

Release Notes

N1™ Provisioning Server 3.0, Blades Edition

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Preface

These release notes describe known issues for the N1 Provisioning Server 3.0, Blades Edition.

N1 Provisioning Server Software Packages

The N1 Provisioning Server comprises the following software packages:

- `TSPRagsol`
- `TSPRbli`
- `TSPRblibl`
- `TSPRcore`
- `TSPRcs`
- `TSPRdb`
- `TSPRdhcp`
- `TSPRdns`
- `TSPRdrvrs`
- `TSPRgm`
- `TSPRgw`
- `TSPRgwdb`
- `TSPRhal`
- `TSPRipf`
- `TSPRmlg`
- `TSPRmon`
- `TSPRnetcf`
- `TSPRrel`
- `TSPRstmc`
- `TSPRsuna`
- `TSPRtools`

Note: The `TSPRagsol` package is installed on the Solaris master image supplied with the software. All other packages are installed on the control plane server.

Note: If you want to verify the version installed on your control plane server, execute **`/opt/terraspring/sbin/check_rel`** to validate the installed software release.

CD Layout and CD Content

The following provides a high-level description of the layout of the N1 Provisioning Server Software CDs. This product is shipped on two CDs and the directory structure is as follows:

N1 Provisioning Server 3.0, Blades Edition CD1 of 2

Root

|

|->install

|->docs

+ N1 Provisioning Server Documentation

|- N1ProvServSysAdminGuide.pdf

|- N1ProvServImplementationGuide.pdf

|- N1ProvServInstallGuide.pdf

|- N1ProvServCCMgmtGuide.pdf

|- Readmefirst.txt

|->Solaris/Terraspring/3.0/Product/

+ N1 Provisioning Server and Bundled Software Packages

|->Installer/

+ Support files (libraries and etc) for install script

N1 Provisioning Server 3.0, Blades Edition CD2 of 2

Root

|->Images/

+ Solaris master image: solaris8_blade

Who Should Use this Book?

This guide is intended for system administrators who are responsible for installing or upgrading N1 Provisioning Server software packages.

Related Publications

You might consider the following related publications helpful:

N1 Provisioning Server 3.0, Blades Edition:

- *Implementation Guide*
- *Installation Guide*
- *System Administration Guide*
- *Control Center Management Guide*

Accessing Sun Documentation Online

The docs.sun.com Web site enables you to access Sun technical documentation online. You can browse the docs.sun.com archive or search for a specific book title or subject. The URL is *http://docs.sun.com*.

Terminology

The term *provisionable server* as used in this document refers to *provisionable server blades*.

The term *disk* as used in this document refers to either *provisionable server blade disk space* or *provisionable server blade disk size*.

The term *server farm* as used in this document refers to *blade-based server farms*.

The terms *server* and *servers* as used in this document refer to one or more *blade-based servers* when associated with the resource layer of the N1 Provisioning Server.

Known Issues

This section describes existing issues in the current release of the software.

Installation Issues

Different Login and Passwords Not allowed for Multiple Shelves

This problem is only present at the initial installation of the shelves. The limitation is that you must use a common username and password for all shelves during the installation.

After completion of the installation, you can modify the username and password on any shelf and update the database to reflect the changes using the `device` command. All other discovery commands permit the use of multiple username and password combinations. (4849704)

System Controller and Switch Login

Presently, the installer utility accepts only one username and password for all chassis switches and system controllers, so ensure that you assign the same username and password for all system controllers and chassis switches. (4856821)

System Controller Responds to Old and New IP Address

When you change the IP address of a system controller using the command `setupsc`, the system controller begins to respond to the new IP address and also continues to respond to the previous IP address. If the previous IP address is in use by another device, this can cause connectivity issues to the other device. To resolve this issue, execute the **`resetsc`** command on the offending system controller. Once it successfully boots, it only responds to the newly assigned IP address.

> **Note:** As a precaution, always execute the **`resetsc`** command after changing an IP address.

(4857745)

Segment Manager Cannot Instantiate Farm Manager

Sometimes, after installing the N1 Provisioning Server software, the Segment Manager is unable to instantiate the Farm Manager. To resolve this issue, restart the Segment Manager by executing the commands **`sm -stop`**, then **`sm -start`** from the control plane server. (4856825)

I-Fabric Installation With a Separate Image Server

Due to a known problem within the N1 Provisioning Server software, make sure you check the following after an installation on a separate image server:

1. Execute the following command to check whether the `/images` mount point has been exported via network file server (NFS) and is shared in the correct subnet:

   `/usr/sbin/share`

   Your output must include a line that looks like the following:

   `/images anon=0, rw=@10.20.30.0/24 “”`

2. Verify that the subnet address in the preceding line corresponds to the image subnet address that you had supplied during the user input phase of the installation on the Infrastructure Director device. If not, edit the `/etc/dfs/dfstab` file and change the subnet. If you do not see a line containing the `/images` directory, add the following line to the `/etc/dfs/dfstab` file:

   `share -F nfs -o anon=0, rw=@10.20.30.0/24 /images`

   Note: Replace the subnet in the preceding line with the image subnet address that you had supplied. You might need to obtain assistance from a Solaris NFS administrator in case the `/etc/dfs/dfstab` file is corrupted.

If you are installing the image server on the same device as the N1 Provisionable Server software, a corrupted `/etc/dfs/dfstab` file might cause the installer utility to fail during the Updating Image Server Information in Database... phase. If the installer fails with one of the following messages, perform the steps described above on the device to resolve the `/etc/dfs/dfstab` file and retry the installation:

- `Cannot access image server file system.`
- `Cannot find image server file system on subnet.`

(4856874)

Installer Allows IDB IP to Overlap the Internal or External Subnet

The installer menu accepts a list of resource subnets that are added to the database for use by server farms. Do not add the control layer subnet as one of the subnets in this list. The control layer subnet refers to the subnet to which the control layer server belongs.

After the installation is complete, execute the **`/opt/terraspring/sbin/subnet -l`** command to get the list of all subnets included in the database. If the control layer subnet appears in that list, remove it from the database by executing:

`/opt/terraspring/sbin/subnet -d [-x] -m` *`<masklength>`* *`<ipaddress>`*

where *`<masklength>`* and *`<ipaddress>`* refer to the control layer subnet.

It is necessary to remove the control layer subnet from the database because it can cause unexpected behavior and failure in the control layer if that subnet is allocated to be used by a farm.

Presently, the installer can verify and prevent you from entering the exact same subnet as the control layer subnet for the resource subnet list. However, it cannot handle situations where you enter a subnet containing the same subnet address but a different netmask, which makes it a different subnet but still a subset or superset of the control layer subnet. Make sure that you do not enter resource layer subnets that are either a subset or superset of the control layer subnet.

For example, if the control layer subnet is `10.5.140.0/24`, do not enter subnets such as `10.5.140.0/25` or `10.5.140.0/23` as resource layer subnets. (4856824)

Disk Copying Failure

After installing the N1 Provisioning Server software, you must add the following properties to the file `/etc/opt/terraspring/tspr.properties` before activating any farms:

1. Open the file `/etc/opt/terraspring/tspr.properties` in a text editor.
2. Add the following lines:

   ```
   com.terraspring.stm.client.ScriptCopyInterval.pingInterval=60
   com.terraspring.stm.client.ScriptCopyInterval.pingTimeout=300
   ```

3. Save the file and exit the editor.

(4856862)

Switch Configuration Failures

During setup, the switch configuration for a blade system chassis in your I-Fabric might fail because of hardware problems. If this occurs, you will see the following prompts on your screen (IP addresses vary; this is an example only.):

```
Setup Switch for Blade System Chassis with System Controller IP =
10.5.132.85 ...failed!

  FAILURE: Installation of N1 Provisioning Server software did not
succeed because of the following problem:
   An error occurred while configuring the Internal Switch 10.5.132.85.
    Timed out waiting for appropriate prompt (errno 30).
  Please see /var/opt/terraspring/install/run/install.log for details.

  Installation may have failed due to incorrect user input or some other
correctable error. You may choose from the following options:
  1.  Cancel the installation.
  2.  If there is some other problem with the system, fix it manually,
      then enter this option to try again
  3.  If you believe there is a problem with the user input values, enter
      this option to edit these values and try again

  Enter option [1|2|3]:
```

Select option `2` to retry the switch configuration. If the switch configuration for the blade system chassis continues to fail after five retries, select option `3` and remove this blade system chassis from the list. Selecting option `3` will take you to the main user menu.

```
N1 Provisioning Server Install Main Menu
1.  IP Address of external DNS server to forward unknown queries:
.
.
.
```

Select the last menu item Sun Blade System Chassis Information for discovery —>. You will see the following submenu:

```
Sun Blade System Chassis Information for discovery

1.  Blade System Chassis IP Addresses and Switch Network Configuration:
     <list>
2.  Blade System Controller and Switch User Login (Note: The System
    Controllers and Switches for ALL the Blade System Chassis MUST have
     the same login): admin
3.  Blade System Controller and Switch Password (Note: The System
    Controllers and Switches for ALL the Blade System Chassis MUST have
     the same password): *****
```

Select item `1` to edit the list of blade system chassis previously entered. Your screen will be similar to the one shown below. (IP addresses mentioned here are examples only).

```
Blade System Chassis IP Addresses and Switch Network Configuration
    sc_ip            switch_ip        default_gw       netmask

-----------------------------------------------------------------------
    -
1.  10.5.132.85      10.5.132.88      10.5.132.1       255.255.255.0
2.  10.5.132.80      10.5.132.83      10.5.132.1       255.255.255.0
3.  10.5.132.60      10.5.132.63      10.5.132.1       255.255.255.0

These are the IP Addresses of the SunFire Blade System Chassis in your
.
.
with the supplied information.

Choose an operation to perform on the list.
a - add item       d - delete item
i - insert item    x - exit
[a|d|i|x]:
```

To delete a blade system chassis, type **`d`** and press ENTER. You will see the following prompt.

```
Delete Item from List
Enter list index to delete [1..3, '0' to quit]:
```

Assume for the purposes of this example that the faulty blade system chassis is the one with IP address `10.5.132.85`. To delete this chassis, type **`1`** at the prompt and press ENTER. The blade system chassis will be removed from the list and you can exit from the menu by typing **`x`** at all the following prompts. The installation will continue from the point where it failed but it will not include the faulty switch during configuration.

Contact the your technical support representative about the faulty blade system chassis. The blade system chassis might be experiencing a known hardware problem that technical support can help you with. (4856871)

Installation Process Might Not Detect All Blades During Discovery

At the end of the installation process for multiple shelves, execute **`device -l`** to verify that the blades for all shelves were discovered successfully. If blades for some shelves are not reported by the `device -l` command output, but all blades for at least one shelf were discovered successfully, execute the **`discoversfb1600`** command manually for these shelves. Consult the `discoversfb1600` man page for details.

> **Note:** Before executing the `discoversfb1600` command, you must configure the blade shelves correctly. See Configuring Blade Shelves in the Resource Pool, page 30, for details.

If you are installing only one shelf and not all blades of that shelf were successfully discovered, add the following property to the `/etc/opt/terraspring/tspr.properties` file:

```
com.terraspring.core.sys.GridOS.nexec=false
```

Then rerun the installation and discovery process.(4856875)

Installing Patches

If you have patch 108827-40, you do not need to install patch 108993-18. When you install patch 108993-18, you must add the following line to the `/var/sadm/<pkgname>/pkginfo` file before you install the N1 Provisioning Server software, where `<pkgname>` is one of the directories in the `/var/sadm/` directory that refers to an installed package:

```
PATHLIST-108827-40
```

Note: Remove this line after you install the N1 Provisioning Server software. (4856878)

Control Center Known Issues

Control Center Client Software Requirements

The Control Center requires the Internet Explorer, version 5.5 or 6.0, web browser with a 128-bit security encryption. (4857757)

Manual Infrastructure Director Database and Control Center Synchronization

If a farm update fails after it reaches the internal `ALLOCATED` state, the IDB might not discard the failed Farm Mark-up Language (FML). However, the Control Center does discard the failed FML, and the IDB and the Control Center will be "out of sync." Therefore, you need to manually synchronize the IDB and Control Center.

The following steps describe how to resolve this issue:

1. Determine the cause of the error and take any necessary actions to resolve the problem (i.e., replace a failed server, free farm resources, resolve networking issues, and so forth).
2. Run the **`farm -pf`** `<farm_ID>` command to clear the error state. This command clears the internal state; however, this change is *not* reflected in the Control Center.
3. Open the farm in the Control Center Editor, and select a "good" farm configuration from Farm Details on the left side of the screen.

4. Make any changes necessary to this version of the farm in the Editor and click **Commit**.
5. Unblock the request as you normally would.

(4849688)

Administration Screen Timeout Issue

In certain cases, when you navigate from the Administration screen to the Editor screen and the session times out, you might not be able to log into the Control Center. The workaround is to close the browser, open another browser, and log in again.

If you are in the Administration screen and the session times out, when you log in again, the window might display incorrectly. If this happens, close the browser and log in again.

To vary the session timeout, modify the timeout setting in `web.xml` in the `/opt/terraspring/gw/war/WEB-INF` directory. Look for the `<session-timeout>` tag. The value is specified in minutes. (4849661)

Farm Update Fails

When a farm update fails, changes do not always roll back to the last good state of the farm. The following is the workaround:

1. To clear the error state, ping the farm using **`farm -pf`** `<farm_ID>`.
2. View the farm in the farm editor.
3. From the farm editor, select the latest farm update request from the Request History panel on the left. The correct farm information will display.
4. Select File—>Commit to submit the farm update again. A newly updated request is issued.
5. Unblock the new request. The correct farm information will display in the farm editor after the request is completed. (4849688)

Unable to Submit I-Fabric Change

If a farm name is more than 25 characters long, the **OK** button disappears in the Change I-Fabric dialog for that farm. Ensure that the farm name does not exceed 25 characters. (4849706)

Graphics Not Displayed Correctly After Reload Operation

Sometimes, when you reload a current farm, the graphics in the Navigation bar do not display correctly. The workaround is to refresh the page. (4857740)

JavaScript Error When Configuring a Provisionable Server

While configuring a provisionable server, if you wait more than two hours on the dialog before attempting to select an image for that server, you are taken to a new page to log in. After logging in, you will see a JavaScript error. The workaround is to close the dialog and reopen it. (4849700)

Do Not Book Mark Login Page

Do not book mark any page except the welcome page. (4849693)

Allow Dialog Pages to Finish Downloading Information

In some dialog pages (e.g., Select: Disk Image), the application needs to download information from the server. If you click any buttons on the page before that download is complete, you will get a script error. The workaround is to wait until the page has finished downloading all information from the server before taking any actions. (4849697)

Find Farm Window Displays in Full after Timeout

If you press the **Find** button in the Find Farm dialog after the Find Farm session has timed out, the Find Farm window displays in full. The workaround is to increase the timeout value. To do so, modify the timeout setting in the `web.xml` file in the `/opt/terraspring/gw/war/WEB-INF` directory. Look for the `<session-timeout>` tag. The value is specified in minutes. (4849673)

Display of Newly Created Items in List

Currently, when you create a new item, such as a contract type of account, the newly created item will not be auto-selected after creation. To view the newly created item, select it from the appropriate list. (4849691)

Snapshot Button Not Disabled for New Disk Created

When you create a new disk by flexing a server group, the snapshot button is not disabled as it should be. When you click that button, you will get an error messages, so do not click that button. (4849721)

Deleting Snapshots or Images From the Control Center

When you delete snapshots and images from the Control Center, they are only marked as deleted; they are not yet deleted from the I-Fabric. Until you delete them from the I-Fabric, you will not be able to create snapshots and images with the same names as the ones marked as deleted.

To purge snapshots and images from the I-Fabric, execute the `image -lR` command from the control plane server to view a list of the images marked as deleted, then execute the `image -d` command to delete them from the I-Fabric. See the man pages for details on using the `image` command. (4856854)

Default Gateway Value on Farm Summary Page

When a default gateway for devices on an external subnet have been configured to point to an external router, the farm summary page lists the default gateway as `NONE`. This behavior is caused by devices on an external subnet with no specified default gateway being automatically configured to use the external router. The workaround is to ignore the `NONE` value on the display; the devices will function as expected. (4856847)

BOM Does Not Show Backhaul Devices

The bill of materials (BOM) dialog only shows information about devices managed by the N1 Provisioning Server. Backhaul devices are considered non-managed devices, so the BOM dialog does not include information about backhaul devices. (4856865)

Pressing the Find an Image Button Causes an Error Message to Display

In general, duplicate names within the same account can cause unexpected behavior inside the Control Center. Some of them can cause error messages to display. In most cases, the Control Center prevents you from creating duplicate names within the same account. However, sometimes the Control Center will allow you to create duplicate names, for example while updating the software or application names.

Caution: Do not create duplicate names within the same account. Call your technical support representative if you inadvertently create a duplicate name within the same account. (4856864)

Configuring I-Fabric Properties

Sometimes while configuring I-Fabric properties, if the newly created property name or property value contains a long string with special characters, such as $, %, or # for example, the Commit Changes task will not work properly. Therefore, do not use special characters in I-Fabric properties. The maximum string length for the property name is 12 characters, and for the property value it is 30 characters. (4849701)

Renaming a Farm

When renaming a farm, it is possible that the new farm name already exists, causing a naming collision. When this occurs, the farm details widget will show incorrect information about the farm although the information is not lost.

To resolve this, rename the farm again. To do so, from the File menu choose Save As... (or Rename) to save the farm under a new name. If this attempt is successful, the farm details will show the correct information. (4856858)

Setting a New Password

If you enter a value into the New Password and Re-enter New Password fields and click the **Reset** button, it will not reset the value in these two fields. To resolve this, remove the entered information from the New Password and Re-enter Password fields and click the **Reset** button to reset the value. (4856860)

Multiple Displays of Operating Systems on the Find an Image Page

On the Find an Image Page, the Operating Systems and Applications selection lists might show the same operating system or application multiple times if the same name has been used for operating systems and applications in multiple accounts. To get the expected results while running a search, select all instances of the particular operating system and application in the list that you want to search for. (4856866)

Infrastructure Director Known Issues

Messages Lost During Farm Activation

Sometimes, while activating large farms, messages from the monitoring system are lost. To avoid this problem, increase the UDP message RECEIVE buffer size. It is recommended that the RECEIVE buffer size is set to 65536.

To check the current size, execute:

```
ndd -get /dev/udp udp_recv_hiwat
```

To set the size to 65536 execute:

```
ndd -set /dev/udp udp_recv_hiwat 65536
```

(4856870)

Command Usage References to Firewalls and Load Balancers

Some commands might have references to firewalls and load balancers in their usages as displayed in the man pages. Any command options and usage references to firewalls and load balancers do not apply to the Blades Edition of the N1 Provisioning Server software. Ignore these references. (4856855)

Failures During Disk Copy Operations When Farm Goes Into Standby

When a farm goes into standby mode, disk copy operations for all servers belonging to that farm start simultaneously. However, when there is a failure during the first disk copy operation (e.g., not enough disk space), the other disk copy operations continue until all are completed, and then the failure is reported. To resolve this, ping the farm using the command **`farm -pf`** <*`farm_ID`*>. Then put the farm in standby using the command **`farm -s`** <*`farm_ID`*>. (4849694)

No More Resource Exception When No Servers Available in IDB

When no more provisionable servers are available in the IDB, you will not be able to move a server from one server group to another in a single farm operation. The workaround is to remove the server from the first server group and update the farm. Then add the server to the second server group and update the farm.

Note: The server might be provisioned by another farm between removing it from the first server group and adding it to the second. Consequently a "no more resources" exception will occur. (4849699)

shelfsync Categorizes by Type Not Size

Even though the discovery mechanism detects differences in the blades, such as memory size and number of CPUs, it is currently not possible to make these differences a part of the selection criteria for CPU resources for a farm.

If it is necessary to do this, use the `device` and `devtype` commands to create pools of like-resources from the discovered items that have the common elements that the original resources use. (4849705)

Rebooting Provisionable Servers Overwrites DNS Setup

The N1 Provisioning Server software overwrites the DNS setup information in the `/etc/resolv.conf` configuration file when the provisionable server is rebooted. So if you have made any changes to that file, they will be lost when rebooting the server. The workaround is to create a boot time startup script that will restore the DNS setup information you specified previously. (4849715)

Power Command Issues

The `power` command with the `off` option is very similar to the UNIX command `poweroff`, which powers off the device on which it is executed. When using the `power` command with the `off` option, be sure to have a blank space between `power` and `off`; otherwise you will power off the control plane server. (4857749)

Changing the System Password

The system password is set to a default value of `u8(!xq][~be4`. Perform the following steps to change the system password:

1. Execute the **`encrypter -k`** command to generate the encrypted value of a new system password and put this value in the `/opt/terraspring/etc/pbe.properties` file in the following format:

   `Parameter1=<`*`encrypted_system_password`*`>`

2. Execute the **`encrypter`** command to generate a new encrypted database password and put this value in the `/etc/opt/terraspring/tspr.properties` file in the following format:

   `com.terraspring.db.CPdbConnection.password=<`*`encrypted_db_password`*`>`

3. Execute the **`resetpasswd`** command to reset the passwords for all devices, types, and farms within the I-Fabric. The command only resets passwords in the IDB, not in the physical device. See the man pages for details on using the `resetpasswd` command.

(4856851)

mls Command Does not Show Accurate Status

It is possible that an `mls -a` command might inaccurately report the agent on a server as being marked `DOWN`. If this happens, wait 60 seconds and try again to confirm the status of the node. The normal monitoring of the node by the control plane server is not affected by this condition and it will accurately report a failed node. (4849719)

replacedevice Does Not Remove IP Address

When you are attempting to replace a device with a newly specified device using the `replacedevice` command, the command attempts to move the IP address to the newly specified device but does not remove the IP address from the old device, causing an error condition. To resolve this, change the IP address of the old device to an arbitrary IP address (e.g., 0.0.0.0) using the `device` command. Then use the `replacedevice` command to replace the old device with the new device. The `replacedevice` command works well when no new device is explicitly specified on its command line, thus allowing the system to automatically allocate a new device. (4856857)

Adding a Backhaul Device to a Farm

When adding a backhaul device to a farm, make sure that the port on the switch of the shelf that is reserved for the backhaul device is not in trunking mode. Typically, after bench configuration, the ports on the shelf are in trunk mode. Change this when adding a backhaul device to these ports. (4856867)

Deleting Active Requests Before Stopping the IDB

Make sure that there are no active requests in the system before stopping the IDB server. If the IDB server fails, existing Farm Manager processes sometimes do not exit gracefully. Before restarting the IDB server, stop all hanging Farm Manager processes by performing the following:

1. Check the existence of any Farm Manager processes by executing:
   ```
   /usr/ucb/ps -auxwww | grep -i "com.terraspring.cs.fm"
   ```
2. Use the UNIX `kill` command to stop any hanging Farm Manager processes.

(4856872)

Updating Images Requires New Image Name

When you update an existing image, a copy of the original image is made to a new disk to allow you to upgrade the newly copied image. Before releasing the new image, using the `image -r` command, you must give the new image a unique name. (4877335)

Configuring Port Connectivity When Using a Separate Image Server

For an I-Fabric that has less than three chassis switches and a separate image server, connect the image subnet interface on the image server to the `NETP1` port on the first chassis switch. Then, configure the `NETP1` port of that chassis to the image VLAN (`vlan 8`).

Execute the following set of commands to configure the `NETP1` interface of the Sun Fire B1600 chassis switch:

```
Vty-0#configure
Vty-0(config)#interface ethernet NETP1
Vty-0(config-if)#description External RJ-45 connector NETP1
Vty-0(config-if)#switchport allowed vlan add 8 untagged
Vty-0(config-if)#switchport native vlan 8
Vty-0(config-if)#switchport forbidden vlan add 2
Vty-0(config-if)#end
```

If there are two chassis switches, connect `NETP0` of the second chassis switch to `NETP2` of the first chassis switch. Both of these ports will be configured automatically during the installation process.

For an I-Fabric that has more than three chassis switches and a separate image server, connect the image subnet interface on the image server to a port on the external data layer switch. Then, configure that port of the external data layer switch to the image VLAN (`vlan 8`) and add the image VLAN to the VLAN database.

The image VLAN configured on this switch should be `vlan 8`. Perform the following steps to create `vlan 8`:

```
enable
vlan database
 vlan 8 name ImageVlan
 exit
```

For example, on the Cisco 3550 and 4503 switches, you would execute the following set of commands to achieve this for port `GigabitEthernet 2/19`:

```
qe1-4500>enable
Password:
qe1-4500#
qe1-4500#conf terminal
Enter configuration commands, one per line.  End with CNTL/Z.
qe1-4500 config)#interface GigabitEthernet 2/19
qe1-4500(config-if)#switchport access vlan 8
qe1-4500(config-if)#^Z
qe1-4500(config-if)#write mem
```

(4857752)

Securing DNS Zones for Farms

To make DNS zones for every farm secure from each other set, the `com.terraspring.dns.useacl` property to `true` in the `/etc/opt/terraspring/tspr.properties` file. This property is set to `false` by default. After changing this property, execute `dnsmod sync` to restart the DNS server. (4857751)

System Controller Hangs During Power State Change

During operation on a farm with a large number of servers, the system controller sometimes hangs indefinitely. If this happens, perform the following steps:

1. Stop the farm manager process for the affected farm. To determine the process identification (PID) of the corresponding farm manager process, execute **`/usr/ucb/ps -auxwww | grep "com.terraspring.cs.fm"`**. In the list that displays, look for the process with the farm ID in the command-line arguments.
2. Use the `kill` command (or `kill -9` if necessary) to stop the identified process and any children of this process.
3. Power cycle the hung chassis. The system controller should be accessible after the power cycle. If not, contact your technical support representative.

4. All server blades on the power cycled chassis will loose power and `replaceFailedDevice` requests might be filed before the blades are done rebooting.
5. Restart the aborted farm operation.
6. Delete any `replaceFailedDevice` requests on the rebooted chassis by executing **`request -d`** *<request_ID>*. (4856873)

New Feature

You can now use the GigaSwift™ copper gigabit Ethernet interface card, Part No. X1150A, within the N1 Provisioning Server environment. You can use this network interface card as a VLAN-capable gigabit Ethernet adapter on the Infrastructure Director database (IDB) for farm management.

Initial Installation

During the initial installation of the N1 Provisioning Server software, this card is detected and configured by the N1 Provisioning Server `installer` utility. However, prior to the installation, you need to download and install the patch ID 112119-04 for Solaris 8.

To download the patch, do the following steps:

1. Go to the ULR http://sunsolve.sun.com.
2. Click on **Patches**.
3. Enter the patch ID in the patch finder box.
4. Click **Find Patch**.
5. The patch is available for downloading in the `zip` format. Choose “Download Patch.”

   Note: Do not choose “Download Signed Patch.”

   The Save Dialog appears.
6. Download the patch (zip file) to your local directory.
7. Copy the patch (zip file) to the N1 Provisioning Server.

To install the patch, do the following steps:

1. Use the following command to uncompress the patch file.

   ```
   unzip 112119-04.zip
   ```
2. Add the patch by entering the following command.

   ```
   patchadd 112119-04
   ```

Replacing an Existing Network Interface Card (NIC)

If you are replacing the SysKonnect NIC with the GigaSwift NIC in an existing installation of the N1 Provisioning Server environment, do the following steps:

1. Verify that no farm requests are being processed by typing the following command:

   ```
   request -l
   ```

2. Shut down the server.
3. Follow the steps in the preceding Initial Installation section to download and install the required patch.
4. Update the HAL class of the IDB by doing the following substeps.
   a. Get the device ID of the IDB server device by typing the following command:

      ```
      device -Lr idb.
      ```

   b. Type the following command to update the HAL class:

   ```
   device -s -H com.terraspring.drivers.sun.SunGigaSwiftCPU <IDB_device_ID>
   ```

5. Reboot the server to apply the patch.

Additional Information Not Covered in the Manuals

This section provides information that is not covered in the N1 Provisioning Server 3.0, Blades Edition guides.

Firmware Requirements for the Sun Fire B1600 Blade System Chassis

The following is a list of supported firmware for the Sun Fire B1600 Blade System Chassis:

Device	Firmware
Switch	■ Loader version 0.0.6.7 ■ Boot ROM version 1.0.0.9 ■ Operation Code version 1.0.0.13
System controller	■ SC version 1.0.0.67 ■ SC Boot version 1.0.0.67

Device	Firmware
Blade	■ BSC version 5.0.2 ■ OBP version 4.7.5

Configuring the Control Plane Switch

You can use the Cisco 2950 switch to provide connectivity for the control plane of the N1 Provisioning Server software. In a typical scenario, you can connect the management port of the control plane server and the management port of the chassis switches to this switch.

The management VLAN configured on this switch should be `vlan 9`. Perform the following steps to create `vlan 9`:

```
enable
vlan database
 vlan 9 name ManageMentVlan state active media ethernet
 exit
```

Although the control plane server does not require the control plane switch to have IP connectivity on the management VLAN, you can optionally configure a management IP address on this switch. Perform the following steps to create a management IP on this switch:

```
enable
configure terminal
interface Vlan1
 no ip address
 shutdown
 exit
interface Vlan9
 ip address <IP_address> <IP_subnet_mask>
 no shutdown
 end
```

Because the `vlan 9` interface is configured with an IP address, you also need to move the uplink to the external router to `vlan 9`. To do so, execute the following set of commands:

```
configure terminal
interface Fastethernet 0/<port>
switchport access vlan 9
speed 100
duplex full
end
```

To set the default gateway on the device, do the following:

```
configure terminal
ip default-gateway <IP_of_default_gateway>
end
```

To enable `telnet` to the switch, do the following:

```
configure terminal
line vty 0 4
 password <PASSWORD>
 login
line vty 5 15
 password <PASSWORD>
 login
 exit
```

To set the enable password for the switch, do the following:

```
configure terminal
enable password 0 <password>
end
```

To move a port to a particular VLAN, do the following:

1. Use `telnet` or `console` to connect to the switch.
2. Enter `enable` and `configure` mode and execute the following.

```
interface <IF_NAME>
 switchport access vlan <VLAN_ID>
 speed 100
 duplex full
 end
```

You must move all chassis `NETMGT` and control connections from the control plane and image server to `vlan 9`.

The following example shows a management port of a shelf switch that is connected to `FastEthernet0/24` being moved to `vlan 9`.

Example:

```
configure terminal
interface FastEthernet0/24
 switchport access vlan 9
 end
```

When you are done, execute **`write mem`** to permanently save all the configurations.

To view the switch configuration execute **`show configuration`**. The following is an output example of the `show configuration` command.

Example Output:

```
sw-2950#show configuration
Using 1647 out of 32768 bytes
!
version 12.1
no service single-slot-reload-enable
no service pad
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname sw-2950
!
enable secret 5 $1$byj9$P2S4zO48RKZBG3Sz0F4J/.
enable password root
!
ip subnet-zero
!
spanning-tree extend system-id
!
!
interface FastEthernet0/1
 no ip address
!
interface FastEthernet0/2
 no ip address
!
interface FastEthernet0/3
 switchport mode trunk
 no ip address
!
interface FastEthernet0/4
 no ip address
!
interface FastEthernet0/5
 no ip address
!
interface FastEthernet0/6
 no ip address
!
interface FastEthernet0/7
 no ip address
!
interface FastEthernet0/8
 no ip address
!
interface FastEthernet0/9
 no ip address
!
interface FastEthernet0/10
 no ip address
!
interface FastEthernet0/11
```

```
 no ip address
!
interface FastEthernet0/12
 no ip address
!
interface FastEthernet0/13
 no ip address
!
interface FastEthernet0/14
 no ip address
!
interface FastEthernet0/15
 no ip address
!
interface FastEthernet0/16
 no ip address
!
interface FastEthernet0/17
 no ip address
!
interface FastEthernet0/18
 no ip address
!
interface FastEthernet0/19
 no ip address
!
interface FastEthernet0/20
 no ip address
!
interface FastEthernet0/21
 no ip address
!
interface FastEthernet0/22
 no ip address
!
interface FastEthernet0/23

!
interface FastEthernet0/24
 switchport access vlan 9
 no ip address
!
interface Vlan1
 no ip address
 no ip route-cache
 shutdown
!
interface Vlan9
 ip address 10.5.131.210 255.255.255.0
 no ip route-cache
!
ip http server
!
line con 0
line vty 0 4
 password root
 login
```

```
line vty 5 15
 password root
 login
!
end
```

(4857743)

Additional Information

Configuring Blade Shelves in the Resource Pool

This section describes the configuration of provisionable blade shelves in the resource pool. Configuring provisionable blade shelves is done in three phases:

- Configuring the blade shelf system controller
- Configuring the blade shelf switch
- Configuring the blade server blades

The N1 Provisioning Server installation program automatically performs most of the configuration for each shelf based on a set of parameters you provide. See the *Installation Guide* for details. The following sections describe the specific steps and commands that are executed by the automated shelf configuration tools of the installation program.

Note: However, when you add shelves after the initial installation, you must perform the steps described in the following two sections manually for each added shelf and blade.

Configuring the Blade Shelf System Controller

The main requirement for the network configuration is that the system controller must be accessible from the control plane server via `telnet`. Use the `setupsc` command to configure the system controller.

The following is an example of executing the `setupsc` command. You can configure the system controller differently as long as it meets the requirement described in the previous paragraph. For example, you can choose to setup the Internet Protocol (IP) addresses via a DHCP server.

Example:

```
# telnet 10.5.128.156 2038
Trying 10.5.128.156...
Connected to 10.5.128.156 (10.5.128.156).
Escape character is '^]'.

username: admin
password:
sc>setupsc
Entering Interactive setup mode.
Use Ctrl-z to exit & save. Use Ctrl-c to abort.
Do you want to configure the enabled interfaces [y]? y
Should the SC network interface be enabled [y]? y
Should the SC telnet interface be enabled for new connections [y]? y
Do you want to configure the network interface [y]? y
Should the SC use DHCP to obtain its network configuration [n]? n
Enter the SC IP address [10.5.144.50]: 10.5.144.50
Enter the SC IP netmask [255.255.255.0]: 255.255.255.0
Enter the SC IP gateway [10.5.144.1]: 10.5.144.1
Do you want to configure the the SC private addresses [y]? y
Enter the SSC0/SC IP private address [10.5.144.51]: 10.5.144.51
Enter the SSC1/SC IP private address [10.5.144.52]: 10.5.144.52
Do you want to enable a VLAN for the SC [n]? n
Enter the SMS IP address [0.0.0.0]: 0.0.0.0
Do you want to configure the managed system interface [y]? y
Should all frus be configured to be automatically restarted if hung [y]? n
Should none of the frus be configured to automatically restart if hung
[y]? y
Should all of the blades be configured to power on automatically [y]? n
Should none of the blades be configured to power on automatically [y] y
Do you want to configure the System Controller parameters [y]? y
Do you want to enable CLI event reporting via the telnet interface [y]? y
Enter the level of events to be displayed over the CLI.
(0 = critical, 1 = major, 2 = minor) [0]:
Enter the CLI prompt [ssc1/sc>]:ssc1/sc
Enter the CLI timeout (0, 60 - 9999 seconds) [0]:
Should the password entry echo *'s [n]? n
Do you want to enable NTP [n]? n
sc>
```

Configuring the Shelf Switch

Execute the following steps to configure a shelf switch for an added shelf:

1. Log onto the switch console using the `console` command from the system controller.

```
sc>console ssc0/swt
[Connected with input enabled on fru SSC0/SWT]
Escape Sequence is '#.'

User Access Verification

Username: admin
Password:

      CLI session with the Sun Fire B1600 is opened.
      To end the CLI session, enter [Exit].

Console#
```

2. Setup the VLAN database for the shelf switch.

```
Console#configure
Console(config)#vlan database
Console(config-vlan)#vlan 4 name IdleVlan media ethernet state active
Console(config-vlan)#vlan 8 name ImageVlan media ethernet state active
```

For each VLAN in the infrastructure database, execute the following command:

Note: You can obtain the list of vlans in the database using the **`/opt/terraspring/sbin/vlan -l`** command.

```
Console(config-vlan)#vlan <vlan-num> name VLAN<vlan-num> media ethernet
state active
```

Replace <*vlan-num*> with the actual VLAN number.

```
Console(config-vlan)#exit
```

3. Setup the IP Address and network parameters.

```
Console#configure
Console(config)#snmp-server community admin rw
Console(config)#interface vlan 2
Console(config-if)#ip address 10.5.132.63 255.255.255.0
Console(config-if)#exit
Console(config)#ip default-gateway 10.5.132.1
Console(config)#exit
```

Replace the Simple Network Management Protocol (SNMP) password and IP addresses used in the preceding example with the ones for your system. Set the SNMP password to the same password as the administrator password.

4. Setup the ports connected to the control plane.

```
Console#configure
Console(config)#interface ethernet netp0
Console(config-if)#negotiation
Console(config-if)#no switchport gvrp
Console(config-if)#no lacp
Console(config-if)#switchport mode trunk
Console(config-if)#switchport allowed vlan add 1,4,8,10-255 tagged
Console(config-if)#exit
```

Replace the VLAN range 10-255 in the above command with the exact list of VLANs that you configured in the VLAN database (e.g., 25, 35-45). Repeat this step for all of the following ports (i.e., `netp0, netp2, netp3, netp4, netp5, netp6, netp7`). Configure the `netp1` port to be in the image VLAN (`vlan8`).

5. Save the configuration.

```
Console#copy running-config startup-config
Startup configuration file name [startup.cfg]: startup.cfg
Write to FLASH Programming.
Write to FLASH finish.
Success.

Console#
```

Configuring Blade Servers

Bench configuring the blade servers is performed automatically by the installation program at installation time. However, when you add blades after the initial installation, you must make the following changes to the OpenBoot™ PROM for each added blade.

```
ok setenv boot-device net:dhcp
ok setenv diag-script none
ok setenv diag-switch? False
ok setenv local-mac-address? true
```

(4856846)

Documentation Errata

The following table contains corrections to errors in the N1 Provisioning Server manuals.

Text	Location	Should Read
The control plane server contains the following software packages:	System Administration Guide, chapter 6	The control plane server fulfills the following roles: **Note**: These are not software packages but roles that the control plane server assumes.
Select a port on the data layer switch of the control plane network to connect a backup server.	System Administration Guide, chapter 6	Select a port on the control switch of the control plane network to connect a backup server.
Uncomment the line in the `/etc/netc/conf.` file that reads:	System Administration Guide, chapter 4	Uncomment the line in the `/etc/inetd.conf` file that reads:
Execute the command: `kill -Hup netid`	System Administration Guide, chapter 4	To restart `inetd`, execute the command: `pkill -HUP inetd`
Ensure that `root` is not in the `/etc/ftp` users file	System Administration Guide, chapter 4	Ensure that `root` is not in the `/etc/ftpusers` file

(4857753)