



Backing Up and Restoring Cisco Vision Dynamic Signage Director Servers

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This module describes how to setup and schedule backups between a primary and secondary server, and restore data between them.

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Prerequisites for Backing Up and Restoring Cisco Vision Dynamic Signage Director Servers

Before you backup or restore Cisco Vision Dynamic Signage Director servers, be sure that the following requirements are met:

CAUTION: For any release 4.1 systems or releases prior to 5.0 SP2, imported logos as channel icons are not backed up (the channel icons will disappear during the upgrade procedure of backing up the primary and restoring to secondary if the icons are not already on the secondary server). A maintenance patch (SV-DIRECTOR-HOTFIX-CSCvd35309) is needed on both the primary and secondary servers before you run any backup and restore operations as part of an upgrade from any 4.1 release, or to Release 5.0 SP2. Otherwise, you will need to re-import the logos after upgrading to Release 5.0 SP2.

- You are familiar with using the Text Utility Interface (TUI) in Cisco Vision Dynamic Signage Director.
For more information, see [Cisco Vision Dynamic Signage Director Server Text Utility Interface, page 89](#).
- You have a directly-connected console or an SSH client to access the primary active and secondary servers.
- You have the IP addresses of the active and secondary servers.
- You know the installer account credentials on the Cisco Vision Dynamic Signage Director active and secondary servers.

- The IP address of the secondary server must be reachable on the network from the active server or the TUI backup configuration will fail.
- You have determined an appropriate time on the network to schedule automatic backups and restores.

Restrictions for Backing Up and Restoring Cisco Vision Dynamic Signage Director Servers

Consider the following restrictions when backing up and restoring Cisco Vision Dynamic Signage Director servers:

CAUTION: The tasks described in this document apply only to a redundant server environment where *both* servers are running Cisco Vision Dynamic Signage Director software.

- If you have to fail over to your secondary Cisco Vision Dynamic Signage Director server due to a problem on the primary, then your original backup configuration will be invalid.

Be aware that your scheduled backup process cannot fully operate by automatically transferring a copy of the backup to the secondary server until you use the TUI automatic backup configuration again to reset the backup configuration between the primary and secondary servers. However, a backup will continue to be saved on the primary server.
- When you fail back to the original primary server and are now using the original IP addressing configuration, you still will need to use the TUI automatic backup configuration again so that the backup directory can be re-established on the secondary server.

Information About Backing Up and Restoring Cisco Vision Dynamic Signage Director Servers

This section includes the following topics:

- [Backup Environment, page 64](#)
- [What Cisco Vision Dynamic Signage Director Data is Backed Up, page 65](#)
- [Disk Storage and Maintenance, page 65](#)
- [Restore Environment, page 65](#)

Backup Environment

While you can run a backup for a network environment where there is only a single Cisco Vision Dynamic Signage Director server, the recommended environment that is described in this document is a redundant environment for either Platform 2 or Platform 3 servers or a virtualized environment. In a redundant environment, you are running Cisco Vision Dynamic Signage Director on a primary server, with a secondary server connected to the same subnet where the backup data from the primary server is saved.

The backup process can be scheduled and also run manually. When a backup is completed, the CMS is automatically restarted.

In Cisco StadiumVision Director Release 4.1 and later releases, the backup task can run even while an event script is running. As part of this change, the database is no longer optimized or repaired during the backup process—a new TUI option is added to run database maintenance manually if needed.

Although it is not expected that database maintenance should be needed on a regular basis, a possible symptom could be slow performance indicating a need to run database maintenance.

Tip: You can look at the backup log (`/var/log/svd-config/backup-YYMMddHHMMSSz.log`) to see if the table updates are “OK” and up-to-date. If not, then use the TUI option to run database maintenance. For more information, see the “Running Database Maintenance” topic in the [Cisco Vision Director Operations Guide](#).

What Cisco Vision Dynamic Signage Director Data is Backed Up

There are several areas of Cisco Vision Dynamic Signage Director that need to be backed up. The backup process backs up the following areas of the Cisco Vision Dynamic Signage Director server:

- Uploaded fonts
- Cisco Vision Dynamic Signage Director Content Management System (CMS)
- Cisco Vision Dynamic Signage Director database
- Cisco Vision Dynamic Signage Director system configuration files
- Content Integration data
- Dynamic Menu Board data (including GAR files)
- Proof of play report data in the `/var/sv/pofp/data` directory

Caution: The proof of play raw data in the `/var/sv/pofp/raw` directory is *not* backed up.

Disk Storage and Maintenance

Note: To be sure that your system has enough disk space, Release 4.0 and later releases only retain one backup file by default.

For more information, see the “Managing Server Resources in Cisco Vision Director” module of the [Cisco Vision Director Operations Guide](#).

Restore Environment

As with backups, you can schedule the restore process or run it manually. When the manual restore screen is displayed, it lists backups from both the backup and restore directories, concatenated together. This allows you to run a manual restore on either the primary or the secondary server. An automated restore always uses the most recent backup file in the restore directory.

Also, the schedule of tasks to run in the primary database and the secondary database will be different, due to the existence of the backup and restore tasks. Therefore, the schedule itself is not automatically restored.

How to Backup a Cisco Vision Dynamic Signage Director Server

This section includes the following tasks:

- [Enabling the Backup Account on the Secondary Server, page 66](#) (required)
- [Setting Up the Primary Server for Automatic Backup and Restore, page 66](#) (required)
- [Scheduling a Regular Backup, page 68](#) (required)
- [Starting a Backup Manually for Immediate Execution, page 69](#) (optional)
- [Verifying Backup Completion, page 70](#) (optional)

- [Modifying the Number of Backup Files to Retain, page 71](#) (optional)

Enabling the Backup Account on the Secondary Server

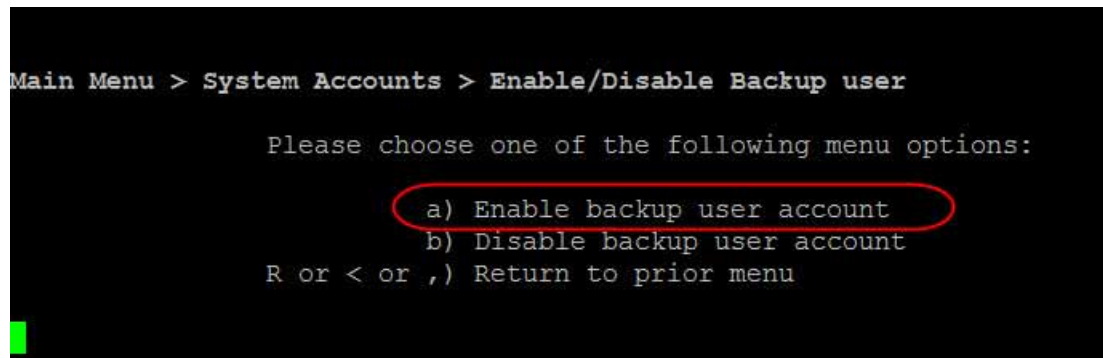
Before you set up the primary Cisco Vision Dynamic Signage Director server for automatic backup and restore with a redundant secondary server, you need to enable the backup account on the secondary server using the TUI.

For more information about using the TUI, see [Cisco Vision Dynamic Signage Director Server Text Utility Interface, page 89](#).

To enable the backup account on the secondary server:

1. On the secondary server, log into the TUI by doing the following:
 - a. Use a directly connected console, or use an SSH client from a laptop computer that is connected to the Cisco Vision Dynamic Signage Director server network to run a secure login to the secondary Cisco Vision Dynamic Signage Director server using the IP address for your server.
 - b. When the login prompt appears, enter the **installer** userid followed by the installer password at the password prompt.
2. From the Main Menu, go to the **System Accounts > Enable/Disable Backup User** menu ([Figure 1 on page 66](#)).

Figure 1 Enable/Disable Backup User Menu



```
Main Menu > System Accounts > Enable/Disable Backup user

Please choose one of the following menu options:

  a) Enable backup user account
  b) Disable backup user account
R or < or ,) Return to prior menu
```

1. Select **Enable backup user account**.

Tip: To navigate through the TUI menus you must type the character that corresponds to the menu area where you want to go (a, b, c, and so on) and press Enter. To return to other menus, you must back out of the hierarchy of menus using one of the indicated keys to return you to prior menus.

When successfully created, the following messages are displayed:

```
Backup user has been enabled.
You must set up the backup user key from the primary system to use it.
```

2. Press any key to return to the Enable/Disable Backup user menu.
3. Continue to return to the Main Menu and exit the TUI.

Setting Up the Primary Server for Automatic Backup and Restore

The configuration of the backup accounts and directories between the primary and backup server is automated using a TUI menu option. You need to use the TUI to setup the Cisco Vision Dynamic Signage Director Server environment to be able to run the backup and restore processes.

Note: The TUI is only used to configure the backup environment. You need to use the Management Dashboard to schedule or run any manual backups. For more information, see [Scheduling a Regular Backup, page 68](#) and [Starting a Backup Manually for Immediate Execution, page 69](#).

To set up the primary server for automatic backup and restore:

1. On the primary server, log into the TUI by doing the following:
 - a. Use a directly connected console, or use an SSH client from a laptop computer that is connected to the Cisco Vision Dynamic Signage Director Server network to run a secure login to the primary Cisco Vision Dynamic Signage Director server using the IP address for your server.
 - b. When the login prompt appears, enter the **installer** userid followed by the installer password at the password prompt.
2. From the Main Menu, go to **Cisco Vision Server Administration > Setup automatic backup and restore**.

Figure 2 Setup Automatic Backup and Restore Menu Option

```
Main Menu > Cisco Vision Server Administration

Please choose one of the following menu options:

a) Display Software Version
b) Upgrade Server
c) Restart Cisco Vision Dynamic Signage Director software
d) Shutdown Cisco Vision dynamic Signage Director software
e) Setup automatic backup and restore
f) Re-Run CiscoVision initial configuration
g) Retention Policy
h) Database Maintenance
i) Failover
j) Reboot
k) Power Off
R or < or ,) Return to prior menu
```

3. At the prompt type the IP address or hostname of your secondary server as shown in the example in [Figure 3 on page 67](#):

Figure 3 Secondary Server IP Address Configuration

```
-----
Please enter the IP address of the currently inactive SVD server
Enter hostname (or press <ENTER> to cancel): 10.194.171.62
```

4. At the prompt, type the password for the installer account on the secondary backup server.
5. When accepted, the system generates the RSA keys and the public key is copied to the secondary server. Confirm that the keys are created without errors as shown in [\(Figure 4 on page 68\)](#):

Figure 4 Generation of RSA Keys

```

Please enter the IP address of the currently inactive SVD server
Enter hostname (or press <ENTER> to cancel): 10.194.171.62
Please enter the password for installer @ 10.194.171.62:
Generating public/private rsa key pair.
Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
01:79:b0:1f:e4:c3:34:07:9a:38:3a:69:2e:65:98:0b root@gatemp34
The key's randomart image is:
+--[ RSA 2048]-----+
  . +..
   O.o
  .o*
  o=* o
  o o .S .
E o B
  * .
  o .
  .
-----+
Press any key to return to the menu.

```

6. Wait until the “Press any key” message appears (there can be a short delay before it is displayed).
7. Then, press any key to return to the Cisco Vision Server Administration menu.
8. Continue to return to the Main Menu and exit the TUI.

Scheduling a Regular Backup

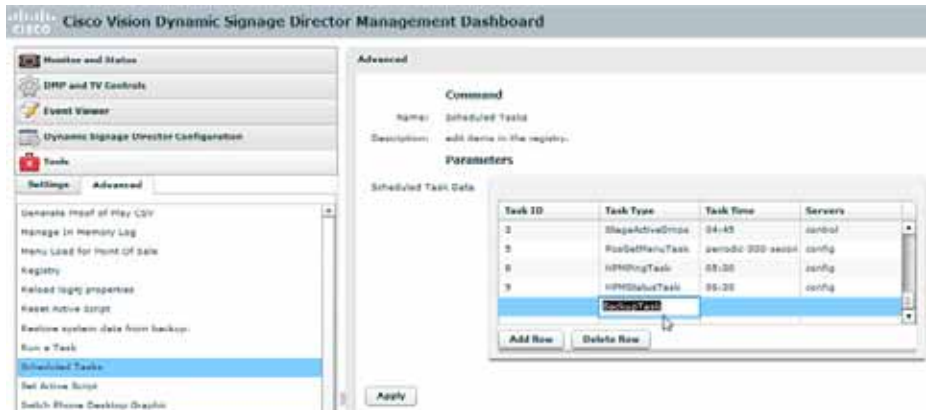
After you have configured the servers to support the backup process, you need to schedule backups using the Management Dashboard in the Cisco Vision Dynamic Signage Director software.

To configure a backup to run on a regular schedule:

1. Log into the primary Cisco Vision Dynamic Signage Director server as an administrator.
2. From the Cisco Vision Dynamic Signage Director main menu, click **Management Dashboard**.
The Cisco Vision Dynamic Signage Director Management Dashboard opens in a new window.
3. Select **Tools > Advanced > Scheduled Tasks**.
4. Click **Add Row** and scroll to the new blank line.
5. Click in the Task Type column and type **BackupTask** (Figure 5 on page 69).

Note: Be sure to type the name of the task exactly as shown with upper and lowercase characters.

Figure 5 Adding a Backup Task to Run on a Regular Schedule



6. Click in the Task Time column and specify the time (in 24:00 format) when you want the backup to run.
7. Click in the Servers column and type **config**.
8. Click **Apply**.

Starting a Backup Manually for Immediate Execution

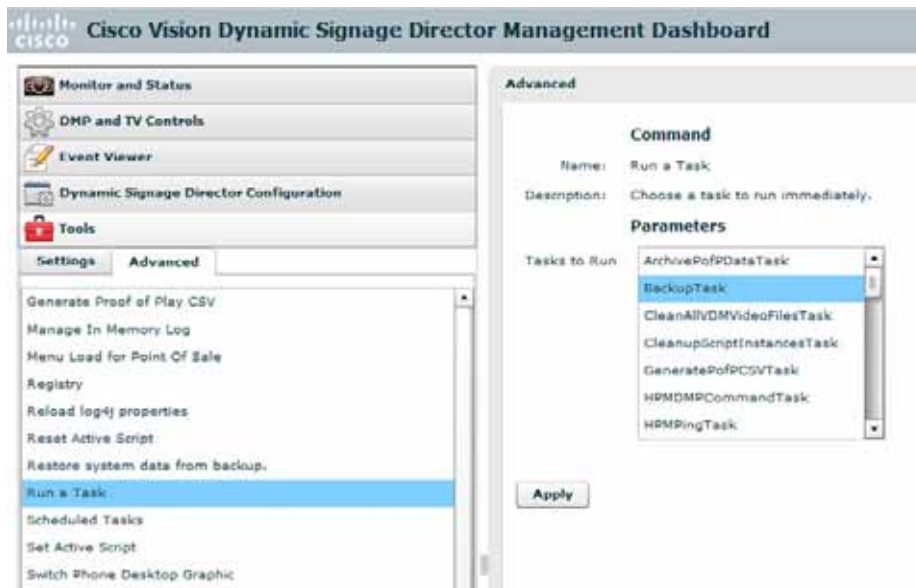
If you want to start a backup other than at the regularly scheduled time, you can run a backup manually.

To start a backup manually for immediate execution:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.
2. From the Cisco Vision Dynamic Signage Director main menu, click **Management Dashboard**.

The Cisco Vision Dynamic Signage Director Management Dashboard is opened in a new window.

3. Select **Tools > Advanced > Run a Task**.
4. In the Tasks to Run box, select the **BackupTask** (Figure 6 on page 70).

Figure 6 Running a Scheduled Backup Task Manually**5. Click Apply.**

The backup begins immediately. When completed, the CMS is automatically restarted.

Note: The “success” message that appears means that the backup task has started. It does not mean that the backup has completed.

Verifying Backup Completion

To verify backup completion, you should confirm that a backup file exists and also that no errors appear in the log file.

Verifying That a Backup File Exists

Note: Verifying the existence of a backup file only tells you that a backup was attempted, but not necessarily if there were any errors.

To verify that a backup file exists:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.
2. From the Cisco Vision Dynamic Signage Director main menu, click **Management Dashboard**.

The Cisco Vision Dynamic Signage Director Management Dashboard is opened in a new window.

3. Select **Tools > Advanced > Restore system data from backup**.
4. Verify that backup files with dates and times appear.

Finding Backup Errors in the Log File

Note: Be aware that the messages “Starting backup” and “Backup completed” will always appear in the log regardless of success.

To find backup errors in the log file:

1. Open the `/opt/sv/servers/config/logs/sv_dev_debug.log` file.

How to Backup a Cisco Vision Dynamic Signage Director Server

Tip: You can access log files from the TUI, or by running a System State Report from the Cisco Vision Dynamic Signage Director main menu.

2. In the sv_dev_debug.log file, find messages that include the string “com.cisco.sv.backup.”

These are the backup process messages.

3. Find the “Starting backup” message.
4. After the “Starting backup” message (but before the “Backup completed” message), look for a “com.cisco.sv.backup” message that also includes “ERROR” in the string.

If you find this error, the backup did not complete successfully.

Modifying the Number of Backup Files to Retain

To reduce the amount of disk storage required in your system, the default backup retention policy is to keep one backup file. This retention policy can be modified to retain 2, 5, 7, or 10 backup files.

CAUTION: Be aware of your overall disk utilization and the size of your backup content to be sure that the number of backup files that you want to keep can be supported by your system resources.

Note: This task must be run on both the primary server and secondary backup server.

To modify the number of backup files to retain:

1. Log into the TUI by doing the following:
 - a. Use a directly connected console, or use an SSH client from a laptop computer that is connected to the Cisco Vision Dynamic Signage Director server network to run a secure login to the primary Cisco Vision Dynamic Signage Director server using the IP address for your server.
 - b. When the login prompt appears, enter the **installer** userid followed by the installer password at the password prompt.
2. From the Main Menu, go to **Cisco Vision Server Administration > Retention Policy > Backup/restore Files**.

A menu of policy options is displayed (Figure 7 on page 71), where you can choose to retain 1 (the default), 2, 5, 7, or 10 backup files.

Figure 7 Backup Retention Policy Menu

```
Main Menu > Cisco Vision Server Administration > Retention Policy > Backup/restore
Files

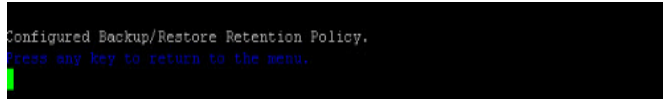
Please choose one of the following menu options:

a) Retain 1 backup
b) Retain 2 backups
c) Retain 5 backups
d) Retain 7 backups
e) Retain 10 backups
R or < or ,) Return to prior menu
```

3. Type the letter that corresponds to the number of days that you want to retain files and press **Enter**.

4. When the change of policy confirmation message displays, press any key to return to the Cisco Vision Server Administration menu.

Figure 8 Confirmation of Policy Change



5. Continue to return to the Main Menu and exit the TUI.

How to Restore a Cisco Vision Dynamic Signage Director Server

The Cisco Vision Dynamic Signage Director software automatically copies backup files between the primary and secondary servers and when the restore process starts, verifies the MD5 checksum.

If you need to failover to the secondary server and do a restore, follow the procedures in [Configuring Failover Between Redundant Cisco Vision Dynamic Signage Director Servers, page 75](#).

Note: If for some reason you need to manually copy files between the servers, be sure that you copy both the .tar and .chksum files because the restore process automatically uses both files to verify the MD5 signature.

This section includes the following tasks:

- [Starting a Restore Manually for Immediate Execution, page 72](#) (optional)
- [Restarting the Cisco Vision Dynamic Signage Director Software, page 73](#) (required after restore run)

Starting a Restore Manually for Immediate Execution

If you want to start a restore other than at the regularly scheduled time, the Cisco Vision Dynamic Signage Director software also allows you to run a restore from backup to begin immediately.

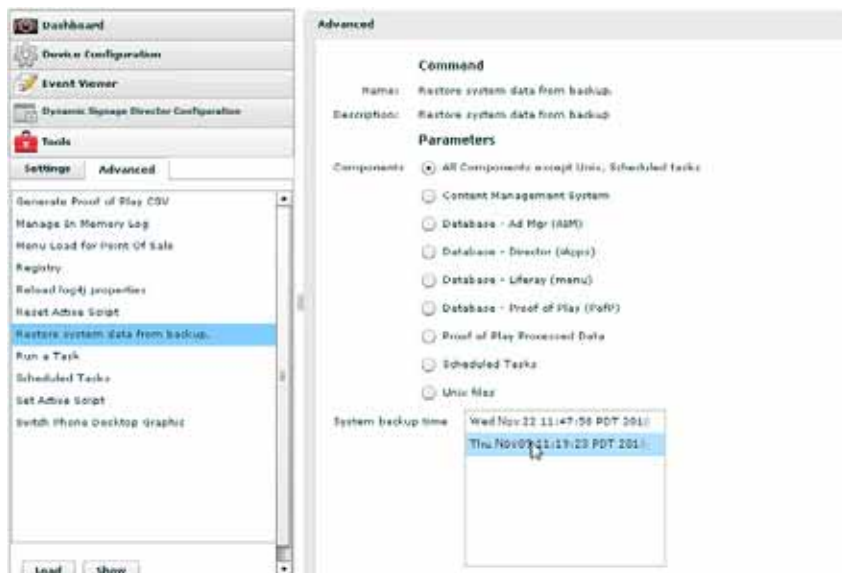
CAUTION: You cannot successfully run the restore process while an event script is running. In addition, if your venue was running any script when the backup took place, then those scripts will begin running after the restore.

To start a restore manually for immediate execution:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.
2. From the Cisco Vision Dynamic Signage Director main menu, click **Management Dashboard**.

The Cisco Vision Dynamic Signage Director Management Dashboard is opened in a new window.

3. Select **Tools > Advanced > Restore system data from backup**.
4. For Components, select **All components except Scheduled tasks** ([Figure 9 on page 73](#)).

Figure 9 Running a Restore Task Manually

5. (Optional) If you do not want to restore the latest backup (the default), then in the System backup time box, select the date and time of the backup file that you want to restore (Figure 9 on page 73).

6. Click **Apply**.

The restore begins immediately.

Note: If you need to also restore the scheduled tasks, you can rerun the Restore system data from backup and for Components, select **Scheduled Tasks**.

Restarting the Cisco Vision Dynamic Signage Director Software

After you perform any restore on a Cisco Vision Dynamic Signage Director server, you must restart the Cisco Vision Dynamic Signage Director software to resume normal operation of the services.

To restart the Cisco Vision Dynamic Signage Director software:

1. On the primary server, log into the TUI by doing the following:
 - a. Use a directly connected console, or use an SSH client from a laptop computer that is connected to the Cisco Vision Dynamic Signage Director server network to run a secure login to the primary Cisco Vision Dynamic Signage Director server using the IP address for your server.
 - b. When the login prompt appears, enter the **installer** userid followed by the installer password at the password prompt.
2. From the Main Menu, go to **Cisco Vision Server Administration > Restart Cisco Vision Dynamic Signage Director Software**.
3. Return to the Main Menu and exit the TUI.

