

# Horizon DaaS Platform 6.1 Upgrade

This document describes the Horizon DaaS Platform Upgrade process.

August 2014

**vmware**

## Revision History

Date	Version	Description
09/04/2014	1.0	Initial release

© 2014 VMware, Inc. All rights reserved. This product is protected by U.S. and international copyright and intellectual property laws. VMware products are covered by one or more patents listed at <http://www.vmware.com/go/patents>.

VMware is a registered trademark or trademark of VMware, Inc. in the United States and/or other jurisdictions. All other marks and names mentioned herein may be trademarks of their respective companies.

**VMware, Inc.**  
3401 Hillview Ave.  
Palo Alto, CA 94304  
[www.vmware.com](http://www.vmware.com)

# Contents

1 Overview	1
2 Pre-Upgrade Tasks	2
2.1 Verify All Appliances are at Version 6.0.x	2
2.2 Verify Port Availability	2
2.3 Create Snapshot of All Service Provider Appliances	2
2.4 Obtain the Upgrade Files	3
3 Upgrade Appliances to Horizon DaaS 6.1	4
3.1 Upgrade Primary Service Provider Appliance	4
3.2 Upgrade Org1000 Appliances	5
4 Migrate Appliances to Ubuntu 12 Template	6
4.1 Prepare for Template Migration	6
Deploy the Ubuntu 12 Template	6
Update Network Settings	6
4.2 Migrate Primary Service Provider Appliance to New Template	7
4.3 Migrate Tenant Appliances to New Template	9
5 Update DaaS Agent	10
5.1 Update Via GPO Policy	10
5.2 Update Manually	10
6 Snapshots and Rollback	11
6.1 Changing the Retention Period for Horizon DaaS generated Snapshots	11
6.2 Rescheduling the Snapshot Deletion	11
6.3 Snapshot	12
6.4 Rollback	12
Appendix A Migrate Appliances to Ubuntu 12 Template – Downtime Migration Option	13
Prepare for Template Migration	13
Deploy the Ubuntu 12 Template	13
Update Network Settings	13
Migrate Primary Service Provider Appliance to New Template	13
Migrate Tenant Appliances to New Template	16

This page intentionally left blank

# 1 Overview

---

The upgrade process for the Horizon DaaS Platform 6.1 release has two components:

- Upgrading appliances to Horizon DaaS 6.1
- Migrating appliances to the new Ubuntu 12 template.

**Note:** Database replication will not be operational on secondary SP appliances until they have been restored and have the new template. As a result, you may observe some unusual behavior during normal tasks such as provisioning.

**Warning: Migration is not supported for appliances on Direct ESX hosts. You must migrate all appliances to vCenter prior to performing the template migration.**

## 2 Pre-Upgrade Tasks

---

### 2.1 Verify All Appliances are at Version 6.0.x

You must be running at least version 6.0.0 of the Horizon DaaS Platform before starting the upgrade.

To verify the version of your appliances, log in to the Service Center and select **appliances** ► **browse appliances**. The version number is displayed in the Version column of the table.


### 2.2 Verify Port Availability

All appliances now use port 8443 to communicate with each other, and the DaaS Agent also uses port 8443 to communicate with the appliances. You must confirm that port 8443 is open, and may also need to open an additional firewall port to allow traffic using port 8443.

### 2.3 Create Snapshot of All Service Provider Appliances

During upgrade, the Horizon DaaS Platform automatically creates a snapshot of all existing Tenants and Resource Managers, but does not create snapshots of Service Providers. Before starting the upgrade, you must create manual snapshots of all Service Provider appliances.

#### Procedure

1. Shut down all Service Provider appliances, making sure you shut down the primary Service Provider appliance last.
2. Using the VMware vSphere Client, create a snapshot of all Service Provider appliances.
3. Beginning with the primary Service Provider appliance, power up all Service Provider appliances.
4. Wait until all appliances are online before proceeding with the upgrade. To check the status in the Horizon DaaS Service Center, select **appliances** ► **browse appliances**. The appliance is online if the status line contains the green arrow icon .

**Note:** The migration to the Ubuntu 12 template involves restoring all appliances after upgrading to Horizon DaaS 6.1. This restore process will delete all existing appliance snapshots.

## 2.4 Obtain the Upgrade Files

### Procedure

1. Log in to the primary Service Provider appliance and run all commands as root:  
`sudo -i`
2. Verify that the upgrade directory exists and is empty:  
`rm -rf /usr/local/desktopone/upgrade`  
`mkdir /usr/local/desktopone/upgrade`
3. Copy the following files to the /tmp directory on the primary Service Provider appliance.

**Table 1: Files Needed for Upgrade**

File Contents	File Names
6.1 debians	dt-platform-6_1_0.deb dt-aux-1_4_0.deb
6.1 upgrade package	upgradeBrighton.tgz
6.1 template	BrightonTemplate20140825.ova

4. Untar the upgrade package in the /usr/local/desktopone/upgrade/ directory:  
`mv /tmp/upgradeBrighton.tgz /usr/local/desktopone/upgrade/`  
`cd /usr/local/desktopone/upgrade`  
`tar xvfz ./upgradeBrighton.tgz`
5. Move the debian files to /data/repo/ :  
`mv /tmp/dt-platform-6_1_0.deb /data/repo`  
`mv /tmp/dt-aux-1_4_0.deb /data/repo`

The files that are moved are:

- dt-platform-6\_1\_0.deb
- dt-aux-1\_4\_0.deb

6. Verify that the right packages are on the Primary Service Provider appliance in the first Datacenter:

`/usr/local/desktopone/upgrade/checkPackages.sh`

The expected output of this command is as follows:

Found 2 out of 2 packages at xxx.xx.xxx.xx.  
Found 2 out of 2 packages at xxx.xx.xxx.xx.  
All packages found on specified IPs. Please confirm all SP Nodes are listed and proceed with upgrade.

## 3 Upgrade Appliances to Horizon DaaS 6.1

---

### 3.1 Upgrade Primary Service Provider Appliance

Upgrade primary SP1 to Horizon DaaS 6.1 using the following procedure.

#### Procedure

1. Ensure that all commands are run as root (required only if not already root):

```
sudo -i
```

2. Execute the upgrade file, specifying the full path is required:

```
/usr/local/desktopone/upgrade/runUpgrade.sh
```

The system prompts you to accept the End-User License Agreement (EULA).

3. Enter **Yes** to accept the agreement.

Upon successful completion, the Primary SP appliance reboots.

Upon a failed completion, the dtService and CIM service stop and information regarding the failure is contained in this file: /var/log/desktopone/upgrade.log

4. Once reboot completes and the dtService has started, navigate to the Service Center using the Primary Service Providers IP address:

```
http://IP_Address_Primary_Service_Provider/service
```

5. Review the Appliances page (**appliances ► browse appliances**) and verify that the Primary Service Provider appliance is at version 6.1.0.

**Note:** At this point in the process, the other appliances may appear as being down. The appliances in Org 1000 should appear as being online once the upgrade in Org1000 is completed.

## 3.2 Upgrade Org1000 Appliances

**Note:** Before upgrading appliances for an organization, navigate to the Reservations page in the Service Center (appliances ► reservations) and reschedule any pending reservations until after the upgrade.

### Procedure

1. Navigate to the dt-console of the Service Provider using the following URL:  
`http://IP_Address_Primary_Service_Provider/dt-console`
2. At the dt-console login prompt, enter the user name jmxUser and the dt-console password (the dt-console password for Service Provider appliances can be viewed and changed in the Service Center on the General Configuration screen).
3. In the com.desktone section, click on **service=UpgradeManager**.
4. Invoke the upgradeOrg function with the organization ID 1000 for the p1 parameter:

<b>upgradeOrg</b>	boolean	upgradeOrg	p1	long	(no description)	1000	Invoke
-------------------	---------	------------	----	------	------------------	------	--------

5. Click **Invoke**. All appliances for organization 1000 are updated. The time required to upgrade could be 20 minutes for each data center. Services on affected appliances are stopped and started automatically. Watch deskstone.log for progress (located in the /var/log/deskstone directory on the Primary Service Provider). When complete, the result appears in the browser window. True is success; false is failure (look in the log for cause).
6. Stay logged in to the dt-console if you are upgrading other appliances.

**Note:** It is recommended that you upgrade AND migrate your Org 1000 appliances (all Service Provider and Resource Manager appliances) during the same maintenance window or soon after. If you upgrade to Horizon DaaS 6.1 but do not migrate the Service Provider and Resource Manager appliances to Ubuntu 12, core functionality should work, but you will not be able to install new Tenant Appliances, or restore any appliances that have been upgraded to Horizon DaaS 6.1 until you migrate the Org1000 appliances to the Ubuntu 12 template.

## 4 Migrate Appliances to Ubuntu 12 Template

---

There are two options for performing the migration:

- **Option 1 (recommended): Minimal downtime deployment.** This procedure has little or no impact on tenants and end users. However, it is possible in some cases for there to be loss of tenant billing data during the migration of the primary Service Provider appliance. The minimal downtime deployment option is described below.
- **Option 2: Downtime migration.** This process involves shutting down all appliances during the migration of the primary Service Provider appliance. If you have concerns about data loss during the migration, then use the downtime migration option, described in [Appendix A](#).

### 4.1 Prepare for Template Migration

Perform the following tasks to prepare for the migration of appliances to the new Ubuntu 12 template.

#### Deploy the Ubuntu 12 Template

Deploy the Horizon DaaS 6.1 appliance Template to create the following.

- A 6.1 appliance template VM (to be used for appliance restore and to create appliances).
- A new Ubuntu 12 appliance with a different name than the existing SP1 appliance. This new appliance will replace the existing Ubuntu 10 appliance.

#### Update Network Settings

For the new Ubuntu 12 SP1 appliance, set the ETH0 and ETH1 LANs to networks other than the existing appliance networks.

- The network must route traffic to Ubuntu10 SP1.
- The network can be local to Ubuntu10 SP1.
- The network can be temporary; use only for migration.

## 4.2 Migrate Primary Service Provider Appliance to New Template

**Note:** The following commands are performed on the newly created Ubuntu 12 appliance unless otherwise noted. When you are prompted for the IP address of the existing Ubuntu 10 SP1, do NOT use the floating IP for the ETH0 IP.

### Procedure

1. If you are not using DHCP, run the following script from the command line to set static IPs for the new appliance. If you are using DHCP, skip this step.

```
sudo /usr/local/desktopone/scripts/backupSP1.sh setup_static_ip
```

2. Run the following script, which backs up pertinent files that need to be migrated to the new SP1 appliance (including a DB backup).

```
sudo /usr/local/desktopone/scripts/backupSP1.sh backup_files
```

**Table 1–1 IP Setup for SP1 Migration**

Field	Sample Value	Notes
Enter IP for the existing Primary Service Provider (eth0):	172.16.0.3	This is the front-end IP for the existing Ubuntu 10 SP1 Appliance.
Enter eth0 for this VM:	192.168.1.3	This is the front-end IP for the new Ubuntu 12 SP1 Appliance.
Enter netmask for this VM (eth0): Netmask CIDR format (0-32)	24	For the new Management network used by the new Ubuntu 12 SP1 Appliance.
Enter gateway for this VM:	192.168.1.1	For the new Management network

3. When prompted, enter passwords for the appliance and the postgres DB.

Upon completion of the script the VM will reboot.

**Note:** Any changes that are made to the database (for example, billing data) after this backup and before completing the migration to the new Ubuntu 12 template (step 8 below) will be lost.

4. On the VM console, run the following command.

```
sudo /usr/local/desktopone/scripts/bootstrap.sh
```

This script restarts the appliance.

5. After the appliance has restarted, run the following command on the VM console :

```
sudo /usr/local/desktopone/scripts/restoreSP1.sh
```

**Note:** The script may take some time to run because it needs to wait for dtService to fully initialize.

TEST : After this script completes, confirm that the DB restored successfully by running the following query from the FDB database :

```
Select * from appliance;
```

This should return all of the appliances in your system. If only one appliance is returned, then the restore was unsuccessful and you should contact VMware Global Support Services.

6. Shut down the Ubuntu 12 SP1 appliance.

7. In the Ubuntu 12 SP1 appliance, select **VM ► Edit Settings** and set the ETH0 and ETH1 LANs to the original SP1 LANs.
8. Shut down the original Ubuntu 10 SP1 appliance and give it a new name.
9. Change the name of the Ubuntu 12 SP1 to the original name of the Ubuntu 10 SP1 appliance and power on the Ubuntu 12 SP1.

**TEST:** When the Ubuntu 12 appliance has initialized, confirm that you can login to the Service Center at the original Service Provider IP address. Confirm all appliances are registering as **Online** on the **Browse Appliance** screen.

10. Re-initialize replication (slony) on the SP nodes as follows.

On each SP appliance run these commands as root:

- a. Stop dtService on all ServiceProvider nodes :

```
service dtService stop
```

- b. Stop slony daemons on all SPs:

```
killall slon
```

- c. Drop the slony schema on the FDB database for all SP appliances :

```
drop schema _slony cascade;
```

**Note : The primary SP should already have the slony schema dropped.**

- d. Start dtService on primary (Ubuntu 12) SP appliance:

```
service dtService start
```

- e. Restart slony for FDB on all SP appliances:

```
/usr/local/deskone/scripts/start_slon_fdb.sh
```

- f. Via the dt-console in the Service Center on the primary SP appliance, invoke the UpgradeManagerImpl bean and activate methods below.

For FDB, invoke initSlonyForOrg with the following arguments :

```
orgId : 1000
```

```
dataCenterId : <blank>
```

```
dbType : fabric
```

- g. When these methods have returned true, start dtServices on the stopped appliances.

11. In the Ubuntu 12 SP1 Service Center, select **Appliances ► Browse Appliance Templates ► Add Appliance Template** to upload the Horizon DaaS 6.1 Appliance Template.
12. Restore the HA Service Provider Node.
13. Restore the remaining Org1000 appliances one at a time. The restore process will migrate each appliance to Ubuntu 12.

**Note:** Once the migration for SP1 is complete, upgrade the remaining Org1000 (SP and RM) appliances across all data-centers as soon as possible (i.e. within the same maintenance window) to avoid having different versions of the templates across SP/RM appliances for an extended period of time.

## 4.3 Migrate Tenant Appliances to New Template

**Note:** Before upgrading appliances for an organization, navigate to the Reservations page in the Service Center (appliances ► reservations) and reschedule any pending reservations until after the upgrade.

### Procedure

1. Back up the database on the primary tenant appliance and primary desktop managers by running the following command on each appliance:

```
/usr/local/desktopone/scripts/backup_db.sh -P '<postgres_db_password>'
```

This command extracts a PostgreSQL database into an archive file, creating a backup file of the form <hostname>.<timestamp>.tar.gz in the /usr/local/desktopone/backup folder.

backup\_db.sh also accepts the following optional command line arguments:

Argument	Description
-P password	Password for database user admin
-V true	Enable verbose mode
-U username	PostgreSQL username (default is postgres).

**Note:** Be sure to save the database backup file on an independent server prior to restoring the primary tenant appliance.

2. In the Service Center, select **tenants ► browse tenants** to find the organization ids for each tenant.
3. In the com.desktopone area of the dt-console, click on service=UpgradeManager.
4. Invoke the upgradeOrgsSimultaneously function, specifying the p1 parameter as a comma delimited list of organization IDs with no spaces.
5. For example, to upgrade all appliances in organizations 1001, 1002, and 1003:

upgradeOrgsSimultaneously	java.lang.String	upgradeOrgsSimultaneously	p1 java.lang.String (no description)	1001,1002,1003
				Invoke

6. Click **Invoke**. All appliances for the specified organization are upgraded, but each org id is upgraded at the same time.

**Note:** VMware recommends that you upgrade no more than five tenants at a time. The time required to upgrade a Tenant could be as much as 20 minutes.

7. Progress is tracked in desktopone.log, located in the /var/log/desktopone directory on the Primary Service Provider. Once the operation is complete, the result is displayed in the browser window: either "Organization: <org\_id> Successful" or "Organization: <org\_id> Failure."
8. In the Service Center, select **appliances ► browse appliances** to verify that all Tenant appliances are at Version 6.1.0. If some appliances are not at Version 6.1.0, you did not update all of the organization ids you noted on the Tenants screen.
9. Restore each tenant appliance one at a time. This will complete the migration of each appliance to Ubuntu 12. It is recommended that migration occur soon after upgrading.

**Note:** If you have a tenant with RSA enabled, you will see a message notifying you that need to perform manual configuration on the tenant after the restore. Click OK on the message dialog. When the restore is complete, go to the RSA Server and clear the Node Secret and upload a new sdconf.rec file for any tenants that have been restored.

**Warning: There will be brief downtime during the restore of each tenant when users will not be able to launch new sessions into desktops and existing sessions may be disconnected.**

## 5 Update DaaS Agent

---

When the Tenant appliances have been upgraded, update the DaaS Agent using one of the methods described below.

### 5.1 Update Via GPO Policy

To update the Horizon DaaS Agent on all VMs for all upgraded Tenants, you typically use a domain controller with a GPO policy.

See <http://support.microsoft.com/kb/816102> for a detailed reference.

**Note:** For the Horizon DaaS 6.1 release, you must install the SSL Certificate at the same time that you update the DaaS Agent to version 6.1. This can also be done by GPO policy.

### 5.2 Update Manually

#### Procedure

1. Copy DaaSAgent\_6.1.0.msi to each VM. This is an executable file.
2. Run DaaSAgent\_6.1.0.msi
3. Log in to the Enterprise Center and select **pool management ► patterns**.
4. On the Pattern Management page, select **Download the Horizon DaaS SSL certificate**.
5. Save the cacert.pem file to the DaaS agent's cert directory (typically C:\Program Files (x86)\VMware\VMware DaaS Agent\cert). This file contains the public certificate of the DaaS internal Certificate Authority.

#### Note the following:

- Existing desktop VMs that are running Horizon DaaS Agent 6.0 will continue to function without any changes. However, to ensure secure communication, the agent should be updated to version 6.1 as soon as possible.
- Once the agent is updated to version 6.1 on any existing desktop VMs, the cacert.pem file must be placed on those VMs in the cert directory.
- It is not necessary to back up the cacert.pem file on the DaaS agent system. The cacert.pem file is contained on the service provider and tenant appliances and will be backed up as part of the service provider appliance backups. If the cacert.pem file is lost from the agent system it can be downloaded again from the Enterprise Center.

For troubleshooting information regarding this download, see the Enterprise Center help.

## 6 Snapshots and Rollback

---

During upgrade, the Horizon DaaS Platform automatically creates a snapshot of Tenant appliances and resource managers (and creates a reservation task to remove snapshots from the previous upgrade). Use this snapshot if you need to roll back to the previous Horizon DaaS version after completing the upgrade.

**Note:** If you roll back to Horizon DaaS Platform 6.0.x, any changes made to the environment after the Horizon DaaS Platform 6.1.0 upgrade will be lost, for example changes to pools and mappings. When you restore appliances during the Ubuntu 12 migration, this deletes any snapshots on those appliances.

### 6.1 Changing the Retention Period for Horizon DaaS generated Snapshots

The system by default retains the snapshots it creates for Tenant and Resource Manager appliances for three days before deleting them. If you need to change the default retention period, you must do so in the Enterprise Center before you begin the upgrade.

#### Procedure

1. Navigate to **tenants ► policy**.
2. On the Policy Configuration page, select **Service Provider** from the Tenant Name drop-down.
3. Double-click the row of the `upgrade.snapshot.keep.seconds` policy.
4. Enter the new value in seconds. The default is 259200 seconds (3 days).
5. Click **OK** to make the change or **Cancel** to retain the current value.

### 6.2 Rescheduling the Snapshot Deletion

A reservation exists to delete Tenant and Resource Manager snapshots. Once the snapshots are deleted, you cannot roll back. To change the reservation and keep the snapshots for a longer time period:

1. In the Service Center, select **appliances ► reservations**.
2. Locate the reservation named “Delete snapshots for <X> - <Y>”, where X is org ID and Y is the datacenter, and click the Reschedule link for this reservation.

## 6.3 Snapshot

You can see the list of current snapshots using the vSphere client. For example, if you are upgrading from 6.0.0 to 6.1.0, the snapshot name and description in vSphere will look like this:

Name: Automated Snapshot at 6.0.0

Description: AUTO|6.0.0|6.1.0|<Timestamp>

## 6.4 Rollback

**Note:** You cannot roll back Service Provider appliances using the dt-console. Instead, you manually rollback the Service Provider appliances, using the snapshots you created in Section 1.2.

**Note:** Rollback is not supported after migration to Ubuntu 12.

To roll back all Tenant appliances in an organization to a previous snapshot, follow the steps below.

### Procedure

1. Navigate to the dt-console of the Service Provider using the following URL:  
`http://IP_Address_Primary_Service_Provider/dt-console`
2. At the dt-console login prompt, enter the user name jmxUser and your dt-console password (the dt-console password for Service Provider appliances can be viewed and changed in the Service Center on the General Configuration screen).
3. In the com.desktone section, click on service=UpgradeManager.
4. Invoke the rollbackOrg function with the organization ID for the p1 parameter:

rollbackOrg	boolean	rollbackOrg	p1	long	(no description)	<input type="text"/>
						Invoke

5. Click **Invoke**. All appliances for the specified organization are rolled back.

# Appendix A Migrate Appliances to Ubuntu 12 Template – Downtime Migration Option

---

There are two options for performing the migration:

- **Option 1 (recommended): Minimal downtime deployment.** This procedure has little or no impact on tenants and end users. However, it is possible in some cases for there to be loss of tenant billing data during the migration of the primary Service Provider appliance. The minimal downtime deployment option is described in the main part of this document.
- **Option 2: Downtime migration.** This process involves shutting down all appliances during the migration of the primary Service Provider appliance. If you have concerns about data loss during the migration, then use the downtime migration option, described below.

## Prepare for Template Migration

Perform the following tasks to prepare for the migration of appliances to the new Ubuntu 12 template.

### Deploy the Ubuntu 12 Template

Deploy the Horizon DaaS 6.1 appliance Template to create the following.

- A 6.1 appliance template VM (to be used for appliance restore and to create appliances).
- A new Ubuntu 12 appliance with a different name than the existing SP1 appliance. This new appliance will replace the existing Ubuntu 10 appliance.

### Update Network Settings

For the new Ubuntu12 SP1 appliance, set the ETH0 and ETH1 LANs to the same networks as your existing Service Provider appliances.

## Migrate Primary Service Provider Appliance to New Template

The process described above under **Migrate Primary Service Provider Appliance to New Template** is the recommended procedure and will cause the least impact to end users. However, if you are concerned about the loss of billing data during the migration or if you do not have a network available that can support the new Ubuntu 12 appliance during the process, then you can follow an alternative procedure where all appliances are shut down.

Note the following:

- While the appliances are shut down, existing desktop connections should remain intact, but tenant administrators will be unable to access the Enterprise Center, and users will not be able to initiate new desktop connections.
- Database replication will not be operational on secondary SP nodes until they have been restored and have the new template. As a result, you may observe some unusual behavior during normal tasks such as provisioning.
- You may not be able to perform provisioning or other VM-related maintenance tasks while the Service Provider and Resource Manager appliances are being migrated. Desktops remain available during this time.

#### Procedure

**Note:** The following commands are performed on the newly created Ubuntu 12 appliance unless otherwise noted. When you are prompted for the IP address of the existing Ubuntu 10 SP1, do NOT use the floating IP for the ETH0 IP.

1. If you are not using DHCP, run the following script from the command line to set static IPs for the new appliance. If you are using DHCP, skip this step.

```
sudo /usr/local/desktopone/scripts/backupSP1.sh setup_static_ip
```

**Table B–1 IP Setup for SP1 Migration**

Field	Sample Value	Notes
Enter IP for the existing Primary Service Provider (eth0):	172.16.0.3	This is the front-end IP for the existing Ubuntu 10 SP1 Appliance.
Enter eth0 for this VM:	192.168.1.3	This is the front-end IP for the new Ubuntu 12 SP1 Appliance.
Enter netmask for this VM (eth0): Netmask CIDR format (0-32)	24	For the new Management network used by the new Ubuntu 12 SP1 Appliance.
Enter gateway for this VM:	192.168.1.1	For the new Management network

2. Run the following script, which backs up pertinent files that need to be migrated to the new SP1 appliance (including a DB backup).

```
sudo /usr/local/desktopone/scripts/backupSP1.sh backup_files
```

When prompted, enter passwords for the appliance and the postgres DB.

Upon completion of the script the VM will reboot.

3. Power down all appliances except the Ubuntu 12 SP1 appliance.
4. On the VM console, run the following command.

```
sudo /usr/local/desktopone/scripts/bootstrap.sh
```

This script restarts the appliance.

5. After the appliance has restarted, run the following command on the VM console :

```
sudo /usr/local/desktopone/scripts/restoreSP1.sh
```

**Note:** The script may take some time to run because it needs to wait for dtService to fully initialize.

TEST : After this script completes, confirm that the DB restored successfully by running the following query from the FDB database :

```
Select * from appliance;
```

This should return all of the appliances in your system. If only one appliance is returned, then the restore was unsuccessful and you should contact VMware Global Support Services.

6. Shut down the Ubuntu 12 SP1 appliance.
7. Rename the original Ubuntu 10 SP appliance.
8. Change the name of the Ubuntu 12 SP1 appliance to the original name of the Ubuntu 10 SP1 appliance and power on the Ubuntu 12 SP1.
9. Power on all appliances, except the original Ubuntu 10 appliance.

**TEST:** After making these changes, confirm that you can login to the Service Center at the original Service Provider IP address. Confirm all appliances are registering as **Online** on the **Browse Appliance** screen.

10. Re-initialize replication (slony) on the SP nodes as follows.

On each SP appliance run these commands as root:

- a. Stop dtService on all ServiceProvider nodes :

```
service dtService stop
```

- b. Stop slony daemons on all SPs:

```
killall slon
```

- c. Drop the slony schema on the FDB database for all SP appliances :

```
drop schema _slony cascade;
```

**Note : The primary SP should already have the slony schema dropped.**

- d. Start dtService on primary (Ubuntu 12) SP appliance:

```
service dtService start
```

- e. Restart slony for FDB on all SP appliances:

```
/usr/local/desktop/scripts/start_slon_fdb.sh
```

- f. Via the dt-console in the Service Center on the primary SP appliance, invoke the UpgradeManagerImpl bean and activate methods below.

For FDB, invoke initSlonyForOrg with the following arguments :

```
orgId : 1000
```

```
dataCenterId : <blank>
```

```
dbType : fabric
```

- g. When these methods have returned true, start dtServices on the stopped appliances.

11. In the Ubuntu 12 SP1 Service Center, select **Appliances ► Browse Appliance Templates ► Add Appliance Template** to upload the Horizon DaaS 6.1 Appliance Template.
12. Restore the HA Service Provider Node.
13. Restore the remaining Org1000 appliances one at a time.

**Note:** After you have migrated your SP1 appliance to the Ubuntu 12 appliance template, you must migrate all of your Org1000 (SP and RM) appliances across all data-centers as soon as possible (i.e. within the same maintenance window) to avoid having different versions of the templates across SP/RM appliances for an extended period of time. Before you upgrade to version 6.1, having different versions of the templates is not a problem.

## Migrate Tenant Appliances to New Template

**Note:** Before upgrading appliances for an organization, navigate to the Reservations page in the Service Center (appliances ► reservations) and reschedule any pending reservations until after the upgrade.

### Procedure

1. Back up the database on the primary tenant appliance and primary desktop managers by running the following command on each appliance:

```
/usr/local/desktopone/scripts/backup_db.sh -P '<postgres_db_password>'
```

This command extracts a PostgreSQL database into an archive file, creating a backup file of the form <hostname>.<timestamp>.tar.gz in the /usr/local/desktopone/backup folder.

backup\_db.sh also accepts the following optional command line arguments:

Argument	Description
-P password	Password for database user admin
-V true	Enable verbose mode
-U username	PostgreSQL username (default is postgres).

**Note:** Be sure to save the database backup file on an independent server prior to restoring the primary tenant appliance.

2. In the Service Center, select **tenants ► browse tenants** to find the organization ids for each tenant.
3. In the com.desktopone area of the dt-console, click on service=UpgradeManager.
4. Invoke the upgradeOrgsSimultaneously function, specifying the p1 parameter as a comma delimited list of organization IDs with no spaces.
5. For example, to upgrade all appliances in organizations 1001, 1002, and 1003:

<b>upgradeOrgsSimultaneously</b>	java.lang.String	upgradeOrgsSimultaneously	p1 java.lang.String (no description)	1001,1002,1003
				<input type="button" value="Invoke"/>

6. Click **Invoke**. All appliances for the specified organization are upgraded, but each org id is upgraded at the same time.

**Note:** VMware recommends that you upgrade no more than five tenants at a time. The time required to upgrade a Tenant could be as much as 20 minutes.

7. Progress is tracked in desktopone.log, located in the /var/log/desktopone directory on the Primary Service Provider. Once the operation is complete, the result is displayed in the browser window: either "Organization: <org\_id> Successful" or "Organization: <org\_id> Failure."
8. In the Service Center, select **appliances ► browse appliances** to verify that all Tenant appliances are at Version 6.1.0. If some appliances are not at Version 6.1.0, you did not update all of the organization ids you noted on the Tenants screen.
9. Restore each tenant appliance one at a time. This will complete the migration of each appliance to Ubuntu 12. It is recommended that migration occur soon after upgrading.

**Note:** If you have a tenant with RSA enabled, you will see a message notifying you that need to perform manual configuration on the tenant after the restore. Click OK on the message dialog. When the restore is complete, go to the RSA Server and clear the Node Secret and upload a new sdconf.rec file for any tenants that have been restored.

**Warning: There will be brief downtime during the restore of each tenant when users will not be able to launch new sessions into desktops and existing sessions may be disconnected.**