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

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.

System Requirements

On Linux

In case of Linux,Prime Cable Provisioning must be installed on Red Hat Enterprise Linux 7.x/8.x or on CentOS 7.x/8.x versions, 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 7.x or CentOS 7.x version platforms. For more information on RDU Redundancy, see Setting Up RDU Redundancy.

Hardware Requirements

The resource recommendations for Linux is shown below. 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.

✎

Note

- The resource recommendations mentioned in the above topics for 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.

- Prime Cable Provisioning recommends usage of virtual machines (VMs) which are Thick provisioned.

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 6.3, 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 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 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 9.x or later.

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 9.x or later.

- You must install a Prime Network Registrar DHCP server on a system running Linux 7.x/8.x (RedHat or CentOS).

- In a failover deployment of Prime Network Registrar, you must configure two DHCP servers. For information on configuring failover on Prime Network Registrar servers, see the Cisco Prime Network Registrar 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.