# Prime合作保證從11.x遷移到12.1

## 目錄

## 簡介

本文分步介紹了從Prime合作保證(PCA)11.x遷移到PCA 12.1的過程。

## 必要條件

### 需求

思科建議您瞭解以下主題：

- 支援的遷移版本中的PCA 11.x
- 從Cisco Cloud Orchestrator(CCO)伺服器下載的資料遷移助理(DMA)檔案
- 安全FTP(SFTP)伺服器

### 採用元件

本文中的資訊係根據以下軟體和硬體版本：

- PCA 12.1
- PCA 11.x

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

## 設定

### 步驟1.安裝RPM檔案

- 從CCO站點下載rpm檔案。在PCA 11.x伺服器上生成備份時需要此檔案，其格式為PCA 12.X平台可讀格式。
- 將檔案放在/opt下，驗證檔案完整性並驗證md5sum。

將md5sum與CCO站點上提到的內容進行配對：

```
[root@PCA ~]# cd /opt/
[root@PCA opt]# ls -lrt
total 384
drwxr-xr-x   3 cmuser cmuser    4096 Oct 24  2013 CSCOpx
drwxr-xr-x   2 root   root      4096 Oct 24  2013 META-INF
drwx------   2 root   root     16384 Jan 31  2017 lost+found
drwxr-xr-x   8 root   root      4096 Feb  9 22:30 system
drwxr-xr-x   3 root   root      4096 Feb  9 22:34 postgres
drwxr-xr-x   3 root   root      4096 Feb  9 22:36 CSCOlumos
drwxr-xr-x  14 cmuser cmuser    4096 Feb  9 22:36 emms
drwxr-xr-x   7 root   root      4096 Feb  9 22:40 pa
drwxr-xr-x   2 root   gadmin    4096 Feb 16 19:40 backup
drwxr-xr-x   2 root   root      4096 Feb 21 22:12 bkptest
drwxr-xr-x   2 root   root      4096 May 28 19:34 tempbackups
-rw-r--r--   1 root   root    325918 May 29 09:43 CSCOpca-dma-1.0-1.x86_64.rpm
[root@PCA opt]# md5sum CSCOpca-dma-1.0-1.x86_64.rpm
c893127789fe511f17b7a20f6c88242e  CSCOpca-dma-1.0-1.x86_64.rpm
[root@PCA opt]#
```

- 使用以下命令安裝rpm檔案：**rpm -ivh CSCOpca-dma-1.0-1.x86_64.rpm**

```
[root@PCA opt]# rpm -ivh CSCOp
CSCOpca-dma-1.0-1.x86_64.rpm  CSCOpx/
[root@PCA opt]# rpm -ivh CSCOpca-dma-1.0-1.x86_64.rpm
Preparing...                ########################################### [100%]
Starting DMA backup operations:
   1:CSCOpca-dma             ########################################### [100%]
```

- 確保rpm安裝成功：

```
[root@PCA opt]# rpm -qa | grep -i CSCOpca-dma
CSCOpca-dma-1.0-1
```

## 步驟2.在安裝了軟體包的11.X伺服器上啟動備份

- 運行此指令碼以啟動備份。它會提示您輸入SFTP伺服器的引數，例如IP、埠號、使用者名稱和路徑。

./pcandma.sh

**附註**：該路徑應相對於使用者目錄路徑。例如，如果使用者目錄是USER1，則您需要在此目錄下建立一個資料夾，該資料夾將成為備份的放置路徑。

/USER1/PCA/pca

pca是伺服器的主機名（將從這裡選擇備份）。

PCA是前面提到的路徑。

```
[root@PCA dma]# ./pcandma.sh
DMA Backup will restart Prime Collaboration Assurance services. Do you want to proceed?[Y/N]: y
Do you want to backup Analytics Data?[Y/N]: y
Enter sftp server ip address to store the backup file : 10.106.36.78
Enter sftp server port number : 26
Enter the  username: root
Enter the  password:
Enter sftp server backup path : PCA
INFO: Tue May 29 17:46:21 UTC 2018: pcandma script is starting for backup, please do not type anything..
INFO: Tue May 29 17:46:23 UTC 2018: Time taken to complete the DMA backup depends on the OVA mode/profile and the size of Database involved in the backup ..
2018-05-29 17:46:25 | Performing pre-configurations as a pre-requisite to run DMA
PCA server is running on Redhat: 11.X version
Shutting down Collaboration Manager
```

- 指令碼將檢查目標資料夾是否存在。如果不是，則建立資料夾。

```
[root@PCA ~]# pwd
/root
[root@PCA ~]# ls -lrt
total 56
-rw-r--r-- 1 root root  3376 Feb  1  2017 install.log.syslog
-rw-r--r-- 1 root root 21524 Feb  1  2017 install.log
drwxr-xr-x 2 root root  4096 Feb  1  2017 bin
-rw------- 1 root root  1557 Feb  1  2017 anaconda-ks.cfg
drwxr-xr-x 3 root root  4096 May 29 17:46 PCA
[root@PCA ~]# cd PCA/
[root@PCA PCA]# ls -lrt
total 4
drwxr-xr-x 2 root root 4096 May 29 17:46 pca
```

- 如果該目錄不存在，PCA會自動建立一個：

```
PCA not found. Creating directory
pca not found. Creating directory
createDirectory true
ret_status=success
[root@PCA log]# more dma_backup_sftp.log
```

- 在傳輸到SFTP伺服器之前，備份儲存在本地伺服器上，路徑為 /opt/tempbacts/DMA_Backup/backup/appcomponent。

```
[root@PCA appcomponent]# ls -lrt
total 32
drwxr-xr-x  3 root root  4096 May 29 17:52 tomcat
drwxr-xr-x  3 root root  4096 May 29 17:52 opt
drwxr-xr-x  4 root root  4096 May 29 17:52 export
drwxrwxrwx  2 root root  4096 May 29 17:52 db
drwxr-xr-x  4 root root  4096 May 29 17:52 cuom
drwxr-xr-x 35 root root 12288 May 29 17:52 conf
[root@PCA appcomponent]# pwd
/opt/tempbackups/DMA_Backup/backup/appcomponent
[root@PCA appcomponent]#
```

• 完成DMA備份後，檔案將放置到目標資料夾的SFTP伺服器中。

```
ade # cd /root/PCA/pca/
ade # ls -lrt
total 815188
-rw-rw-r-- 1 root root 820527968 May 29 18:06 Assurance_Backup.tar.gz
-rw-rw-r-- 1 root root  13390800 May 29 18:06 Analytics_Backup.tar.gz
```

• 服務啟動時可能會看到一些延遲。您將看到如下所示的一些日誌：
建議您等待所有服務啟動。

```
--- 10.106.36.78 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.030/0.030/0.030/0.000 ms
INFO: Tue May 29 18:06:50 UTC 2018 postgresql.conf backup in cpcm_data found....cpc_toposerver: no process killed
cpc_ipslaserver: no process killed
cpc_smdbmonitor: no process killed
cpc_qovr: no process killed
cpc_sshd: no process killed
cpc_stserver: no process killed
cpc_srstserver: no process killed
cpc_ipiudataserver: no process killed
cpc_pifserver: no process killed
cpc_qovmserver: no process killed
cpc_gpf: no process killed
cpc_segserver: no process killed
cpc_datapurge: no process killed
Stopping emsam_fault
Stopping emsam_poller
Stopping emsam_sessionmon
Stopping emsam_troubleshoot
Stopping emsam_tomcat
Stopping emsam_inventory
Stopping Analytics PostgreSQL Server ...
Stopping CPC PostgreSQL Server ...
INFO: Tue May 29 18:10:50 UTC 2018: Starting all processes
INFO: Tue May 29 18:10:50 UTC 2018: EmsamUp: false , process_count: 0, i: 1
INFO: Tue May 29 18:10:50 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 0, i: 1
INFO: Tue May 29 18:15:51 UTC 2018: EmsamUp: false , process_count: 16, i: 2
INFO: Tue May 29 18:15:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 16, i: 2
INFO: Tue May 29 18:20:51 UTC 2018: EmsamUp: false , process_count: 23, i: 3
INFO: Tue May 29 18:20:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 23, i: 3
INFO: Tue May 29 18:25:51 UTC 2018: EmsamUp: false , process_count: 23, i: 4
INFO: Tue May 29 18:25:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 23, i: 4
INFO: Tue May 29 18:30:51 UTC 2018: EmsamUp: false , process_count: 23, i: 5
INFO: Tue May 29 18:30:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 23, i: 5
INFO: Tue May 29 18:35:51 UTC 2018: EmsamUp: false , process_count: 23, i: 6
INFO: Tue May 29 18:35:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 23, i: 6
INFO: Tue May 29 18:40:51 UTC 2018: EmsamUp: false , process_count: 23, i: 7
INFO: Tue May 29 18:40:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 23, i: 7
INFO: Tue May 29 18:45:51 UTC 2018: EmsamUp: false , process_count: 23, i: 8
INFO: Tue May 29 18:45:51 UTC 2018: Sleep for 5 min.. Emsam not UP. isEmsamUp: false , process_count: 23, i: 8
INFO: Tue May 29 18:50:52 UTC 2018: EmsamUp: false , process_count: 23, i: 9
unt: 23, i: 9, Exiting loop after 40min.m is Not UP. EmsamUp: false , process_co--More--(97%)
INFO: Tue May 29 18:50:52 UTC 2018: All processes are not up
INFO: Tue May 29 18:50:52 UTC 2018 DMA backup - pcandma script END
```

## 步驟3.使用DMA將資料遷移到PCA 12.X

- 您需要安裝Engineering Special(ES)補丁程式,才能在PCA 12.1中獲得Enabled for DMA restore選項。

從ES1開始,DMA選項可用。

建議您在啟動DMA之前安裝最新的ES修補程式。

啟動DMA之前,可以讀取ES的只讀檔案。

- 指定SFTP伺服器詳細資訊,如下所示。驗證SFTP連線。

  **附註**:該路徑應相對於使用者目錄路徑。

如果使用者目錄是USER1。

pca是伺服器的主機名(將從這裡選擇備份)。

PCA是在生成DMA備份時提到的路徑。

**DMA** ( View DMA Log )

sFTP Server (IP Address)   10.106.68.20   ⓘ

sFTP Port   22

Path   PCA/   ⓘ

Note: The backup location is relative to specified ssh user home directory

User Name   root

Password   ••••••••   **Test Connection** ✓

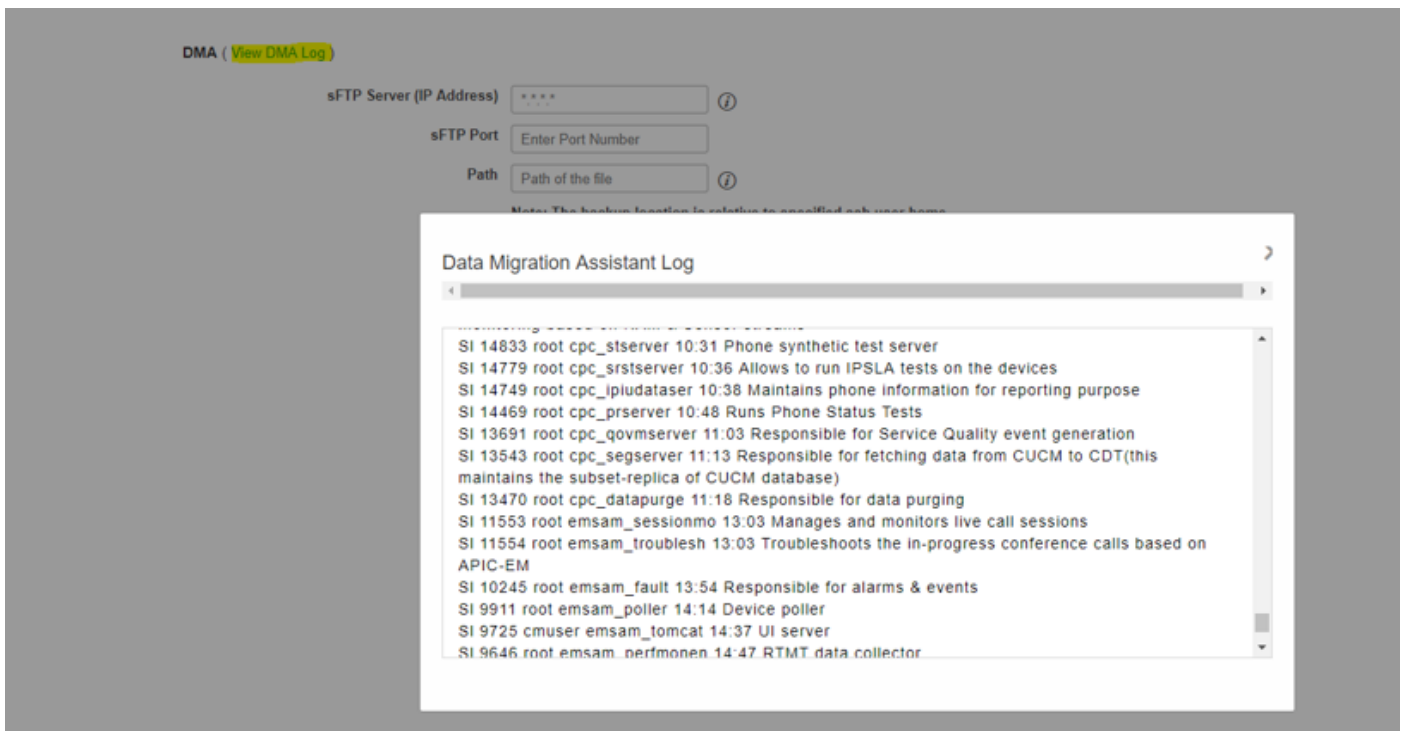**Start DMA**   View DMA Status Detail

Note: Please close all active sessions before starting data migration

Data migration is in progress. Please wait.

Step 9 of 20: migrating assurance db data from temp db to main db is in progress...

- 一旦DMA進程啟動，您就可以使用DMA螢幕上的**檢視DMA日誌**來監控日誌。

**DMA** ( View DMA Log )

sFTP Server (IP Address)   ••••   ⓘ

sFTP Port   Enter Port Number

Path   Path of the file   ⓘ

Note: The backup location is relative to specified ssh user home

Data Migration Assistant Log                          >

SI 14833 root cpc_stserver 10:31 Phone synthetic test server
SI 14779 root cpc_srstserver 10:36 Allows to run IPSLA tests on the devices
SI 14749 root cpc_ipiudataser 10:38 Maintains phone information for reporting purpose
SI 14469 root cpc_prserver 10:48 Runs Phone Status Tests
SI 13691 root cpc_qovmserver 11:03 Responsible for Service Quality event generation
SI 13543 root cpc_segserver 11:13 Responsible for fetching data from CUCM to CDT(this maintains the subset-replica of CUCM database)
SI 13470 root cpc_datapurge 11:18 Responsible for data purging
SI 11553 root emsam_sessionmo 13:03 Manages and monitors live call sessions
SI 11554 root emsam_troublesh 13:03 Troubleshoots the in-progress conference calls based on APIC-EM
SI 10245 root emsam_fault 13:54 Responsible for alarms & events
SI 9911 root emsam_poller 14:14 Device poller
SI 9725 cmuser emsam_tomcat 14:37 UI server
SI 9646 root emsam_perfmonen 14:47 RTMT data collector

- 運行DMA進程時，GUI可能會註銷。如果再次登入，它會將其定向到新的DMA頁面。如果輸入詳細資訊並再次運行DMA，系統將提示您顯示DMA已在運行的狀態。

- 或者，也可以使用日誌檔案日誌從CLI檢查狀態**日誌。**

此檔案將在DMA操作結束時刪除。

或者可以從GUI本身的「檢視DMA日誌」(View DMA Log)選項進行檢查。

```
[root@pca log]# more dma_status.log
IN-PROGRESS
```

- DMA是一個20步的過程。在這20個步驟結束時，服務將重新啟動。

服務重新啟動完成後，VM將重新載入。在重新啟動完成之前，您將無法控制CLI和GUI。

VM重新啟動後，檢查可維護性頁面上的服務狀態。

等待所有服務啟動。

# 驗證

使用本節內容，確認您的組態是否正常運作。

所有服務啟動並運行後，您就可以登入以驗證PCA中的資料。

# 疑難排解

本節提供的資訊可用於對組態進行疑難排解。

PCA 11.x上的日誌：

- pcaninfra.log
- analytics_dma.log =>用於分析備份建立。
- assurance_backup_dma.log =>用於保證備份建立。
- dma_assurance_backup_file_tran.log =>用於保證備份檔案傳輸
- dma_backup_file_tran.log =>用於分析備份檔案傳輸
- dma_backup_sftp.log
- dma_debug.log
- pcandma.log =>在某些情況下，觀察到DMA指令碼運行後，PCA服務需要一段時間才能重新開始服務。

PCA 12.x上的日誌：

- pcandma.log =>提供了有關還原和更新故障的詳細資訊。
- analytics_dma.log
- assurance_backup_dma.log
- assurance_restore_dma.log
- dma_assurance_restore_file_tran.log
- dma_backup_file_tran.log
- dma_debug.log
- dma_status.log =>此檔案將在DMA指令碼結束時刪除。