



## **CPS UDC MoP for Session Migration, Release 18.1.0 (Restricted Release)**

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# RESTRICTED RELEASE

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**IMPORTANT:** This is a Short Term Support (STS) release with availability and use restrictions. Contact your Cisco Account or Support representatives for more information.

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# UDC Session Migration

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This guide describes UDC Session Migration procedures and includes the following topics:

- Migrate UDC VMs
- Configure Session Migration
- Verify Session Migration

# Migrate UDC VMs

Perform the following steps to migrate UDC VMs:

**Step 1** Migrate existing CPS setup to CPS 13.x ISO.

**Step 2** Initialize new UDC VMs.

For more information about initializing new UDC VMs, see *CPS User Data Convergence Migration MoP for VMWare* or *CPS User Data Convergence Migration MoP for OpenStack*.

**Step 3** Restart the qns processes on `pcrfclient01` and `pcrfclient02`.

**Step 4** Add the following UDC Systems Configuration in Policy Builder and publish the configuration:

If you are using `systems.json` configuration, update the file with the following configurations:

1. Log in to Policy Builder.
2. Add a new cluster under **system-1**.
3. Navigate to **Systems**.
4. Click **Create Child: Cluster**.

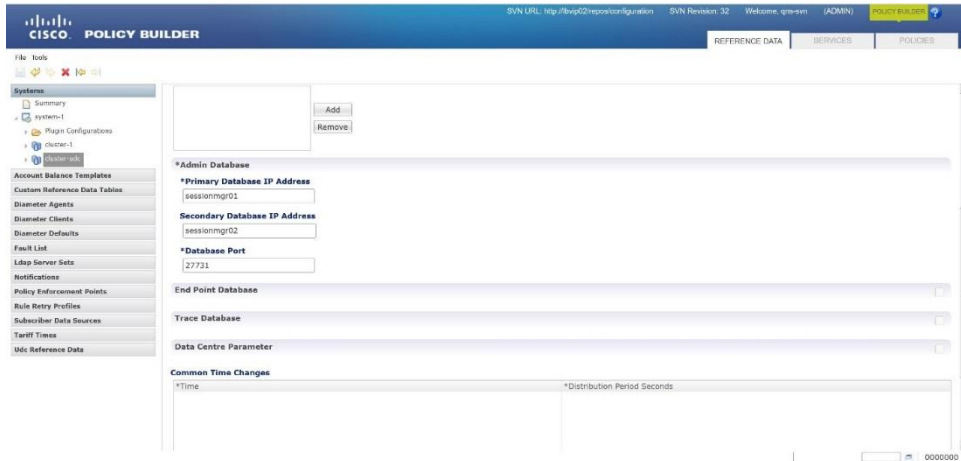
A new screen is displayed as follows:

The screenshot shows the Cisco Policy Builder web interface. The left sidebar contains a navigation menu with categories like Systems, Plugins Configurations, Account Balance Templates, Custom Reference Data Tables, Diameter Agents, Diameter Clients, Diameter Defaults, Fault List, LDAP Server Sets, Notifications, Policy Enforcement Points, Rule Retry Profiles, Subscriber Data Sources, Swift Tools, and IMC Reference Data. The main content area is titled 'Cluster' and contains the following configuration fields:

- Name:** cluster-udc
- Description:** (empty)
- \*Ds Write Concern:** DefaultInstanceSafe
- \*Failover Site Ms:** 0
- \*Replication Wait Time:** 100
- \*Trace Db Size Mb:** 512
- \*Min Key Cache Time Min:** 240
- \*Max Timer T P S:** 2000
- \*Re-evaluation diffusion buckets:** 50
- \*Re-evaluation diffusion interval ( in milli seconds):** 20
- \*Broadcast Msg Wait Timer Ms:** 50
- \*Max Sessions Per Shard:** 0

At the bottom, there is a section for 'Lookaside Key Prefixes' with 'Add' and 'Remove' buttons, and an 'Admin Database' section with a 'Primary Database IP Address' field containing the value 'sessionmg01'.

5. Add the name **cluster-udc**.
6. Add the database IP and port address that are configured in `mongoConfig.cfg` for the Admin Database.



7. Add the remaining Policy Builder Systems Configuration for UDC.

For information about systems configuration, see *CPS UDC Guide*.

1. UD Interface Configuration
2. cluster-udc Configurations
  - i. UDC FE Configuration
  - ii. Diameter Configuration
  - iii. Ldap Server Configuration

**NOTE:** In order to configure Ldap Server Configuration, Ldap Server Sets have to be configured. To configure Ldap Server Sets, see *CPS Mobile Configuration Guide*.

**Step 5** Publish Policy Builder configurations.

**Step 6** Run `restartall.sh`.

**Step 7** From Installer, log in to UDC Admin DB using `mongo sessionmgr01:xxxxx`.

Where `xxxxx` is the port number of the new UDC Admin DB.

Verify if the values for `seed_1`, `seed_2`, and `port` corresponds to the values that is in the `session.db.init` parameters in `/etc/broadhop/udc/qns.conf` by running the following command from the MongoDB shell:

```
set06:PRIMARY> db.shards.findOne()
{
  "_id" : 1,
  "seed_1" : "sessionmgr01",
```



```
"seed_2" : "sessionmgr02",  
"port" : 27727,  
"db" : "session_cache",  
"online" : true,  
"count" : NumberLong(5),  
"lockTime" : ISODate("2017-06-29T20:47:43.690Z"),  
"isLocked" : false,  
"lockedBy" : null  
}
```

**Step 8** Verify that processes on each UDC VM are up and running by running the following command:

```
ssh udc<xx> service qns status
```

**Step 9** Verify that QNS UDC Client is up and running by running the following command:

```
diagnostics.sh
```

The following clean diagnostics.sh output indicates that the QNS UDC Client is up and running:

```
(all [PASS])
```

# Configure Session Migration

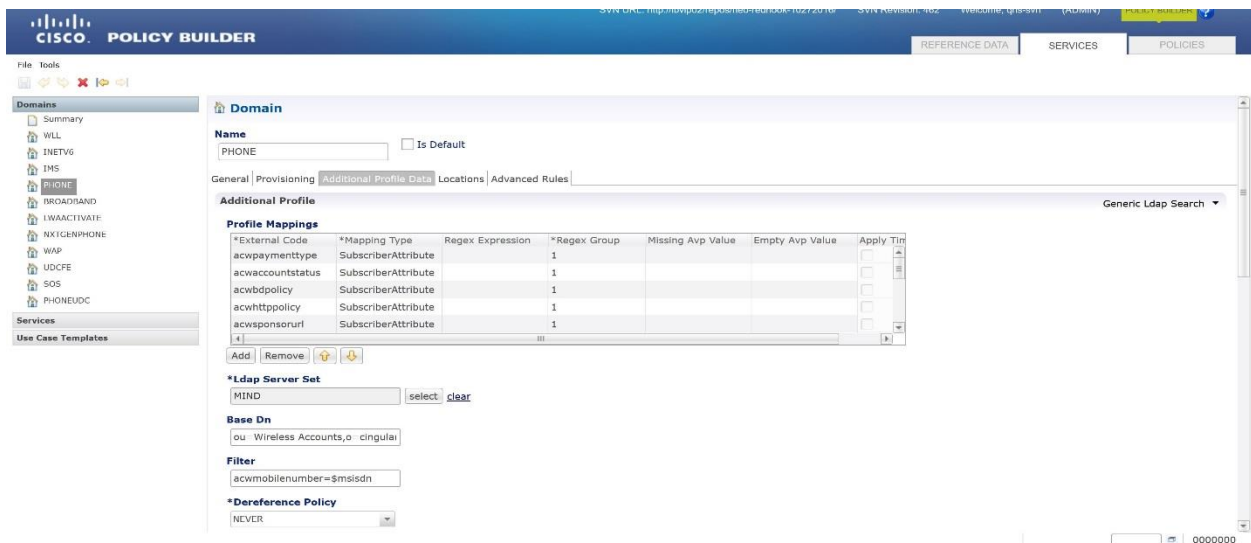
Configuring session migration includes the following tasks:

- Domain Configuration
- Policy Configuration

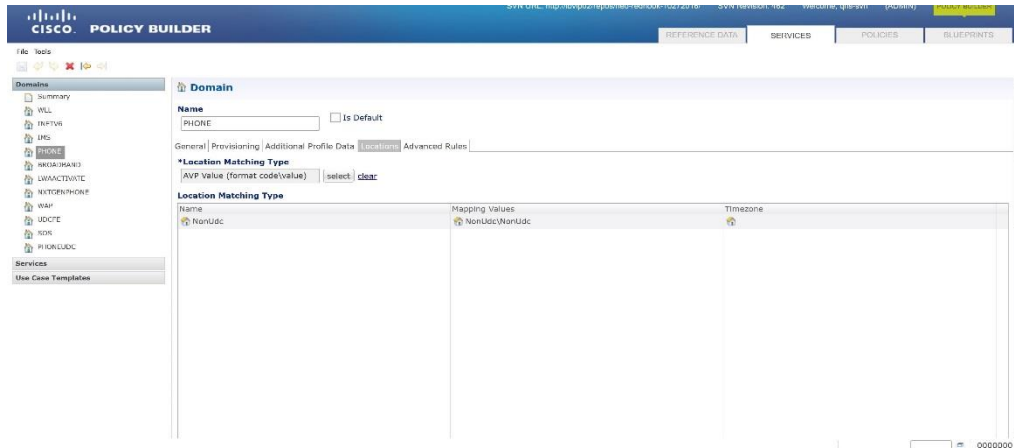
## Domain Configuration

- Step 1** In Policy Builder, navigate to Services.
- Step 2** Select Domain.
- Step 3** Configure existing domains to work with the UDC deployment.

For example, the domain “PHONE” has **Generic Ldap Search** under the **Additional Profile Data** tab. Another corresponding domain called “PHONEUDC” with UDC Profile in it has to be created to be used by the UDC Client on the QNS VM.



- Step 4** Ensure that in the **Locations** tab of the “PHONE” domain, in the **Location Matching Type** table, the entry has the **Mapping Values** as “NonUdc\NonUdc.”



**Step 5** Add a corresponding UDC-specific domain, for each existing domain that has **Generic Ldap Search** under **Additional Profile Data**.

**Step 6** Create a new domain named **PHONEUDC**.

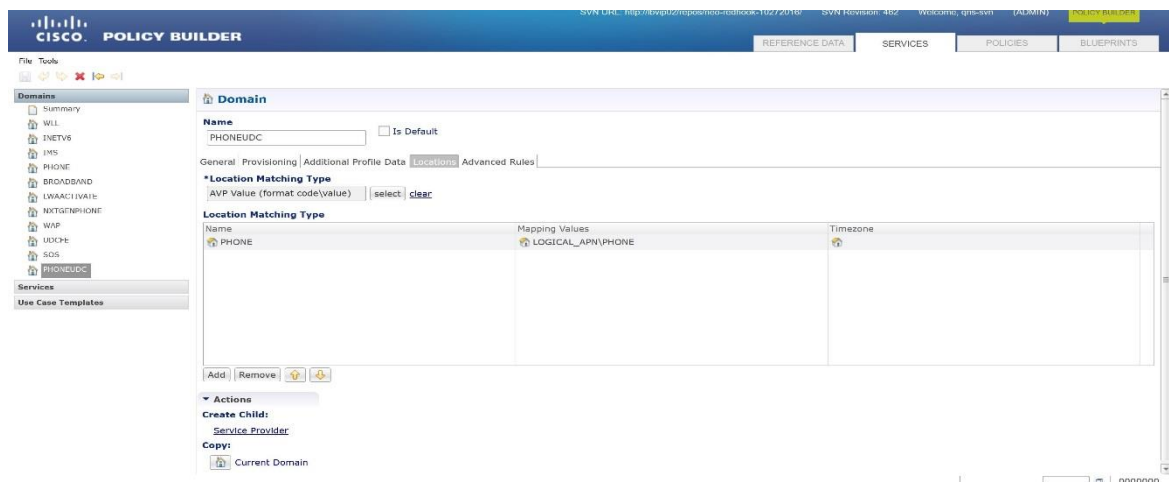
**Step 7** In the “PHONEUDC” domain, under the **General** tab, in the **Authorization** section, select **Allow All Users**.

**Step 8** In the “PHONEUDC” domain, under the **Additional Profile Data** tab, select **UDC Profile**.

For more information about configuring UDC Profile, refer to *CPS UDC Guide*.

**Step 9** Under **Locations** tab in “PHONEUDC” domain, select “AVP Value (format code\value)” for **Location Matching Type**.

**Step 10** Add a new entry in the **Location Matching Type** table with the **Name** as “PHONE” and the **Mapping Values** as “LOGICAL\_APN\PHONE”

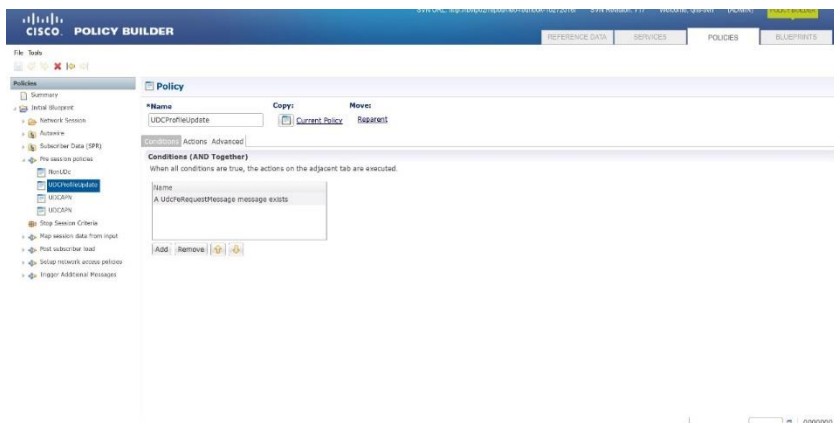


## ■ Configure Session Migration

- Step 11** Under **Advanced Rules** tab, select **Default Service** as the service that is used by the **PHONE** domain.
- Step 12** Create a new domain named “UDCFE.”
- Step 13** Navigate to the **Authorization** section under **General tab** in the “UDCFE” domain.
- Step 14** Select **Allow All Users**.
- Step 15** Under the **Additional Profile Data** tab, select **Generic Ldap Search** and enter all possible attributes from all domains.
- Step 16** Under **Locations** tab in “UDCFE” domain, select “AVP Value (format code\value)” for **Location Matching Type**.
- Step 17** Add a new entry in the **Location Matching Type** table with the **Name** as “UDCFE” and the Mapping Values as “UDCFE\UDCFE”.
- Step 18** Under the Advanced Rules tab, select the Default Service as the service that is used by the “PHONE” domain.

## Policy Configuration

- Step 1** Navigate to **Policy** tab.
- Step 2** Under **Policies** navigate to **Initial Blueprint**.
- Step 3** Add the section if there is no existing **Pre session policies** section.
- Step 4** Select **Configured Extension Point**.  
  
The dialog box is displayed.
- Step 5** Expand **Initial Blueprint**.
- Step 6** Select **Pre session policies**.
- Step 7** Click **ok**.
- Step 8** Under **Pre session policies**, add another policy named “UDCProfileUpdate”.
- Step 9** Under **Conditions** tab, add a new condition **A UdcFeRequestMessage message exists**.



**Step 10** Under **Actions** tab, add a new action **Add a policy derived AVP**.

**Step 11** Under **Input Variables**, add **code** with the following details:

Type: Literal

Operator: =

Value: UDCFE

**Step 12** Add **string** with the following details:

Type: Literal

Operator: =

Value: UDCFE

The screenshot shows the Cisco Policy Builder interface. The main window displays the configuration for a policy named "UDCProfileUpdate". The "Actions" tab is selected, showing a list of actions. The "Input Variables (AND Together)" table is visible below the actions, containing two rows:

Input Variables (AND Together)	Type	Operator	Value	
code (String)	Literal	=	UDCFE	Remove
value (String)	Literal	=	UDCFE	Remove

**Step 13** Publish Policy Builder configuration.

## Verify Session Migration

After migration, you need to monitor the increase in the number of sessions on UDC session cache to verify if all subscribers are migrated to the UDC cache.