



Installation Requirements

Before installing Prime Cable Provisioning, review the licensing and the installation requirements described in this chapter.

This chapter contains the following sections:

- [Licensing, page 1](#)
- [System Requirements, page 1](#)
- [Prime Network Registrar Requirements, page 8](#)

Licensing

Prime Cable Provisioning enables licensing using a licensing file. Each license translates to a DOCSIS IP device. The license file that you receive will contain the number of DOCSIS IP devices that are licensed. For more licensing information, see [Licensing Prime Cable Provisioning](#).



Note

System Requirements

On Solaris

In case of Solaris, you must install Prime Cable Provisioning on a Sun SPARC platform that runs a Solaris 10 operating system and 64 bit hardware system with at least 4 GB memory. We recommend that you use a Sun SPARC multiprocessor platform. Also, you must configure coreadm to avoid overriding of core files. For more information, see Solaris documentation.



Note

Before installing Prime Cable Provisioning, download and install the recommended Solaris patches from the Oracle support site.

Prime Cable Provisioning ships with the required JRE version 1.6.0_32, which resides in the `<BPR_HOME>/jre` directory.

You must also download and install the Java Platform Standard Edition (Java SE) cluster patches recommended by Oracle to install Prime Cable Provisioning on a system that runs Solaris 10. See the following table:

Table 1: Java Standard Edition Cluster Patches for Solaris 10

Patch	Description
120900-04	Libzonecfg patch
121133-02	Zones library and zones utility patch
119254-44	Install and patch utilities patch, for more information, see Installing and Uninstalling Prime Cable Provisioning
118918-24	Solaris crypto framework patch
119042-10	Svccfg and svcprop patch
119578-30	FMA patch
144488-09	Kernel patch

Before you install Prime Cable Provisioning on Solaris, ensure that you install the `—SUNWxcu4—` package, on the same server. This is an optional package available as part of the Solaris OS installation.

On Linux

In case of Linux, Prime Cable Provisioning must be installed on Red Hat Enterprise Linux 6.5, or on CentOS 6.5, using x86-64 (64-bit version of x86), with at least 4 GB memory.



Note The SELinux should be disabled.

To disable SELinux feature, modify the `config` file using the following command:

```
# vi /etc/selinux/config
```

'`config`' - is the File that controls the state of SELinux on the system. SELinux value is to be set to '`disabled`' in this file.

Prior to installation of Prime Cable Provisioning on Linux, ensure that the `-sysstat-` package is installed, this is an optional package, for the proper execution of the diagnostic scripts.

RDU Redundancy (an optional feature) can be configured on RHEL 6.5 and CentOS 6.5 platform. For more information on RDU Redundancy, see [Setting Up RDU Redundancy](#).

The below 32 bit library files need to be present in the 64 bit server which we are trying to install CNR_EP.

- libframework.so
- libgssapi_krb5.so.2
- libk5crypto.so.3
- libkrb5.so.3
- libkrb5support.so.0
- libsasl2.so.2

- libz.so.1

These files can be either in: `/usr/lib` or `/lib` location.

Once these files are copied to the location, the `LD_LIBRARY_PATH` needs to be updated accordingly with the file location. The DHCP server needs to be restarted.

Hardware Requirements

The resource recommendations for Solaris and Linux are shown below in the respective topics. Resource recommendations corresponds to the number of devices in the provisioning group or RDU. PWS resource recommendation is independent of the number of devices in the RDU.

[Solaris PG Hardware Recommendations, on page 3](#)

[Solaris RDU Hardware Recommendations, on page 4](#)

[Solaris PWS Hardware Recommendations, on page 4](#)

[Linux PG Hardware Recommendations, on page 5](#)

[Linux RDU Hardware Recommendations, on page 5](#)

[Linux PWS Hardware Recommendations, on page 6](#)



Note

- The resource recommendations mentioned in the above topics for Solaris and Linux, are the resources required for the components itself. These recommendations does not include the OS overhead or the overhead of any other applications installed on the server.
- **Server/VM configuration:** This is to be configured by considering the resource requirement of the component being installed on the respective Server/VM.

Solaris PG Hardware Recommendations

Devices	Server	# Cores	Memory	%Swap	Disk
100K	DPE	2	2 GB	2 GB	20 GB
	KDC				
250K	DPE	2	2 GB	2 GB	20 GB
	KDC				
500K	DPE	2	4 GB	4 GB	20 GB
	KDC ⁽¹⁾				
1M	DPE	4	8 GB	8 GB	40 GB
2M	DPE				

⁽¹⁾ No more than 500K SECURE mode MTA devices recommended per provisioning group (500K MTA equals 500K eCM and 500K eMTA)

Cores assumes 8 threads/core (UltraSPARC T2 Core)

%Swap space should be equal or more than memory (RAM)

Solaris DPE that requires 20 GB disk space uses BPR_DATA=10 GB and BPR_HOME=10 GB

Solaris DPE that requires 40 GB disk space uses BPR_DATA=30 GB and BPR_HOME=10 GB

Solaris RDU Hardware Recommendations

Devices	Server	# Cores	Memory	%Swap	Disk
100K	RDU	2	8GB	8GB	40GB ⁽¹⁾
250K					
500K					
1M	RDU	4	16GB	16GB	80GB ⁽²⁾
2M					
Greater than 2 Million	RDU	8	32 GB	32GB	200GB ⁽²⁾

⁽¹⁾ 3 drive configuration - 1 drive for OS, 1 drive for DB logs and 1 drive for DB

⁽²⁾ External RAID array recommended

Cores assumes 8 threads/core (UltraSPARC T2 Core)

%Swap space should be equal to memory(RAM)

Solaris RDU that requires 40 GB disk space uses BPR_DATA=15 GB, BPR_DBLOG=15 GB and BPR_HOME=10 GB

Solaris RDU that requires 80 GB disk space uses BPR_DATA=30 GB, BPR_DBLOG=30 GB and BPR_HOME=20 GB

Solaris RDU that requires 200 GB disk space uses BPR_DATA=150 GB, BPR_DBLOG=30 GB and BPR_HOME=20 GB

Solaris PWS Hardware Recommendations

Server	# Cores	Memory	%Swap	Disk
PWS	4	4 GB	4 GB	20 GB

Cores assumes 8 threads/core (UltraSPARC T2 Core)

%Swap space should be equal to memory(RAM)

Solaris PWS that requires 20 GB disk space uses BPR_DATA=10 GB and BPR_HOME=10 GB

Linux PG Hardware Recommendations

Devices	Server	# Cores	Memory	%Swap	Disk
100K	DPE	2	2 GB	2 GB	20 GB
	KDC				
250K	DPE	2	2 GB	2 GB	20 GB
	KDC				
500K	DPE	2	4 GB	4 GB	20 GB
	KDC ⁽¹⁾				
1M	DPE	4	8 GB	8 GB	40 GB
2M	DPE				

⁽¹⁾ No more than 500K SECURE mode MTA devices recommended per provisioning group (500K MTA equals 500K eCM and 500K eMTA)

%Swap space should be equal or more than memory (RAM)

Linux DPE that requires 20 GB disk space uses BPR_DATA=10 GB and BPR_HOME=10 GB

Linux DPE that requires 40 GB disk space uses BPR_DATA=30 GB and BPR_HOME=10 GB

Linux RDU Hardware Recommendations

Devices	Server	# Cores	Memory	%Swap	Disk
100K	RDU	2	8GB	8GB	40GB ⁽¹⁾
250K					
500K					
1M	RDU	4	16GB	16GB	80GB ⁽²⁾
2M					
Greater than 2 Million	RDU	8	32 GB	32GB	200GB ⁽²⁾

%Swap space should be equal or more than memory (RAM)

Linux RDU that requires 40 GB disk space uses BPR_DATA=15 GB, BPR_DBLOG=15 GB and BPR_HOME=10 GB

Linux RDU that requires 80 GB disk space uses BPR_DATA=30 GB, BPR_DBLOG=30 GB and BPR_HOME=20 GB

Linux RDU that requires 200 GB disk space uses BPR_DATA=150 GB, BPR_DBLOG=30 GB and BPR_HOME=20 GB

Linux PWS Hardware Recommendations

Server	# Cores	Memory	%Swap	Disk
PWS	4	4 GB	4 GB	20 GB

PWS that requires 20 GB disk space uses BPR_DATA=10 GB and BPR_HOME=10 GB

Database Requirements

Before you install Prime Cable Provisioning 5.3.1, ensure that the requirement for the file system block size and the support for large files in the file system are met.

File-System Block Size

On Solaris

For optimum performance and reliability of the Prime Cable Provisioning database, configure the file system or systems that contain the database files and database log files with an 8 KB or greater block size. If your system configuration does not support an 8-KB block size, then configure the block size in multiples of 8 KB; for example, 16 KB or 32 KB.



Note

The block size cannot be changed after the Unix File System (UFS) is mounted with a value. The value has to be set during Solaris disk partition.

ZFS is a new file system in Solaris 10 OS which provides excellent data integrity and performance compared to other file systems. The default block size for ZFS is 128 KB. In Prime Cable Provisioning, the RDU and DPE support file system with block size of 8 KB to 64 KB. So it is recommended to configure a block size of 8KB for optimal performance.

The installation program prompts you to specify a directory in which to install database files, and database transaction log files. These directories are identified in Prime Cable Provisioning with the system variables BPR_DATA, and BPR_DBLOG, respectively. You can specify the same directory for these, which will contain both database files and database transaction log files.

To verify that a directory resides on a file system with a minimum of 8-KB block size:

Procedure

- Step 1** Run the UNIX **mount** command without any parameters to determine on which file-system device the directory resides. The default directory is */var/CSCObac*.
For example:

```
# mount
```

```
/var on /dev/dsk/c0t0d0s4
read/write/setuid/intr/largefiles/logging/xattr/onerror=panic/
dev=2200004 on Thu Jun 15 16:58:21 2006
```

In this example, the file-system device is `/dev/dsk/c0t0d0s4`.

- Step 2** To determine the file-system block size, use the `df` command.
For example:

```
# df -g /dev/dsk/c0t0d0s4
```

```
/var (/dev/dsk/c0t0d0s4): 8192 block size 1024 frag size
961240 total blocks 851210 free blocks 755086 available 243712 total files
239730 free files 35651588 filesys id
ufs fstype 0x00000004 flag 255 filename length
```

In this example, the block size is 8192 bytes, which is 8 KB. The block size of the selected directory, therefore, is correct.

On Linux

File system of all components of Prime Cable Provisioning supports a block size of 4 KB.

You can specify the block size when you create the file system using the command `mkfs`. For more details on the command `mkfs`, see `man mkfs` manual page.

To verify that a directory resides on a file system with a minimum of 4 KB block size run the following command:

```
# tune2fs -l /dev/sda2 | grep "Block size"
```

```
Block size: 4096
```

In this example, the block size is 4096 bytes, which is 4 KB.

Large File Support

Ensure that the file system in which you place database files is configured to support files larger than 2 GB.

On Solaris

To verify large file support:

Procedure

- Step 1** Run the UNIX `mount` command without parameters.
- Step 2** Check whether the intended file system contains the keyword `largefiles`.
For example:

```
# mount
```

```
/var on /dev/dsk/c0t0d0s4
read/write/setuid/intr/largefiles/onerror=panic/dev=2200004 on
Thu Jun 15 08:07:53
```

In this example, the output contains the keyword *largefiles*. This file system, therefore, can support files larger than 2 GB.

Note If large file support is not configured, add the *largefiles* option in the file system features using the command:

```
# vi /etc/mnttab
```

On Linux

To verify large file support:

Procedure

Step 1 Run the following command:

```
# tune2fs -l /dev/sda2 | grep large_file
```

Step 2 Check whether the intended file system contains the keyword **large_file**.

```
Filesystem features: has_journal ext_attr resize_inode dir_index filetype
needs_recovery extent flex_bg sparse_super large_file huge_file uninit_bg
dir_nlink
extra_isize
```

In this example, the output contains the keyword *large_files*. This file system, therefore, can support files larger than 2 GB.

Note If large file support is not configured, modify the file system features using the command `tune2fs` to enable large file support. For more details on the command, see the Linux man page for `tune2fs`.

Prime Network Registrar Requirements



Note

To install Prime Network Registrar Extension Points, you must install Prime Network Registrar 8.x.

The following are the prerequisites for installing Prime Network Registrar:

- Prime Network Registrar must be compatible with Prime Cable Provisioning. For details, see [Prime Cable Provisioning and Prime Network Registrar Compatibility Matrix](#).
- You must install the compatible version of Prime Network Registrar 8.x.
- You must install a Prime Network Registrar DHCP server on a computer running Solaris 10, or Linux 6.5, or CentOS 6.5.

- In a failover deployment of Prime Cable Provisioning, you must configure two DHCP servers. For information on configuring failover on Prime Network Registrar servers, see the [Cisco Prime Network Registrar 8.x User Guide](#).
- After you install Prime Cable Provisioning, you must create its scopes and policies in Prime Network Registrar.

**Note**

Prime Network Registrar Extension Points must be installed in the Prime Network Registrar setup and it must be able to communicate with the other Prime Cable Provisioning components.
