Replication Guide

March 2015

Applications

The replication feature is an easy way to copy movies, albums, mix albums, collections, scripts and user settings stored on one Kaleidescape System to another Kaleidescape System. Replication is often used in the following circumstances:

▶ Moving content to new Premiere Line server(s) when one or more servers is retired

▶ Duplicating content onto a second system for a second home

▶ Copying content to a backup system

▶ Upgrading to or from a Cinema One (2nd generation), Kaleidescape Alto player, or players

Terminology

Premiere Line Server

The Kaleidescape **Premiere Line server** consists of the 1U, 3U, 5U servers and the 1st generation Cinema One.

Kaleidescape System

A Premiere Line **Kaleidescape System** contains one or more Premiere Line servers.

A single Cinema One (2nd generation) player or two linked Cinema One (2nd generation) players form a **Kaleidescape System.**

A single Kaleidescape Alto player or up to four linked Kaleidescape Alto players form a **Kaleidescape System.**

Replication Source

The **replication source** is a Kaleidescape Premiere Line server or a Cinema One (2nd generation) player or a Kaleidescape Alto player containing content to be replicated onto the destination Kaleidescape System. To replicate content from a Kaleidescape System containing more than one server or Cinema One (2nd generation) player or Kaleidescape Alto player, the content from each server or Cinema One (2nd generation) player or Kaleidescape Alto player must be replicated individually. While as many as five replication sources can replicate to a destination Premiere Line system simultaneously, only one replication source at a time should replicate to a destination Cinema One (2nd generation) system or Kaleidescape Alto system. The replication source cannot be used to play back content during replication.

Destination System

The **destination system** is the Kaleidescape System that receives replicated content. Replication to all types of Kaleidescape Systems is supported from any type of replication source. If the destination system consists of one or more Premiere Line servers, the destination system can play back content during replication.

Disk Set

The **disk set** is the term for all the disk cartridges installed in a Premiere Line server. The disk cartridges in a disk set must all remain together and cannot be mixed with disk cartridges from another disk set.

System Requirements

The following criteria must be met before replication can begin:

▶ Replication must be enabled on both the system containing the replication source and the destination system. Only the system administrator can enable replication. For more information, go to the Kaleidescape Extranet, https://extranet.kaleidescape.com/programs/replication.

▶ The replication source and destination system must be running exactly the same version of kOS.

▶ The replication source and the destination system must be on the same subnet of the same network. For fastest replication speed, use a Gigabit network.

▶ Commercial Blu-ray Discs, DVDs and CDs previously imported into the replication source must all be owned by the same person who owns the Premiere Line disk cartridges or the Cinema One (2nd generation) player(s) or Kaleidescape Alto player(s) of the destination system.

Disk Space

The destination system should have enough free space to accommodate all content on the replication source not already on the destination system. **If the destination system does not have enough free space, only some content will be replicated.** Duplicate content already on the destination system is skipped during replication.

If the destination system runs out of disk space during replication, an option is available to skip copying the remaining content, but continue copying scripts (Premiere Line only), collections, and mix albums. Any cataloged content skipped over in this way will not be cataloged on the target.

Replication Content

If a specific content type is not supported on the target system, it will be skipped with an indication it is not supported. Cataloged content is always replicated. Examples of content that will be skipped:
- Imported content will be skipped when replicating to a Kaleidescape Alto system.
- Imported, protected DVDs will be skipped when replicating to a system purchased after November 29th, 2014. For more information, please visit www.kaleidescape.com/protected-dvds.
- Some downloads on Kaleidescape Alto players can only be replicated to Kaleidescape Alto systems. These downloads cannot be replicated unless both systems are connected to the Internet (to verify that they can be replicated).

Skipped movies are NOT automatically cataloged on the target system.

The following table lists what can and cannot be replicated.

Always Replicated	Replicated between Premiere Line systems ONLY	Replicated to Premiere Line andCinema One (2nd generation) systems ONLY	Never Replicated
• Cataloged Movies • Downloaded Movies* • Favorite scenes • Paused bookmarks • Movie metadata entered by the user • Movie Collections	• User preferences except Browser Interface password • Scripts • Parental control settings • Pre-loaded HD content	• Imported Movies • Albums • Music metadata entered by the user • Mix albums • Music Collections	• System URL • Time zone • Music zone control • HTTP proxy server • Browser interface password • Server front panel light setting • Player configurations, e.g., Primary video output • Group membership • System passcode

Note: When a script on a Premiere Line destination system has the same name as a script on the replication source, the script on the replication source overrides the script on the destination system during replication.

* Some downloads on Kaleidescape Alto players can only be replicated to Kaleidescape Alto systems.

Replication Process

There are four basic steps to the replication process.

▶ Configuring the components

▶ Selecting the replication source

▶ Starting the replication session

▶ Monitoring the session

Configuring Components

When replicating from a Premiere Line system to a Premiere Line system, use the following procedure to configure the components for replication.

1. Open a web browser and access the browser interface on the source Premiere Line system.
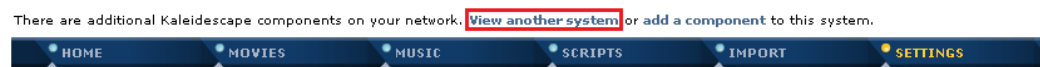
   http://my-kaleidescape (Windows)

   http://my-kaleidescape.local (Mac)

   Or

   http://[server_IP_address] (Windows or Mac)

2. Select **View another system** from the top banner. See Figure 1.

**Figure 1**   View Another System Link

3. The **VIEW ANOTHER SYSTEM** window appears. See Figure 2. Write down the serial number of all source servers and all servers in the destination system. These numbers are needed to identify the source servers and the destination system when starting the replication and monitoring the replication session.

Figure 2   VIEW ANOTHER SYSTEM Window

Note: Only servers will appear in the **VIEW ANOTHER SYSTEM** window. Players, disc vaults, and other components will not be listed.

4. Locate the destination system and click on the **name of the system**.

5. The **browser interface** for the destination system appears in a new window. Select the **SETTINGS** tab which loads the **General** page, and a second row of tabs.

6. Select **Components** from the second row of tabs.

7. Compare the components with the serial numbers recorded during step 3. If a source server is listed in the destination system, remove it by clicking the **Remove from system** button. See Figure 3. Be sure that no source servers are part of the destination system before starting a replication session.
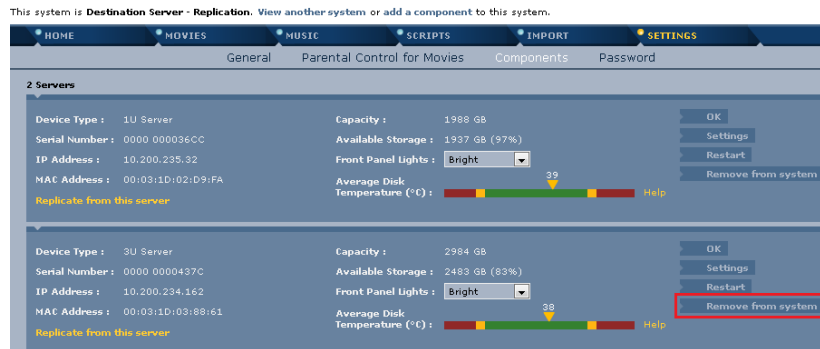
Figure 3   Remove from System Link

8. If the destination system contains more than one server, verify that all destination servers are listed on the **Components** page before starting a replication session.

   Note: Content residing on a source server cannot be played back during replication. To play content during replication, players must be part of the destination system.

9. If a server is missing from the destination system, or a player needs to be added to the destination system, select **add a component** from the top banner. See Figure 4.

Figure 4   Add a Component Link

10. The **ADD COMPONENT** window appears. Select the **Add** button next to the missing component to have it added to the destination system. See Figure 5.

Figure 5   Adding Missing Component

**When replicating to a Cinema One (2nd generation) or Kaleidescape Alto system:**

▶ Complete the Initial Setup process, including Activation (if desired), before beginning to replicate to a Cinema One (2nd generation) or Kaleidescape Alto system. Do not activate or deactivate a destination player during the replication process.

▶ When replicating to a single Cinema One (2nd generation) or Kaleidescape Alto player, it may be configured to use either a wired or wireless connection. Do not change the network configuration on the destination player during the replication process.

▶ When replicating to a system containing more than a single Cinema One (2nd generation) player or Kaleidescape Alto player, they must be configured to use a wired connection. Link them together before beginning the replication process. Do not change the network configuration on a destination player during the replication process.

▶ Complete the replication process before using the destination Cinema One (2nd generation) or Kaleidescape Alto system for import from disc (2nd generation Cinema One only), cataloging from disc, download, or playback. Do not replicate from more than one replication source at a time.

Select the Replication Source

Use the following procedure to select a replication source from a Premiere Line system.

Note: If there is more than one source server, follow this procedure for each source server.

1. From the **View another system** link (see Figure 2), locate the source server by matching the serial number, then click on the **system name**. See Figure 6.
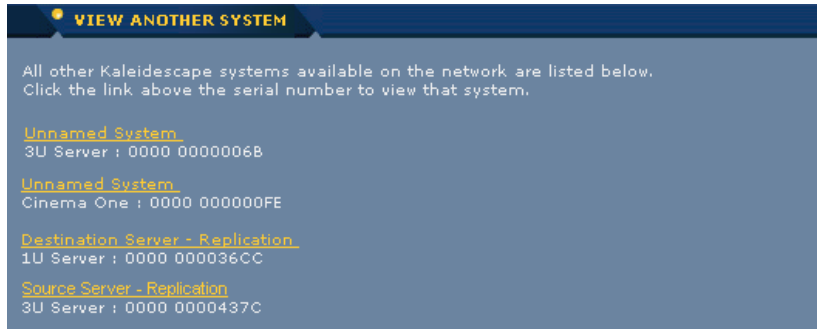
Figure 6   Selecting Source Server

2. The **browser interface** for the source server appears in a new window. Select the **SETTINGS** tab which loads the **General** page, and a second row of tabs.

3. Select **Components** from the second row of tabs.

4. Click the **Replicate from this ...** link to prepare the source server for replication. See Figure 7.1.
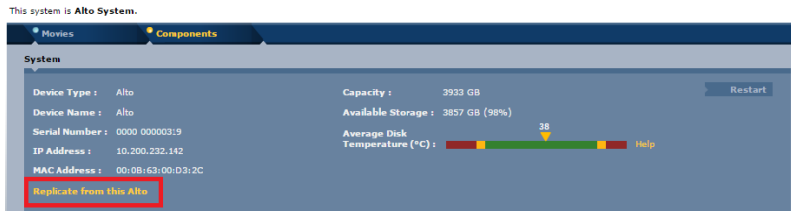

Figure 7.1   Replicate from this 1U Server Link

Use the following procedure to select a replication source from a Cinema One (2nd generation) or Kaleidescape Alto system.

Note: If the source Cinema One (2nd generation) or Kaleidescape Alto system contains more than one player, follow this procedure for each source Cinema One (2nd generation) or Kaleidescape Alto player.

1. Select the **Components** tab in the Browser Interface.

2. Click the **Replicate from this Cinema One (2nd generation)** or the **Replicate from this Alto** link to prepare the source player for replication. See Figure 7.2.

Figure 7.2   Replicate from this Alto Link

> **Note:** If this link does not appear, replication has not been enabled for the
> system with the source server. To enable replication, go to the
> Kaleidescape Extranet at
> https://extranet.kaleidescape.com/programs/replication.

Starting the Replication Session

1. The **REPLICATION** page for the replication source appears.
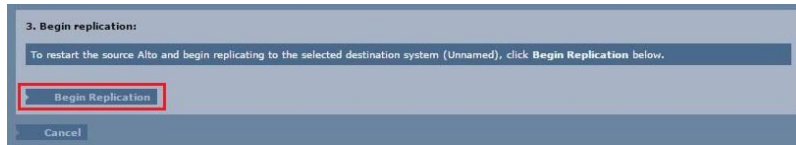   See Figure 8.
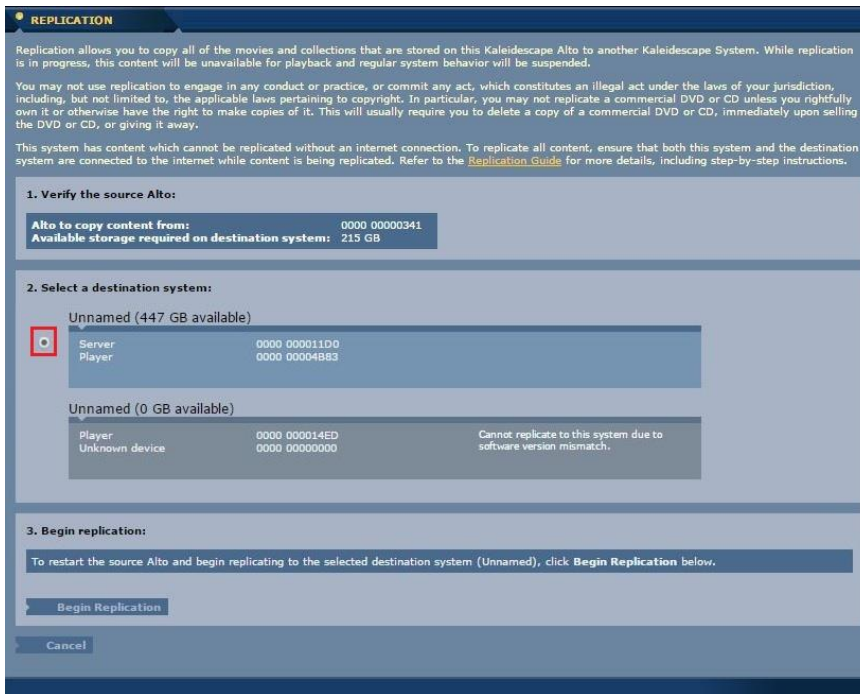
Figure 8   REPLICATION Page

2. Verify the source server's serial number and note the amount of disk space
   required on the destination system.

3. Select the radio button to the left of the **destination system** and verify that the
   system has enough disk space for the content from the source server.

   > **Note:** Replication can be started even if there is not enough free disk space. The
   > available disk space reported does not account for duplicate content
   > already on the destination system.

4. Click the **Begin Replication** button at the bottom of the page to start the replication process. (Click **CANCEL** at the bottom of the page if the source server is incorrect.) See Figure 9.


Figure 9   Begin Replication

A wait window appears while the source server reboots into replication mode and initiates replication. See Figure 10. The reboot usually takes from 30 seconds to 5 minutes. Older servers or servers with a lot of content can take more time.
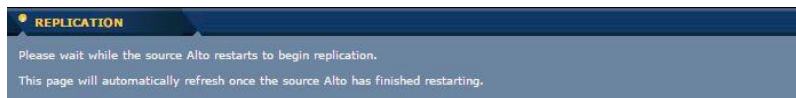
Figure 10   Wait Window

After reboot, the wait window is replaced by a window showing replication progress details. See Figure 11. The source server begins to pulse slowly on and off when replication begins.
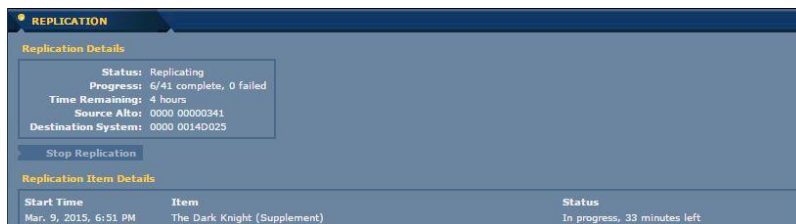
Figure 11   Replication in Progress

5. Wait for at least one piece of content to be replicated to verify that the replication process is working correctly and for the best estimate of the remaining session time.

   Note: On a healthy Gigabit network, replication should take roughly one day to transfer one terabyte of data.

   Note: The replication status page can be closed during the replication session.

Monitoring the Session

During the replication session, the front panel of the source server pulses on and off slowly. When replication is complete, the front panel blinks rapidly.

Replication status can be monitored remotely by your dealer using the System dashboards data on the Extranet. Replication status on the dashboard includes the following information:

- **Replication not enabled**
- **Replication enabled**
- **Replication in progress**
- **Replication requires attention**
- **Replication failed**
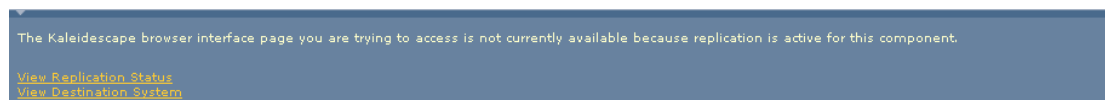- **Replication completed**

Use the following procedure to view replication status locally via the browser interface:

1. Open a web browser and access the browser interface for the source server by entering one of the following URLs

   - http://[server_IP_address]

   - http://ks-[server_serial_number] (Windows)

   - http://ks-[server_serial_number].local (Mac)

   Note: The serial number is a 12-digit (left-padded zero) number. For example, serial number 1cb is http://ks-0000000001cb

2. A page appears with a message stating that the component is replicating. See Figure 12.

The Kaleidescape browser interface page you are trying to access is not currently available because replication is active for this component.

View Replication Status
View Destination System

Figure 12   Browser Interface Message

There are two links on the message page.

- **View Replication Status** brings up the replication status page.
- **View Destination System** brings up the browser interface for the destination system.

3. Select the **View Replication Status** link. The replication in progress window appears showing the number of movies and albums replicated and the time remaining for replication to complete. The first item in the list is the most recently replicated. Refer to Figure 11.

4. When replication is complete, the glow on the front of the source server stops pulsing and starts blinking rapidly.

   Note: If Kaleidescape Conductor was installed from a source server that is being retired, music will stop synchronizing when the source server cannot be located on the network. Conductor must be reinstalled on the destination

system from http://kaleidescape.com/go/conductor. Conductor then re-synchronizes with the destination system without requiring music to be exported again.

Verifying Replication

1. If not actively monitoring a replication session when the front panel of the source server begins blinking rapidly, perform steps 1 to 3 under "Monitor Replication Session" on page 8. The replication status page now shows a message stating that replication is complete. See Figure 13.

Figure 13   Replication Status Page with Replication Complete Message

2. Review and verify that all content was replicated successfully.

3. Click the **Export Details** button to save replication details to a spreadsheet (see Figure 14) or simply review the details on the replication status page.

   Note: Replication details are no longer accessible once the **Finish Replication** button is clicked unless saved to a spreadsheet.
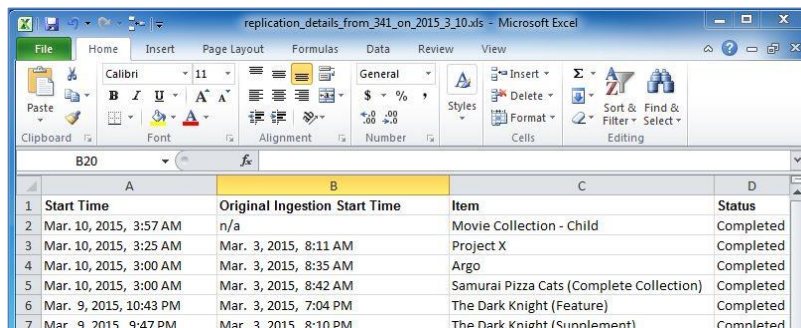
Figure 14   Spreadsheet of Replication Details

4. Note any titles that failed to replicate. Content imported or cataloged from disc can be manually re-imported or re-cataloged onto the destination system.

Downloaded content can be downloaded from the Kaleidescape Store again at no additional charge.

5. Verify that all mix albums and music collections are replicated if replicating to a Premiere Line or Cinema One (2nd Generation) system. If replicating between Premiere Line systems, verify that all parental control settings, user preferences, and scripts are successfully replicated. (Parental controls and user preferences are replicated first, then movies and music, and then mix albums, collections, and scripts.)

Completing Replication

Use the following procedure to complete the replication process.

1. Click on the **Finish Replication** button to restart the source server and return the server to normal operation. See Figure 13.

   A replication message appears while the source server restarts. See Figure 16.
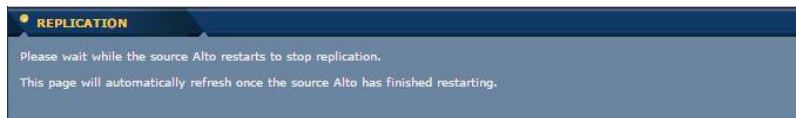
Figure 16   **Source Server Restart Message**

Replication and System Registration

The replication feature is typically used when a disk set in a system needs to be replaced or when a duplicate system is being set up (e.g., for a second home or for backup).

To ensure content from the Kaleidescape Store is managed correctly during replication, all systems containing downloaded content must be connected to the Internet and registered or unregistered either before initiating the replication session or after it is complete:

- When replacing a disk set, **unregister** the source server (which contains the disk set to be replaced) and **register** the destination server (which contains the new disk set).
- When setting up a duplicate system, ensure that both the existing source replication system and new destination system are registered under the **same** Kaleidescape account.

Each Store account is authorized to download movies to as many as 5 different Kaleidescape Systems registered with that account. Downloaded movies on an unregistered server are not automatically deleted, but become unauthorized. They appear dim on the OSD, are not playable, and do not count toward the 5 authorized downloads limit. They can be deleted, if desired.

If a system is unregistered in error, re-registering with the same Store account will ensure the downloaded movies are again playable.

> **Note:** Registering or unregistering a system during replication stops the replication session.

To register a Premiere Line system

1. Turn on the server and make a note of the server serial number.

2. Open the **browser interface** by entering one of the following URLs in a web browser:

   - http://[server_IP_address]

   - http://ks-[server_serial_number] (Windows)

   - http://ks-[server_serial_number].local (Mac)

   > **Note:** The serial number is a 12-digit (left-padded zero) number. For example, serial number 1cb is http://ks-0000000001cb

3. Select the **SETTINGS** tab which loads the General page.

4. Click the **Register System** button near the bottom of the page. See Figure 18.

Figure 18   **Register System Button**

5. To complete registration, follow the onscreen instructions and respond to the registration email message.

## To unregister a Premiere Line system

1. Turn on the server and make a note of the server serial number.

2. Open the **browser interface** by entering one of the following URLs in a web browser:

   - http://[server_IP_address]

   - http://ks-[server_serial_number] (Windows)

   - http://ks-[server_serial_number].local (Mac)

   > **Note:** The serial number is a 12-digit (left-padded zero) number. For example, serial number 1cb is http://ks-0000000001cb

3. Select the **SETTINGS** tab which loads the General page.

4. Click the **Unregister System** button near the bottom of the page. See Figure 17.
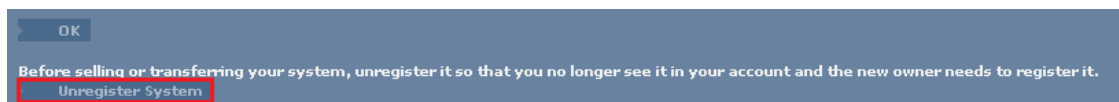
Figure 17   Unregister System Button

5. Click **OK** at the prompt "Are you sure you want to unregister your system?"

To activate or deactivate a Cinema One (2nd gen) or Kaleidescape Alto system

Use the onscreen **Settings** menu.

1. Press the **MENU** button on your Kaleidescape remote
2. Scroll to the **System** tab
3. Select **Settings**

For more information, see http://www.kaleidescape.com/manuals.

To replace a disk set in a registered multi-server system

Remove the single server from the system before initiating replication.

Use the following procedure to remove a server from a registered system.

1. Open a web browser and access the browser interface for the system.

    http://my-kaleidescape (Windows)

    http://my-kaleidescape.local (Mac)

    Or

    http://[server_IP_address] (Windows or Mac)

2. Select the **SETTINGS** tab which loads the General page, and a second row of tabs.
3. Select **Components** from the second row of tabs.
4. Remove the server from the system by clicking the **Remove from system** button. See Figure 3.

The single server you removed from the system is no longer registered.

Kaleidescape Support

For more information, contact Kaleidescape Support:

▶ Send an email message to support@kaleidescape.com.

▶ Call the support line at **+1 (650) 625-6160**