N1 Provisioning Server 3.0 Update 1, Blades Edition, Release Notes

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Release Notes

These release notes include the following topics:

- "N1 Provisioning Server Software Packages" on page 5
- "CD Layout and CD Content" on page 6
- "Related Publications" on page 7
- "Terminology" on page 7
- "Known Issues" on page 8
- "New Features" on page 21
- "Bugs Corrected for This Release" on page 19
- "Additional Information Not Covered in the Manuals" on page 26
- "Additional Information" on page 31
- "Documentation Errata" on page 33

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.

If you want to verify the version installed on your control plane server, type /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 described below.

The Contents of the N1 Provisioning Server 3.0, Blades Edition CD 1 of 2 are:

./Solaris – Contains all N1 Provisioning Server software packages

./Install

./uninstall_PS

./Installer – Contains installer support files

./docs

./docs/N1SERVSUPP.pdf

./docs/N1PROVSERVBEGIN.pdf

./docs/README

The Content of the N1 Provisioning Server 3.0, Blades Edition CD 2 of 2 is:

```
./Images/solaris8_blade_agsol305
```

Related Publications

For further information about the N1 Provisioning Server, see:

- N1 Provisioning Server 3.0, Blades Edition
  - *Implementation Guide*
  - *Installation Guide*
  - *System Administration Guide*
  - *Control Center Management Guide*
- N1 Provisioning Server 3.0 Update 1, Blades Edition
  - *Before You Begin*
  - *Supplement*

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 that are related to the following areas:

- Installation
- Control Center
- Infrastructure Director

Installation

This section describes known issues of N1 Provisioning Server installations.

Different Usernames and Passwords Not Allowed for Multiple Shelves

At the initial installation of the shelves, 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. Therefore, you must assign the same username and password for all system controllers and chassis switches. (4856821)

Segment Manager Cannot Instantiate Farm Manager

After installing the N1 Provisioning Server software, the Segment Manager sometimes 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)

Disk Copying Failure

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

Add the following lines to the file `/etc/opt/terraspring/tspr.properties`

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

(4856862)

System Controller Responds to Old and New IP Address

When you change the Internet protocol (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, connectivity issues to the other device can develop. To resolve this issue, issue the `resetsc` command on the offending system controller. After the system controller successfully boots, it only responds to the newly assigned IP address.

Note – As a precaution, always issue the `resetsc` command after changing an IP address.

(4857745)

Removing the `/images/__imageserver_profile__` File

When you upgrade the N1 Provisioning Server software from version from 3.0.4.7 to a higher version, the `/images/__imageserver_profile__` file from the older version still exists on the image server and contains clear text passwords. Manually remove this file. In case of a new installation of the software, all passwords are encrypted. (4874099)

Image Subnet Mask Length for N1 Provisioning Server Installation

The image subnet mask length for the N1 Provisioning Server installation must be 24. (4891850)

N1 Provisioning Server Software Installation on Chassis

The N1 Provisioning Server software installation requires the presence of at least one chassis in the data center. (4919187)

Installing a Separate Image Server

Use the NFS option when installing a separate image server. The installer utility does not support installing a separate image server using the FTP option. (4924851)

Control Center

This section describes known issues of the N1 Provisioning Server Control Center.

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. 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)

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. 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)

No Rollback After Farm Update Failure

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

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. Choose 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)

Display of Newly Created Items in List

When you create a new item such as an account, contract type, or articles, the newly created item will not be autoselected after creation. To view the newly created item, select it from the appropriate list. (4849691)

Do Not Bookmark Login Page

Do not bookmark any page except the welcome page. (4849693)

Allow Dialog Pages to Finish Downloading Information

In some dialog pages, for example, 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, a script error occurs. Wait until the page has finished downloading all information from the server before taking any actions. (4849697)

JavaScript Error When Configuring a Provisionable Server

While configuring a provisionable server, if you wait more than two hours on the dialog page 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. Close the dialog page and reopen it. (4849700)

Configuring I-Fabric Properties

Sometimes while configuring Infrastructure Fabric (I-Fabric) properties, if the newly created property name or property value contains a long string with special characters such as $, %, or #, the Commit Changes task will not work properly. 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 the limit is 30 characters. (4849701)

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)

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, an error message appears. (4849721)

Default Gateway Value on Farm Summary Page

When a default gateway for devices on an external subnet has 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. Ignore the NONE value on the display. The devices will function as expected. (4856847)

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, issue the `image -lR` command from the control plane server to view a list of the images marked as deleted. Then issue the `image -d` command to delete them from the I-Fabric. See the `image` command man pages for details. (4856854)

Renaming a Farm

When you rename a farm using a farm name that already exists, a naming collision 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. 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 Reenter New Password fields and click the Reset button, the value in these two fields does not reset. To resolve this, remove the entered information from the New Password and Reenter Password fields and click the Reset button to reset the value. (4856860)

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

Duplicate names within the same account can cause unexpected behavior inside the Control Center and 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)

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 nonmanaged devices, so the BOM dialog does not include information about backhaul devices. (4856865)

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 retrieve 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)

Graphics Not Displayed Correctly After Reload Operation

Sometimes when you reload a current farm, the graphics in the navigation bar do not display correctly. Refresh the page. (4857740)

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)

Monitoring Information Display for Farms

Monitoring information is not available for locked farms. Unlock the farm and refresh the monitoring page to view and edit the monitoring information. (4919192)

Control Center – IDB Image Synchronization

When you create an image from the Infrastructure Database (IDB), make sure that the image name is no longer than 32 characters. Otherwise, the synchronization of the image with the Control Center database will fail. (4919193)

Farm Naming Conventions

When you create or rename a farm using a name that already exists, a naming collision occurs. The farm will be temporarily named "New Farm" in the farm details widget to indicate that the farm is not properly saved. If you then decide to change the I-Fabric of this farm and no further error occurred, the farm will be saved as "new farm" with a space in the name. Spaces in farm names are not acceptable. Save the farm with a different name whenever a name collision occurs. (4919210)

Changing Server Group Names

When changing the name of a server group, the number of servers in the group must be 25 or less. If you have more than 25 servers in a group, remove servers from the group to reduce the number of servers to 25 or less, then add them back to the group after the name change process completes. (4924841)

Infrastructure Director

This section describes known issues of the N1 Provisioning Server Infrastructure Director.

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 a failure occurs during the first disk copy operation, for example, 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. 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, these differences are no currently a part of the selection criteria for CPU resources for a farm.

If you need this information, 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. Any changes to that file, will be lost when rebooting the server. Create a boot time startup script that will restore the DNS setup information that you specified previously. (4849715)

`mls` Command Does not Show Accurate Status

An `mls -a` command might inaccurately report the agent on a server as being marked DOWN. 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 monitoring will accurately report a failed node. (4849719)

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)

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 remaining Farm Manager processes by performing the following steps:

1. Check the existence of any Farm Manager processes by executing the following command:

   `/usr/ucb/ps -auxwww | grep -i "com.terraspring.cs.fm"`

2. Use the UNIX `kill` command to stop any remaining Farm Manager processes.

(4856872)

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, type **`/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 child processes.
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 lose 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)

Power Command Issues

The `power` command with the `-off` option is similar to the UNIX command `poweroff`, which powers off the device on which it is issued. 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)

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, issue the `/opt/terraspring/sbin/dnsmod sync` command to restart the DNS server. (4857751)

Configuring Port Connectivity When Using a Separate Image Server

For an I-Fabric that has fewer 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`).

Issue 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`. Type the following to create `vlan 8`:

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

For example, on the Cisco 3550 and 4503 switches, you would issue the following set of commands to achieve this connection 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)

Updating Images Requires New Image Name

When you update an existing image, a copy of the original image is placed onto 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)

Replacing Failed Blades

Before replacing a failed blade with another blade, ensure that you have free blades available by executing the `device -l` command. (4919188)

Adding a New Blade to an Existing Chassis

When adding a new blade to an existing chassis, the new blade is not configured by the `shelfsync` command. Follow the steps described in Chapter 3 of the *N1 Provisioning Server 3.0, Blades Edition, System Administration Guide* to configure the newly added blade. (4919189)

Changing Power State of Provisionable Servers Used in an Existing Farm

Do not independently power on or off provisionable servers in an existing farm. (4919199)

Listing Provisionable Servers in Use

Sometimes the command `device -L -U` does not list all used servers in the system. A better way to determine all used servers in a system is to issue the command `device -l | grep -i used`. (4919200)

Specifying a JumpStart File in the `image` Command

Ensure that the JumpStart™ file exists before you specify it as a parameter of the `-j` option in the `image` command. Otherwise, a `java.lang.NullPointerException` is printed out with a stack trace. (4919203)

`tsprmonitor` Usage

Although the usage information of the `tsprmonitor` command indicates that the `time` parameter is optional, this parameter is mandatory. Therefore the usage should read as follows:

`tsprmonitor -stop` *minutes-to-be-rebooted* `[-c]`

(4919204)

Gigabit Ethernet Card Instance Assignment

The gigabit Ethernet card must be assigned an instance of 0. (4924060)

Bugs Corrected for This Release

The following table describes the bugs that were corrected for this release.

Bug Number	Description
4856851	The procedure for changing the system password has been changed for clarification of required input.
4856875	At the end of an installation process of multiples shelves, the discovery process now correctly identifies unsuccessful shelf discoveries.

Bug Number	Description
4857810	The `encrypter -h` command now correctly displays the usage of that command.
4870368	The N1 Provisioning Server software can now be uninstalled. For details see the*N1 Provisioning Server 3.0 Update 1, Blades Edition Supplement*.
4891798	The `disk` tool has been enhanced with the `-Ui` option, allowing you to change the image ID of an existing image.
4891826	The `bill` command now issues an error message to the error log when an invalid customer ID is entered. The start state and ID and end date and ID fields are now optional.
4891834	This version of the N1 Provisioning Server supports chassis firmware version 1.2.
4891797	All database commands now correctly display their usages when an error is made in using them.
4911811	To configure the behavior of the failover mechanism, alter the property in the `/etc/opt/terraspring/tspr.properties` file. If the `com.terraspring.cs.services.DeviceStatusService.blockReqFailedDevice` property is set to `false`, any detected device failures will not result in blocked failover requests. If this property is set to `true`, any detected device failures will result in blocked failover requests. The property is set to `true` by default, which is the recommended setting. **Note –** This information replaces the last paragraph of the "Handling Failed Farm Devices" section in Chapter 8 of the *N1 Provisioning Server 3.0, Blades Edition, System Administration Guide*.
4917449	The `S95mm start` command now displays a proper exit value if the monitoring daemon fails to start.
4917453	The `discoversfb1600` command VLAN dialog has been changed for clarification of required input.
4917455	The term "extended" has been removed from error messages associated with subnets during installation.
4917456	The screen output of the `check_rel` command has been limited to a width of 80 characters.
4917457	The software now correctly generates billing events for added servers after a device failover.
4917459	When using incorrect chassis login values with the `discoversfb1600` command, this command now generates an error message and exits.

Bug Number	Description
49211435	When upgrading from the N1 Provisioning Server version 3.0.4.7 to 3.0.5.x, the default Oracle DBA account is no longer required. You may now change the DBA account before the installation.

New Features

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 (NIC) as a VLAN-capable gigabit Ethernet adapter on the IDB for farm management.

Initial Installation

During the initial installation of the N1 Provisioning Server software, the interface 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

1. **Go to http://sunsolve.sun.com.**
2. **Click Patches.**
3. **Type the patch ID in the patch finder box.**
4. **Click Find Patch.**
5. **The patch is available for downloading in ZIP format. Select "Download Patch."**

   Note – Do not choose "Download Signed Patch."

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

▼ To Install the Patch

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

   ```
   unzip 112119-04.zip
   ```

2. **Add the patch using the following command:**

   ```
   patchadd 112119-04
   ```

Replacing an Existing NIC

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

▼ To Replace an Existing NIC

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 Hardware Abstraction Layer (HAL) class of the IDB.**

   a. **Retrieve the device ID of the IDB server 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.**

Adding Shelves to an I-Fabric

Use the `/opt/terraspring/sbin/discoversfb1600` command for dynamically adding shelves to an I-Fabric. This tool launches a command-line UI that prompts you for shelf information.

▼ To Add Shelves to an I-Fabric

1. **When prompted for the IP address of the system controllers of the shelves to be added, enter the addresses one per line.**

- If the IP address you added does not exist in the database, the address is added.
- If the IP address you added already exists in the database, the tool gives you the option to rediscover it.
- To reconfigure and rediscover the shelf, select `rediscover`.
- If you opt not to reconfigure and rediscover the shelf, either edit the IP address or delete it from the list.

a. Select the index of the entry to edit and press Return.

You are prompted whether to delete the selected entry or to edit it.

b. Type `yes` to delete the entry or `no` to edit the entry.

c. If you have decided to edit the entry, type the new value, then type `x` to leave the editing process.

2. After you have finished entering the IP addresses of the system controllers of the shelves to be added, you are prompted to configure the switches and the blades of the added shelves.

Note – You can choose not to configure the shelf if its components are already configured and you just want to discover and enter them into the database.

---

3. Type your system controller username at the prompt.

4. Type your system controller password at the prompt.

5. When prompted whether your system controller username and password are the same as your switch username and password, type `y`. Your system controller username and password must be the same as your username and password for the switch.

6. Provide the default gateway, netmask, and virtual local area network (VLAN) ranges for the switch configuration.

7. For each shelf to be configured, type the switch IP address when prompted.

The configuration and discovery of the shelves begins. This process might take several minutes for each shelf.

When the discovery process finishes, shelf components and their interconncetions are automatically added to the database.

8. You are asked whether you want to perform a validation for the newly added components. This test might take up to 30 minutes. If you cannot perform this test, you can, at a later time, validate the provisionable servers by issuing the `/opt/terraspring/sbin/pestest` command.

EXAMPLE 1–1 Adding Shelves to an I-Fabric

```
sp1# discoversfb1600
SFB1600 Discovery
Please enter a list of SFB1600 System Controller IP Addresses
End the list with an empty line
IP Address of Blade System Controller #1: 10.5.132.65
IP Address of Blade System Controller #2: 10.5.132.75
IP Address of Blade System Controller #3:

Checking Blade System Chassis...
1: 10.5.132.65 : OK
2: 10.5.132.75 : OK

Checking Blade System Chassis entries in database....
1: 10.5.132.65 : present in DB
Do you want to rediscover this shelf[yes/no]? yes

Checking the state of shelf (IP: 10.5.132.65) components to see if they
can be deleted from the database...
Shelf id 50200 components are:
        DEVICE_ID       STATUS  FARM_ID TYPE
        50200           FREE    -       cpu:sun-b100s-blade
        50201           FREE    -       cpu:sun-b100s-blade
        50202           FREE    -       cpu:sun-b100s-blade
        50203           FREE    -       cpu:sun-b100s-blade
        50204           FREE    -       cpu:sun-b100s-blade
        50205           FREE    -       cpu:sun-b100s-blade
        50206           FREE    -       cpu:sun-b100s-blade
        50207           FREE    -       cpu:sun-b100s-blade
        50250           USED    -       sw:stiletto-sw
        50260           USED    -       pwr:stiletto-pwr
Shelf id 50200 is in a valid state for DELETION.
Deleting shelf id 50200 and its subcomponents from  the database.
Deleted shelf id 50200 and all its subcomponents from the database.


1: 10.5.132.65 : OK
2: 10.5.132.75 : present in DB
Do you want to rediscover this shelf[yes/no]? no

One or more Blade System Controller(s) are already in the database.
Type 'x' to exit or enter to correct entry:
Enter the index of the entry to correct: 2
2: 10.5.132.75, please enter new value:
Do you want to delete this entry [yes/no]? yes

Following is the new list:
1: 10.5.132.65
Enter index number to correct or 'yes' to accept: yes

Checking Blade System Chassis...
1: 10.5.132.65 : OK

Checking Blade System Chassis entries in database....
```

EXAMPLE 1–1 Adding Shelves to an I-Fabric *(Continued)*

```
1: 10.5.132.65 : OK


Using the following IP addresses:
1: 10.5.132.65
Do you want to configure this shelf [yes/no]? yes

Enter common user name: admin
Enter common password:
Are the switch user name and password the same as the management user
name and password? [yY/nN]y

Configuring devices......
Enter default gateway: 10.5.132.1
Enter netmask: 255.255.255.0
Please enter VLAN ranges, <ENTER> to end the list
Enter VLAN lower bound: 20
Enter VLAN upper bound: 45
Enter VLAN lower bound: 60
Enter VLAN upper bound: 200
Enter VLAN lower bound:
Enter switch IP for shelf with controller 10.5.132.65: 10.5.132.68

Configuring switch with IP 10.5.132.68...
...
...
...
Configuring blades with controller IP 10.5.132.65...
...
...
...
Discovering shelf with IP: 10.5.132.65. Please Wait...
Done!
...
...
...
Validating the blades. This may take up to 30 minutes.
You can choose to skip this step.
Do you want to continue [yes/no]? yes
Testing Blades...
...
...
...
Addition of shelf(s) completed.
```

(4856846)

Uninstalling the N1 Provisioning Server Software

The N1 Provisioning Server software can now be uninstalled. For details, see the *N1 Provisioning Server 3.0 Update 1, Blades Edition Supplement*. (4870368)

Changing the ID of an Existing Image

The `disk` tool has been enhanced with the `-Ui` option, allowing you to change the image ID of an existing image.

For example:

```
disk -Ui 1 2
Warning!!! you are about to change image id of disk 2
new image id will be 1, continue (y/n)? y
```

(4891798)

Chassis Firmware Version 1.2 Supported

This version of the N1 Provisioning Server supports chassis firmware version 1.2. (4891834)

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 table provides 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
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. Type the following steps commands 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, type 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, type the following command :

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

To enable telnet to the switch, type the following commands:

```
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, type the following commands:

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

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

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

   ```
   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`.

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

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

To view the switch configuration type `show configuration`. The following example shows sample output of the `show configuration` command.

```
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

This section provides additional information about the N1 Provisioning Server.

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 that you provide. See the *N1 Provisioning Server 3.0, Blades Edition, Installation Guide* for details. The following sections describe the specific steps and commands that are issued 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 example shows a typical execution of 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 set up the IP addresses via a Dynamic Host Configuration Protocol (DHCP) server.

For 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 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>
```

Documentation Errata

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

Location	Text	Should Read
N1 Provisioning Server 3.0 Update 1, Blades Edition, Supplement	"N1"s Standard DHCP Environment"	"N1's Standard DHCP Environment"
N1 Provisioning Server 3.0, Blades Edition, System Administration Guide, Chapter 6	The control plane server contains the following software packages:	The control plane server fulfills the following roles: **Note –** These items are not software packages but roles that the control plane server assumes.
N1 Provisioning Server 3.0, Blades Edition, System Administration Guide, Chapter 6	Select a port on the data layer switch of the control plane network to connect a backup server.	Select a port on the control switch of the control plane network to connect a backup server.
N1 Provisioning Server 3.0, Blades Edition, System Administration Guide, Chapter 4	Uncomment the line in the `/etc/netc/conf.` file that reads:	Uncomment the line in the `/etc/inetd.conf` file that reads:
N1 Provisioning Server 3.0, Blades Edition, System Administration Guide, Chapter 4	Issue the command: `kill -Hup netid`	To restart `inetd`, issue the command: `pkill -HUP inetd`.
N1 Provisioning Server 3.0, Blades Edition, System Administration Guide, Chapter 4	Ensure that root is not in the `/etc/ftp` users file	Ensure that root is not in the `/etc/ftpusers` file.

(4857753)