



Viewing Content Replication Status

The replication status feature allows you to view the status of content replication using the Content Distribution Manager GUI, output from CLI commands, or an API file. This chapter explains how to monitor content replication status from the Content Distribution Manager GUI.

In the Content Distribution Manager GUI, replication status is provided under the Content tab and the Devices tab. You can view the replication status by channel or by device. The Content Distribution Manager GUI also allows you to obtain a detailed view for a specific Content Engine or channel. You can also view detailed replication status for a particular content item in a channel.

This chapter contains the following sections describing views that you can obtain under the Content tab:

- [Viewing the System-Wide Replication Status by Channel, page 11-1](#)
- [Viewing the Replication Status for a Specific Channel, page 11-5](#)
- [Viewing the Detailed Replication Status of Content Items for a Specific Channel, page 11-9](#)
- [Viewing the Detailed Replication Status of Content Items for a Channel by Device, page 11-10](#)
- [Viewing the Detailed Replication Status of Content Items Across All Content Engines in a Channel, page 11-12](#)

This chapter contains the following sections describing views that you can obtain under the Devices tab:

- [Viewing the System-Wide Replication Status by Content Engine, page 11-13](#)
- [Viewing the Replication Status for a Specific Content Engine, page 11-14](#)
- [Viewing the Detailed Replication Status of Content Items for a Selected Channel by Content Engine, page 11-15](#)



Note

Individual Content Engines report their known status, but the Content Distribution Manager has a global view of the channel and may modify the state that the Content Engine reports. If the root Content Engine is processing an updated manifest file or has found new content of which a receiver Content Engine is unaware, the receiver Content Engine reports the replication status as “Completed,” yet the Content Distribution Manager reports the status as “Update Pending.” If the root Content Engine fails to update files, the status of all the receiver Content Engines is reported as “In Process.”

Viewing the System-Wide Replication Status by Channel

The Channels window lists all channels on the system and displays the replication status information for each channel. This display summarizes the replication status of all Content Engines associated with a specific channel in a given state.

To view system-wide replication status for each channel, follow these steps:

- Step 1** From the Content Distribution Manager GUI, choose **Services > Web > Channels** to display the Channels window. (See [Figure 11-1](#).)

Figure 11-1 Channels Window—System-Wide Replication Status by Channel

| Channel | Type | WebSite | Status | State | Manifest State |
|--------------------|---------|----------------|--------|-------|----------------|
| chan3 | Content | Cisco | N/A | N/A | N/A |
| chan4 | Content | Cisco | N/A | N/A | N/A |
| channel_rep_dis | Content | Cisco | N/A | N/A | N/A |
| channelAPI2 | Content | WebsitefromAPI | N/A | N/A | N/A |
| channelAPI3 | Content | WebsitefromAPI | N/A | N/A | N/A |
| channelAPI4 | Content | WebsitefromAPI | N/A | N/A | N/A |
| Channelcli | Content | Website1 | N/A | N/A | N/A |
| ChannelthruApi | Content | Website1 | N/A | N/A | N/A |
| export_Export | Export | web1 | N/A | N/A | N/A |
| export_stb_program | Export | Website1 | N/A | N/A | N/A |

- Step 2** View the replication status information for each channel. [Table 11-1](#) describes the status information that is displayed in this window.

Table 11-1 System-Wide Replication Status by Channel—Channels Window

| Column Heading | Description |
|----------------|--|
| Channel | Name of the channel. |
| Type | Type of channel. The channel types are Live and Content. |
| Website | Name of the website assigned to the channel. |

Table 11-1 System-Wide Replication Status by Channel—Channels Window (continued)

| Column Heading | Description |
|----------------|--|
| Status | <p>Graphical display indicating acquisition, replication, and device errors. Status lights represent the highest level of errors encountered:</p> <p>Green—No errors encountered.</p> <p>Yellow—Only minor errors encountered.</p> <p>Red—At least one critical error encountered, such as an acquisition failure, a content replication failure, or a failed or nonresponsive Content Engine.</p> <p>For details of the errors, click the status light for a particular channel, which takes you to the Replication Status for Channel window. (See Table 11-2 for a description of status errors and their corresponding status lights.)</p> |
| State | <p>State of the channel. States are reported for the root Content Engine and for receiver Content Engines. (See Table 11-3 for a definition of the different channel states.)</p> <p>The state is also a link to the Replication Status for Channel window that provides a more detailed view of the replication status for the channel. (See Figure 11-3.)</p> |
| Manifest State | <p>State of the manifest file. States reported are as follows:</p> <p>Fetching—The manifest file is being fetched.</p> <p>Fail Fetching—The manifest file has failed to be fetched.</p> <p>Parsing—The manifest file is being parsed.</p> <p>Fail Parsing—The manifest file has failed to be parsed.</p> <p>Completed—The manifest file was successfully fetched and parsed.</p> <p>No Status Reported—Root Content Engine is in a Pending or Disabled state.</p> |

Table 11-2 Channel Status Errors

| Status Light | Error | Description |
|--------------|--|---|
| Yellow | Manifest retrieval error | The root Content Engine cannot retrieve the manifest file for 1 or 2 consecutive attempts. |
| Red | Manifest retrieval error | The root Content Engine cannot retrieve the manifest file for 3 consecutive attempts. |
| Red | Manifest syntax error | The root Content Engine fails to parse the manifest file. |
| Red | Crawl job processing error | The root Content Engine encounters problems while crawling for content. |
| Red | Acquisition or content replication error | The Content Engine fails to obtain the content. |
| Red | Disk quota exceeded error | The Content Engine cannot store or process the content because there is no more disk space available. |

Table 11-2 Channel Status Errors (continued)

| Status Light | Error | Description |
|--------------|---|---|
| Yellow | Replication status update error | Content replication failed for 1 or 2 consecutive attempts. |
| Red | Replication status update error | Content replication failed for 3 or more consecutive attempts. |
| Red | Content Engine unreachable error | The Content Engine is offline or the Content Engine has not responded to replication status requests for 3 consecutive polling periods. |
| Red | Root Content Engine failover | The root Content Engine has failed over to a temporary root Content Engine. Receiver Content Engines have not identified a valid root Content Engine. |
| Red | Receiver Content Engine device or channel error | Receiver Content Engine is not reporting replication status or any other content replication problem. |

Table 11-3 Channel States in Replication Status for Channel Window

| State | Description |
|------------|--|
| Completed | <p>All receiver Content Engines are in the Completed state, and the root Content Engine is either in the Completed, Re-checking, Retrieving Manifest, or Processing Manifest state. (See Table 11-6 for a description of Content Engine states.)</p> <p>When the root Content Engine in the Re-checking state determines that new content needs to be acquired, the channel state changes to In Process.</p> |
| In Process | <p>In Process can mean:</p> <ul style="list-style-type: none"> • The root Content Engine is in the Retrieving Manifest, Processing Manifest, Acquiring Content, or Re-checking Content state. • Any receiver Content Engine is in the Pending Update, Replicating, or Recovering from Failure state. • The root Content Engine has failed and receiver Content Engines are still reporting status. |
| Failed | <p>Failed can mean:</p> <ul style="list-style-type: none"> • An acquisition or content replication error has occurred. (See Table 11-2.) • A Content Engine has gone offline or has not reported status in 3 consecutive polling periods. • The channel has more than 1 root Content Engine • The channel has no root Content Engine, but has receiver Content Engines reporting replication status. |

Viewing the Replication Status for a Specific Channel

To view the replication status for a particular channel, follow these steps:

- Step 1** From the Content Distribution Manager GUI, choose **Services > Web > Channels**. When you roll your mouse over an alarm light in the Status column for a particular channel, the content replication status for that channel is displayed. (See [Figure 11-2](#).)

Figure 11-2 Channels Window

| Channel | Type | WebSite | Status | State | Manifest State |
|-------------|---------|-----------|------------|--------------------|---|
| a-wz-5-10m | Content | wzhou-web | Failed | Completed | Completed At Wed Sep 07 00:32:09 UTC 2005 |
| a-wz-5-1k | Content | wzhou-web | Failed | Failed | Fail Fetching Manifest |
| a-wz-5-1mb | Content | wzhou-web | Failed | Failed | Fail Fetching Manifest |
| a-wz-5-20m | Content | wzhou-web | N/A | N/A | N/A |
| a-wz-5-4m | Content | wzhou-web | Failed | Completed | Completed At Fri Dec 10 20:54:53 UTC 2004 |
| a-wz-5-500k | Content | wzhou-web | Failed | Completed | Completed At Wed Sep 07 00:22:21 UTC 2005 |
| a-wz-5-50k | Content | wzhou-web | In Process | No Status Reported | No Status Reported |
| a-wz-5-5k | Content | wzhou-web | Failed | No Status Reported | No Status Reported |
| a-wz-5-8k | Content | wzhou-web | Failed | Completed | Fetching Manifest |
| aaa | Content | wzhou-web | Failed | Failed | Fail Fetching Manifest |

Channel a-wz-5-8k
 Root CE: AD-CE17-wzhou
 Root CE State: Retrieving Manifest
 Total content items: 5
 Content items acquired: 5
 Receiver CEs completed: 1
 Receiver CEs in progress: 0
 Receiver CEs failed: 0
 Receiver CEs not responding: 0

- Step 2** Click an alarm light in the Status column or a link in the State column. The Replication Status for Channel window appears. This window displays the replication status for the particular channel chosen. (See [Figure 11-3](#).)

[Table 11-4](#) describes the acquisition status information that is displayed in this window, and [Table 11-5](#) describes the replication status information for individual devices that is displayed in this window.



Note Alternatively, you can choose **Services > Web > Channels**, click the **Edit** icon next to the channel for which you want to view the replication status, and choose **Replication Status** from the Contents pane.

Figure 11-3 Replication Status for Channel Window

The screenshot shows the Cisco Application and Content Networking System interface. The main window is titled "Replication Status for Channel, ManifestGUI". It contains several sections:

- Acquisition Status:**
 - User Selected Root CE: bxb-interop-a-ce1
 - Current Root CE: bxb-interop-a-ce1
 - Disk Quota Used: 3.172 MB / 10.0 MB
 - Status: Completed
 - Manifest Last Modified Time: Thu Jul 28 15:43:42 CDT 2005
 - Manifest Last Checked Time: Sun Aug 07 11:24:44 CDT 2005
- View Detailed Replication Status:**
 - Get Detailed Status using Search Criteria: [input field] [Go]
- View Detailed Replication Status for Channel by Device:**
 - Get: [all] content items using Search Criteria: [input field] for Selected Device: [Go]
- Devices Assigned to Channel, ManifestGUI:**

| Device | Type | Status | State | Last Report Time | File Count | | | Total |
|-------------------|------|-----------|-----------|---------------------|------------|------------|--------|-------|
| | | | | | Completed | In Process | Failed | |
| bxb-interop-a-ce1 | Root | Completed | Completed | 11:44:40 08-04-2005 | 99 | 0 | 0 | 99 |

This window also allows you to do the following:

- See a detailed view of replication status using search criteria. (See the “Viewing the Detailed Replication Status of Content Items for a Specific Channel” procedure on page 11-9.)
- Query the replication status of content items (by pattern) for a selected Content Engine in the channel. (See the “Viewing the Detailed Replication Status of Content Items for a Channel by Device” procedure on page 11-10.)

Table 11-4 Acquisition Status for a Channel

| Field | Description |
|-----------------------|--|
| User Selected Root CE | Name of the user-selected root Content Engine. |
| Current Root CE | Name of the current root Content Engine. The current root Content Engine will be the same as the user-selected root Content Engine as long as the user-selected root is active; if it fails for any reason, the temporary root Content Engine becomes the current root Content Engine. |
| Disk Quota Used | Amount of available disk space used for the channel. |
| Status | State of the root Content Engine. (For a description of root Content Engine states, see Table 11-6.) |

Table 11-4 Acquisition Status for a Channel (continued)

| Field | Description |
|-----------------------------|--|
| Manifest Last Modified Time | Time when the manifest file was last saved, as recorded on the Content Engine. |
| Manifest Last Checked Time | Time when the root Content Engine last checked the manifest file for changes. |

Table 11-5 Replication Status for Devices Assigned to a Channel

| Field | Description |
|------------------|--|
| Device | Name of the Content Engine assigned to the channel. |
| Type | Type of Content Engine: root, receiver, or temporary root. |
| Status | Graphical display indicating acquisition, replication, and device errors. Status lights represent the highest level of errors encountered: Green—No errors encountered. Yellow—Only minor errors encountered. Red—At least one critical error encountered, such as an acquisition failure, a content replication failure, or a failed or nonresponsive Content Engine. For details of the errors, click the status light. A dialog box pops up, listing the errors. (See Table 11-2 for a description of status errors and their corresponding status lights.) |
| State | State of either the root Content Engine or receiver Content Engines. (See Table 11-6 for a description of Content Engine states.) |
| Last Report Time | Time when the last report from the Content Engine was received by the Content Distribution Manager. This time stamp uses the Content Distribution Manager clock. |
| File Count | |
| Completed | Number of files that the Content Engine has successfully acquired or received. |
| In Process | Number of new files to be acquired or replicated. Includes only files for which no acquisition or replication attempts have previously been made. |
| Failed | For the root Content Engine: Number of files that failed to be acquired in at least 1 attempt. For receiver Content Engines: Number of files that failed to be replicated in at least 1 attempt. Note The failure count for the receiver Content Engine has no relationship to the failure count for the root Content Engine. If the root Content Engine fails to replicate an item, the receiver counts this item as “In Process.” |
| Total | Total number of Completed, In Process, and Failed files. |

Table 11-6 Content Engine States

| State | Description |
|--------------------------------|--|
| Root Content Engine | |
| Retrieving Manifest | The root Content Engine is retrieving the manifest file from the origin server or rechecking the manifest file for changes. |
| Processing Manifest | The root Content Engine has retrieved the manifest file and is parsing it. |
| Acquiring Content | The root Content Engine has processed the manifest file and is crawling or fetching content. |
| Re-checking Content | The root Content Engine is checking the content or crawl job freshness. |
| No Status Reported | No Status Reported can mean: <ul style="list-style-type: none"> • The root Content Engine is unreachable for 3 consecutive polling periods. • The root Content Engine is offline. • The Content Distribution Manager has recently restarted and has not yet received a report from the root Content Engine. |
| Completed | The root Content Engine is not in the Retrieving, Processing, Acquiring Re-checking, or Unreachable state. |
| Receiver Content Engine | |
| Pending Update from Root | The receiver Content Engine is not synchronized with the root Content Engine. |
| Replicating | The receiver Content Engine is synchronized with the root Content Engine and is replicating content. |
| Completed | The receiver Content Engine has finished replicating all the content with no errors. |
| Recovering from Failure | The receiver Content Engine has not identified the root Content Engine. This state occurs during a failover from the root Content Engine to a temporary root Content Engine. |
| No Status Reported | No Status Reported can mean: <ul style="list-style-type: none"> • The receiver Content Engine is unreachable for 3 consecutive polling periods. • The receiver Content Engine is offline. • The Content Distribution Manager has recently restarted and has not yet received a report from the receiver Content Engine. |

Viewing the Detailed Replication Status of Content Items for a Specific Channel

To view the detailed replication status of content items for a channel, follow these steps:

- Step 1** Choose **Services > Web > Channels**. The Channels window appears.
- Step 2** Click the **Edit** icon next to the channel for which you want to view the replication status.
- Step 3** In the Contents pane, choose **Replication Status**. The Replication Status for Channel window appears.
- Step 4** In the View Detailed Replication Status section (see [Figure 11-3](#)), enter a string in the Get Detailed Status using Search Criteria field. Use an asterisk (*) to match one or more characters, or a question mark (?) to match only a single character.

The criteria are matched against the relative *cdn-url* attribute specified in the <item> tag in the manifest file. It is recommended that you start the search criteria by specifying wildcards such as *.htm or *.clip.mpeg.

- Step 5** To retrieve the specified items, click the **Go** button. The Replication Items window appears, displaying replication status for content items for a specific channel. (See [Figure 11-4](#).) [Table 11-7](#) describes the information that is displayed in the window.

Figure 11-4 Replication Status for Content Items for a Specific Channel

| Url | Size | Status | Replied CEs | Playtime | Modification Time |
|---------------------------------|------------|---------|-------------|----------|---------------------|
| http://2.10.4.15/welcome3.asf | 328.291 KB | Pending | 3 | 00:00:17 | 19:56:47 09-29-1999 |
| http://2.10.4.15/welcome2.asf | 2.042 MB | Pending | 3 | 00:01:07 | 22:03:47 07-09-1999 |
| http://2.10.4.15/pinball.wmv | 816.947 KB | Pending | 3 | 00:00:21 | 16:34:51 12-19-2002 |
| http://2.10.4.15/industrial.wmv | 1.209 MB | Pending | 3 | 00:00:34 | 15:34:47 12-19-2002 |
| http://2.10.4.15/welcome1.asf | 353.671 KB | Pending | 3 | 00:00:17 | 19:56:32 09-29-1999 |

Table 11-7 Replication Status of Items for a Channel

| Column Heading | Description |
|----------------|--|
| Url | URL of the origin web server that stores the website content. |
| Size | Size of the file to be acquired or crawled. |
| Status | Status of replication of content in the channel. The status will be shown as Complete if the replication is complete on all Content Engines assigned to the channel. |
| Replied CEs | Number of Content Engines that have replicated this item. |

Table 11-7 Replication Status of Items for a Channel

| Column Heading | Description |
|-------------------|---|
| Playtime | Duration of playback of the file. |
| Modification Time | Time stamp of the earliest update for that channel from an active Content Engine. |

Viewing the Detailed Replication Status of Content Items for a Channel by Device

Queries to determine the detailed replication status of a content item trigger extensive CPU cycles and high consumption of memory, because all the Content Engines assigned to a channel need to be polled, and the retrieved replication status is cached in the memory of the Content Distribution Manager. This results in performance degradation. To optimize the use of memory resources without compromising the need to obtain detailed replication status of a particular content item, you can choose a Content Engine assigned to a channel and generate a query.

To view the detailed replication status for a channel by device, follow these steps:

- Step 1** Choose **Services > Web > Channels**. The Channels window appears.
- Step 2** Click the **Edit** icon next to the channel that you want to view.
- Step 3** In the Contents pane, choose **Replication Status**. The Replication Status for Channel window appears.
- Step 4** In the Devices Assigned to Channel section (see [Figure 11-3](#)), click the radio button next to the name of the device that you want to view.
- Step 5** In the View Detailed Replication Status for Channel by Device section, do the following:
 - a.** Choose content items (**all**, **replicated**, or **nonreplicated**) from the Get drop-down list.
 - b.** In the Search Criteria for Selected Device field, enter a string that specifies the type of content items that you want displayed.
 - c.** To retrieve the specified items, click the **Go** button.

For example, enter Get **replicated** content items using Search Criteria ***.wmv** for selected Device.



Note Use an asterisk (*) to match one or more characters, or a question mark (?) to match only a single character.

The Replication Items window for the selected device appears. (See [Figure 11-5](#).) [Table 11-8](#) describes the fields displayed in this window.

Figure 11-5 Replication Items for a Selected Device

The screenshot shows the Cisco Application and Content Networking System interface. The main window is titled "Replication Items - Channel: int54-camiant Content Engine: ce-13". It features a search bar with a "Get" dropdown menu set to "replicated", a search criteria field containing "content items using Search Criteria", a search field with "*.wmv", and a "Go" button. Below the search bar is a table with the following data:

| Url | Size | Status | Playtime | Modification Time |
|---------------------------------|------------|----------|----------|---------------------|
| http://2.10.4.15/industrial.wmv | 1.209 MB | Complete | 00:00:34 | 15:34:47 12-19-2002 |
| http://2.10.4.15/pinball.wmv | 816.947 KB | Complete | 00:00:21 | 16:34:51 12-19-2002 |

The table is displayed on "Page 1" and shows "1-2 of 2 Content Items".

Table 11-8 Replication Status of Items for a Channel by Device

| Column Heading | Description |
|-------------------|--|
| Url | URL of the origin web server that stores the website content. |
| Size | Size of the file to be acquired or crawled. |
| Status | Status of replication of content for the selected Content Engine. |
| Playtime | Duration of playback of the file. |
| Modification Time | Time stamp in Greenwich mean time (GMT) of the latest update to the content item as recorded on the origin server. |

**Note**

When you click the **Force replication information refresh** icon in the taskbar of the Replication Items window for the selected device, the system displays a dialog box asking you to confirm whether you want to refetch the information from Content Engines assigned to this channel. To continue with the refresh process, click **OK**. You are notified that the request has been queued and asked to check back later.

Step 6 To refine your search from this window, do the following:

- a. Make a choice from the Get drop-down list.
- b. Enter a search string in the Search Criteria field.
- c. To retrieve the specified items, click the **Go** button.

Step 7 To return to the Replication Status for Channel window, click the straight blue **Back** arrow in the Content Distribution Manager GUI taskbar (not the **Back** button for your browser).

Viewing the Detailed Replication Status of Content Items Across All Content Engines in a Channel

You can choose the URL of the origin server and request a detailed replication status of content items across all Content Engines to trigger an aggregated replication status request. The detailed item replication status window shows a time stamp indicating the time in Greenwich mean time (GMT) at which the replication status was last cached to provide information about the freshness of the detailed content replication status.

To view the detailed replication status of an item across all Content Engines in a channel, follow these steps:

- Step 1** Choose **Services > Web > Channels**. The Channels window appears.
- Step 2** Click the **Edit** icon next to the channel for which you want to view the replication status.
- Step 3** In the Contents pane, choose **Replication Status**. The Replication Status for Channel window appears.
- Step 4** In the View Detailed Replication Status section (see [Figure 11-3](#)), enter a string in the Get Detailed Status using Search Criteria field. Use an asterisk (*) to match one or more characters, or a question mark (?) to match only a single character.

The criteria are matched against the relative *cdn-url* attribute specified in the <item> tag in the manifest file. We recommend that you start the search criteria by specifying wildcards such as *.htm or *.clip.mpeg.

- Step 5** To retrieve the specified items, click the **Go** button. The Replication Items window appears, displaying replication status for content items for a specific channel. (See [Figure 11-4](#).)
- Step 6** Click the **View** icon next to the URL that you want to view. The Replication Item window appears, displaying the replication status of the content item for each Content Engine in the channel. (See [Figure 11-6](#).) [Table 11-9](#) describes the fields in this window.

Figure 11-6 Replication Status of the Content Item for All Content Engines in the Channel

| CE | Size | Status | Playtime | Modification Time |
|-------|------------|----------|----------|---------------------|
| ce-13 | 816.947 KB | Complete | 00:00:21 | 16:34:51 12-19-2002 |
| ce-40 | 816.947 KB | Complete | 00:00:21 | 16:34:51 12-19-2002 |
| ce-39 | 816.947 KB | Complete | 00:00:21 | 16:34:51 12-19-2002 |



Note The Replication Item window is specifically designed to limit listings to 5000 objects for scalability reasons. These are system limits and not specifically enforced for replication status reporting.

Table 11-9 Replication Status of an Item for All Content Engines in a Channel

| Column Heading | Description |
|-------------------|---|
| CE | Name of the Content Engine to which the item has been replicated. |
| Size | Size of the file to be acquired or crawled. |
| Status | Status of replication of content in the channel. Status is shown as Complete if replication is complete on all Content Engines assigned to the channel. |
| Playtime | Duration of playback of the file. |
| Modification Time | Time stamp of the latest update for the content item as recorded on the origin web server. |

- Step 7** To return to the Replication Status for Channel window, click the straight blue **Back** arrow in the Content Distribution Manager GUI taskbar (not the **Back** button for your browser).

Viewing the System-Wide Replication Status by Content Engine

To view the system-wide replication status by device, follow these steps:

- Step 1** From the Content Distribution Manager GUI, choose **Devices > Statistics > Replication Status**. The Device Replication Status window appears.
- This window summarizes the replication status of all channels associated with a specific Content Engine in a given state. (See [Figure 11-7](#).)

Figure 11-7 Device Replication Status Window

The screenshot shows the Cisco Application and Content Networking System GUI. The main window is titled "Device Replication Status" and displays a table with the following data:

| Device | Status | Channel Count | | | |
|-------------------|--------|---------------|------------|--------|---------|
| | | Completed | In Process | Failed | Unknown |
| bxb-interop-a-ce1 | ⚠️ | 5 | 0 | 2 | 0 |
| uni-e1-ce2 | ✅ | 0 | 0 | 0 | 0 |

The interface also shows system status information: "Devices: 2 Devices, Major" and "Content: 2 Channels, Critical". The table is paginated, showing "Page 1" and "Showing 1-2 of 2 Devices".

- Step 2** View the replication status information for each device. [Table 11-10](#) describes the status information that is displayed in this window.

Table 11-10 Device Replication Status Window

| Column Heading | Description |
|----------------|---|
| Device | Name of the Content Engine. |
| Status | Graphical display indicating acquisition, replication, and device errors. Status lights represent the highest level of errors encountered: Green—No errors encountered. Yellow—Only minor errors encountered. Red—At least one critical error encountered, such as an acquisition failure, a content replication failure, or a failed or nonresponsive Content Engine. (See Table 11-2 for a description of status errors and their corresponding status lights.) |
| Channel Count | Number of channels reporting Content Engines in a particular state. (See Table 11-6 for a description of Content Engine states.) |
| Completed | Number of channels reporting this Content Engine in a Completed state. |
| In Process | In Process can mean: <ul style="list-style-type: none"> • Number of channels reporting this Content Engine (as a root Content Engine) in the Retrieving Manifest, Processing Manifest, Acquiring Content, or Re-checking Content state. • Number of channels reporting this Content Engine (as a receiver Content Engine) in the Pending Update, Replicating, or Recovering from Failure state. |
| Failed | Number of channels reporting this Content Engine in the Failed or Failed Update state. |
| Unknown | Number of channels reporting this Content Engine in the No Status Reported state. |

Step 3 To view the replication status of individual channels assigned to a particular Content Engine, proceed to the next section, “[Viewing the Replication Status for a Specific Content Engine.](#)”

Viewing the Replication Status for a Specific Content Engine

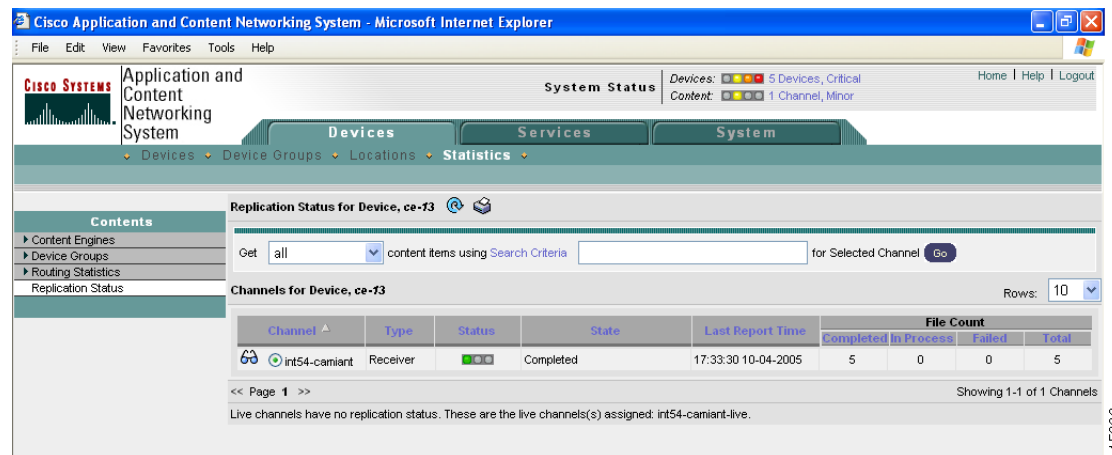
To view the replication status for a particular Content Engine, follow these steps:

- Step 1** From the Content Distribution Manager GUI, choose **Devices > Statistics > Replication Status**. The Device Replication Status window appears.
- Step 2** Click the **View** icon next to the Content Engine that you want to view. The Replication Status for Device window appears.

The Replication Status for Device window displays the replication status of individual channels assigned to a particular Content Engine. You can filter the information by channels or by any of the other categories displayed in this window. (See [Figure 11-8](#).)

Table 11-5 describes the status information that is displayed in this window with the exception that the first column in this window displays the names of the channels to which the Content Engine is assigned rather than the names of the devices in the channel, as described in Table 11-5.

Figure 11-8 Replication Status for Device Window



- Step 3** To view the Content Engine forwarder path for a selected channel, click the **View** icon next to the name of the channel. To return to the Replication Status for Device window, click **Replication Status** in the Contents pane.
- Step 4** To view replication details for the selected channel, see the next section, “[Viewing the Detailed Replication Status of Content Items for a Selected Channel by Content Engine](#).”

Viewing the Detailed Replication Status of Content Items for a Selected Channel by Content Engine

A request for a detailed replication status triggers an aggregated replication status update request. This ensures that the cache status is refreshed on both the Content Engine and the Content Distribution Manager simultaneously.

To view the status of replication of content items for a selected channel by Content Engine, follow these steps:

- Step 1** From the Content Distribution Manager GUI, choose **Devices > Statistics > Replication Status**. The Device Replication Status window appears.
- Step 2** Click the **View** icon next to the Content Engine that you want to view. The Replication Status for Device window appears. (See [Figure 11-8](#).)
- Step 3** To view replication details for the selected channel, click the radio button next to a channel name.
- Step 4** From the **Get** drop-down list, choose the type of items to display (**all**, **replicated**, or **non replicated**).
- Step 5** In the Search Criteria for Selected Device field, enter a regular expression (such as ***.html**, ***.mpg**, ***.jpg**, or ***.***). Use an asterisk (*****) to match one or more characters, and a question mark (**?**) to match exactly one character.
- Step 6** To retrieve the specified items, click the **Go** button. The Replication Items - Channel: Content Engine window appears. (See [Figure 11-9](#).) [Table 11-11](#) describes the fields displayed in this window.



Note The Replication Items - Channel: Content Engine window is specifically designed to limit listings to 5000 objects for scalability reasons. These are system limits and not specifically enforced for replication status reporting.

Figure 11-9 Replication Items - Channel: Content Engine Window

| Uri | Size | Status | Playtime | Modification Time |
|---------------------------------|------------|----------|----------|---------------------|
| http://2.10.4.15/industrial.wmv | 1.209 MB | Complete | 00:00:34 | 15:34:47 12-19-2002 |
| http://2.10.4.15/welcome3.asf | 328.291 KB | Complete | 00:00:17 | 19:56:47 09-29-1999 |
| http://2.10.4.15/pinball.wmv | 816.947 KB | Complete | 00:00:21 | 16:34:51 12-19-2002 |
| http://2.10.4.15/welcome2.asf | 2.042 MB | Complete | 00:01:07 | 22:03:47 07-09-1999 |
| http://2.10.4.15/welcome1.asf | 353.671 KB | Complete | 00:00:17 | 19:56:32 09-29-1999 |

Table 11-11 Replication Status of Items for Content Engines in a Selected Channel

| Column Heading | Description |
|-------------------|---|
| URL | URL of the origin web server that stores the website content. |
| Size | Size of the file to be acquired or crawled. |
| Status | Status of replication of content from the root Content Engine. |
| Playtime | Duration of playback of the file. |
| Modification Time | Time stamp of the earliest update for that channel from an active Content Engine. |

- Step 7** To further qualify your search, change the item type from the drop down list, if you wish, or specify another file type (such as ***.html**, ***.mpg**, or ***.jpg**) in the Search Criteria field. To retrieve the specified items, click the **Go** button.
- Step 8** To forcibly refetch the latest content replication information, click the **Force replication information refresh** icon in the taskbar. You are asked to confirm whether or not you wish to refetch the information from the Content Engine assigned to the particular channel.
- Step 9** To continue with the refresh process, click **OK**. You are notified that your request has been sent and prompted to check back after a few minutes.
- Step 10** To return to the Replication Status for Device window, click the straight blue **Back** button in the taskbar.

Using CLI Commands for Replication Status

You can use the Content Engine CLI to view the content replication status for a channel by using the following commands:

- Use the **show distribution channel channel-id** command to see if there is an unfinished job listed for the channel. The last line in this example shows that there are no unfinished jobs.

```
ContentEngine# show distribution channel channel-id 158
Channel ID: 158
Channel Name: sz300
Website Name: website3
Channel Priority: 500
ID of Configured Root CE: 140
Name of Configured Root CE: sz590b
IP of Configured Root CE: 10.1.1.170
This CE's Role: Not a Root CE
In Full Reload: No
Mcast Receiving: No
Mcast Sending: No
Metadata-Forwarder ID: 140
Metadata-Forwarder Name: sz590b
Metadata-Forwarder IP: 10.1.1.170
Ucast-Forwarder ID: 140
Ucast-Forwarder Name: sz590b
Ucast-Forwarder IP: 10.1.1.170
Last gen-id Switch: Never
ID of Effective Root CE: 140
Current root-ce-uid: 1042665163
Current low-water-marker: 1
Current max-gen-id: 300
Current max-del-gen-id: 0
Has Unfinished Job: No
```



Note The Has Unfinished Job line is only available if the Content Engine is *not* a root Content Engine. It is only available on a receiver Content Engine.

- Use the **show statistics replication channels** command to view the replication status of the channel. The **show statistics replication** commands display the progressive file count status during acquisition and replication.

The following sample output is from the Content Distribution Manager show statistics replication command.

```

CDM# show statistics replication channels selected-channel ws1 ch1c
Channel: ch1c
State: Completed
Status: Green
User Selected Root CE: ce-s4
Current Root CE: ce-s4
Receiver CEs Completed: 1
Receiver CEs In Progress: 0
Receiver CEs Failed: 0
Receiver CEs Not Responding: 0

```

```

Displaying Device Acquisition Replication Status
Device: ce-s4 (CE ID: 92)
Channel: ch1c (Channel ID: 246)
Website: ws1
Type: Root
State: Completed
Status: Green
Completed: 1
To Do: 0
Failed: 0
Total: 1
Last Report Time: Mon Apr 19 20:37:43 GMT 2004
Disk Quota Used: 281.171 KB
Manifest Last Modified: Mon Sep 29 14:59:01 GMT 2003
Manifest Last Check: Wed Apr 14 18:19:12 GMT 2004
Manifest State: Completed

```

```

Displaying Device Distribution Replication Status
Device: CE2 (CE ID: 97)
Channel: ch1c (Channel ID: 246)
Website: ws1
Type: Receiver
State: Completed
Status: Green
Completed: 1
To Do: 0
Failed: 0
Total: 1
Last Report Time: Mon Apr 19 20:32:16 GMT 2004

```

Detailed Error for CE2

The following sample output shows the replication status for the Content Engines of a selected channel.

```

CDM# show statistics replication content-engines selected-channel ws1 ch1c
Displaying Device Acquisition Replication Status
Device: ce-s4 (CE ID: 92)
Channel: ch1c (Channel ID: 246)
Website: ws1
Type: Root
State: Completed
Status: Green
Completed: 1
To Do: 0
Failed: 0
Total: 1
Last Report Time: Mon Apr 19 20:42:38 GMT 2004
Disk Quota Used: 281.171 KB
Manifest Last Modified: Mon Sep 29 14:59:01 GMT 2003
Manifest Last Check: Wed Apr 14 18:19:12 GMT 2004
Manifest State: Completed

```

```

Displaying Device Distribution Replication Status
Device: CE2 (CE ID: 97)
Channel: ch1c (Channel ID: 246)
Website: ws1
Type: Receiver
State: Completed
Status: Green
Completed: 1
To Do: 0
Failed: 0
Total: 1
Last Report Time: Mon Apr 19 20:42:12 GMT 2004

```

Detailed Error for CE2

The following sample output is from the Content Engine show statistics replication command.

```

ContentEngine# show statistics replication channels selected-channel ws1 ch1c
Displaying Device Acquisition Replication Status
Device: ce-s4 (CE ID: 92)
Channel: 5001Item (Channel ID: 412)
Website: ws1
Type: Root
State: Re-checking Content
Status: Green
Completed: 5001
To Do: 0
Failed: 0
Total: 5001
Last Report Time: Mon May 03 14:09:45 GMT 2004
Disk Quota Used: 1.340 GB
Manifest Last Modified: Wed Dec 18 15:15:49 GMT 2002
Manifest Last Check: Thu Apr 29 12:02:45 GMT 2004
Manifest State: Completed

```

```

Displaying Device Acquisition Replication Status
Device: ce-s4 (CE ID: 92)
Channel: syntaxError (Channel ID: 280)
Website: ws1
Type: Root
State: Processing Manifest
Status: Red
Completed: 0
To Do: 0
Failed: 0
Total: 0
Last Report Time: Mon May 03 14:09:45 GMT 2004
Disk Quota Used: 0 Bytes
Manifest Last Modified: Thu Oct 03 11:00:19 GMT 2002
Manifest Last Check: Mon May 03 14:08:13 GMT 2004
Manifest Error: Syntax Error: Parser Error at (line 5, char 35): Datatype error:
Type:InvalidDatatyp
eValueException, Message:The unary operation node had a binary node type.
Manifest State: Fail Parsing Manifest
7.3.4.2Get selected channel
CE#sh statistics replication channels selected-channel ws1 ch1c
Displaying Device Acquisition Replication Status
Device: ce-s4 (CE ID: 92)
Channel: ch1c (Channel ID: 246)
Website: ws1
Type: Root
State: Completed
Status: Green
Completed: 1

```

```
To Do: 0
Failed: 0
Total: 1
Last Report Time: Mon May 03 14:08:50 GMT 2004
Disk Quota Used: 281.171 KB
Manifest Last Modified: Mon Sep 29 14:59:01 GMT 2003
Manifest Last Check: Wed Apr 14 18:19:12 GMT 2004
Manifest State: Completed
```