Cisco Prime Provisioning 7.0 Release Notes

March 14, 2018

All documentation, including this Cisco Prime Provisioning 7.0 Release Notes document and any or all parts of the Cisco Prime Provisioning 7.0 documentation set, might be upgraded over time. Therefore, we recommend you to access the Prime Provisioning 7.0 documentation set online at:

http://www.cisco.com/go/provisioning

You can also navigate to this documentation set by clicking **Help** on the Home Page of the Prime Provisioning 7.0 product.

The information in this release notes provides an overview of this release and helps you understand it at a high level. After reading the *Cisco Prime Provisioning 7.0 Documentation Overview*, please read this release note prior to reading any other documentation for Prime Provisioning 7.0.

URL's for base information about Prime Provisioning 7.0, a product overview, and suggested reading order of these documents is given in Related Documentation, page 18.

Contents

This document includes the following sections:

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Introduction

Prime Provisioning is a management solution for network provisioning that enables the automation and scaling of complex, policy-driven network provisioning tasks to produce consistent and reliable service deployments. Prime Provisioning does this by planning, provisioning, and auditing services across core, aggregation, access, and consumer premises equipment devices.

Cisco Prime Provisioning enables fast deployment and time-to-market of Multiprotocol Label Switching (MPLS) and Carrier Ethernet technologies. In addition, the Prime Provisioning Traffic Engineering Management (TEM) module is Cisco's exclusive planning and provisioning tool for Cisco MPLS Traffic Engineering-enabled routers. MPLS Transport Profile (TP) provides service providers with a reliable packet-based technology that is based upon circuit-based transport networking, and hence is expected to align with current organizational processes and large-scale work procedures similar to other packet transport technologies.

The Cisco Prime Provisioning solution has management capabilities for MPLS VPN, L2VPN and Carrier Ethernet, MPLS TP, and MPLS Traffic Engineering. These capabilities that comprise Cisco Prime Provisioning can be used in a stand-alone manner or can be integrated with the Prime Carrier Management March 2018 suite.

Cisco Prime Provisioning 7.0 includes many new and enhancement features whose highlights are listed below:

- L2 Features
  - Support for pseudowire interface and cross connect between the service instance to the pseudowire interface.
  - Support for L2 EVC services with autopick bridge domain name with new L2-X format.
- L3 Features
  - Support for BGP additional paths and ip helper address for L3VPN configuration for ASR 920 devices, which is a new syntax support for ASR 920 devices.
  - Auto Rd Configuration support in Prime Provisioning.
  - Support for modification of Site of origin (SOO) during modification of customer site.
- Infrastructure
  - Firefox browser support for standard version 55 and ESR 52.

Installing Prime Provisioning 7.0

When purchasing Prime Provisioning you will be prompted to select either delivery by

- eDelivery, in which case you will receive an email with a download link, or physical DVD media

If the version is not the latest, you are advised to upgrade. The latest Prime Provisioning 6.x version can be ordered for download by eDelivery (or DVD shipment) free of charge, provided that you have a Software and Services (SAS) contract. The minor upgrade can be ordered through the Product Upgrade Tool (PUT):
http://tools.cisco.com/gct/Upgrade/jsp/productUpgrade.jsp

Additionally, you are strongly advised to apply the latest available service patch. Prime Provisioning patches are available at
http://software.cisco.com/download/navigator.html?mdfid=284127465&flowid=37682

For information about the installation process, see the *Cisco Prime Provisioning Installation Guide 7.0.*

Installation Notes

After the Patch upgrade, certain host configuration properties are not retained. So, it is advisable to create a backup of all the DCPL settings, by running the following script.

$PRIMEF_HOME/bin/extractproperties.sh

Once you upgrade, run the following script to restore the DCPL settings.

$PRIMEF_HOME/bin/extractproperties.sh -replace

New Features and Enhancements in Prime Provisioning 7.0

This section describes features and enhancements added or modified in Prime Provisioning 7.0.

For system recommendations, refer to the *Cisco Prime Provisioning Installation Guide 7.0,* and for device and platform support, refer to Cisco Prime Provisioning Supported Devices. It includes the network devices and related software supported with Prime Provisioning 7.0. We recommend that you thoroughly review this list before even planning your installation, to be sure you have all the hardware and software needed for a successful installation.

Prime Provisioning 7.0 is based on Cisco Prime Provisioning 6.8.2.

Prime Provisioning 7.0 includes problems fixed since Cisco Prime Provisioning 6.8.2. See Prime Provisioning 7.0 Resolved and Open Bugs, page 16.

Note Cisco Prime Provisioning 7.0 is compatible with Cisco Prime Central 2.0. Make sure you upgrade Cisco Prime Central to version 1.5.3 before upgrading and integrating the current version of Prime Provisioning.

Note

- Prime Provisioning can be used as a standalone product or as a part of Prime Carrier Management March 2018. When installed as part of the suite, you can launch Prime Provisioning from the Prime Central portal. For more information about Prime Central, see the documentation for Cisco Prime Central.
- Cisco Prime for IP Next Generation Networks (IP NGN) has been renamed as Cisco Prime for Evolved Programmable Networks (EPN). Please keep this in mind when viewing the suite and application documentation for the upcoming Cisco Prime Carrier Management release.

Items specific to Prime Provisioning 7.0 include the new and changed information as documented in the following sections:

- Features introduced in Prime Provisioning 6.8.1
  - General Features, page 4
  - L2EVC/TDM-CEM New Features, page 6
  - API New Features, page 8
- Features introduced in Prime Provisioning 6.8.2
  - General Features, page 9
  - L3 Features, page 9

Features Introduced in Prime Provisioning 6.8.1

General Features

This section summarizes the general features that were added in Prime Provisioning 6.8.1.

Supporting NBI for IPv6 Address Pool

From this release, NBI support has been extended for **IPv6 Address** pool. IPv6 Address pool is used by MPLS services while automatically assigning the IPv6 Addresses from the pool.

Below is a sample **NBI XML** highlighting the tags, attributes and values required for creation of a new IPV6 Address pool.

```
<soapenv:Envelope>
   <soapenv:Header>
     <ns0:message id="199" timestamp="2016-07-05T17:15:38.885Z"
sessiontoken="E4DBF8A8E61BF4A77FF8B6106819C433"/>
   </soapenv:Header>
   <soapenv:Body>
    <ns1:createInstance>
      <objectPath xsi:type="ns1:CIMObjectPath">
        <className xsi:type="xsd:string">IPv6AddressPool</className>
        <properties xsi:type="ns1:CIMPropertyList" soapenc:arrayType="ns1:CIMProperty[]">
          <item xsi:type="ns1:CIMProperty">
            <name xsi:type="xsd:string">IPv6AddressPool</name>
            <value xsi:type="xsd:string">2090:588:af23::/110</value>
          </item>
          <item xsi:type="ns1:CIMProperty">
           <name xsi:type="xsd:string">SubnetMask</name>
            <value xsi:type="xsd:string">127</value>
           </item>
           <item xsi:type="ns1:CIMProperty">
             <name xsi:type="xsd:string">Region</name>
             <value xsi:type="xsd:string">Reg_00X</value>
           </item>
         </properties>
       </objectPath>
     </ns1:createInstance>
   </soapenv:Body>
 </soapenv:Envelope>
```

NBI Support for Automatically Assigning the IPv6 Addresses

From this release, Prime Provisioning extended NBI support for automatically assigning the **IPv6 Addresses** for MPLS Services from the pool.

IPv6 Address allocation is supported only for **Regular: PE-CE MPLS** policy and services.

Below are the sample **NBI XML** snippets highlighting the tags, attributes and values required for automatically assigning the **IPv6 Addresses** from the pool during creation/modification of MPLS Policies.

```
<item xsi:type="ns1:CIMProperty">
     <name xsi:type="xsd:string">Auto_Assign_IPv6_Address</name>
     <value xsi:type="xsd:string">true</value>
     <qualifier xsi:type="ns1:CIMQualifier">
       <name xsi:type="xsd:string">editable</name>
       <value xsi:type="xsd:string">true</value>
     </qualifier>
   </item>

   <item xsi:type="ns1:CIMProperty">
     <name xsi:type="xsd:string">IPv6_Address_pool_type</name>
     <value xsi:type="xsd:string">Region Pool</value>
     <qualifier xsi:type="ns1:CIMQualifier">
       <name xsi:type="xsd:string">editable</name>
       <value xsi:type="xsd:string">true</value>
     </qualifier>
   </item>

  <item xsi:type="ns1:CIMProperty">
     <name xsi:type="xsd:string">IPv6_Address_pool_mask</name>
     <value xsi:type="xsd:string">126</value>
     <qualifier xsi:type="ns1:CIMQualifier">
       <name xsi:type="xsd:string">editable</name>
       <value xsi:type="xsd:string">true</value>
     </qualifier>
   </item>
```

Note To create an IPv6 addressing based MPLS-SR via NBI, the Policy must be created with IP numbering scheme as **IPv6 Numbered**.

Deprecating Config Audit Functionality

From this release, Prime Provisioning deprecates the Config Audit functionality.

In Prime Provisioning, whenever an SR is deployed, configlets are pushed into the devices and config audit functionality compares the generated configlet against the one downloaded to the device.

During subsequent modification of SR, config audit only compares the additional/modified configlets which are pushed into the device. This doesn't serve any purpose as it doesn't check whether the initial configlets pushed into the devices are still available and valid.

Config Audit functionality can be reactivated using DCPL properties. If the value of the DCPL property is set to true, Prime Provisioning will not perform config audit. If the value is set to false, Prime Provisioning will perform config audit. The default value of DCPL property is true.

DCPL Path:

```
Provisioning\ProvDrv\DeprecateConfigAudit
```

Note Once the DCPL property is set to false, Prime Provisioning need to be restarted to re-display the Config Audit in the Task Manager.

L2EVC/TDM-CEM New Features

This section summarizes features that were added to enhance EVC services in Prime Provisioning 6.8.1.

Supporting Trunk EFP for ASR920 UPE device

In Prime Provisioning 6.8.1, a new attribute **Enable Trunk EFP** has been added in Service Request screens for UPE device, which gives flexibility to make many Layer 2 flow points within one interface. One interface can have only one trunk support and doesn't provide support for switchport trunk. Enable Trunk EFP attribute supports flex. It appears in the screen only when the Links with L2 Access Nodes or Rings contain ASR920 device. It provides support only for ASR920 IOS device.

If Enable Trunk EFP check box is enabled user will get "**service instance trunk <id> ethernet** and **encapsulation dot1q add <id>/ encapsulation dot1q remove <id>**" commands. If this check box is checked, Inner VLAN, Autopick Outer VLAN and Autopick Inner VLAN are not supported. For Rewrite Type only Pop is supported.

Note In SR modification, Encapsulation of VLAN Id does not support add and remove commands together due to XDE framework limitation. As a workaround, same can be achieved by using policy customization.

This is feature is supported through GUI, NBI and Physical Rings.

Below are the sample configlets:

```
service instance trunk <id> ethernet
   encapsulation dot1q add <value>
   rewrite ingress tag pop <id> symmetric
   bridge-domain from-encapsulation
```

Extending E-Tree Functionality

From Prime Provisioning 6.8.1, E-Tree role functionality has been extended to generate neighbor commands under vfi for hubs with E-Tree role as root or leaf for EVC services.

In accordance with this functionality, when the **E-Tree** role of the **HUB** node is set as **ROOT**, under vfi, neighbor commands gets generated for all the other hubs, and when the **E-Tree** role of the **HUB** node is set as **LEAF**, under vfi, neighbor commands gets generated for only the hub node with E-tree role as root.

Below are the sample configlets.

Example: HVPLS SR with E-Tree (2 HUBs_root, 2 HUBs_leaf)

cl-test-l2-7600-5 (HUB-root)	isc-cl-test-l2-asr9006-3 (HUB_leaf)

bridge-domain 558
l2 vfi vpn1-85254 manual
  vpn id 85254
  neighbor 192.18.156.71 encapsulation mpls
  neighbor 192.168.5.49 encapsulation mpls
  neighbor 192.169.105.65 encapsulation mpls
vlan 558
  exit
interface GigabitEthernet2/2
  service instance 885 ethernet
  description EVC-JOBID:15
  encapsulation dot1q 747
  bridge-domain 558
  exit
interface Vlan558
  no ip address
  description EVC-JOBID:15
  xconnect vfi vpn1-85254
  no shutdown
	interface GigabitEthernet0/1/0/12.552
	l2transport
	  description EVC-JOBID:15
	  encapsulation dot1q 552
	  no shutdown
	l2vpn
	  bridge group Customer1
	  bridge-domain ISC-vpn1-85254
	  interface
	GigabitEthernet0/1/0/12.552
	  split-horizon group
	  vfi vpn1-85254
	  neighbor 171.16.150.47 pw-id 85254
	  neighbor 192.18.156.71 pw-id 85254

isc-asr903 (HUB_root)	**isc-cl-test-me3800x-1 (HUB_leaf)**

bridge-domain 669
  exit
l2 vfi vpn1-85254 manual
  vpn id 85254
  bridge-domain 669
  neighbor 171.16.150.47 encapsulation mpls
  neighbor 192.168.5.49 encapsulation mpls
  neighbor 192.169.105.65 encapsulation mpls
interface GigabitEthernet0/0/3
  service instance 996 ethernet
  description EVC-JOBID:15
  encapsulation dot1q 369
  bridge-domain 669
  exit
	bridge-domain 550
	  exit
	l2 vfi vpn1-85254 manual
	  vpn id 85254
	  neighbor 171.16.150.47 9632
	encapsulation mpls no-split-horizon
	  neighbor 192.18.156.71 9632
	encapsulation mpls no-split-horizon
	vlan 550
	  exit
	interface GigabitEthernet0/14
	  switchport mode trunk
	  switchport trunk allowed vlan none
	  service instance 554 ethernet
	  description EVC-JOBID:15
	  encapsulation dot

Supporting SONET to SONET Provisioning

From this release, Prime Provisioning extended SONET–SONET provision support for EVC TDM-CEM services which will allow users to select **SONET** as a controller at A-End and Z-End. Prior to this release users were able to select SONET as a controller only at Z-End. In accordance with this functionality for CEM Container Type, a new value **SONET** controller has been introduced in both Policy editor screen and Service Request editor screen to provision SONET to SONET connectivity.

Supported Attributes are, when Framing Type is SDH:

- tug-3 Number: (ranges: 1-3)
- tug-2 Number: (ranges: 1-7)
- e1-Number: (ranges: 1-3)
- Time Slots: (1, 10-20, 24), (ranges: 1-31)

When Framing Type is SONET:

- sts-Number: (ranges: 1-3)

- VGT Number: (ranges: 1-7)
- T1 line-Number: (ranges: 1-4)
- Time Slots: (1, 10-20, 24), (ranges: 1-24)

These attributes are available in SR Link attribute at SR level.

Below are the sample configlets.

Example 1: Service Options: **SATop_UNFRAMED**, CEM Container Type: **SONET** and Framing Type: **SONET**

isc-asr903b (A Terminal)	isc-cl-test-l2-7600-6 (Z Terminal)

Configlet #4, Job ID 81 (Created: 2016-11-11 02:55:04)
 	
controller SONET 0/2/1
  sts-1 2
  mode vt-15
  vtg 7 t1 3 cem-group 201 unframed
interface CEM0/2/1
  cem 201
  xconnect 192.168.5.49 453 encapsulation mpls
	Configlet #3, Job ID 81 (Created: 2016-11-11 02:57:56)
	
	controller SONET 3/0/0
	  sts-1 2
	  vtg 6 t1 3 cem-group 908 unframed
	interface CEM3/0/0
	  cem 908
	  xconnect 1.1.78.79 453 encapsulation mpls

Example 2: Service Options: **CESoPN_TIMESLOT**, CEM Container Type: **SONET** and Framing Type: **SDH**

isc-asr903b _A Terminal	ems7606c _Z Terminal

Configlet #1, Job ID 35 (Created: 2016-11-09 04:53:26)
 	
controller SONET 0/2/2
  au-4 1 tug-3 1
  tug-2 1 e1 1 cem-group 342 timeslots 10
interface CEM0/2/2
  cem 342
  xconnect 20.10.10.100 5667 encapsulation mpls
	Configlet #1, Job ID 35 (Created: 2016-11-09 04:53:26)
	
	controller SONET 3/3/0
	  au-4 1 tug-3 1
	  tug-2 1 e1 1 cem-group 1 timeslots 10
	interface CEM3/3/0
	  cem 1
	  xconnect 1.1.78.79 5667 encapsulation mpls

API New Features

All Application Programming Interface (API) features are explained in detail in the *Cisco Prime Provisioning API Programmer Guide 7.0* and the accompanying *Cisco Prime Provisioning API Programmer Reference 7.0*.

New features added in Prime Provisioning are generally available via both the GUI and APIs. See the respective sections in this document for a description of new features under each service.

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Features Introduced in Prime Provisioning 6.8.2

General Features

This section summarizes the general feature that were added in Prime Provisioning 6.8.2.

initdb Script Enhancements to Retain DCPL Values with Configured Values

During Prime Provisioning upgrade, to retain the Dynamic Component Properties Library (DCPL) property values without a reset, use the following CLI commands:

```
./prime.sh stop
./prime.sh startdb
./prime.sh initdb.sh noreset
./prime.sh start
```

The values are retained or updated in the Prime Provisioning repository based on the following criteria.

1. When the *initdb.sh* script is run without any argument, Prime Provisioning reads the DCPL properties from *vpnsc.properties* and updates them in the Prime Provisioning repository.
2. When the *initdb.sh* script is run with *noreset* argument, Prime Provisioning retains the DCPL values which are already configured.
3. When the *initdb.sh* script is run with some irrelevant argument other than the *noreset* argument, Prime Provisioning will display an error message; “The only supported argument for *initdb.sh* is *noreset*.”

L3 Features

Supporting Manual Allocation of IPv6 Address from IPv6 Address Pool

From this release, you can enter an IPv6 address manually in the IP Address Scheme window of Cisco Prime Provisioning (CPP) while creating an MPLS service request. The IPv6 address entered must be available in the IPv6 address pools. If the IPv6 address belongs to a valid IPv6 block, then the IPv6 address is blocked as allocated and is updated in the respective IPv6 pool. The IPv6 address pool is then split as valid IPv6 address blocks or pools.

While entering the IPv6 address, ensure that you remember the following conditions:

1. The subnet mask that you enter should be same as that of the IPv6 pool mask.
2. The IPv6 address mask of the Provider Edge (PE) interface and the Customer Edge (CE) interface must be under the same subnet mask as that of the IPv6 address pool.

Once the allocation is successful, you can view the valid IPv6 address pools with Allocated status in the Resource Pools window of CPP.

To remove the MPLS service request, you need to release the IPv6 address back to the available pool. The pools that are split as blocks are combined again into a single pool. For this, you can either decommission the service or perform force delete of the IPv6 allocated block or pool.

Extending VLAN-ID Range to Support BVI Interfaces with Values Range

Prime Provisioning 6.8.2 release allows you to create MPLS SR with VLAN-ID that ranges between 1-65535 for L3VPN/MPLS services on ASR9K series devices, only when the **EVC Service** is enabled.

Note This functionality supports only PE devices of IOS-XR type.

When you enable the **EVC Service** checkbox in the **MPLS Service Request Editor** page, the VLAN-ID value is automatically updated/changed to support VLAN-ID ranges of 1-65535.

It is recommended to enter the VLAN-ID ranges within the specified range otherwise, an exemption occurs in the following instances:

- On clicking **Next**, an invalid VLAN-ID error message is displayed when the value entered is greater than 65535.
- If the selected device is IOS and the given VLAN-ID value is more than 4094 an error message is displayed.

Note Enabling EVC service on L3VPN creates BVI virtual interfaces to allow routing through BVI interfaces. BVI interfaces can be configured in the range of 1-65535. This is because Prime Provisioning does not have an option to provide BVI interface and thus uses the VLAN- ID value as BVI interface value. The extended value of 1-65535 specified in the **VLAN-ID** range field allows you to create BVI interface with BVI interface number range 1-65535.

Supporting EVPN-VPWS Attributes through a Customization XML File

From this release, EVPN-VPWS configurations are supported by importing a EVPN-VPWS customization.xar file as part of Prime Provisioning policies and service requests to manage various Ethernet Virtual Circuit services.

Before you Begin

To view or edit the EVPN-VPWS attributes in the **Policy Editor** window or the **EVC Service Request Editor** window, make sure that you have completed the following prerequisite.

1. Import the **EVPNVPWSCustomization.xar** file under $PRIMEP_HOME/packages/std, which is already copied as part of Prime Provisioning product (PP6.8.2 or greater). The customization XML uses merge mode as “Combine”. For more information about how to Import customization files, see Importing and Exporting Customizations section in the Cisco Prime Provisioning 6.8 User Guide.

Note The EVPN-VPWS attributes are visible in the **Policy Editor** or the **EVC Service Request Editor** window only when you import the **EVPNVPWSCustomization.xar** file.

2. Make sure that the supported platform includes ASR9K with IOS-XR version 6.0 or later.

Enter or Modify EVPN-VPWS Attributes

To enter the EVPN-VPWS Attributes:

1. Create an EVC PW policy and import the “EVPNVPWSCustomization.xml”. Below is a configuration sample:

```
interface GigabitEthernet0/1/0/13.315 l2transport
```

```
  description  EVC-JOBID:53
  encapsulation dot1q 315
  no shutdown
l2vpn
  xconnect group ISC
    p2p ELINE888
      interface GigabitEthernet0/1/0/13.315
      neighbor evpn evi 4341  target 64123 source 64222
```

2. In the **Policy Editor** window, in the **Source ac-id** field, enter the range between 1 and 16777215.
3. In the **Remote ac-id** field, enter the range between 1 and 16777215.
4. Click **Finish** to save the EVC Policy.

Note You can also create an SR (VPWS) using this policy with XR devices and enter the values for the attributes.

Supporting EVPN-VPLS Attributes through a Customization XML File

From this release, EVPN-VPLS configurations are supported by importing a EVPN-VPLS customization.xar file as part of Prime Provisioning policies and service requests to manage various Ethernet Virtual Circuit services.

Before you Begin

To view or edit the EVPN-VPLS attributes in the **Policy Editor** window or the **EVC Service Request Editor** window, make sure that you have completed the following prerequisite.

1. Import the **EVPNVPLSCustomization.xar** file under $PRIMEP_HOME/packages/std, which is already copied as part of Prime Provisioning product (PP6.8.2 or greater). The customization XML uses merge mode as “Combine”. For more information about how to Import customization files, see Importing and Exporting Customizations section in the Cisco Prime Provisioning 6.8 User Guide.

Note The EVPN-VPLS attributes are visible in the **Policy Editor** or the **EVC Service Request Editor** window only when you import the **EVPNVPLSCustomization.xar** file.

2. Make sure that the supported platform includes ASR9K with IOS-XR version 6.0 or later.
3. Before configuring the EVPN-VPLS, configure BGP with new EVPN Address family as in the sample configuration below:

```
router bgp 64
 bgp router-id 1.100.100.100
 address-family l2vpn evpn
 !
 neighbor 2.100.100.100
  remote-as 64
  update-source Loopback0
  address-family l2vpn evpn
```

Enable or Modify EVPN-VPLS Attributes

To enter the EVPN-VPLS Attributes:

1. Create an EVC VPLS policy and import the “EVPNVPLSCustomization.xml”. Below is a configuration sample:

```
interface GigabitEthernet0/1/0/17.2017 l2transport
  description  EVC-JOBID:216
  encapsulation dot1q 2017
  no shutdown
l2vpn
  bridge group BGNevpn1
    bridge-domain BDNevpn1
      mtu 345
      interface GigabitEthernet0/1/0/17.2017
      vfi wppq
      evi 2001
evpn
  evi 2001
    load-balancing flow-label static
-------
evpn
 evi 2001
  advertise-mac
------
evpn
 evi 2001
  unknown-unicast-suppress
------
evpn
 evi 2001
  control-word-disable
-----
evpn
 evi 2001
  bgp
   route-target import 200:101
   route-target export 200:101
```

2. In the **Policy Editor** window, the following EVPN-EVI attributes are added.

Field	Description
Load Balancing	To provision the EVPN load balancing command and to view the load balancing policy name in the Service Request Manager, check the **Load Balancing** check box.
Enable Advertise Mac	To provision advertise Mac command, check the **Enable Advertise Mac** check box.
Unknown Unicast Supress	To provision the Unknown unicast supress command, check the **Unknown Unicast Supress** check box.
Control Word Disable	To provision the control word disable command, check the **Control Word Disable** check box.
Enable BGP	To provision the BGP command, check the **Enable BGP** check box.

Field	Description
Route Target Import	Enter the format for **Route Target Import**. For example: 1234:5678([0-9]:[0-9])
Route Target Export	Provide the format for **Route Target Export**. For example: 1234:5678([0-9]:[0-9])

Note You can also create an SR (VPLS) using this policy with XR devices and enter the values for the required attributes.

Features Introduced in Prime Provisioning 7.0

This release contains the following new and enhancements feature under different service blades and infrastructure.

All the new features introduced in Prime Provisioning 6.8.1, Prime Provisioning 6.8.2 and Prime Provisioning 7.0 release are explained in *Prime Provisioning User Guide 7.0.*

L2 EVC Features

This section summarizes features that were added to enhance EVC services in Prime Provisioning 7.0.

Supporting Pseudowire Interface for EVC-Pseudowire Policies

From this release, Prime Provisioning supports new CLI that define pseudowire interface and cross connect between the service instance to the Pseudowire interface.

In new XE versions you can use both, old and new CLIs and support is provided only for ASR920 devices and applicable only for EVC-Pseudowire policies.

ASR920 supports only flex in Prime Provisioning and this feature is applicable only for flex services.

You can create an EVC Service Request (SR) with Use Pseudowire Interface feature for ASR 920 devices. If the selected device is other than ASR 920 devices, and when you try to create an EVC SR by enabling Use Pseudowire Interface, Prime Provisioning will report an error message.

For more information, see the section in the Prime Provisioning 7.0 User Guide.

Note Prime Provisioning does not support enabling the following attributes together at a time:
“Use Pseudowire Interface' and 'Configure Bridge Domain'
“Use Pseudowire Interface” and “Use Pseudowire Class”
Also, the minimum allowed direct link should be 2.

Supporting Autopick Bridge Domain Name for L2 Services

Prime Provisioning supports L2 services with Autopick Bridge Domain Name with new format L2-X.

Create L2 services with autopick bridge domain name, with the format of L2-X, where X will be the range between 1 to 60000 for the newly created service request.For example, "bridge-domain L2-40001".

As soon as the starting range value is set through the DCPL property as (Provisioning\Service\fsm\bridgeDomainName) for the first service request, Prime Provisioning will consider the set value as a starting range value for autopick bridge domain name automatically, and for the next service request onwards the value is incremented with +1.

If the default value for bridgeDomainName property is zero, the existing behavior will not change.

L3VPN/MPLS Services Features

This section summarizes features that were added to enhance L3VPN/MPLS services in Prime Provisioning 7.0

Supporting BGP Additional Multipaths for ASR920 Devices

Prime Provisioning allows you to create MPLS services with BGP additional path configuration CLI for Install or Select backup.

Supporting IP Helper Addresses for ASR 920 Devices

You can provide DHCP Helper IP parameters for ASR920 devices, while creating MPLS service requests for the selected PE interface type you can view the IP helper address details of a server, VRF, GRT, MTU in CLI under the interface node.

In the MPLS Service Request Editor-Interface area, check the **Use EVC Service** check box to enable the following DHCP Helper IP fields:

- **DHCP Helper Server IP (a.b.c.d)**
- **DHCP Helper GRT IP (a.b.c.d)**
- **DHCP Helper VRF IP (a.b.c.d)**
- **MTU** (68 - 9216)

Supporting Auto RD Configuration

Create, modify, and decommission MPLS Service Request with auto RD Value for ASR9k devices. Prime Provision notifies an error if the selected device is IOS and the specified Rd value is “auto” while creating a MPLS Service request.

Supporting Modification of Site of Origin

From this release, you an edit Site Of Origin pool while editing a customer site, You can edit SOO pool with available pool values or with other than pool value, if required.

Web Browser Support

- Prime Provisioning 7.0 GUI is supported by the following browsers:

- Internet Explorer 9, 10, and 11.
- Firefox browser standard version 30, 31, 37 and 55.
- Firefox browser version ESR 24, 31, 52.

Version Supported

You can install Prime Provisioning 7.0 on Prime Provisioning 6.8.2.2/6.8.2/6.8.1.3/6.8.0.5/6.7.2.12. Schema upgrade is supported from 6.7.2.10, 6.8.0.4, 6.8.1.2, 6.8.2 to 7.0. Therefore, repository migration can only be performed from 6.8.2.2/6.8.2/6.8.1.3/6.8.0.5/6.7.2.12. To migrate from earlier releases (prior to 6.8), you must first upgrade to Prime Provisioning 6.8.2.2/6.8.2/6.8.1.3/6.8.0.5/6.7.2.12 release. See "Upgrading Prime Provisioning" section on page 15.

The procedure for upgrading from earlier releases is documented in the *Cisco Prime Provisioning Installation Guide 7.0*.

The Linux platform supported by Prime Provisioning includes: Red Hat Enterprise Linux, 64 bit, version 6.7, 6.8, 7.0, and 7.2.

Upgrading Prime Provisioning

If you want to migrate from an existing installation to Prime Provisioning 7.0, your upgrade path depends on which release you are upgrading from. This process is explained in detail in Chapter 4, "Upgrading Prime Provisioning" of the *Cisco Prime Provisioning Installation Guide 7.0.*

Upgrade Matrix

The various possible upgrade paths are described in Table 1.

Table 1 Upgrade Path to Prime Provisioning 7.0

Current Prime Provisioning Version	Procedure	Steps to Upgrade to Prime Provisioning 7.0 (run in order stated)	Supported Oracle Database	Supported OS
• 6.8.2.2 • 6.8.2 • 6.8.1.3 • 6.8.0.5 • 6.7.2.12	Direct	<Prime Provisioning installation directory>/upgradeTool	Enterprise Oracle 12C	Linux (Red Hat)
• 6.8	Upgrade to 6.8.2 and then to 7.0	<Prime Provisioning installation directory>/upgradeTool	Enterprise Oracle 12C	Linux (Red Hat)

Table 1 Upgrade Path to Prime Provisioning 7.0

Current Prime Provisioning Version	Procedure	Steps to Upgrade to Prime Provisioning 7.0 (run in order stated)	Supported Oracle Database	Supported OS
• 6.6	Upgrade to 6.6.1.8 and then to 6.8 and upgrade to 6.8.2 and then follow steps to upgrade to 7.0	<Prime Provisioning installation directory>/upgradeTool	Enterprise Oracle 12C	Linux (Red Hat)
• 6.5	Upgrade to 6.5.0.9 and then to 6.7.1, then to 6.8 and upgrade to 6.8.2 and then follow steps to upgrade to 7.0	<Prime Provisioning installation directory>/upgradeTool	Enterprise Oracle 12C	Linux (Red Hat)
• Prior to 4.2.5		E-mail isc-mktg@cisco.com for upgrade instructions	Enterprise Oracle 12C	Linux (Red Hat)

Prime Provisioning 7.0 Resolved and Open Bugs

Resolved Bugs

The following bugs were resolved in Prime Provisioning 7.0:

Bug	Description
CSCvg99780	'Enable EFP Trunk' checkbox is missing in service instance attributes when EVC SR is created.
CSCvh01653	FF 55 & FF ESR 52 needs to be added in supported versions.
CSCvh03640	Backup & Restore Tool README file needs to be updated for 7.0.
CSCvh09926	VRF create with RD autopick:'Autopick RD' checkbox has to be checked and RD value need to be masked.
CSCvh22405	SR goes to failed deploy during modification of EVC PW SR with VPWS customization.
CSCvh22853	Use Pseudowire Interface should be grayed out in SR page when both check boxes unchecked in policy.
CSCvh25962	MPLS SR with IOS:Blank error thrown when vlan id not provided.
CSCvh27400	Enabling Bgp multipath throws error and hangs PP server.
CSCvh40676	MPLS SR with Evc: pp screen goes blank if vlan id not provided during Sr creation.
CSCvh47668	Wrong configlets are generated when bridge domain name is modified from manual to autopick in EVC SR.

Bug	Description
CSCvh49123	Secondary bridge domain value is generated for UPE device when EVC DHR SR with EFP Trunk is created.
CSCvh50918	BRIDGE DOMAIN NAME should be same for both links of EVC_LOCAL SR.
CSCvh53125	GUI/NBI: 'bridge group' cmd is not getting removed from device when EVC HVPLS SR is decommissioned.
CSCvh57472	Mpls SR:negate configlets not generated for dhcp helper ip addresses.
CSCvh57789	MPLS SR with Evc: Error thrown when extended vlan is entered.
CSCvh58011	Mpls SR:PP throws error if we leave any one or two dhcp attribute blank(but not all three).
CSCvh63261	MPLS SR with dhcp addresses: Wrong configltes generated when dual stack Sr created.
CSCvh67694	7.0 Upgrade Tool is not working for 6.7.2.12/6.8.0.5/6.8.1.3 paths.
CSCvh74887	Errors in preview when EVC_LOCAL SR is modified-GUI & NBI
CSCvh77160	LOCAL SR- Autopick Bridge domain name taking same value for same device.
CSCvh78974	Mpls Sr:negate configlets not getting generated when Mtu value is deleted.
CSCvh86421	In 6.7.2.12/6.8.0.5 to 7.0 upgrade tables/columns missing.
CSCvh91070	Mpls Sr with Evc:Outer vlan is released to pool when Sr is still using it.
CSCvh92831	In 6.7.2.12 to 7.0 upgrade facing issues in L2 SRs.
CSCvh92833	EVC SR is not picking the modified bridge domain value [US14401].
CSCvi04900	'Rd-auto' gets associated with Sr's where it is not enabled.

Open Bugs

The following open bugs apply to Prime Provisioning 7.0.

Bug	Description
CSCvi04889	Issues while modification of Autopick inner Vlan (for IOS devices).
CSCvh76669	NBI_HVPLS_DHR No neibhour cmd generated under vfi when autopick bridge domain name is enabled.
CSCvh69580	NBI Direct link bridgedomainname details are getting modified while modifying L2accesslink attribute.
CSCvh67709	SHR/DHR: bridge group cmd is not getting removed from device when EVC SR is decommissioned via NBI.
CSCvh67266	Modification of service instance ID from manual to autopick fails for EVC SR using SHR or DHR.
CSCvh61618	MPLS SR with asr920: Extra configlets generatd when ospf Sr is edited.
CSCvh61170	MPLS SR with asr920: Rip version appears twice in configlets.

Bug	Description
CSCvh59659	pp allows to input dhcp addresses with last byte having extra leading zeros.
CSCvh49502	Evc-vpls: Autopick VLAN to manual moves SR to FD with common NPE in L2 & dir.
CSCvh47676	Multicast Mpls Sr failed deploy when asr920 device is used as Pe.
CSCvh24496	Modification and decommission of EVC SR with EFP trunk goes to failed deploy.

Finding Known Problems in Prime Provisioning 7.0

To find known problems in Prime Provisioning 7.0, use the following URL:

https://tools.cisco.com/bugsearch/search

You must log into Cisco.com.

You can search for specific bugs or search for a range by product name. This tool enables you to query for keywords, severity, range, or version.

Use the following search criteria to locate bugs for Prime Provisioning 7.0:

- Product category: **Cloud and Systems Management > Routing and Switching Management > Fulfillment Products.**
- Product: **Cisco Prime Provisioning (6.3 to 7.0).**

The results display bug ID and title, found-in version, fixed-in version, and status. The bug ID is a hyper link to detailed information for the bug ID's product, component, severity, first found-in, and release notes. The results could be displayed in a feature matrix or spreadsheet.

Related Documentation

See the *Cisco Prime Provisioning 7.0 Documentation Overview* for a list of all Prime Provisioning guides.

We sometimes update the documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.

Other Cisco Prime Product Documentation

If you are deploying Prime Provisioning as part of the Prime Carrier Management suite, then see also the documentation for the other suite components:

- *Cisco Prime Central 2.0*
- *Cisco Prime Network 5.0*
- *Cisco Prime Optical 10.7*
- *Cisco Prime Performance Manager 1.7*

Accessibility Features in Prime Provisioning

For a list of accessibility features in Prime Provisioning, visit Cisco's Voluntary Product Accessibility Template (VPAT) website, or contact accessibility@cisco.com.

- All product documents are accessible except for images, graphics and some charts. If you would like to receive the product documentation in audio format, braille, or large print, contact accessibility@cisco.com.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*.

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the What's New in Cisco Product Documentation RSS feed. The RSS feeds are a free service.
