Configuring Cisco Vision Dynamic Signage Director for Multiple Venue Support

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A centralized server site can be deployed with multiple remote sites in a multi-venue architecture. This document is intended for Cisco Vision Dynamic Signage Director administrators and describes how to enable and manage multiple venue support.

Contents

Prerequisites for Configuring Multiple Venue Support

Before you configure multiple venue support, be sure that the following requirements are met:

- You have read Cisco Vision Dynamic Signage Director On-Premise Architecture Overview, page 11.

- You understand the deployment of zones, groups and locations and the use of playlists and scripts in Cisco Vision Dynamic Signage Director.

- The centralized Cisco Vision Dynamic Signage Director server is installed with a minimum of Release 3.1.

- You have planned the configuration for any new or changes to existing Locations. For existing Locations be sure that you are aware of current group/zone associations that will be disabled once you reassign an existing Location to a specific venue.

Restrictions for Configuring Multiple Venue Support

Before you configure Cisco Vision Dynamic Signage Director for multiple venue support, be sure that you consider the following restrictions:

- Any remotely-located DMPs are controlled by the central Cisco Vision Dynamic Signage Director server.

- The PTP master for DMP time service must be co-located with those remote DMPs and on the same VLAN.

- Venue objects (such as locations, playlists, and scripts) are limited to a single-venue association, except for users who are assigned to the role of Venue Operator.

Caution: Once an existing Location is reassigned to a specific venue, any previous group/zone associations will be disabled and the Location will need to be reassigned to groups/zones.

- Only Venue Administrators or Venue Operators can be associated to one or more venues.

- Only certain areas of the Cisco Vision Dynamic Signage Director software are *venue aware*, which means that certain roles can apply venue-specific scope of control using the venue selector. These areas include:

  — Command Center Monitoring

  — **Control Panel > Control**

  — **Control Panel > Content**

    Note: External content, channels, and Dynamic Menu Board (DMB) content items are global to all venues. Therefore, these global content items also can be deleted by a venue administrator.

  — **Control Panel > Schedule**

  — **Management Dashboard**

  For information about specific access allowed by user role, see Table 2 on page 66.

Note: The following areas of the **Control Panel > Setup** are not directly venue-aware using the venue selector, but objects defined there can have a venue-specific relationship:

- Users—You can define all Users under **Control Panel > Setup**, but you can only associate venues to Venue Administrators or Venue Operators under the Venues tab. Therefore, the Users interface is not venue aware.

- Zones & Groups—Zones and groups inherit their venue association through the Location. Locations are associated to venues under the Venues tab by the administrator.

- Triggers—Triggers can be applied to venue-associated scripts, but the Triggers interface itself is not venue aware, and all defined triggers in Cisco Vision Dynamic Signage Director are global in scope.

- Playlists imported using the Media Planner Import API need to be manually assigned to venues after import into Cisco Vision Dynamic Signage Director.

Caution: Cisco Vision Dynamic Signage Director does not support disabling of multiple venue support (set the "Multiple Venue Enabled?" property to false) after you have enabled it and associated objects.

Information About Configuring Multiple Venue Support

This section includes the following topics:

- Role-Based Access Control for Hierarchical Management of Multiple Venues, page 42

- Understanding Venue Association, page 44

- Understanding Scripts and Staging Behavior in a Multi-Venue Environment, page 44

Role-Based Access Control for Hierarchical Management of Multiple Venues

Cisco Vision Dynamic Signage Director Release 5.0 introduces a new role of Venue Administrator.

For more information about user management and Role-Based Access Control (RBAC), see User Management in Cisco Vision Dynamic Signage Director, page 61.

Administrator

The Cisco Vision Dynamic Signage Director administrator can perform all functions related to venue management.

Most of the configuration management for multiple venue support resides only with the Cisco Vision Dynamic Signage Director administrator role, which includes the addition of the following functions:

■ Enabling Cisco Vision Dynamic Signage Director for multiple venue support.

■ Creating venues in Cisco Vision Dynamic Signage Director.

■ Creating users with role of Venue Administrator and Venue Operator.

■ Capability for associating any venues to users, locations, content, playlists, and scripts.

Content Manager

In a multi-venue architecture a Content Manager can perform all of the same functions as within a standard Cisco Vision Dynamic Signage Director environment, with the addition of the following capabilities:

■ Selecting the venue scope from the Content and Schedule screens in Control Panel.

■ Importing content to be associated with one or more venues by using venue tags.

■ Creating playlists and scripts to be associated with the currently selected venue scope or all venues.

Note: Content Managers can only create new objects with venue assignment based on the currently selected venue in the venue selector. To reassign an object to a different venue, the Content Manager must remove the object and add again.

Venue Administrator

The Venue Administrator role was introduced in Cisco Vision Dynamic Signage Director Release 5.0 and provides limited permissions at the venues authorized by the central Administrator for that user, for the following areas of Cisco Vision Dynamic Signage Director:

■ Command Center Monitoring

■ Control Panel—Content, Control (Script control and Staging), Schedule.

■ Management Dashboard—Read-only access with limited command support.

■ Setup—Devices (Display specifications only); Read-only access to Zones & Groups, Channels, Luxury Suites.

Venue Operator

The Venue Operator role is based on a subset of Event Operator and Help Desk roles, with the added functionality of venue-specific scope of control. The Venue Operator role supports the following capabilities:

■ Changing the user password in Control Panel.

■ Selecting venue scope for the venues for which permissions are granted.

■ Viewing and monitoring information on the Management Dashboard with read-only access to the venues for which permissions are granted.

■ Executing scripts and related state functions during an event at the venues for which permissions are granted.

■ Running CCM.

Other Legacy RBAC Roles

Legacy RBAC roles (roles that were available in releases prior to Cisco StadiumVision Director Release 3.1) can perform all of the same functions as within earlier Cisco Vision Dynamic Signage Director software releases.

Note: In a multi-venue architecture an Event Operator can perform all of the same functions as within a standard Cisco Vision Dynamic Signage Director environment. The Event Operator role is not venue aware. To support venue-specific scope of control for scripts, use the new Venue Operator role.

Understanding Venue Association

A centralized Cisco Vision Dynamic Signage Director site with multiple remote sites (venues) supports the following functionality:

- Association of venues to Users, Locations, Playlists, and Scripts (referred to collectively as *venue objects*).

- Inheritance of venue association from Locations for Groups, Zones, and Luxury Suites.

Tip: You can use the Bulk Administration Tool (BAT) to associate multiple locations to a venue.

Understanding Scripts and Staging Behavior in a Multi-Venue Environment

This section provides information about scripts when implementing them in a multi-venue environment.

Script Best Practices

When configuring scripts in a multi-venue environment, consider the following best practices:

- Configure scripts to control only a single venue.

- When creating venue-specific scripts, use the following process:

  a. Create the script first without any actions—Name it and save it.

  b. Assign the script to the venue.

  c. Edit the script to assign it to zones/groups.

  d. Use playlists that belong to the same venue.

  e. Edit the script to further define states.

- Be sure that scripts that are intended to run at a remote site are not also being run on any non-site DMPs.

- For optimal operation, avoid running multiple event scripts to the same DMPs at a site.

Note: If you move a script assignment from one venue to another, be aware that the zones/groups/playlists might still be associated with the old venue until they are manually reassigned. If a script is part of one venue and zones/groups/playlists are part of another venue, then the script will not start.

Script Staging Behavior

In Cisco Vision Dynamic Signage Director, script staging is always serialized. For example, if a manual staging job is running, a script-initiated staging job will begin after the manual staging has completed. The scripts will not start at the same time.

In the case of content replacement, content staging happens right away. If current staging is going on, content replacement staging will go into the queue. The DMP will play old content until confirmation of successful staging occurs, so there could be some time delay.

How to Configure Multiple Venue Support

This section includes the following tasks:

Enabling Multiple Venue Support in Cisco Vision Dynamic Signage Director

By default, Cisco Vision Dynamic Signage Director is not configured for multi-venue deployment. To support Cisco Vision Dynamic Signage Director with a centralized server and remote sites, you must configure the Multiple Venue Configuration property, which will set the corresponding registry key. Once this registry key is set, it will be preserved during an upgrade.

Caution: Cisco Vision Director does not support disabling of multiple venue support (set the "Multiple Venue Enabled?" property to false) after you have previously enabled it and associated objects. In other words, do not toggle between enabling multiple venue support and disabling it.

To enable multiple venue support in Cisco Vision Dynamic Signage Director:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.

2. Go to **Tools > Management Dashboard**.

3. Go to **Dynamic Signage Director Configuration > System Configuration > Data Integration > Multiple Venue Configuration**.

4. Set the **Multiple Venue Enabled?** property value to "**true**."

5. Click the Refresh icon to update property values.

   The multiple venue management functions are enabled in Cisco Vision Dynamic Signage Director and the registry key named "**multiVenueDeployment**."

6. Click **Save**.

7. Confirm that the "**Choose venue:**" control appears in the upper right corner of the **Management Dashboard** window.

8. Go to **Control Panel** > **Setup** and confirm that the Venues tab is available.

Tip: If you already had the Control Panel open before enabling multiple venue support, refresh the window to display the Venues tab.

Adding Venues to Cisco Vision Dynamic Signage Director

After you enable multiple venue support in Cisco Vision Dynamic Signage Director, you can add remote sites as venues in the Control Panel.

To add venues in Cisco Vision Dynamic Signage Director:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.

2. Go to **Tools** > **Control Panel**.

3. Go to **Setup** > **Venues**.

4. Click the plus (+) icon (Figure 1 on page 46).

Figure 1   New Venue Intro Panel

5. (Required) In the Name box, type a unique and identifiable name for the venue. "New venue" is the default.

6. (Required) In the Time zone box, click the arrow to open the drop-down box and select the time zone for the remote site.

   Note: This option is informational only and for proof-of-play reporting.

7. Set Default Content URL (landscape).

8. Set Default Content URL (portrait).

Associating Venues with Cisco Vision Dynamic Signage Director Objects

You can associate venues with Locations, Playlists, Scripts, and Users in Cisco Vision Dynamic Signage Director. Only the administrator can perform associations for all of these objects for all venues using the Venues tab in the Control Panel Setup screen.

After the initial multiple venue configuration and association is completed by the Cisco Vision Dynamic Signage Director administrator, other roles (Content Manager, Venue Administrator, and Venue Operator) can use the venue selector in Cisco Vision Dynamic Signage Director for their authorized functional areas of the interface to select their venue scope of control. Any related tasks will be based on that selected venue scope (All Venues or a specific venue).

This section includes the following topics:

Guidelines for Associating Venues

Before you associate venues in Cisco Vision Dynamic Signage Director, understand the following guidelines:

■ Each object is limited to a single-venue association, except for users.

■ Only users with the assigned role of Venue Administrator or Venue Operator can be assigned to one or more venues by the administrator.

■ Only the following roles can see the venue selector in the Cisco Vision Dynamic Signage Director interface and use it to select the venue scope of control for their authorized areas:

— Administrator

— Content Manager

— Event Operator

— Venue Administrator

— Venue Operator

Caution: If a location is already in a group/zone configuration, it will be forcibly removed from those groups and zones when you either associate or disassociate the location from a venue. Scripts might fail to start on those endpoints because they are not part of the group anymore.

■ Refer to Script Best Practices, page 44 for guidelines on script creation and association.

Venue Association Procedure

To associate venues with Cisco Vision Dynamic Signage Director objects:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.

2. Go to **Tools > Control Panel**.

3. Go to **Setup** > **Venues**.

4. In the Venue list, click the name of the venue that you want to associate.

5. Do the following to assign object types to the selected venue:

    a. Click **Locations**, **Playlists**, **Scripts**, **Users**, **Tags**, or **Folders**.

    b. In the "Available" box, select the name of the location, playlist, script, user, tag, or folder that you want to associate.

    Tip: You can multi-select objects. Click the checkbox and **Ctrl+Click** to select additional objects.

    c. Click the << button.

    The object name is added to the Assigned box.

    d. Repeat from Step a. on page 47 or Step b. on page 47 for as many objects as you need to associate.

Figure 2   Associate Scripts to Venue Example

6. (Optional) To remove an assigned object, select the name of the object in the "Assigned" box and click the **>>** button.

7. When associations are complete, click **Save**.

Troubleshooting Venue Association Conflicts

When you attempt to associate objects to venues, certain conditions can cause the system to warn about objects that are not optimally configured to be associated to the venue, such as a Location already being associated to a group or zone in another venue. The warning message identifies the objects, which allows you to do one of two things:

■ Click **Close** to go back to the Cisco Vision Dynamic Signage Director configuration to confirm that the object best follows venue association guidelines and note or change the configuration.

■ Click **Force** to permit the system to attempt to make the requested association for the objects in conflict.

   Note: The Force button might not work for all associations. The system attempts to force the specified user action but several factors influence its success. For best results, read the error message and see what objects are in conflict with the requested action. Take corrective steps to avoid the conflict within Cisco Vision Dynamic Signage Director.
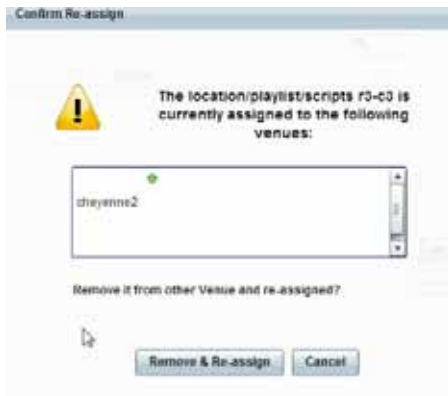
Figure 3 on page 48 shows an example of an error message that can appear when you attempt to associate venue objects and there are conflicts within the Cisco Vision Dynamic Signage Director configuration. Any other objects not in conflict will be associated to the venue as requested.

Figure 3   Venue Association Conflict Message Example

shows an example of a venue assignment conflict message where the location, playlist, or script that you tried to assign to a venue is identified as already assigned to another venue. The original venue assignment is displayed in the message ("Cheyenne2" in this example). You can do one of two things:

- Click **Remove & Re-assign** to proceed with the new venue assignment and remove the specified object from its current venue assignment.

- Click **Cancel** to retain the original venue assignment and return to Cisco Vision Dynamic Signage Director.

Figure 4   Confirm Object Reassignment Message Example

Removing Venues From Cisco Vision Dynamic Signage Director

To remove a venue from Cisco Vision Dynamic Signage Director:

1. Log into Cisco Vision Dynamic Signage Director as an administrator.

2. Go to **Tools > Control Panel**.

3. Go to **Setup** > **Venues**.

4. Remove association from all objects that are linked to the venue that you want to remove.

5. In the Venue List box, select the venue that you want to remove.

6. Click the delete icon (red dash).

Selecting Venue Scope

You can select venue scope in the **Control Panel** and in the **Management Dashboard**. However only certain areas of the Control Panel interface are venue aware. Once you have enabled the software for multiple venue support and added new venues in the Control Panel, you can use the venue selector in those areas that are venue aware.

Venue status is indicated in the venue selector using a radio button that is colored red to indicate that the venue is disabled and green to show that the venue is online.

Caution: Take note that the venue selector will show the last venue that you selected, but the scope will not be limited to the selected venue if you are not in a venue-aware area of the interface. The global scope will apply (All Venues). For more information, see Understanding Venue Association, page 44.

To select venue scope:

1. Log into Cisco Vision Dynamic Signage Director as an administrator, content manager, venue administrator, or venue operator.

2. Go to **Tools > Control Panel** (or Management Dashboard, as allowed by your role).

3. At the top of the window, look for the venue selector drop-down box.

shows an example of the venue selector in the Cisco Vision Dynamic Signage Director Control Panel.

Figure 5   **Venue Selector Drop-Down Box in the Control Panel**

4. Do one of the following:

    — To apply the scope of operation to a specific venue, select the name of the venue in the drop-down box.

    — To apply the scope of operation to all venues, select All Venues.

5. Continue to the Control Panel area that you want to configure.

Monitoring Venues From the Management Dashboard

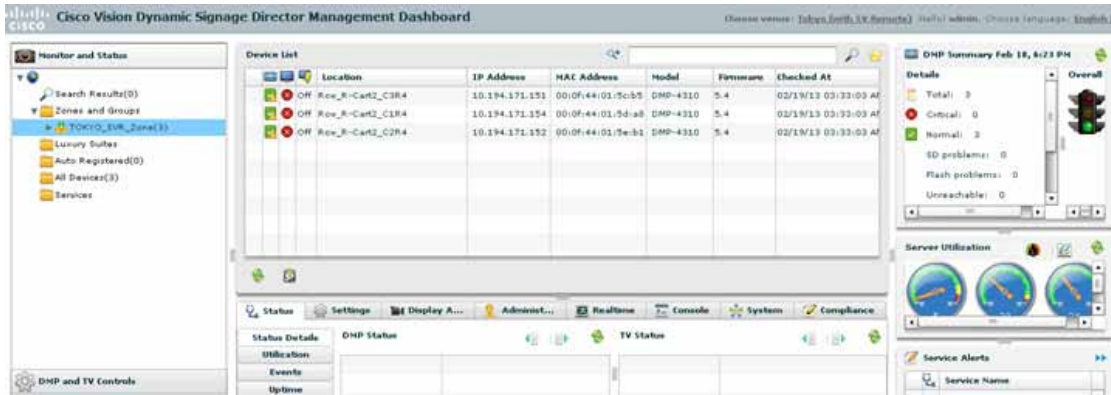You can monitor the status of remote devices for selected venues from the **Management Dashboard**.

Traffic monitoring of remote DMPs in the Management Dashboard is performed using unicast messaging, so multicast optimization does not apply.

To monitor venues from the Management Dashboard:

1. Log into the Cisco Vision Dynamic Signage Director server as an administrator.

2. Go to **Tools > Management Dashboard**.

3. At the top of the window, select the venue whose devices you want to monitor.

4. Click the **Monitor and Status** drawer.

5. Select the area that you want to get information about.

shows information about zones in the Tokyo venue.

Figure 6   Monitoring Devices for a Specific Venue in the Management Dashboard

How to Migrate Deployed Devices From a Single Venue to a Multiple Venue System

This section describes the best practices for migrating a large number of deployed devices and locations from a single venue to a multiple venue system using the Bulk Administration Tool (BAT).

For more information about the tasks referenced here for exporting, editing, and importing TSV files using BAT, see the Cisco Vision Director Bulk Administration Tool guide.

This section includes the following tasks:

- Prerequisites, page 51 (required)

- Exporting a Device List for the Original System Configuration, page 52 (required)

- Creating New Venues, page 53 (required)

- Removing All Locations From Existing Groups, page 53 (required)

- Removing Locations From Existing Suites, page 53 (only required if DMPs are in suites)

- Associating Initial Locations to Venues, page 53 (required)

- Completing Venue-Specific Information and Association of Locations Using the BAT, page 54 (required)

- Populating Group Information in the New Device List, page 54 (required)

Prerequisites

Before you migrate deployed devices from Cisco Vision Dynamic Signage Director, be sure that the following requirements are met:

Caution: Cisco Vision Dynamic Signage Director does not support disabling of multiple venue support (set the "Multiple Venue Enabled?" property to false) after you have previously enabled it and associated objects. In other words, do not toggle between enabling multiple venue support and disabling it.

- You must be sure that the following object types are configured to be unique per venue:

Groups, zones, locations, scripts, suites, and playlists.

■ Use a naming convention that easily identifies the venue to which an object is associated by assigning a prefix to the object name. This makes it easier to find and track related objects.

For example, to name scripts, playlists, and locations that belong to a venue called "WEST-SIDE-VENUE" you could use the prefex "WE" such as WE-Script1, WE-Script2, WE-Playlist1, WE-Location1, and so on.

■ If you have existing DMPs in a group that are targeted to be in multiple venues, they need to be split up so that each group contains DMPs *only for a single venue*.

For example, if there is a group (ALL-DMPs) that consists of all of the DMPs in Cisco Vision Dynamic Signage Director, then sub-divide the group into smaller groups of DMPs by venue, such as "ALL-DMPs-Venue1," "All-DMPs-Venue2," "ALL-DMPs-No-Venue" and so on.

This same rule applies to other objects like zones, scripts, suites, and locations. If any of these have objects that are targeted to be in different venues or to be global (that is, objects that are not part of any venues) then sub-divide them on a per-venue basis.

■ (For DMPs in suites only) All suites must have a suite controller attached.

Tip: You can easily verify whether or not a controller is defined for a suite by looking at the original exported device list (See Exporting a Device List for the Original System Configuration, page 52.) If Column N (Suite Name) has a value and Column M (Suite Control Type) does not have a corresponding value in the same row, then you know that the Suite named in Column N does not have a device list attached to it.

If a suite controller is not attached, assign a suite controller to it. If there are not any available suite controllers, create an artificial one and assign it to the suite. Delete these fake controllers after the migration process completes successfully:

a. Go to **Tools > Control Panel** > **Setup** > **Devices** > **IP Phones**.

b. Create artificial IP phone entries with fake, non-pingable IP addresses.

c. Go to **Suites**.

d. Select the suite that does not have a suite controller.

e. Click the **Phone & Remote** tab on the right panel that has suite properties.

f. Assign the artificial IP phone that you created to the suite by selecting the checkbox.

Exporting a Device List for the Original System Configuration

Do this task to preserve initial single-venue system configuration information and to aid re-population of that information to the new multi-venue device list created later.

For more information, see the "Exporting and Downloading a TSV File for Locations and DMPs" topic in the Cisco Vision Director Bulk Administration Tool guide.

To export a device list for the original system configuration:

1. Go to **Tools > Control Panel** > **Setup** > **Devices** > **Locations & DMPs**.

2. Click **Export**.

3. When the Export box displays, click **Download**.

4. When the "Select location for download" window appears, type the name of the .txt file that you want to save, or accept the default name and click **Save**.

5. **Be sure to save a master copy** of the originally exported device list.

Creating New Venues

This task describes how to create a new venue with basic information, which will be further updated in a later task using BAT.

To create new venues:

1. Go to **Tools > Control Panel** > **Setup** > **Venues.**

2. Specify the Name and Timezone for the venue.

3. Click **Save**.

Removing All Locations From Existing Groups

Note: Before you remove locations from existing groups, complete the requirements in the Prerequisites section to place all objects in unique groups per venue.

Before associating Locations to the new venues, remove them from existing groups.

To remove all Locations from Groups:

1. Go to **Tools > Control Panel** > **Setup** > **Zones & Groups**> **Location<->Group**.

2. Click **Groups**.

3. Select an individual group.

4. In the Locations panel on the right, select all Locations for the selected group.

5. You can use Ctrl+Click or Shift+Click key sequences to multi-select the Locations.

6. Click **Remove From Groups**.

7. Repeat from Step for all groups that need locations removed.

8. Refresh the browser to reload the UI so that the changes update.

Removing Locations From Existing Suites

To associate locations to a venue, remove them from any existing suites. Add these locations back to the configuration using the BAT tool using the original Device list that was exported.

To remove Locations from existing suites:

1. Go to **Tools > Control Panel** > **Setup** > **Suites**.

2. Select any suites that contain locations that are targeted to be moved to venues.

3. Select each location and click the red '-' button on the top to delete it from the suite.

   Tip: Click the red '-' button rapidly to delete DMPs quickly from the suite.

4. After all DMPs are removed from the suite, click **Save**.

5. Repeat from Step for each suite from which you need to remove locations.

Associating Initial Locations to Venues

To establish the venue-specific fields when you export the new multi-venue device list, associate at least one Location to each new venue that you created.

For more information, see Associating Venues with Cisco Vision Dynamic Signage Director Objects, page 46.

Completing Venue-Specific Information and Association of Locations Using the BAT

Perform this task to more easily complete configuration of any remaining venue-specific information and association of locations using the BAT.

To complete venue-specific information and association of Locations:

1. Export a new device list.

   After the association of at least one Location per venue, the newly exported device list file now contains the venue-specific field entries that can now be more easily populated with the remaining required configuration information.

   The venue-specific field entries in the BAT file are:

   — Venue Name

   — Venue Timezone

   — Venue JMX Password—The JMX password is saved in the venue information only when the system is disabled for global credentials.

   Note: The Venue JMX Username field is always ignored.

2. To complete association of Locations to venues, edit the TSV file using a spreadsheet application such as Microsoft Excel to:

   a. Complete the venue-specific information.

   b. Copy (or auto-fill) to add rows for new Locations that you want to add to the venues.

3. Import the device list.

   For more information, see the "Importing a TSV File" topic in the Cisco Vision Director Bulk Administration Tool guide.

4. Go to **Tools > Control Panel** > **Setup** > **Venues** and confirm that the Locations are properly associated to their venues.

Populating Group Information in the New Device List

This step allows you to more easily re-populate the original system's Group information to the new multi-venue device list.

To populate Group and other information from the original device list:

1. Export a new device list and open the file in your spreadsheet application.

2. Excluding the first row, select all rows and columns.

3. Sort the spreadsheet by the Name field (column E).

4. Obtain the copy of the master device list that you exported in Step 1.

5. Sort the master spreadsheet by the Name field.

6. From the original master file, copy the columns that have Group information (Z, AA, AB, AC, and so on) and paste them appropriately into your new device list.

   Tip: When working with certain rows and columns in Microsoft Excel, use the hide/unhide columns or rows feature and freeze/unfreeze feature to efficiently do this job. For information about these features, see the Microsoft support site.

7. From the original master file, copy columns that have Suites and Suite Controller information (J–Y).

8. Save the new device list.

9. Import the new device list into Cisco Vision Dynamic Signage Director.

10. After the import is complete, refresh the browser.