

Changing the DHCP, DNS, or BOOTP Server from CLIMs to System Consoles



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About This Document

A more recent version of this procedure might exist online in the NonStop Service Procedures section of the Support and Service collection in the NonStop Technical Library (NTL) at <http://docs.hp.com>. Compare the dates in the About This Procedure pages to determine the latest version.

This procedure is used to move BOOTP, DHCP, and DNS server functionality for HP Integrity NonStop systems from one or two designated CLuster I/O Modules (CLIMs) to the primary and backup NonStop system consoles. The act of moving DNS/DHCP/BOOTP server functionality from designated CLIMs to system consoles applies to all NonStop systems configured on the same maintenance LAN. When DNS/DHCP/BOOTP services are enabled on the system consoles, they are disabled on the CLIMs; you cannot configure DNS/DHCP/BOOTP services on a per system basis for NonStop systems managed by the same system consoles.

Procedures for accommodating DNS/DHCP/BOOTP services apply to CLIMs on NS-series systems and NonStop BladeSystems even though the BOOTP portion of the services only exists on NonStop BladeSystems. Ignore references to HSS and BOOTP for NS-series servers.

Supported Release Version Updates (RVUs)

This topic supports J06.05 and all subsequent J-series RVUs and H06.16 and all subsequent H-series RVUs until otherwise indicated in a replacement publication.

Intended Audience

This procedure is written for those responsible for configuring NonStop systems

New and Changed Information in This Edition

Version	Date	Changes
546261-002	24 April 2009	<ul style="list-style-type: none">• Changed the title of this document from <i>Changing the HSS BOOTP Server from CLIMs to System Consoles</i> to <i>Changing the DHCP, DNS, or BOOTP Server from CLIMs to System Consoles</i>.• Added text indicating that BOOTP services exist only on NonStop BladeSystems.• Added text indicating that you cannot configure DNS/DHCP/BOOTP services on a per system basis for NonStop systems managed by the same system consoles.• Updated procedures to include DNS server migration from the CLIM also.• Updated procedures to indicate that this procedure also supports H06.16 and all subsequent H-series RVUs.• Corrected and updated the reference for moving services functionality to CLIMs to reflect the new title of that procedure.• In the Requirements section, updated the required version of the CLIM Boot Service Configuration Wizard to T0634 AAU or later which is delivered on NSC Installer DVD, S7X-SWV2/HNSC-SWV2, Update 9 or later. The AAS or later version described in the prior version of this procedure will not migrate the DNS server.• Updated the known problem with the CLIM Boot Service Configuration Wizard to indicate that it is fixed in OSM Console Tools, T0634 AAU and later.• The OSM Launch OA URL action has changed to Launch the Onboard Administrator.
546261-001	1 December 2008	None. New procedure.

Related Information

For information on the CLIM Boot Service Configuration Wizard, see the CLIM Boot Service Configuration Wizard online help.

For more information on OSM actions, see OSM online help.

To move BOOTP and DHCP server functionality for NonStop systems from system consoles to one or two designated CLIMs, see *Changing the DHCP, DNS, or BOOTP Server from System Consoles to CLIMs*.

For NonStop Legal Notices, Important Safety Information, Safety and Compliance, and Waste Electrical and Electronic Equipment (WEEE) information, see the Safety and Compliance collection in NTL at <http://docs.hp.com/en/NSSafety.html>.



NOTE: NTL has moved to docs.hp.com (external view) and docs.fc.hp.com (internal view.)

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Changing the DHCP, DNS, or BOOTP Server from CLIMs to System Consoles

Overview



NOTE: How you configure BOOTP, DHCP, and DNS services applies to all NonStop systems configured on the same maintenance LAN. You can configure your environment to have DNS/DHCP/BOOTP server functionality on either two (primary and backup) system consoles or two designated CLIMs.

Moving DNS/DHCP/BOOTP server functionality for NonStop systems from CLIMs to system consoles includes:

1. Making sure the system consoles meet all Requirements to perform the process and be qualified BOOTP and DHCP servers
2. Preparing to Migrate BOOTP to System Consoles
3. Disabling BOOTP, DHCP, and DNS on CLIMs
4. Enabling DHCP on System Consoles
5. Verifying DHCP

Requirements

To move the BOOTP, DHCP and DNS server functionality for NonStop systems from CLIMs to system consoles, those system consoles must be running Windows 2003 Server and have these minimum product versions installed:

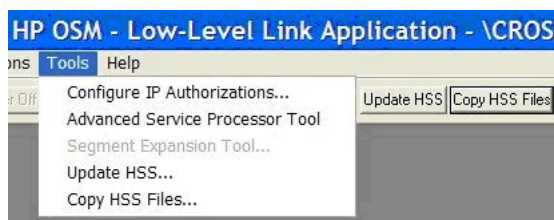
- CLIM Boot Service Configuration Wizard (part of OSM Console Tools, T0634 AAU or later)
- OSM Low-Level Link, T0633 ABE or later
- PuTTY (part of Console CLIM Utilities, T0697 H01 AAA or later)

These products are all available on NonStop System Console (NSC) Installer DVD, S7X-SWV2/HNSC-SWV2, Update 9 or later. Updates to Halted State Services (HSS) firmware for NonStop systems (T8004) are also downloaded from the NSC Installer DVD, as needed.

Preparing to Migrate BOOTP to System Consoles

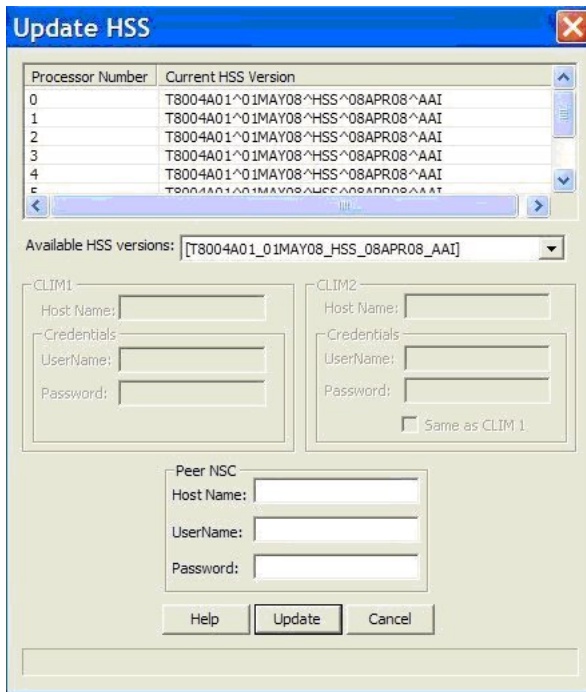
These steps will ensure that you have the appropriate HSS firmware file configured for each NonStop system on the shared maintenance LAN. Depending on your environment, you may not need to perform all of the steps described in this section. This step applies only to NonStop BladeSystems.

1. Check the HSS version currently running on the processor blades in each system. Use the **Update HSS** or **Copy HSS Files** actions in the OSM Low-Level Link to compare the HSS version on all processors in the system against each other and also against versions available in the C:\HSS\T8004 directory on the system console. These actions are launched from the Tools menu or, before system discovery, from the toolbar:



You should also check the latest NSC DVD for possible HSS updates. If a newer version is available, download it to the C:\HSS\T8004 directory on the system console, as described

in the *NonStop System Console Installer Guide*. After this version is downloaded to the system console, it will also appear in the Available HSS versions drop-down menu in the Update HSS dialog box and can be selected during an Update HSS or Copy HSS Files action:



If a newer version is available, the Update HSS or Copy HSS Files actions also allow you to update HSS files for the system you are logged on to. Both the Update HSS and Copy HSS Files actions copy and rename the specified HSS file from C:\HSS\T8004\vproc id \HPILDR.efi to C:\Images\NBsystem serial number.efi on the system console. Update HSS also prompts you to reset all blades after the file copy/rename, whereas Copy HSS Files does not. Repeat the process for each system on the LAN. For more information, see the OSM Low-Level Link online help.

- Whether or not you updated or copied HSS files in Step 1, check the C:\Images directory on the system console to make sure there is an HSS file for each NonStop system on the maintenance LAN in the form NBsystem serial number.efi.



NOTE: To determine the serial number for a system, you can log on to the OSM Low-Level Link and check the System Serial Number attribute, located under the System object.

If no such file exists for one or more NonStop BladeSystems – or, if you did not use one of the Low-Level Link actions and are not sure whether the firmware files in the C:\Images directory are of the desired HSS version – log on to each of those systems in turn with the OSM Low-Level and use the **Copy HSS Files** action to create an HSS file of the appropriate version for each system. Only after you have verified that for each NonStop system configured on the maintenance LAN there is a corresponding HSS firmware in C:\Images named NBsystem serial number.efi should you invoke the CLIM Boot Service Configuration Wizard to disable BOOTP and DHCP server functionality on the CLIMs.

Disabling BOOTP, DHCP, and DNS on CLIMs

After completing the steps under Preparing to Migrate BOOTP to System Consoles, use the CLIM Boot Service Configuration Wizard to disable BOOTP/DHCP/DNS server functionality on the CLIMs.



CAUTION: This step only disables BOOTP, DHCP, and DNS services on the specified CLIMs, and does not enable them on the system consoles. After completing this step, you must complete the next steps for [Enabling DHCP on System Consoles](#) and [Enabling DNS on System Consoles](#).

3. Launch the CLIM Boot Service Configuration Wizard from the Windows Start menu:

All Programs > HP OSM > CLIM Boot Service Configuration Wizard

Click the Help ([?]) button in the welcome dialog box, navigate to the **Disabling BOOTP, DHCP, and DNS Servers on CLIMs** topic, and follow the instructions provided for disabling CLIMs for BOOTP/DHCP/DNS server functionality.



NOTE: There is a known problem in versions prior to AAU when using the CLIM Boot Service Configuration Wizard from a second (peer) system console after previously running the wizard from the other (primary) console. When you launch the wizard from the console that was previously considered the peer console and you indicate that there is a peer system console installed, you should make sure that the pre-populated IP address displayed for that console is correct. From the wizard's perspective, there is an active system console—the system console from which you are running the wizard—and another (inactive) one that is called the peer system console. You should always specify the inactive system console as the peer, so that the changes you make to the BOOTP configuration using the wizard are reflected in the configuration files on both system consoles (failure to do so may result in the configuration files on the two system consoles being out of synch, or showing different BOOTP configuration information).

Enabling DHCP on System Consoles

After Disabling BOOTP, DHCP, and DNS on CLIMs, you must perform these steps to enable DHCP server functionality on each of the system consoles:

4. From the Windows Start menu, select and open **Control Panel > Administrative Tools > Services**.
5. In the list of Services, right-click **DHCP Server** and select **Start**. When the Status column indicates that the DHCP service has Started, close the Services window.
6. In the Administrative Tool window, double-click to open **DHCP**.
7. Expand **DHCP**, then select and expand the system console's `server_name`.
8. Under the `server_name`, right-click **Scope** and select **Delete**. Answer **Yes** to any confirmation dialog boxes.
9. Right-click on the `server_name` and select **New Scope**.
10. When the New Scope Wizard appears, click **Next**.
11. In the Scope Name window, enter these values:
 - Name
NSC-assigned Scope
 - Description
NSC-assigned ScopeClick **Next**.
12. In the IP Address Range window, enter the appropriate IP addresses for the site. The default values are:
 - Start IP address
192.168.31.1
 - End IP address
192.168.31.254

- Length
16
- Subnet mask
255.255.0.0

The Length field is calculated automatically.

If a second system console is being configured as a backup DHCP server, the default values are:

- Start IP address
192.168.32.1
- End IP address
192.168.32.254
- Length
16
- Subnet mask
255.255.0.0

13. When the Add Exclusions window appears, click **Next**.
14. When the Lease Duration window appears, leave the default value (8 days) unchanged and click **Next**.
15. When the Configure DHCP Options window appears, select **Yes, I want to configure these options now**. Click **Next**.
16. When the Router (Default Gateway) window appears, do not enter any values. Click **Next**.
17. When the Domain Name and DNS Servers window appears, enter the following information:
 - Parent domain
private.lan.com
 - Server name
noname-nsc (or a chosen system console name)
 - IP address
192.168.36.1 (default for the primary console) or 192.168.36.2 (default for the backup console)
 Click **Add**. Click **Next**.
18. When the WINS Servers window appears, click **Next**.
19. In the Activate Scope window, select **Yes, I want to activate this scope now**. Click **Next**.
20. When the Completing the New Scope Wizard window appears, click **Finish**.
21. In the DHCP window, right-click on the `server_name` and select **Properties**.
22. Click **Advanced** and select **Bindings**.
23. For the primary system console, deselect anything except for the primary system console IP address (default is 192.168.36.1).
For the backup system console, deselect anything except for the backup system console IP address (default is 192.168.36.2).
24. In the Bindings window, click **OK**.
In the noname-nsc.private.lan.com [192.168.36.1] Properties window, click **OK**.
25. In the DHCP window, right-click on the **nsc-name>scope** folder and select **Properties**.

26. Click the **DNS** tab. Select the following:
 - Enable DNS dynamic updates according to the settings below.
 - Always dynamically update DNS A and PTR records.
 - Discard A and PTR records when lease is deleted.
 Click **Apply**.
27. Click **Advanced**. In the Assign IP addresses dynamically to clients of field, select **Both** and click **OK**.
28. In the DHCP window, right-click **Scope Options** and select **Configure Options....**
29. In the Scope Options window:
 - Scroll down to and select **006 Boot DNS Servers**.
 Enter the IP address of the primary system console and click **Add**. If there is a backup system console, set IP address of the backup system console and click **Add**. The default values are:
 Primary system console:
 192.168.36.1
 Backup system console:
 192.168.36.2
 Click **Apply**.
 - Scroll down to and select **015 DNS Domain Name**.
 Set the String value to the system console DNS suffix. The default value is:
private.lan.com.
 Click **Apply**.
 - Scroll down to and select **066 Boot Server Host Name**.
 Set the String value to the system console IP address. The default values are:
 Primary system console:
 192.168.36.1
 Backup system console:
 192.168.36.2
 Click **Apply**.
30. Click **OK** to finish DHCP server configuration.

Verifying DHCP

After completing the steps under **Enabling DHCP on System Consoles**, perform these steps to ensure that all devices on the LAN that depend on DHCP-assigned IP addresses have received them.

31. Log on to one of the NonStop systems with the OSM Service Connection, select the Enclosure object, and perform the **Launch the Onboard Administrator** action.
 - In the navigation pane of the HP Onboard Administrator interface, click **Active Onboard Administrator**.
 - On the Virtual Buttons tab, click **Reset** to reset the active Onboard Administrator.
 - Confirm that the OA comes up after OSM updates the new Active OA IP address.
32. In the navigation pane, click **Standby Onboard Administrator** and repeat the reset process.
33. If you have a second blade enclosure in the system, repeat Step 1 and Step 2 on that enclosure.

34. From the OSM Service Connection, select one of the CLIM objects and perform the **Invoke iLO** action to launch the Integrated Lights-Out interface.
 - On the System Status tab, click the Diagnostics link.
 - Click **Reset**.
35. Repeat Step 4 for all CLIM iLOs.
36. Launch the management interface for any other device on the Maintenance LAN that is configured for DHCP. If you are not able to reach any of the web interfaces or feel that you are getting connected to a different CLIM iLO, then reboot the CLIM(s) configured for BOOTP and DHCP server functionality.
37. Repeat these follow-up steps for each system on this maintenance LAN, except for objects common to all systems, such as maintenance switches, UPS, etc.

Enabling DNS on System Consoles

After Disabling BOOTP, DHCP, and DNS on CLIMs , you must perform these steps to enable DNS server functionality on each of the system consoles:

38. From the Windows Start menu, select and open **Control Panel > Administrative Tools > Services**.
39. In the list of Services, right-click **DNS Server** and select **Start**.
40. In the list of Services, right-click **DNS Server** and select **Properties**.
41. From the Startup type list, select **Automatic** and click **OK**.
42. From the Windows Start menu, select **Manage your Server**.
43. Click **Manage this DNS server**.
44. In the dnsmgmt screen, right-click **DNS'** → 'NONAME-NSC. Select **Properties**.
45. In the NONAME-NSC Properties screen, select the **Interfaces** tab.
46. Select **Only the following IP addresses**. In the IP Address field, enter the IP address of the system console. Default values are:
 - Primary system console: 192.168.36.1
 - Backup system console: 192.168.36.2
 Remove all IP addresses from the list except the address for the system console (or backup system console) and Click **OK**.
47. If you are configuring the dedicated service LAN to have both a primary and backup system console, perform these steps for the primary system console:
 - a. In the dnsmgmt screen, open **DNS > system console name > Forward Lookup Zones**. Double-click to reveal its contents.
 - b. Right-click on the system console DNS suffix and select **Properties**. The default value is private.lan.com.
 - c. Click the **Zone Transfers** tab.
 - d. Select **Allow zone transfers and Only to the following servers**.
 - e. Enter the IP address of the backup system console, The default value is 192.168.36.2.
 - f. Click **Add**.
 - g. Click **Apply**.
 - h. Click **Notify**.
 - i. In the Notify screen, select **Automatically notify and The following servers**.
 - j. Enter the IP address of the backup system console, The default value is 192.168.36.2.
 - k. Click **Add**.
 - l. Click **OK** to close the Notify screen.
 - m. Click **OK** to close the Properties screen.

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