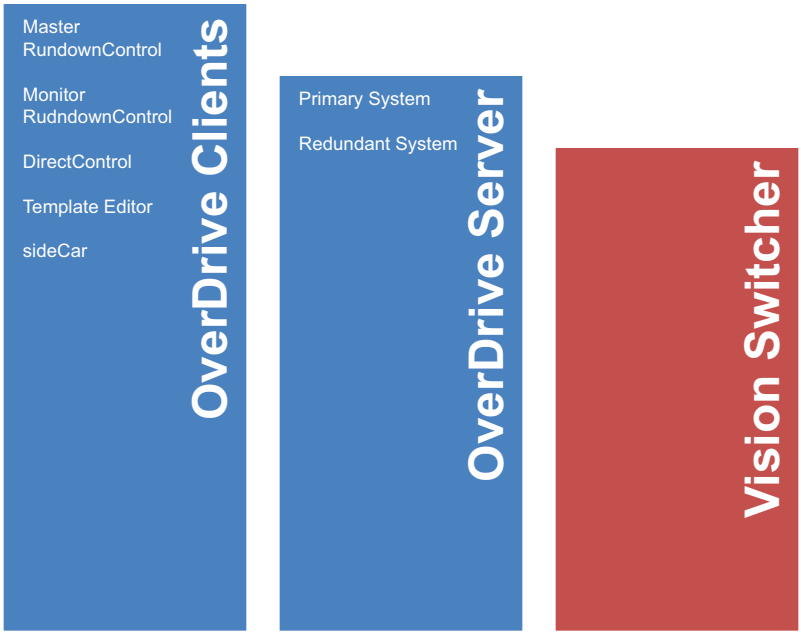
OverDrive Backup System

The OverDrive backup system is an arrangement of one or more clients and a pair of OverDrive systems that are configured to share data and provide multiple connections with the Vision switcher. Every connection has a backup path, eliminating all single points of failure.



Backup System Connections

The backup server solution consists of a pair of OverDrive systems each running OverDrive Servers. One OverDrive system is configured as the Primary system and the other is configured as the Redundant system. User data is periodically (approximately every 10 seconds) mirrored from the Primary to the Redundant system. The Primary system is set as the active on-air OverDrive server and connected to the Vision switcher, while the OverDrive Server on the Redundant system is set in standby mode. Switching between the two systems and determining the active server is handled within the OverDrive clients and launched by the APC operator.

Each OverDrive server may have multiple connected clients, with a single master RundownControl client playing out the open rundown. Additional RundownControl clients may be connected to an OverDrive server and operate as monitors. A RundownControl client in monitor mode is able to view the rundown state, but cannot control rundown playout. Promoting any connected Rundown client to the master play out controller is performed through options provided when opening a rundown. Additional OverDrive clients (DirectControl, Template Editor, or SideCar) may also connect to an OverDrive Server running on either the Primary or Redundant system. Each client contains a Hot Swap button, which is used to change which OverDrive Server is set as the active on-air server.

Purpose

It is the intent of the OverDrive backup system to provide seamless control in the event of equipment or software failure during rundown playout. The OverDrive Server on the Redundant system is kept in a standby state, ready to take control of rundown playout at any time.

It is NOT the intent of the OverDrive backup system to provide data backups, and it does not provide an instant mirror between Primary and Redundant systems. A data backup is generated every ten minutes or less and placed in a backup directory on the Primary system. The data backup is periodically copied from the Primary to the Redundant system; therefore, changes to Master templates falling within this window before a switch may not be reflected in the Redundant system.

Setup

Only one OverDrive Server may be connected to and control the Vision switcher at any point in time. Identification of OverDrive Server roles is important as the steps to setup an OverDrive Server on the Primary or Redundant system requires different configurations.

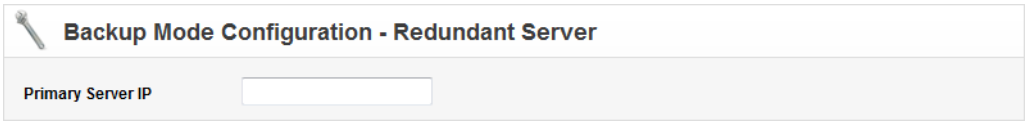
Primary Server Settings

In an OverDrive backup system it is the role of the OverDrive Server running on the Primary system to generate a data backup file, which happens automatically without user intervention. No additional settings are required for a typical installation as this behavior is part of the system design.

To configure optional settings for the OverDrive Primary system:

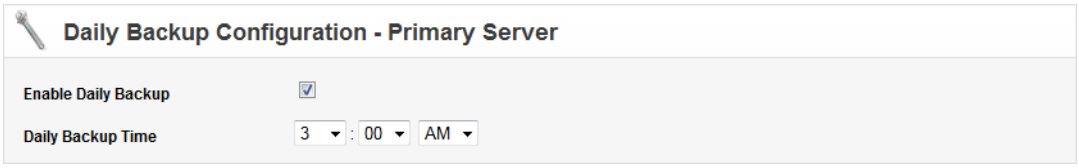
1. Use one of the following methods to open the OverDrive Server Web Administration web page for the Primary system:
   - On the Primary system desktop, double-click the OverDrive Server icon.
   - On the Primary system, use the Start menu to select All Programs > OverDrive > OverDrive Server.
   - On a Client system, use a web browser to connect to the Primary system.

   The OverDrive Server Web Administration web page for the Primary system opens in a web browser window.
2. Access to OverDrive Server settings is controlled by a user login. Enter the following user name and password in the provided boxes:
   - Username — `overdrive`
   - Password — `<your_password>`
3. Click Login.
   The Manage My Server web page opens.
4. In the button bar of the OverDrive Server Web Administration web page, click Configuration.
   The Server Configuration web page opens.
5. In the Backup Mode Configuration - Redundant Server section, clear the IP address or hostname from the Primary Server IP box.



✶ An IP address or hostname should not be entered into the Primary Server IP box on the Primary system, as it can cause data corruption when the system enters backup mode.

6. In the Daily Backup Configuration - Primary Server section, select the Enable Daily Backup check box to automatically create a backup of OverDrive settings and the template database at a set time. To stop creating daily backups, clear the Enable Daily Backup check box.



   Backups are saved on the Primary system. The Redundant system can be configured to periodically copy new backups from the Primary system.

7. Use the Daily Backup Time lists to set the time of day to create a backup of OverDrive settings and the template database on the Primary system.

   Always schedule automatic backups during off-hours.

8. Click Apply Configuration to save and apply the new backup settings.

   The Primary system creates a backup file containing the OverDrive settings and the template database at the set daily backup time. When Backup Mode is enabled on the Redundant system, new backups created on the Primary system are periodically copied to the Redundant system.

Redundant Server Settings

The Redundant server is designed to copy backup files generated by the OverDrive Server running on the Primary system. The Primary system from which to copy backup files is set on the Server Configuration web page.

To configure backup settings on the OverDrive Redundant system:

1. Use one of the following methods to open the OverDrive Server Web Administration web page for the Redundant system:
   - On the Redundant system desktop, double-click the OverDrive Server icon.
   - On the Redundant system, use the Start menu to select All Programs > OverDrive > OverDrive Server.
   - On a Client system, use a web browser to connect to the Primary system.

   The OverDrive Server Web Administration web page for the Redundant system opens in a web browser window.

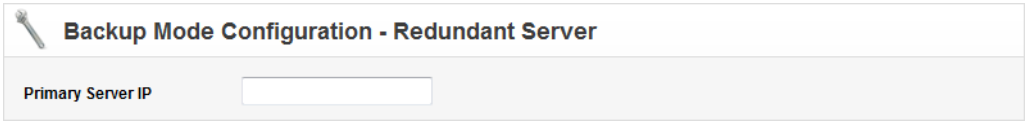
2. Enter the following user name and password in the provided boxes, then click Login to access OverDrive Server settings:
   - Username — `overdrive`
   - Password — `<your_password>`

   The Manage My Server web page opens.

3. In the button bar, click Configuration.

   The Server Configuration web page opens.

4. In the Backup Mode Configuration - Redundant Server section, enter the IP address or hostname of the Primary system from which to copy backups in the Primary Server IP box.

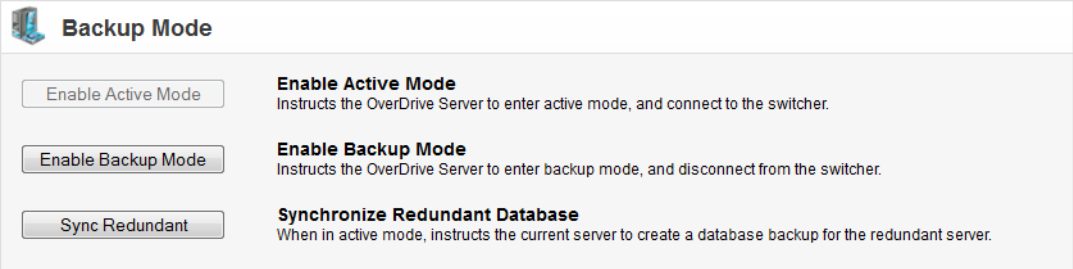


   When the Redundant system detects a new backup file on the selected Primary system, the new backup file is copied from the Primary system to the Redundant system.

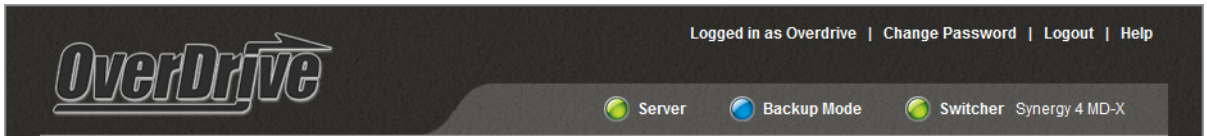
5. In the Daily Backup Configuration - Primary Server section, clear the Enable Daily Backup check box.
   The Daily Backup Time setting is unavailable after clearing the Enable Daily Backup check box.
6. Click Apply Configuration to save and apply the new backup settings.

To activate Backup Mode on the OverDrive Redundant system:

1. Verify that the Primary and Redundant systems can communicate with each other.
   Test communication by using a web browser on the Redundant system to open the IP address of the Primary system. The Ross NCS Plugin Download page should open in the web browser. Close the web browser after verifying communication.
2. In the Backup Mode section of the OverDrive Server Web Administration web page for the Redundant system, click Enable Backup Mode.



   The Backup Mode status LED icon turns blue to indicate that Backup Mode is activated on the Redundant system. The Backup Mode state of the Primary or Redundant system is retained after a system restart.

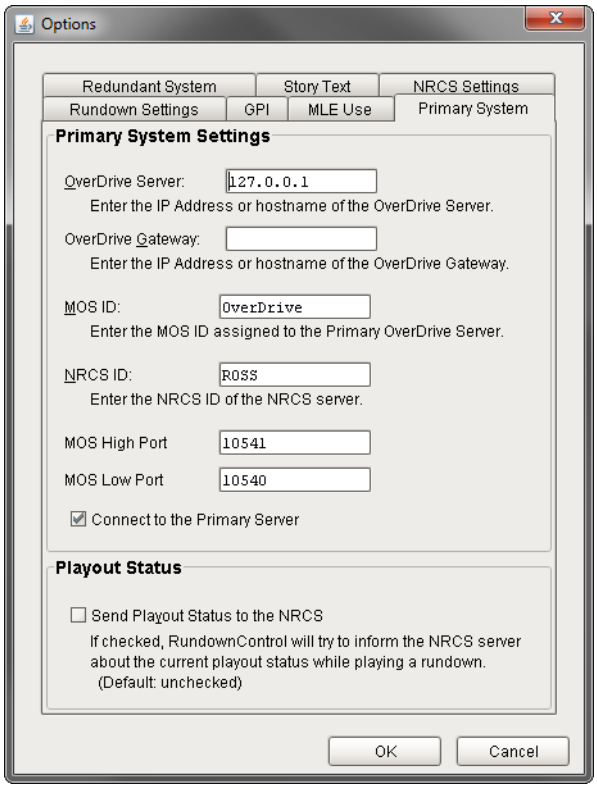


OverDrive Client Settings

OverDrive Clients are configured to communicate with the OverDrive Servers running on both the Primary and Redundant systems. Settings for each system are located on the Primary System and Redundant System tabs in the Options dialog box.

To configure Primary system settings for RundownControl:

1. In RundownControl, use the Tools menu to select Options.
   The Options dialog box opens.
2. Click the Primary System tab.
   The Primary System tab opens.



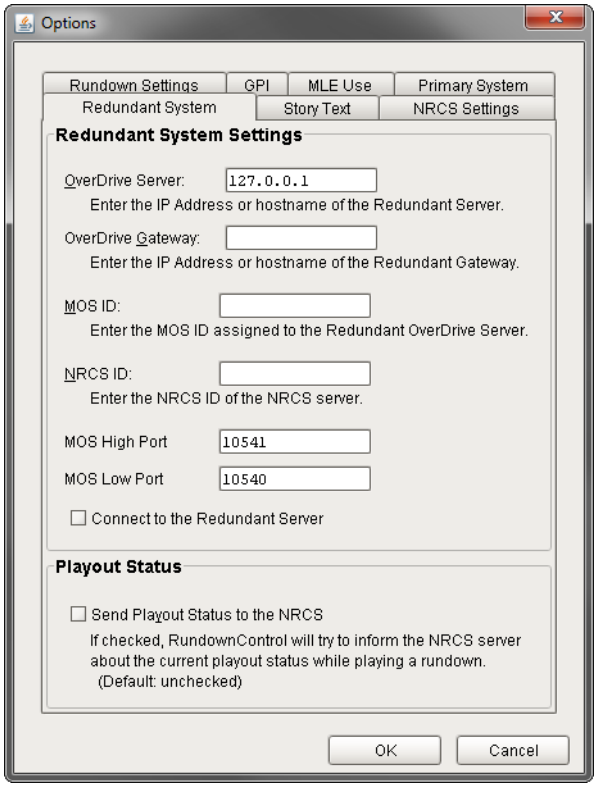
3. In the Primary System Settings section, enter the IP address or hostname of the Primary System in the OverDrive Server box.
4. In the OverDrive Gateway box, enter the IP address or hostname of the Primary OverDrive Gateway.
5. In the MOS ID box, enter the MOS ID assigned by the NRCS to the Primary system.
6. In the NRCS ID box, enter the ID used by OverDrive to access the NRCS.
   Refer to the NRCS client for the correct NRCS ID.
7. In the MOS High Port box, confirm the default value of 10541.
   Ross Video recommends using the default port number unless otherwise specified.
8. In the MOS Low Port box, confirm the default value of 10540.
   Ross Video recommends using the default port number unless otherwise specified.

✶ After changing either the MOS High Port or MOS Low Port settings, RundownControl must be restarted to recognize the new settings.

9. Select the Connect to the Primary Server check box to connect RundownControl with the OverDrive Server running on the Primary System. Selecting this check box automatically clears the Connect to the Redundant Server check box on the Redundant System tab.
   Under normal operation, RundownControl communicates with the OverDrive Server on the Primary system.
10. Click OK to save changes and close the Options dialog box.

To configure Redundant system settings when RundownControl is used with a Redundant Server system:

1. In RundownControl, use the Tools menu to select Options.
   The Options dialog box opens.
2. Click the Redundant System tab.
   The Redundant System tab opens.



3. In the Redundant System Settings section, enter the IP address or hostname of the Redundant system in the OverDrive Server box.
4. In the OverDrive Gateway box, enter the IP address or the hostname of the Redundant OverDrive Gateway.
5. In the MOS ID box, enter the MOS ID assigned by the NRCS to the Redundant system.
6. In the NRCS ID box, enter the ID used by OverDrive to access the NRCS.
   Refer to the NRCS client for the correct NRCS ID.
7. In the MOS High Port box, confirm the default value of 10541.
   Ross Video recommends using the default port number unless otherwise specified.

8. In the MOS Low Port box, confirm the default value of 10540.
   Ross Video recommends using the default port number unless otherwise specified.

✶ After changing either the MOS High Port or MOS Low Port settings, RundownControl must be restarted to recognize the new settings.

9. Click OK to save changes and close the Options dialog box.

Operation

A hot swap between Primary and Redundant systems can be performed a number of ways. Each OverDrive client contains the controls to perform a hot swap. A complete swap can be completed in less than five seconds when the OverDrive backup system is set up correctly and the proper procedures are followed.

Arming the System

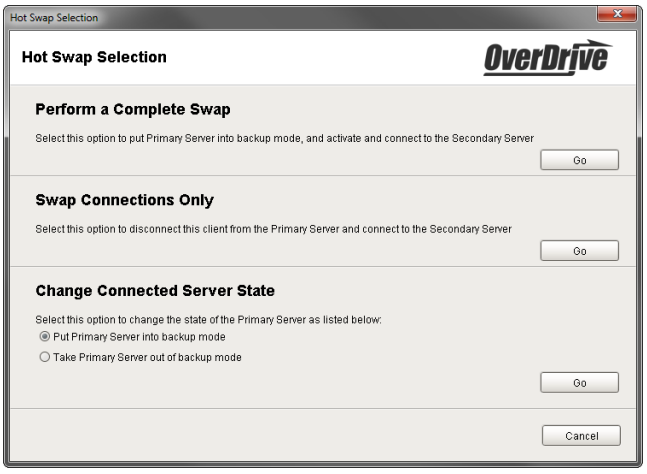
To prepare the backup system for successful operation, a few steps are required prior to attempting to play the rundown.

1. Confirm that the OverDrive Server running on the Primary system is in Active Mode, and the OverDrive Server running on the Redundant server is in Backup Mode.
2. Open a rundown in the RundownControl client used to control playout.
3. Open the same rundown in each RundownControl client used to monitor the rundown playout.
4. Set all of the RundownControl clients to connect to the OverDrive Server running on the Primary system.
5. Start playing out the rundown from the RundownControl client used to control playout.

Performing a Hot Swap

When a problem arises and a switch to the Redundant system is required, click the Hot Swap button in the RundownControl client that will be used to control rundown playout from the Redundant system. The RundownControl client that contains the clicked Hot Swap button does not need to be the same client that was controlling rundown playout from the Primary system.

Clicking Hot Swap in a RundownControl client opens the Hot Swap Selection dialog box to select the type of hot swap perform.

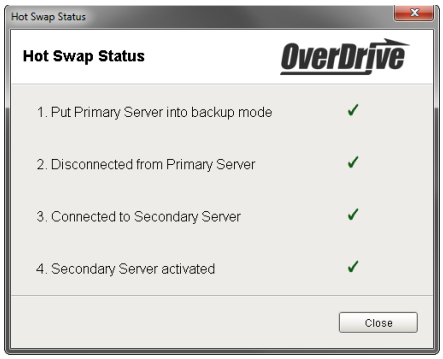


Available Hot Swap Types

The following sections describe the three different types of hot swap that can be performed:

Complete Swap

Click OK in the Perform a Complete Swap section when the Primary system falters and the Redundant system is needed to continue rundown playout. This type of hot swap completes the following tasks:



Complete Hot Swap Tasks

Connection Swap

Click OK in the Swap Connections Only section to check the state of the OverDrive Server running on the Redundant system. Selecting this option does not activate the OverDrive Server running on the Redundant system, it simply swaps the OverDrive Server to which the RundownControl client is connected.

Server State Change

Click OK in the Change Connected Server State section to manually control the state of the OverDrive Server to which the RundownControl client is connected. Selecting this option puts an active OverDrive Server into Backup Mode or a backup OverDrive Server into Active Mode. This option only changes the state of the connected OverDrive Server, it does not change the state of the other OverDrive Server. This option can be used when arming the OverDrive backup system.

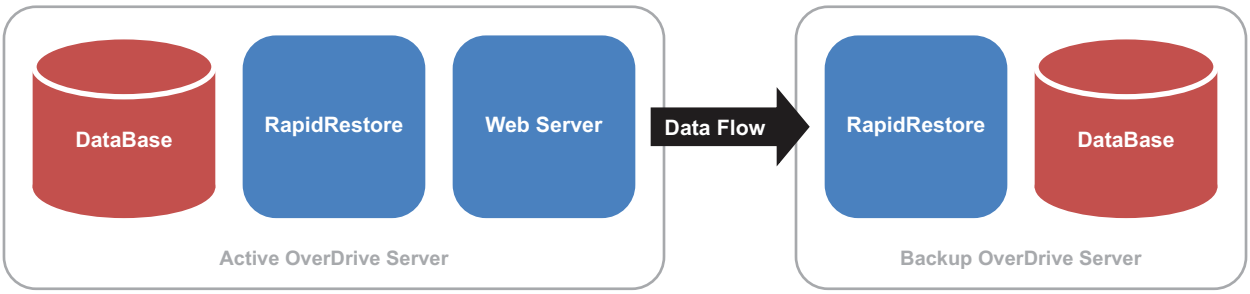
Manually Setting Server States

Both OverDrive clients and OverDrive Server have the ability to directly set the state of an OverDrive Server.

From within an OverDrive client the OverDrive Server state is changed by clicking Hot Swap, followed by clicking OK in the Change Connected Server State section of the Hot Swap Selection dialog box. When directly connected to an OverDrive Server, the server state can be changed by clicking Enable Active Mode or Enable Backup Mode in the System Tools web page.

Architecture

Within the OverDrive software, the backup system is structured as a push/pull operation. The OverDrive Server running in Active Mode (on-air) on the Primary system creates a backup file and hosts it on the built-in web server (push). The OverDrive Server running in Backup Mode on the Redundant system checks the Primary system for the most recent backup file, then downloads and updates the local copy of the backup file when appropriate (pull).



Backup System Architecture

An OverDrive Server running in Active Mode creates a new backup file when one of the following events occurs:

- A few minutes pass after starting the OverDrive Server.
- Changes are made to the configuration of the Primary system.
- An OverDrive client closes.
- On the OverDrive Server, Sync Redundant is clicked in the System Tools web page.
- The set daily backup time occurs.

The backup file is saved as `c:\ross\OverDrive\webapps\root\backups\AutomatedBackup.odv5` on the Primary system, and is overwritten every time a new backup file is created. The Redundant system checks the timestamp on the backup file approximately every 30 seconds. If the backup file on the Primary system is newer than backup file saved on the Redundant system, the Redundant system downloads the backup file and restores it.

The backup file is created using a specialized built-in version of RapidRestore. Backup files contain the following:

- Database
- User Preferences
- Rundown Packages

A backup file does not include the Debug Information, Icon, or Configuration packages (the full RapidRestore application must be used to include these packages).

Contacting Technical Support

Technical Support is staffed by a team of experienced specialists ready to assist you with any question or technical issue.

Ross Video has technical support specialists strategically located around the globe to ensure a prompt response to technical inquiries. Our primary technical support center is located in Ottawa, Ontario, Canada. In addition, we have offices in The United Kingdom (London), Australia (Sydney), and Singapore with satellite locations in New York City, The Netherlands, and China. As we expand our presence globally, we are constantly evaluating other key locations to have a local technical support specialist in order to better service our customers.

North America

Our North America center located in Ottawa, Ontario, Canada and is open Monday to Friday 8:30 a.m. to 6:00 p.m. EST, with 24/7/365 on-call service after hours.

Our telephone number is: +1-613-686-1557

Toll free within North America: +1 844-652-0645

EMEA

Our EMEA center is open Monday to Friday 8:30 a.m. to 5:00 p.m. GMT. After hours support is provided by our North America location.

Our telephone number is: +44 (0)1189502446

International toll free: +800 3540 3545

If the local support specialist is not available, your call will be transferred automatically to our North America center.

Australia

Our Sydney, Australia office is located in Alexandria, NSW.

Our local support telephone number is: 1300 007 677

If the local support specialist is not available, your call will be transferred automatically to our North America center.

Online

E-mail: techsupport@rossvideo.com

Website: open a support request using the link http://www.rossvideo.com/support/tech-support.html to open a support request.

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