maintenance', 'Messaging', 'Tools', and 'Help', and a breadcrumb trail: 'Location → Configuration Wizard → Password Information'. Buttons for 'Back', 'Next', 'Cancel', and 'Help' are present at the bottom of each screen.



# CallPilot 5.0 Security Enhancements

## CallPilot Manager – Internet Mail Clients Page

> Removal of Challenge/Response authentication

**NORTEL CALLPILOT MANAGER**

LDAP server: 172.16.52.38 | Mailbox Number: 000000 [Preferences](#) | [Help](#) | [Logout](#)

[Home](#) | [User](#) | [System](#) | [Maintenance](#) | [Messaging](#) | [Tools](#) | [Help](#)

Location: [Messaging](#) > [Internet Mail Clients](#)

### Internet Mail Clients

[Save](#) [Cancel](#) [Print](#) [Help](#)

**LDAP**

Session Security Options

Encryption Options

Enable LDAP with SSL port

Require SSL

The Ldap search base hosted by this LDAP server:

`dc=callpilot,dc=com`  
(NOTE: This field can be updated by running Configuration Wizard.)

---

**IMAP**

Enable IMAP with Plain Password Authentication

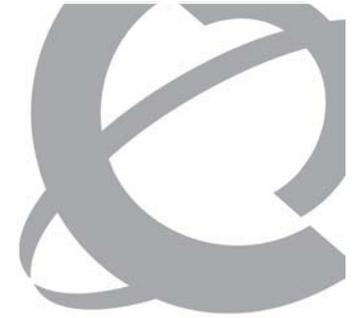
Session Security Options

Encryption Options

Enable IMAP with SSL port

Require SSL

[Save](#) [Cancel](#) [Print](#) [Help](#)



# CallPilot 5.0 Security Enhancements

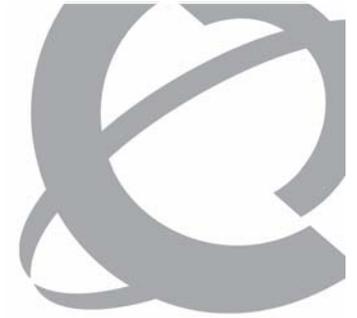
## CallPilot Manager – Security Modes for SMTP Page

### > Removal of Challenge/Response authentication

The screenshot shows the 'Security Modes for SMTP Sessions' configuration page in the CallPilot Manager. The page is titled 'CALLPILOT MANAGER' and includes a navigation menu with options like Home, User, System, Maintenance, Messaging, Tools, and Help. The current location is 'Location > Messaging > Message Delivery Configuration > Security Modes for SMTP Sessions'. The page contains several sections of configuration options:

- Encryption Options:**
  - Enable SSL for Incoming SMTP Sessions:
  - Requires SSL for Incoming SMTP Sessions:
  - Connect to server with SSL for Outgoing SMTP Sessions:
- Authentication Options:**
  - Unauthenticated:
  - User ID/Password Authentication:
  - SMTP/VPIM Password for Initiating Authenticated Connections to Remote Servers:
- Authentication Failure Attempts:**
  - Maximum failed authentication attempts from a remote server:  No Maximum,  Limited to 4 (1-99) attempts
  - Action to perform when the maximum has been reached:
  - Maximum failed authentication attempts from a user:
  - Action to perform when the maximum has been reached:

Buttons for 'Save', 'Cancel', and 'Help' are located at the top and bottom of the configuration area.



# CallPilot 5.0 Security Enhancements

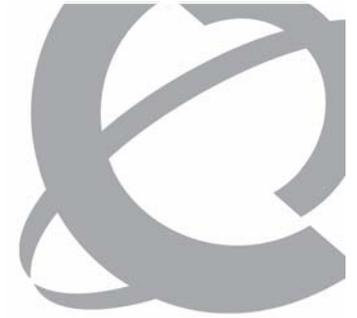
## CallPilot Manager – Security Administration Page

- > Password Master Encryption Key Reset button moved from External Email Servers page to Security Administration page.

The screenshot shows the CallPilot Manager interface. At the top, there is a purple header with the Nortel logo and 'CALLPILOT MANAGER'. Below the header, there is a navigation menu with options: Home, User, System, Maintenance, Messaging, Tools, and Help. The current page is 'Security Administration', which is highlighted in blue. Below the navigation, there are buttons for 'Save', 'Cancel', and 'Help'. The main content area is titled 'General' and contains several settings:

- Thru-Dial Restriction Permission List Number: On Switch (with a Properties link)
- Logon to Mailbox from Telephones External to Switch:
- Prefix: 12
- Minimum Length: 6
- Maximum Days Permitted Between Changes: 0
- Password Expiry Warning Days: 5
- Minimum Number of Change Before Repeats: 1
- Disabled Administrators will be Enabled: 7 after 1 minutes

At the bottom of the form, there is a 'Password Master Encryption Key:' label and a 'Reset' button, which is highlighted with a red rectangular box.



# CallPilot 5.0 Security Enhancements

## CallPilot Reporter – Administrator Action Report

### > New entries in the Administrator Action Report

#### Administrator Action Report (1)

3/26/2006 12:00:00AM - 3/27/2006 11:00:00PM

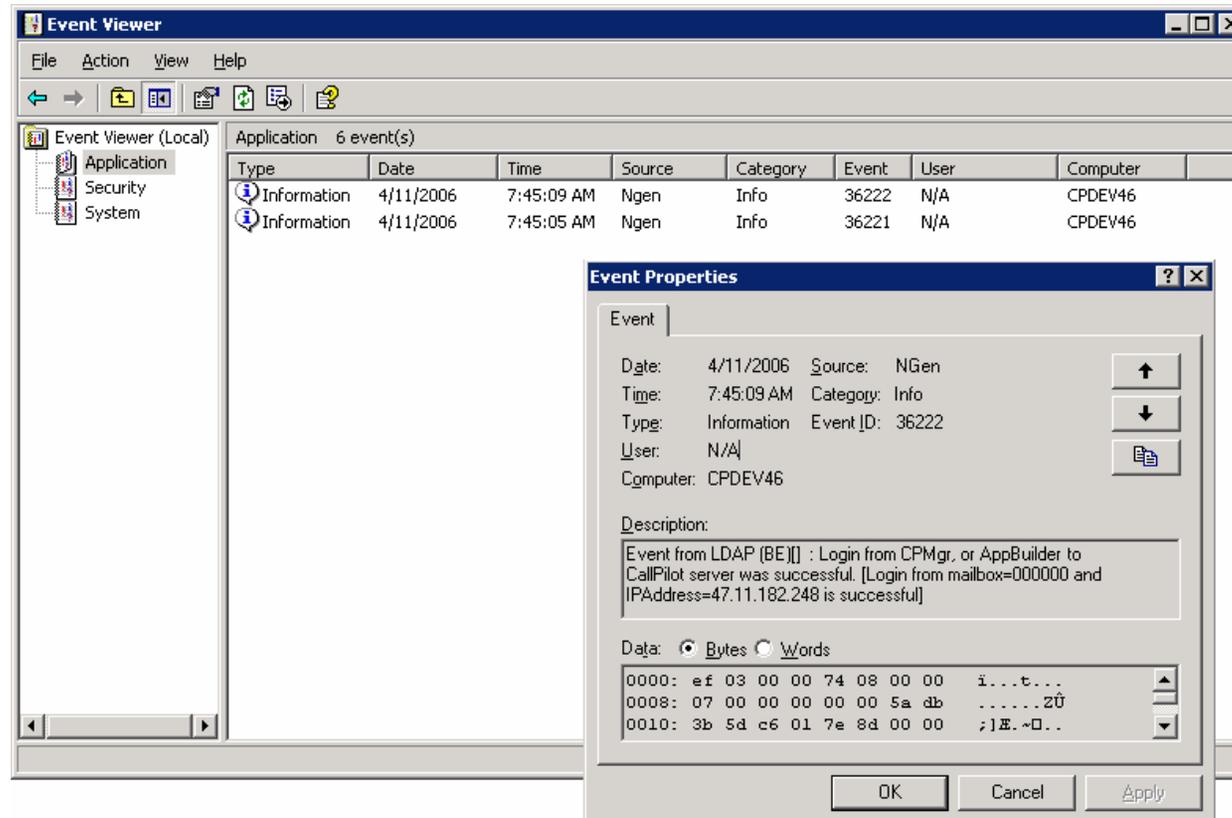
Administrator Name	Action Type	Client Network Address	Object	Description
admin,admin	Create	47.11.182.250	Users	Mailbox 8008000 was created.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 password has been reset.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 was modified.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 password has been changed.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 was modified.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 administration type has been changed.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 has been disabled.
admin,admin	Modify	47.11.182.250	Users	Mailbox 8008000 has been enabled.
admin,admin	Modify	47.11.182.250	External Mail Server	External Email Server zcarhxm1.ca.nortel.com was modified.
admin,admin	Create	47.11.182.250	External Mail Server	External Email Server zcarhxm1.ca.nortel.com was created.
admin,admin	Delete	47.11.182.250	External Mail Server	External Email Server zcarhxm1.ca.nortel.com was deleted.

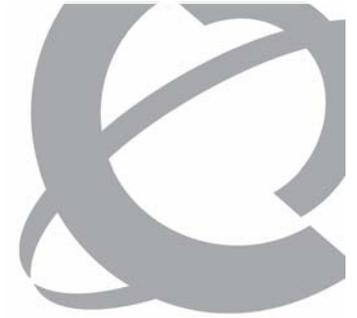


# CallPilot 5.0 Security Enhancements

## Windows Event Log – Application Login/Logout

> New events in the Windows Application Event Log recording CallPilot Manager and AppBuilder logins





# CallPilot 5.0 Security Enhancements

## My CallPilot – Last Logon / Failed Logon

- > Last Logon and Failed Logon Attempts displayed on the My CallPilot Home page

Nortel My CallPilot - Microsoft Internet Explorer

File Edit View Favorites Tools Help Address http://localhost/r Go Google

Back Search Favorites

Links QUICK IS downloads Nortel CallPilot My CallPilot CP 5.0 Schema Yahoo! Mail Tim's RSS Reader Gmail

**NORTEL** My CallPilot Help | About | Logout

Mailbox: Tim Schweitzer (7401) Last Logon: Saturday, March 25, 2006 at 03:15 AM -- Failed attempts: 2

CallPilot Messages Voice Forms Transcription CallPilot Features Useful Information

**CallPilot Tools** **Telephone Settings** **Web Settings**

**Greetings**  
Record external, internal and temporary greetings, and your name for personal verification.

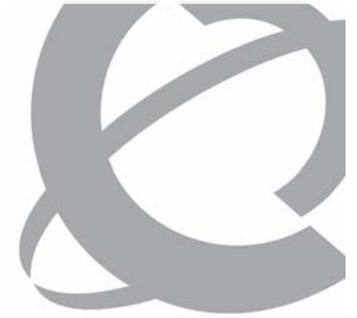
**Message Notification**  
Set options and maintain your schedule for notification of new CallPilot messages at remote telephone, pager, or text device

**Telephone Options**  
Review and personalize your telephone interface and options presented to your callers.

**E-mail By Phone**  
Maintain account information and set options for playing your e-mail over the telephone

**Mailbox Links**  
Create and maintain links to mailboxes on other messaging services.

**My CallPilot Preferences**  
Set preferences for your message list displays and behaviour and options for



# CallPilot 5.0 Security Enhancements

## My CallPilot – Last Logon / Failed Logon

- > Last Logon and Failed Logon attempts displayed on the My CallPilot Useful Information page

### Your Mailbox Status

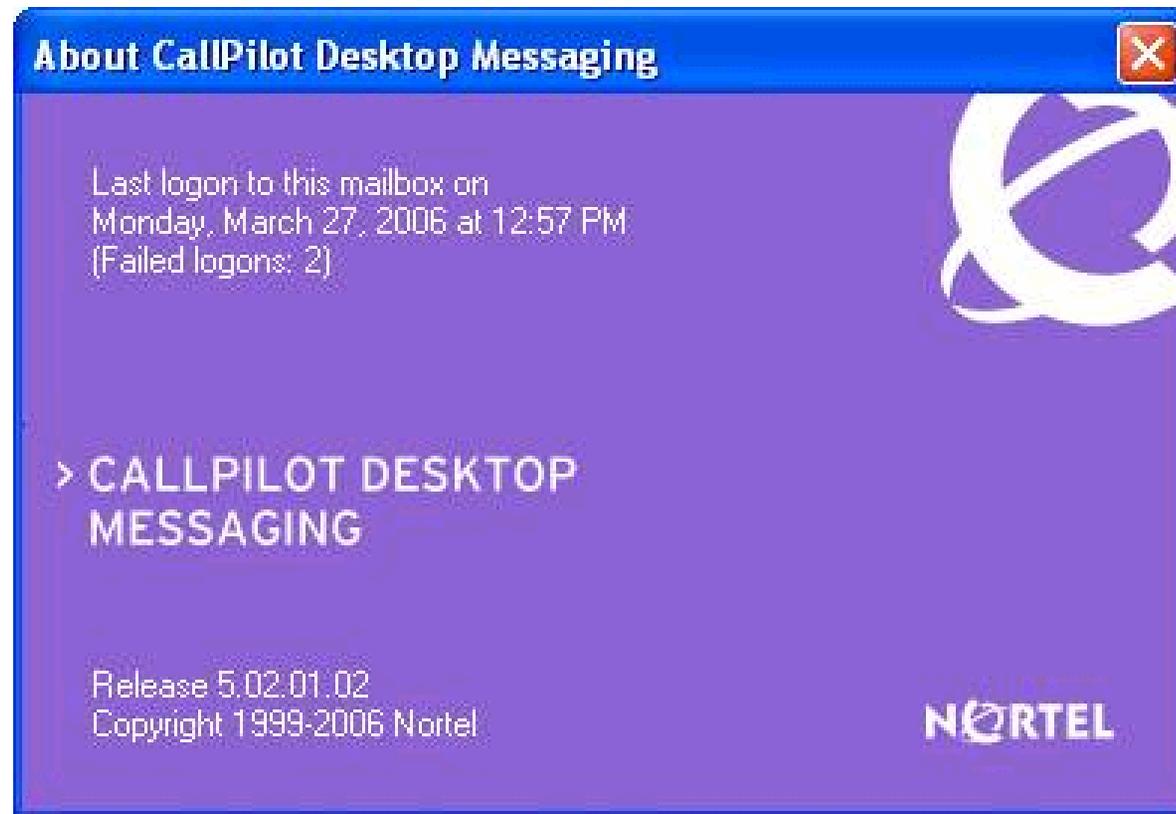
1. Your mailbox can store approximately **10** minutes of audio.
2. Voice messages are deleted **7** days after listening to them.
3. Read faxes are deleted after **7** days.
4. When your mailbox is full, your call answering is **not blocked**.
5. Messages that you send **are not saved** in your mailbox.
6. The maximum length of an outgoing message is **10** minutes.
7. An incoming message can be no longer than **5** minutes.
8. Your password was last changed **Wednesday, March 22, 2006 at 01:52 PM**.
9. Your last successful logon was **Wednesday, December 31, 1969 at 06:00 PM**.
10. Number of failed logon attempts **0**.



# CallPilot 5.0 Security Enhancements

## CallPilot Desktop Messaging – Last Logon / Failed Logon

- > Last Logon and Failed Logon Attempts displayed on the Desktop Messaging Client

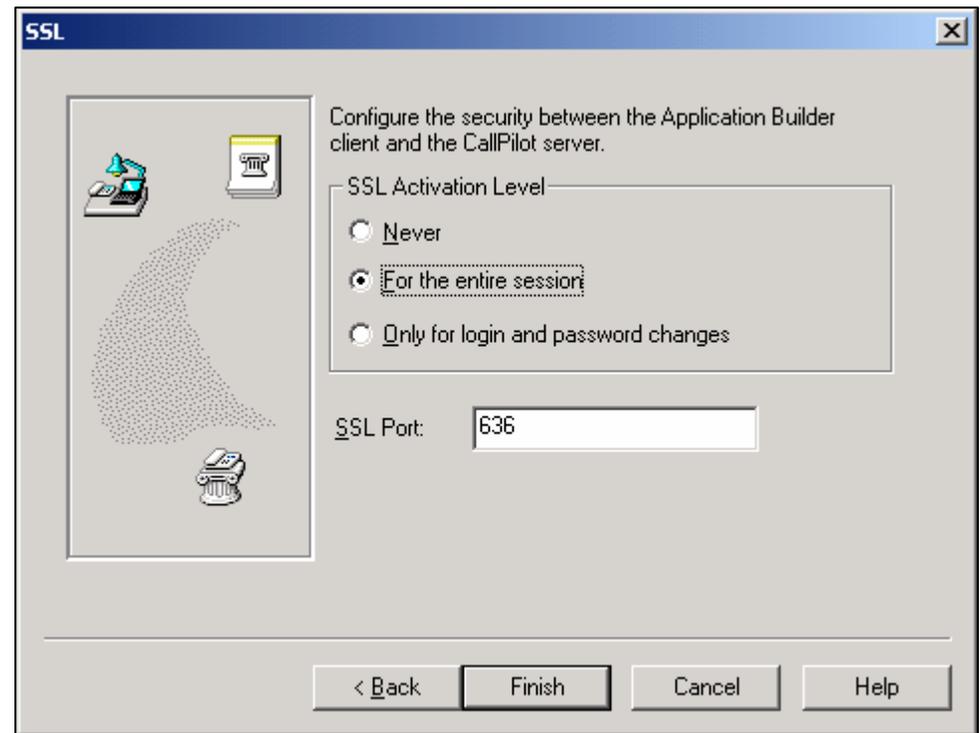


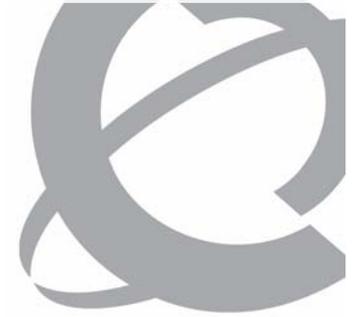


# CallPilot 5.0 Security Enhancements

## CallPilot Application Builder – Security Enhancements

- > Default log on settings set to **SSL for the entire session** instead of **For login and password changes only**
- > User always prompted for the user name and password information for connection via dial-up





# CallPilot 5.0 Security Enhancements

## Database Changes – Passwords

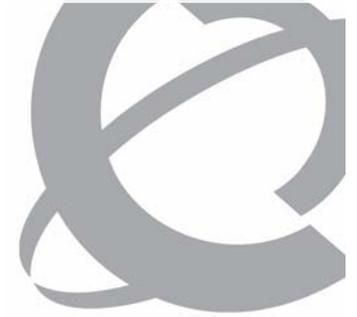
- > Password encryption changed to use stronger algorithms
- > User passwords changed at first successful logon
- > Other passwords upgraded to new algorithm on first use (when retrieved from database)



# CallPilot 5.0 Security Enhancements

## Operating System

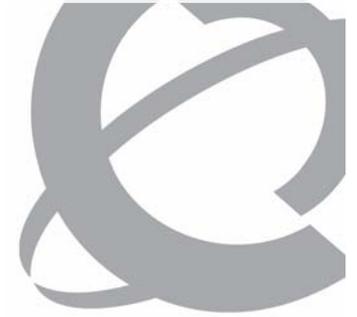
- > OS registry settings modified to improve security
- > DCOM ports statically allocated to port 5000 instead of dynamic allocation
- > Internet Explorer settings hardened:
  - According to JITC recommendations
  - Per-user zone settings disabled
- > Database software moved to a separate drive from database data



# CallPilot 5.0 Security Enhancements

## Troubleshooting – Networking Problems

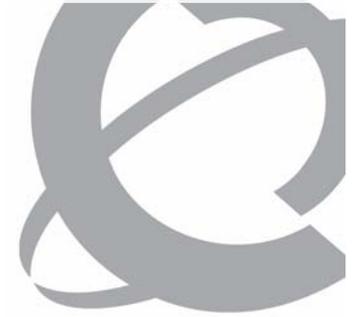
- > Use CallPilot Manager to verify compatible authentication and encryption (SSL) settings at both local and remote servers.
- > Use CallPilot Manager to check if server was disabled.
- > Examine Windows Event Log for possible failure reasons.
- > Use a DOS window to ping between servers.



# CallPilot 5.0 Security Enhancements

## Troubleshooting – Desktop Problems

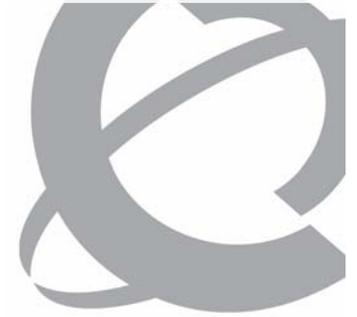
- > Use CallPilot Manager to verify correct authentication and encryption (SSL) settings.
- > Use CallPilot Manager to check if the user was disabled.
- > Examine Windows Event Log for possible failure reasons.
- > Use a DOS window to ping between client and server.



# CallPilot 5.0 Security Enhancements

## Troubleshooting – Operating System Problems

- > Confirm that problem is not a valid security issue.
- > Examine Windows Event Log for possible failure reasons.
- > Search Microsoft Knowledge Base for possible solutions.

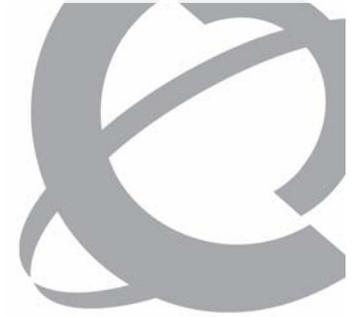


# Knowledge Check

## Question 1

Which user accounts have been removed from the Configuration Wizard Password Information page for Release 5.0?

- a) Administrator
- b) NGenSys
- c) NGenDist
- d) NGenDesign

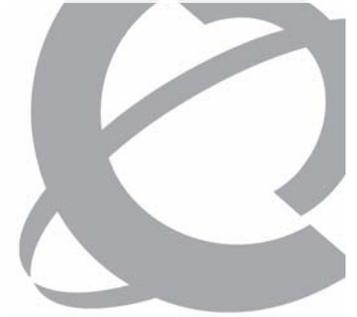


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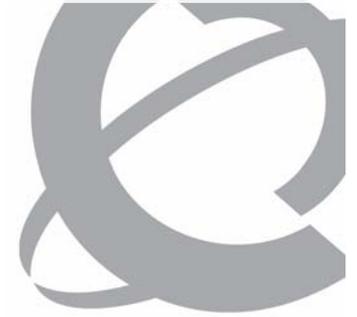


# Knowledge Check

## Question 2

Which of the following entries have been added to the Administrator Action Report?

- a) User mailbox password changed
- b) User mailbox password reset
- c) User mailbox enabled
- d) User mailbox administration type changed



# Knowledge Check

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Which of the following entries have been added to the Administrator Action Report?

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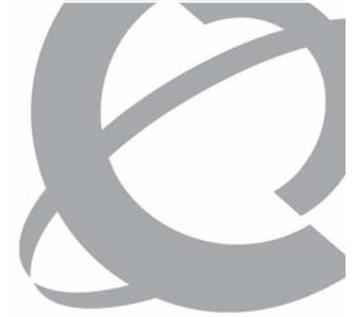


# Knowledge Check

## Question 3

Where is the last logon and number of failed logons information displayed in My CallPilot?

- a) The My CallPilot Home page
- b) The My CallPilot CallPilot Features page
- c) The My CallPilot Useful Information page
- d) The My CallPilot CallPilot Messages page



# Knowledge Check

## Question 3

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