



BlackPearl Avid Archive Plugin

Installation and User Guide



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CHAPTER 1

BlackPearl Avid Archive Solution

This guide is for those new to the Spectra® BlackPearl® system and tape libraries, and should be reviewed by anyone having either virtual or direct physical access to the BlackPearl Avid® Archive Solution to ensure the best possible user experience.

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BLACKPEARL AVID ARCHIVE SOLUTION OVERVIEW

The BlackPearl Avid Archive plugin combined with the Spectra RioBroker application and BlackPearl system provides a simple interface for moving data to and from different tiers of storage including tape (long term archival storage), online disk (fast, random read and write access storage), and nearline disk (fast, mostly read-only disk).

The Spectra RioBroker application is designed as a simple interface layer allowing a RESTful file transfer API that intelligently manages jobs in BlackPearl.

In addition, the BlackPearl system allows the user to set data policies that control how long objects are stored on the different storage tiers, providing the user with powerful tools to manage the usage of the various data storage tiers.

- For additional information about the different tiers of Spectra Storage, see <https://www.spectrallogic.com/products/>.
- For additional information about the Spectra RioBroker Application, see the *RioBroker User Guide*.
- For additional information about setting data policies (called advanced bucket management), see “Understanding Spectra Advanced Bucket Management Concepts” in the *BlackPearl User Guide*.

The diagram below shows a simple BlackPearl Avid Archive Solution with a Spectra Tape Library.

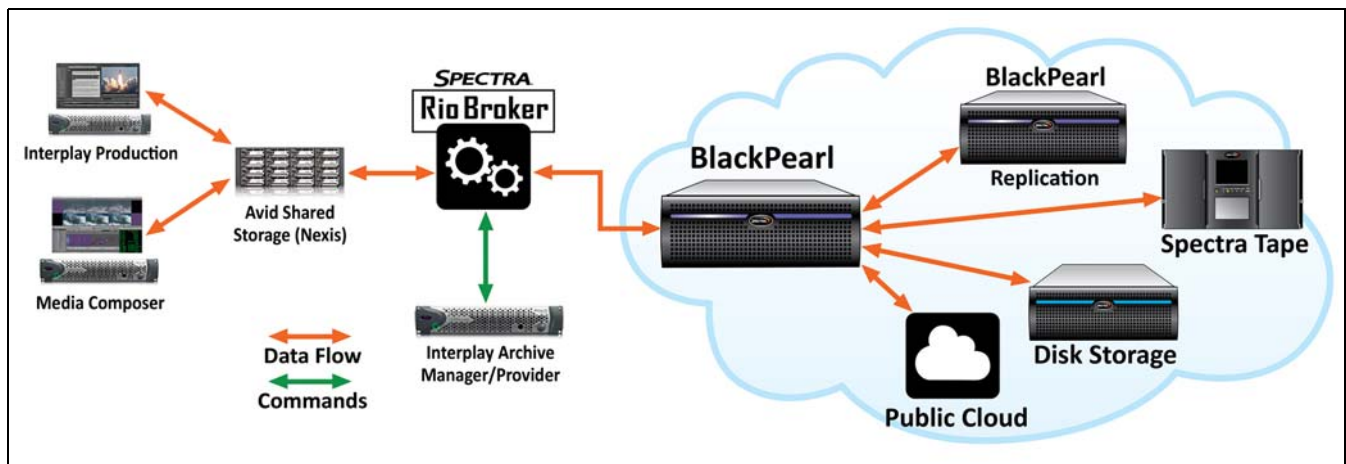


Figure 1 A BlackPearl Avid archive solution example.

The workflow is as follows:

1. The user selects Archive in Avid Access and then selects a profile that targets the BlackPearl system.
2. The Archive Engine sends a request to the Archive Provider.
3. The BlackPearl Avid Archive plugin launches with a list of media assets to archive.

4. A job is created on the BlackPearl system using the list of media assets.
5. Files are sent to the BlackPearl system where they are stored using the asset ID, not the filename - this is important as individual objects are only recognizable using other tools, like the BlackPearl user interface or the Deep Storage Browser, by their asset ID. Individual file names are not displayed.

TAPE LIBRARY OVERVIEW

Digital data can be stored on a variety of media types, including flash, optical, disk, and tape, and each has its own advantages. Tape offers a unique combination of capabilities that make it the ideal medium for long term archival storage:

- Lowest cost per Gigabyte storage medium
- Longest term archive life of 25+ years
- Extremely fast throughput up to 750 MB/s per drive, and drives can write in parallel
- Built-in hardware-based encryption for information security
- Most versatile and stable medium for ejected media (save, eject, and move to an alternate location for safety)
- "Genetically Diverse" storage providing extra safety by using differentiated media
- Practically immune to hacking, electromagnetic pulse (EMP), and other natural disasters when ejected and securely stored
- Excellent cross-vendor compatibility using Linear Tape File System (LTFS)

What is a Tape Library

Digital tape is similar in functionality and structure to the VHS tapes most people can still remember. A tape cartridge is inserted in a tape drive and the large spool of tape passes slowly across a magnetic head which stores data by magnetically aligning particles to represent ones and zeroes. Modern digital tape is significantly more advanced than the VHS of yesteryear; the advance in technology is similar to comparing a Ford® Model T® automobile to a modern Tesla® automobile. Tape is used in nearly every industry worldwide and still holds the majority of all data stored by humans.

It is possible to purchase individual tape drives and connect them to a computer using USB or Thunderbolt™ technology and then manually insert tapes and drag and drop files using a file explorer to archive your data. Going beyond just a few files, however, this process becomes extremely demanding, so advanced tape libraries are the solution.

A tape library normally consists of one or more tape drives, a number of slots for tapes to be stored when not in use, and a robot which moves tapes back and forth between the tape drives, slot storage, and an eject port for inserting or retrieving tapes from the library all controlled by the library software.

Key Things to Know about Tape

Tape usage is significantly different than using a USB flash drive or even a disk drive, and the user needs to both understand the best practices of usage, and make sure that regular maintenance and monitoring of tape systems are performed for the best overall experience.

Tape Library Requirements

Tape systems require the following:

- Data to be stored sequentially, in large blocks, with a continuous feed made possible by a disk/flash cache that collects data from the user space and makes it sequential so it can be easily ingested by tape drives
- External control software to control the robot, manage tapes and usage, and manage and keep track of ejected tapes
- A database to keep track of stored files/objects that can be searched since accessing tapes is too slow of a process for search operations

The Spectra Logic BlackPearl system provides all this functionality in a simple appliance making tape library control and usage simple.

Tape Limitations

While tape is excellent as an archive, for storing a disaster recovery copy of data, or for backup, it should not be used as a normal file system with direct user access. It takes time for the robot to retrieve a tape, move it to a tape drive, spin the tape to where a file or object is stored and then begin streaming it to a user. If a user is allowed to do things that touch all files in a directory or system such as performing an in-file search across all the files in their system, it could take a very long time to mount every tape containing data and restore it to a computer.

Tape Media

Spectra library bundles come with a specific generation of Spectra certified media. When needed, that same generation of Spectra certified media should be purchased to ensure proper operation.

Generations of media/drives are designated as follows:

- LTO-7 media can hold up to 6 TB of uncompressed data.
- LTO-7 tape drives can read and write LTO-7 and LTO-6 media and read LTO-5 media.
- LTO-6 media can hold up to 2.5 TB of uncompressed data.
- LTO-6 tape drives can read and write LTO-6 and LTO-5 media.
- LTO-5 media can hold up to 1.5 TB of uncompressed data.
- LTO-5 tape drives can read and write LTO-5 media.
- LTO-4 and older media does not support LTFS and is not compatible with the BlackPearl system.
- With TS1155 technology drives, 3592 JD media can hold up to 15 TB of uncompressed data and 3592 JC media formatted for TS1155 technology drives can hold up to 7 TB of uncompressed data.
- With TS1150 technology drives, 3592 JD media can hold up to 10 TB of uncompressed data and 3592 JC media formatted for TS1150 technology drives can hold up to 7 TB of uncompressed data.
- TS1150 technology tape drives can read and write 3592 JD media and 3592 JC media formatted for TS1150 technology drives or TS1140 technology drives.
- With TS1140 technology drives, 3592 JC media can hold up to 4 TB of uncompressed data and 3592 JB media can hold up to 1.6 TB of uncompressed data.

The tape drive generation can be found on the faceplate of the drive, a sticker on the back of the drive, on the drive information screen on the library interface, or on the drive information screen in the BlackPearl user interface.

The tape media generation is stamped on the top of a tape cartridge and optionally printed as the last digit on the tape barcode (for example, 5, 6, or 7).

For best operation, purchase Spectra Certified media of the same generation as the library tape drives.

When adding media, some care should be taken to be sure that no duplicate tape barcodes are inserted into the library. Spectra Certified media never comes with duplicate barcodes, but Spectra offers a custom media barcode service and duplicates could be created if care is not taken.


Tape Eject Strategy

A tape eject strategy must be considered as part of a data policy. A data policy is a feature that allows you to customize where and for how long the BlackPearl system stores specific data. For information about the default data policies and options available to customize data policies, see “Understanding Spectra Advanced Bucket Management Concepts” in the *BlackPearl User Guide*. For additional information about ejecting and importing tapes, see “Eject Tapes” and “Import Tapes” in the *BlackPearl User Guide*.

Spectra recommends keeping at least one copy of all archived data in the library at all times. Libraries can be easily upgraded by purchasing more slot licenses, or, if the slots become completely full, upgrading the library itself to one with more slots using the exclusive Spectra TranScale® technology.

A tape library user or administrator may decide to eject cartridges from a tape library for any of the reasons described below:

- **Ejecting a copy for off-site disaster recovery:** The BlackPearl system allows a user to make multiple copies of data automatically. A typical use case is to use a data policy to create a “tape first copy”, that is intended to be left in the library for easy retrieval, as well as an “eject copy”, intended to be removed from the library for storage at an alternate site for safety. See the *BlackPearl User Guide* for information on setting up multiple copies and ejecting a copy, and the *Tape Library User Guide* for your model of tape library for details on the physical process of exporting tapes out of and importing tapes into the library.
- **Ejecting a copy of data for transfer to another location:** In some workflows, a user ejects a tape to transfer the data to another facility. Individual tapes can be ejected manually using the BlackPearl user interface (see “Eject Tapes” in the *BlackPearl User Guide*).
- **Ejecting tapes to free up space in the library:** Some workflows and budgets require older or unused media to be ejected, making it not readily available to the Avid Interplay® Archive™ system. Individual tapes or entire buckets can be ejected manually using the BlackPearl user interface (see “Eject Tapes” in the *BlackPearl User Guide*).

Note: If a tape cartridge is exported from the tape library and an Avid job is queued for the tape, the archive plugin displays an error. If the Avid error message does not display the barcode of the tape, log into the BlackPearl user interface as described in the *BlackPearl User Guide* and select **Status**  **Messages**, or click the **Messages** link on the status bar to display the Messages screen. Inspect the messages to determine the barcode of the missing tape. See the *Tape Library User Guide* for instructions for importing the tape into the library.

RELATED INFORMATION

For more detailed information about the components of the archive solution, see the following resources:

- For additional information about the Spectra BlackPearl Converged Storage System, see the *Spectra BlackPearl User Guide*.
- For additional information about the Spectra RioBroker Application, see the *RioBroker User Guide*.
- For additional information about Spectra Logic Libraries, see the *User Guides* section of the Spectra Logic support portal at: <https://support.spectralogic.com/documentation/user-guides/>.
- For additional Avid information, refer to the Avid Interplay documentation at: http://avid.force.com/pkb/articles/en_US/readme/Avid-Interplay-Production-Documentation.

CHAPTER 2

Install and Configure the BlackPearl Avid Archive Plugin

This chapter describes how to install and configure the BlackPearl Avid Archive plugin, referred to as “the archive plugin” in this document. The archive plugin functions as a third party archive provider and is accessible within an Avid Interplay framework.

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REQUIREMENTS

The following sections describe the requirements for using the archive plugin.

Spectra Logic Requirements

The Spectra RioBroker Application must be configured with devices, brokers, and agents, and available for network communications with the Avid Interplay systems. See “Initial Configuration” in the *Spectra RioBroker Application User Guide*.

Avid Interplay Requirements

The archive plugin was tested with Avid Interplay and Avid shared storage (Nexis) components. The current archive plugin implementation passes all media file data from shared storage through the Archive Provider to a BlackPearl system. The typical Avid recommended configuration for an Archive Provider server includes a 1 Gb/s Ethernet NIC. For configurations incorporating a BlackPearl system with more than one tape drive, we recommend upgrading the Archive Provider server with an Avid approved 10 Gb/s NIC (for example, Avid SKU 7010-30241-01, Model MYRICOM 10G-PCIE-8B-S+E 10GBE NIC).

Other Requirements

The archive plugin does not support 32-bit Windows® operating systems.

The archive plugin requires that .NET be running on both the Archive Engine and Archive Provider systems. Download .NET from:
<https://dotnet.microsoft.com/download/dotnet-framework-runtime>

Follow the on-screen instructions to install .NET.

Version Compatibility

For information on version compatibility, see:
<https://developer.spectrallogic.com/avid-compatibility/>

Best Practices

Archive and restore performance may be improved with the following changes:

- If using 1 Gb/s components in the data path, limit the number of threads to a maximum of three to avoid network contention.
- If using 10 Gb/s components, ensure that all connections from Avid shared storage (Nexis) to the Media Services computer and to the BlackPearl system are 10 Gb/s.

Archive Migration Information

Multiple options exist for migrating from an existing archive provider to a BlackPearl system. Options include:

- Connecting a separate Archive Provider for the current archive and for the BlackPearl system. Restore the entire archive or portions of the archive to Avid shared storage (Nexis) via the first Archive Provider. Archive the data to the BlackPearl system with the second Archive Provider. Continue this process with the remainder of the original archive until complete.
- For additional options contact Avid technical support as described in the “If You Need Help” section in the *Interplay|Production Services Setup and User’s Guide* corresponding to your software version.

INSTALLATION

The archive plugin must be installed on two Interplay systems: the Archive Engine and Archive Provider. Although the code is the same for each installation, the Avid Interplay framework separates archiving functionality. The archive plugin running on the Archive Provider handles archive and restore operations. The archive plugin running on the Archive Engine performs deletions from the archive.

The archive plugin is installed by running an MSI installer, `SpectraS3AvidArchivePlugin-x.x.x.msi` where `x.x.x` is the BlackPearl Avid Archive plugin version (see [Version Compatibility on page 17](#)). The installer copies all the required dynamic link libraries (DLLs) and configuration files, and makes the appropriate registry changes needed to communicate with the Avid Interplay software. After the installation completes, the installer launches the Spectra BlackPearl S3 Configuration Tool.

**Important**

Both the MSI installer and the configuration tool must be run on both the Avid Archive Engine and the Avid Archive Provider systems.

**Important**

Before installing the BlackPearl Avid Archive plugin, it is a best practice to create a restore point in your operating system.

Use the following instructions to download and install the BlackPearl Avid Archive plugin.

1. Log into your account on the Technical Support portal at support.spectrallogic.com. If you do not have a portal account, click **signup for one now!** and follow the instruction to request a portal account.
2. Select **Support by Product** ... **BlackPearl**. The BlackPearl support page displays.
3. Under the heading Spectra BlackPearl Software, click the name of the installer package. The installer package is named `SpectraS3AvidArchivePlugin-x.x.x.msi` where `x.x.x` is the BlackPearl Avid Archive plugin version. The package begins downloading through your web browser.
4. Copy the installer file to the Archive Engine and Archive Provider systems, or copy it to a shared folder that is accessible from both systems.
5. Start the installation by double clicking `SpectraS3AvidArchivePlugin-x.x.x.msi`.
6. Follow the on-screen instructions to install the archive plugin.

7. On the last page of the installation wizard, select **Launch Spectra Logic Configuration Tool**, if not already selected, and click **Finish** to run the Spectra Logic Avid Interplay Configuration Tool after the install completes.

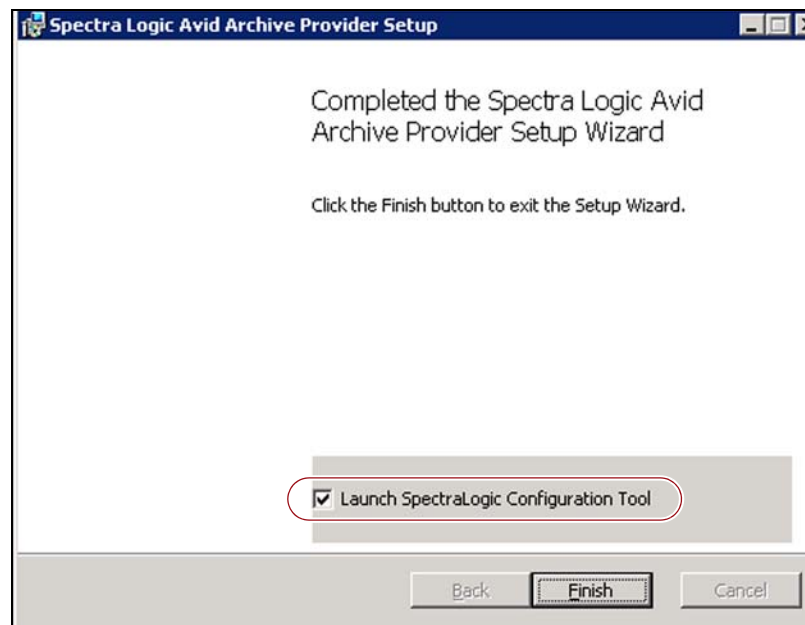


Figure 2 Select **Launch Spectra Logic Configuration Tool**.

Note: To make configuration changes later, the Spectra Logic Avid Interplay Configuration Tool can be run manually from the **Start** menu.

CONFIGURATION

After the installation wizard completes, the Spectra Logic Avid Interplay Configuration tool launches.

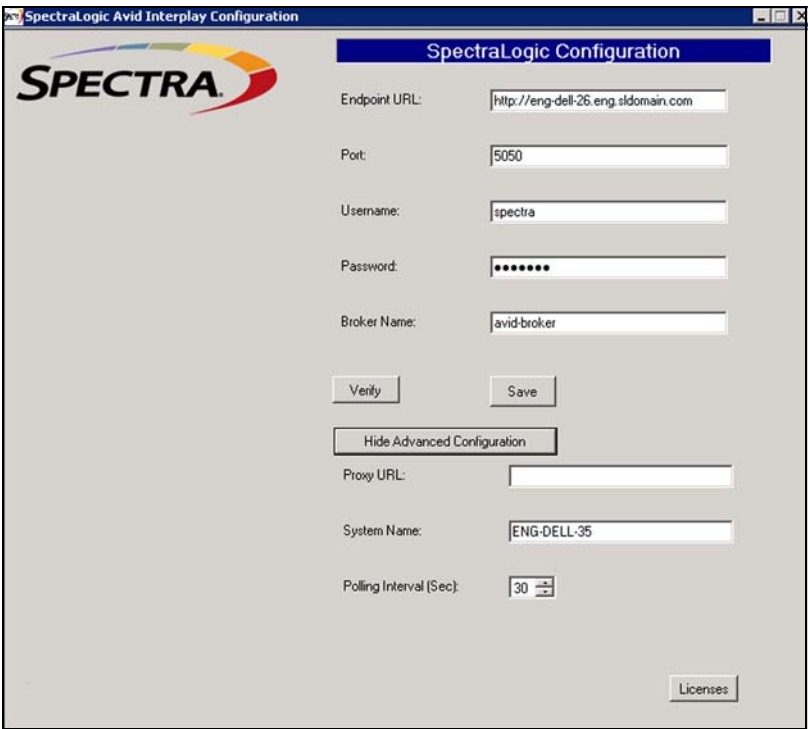


Figure 3 Enter configuration information.

Use the following instructions to configure the archive plugin to communicate with the Spectra RioBroker application.

1. Enter the requested information. The following fields are required.

For this field...	Enter the following...
Endpoint URL	The data path domain name or IP address for the Spectra RioBroker host system.
Port	The port to use to connect to the Spectra RioBroker application. The default port is 5050.
Username	Username of a user configured in the Spectra RioBroker application. The default user is spectra .
Password	The password of the user specified in the Username field. The default password is spectra .
Broker Name	Name of the broker configured in the Spectra RioBroker application to use to archive, restore, or delete media files.



Important

You must run the Spectra Logic Avid Interplay Configuration tool on both the Archive Engine and the Archive Provider. It is very important that values entered in the configuration tool are exactly the same on both systems.

2. The **Verify** button is active if all the required fields contain valid text. Click **Verify**.

The configuration tool attempts to connect to the Spectra RioBroker application using the supplied URL and credentials. If the connection attempt fails, an error displays.

3. The **Save** button is active after **Verify** completes successfully. The Spectra Logic Avid Interplay Configuration tool considers the configuration information accurate if it is able to connect to the Spectra RioBroker application. Click **Save** to save the configuration information to the local disk used by the archive plugin for interactions with the Spectra RioBroker application.

Advanced Configuration Options

This section details additional configuration options that you can use to tune the connection between the Archive Provider server and the Spectra RioBroker application.

For this field...	Enter the following...
Proxy URL	The proxy server through which to redirect connections.
System Name	The system name of the Spectra RioBroker host system listed in the Endpoint URL field.
Polling Interval	The interval, in seconds, that the system polls for job status.

Configuration Errors

The following are some possible configuration errors:

- "Remote name could not be resolved" — The domain name entered for the Endpoint URL is not known or not configured; verify that the hostname and proxy server are correctly configured, or use an IP address.
- "Unable to connect to the remote server" — No response from the RioBroker application at the specified domain name or IP address; verify that you entered the data path domain name or IP address correctly.

FUNCTIONALITY TESTING

To test the system thoroughly, Spectra Logic recommends archiving and then retrieving at least 10 objects totaling 200 MB. Each archive or retrieval operation results in an individual job in the RioBroker application. The test is successful when all jobs display in the Completed Jobs tab of the Job Status screen of the RioBroker user interface, and in Avid Interplay.

Note: If the files are being archived to a Spectra Logic tape library through a BlackPearl system, depending on the size of the files being archived, it may take up to 30 minutes for the BlackPearl system to send the files to the library for archiving.

See the *Interplay|Production Services Setup and User's Guide* and **Chapter 3 – Use the BlackPearl Avid Archive Plugin** to perform the functionality test.

CHAPTER 3

Use the BlackPearl Avid Archive Plugin

This chapter describes how to use the Spectra Avid Archive plugin. Media files in the Avid Interplay Archive™ database can be archived, restored, and deleted using the Avid Access software as described in “Working with Archive and Restore Services” in the *Interplay | Production Services Setup and User’s Guide*. Select your Avid Interplay/Production release on the [Avid Interplay | Production Documentation](#) page, to find *Interplay | Production Services Setup and User’s Guide* for your release.

Topic	
Introduction	page 24
Understanding Archive and Restore Services	page 25
Archive	page 26
Restore	page 30
Select or Clear “Use Best Effort Restore”	page 31
Restore Media	page 32
Delete	page 35
Troubleshooting Operations	page 38
Other Issues	page 41
Submit a Support Ticket	page 42

INTRODUCTION

If you have not already done so, you must create an archive profile as described in “Creating an Interplay Archive or Interplay Restore Profile” in the *Interplay | Production Services Setup and User’s Guide*. Select your Avid Interplay/Production release on the [Avid Interplay | Production Documentation](#) page, to find *Interplay | Production Services Setup and User’s Guide* for your release.

With Avid Interplay version 3.6.0 and above, the **Partition** field can be left blank to use the default broker/bucket or you can enter a value to specify the broker/bucket.

The example below shows a Spectra RioBroker archive profile in the Avid Interplay Production Services tool. The Spectra RioBroker application appends “Avid-Partition-” to the **Partition** parameter so that the bucket used to archive, restore, and delete data, is named Avid-Partition-Avid_Bucket_Tim.

Leave the **Requested Provider** field blank to use the default archive provider. Otherwise, enter a specific archive provider server name.

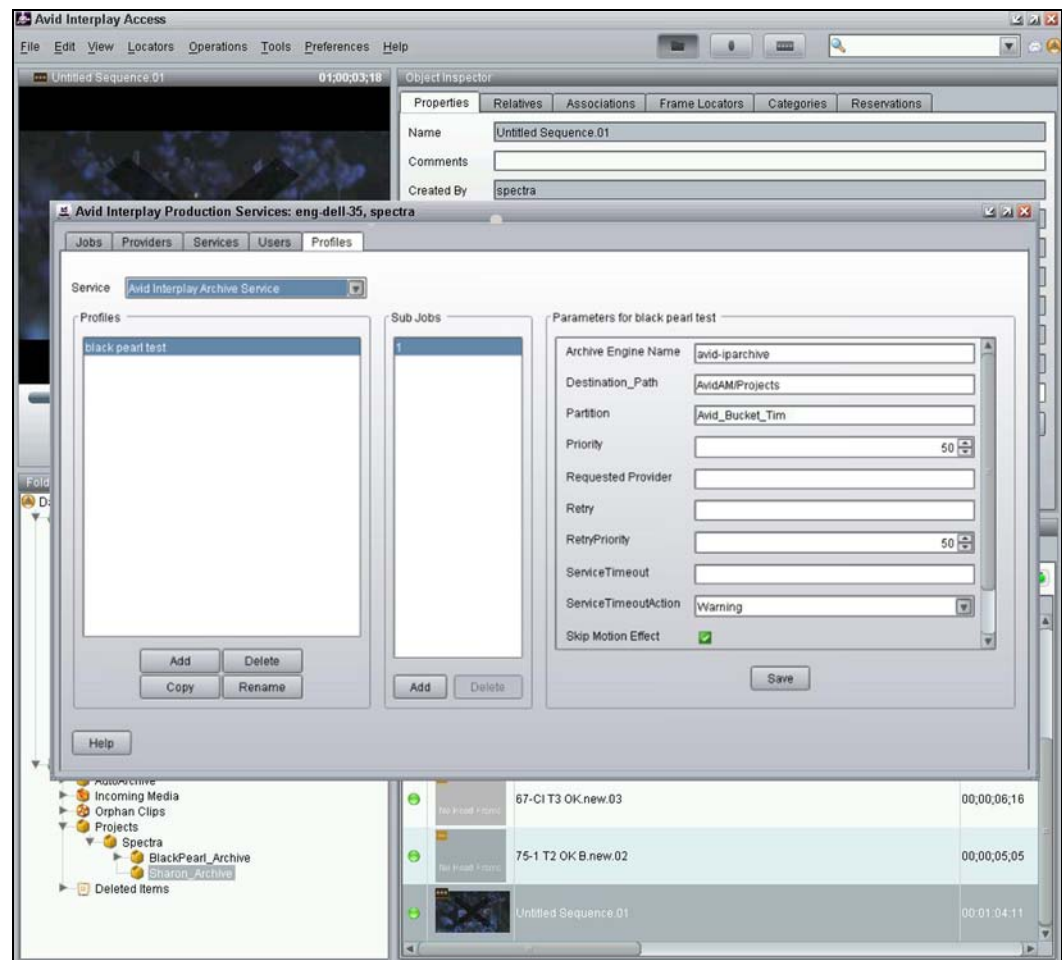


Figure 4 An example archive profile.

Understanding Archive and Restore Services

Avid Interplay supports two types of databases:

- An online database maintained by the Interplay Archive Engine. The name of the database must be “AvidWG”.
- An offline database maintained by the Interplay Archive Engine. The name of the database must be “AvidAM”. The Interplay Archive Engine requires its own server. Archiving allows permanent archiving of data and also allows you to locate and restore archived material.

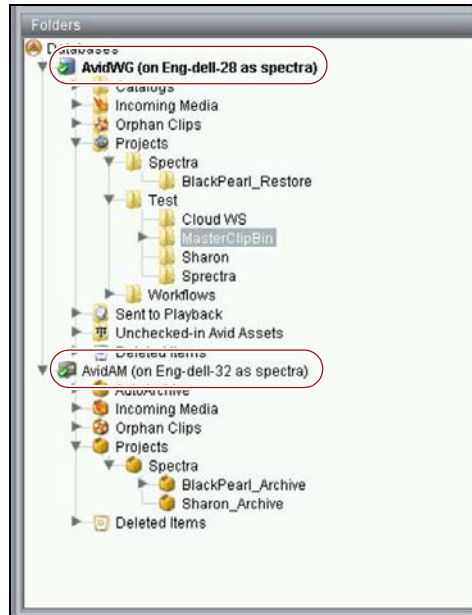


Figure 5 Avid Interplay databases.

ARCHIVE

Before you can archive media files to a BlackPearl system using the Spectra RioBroker application, you must check them into the Avid Interplay database so that they reside in Avid shared storage (Nexis). The Interplay Engine database retains the metadata for the masterclip file.

The following steps use Avid Interplay Access to archive media files to a BlackPearl system using the Spectra RioBroker application.

1. In Avid Interplay Access, select the online database, and then right-click the masterclip and select **Archive**.

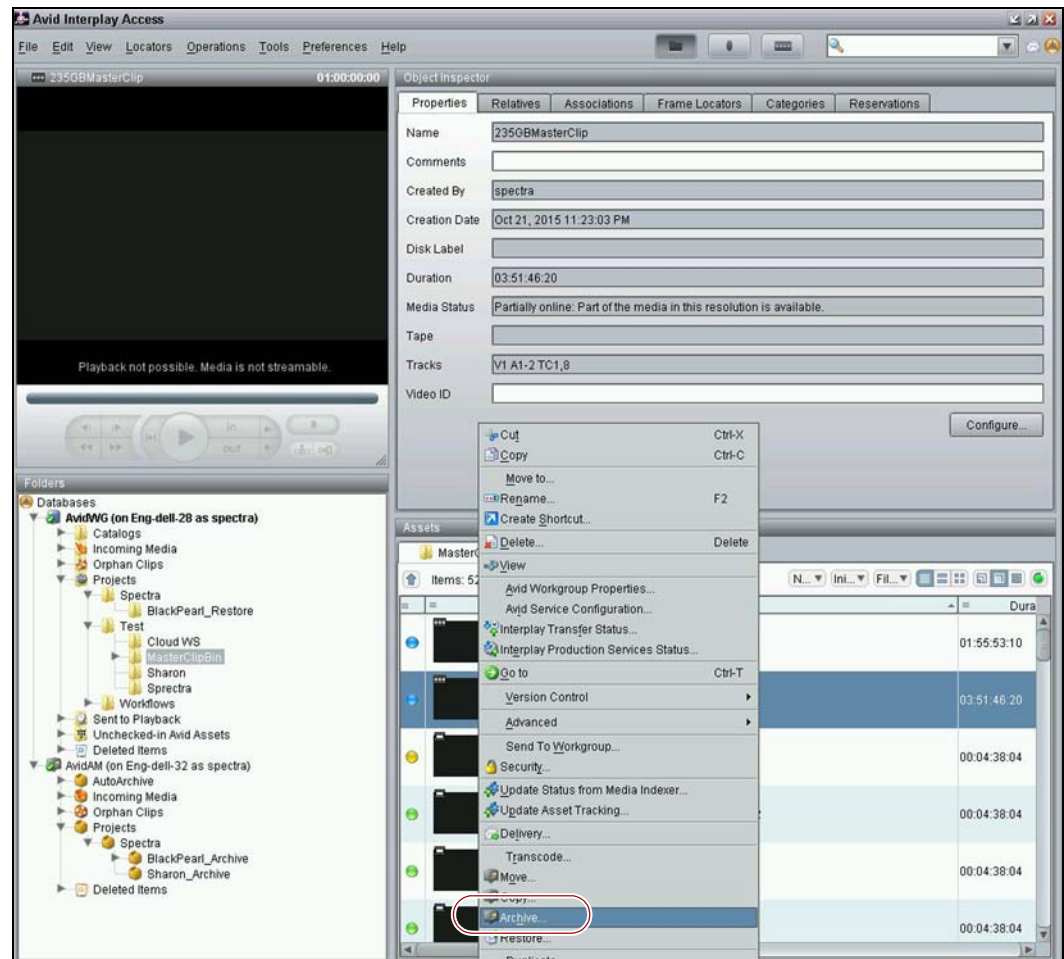


Figure 6 To archive a masterclip, right-click and select **Archive**.

The Archive dialog box displays.

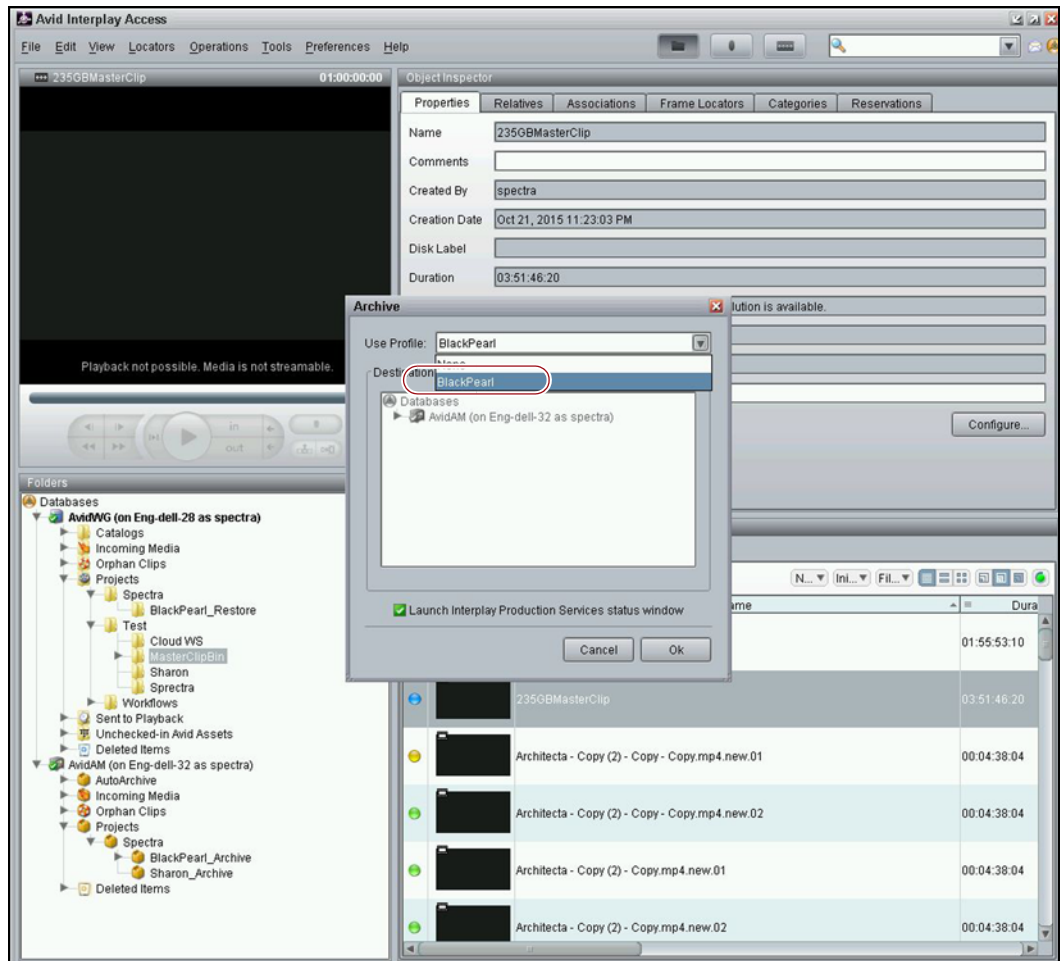


Figure 7 The Archive dialog box.

2. Using the **Use Profile** drop down menu, select the profile you want to use. If you select a profile with a **Partition** value set (see [Introduction on page 24](#)), it is used as part of the bucket name. If you select a profile without a **Partition** value set, the RioBroker application uses the bucket configured for the **Broker** specified in the Spectra Logic Avid Interplay Configuration wizard, in [Step 1 on page 20](#).

3. In the Archive dialog box, click **Ok** (Figure 7 on page 27) to create an archive job.

When an Avid archive job starts, the Avid Interplay Production Services dialog box opens displaying various job related information, including status and percentage complete, as shown in Figure 8.

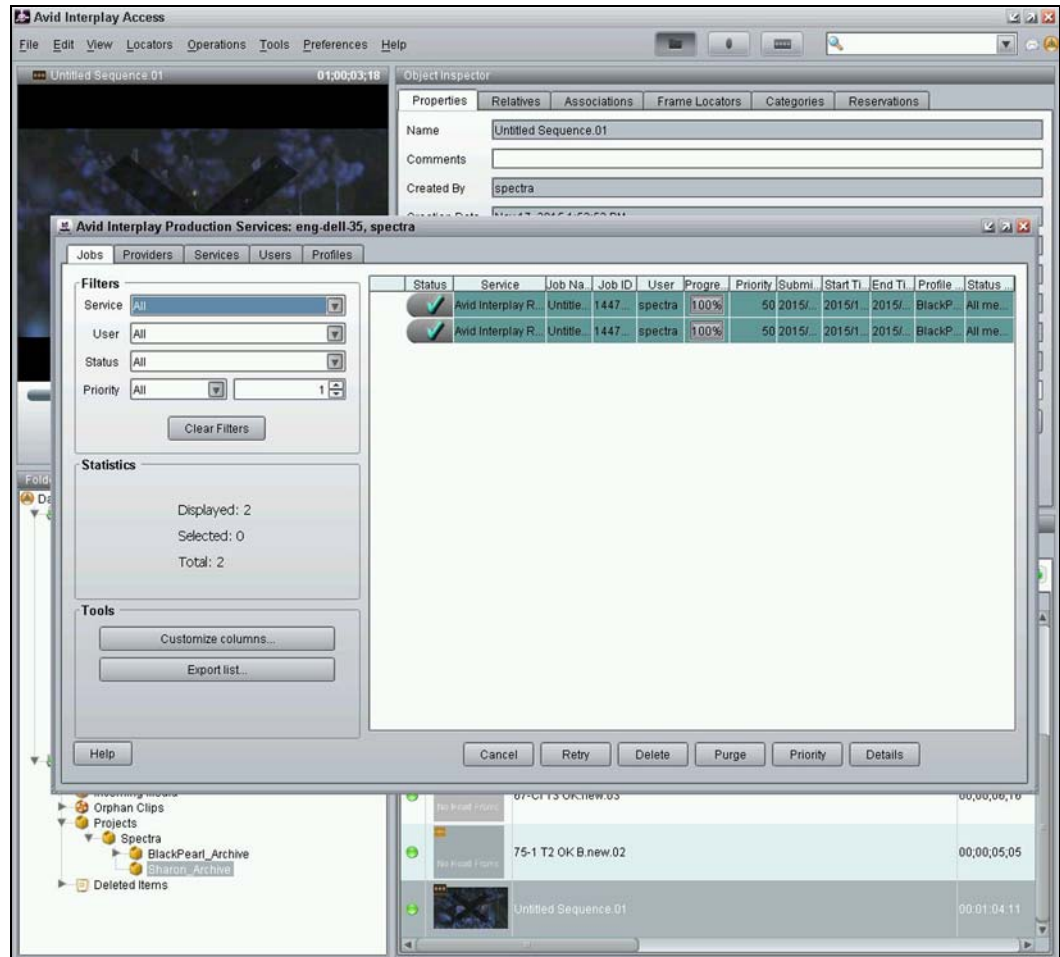


Figure 8 The Avid Interplay Production Services dialog box.

4. The Avid archive job starts the archive plugin, which creates an archive job to a BlackPearl system using the Spectra RioBroker application.

5. If desired, view the object details in the Spectra RioBroker application.
 - a. Log into the Spectra RioBroker user interface as described in 'Login to RioBroker' in the *Spectra RioBroker User Guide*.
 - b. On the taskbar, click **Job Status**. The Job Status screen displays.

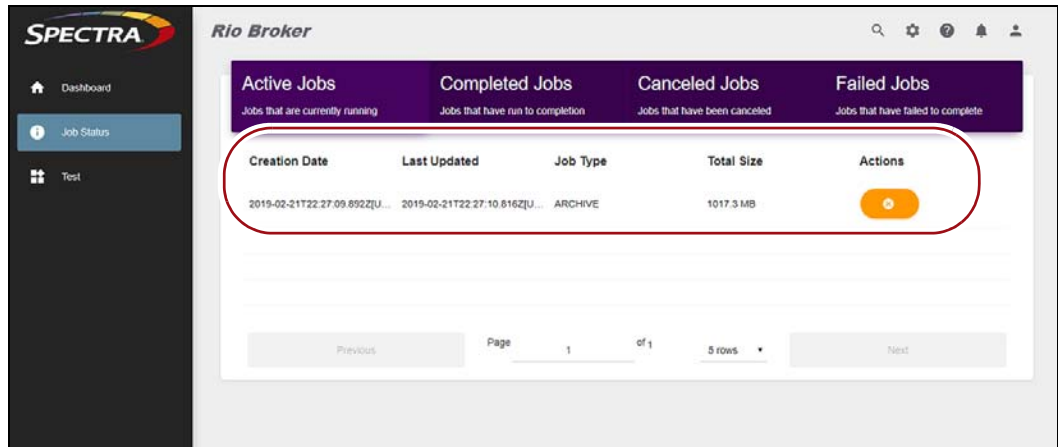


Figure 9 The Job Status screen.

All active jobs are listed in the Active Jobs pane.

Asset ID information and object names are stored as metadata on the BlackPearl archive. Other metadata for the media files are stored in the offline database maintained by the Interplay Archive Engine, and not on the BlackPearl System.

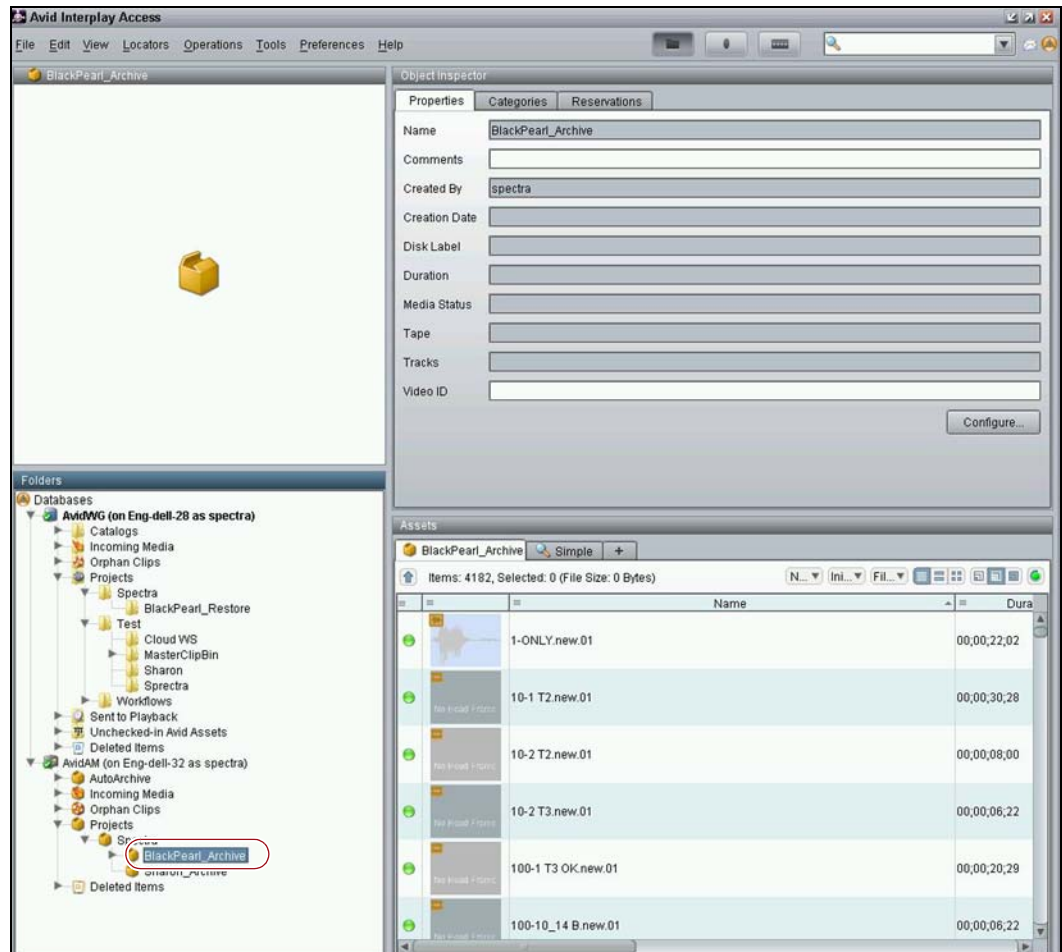


Figure 10 Media file metadata is stored in the AvidAM database.

RESTORE

A restore operation retrieves media files from tape or disk storage, copies them to cache on the BlackPearl system, and then copies them back to Avid shared storage (Nexis). The archive plugin supports full and partial file restores.

Select or Clear “Use Best Effort Restore”

In Avid Archive you can select whether a restore process restores as many files as it can without returning errors or whether it fails immediately if there are any files that cannot be restored. The default is to fail immediately. Missing files can occur if a tape containing the file is exported from the library. Select your Avid Interplay/Production release on the [Avid Interplay | Production Documentation](#) page, open the *Interplay | Production Services Setup and User’s Guide*, and see “Configuring the Archive Service” for more information.

Use the following instructions to select or clear best effort restore in the Archive settings for the online database:

1. Open the Interplay Administrator and log into the system running the Interplay Engine.
2. In the Site Settings section of the Interplay Administrator window, click the **Asset Tracking/Archive Settings** icon. The Asset Tracking/Archive Settings view opens.
3. Select the AvidWG database from the database list. The Archive Settings area displays.

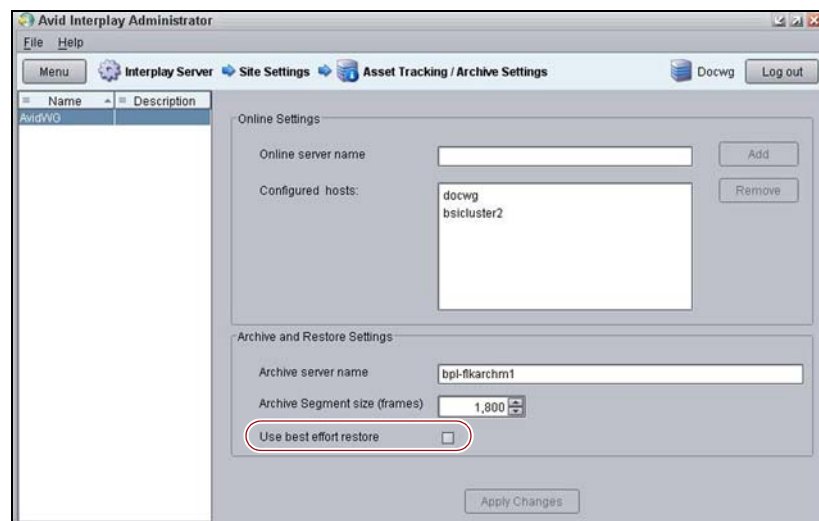


Figure 11 If desired, select **use best effort restore**.

4. In the Archive and Restore Settings area, select or clear **Use best effort restore**. If selected, a restore process restores as many files as it can without returning errors. If cleared (the default), a restore process fails when there are any missing files.
5. Click **Apply Changes** at the bottom of the window.

Restore Media

The following steps use Avid Interplay Access to restore media files from a BlackPearl system using the Spectra RioBroker application.

1. In the Assets pane of the Avid Interplay Access screen, right-click the masterclip you want to restore to the Interplay Database and select **Restore**.

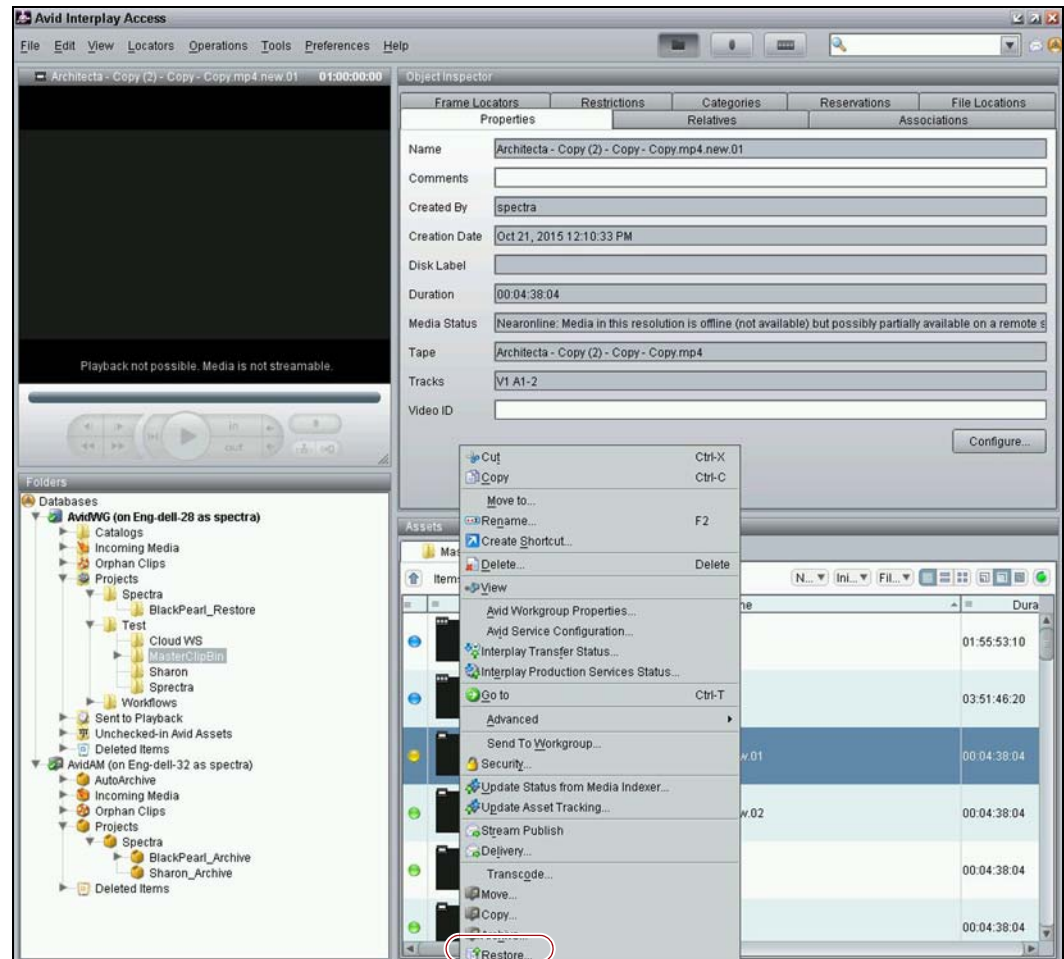


Figure 12 To restore a masterclip, right-click the asset and select **Restore**.

The Restore dialog box displays.

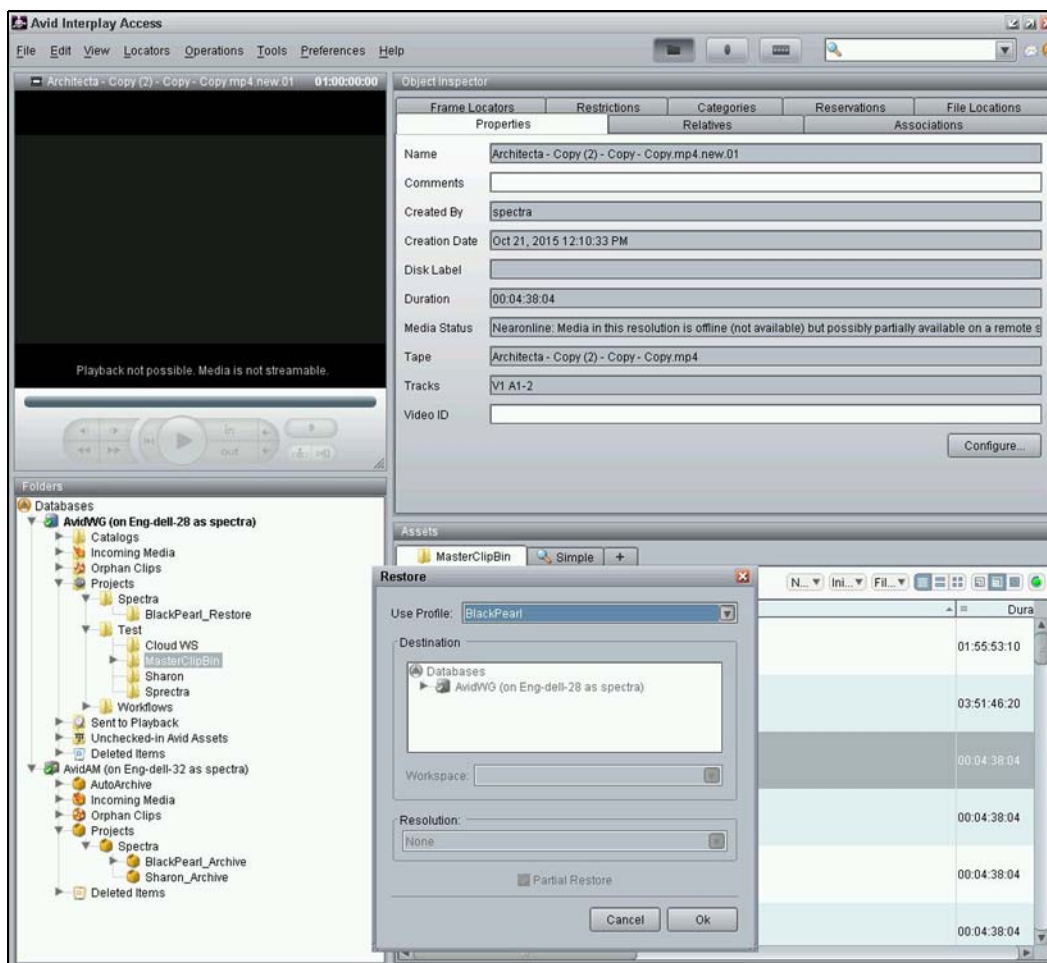


Figure 13 The Restore dialog box.

2. Select a profile and click **Ok**. An Avid restore job initiates, which starts the archive plugin.

The archive plugin creates a restore job that transfers the media files to Avid shared storage (Nexis). When the transfer completes and the media files are indexed, indicators in Avid Interplay Access turn green to reflect online availability.

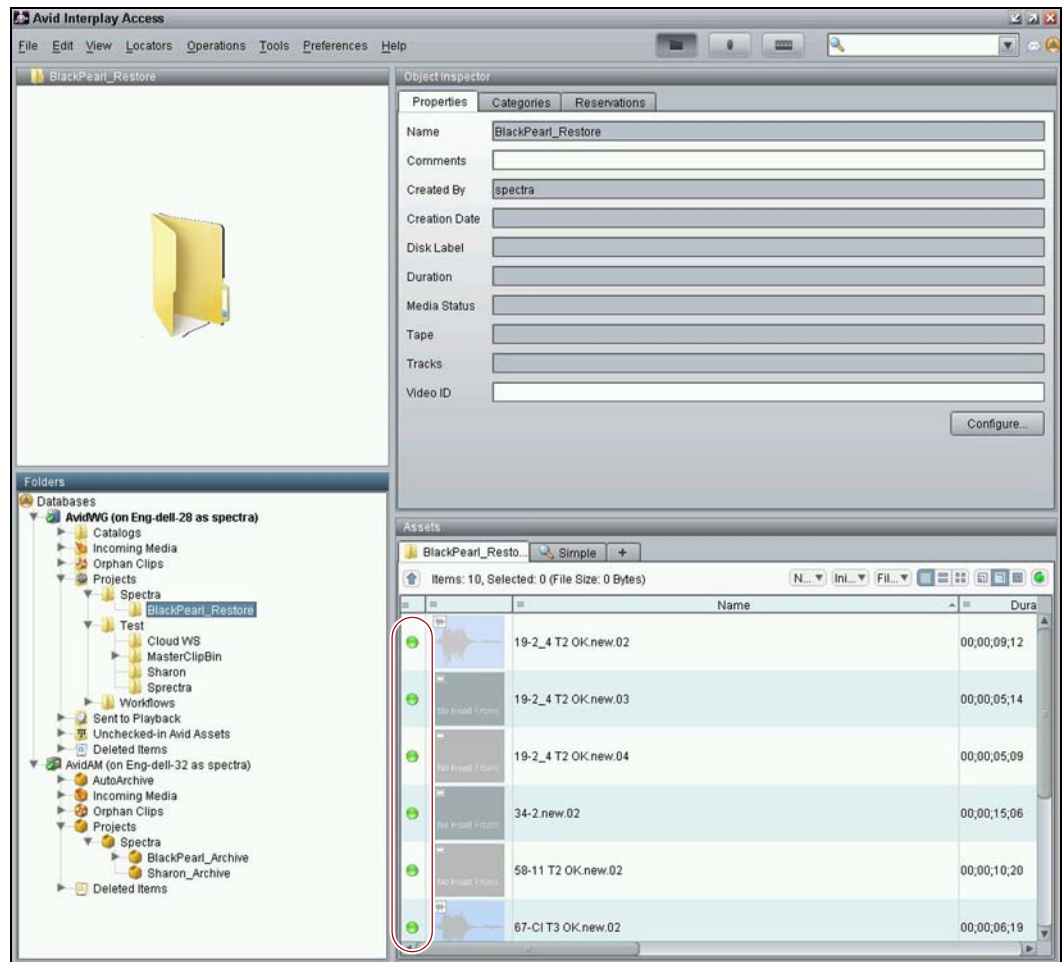


Figure 14 Green icons indicate that the restore is complete; the files are transferred and indexed.

DELETE

This section describes deleting a media file from the BlackPearl system using Avid Interplay.



Important

When deleting a file archived on a tape cartridge, deleting a file from the Avid Archive database deletes it from the BlackPearl database record and marks the file for deletion from tape or disk storage. When stored on tape, due to the sequential nature of tape, files marked for deletion remain on the tape cartridge until the BlackPearl system marks all files on the tape for deletion. At that time, the tape is automatically reclaimed by the BlackPearl system; It is reformatted, and moved to the Managed pool of tapes available for any user data. Refer to the [BlackPearl User Guide](#) for additional information.

Deleting a file from the online database maintained by the Interplay Engine deletes media files directly from Avid shared storage (Nexis), but does not delete the data from the BlackPearl system or tape or disk storage. Files should not be deleted from Avid shared storage unless there are no plans to use them in the immediate future, the space on Avid shared storage is needed for other projects, and they have been successfully archived to the BlackPearl system and the connected storage devices. Deleting files from Avid shared storage frees up storage space for actively used assets. If in the future you need the deleted files that were previously archived, you can restore them from the BlackPearl system and tape library using the restore instructions in [Restore on page 30](#).

The following steps use Avid Interplay Access to delete media files from a BlackPearl system.

1. In the Assets pane of the Avid Interplay Access screen, right-click the masterclip you want to delete from the Archive database and select **Delete**.

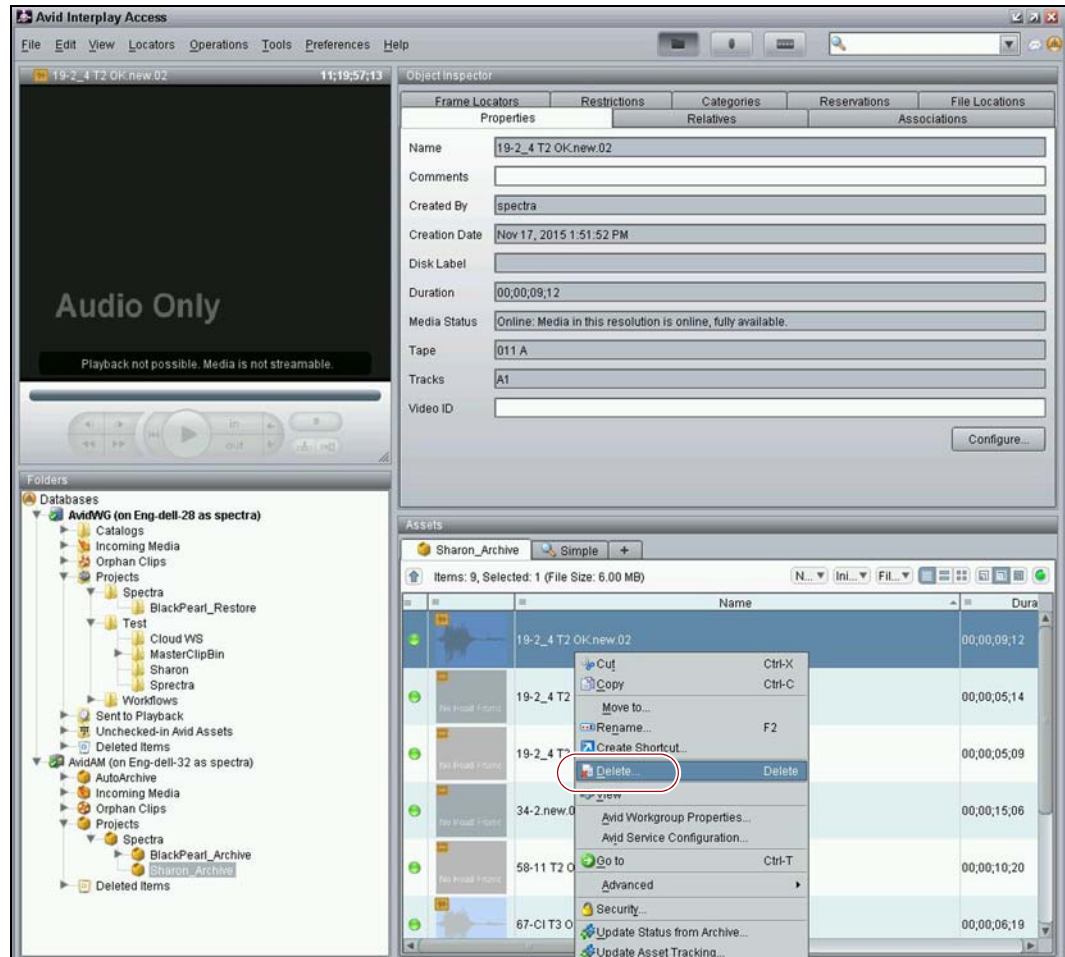


Figure 15 To delete a masterclip from the BlackPearl system, right-click the asset name and select **Delete**.

The Delete dialog box displays.

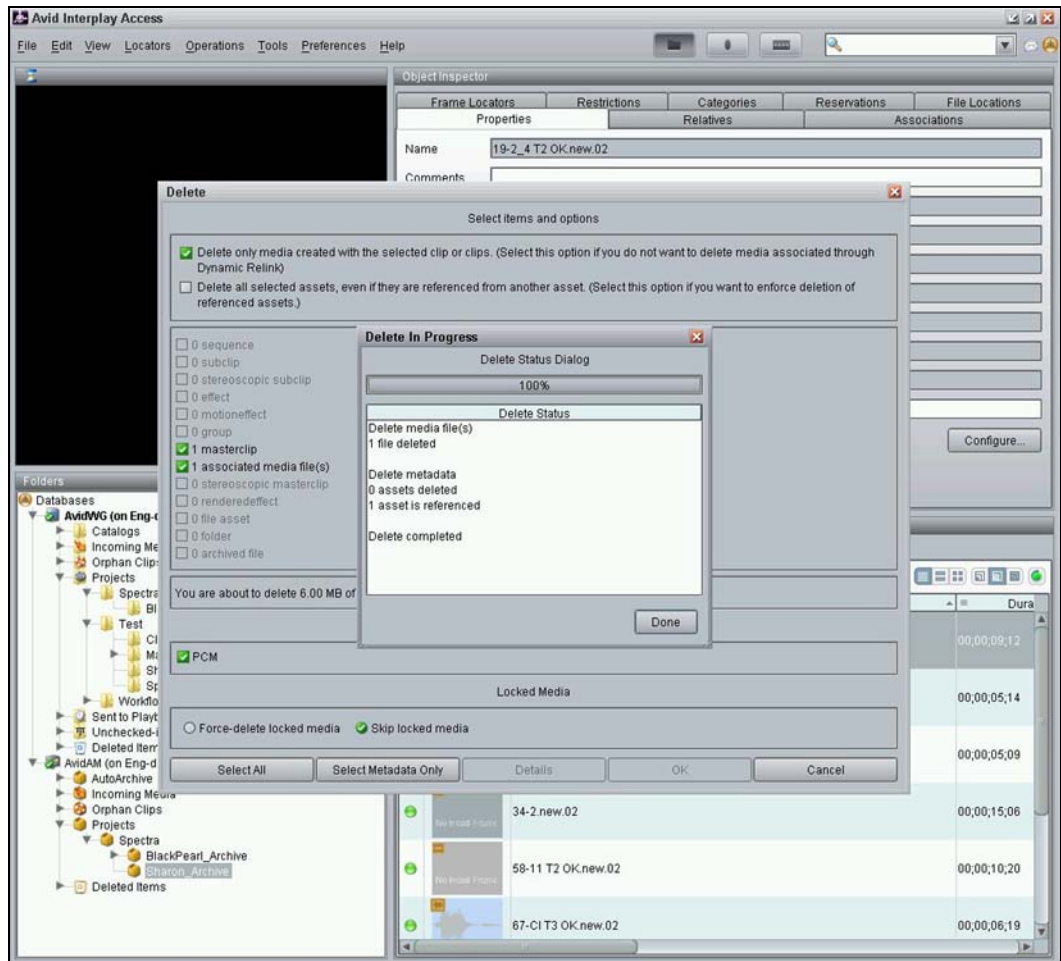


Figure 16 The Delete dialog box.



Caution

When you click **OK**, the BlackPearl system deletes the selected items. There is no deletion confirmation screen.

2. In the Delete dialog box, select the items to delete, or click **Select All**, and then click **OK**. Media files are deleted from the BlackPearl system, and the asset is removed from the Avid Archive database.

TROUBLESHOOTING OPERATIONS

The following table gives information for troubleshooting issues specific to the Spectra Avid Archive plugin. For information on troubleshooting BlackPearl system and tape library issues, see the *BlackPearl Archive Solution Frequently Asked Questions, Troubleshooting & Maintenance Guide*.

Note: When troubleshooting issues, it is helpful to know to what broker the PAM system is sending data, and to what bucket that broker writes data.

Issue	Resolution
A job shows as failed in the Avid Interplay software	<p>Examine the Job Status page in the RioBroker user interface and, if needed, the S3 Jobs page in the BlackPearl user interface for the reason for the failure.</p> <ol style="list-style-type: none"> 1. Log into the RioBroker user interface as described in the <i>RioBroker User Guide</i>. 2. On the taskbar, click Job Status. 3. Select the Active Jobs, Completed Jobs, Canceled Jobs, or Failed Jobs tabs to determine the status of the failed GET job at the RioBroker application level. If the job is complete at the RioBroker application level, continue to Step 4. Otherwise, select the row of the job to determine what steps to take to resolve the issue. 4. Log into the BlackPearl user interface as described in the <i>BlackPearl User Guide</i>. 5. From the menu bar, select Status ... S3 Jobs. The S3 Jobs screen displays. 6. Examine the S3 Jobs screen for any failed jobs and determine the reason for the failure. If there is no clear indication of what caused the failure, there may be a timeout or network issue. See <i>Configuration Errors on page 21</i> or the <i>Spectra BlackPearl Network Setup Tips</i> for troubleshooting help. 7. The BlackPearl system monitors the status of all jobs and restarts or resumes jobs where they left off, if possible. <p>If jobs continue to fail, submit a support ticket. See <i>Submit a Support Ticket on page 42</i>.</p>

Issue	Resolution
Data is transferred from RioBroker to the BlackPearl system, but the data does not transfer from cache to tape	<p>If the BlackPearl system is not migrating data to tape, it is usually because the tape library is not physically connected to the BlackPearl system, the tape partition is offline in the BlackPearl user interface, or the S3 service is not activated.</p> <ol style="list-style-type: none"> 1. Confirm the tape library is physically connected to the BlackPearl system and powered on. 2. Log into the BlackPearl user interface as described in the <i>BlackPearl User Guide</i>. 3. From the menu bar, select Configuration ... Advanced Bucket Management ... Storage & Policy Management. 4. In the Tape Partitions pane, check if the tape partition state is "Standby". If a tape partition is in Standby state, select the tape partition, then click Action ... Activate Tape Partition. Otherwise, continue with Step 5. 5. From the menu bar, select Configuration ... Services. 6. Select the S3 Service and click Action ... Show Details. 7. Click Action ... Activate Data Path Backend.
Files that the client is attempting to restore are on a tape that was ejected from the tape library	<ol style="list-style-type: none"> 1. Locate the required tape cartridge(s). 2. Import in the required media using the library front panel (see your library <i>User Guide</i> for instructions). 3. Re-try the restore operation.
Job failure message indicates that the BlackPearl system is unavailable	<ol style="list-style-type: none"> 1. Confirm that the BlackPearl is powered on. 2. Log into the BlackPearl user interface as described in the <i>BlackPearl User Guide</i>. 3. From the menu bar, select Configuration ... Network. 4. Confirm the network settings for the management and data interfaces are correct for your environment.
Job failure message indicates that a BlackPearl storage target is unavailable	<p>If a BlackPearl system cannot write to attached disk, a cloud target, or a replication BlackPearl system, confirm the storage target is powered on and the network settings of the storage target are correct for your environment.</p>
Job failure message indicates that the source storage system is unavailable	<p>The RioBroker application cannot communicate with the Avid system. Confirm the Avid storage system is powered on and the network settings are correct for your environment.</p> <p>Steps for confirming are described in the <i>BlackPearl User Guide</i>.</p>
Job failure message indicates the BlackPearl system cache is full	<p>Either there are too many jobs running or the BlackPearl cannot communicate to the final storage target(s) (tape, disk, cloud). Temporarily stop sending jobs. Confirm that the BlackPearl system can communicate with all storage targets as described in the <i>BlackPearl User Guide</i>.</p>

Issue	Resolution
Job failure message indicates that RioBroker does not have permission to access files on the BlackPearl system	<ol style="list-style-type: none"> 1. To confirm the username and password configured in RioBroker to access the BlackPearl system, use the credentials used for RioBroker to log in to the BlackPearl user interface as described in the BlackPearl User Guide. Note: If you cannot log in, contact your system administrator. 2. Log into the RioBroker user interface as described in the RioBroker User Guide. 3. On the toolbar in the upper-right of the application window, click Settings (gear icon) ⚙️ Brokers. 4. On the Brokers screen, click DELETE. 5. In the Delete Broker dialog box, using the Broker Name drop-down list, select the broker you want to delete and click Submit. 6. Recreate the broker as described in the RioBroker User Guide using the verified login credentials from Step 1.
Job failure message indicates RioBroker does not have permission to access files on the source storage	<p>This issue is typically caused by bad FTP or file system credentials on the Windows host.</p> <ul style="list-style-type: none"> ▪ Confirm the user configured in the Spectra RioBroker Service has permission to access the source storage. ▪ Confirm that the user that is currently using the Windows host has permission for the file path. ▪ Confirm that the user is using a full FTP address with the correct credentials for FTP access.
Job failure message indicates file does not exist	<p>Confirm the file you are trying to archive is present in the Avid storage system.</p>
The BlackPearl Avid Archive plugin displays a message that a “file exists” when sending a file with a duplicate name	<p>When data is archived from the Avid Interplay system to the BlackPearl system, an asset ID is generated for each file name. This allows the Avid user to have duplicate file names because the asset ID generated for each file is unique. However, the BlackPearl system does not allow duplicate asset ID names. Once a clip is archived to the BlackPearl system, the system will not accept an attempt to archive another file with the same asset ID.</p> <p>In order to archive a file a second time, you must first delete the initial instance of the file.</p>

Issue	Resolution
<p>The Avid software does not display media assets requested to be restored from the BlackPearl system</p>	<p>If a GET job from the BlackPearl system fails to complete, the media assets do not display in the Avid software. Use the following steps to determine why a GET job failed.</p> <ol style="list-style-type: none"> 1. Log into the RioBroker user interface as described in the <i>RioBroker User Guide</i>. 2. On the taskbar, click Job Status. 3. Select the Active Jobs, Completed Jobs, Canceled Jobs, or Failed Jobs tabs to determine the status of the failed GET job at the RioBroker application level. If the job is complete at the RioBroker application level, continue to Step 4. Otherwise, select the row of the job to determine what steps to take to resolve the issue. 4. Log into the BlackPearl user interface as described in the <i>BlackPearl User Guide</i>. 5. From the menu bar, select Status ... Messages, or click the Messages link on the status bar, to display the Messages screen. 6. Inspect the messages to determine what steps to take to resolve the issue. For example, if the tape containing the asset was previously ejected, a message indicates the barcode of the tape you need to import. 7. If the messages do not contain any applicable information, check the bucket configuration for the archive plugin. The bucket configuration must be the same on both the Archive Engine and the Archive Provider and cannot change between the archive and the restore. See Configuration on page 20. <p>If the issue persists, submit a support ticket. See Submit a Support Ticket on page 42.</p>

Other Issues

Use the following resources to troubleshoot other issues:

- The *Spectra RioBroker Application User Guide*.
- The *BlackPearl Archive Solution Frequently Asked Questions, Troubleshooting & Maintenance Guide*
- The “Library Troubleshooting” chapter of your *Tape Library User Guide*
- The “Troubleshooting and Support” chapter of the *BlackPearl User Guide*

Submit a Support Ticket

If you need additional assistance, use the following instructions to gather log sets and open a support ticket.

1. In the Avid software package, collect a set of Archive Provider logs. See the *Interplay | Production Services Setup and User's Guide*. Select your Avid Interplay/Production release on the [Avid Interplay | Production Documentation](#) page, to find the *Interplay | Production Services Setup and User's Guide* for your release.
2. Download the Archive Provider logs on to your local host computer.
3. Log in to the tape library as described in your *Tape Library User Guide*.
4. Collect an AutoSupport Log (ASL) from the tape library as described in the "Configuring and Using AutoSupport" chapter in your *Tape Library User Guide*.
5. Log into the BlackPearl user interface as described in the *BlackPearl User Guide*.
6. From the menu bar, select **Support ⋮ Logs**. The Logs screen displays.
7. Select **Action ⋮ New Log Set** to generate a log set for use in general troubleshooting.
8. Select the log set you just generated, and then select **Action ⋮ Download**. The log set begins downloading to your host computer.
9. Submit a support incident using the Spectra Logic Technical Support portal as described in "Opening a Support Ticket" in the *BlackPearl User Guide*.