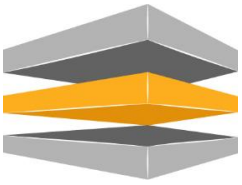
proMAX
media technology solutions



ProMAX Platform™ User Manual

Version 5.0

V5.0.2 – 7/12/2016

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Table of Contents

Contents

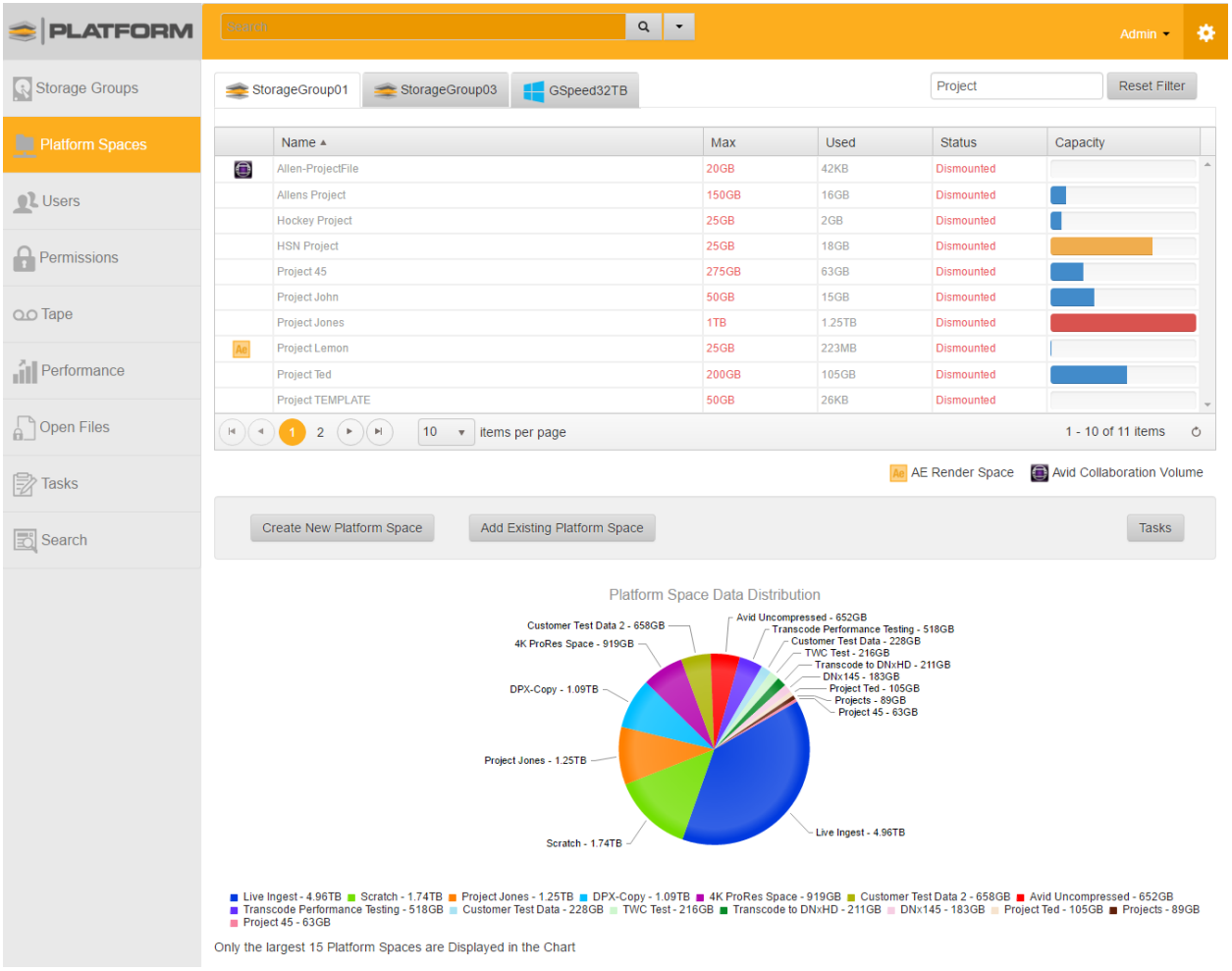
About this Manual

This User Manual has been designed to provide detailed information on features and functions of the Platform Workflow servers. It does not describe specific capabilities of Platform hardware systems, but rather describes the software interface capabilities of the Platform Servers.

This manual is organized as a set of descriptions about each feature of the Platform, what the feature does, how to operate it and in some cases how it works. This manual is not designed to describe specifically how to use the ProMAX Platform system in your workflow. There are other videos and documents that address best practices and workflow efficiencies.

Partner manuals to this document include Platform Quick Start Guides that provide detailed information on how to install, start up and maintain specific Platform Server models.

Platform Interface



Using a Simple Internet Browser

The Platform interface is designed to be a simple but powerful browser based interface allowing the operator to have quick access to control the Platform. Accessing the Platform from a Google Chrome® or Apple Safari® browser is intuitive and simple for operators and administrators. The Platform interface is currently restricted to operating in this two browsers and will not work in Microsoft Internet Explorer®.

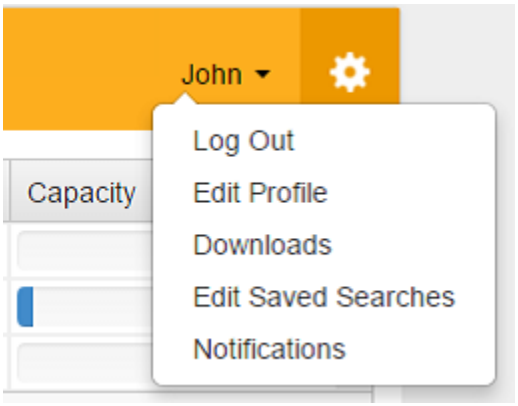
Interface Sections

Each section of the Platform interface creates simple organization and easy access.

Search Header

At the top of every Platform screen is the search header. This gives simple and easy access into Platform's integrated Asset Management catalog. The user has the ability to perform simple searches by typing in a file or folder name in the search box, or can click on the drop down menu for advanced searching options.

User Profile

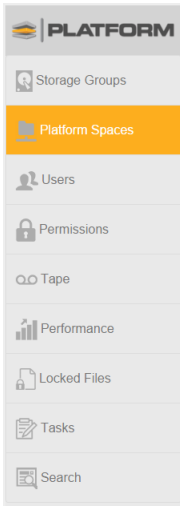


At the right hand corner of the search screen is the user profile section. This shows the account of the logged in user and allows the user to edit their profile (see User Options). Thru the Gear icon to the right, the user also has access to the administration screen which provides the ability to configure Platform Configuration Options for the entire system and for the specific logged in user. Downloads is used to update the workstation with latest copies of the Listener and other programs. Edit Saved Searches allows users to access and remove existing searches the user no longer needs. Notifications allow the user to set up how they will be notified when upon certain events occurring in the Platform System.

Configuration Menu

Next to the logged in user name is a white 'gear' icon. This icon will bring the user to the Administration Screens that will help configure the user experience for that particular user.

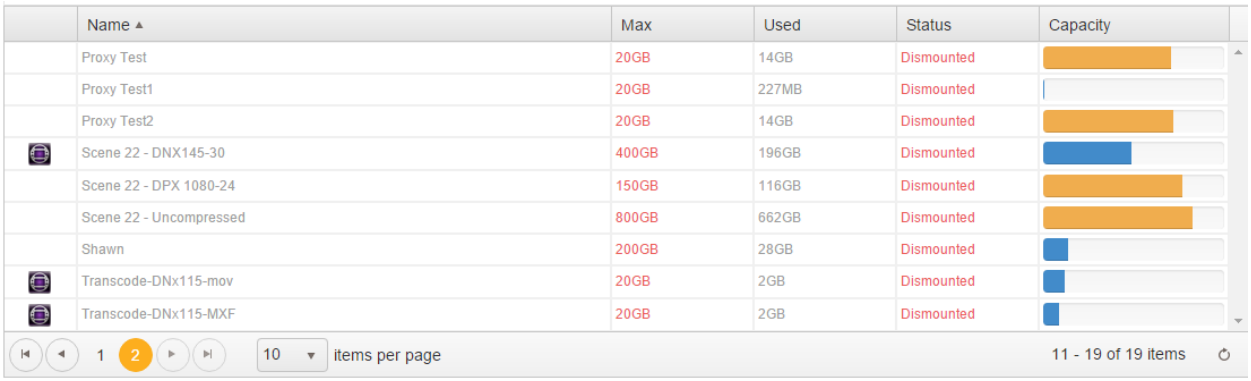
Menu Tabs



The menu tabs on the left hand side of the screen describe the major feature areas of the Platform System. Clicking on one of the tabs will change the screen and display feature sets related to that category.

Information Grids

Data or information grids are used throughout the application to show groups of common data. They occur in many places including search results and Platform Spaces and are a core component of the system. Information grids have the basic layout of a table structure including headers, columns and rows. Remember that even data grids use the 'Right-Click' feature (see below) in order to operate on a specific set of information in the system. Just click on a row in the grid and right click to see a list of options.



Column Sorting

Data columns can typically be sorted by double-clicking on a column name in the grid. The system will then sort the entire data list by the information in that column.

Paging

The paging controls at the bottom of every grid give the user the ability to skip to the next page of data, move to a specific page or jump to the beginning or end of the list. The user can also select the number of items that will show on the page by selecting the drop down.

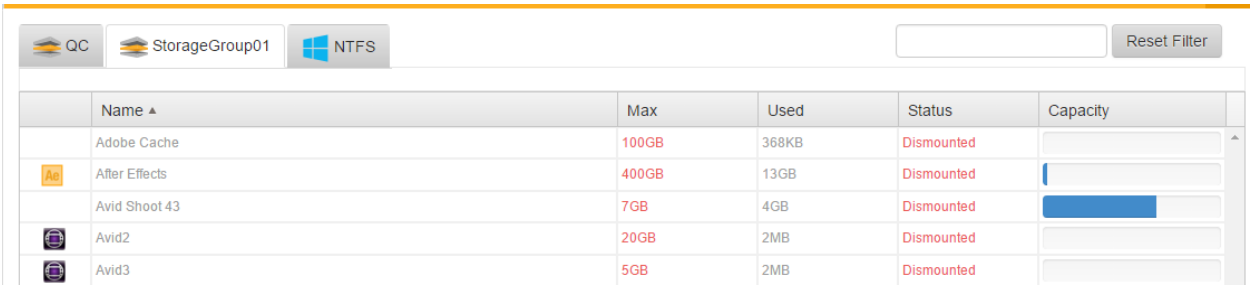
Grid Refresh

On many grids, on the right hand side of the grid, next to the total rows displayed, is a refresh option 

gives the user the ability to manually refresh the data in the grid. After clicking on this option, the system will make another call to the Platform Server and update the grid with current information.

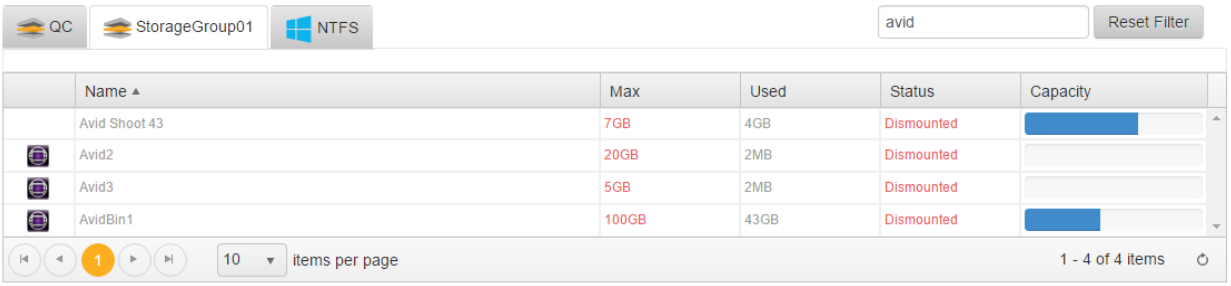
Tabs

Tabs are listed on many screens to help further separate information on screens. In the example below, the tabs listed are Storage Groups and when clicking on the tab, the system will display an entire new set of Platform Spaces within that Storage Group.



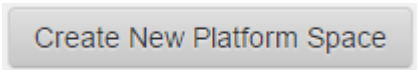
Filter Boxes

Filter Boxes are used throughout the Platform Interface to allow automatic and immediate filtering of information on the screen. In this example, typing in 'avid' into the filter box, causes the system to only display Platform spaces with Avid in the name. This takes place immediately as characters are being typed into the filter box.



Buttons

Buttons simply execute a request or a task. Use the left mouse button to click on a button and execute the function named.

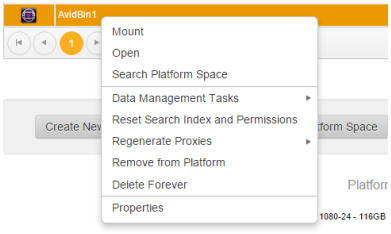


Automatic Screen Refresh

Many Platform screens will automatically refresh after a period of time which is defined in the administration screens. This is designed to keep the information on a screen timely and accurate. Examples of screens that perform automatic refreshes include the Platform Spaces Screen and the Performance Screens.

Right-Clicking

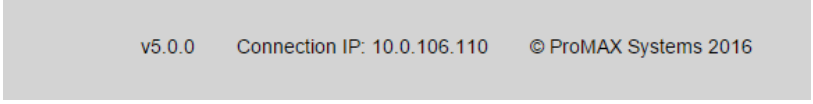
The Platform Interface screens are designed to be a full web-application and therefore offer the ability to 'right-click' on many sections of the screen and provide the user options that are 'context-sensitive'. This means that based on what row or piece of information the user right-click's upon, the menu options listed will change automatically.



Make sure when using the interface that you try the 'Right-click' option on your mouse to see options and use the full capability of the Platform System.

Footer

The footer of the Platform Interface screen displays the version of the Platform System, and the IP of the current connection to the Platform Home Server.



Platform Connection Architecture

Understanding how workstations connect to the Platform System will assist system administrators and users to better utilize the Platform System.

Connection Types

Workstations can connect to the Platform system either through direct, connection, through a switch or in a hybrid approach.

Direct Connection

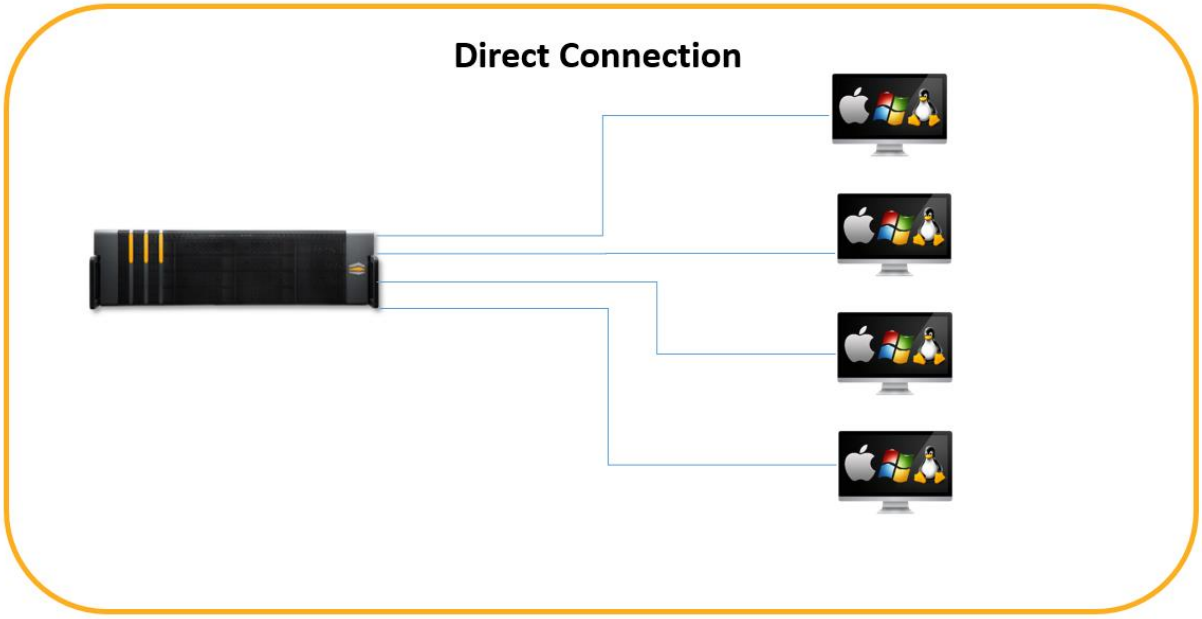


Figure 1 Direct Connection

Workstations connecting directly will be connected via an Ethernet Fiber or Cooper connection from their system to a unique port on the back of the Platform System. In this configuration, each workstation will receive or be assigned a unique IP (Internet Protocol) address to the server. By default, IP addresses from a Platform System fall into the range 10.10.X.Y although they can be changed upon installation of the server. As a general statement, direct connections to the Platform System can be faster with less latency than switch connections.

Switch Connected

In a switch connected environment, users will be connected to a dedicated, fast, low-latency Ethernet switch that is also connected to the Platform. In this set up, there can be multiple high-bandwidth ports like 10GbE or 40GbE, connected from the switch to the Platform system. Because of this connection type, users will share a common IP route to the Platform System which is defined when the switch is installed.

Switch connected systems are also the way the Platform system can expand to multi-node environments.

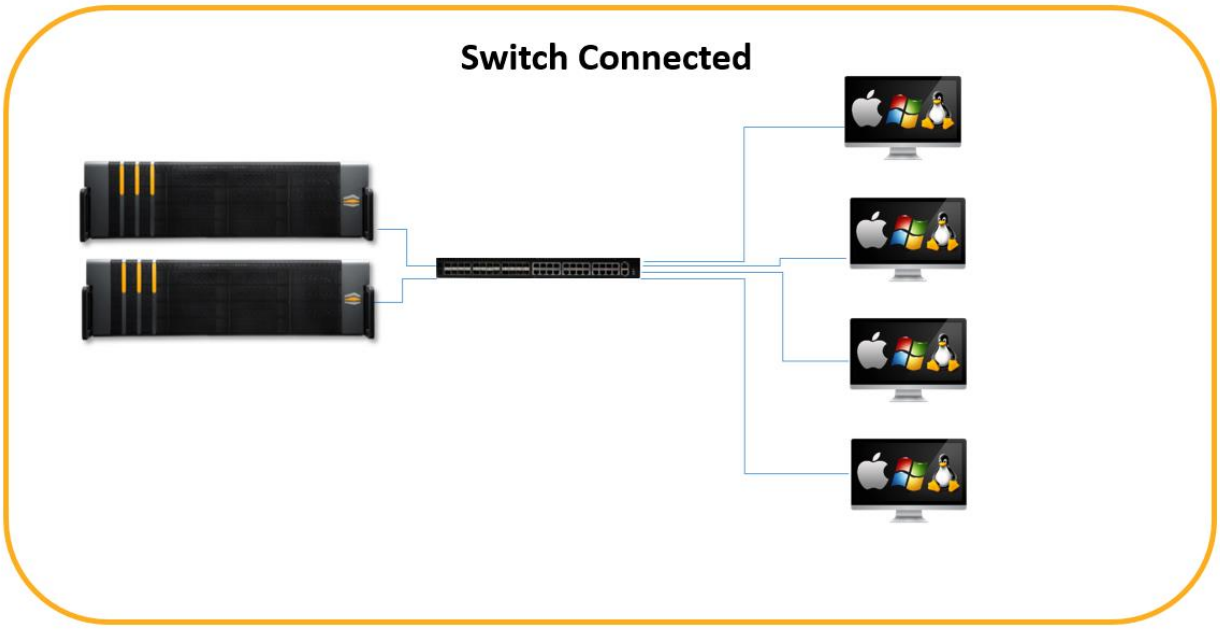


Figure 2 Switch Connected

Hybrid Connections

Hybrid environments are set up when users have a direct connection to the Platform, typically on a faster 10GbE or 1GbE connection and are also connected to a corporate switch. That switch typically has access to other corporate resources such as other servers and/or the internet. The hybrid approach insures a low-latency dedicated connection for the video intensive user with an additional connection for internet or corporate browsing.

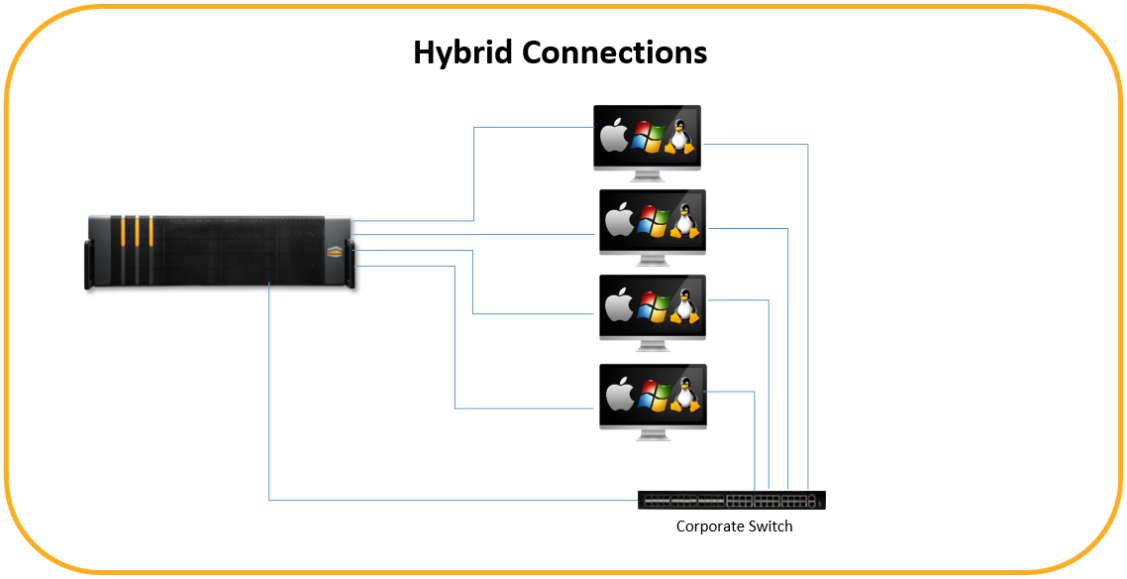


Figure 3 Hybrid Connections

Hybrid environments work well for dedicated smaller groups but do not allow the Platform System to expand to multiple nodes.

Quick Connect

In any case where the user workstation is directly connected to the server, the Platform can issue an IP address directly to the workstation through DHCP. This quick connect feature will activate as soon as the Platform system sees a new physical connection made to one of the Ethernet ports on the system.

Platform Multi-Node Architecture

The Platform architecture design allows for maximum scaling of workflow nodes so that users have access to all resources in the Platform ecosystem. In the example below, users are connected to a dedicated switch and there are 2 Platform nodes also connected to the switch. Each Node has 96TB of raw storage in the primary node chassis and also two (2) 96TB expansion units per node. Users on this Platform system will have access to all storage and CPU resources using the one simple browser interface.

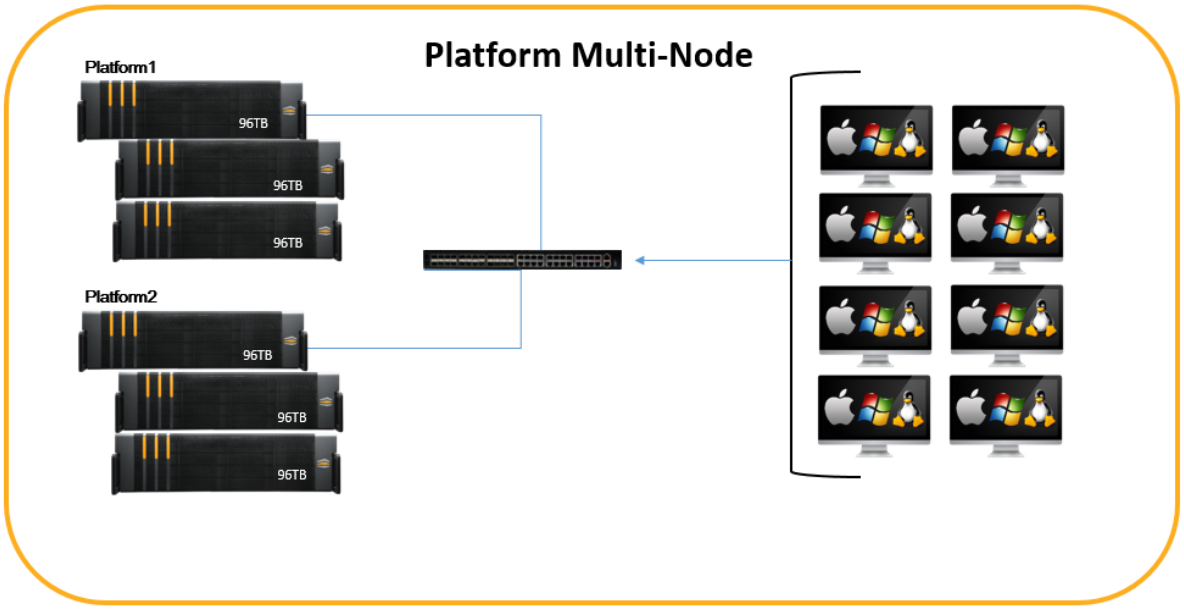


Figure 4 Multi-Node Architecture

Platform can further connect new nodes into the architecture as user requirements continue to grow. It is notable that the secondary nodes can require a different version of the Microsoft Windows Server® Operating System then the model shipped with the primary node.

Communication Architecture

Each workstation connecting to the Platform system will login to the system (see Logging into Platform below) using a browser. However, to accomplish this, the workstation must have a program installed on the workstation to communicate with Platform Services. Below is a diagram of the communication

architecture.

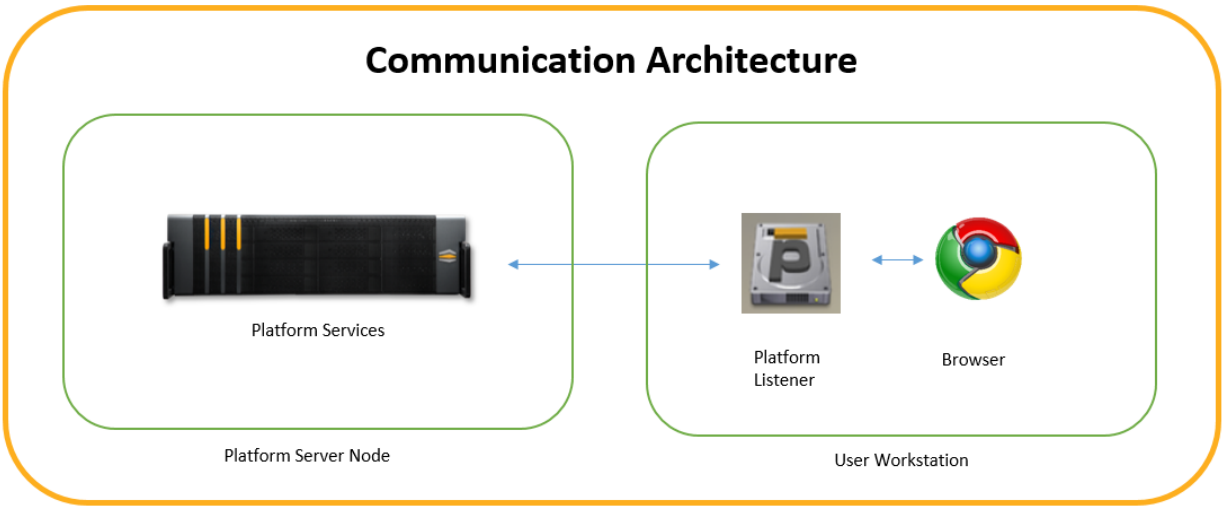


Figure 5 Communication Architecture

The user workstation browser communicates to the Platform Services through a program called the *Platform Listener.* This program shows up on the workstation in the respective system icon bar as a Platform Icon. . This icon, however, will be colored Red or Green depending on if the workstation is connected and authenticated to the Platform home node system.

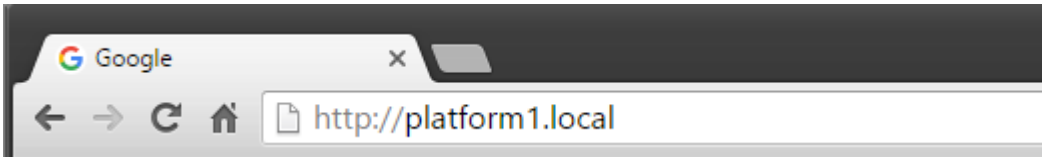
Conversely, if the Listener program is not installed or is not running on the client computer, that computer will not be able to login to the Platform User Interface and will not have access to all of the features and capabilities referenced in this document.

Logging into Platform

Getting Connected to Platform

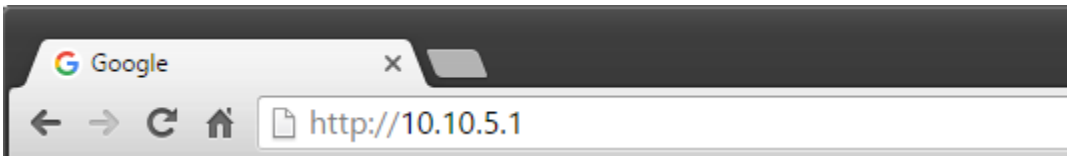
When a user workstation needs to connect to a Platform System, they will open a Google Chrome® or Apple Safari® browser and type in the address of the Platform.

Connecting via Platform System Name



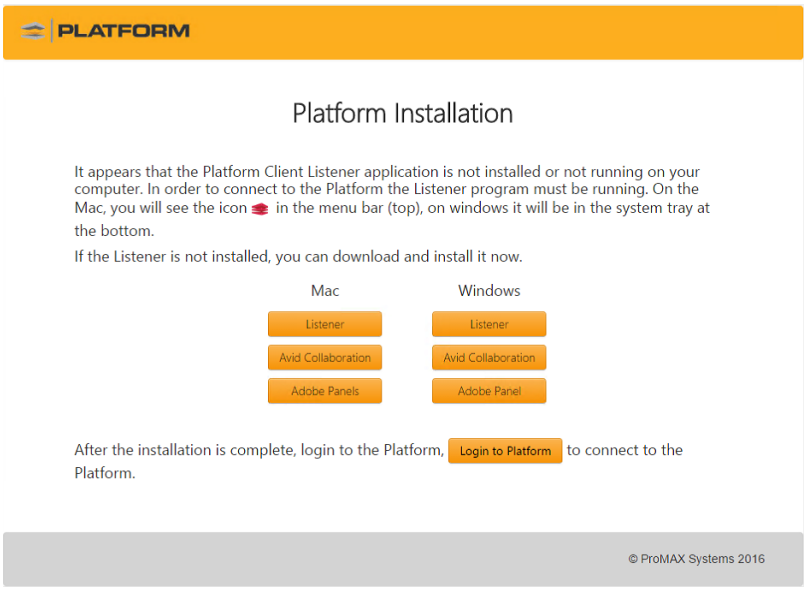
The Platform system uses Apple Bonjour® to translate the system name to the IP address of the Platform System. In this example, 'Platform1.local' is the server name. A couple of notes if the user is going to use this approach. First you must use http:// in front of the system name. And second, the user must type use the suffix of .local at the end.

Connecting via IP Address



The other approach is to connect to the Platform directly with the IP address of the system. If you know the IP address this method will force your system to connect on that IP.

Installing the Platform Listener



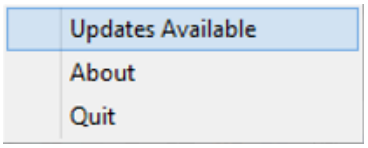
The Platform Listener program must be running in order to login to the Platform system and use the capabilities of the system. If the listener program is not installed or not running the browser will display the screen shown to the left. See the **Platform Getting Started Guide** for specific instructions on installing the Platform Listener.

During the Platform System installation, the program will also

optimize the workstation and NIC (Network Interface Card) settings f-or video streaming.

This installation menu also allows the administrator to install the Avid Collaboration add in and the Platform Adobe Panels capabilities. In order to use these features, these add in options must be installed.

Listener Menu Options

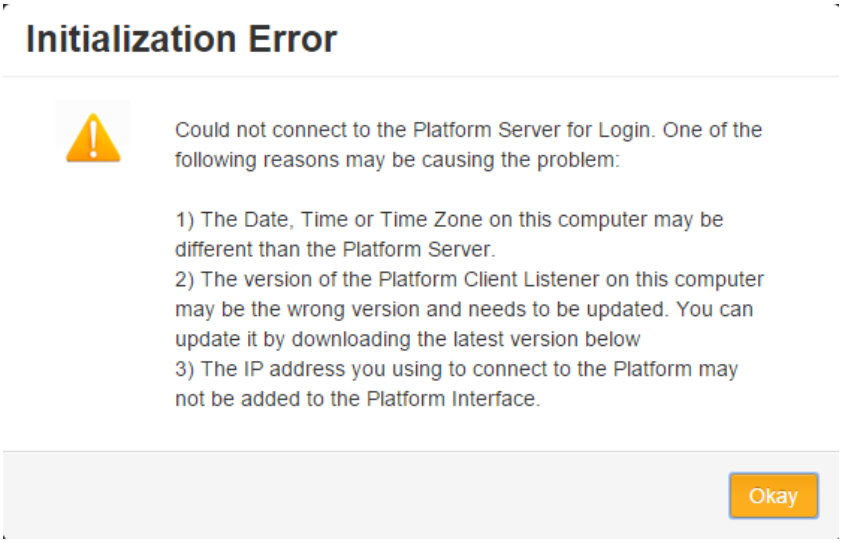


Updates
Clicking on this like will redirect the browser to the ProMAX Support Website. The user will then Login with the ProMAX support username and password and will see a revision list of all new updates and enhancements to the Platform System. As long the Platform System is under a support contract, these new updates will be available to the organization. See Upgrading the Platform Software section for more details.

About
This will describe details about the version of the Platform Listener the workstation has installed.

Quit
This option will cause the Platform Listener program to exit. If a browser window is open using the Platform software, the next request performed on the browser will cause the browser to redirect to the download/install listener screen.

Connection Errors



If a user receives the following message upon attempting to connect to the Platform System, you will need to perform the following steps to resolve the issue:

Date / Time

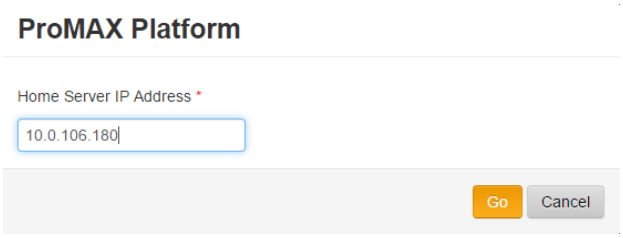
Check the date and time of the workstation and compare it against the date and time of the Platform Server. The administrator may need to login to the Platform Server on the server console to check the date/time of the server. These dates/times must match within the minute or the system will not allow the user to login.

Client Listener Version Problem

Make sure that the version of the Platform Listener is the same as the version on the Platform. If it is not, you can type in http://Platform1.local/download (you may also use the IP address and the /download) to get to the download screen.

IP Address not added

In this case, the IP address used to connect to the Platform is a valid IP address (meaning the Platform is communicating on it), however, it has not been added to the valid list of connections that the Platform can communicate on. You will need to login to the Platform either on another workstation that has access or on the server console (this is the monitor/keyboard connected directly to the server) to add the connection into the system. See the Connections screen for more information.



It is also possible to receive this dialog box when attempting to connect to the Platform. In this case, the system could also be indicating that the IP being used has not been added to the connections screen located in the Administration (configuration screens).

Key Points of Understanding

Additionally, if the NIC configuration on the workstation has changed after the listener program has started, the operator must stop and restart the listener program in order for those changes to be recognized. This includes any changes to NIC Addresses or if an external VPN is connected.

Installing Avid Collaboration

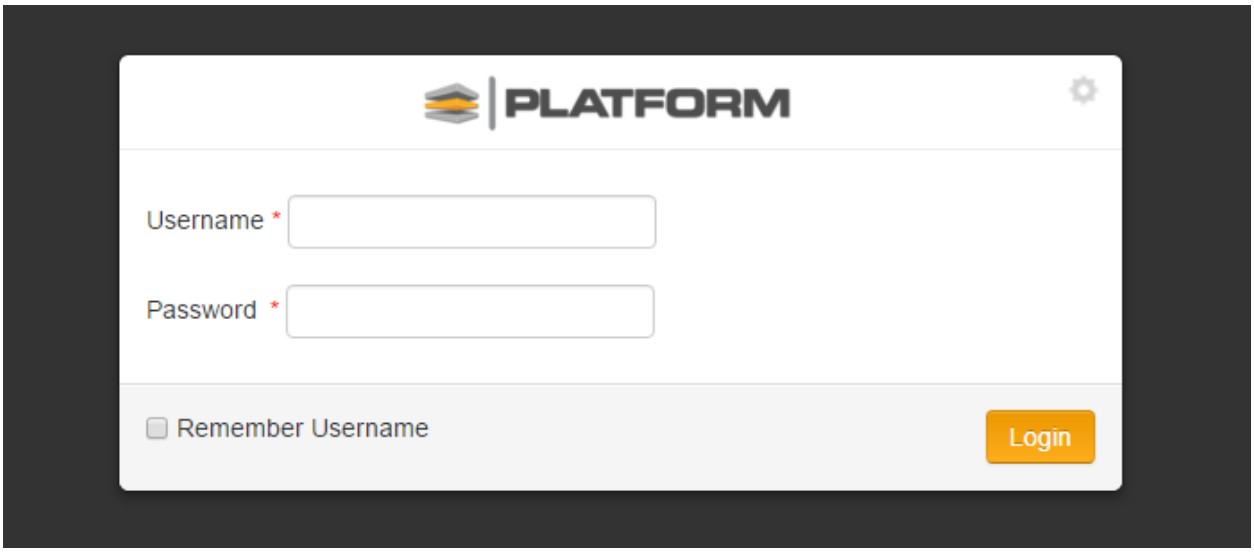
In order to use the Avid Collaboration function (Avid Media Composer® Bin Locking), the Avid Collaboration function must be installed one each workstation. By clicking in the downloads page on the appropriate Avid Collaboration button, the user can install this feature.

Installing Adobe Panels

In order to use the Platform Interface within Adobe Premiere Pro, the Adobe Panel function must be installed one each workstation. By clicking in the downloads page on the appropriate Adobe Panel button (Mac or Windows), the user can install this feature.

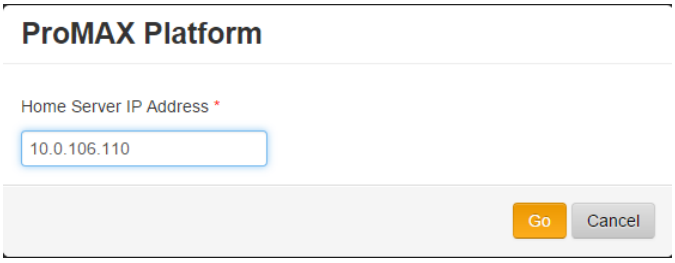
The Login Screen

When your Platform Listener has successfully connected to the Server, you will see a Login screen.



Both the Username and Password fields are required. The operator has the option of clicking on the 'Remember Username' checkbox which upon subsequent logins will fill in the Username field automatically.

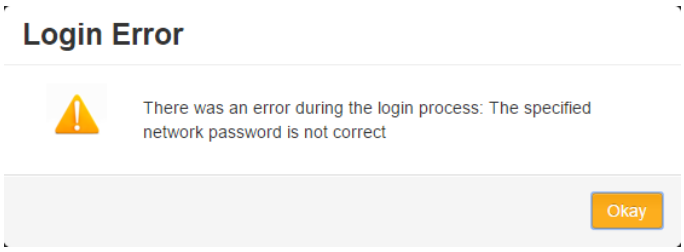
The grey wheel, , in the upper right-hand corner of the login screen can be used to see the IP that the system is attempting to connect on.



After clicking on this wheel, the user has the option of changing this address. This however is not normally required.

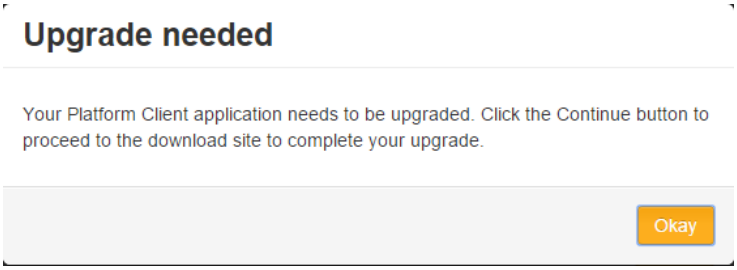
Common Login Errors

Bad Password



When a user has typed in the wrong password into the system, they will receive this error. Remember that passwords are case-sensitive and always remember to check the caps-lock key to insure it is not accidently on.

Upgrade Needed



If the version of the Platform Listener installed on the workstation does not match what is currently installed on the server, the user will receive this message. After pressing the 'Okay' button, the system will bring the user back to the download screen to update the Platform Listener program.

The Admin User

When a Platform System is installed, during the installation process, an administration username and password is selected and installed into the Active Directory. (See Active Directory for more information). This root username is the most powerful user in the system and has no restrictions on permissions or activities across the entire Platform Architecture.

When the Administration user name is installed from the ProMAX Manufacturing Facility, its default is:

Username: Admin
Password: Promax123 (password is case sensitive)

This password must only be changed during installation or with the assistance of the ProMAX Support team. If the password is changed in windows, the Platform Services will stop operating. See contacting support at the end of this document.

Storage Architecture

ProMAX Platform's storage architecture was designed for the ultimate flexibility, speed and scalability. To support these goals, the storage system allows for adding raw storage capacity, or storage groups, into specific Platform Nodes.

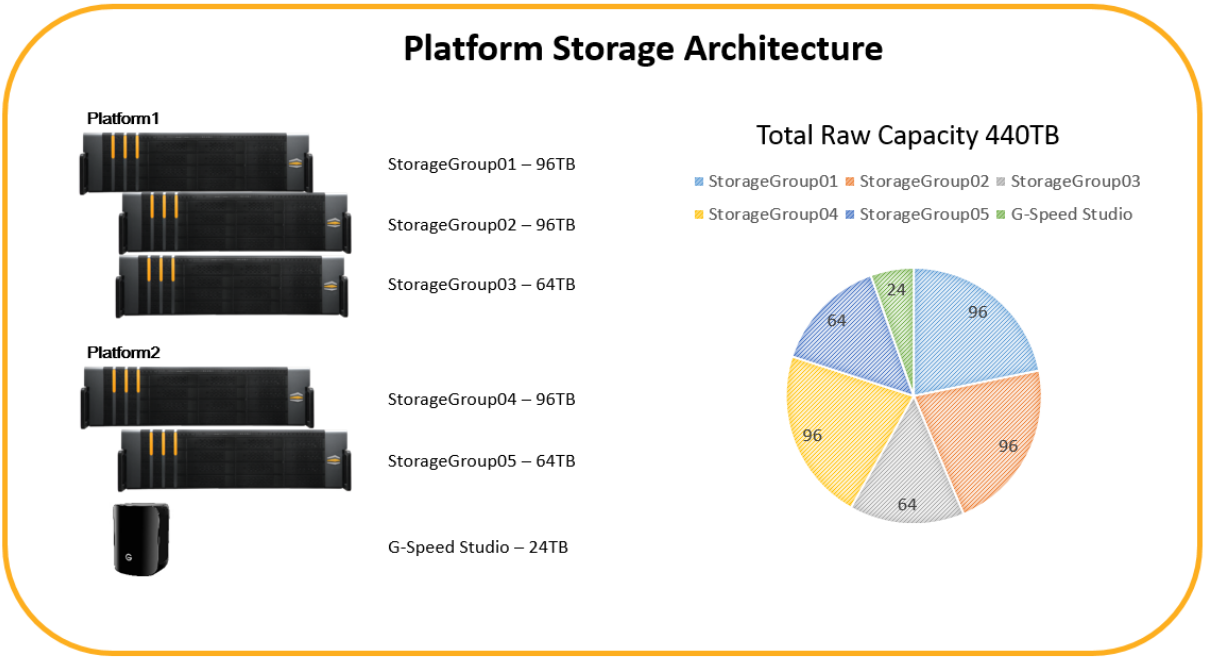


Figure 6 Platform Storage Architecture

Because of Platform's multi-node architecture design, raw storage capacity can continue to grow as users add new storage units to existing nodes or new nodes to the network fabric. In the example above, there are a total of six separate storage units added to the Platform network, totaling 440 terabytes of raw data.

As also referenced above, most Platform Systems allow the connection of 3rd party storage such as G-Technology Thunderbolt RAID system. This ability to add other storage provides the ability to utilize existing storage into the Platform infrastructure.

Within the Platform Interface, all Storage Groups across all Platform nodes can be accessed and managed. See Storage Groups for detailed information.

Platform Spaces

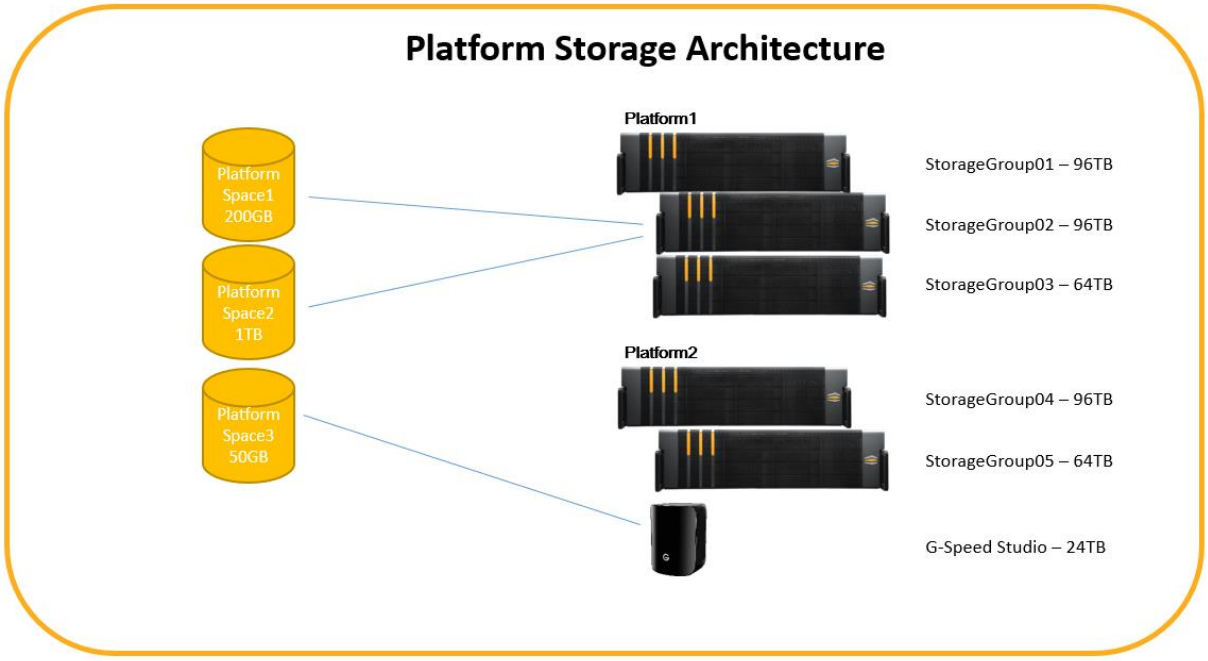
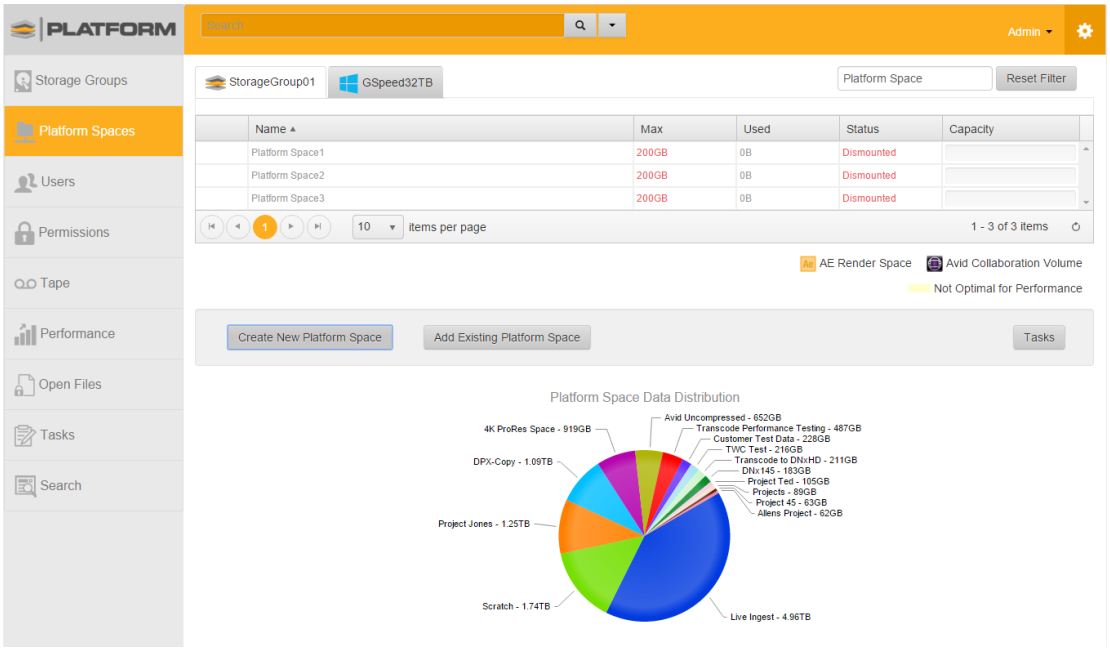


Figure 7 Platform Storage Architecture - Platform Spaces

Secondary to raw Storage Groups, Platform organizes accessible volumes in a concept called a Platform Space. Typically used as "Project Spaces" or buckets of related information, these volumes are carved out of an existing storage group and allow the administrator to grow, shrink and set proprieties on the spaces that perform key functions for the creative user.



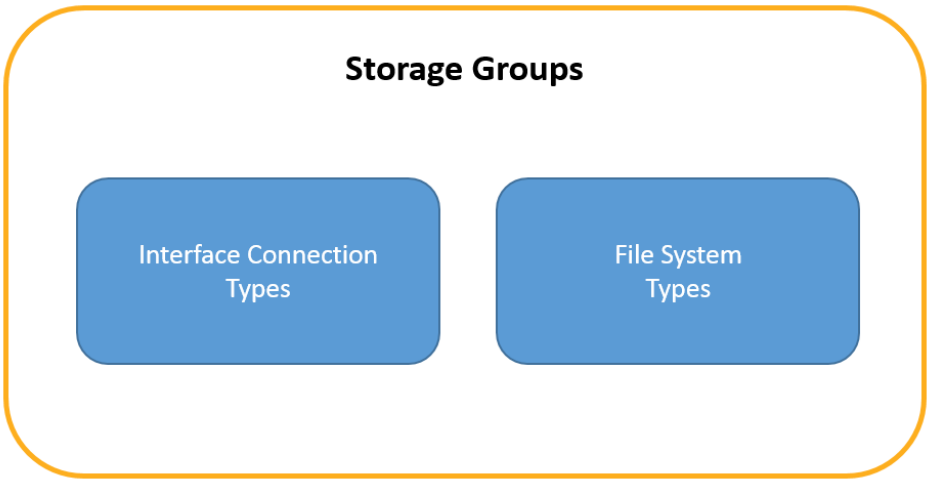
Platform Spaces allow administrators significant flexibility to move logical sets of data between RAID sets (Storage Groups) and across nodes.

Storage Groups

Storage Group Definition

A storage group is best defined as a physical volume of disk storage attached to a Platform Server node. This volume can include RAID volumes, fixed drive systems, removable drive systems and even USB RAM sticks connected to a USB port on a Platform node.

Storage Groups can be further defined by both the interface connection and the File System of the storage.



Storage Group Interface Connection Types

Depending on the model of Platform System, physical disk volumes may be connected to a Platform node many different ways. Examples include:

1. Platform RAID System (disks connected to RAID Controller) both in the main node and to an external expansion chassis through a SAS connection.
2. Thunderbolt Drive system (Both RAID and single disk).
3. Fibre Channel connected storage thru an HBA in the Platform Node.
4. Firewire 800 (IEEE 1394b) drive system.
5. Firewire 400 (IEEE 1394a) drive system.
6. eSata drive system.
7. USB 2.0 drive system.
8. USB 3.0 drive system.

Storage Group File Systems

The file system on a storage group defines the specific format of how files are written to the disk. The native format for the Platform system is Microsoft Windows NTFS®, however other formats are also supported and they include:

1) Platform RAID NTFS
2) NTFS
3) FAT
4) FAT32
5) exFat
6) Apple HFS®
7) Apple HFS Plus®

Each file system can have different properties and features that are supported from workstations connected to the Platform.

	Platform RAID NTFS	**NTFS**	**FAT**	**FAT32**	**exFat**	**Apple HFS or HFS+**	
Support Volume Limits	Yes	Yes	No	No	No	No	
AVID® Project Sharing	Yes	Yes	No	No	No	No	
2GB Single File Limit	No	No	OK-PC	OK-PC			
Optimized for performance	Yes	Yes	No	No	No	No	
Allow Permissions Reset	Yes	Yes	Yes	Yes	No	No	

Table 1 Storage Group File System Limitations

Storage Group Screen

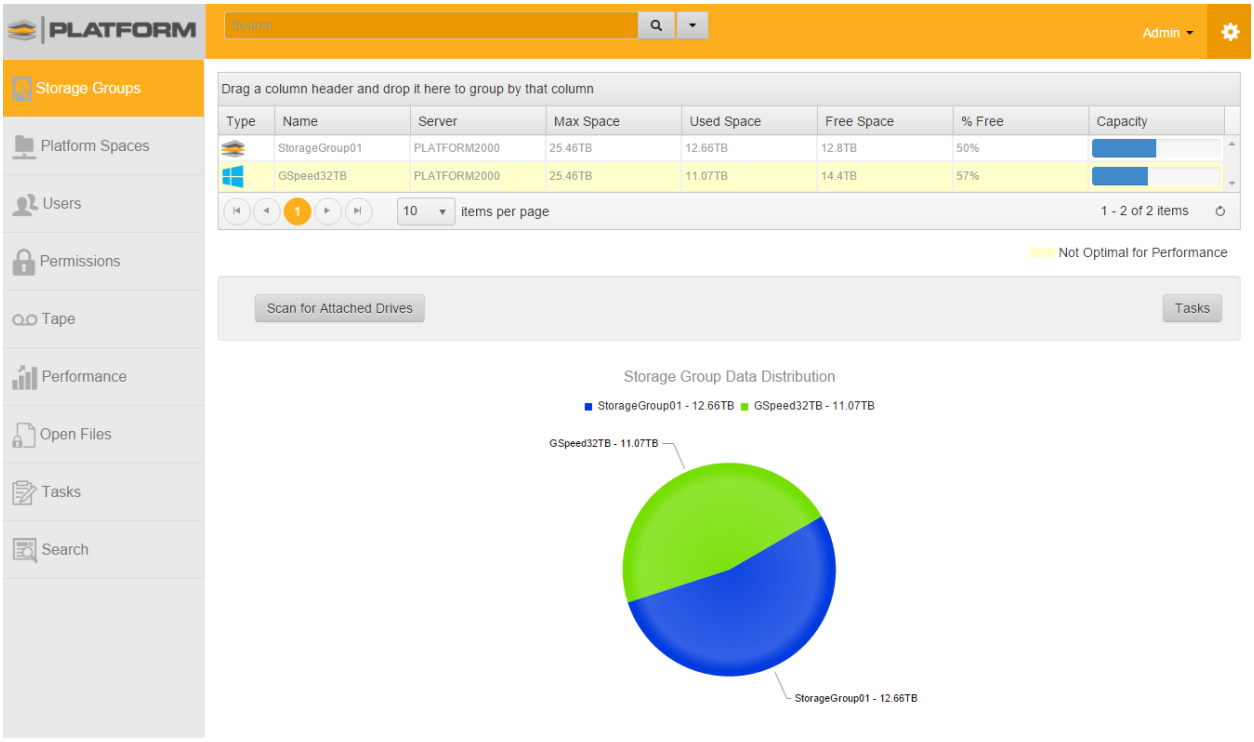


Figure 8 Storage Group Screen

The storage group information grid shows key information about each storage group connected to the Platform Network:

Type: This icon represents the file system of the particular storage group and has the following options:

 ProMAX Platform Storage Group. This type of storage has special properties and capabilities in the Platform Network.

 Represents a Microsoft Windows® type of storage group type. This includes NTFS, FAT, FAT32. To see further details, right click on the storage group and select Properties.

 This icon represents an Apple HFS® or Apple HFS Plus® Storage Group.

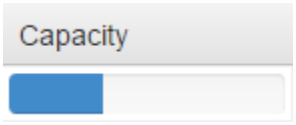
Name: The Storage Group name is listed.
Server: This column shows what Platform Server Node the Storage Group is connected to. Storage Groups can be connected on any node in the Platform Network.

Max Space: Typically Listed in Terabytes or Gigabytes, this column represents the total capacity of the Storage Group.

Used Space: Shows the total amount of space used on the Storage Group. This includes all of the Platform Spaces on the Storage Group but also contains all of the space used from files or other folders on the Storage Group that are not current Platform Spaces. See Removing Platform Spaces.

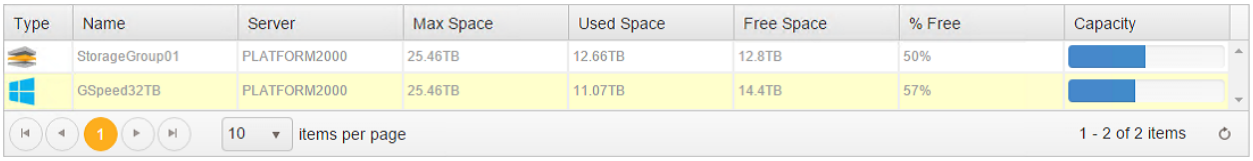
Free Space: A simple calculation of the Total Capacity less the Used Space.

% Free: A percentage calculation of the total space available compared to the maximum capacity of the Storage Group.



The Capacity graph is a visual representation of the total space, how much is used and how much is remaining.

Storage Group Color Legend



It is possible for the background color of each Storage Group row to be highlighted in different color. These colors represent different meanings and show in the legend below the Storage Group grid.

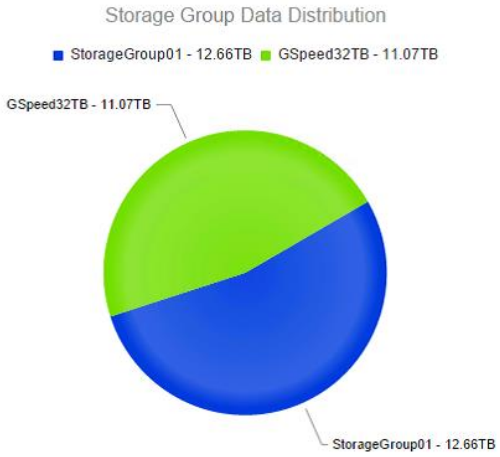
No Color – This is a standard Platform Storage group with no issues listed.

Not Optimal for Performance – The Storage group is online and working, however, it may or may not support the streaming speeds required for video editing or production.

Degraded – This Platform Storage Group has a problem with the RAID and is not performing optimally. This could be caused by a drive failure in a RAID set or another problem. This color will also show as the background color of all of the Platform Space on the Storage Group to notify the operator of the problem. If a degraded Storage Group is shown, please contact ProMAX Support as soon as possible to resolve the problem. ***This could indicate an imminent data loss condition.***

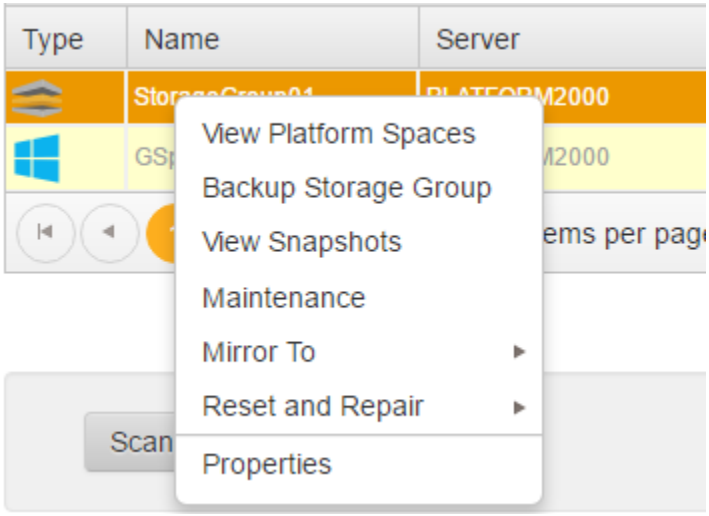
If a Storage Group is in a Degraded State, the physical server may emit a loud repetitive beeping noise. This noise can be muted by right clicking on the Storage Group line and choosing 'Mute Buzzer'. Please contact ProMAX Support as soon as possible to help rebuilding the RAID system to prevent data loss.

Storage Group Space Chart



Listed at the bottom of the Storage Group screen, this chart shows the total ***used*** space across all of the storage groups throughout all of your Platform Network. This will include storage groups on other nodes in your network.

Right-Click Options for a Storage Group



When selecting a Storage Group and right-clicking on it, the interface will present the operator with a number of options. These options allow the administrator to perform operations on the entire storage group.

View Platform Spaces

This option, which is the default if you double-click on a Storage Group, will redirect to the Platform Spaces screen and list all of the Platform Spaces on that storage group.

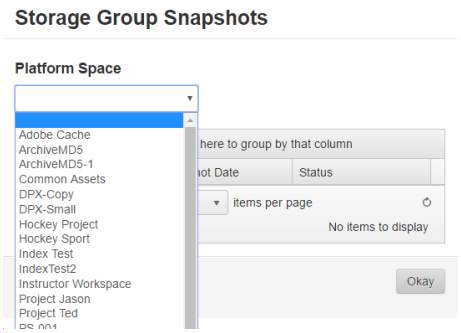
Backup Storage Group

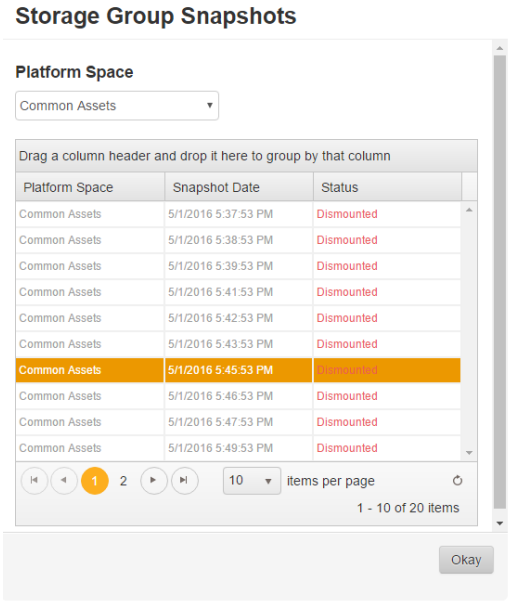
Utilizing the built-in LTO tape sub-system of Platform, the Backup Storage Group option allows the user to copy data from the Storage Group to tape. The operator has the option of running these backups as Full or Incremental. See the details of running Backups in the Tape section of this manual.

View Snapshots

Snapshots allow administrators to set up Time Machine® like versions of information on the Storage Group. See the Storage Group Properties section below to enable Snapshots. As noted below, Snapshots can only be enabled on true Platform Storage Groups, not additional 3rd party attached storage.

The View snapshot option allows the operator to open a window to view Snapshots of particular Platform Spaces. The operator will first choose a Platform Space to see all of the snapshots for that Platform Space.





After selecting a Platform Space, the operator will be presented with a list of Snapshots for that Space.

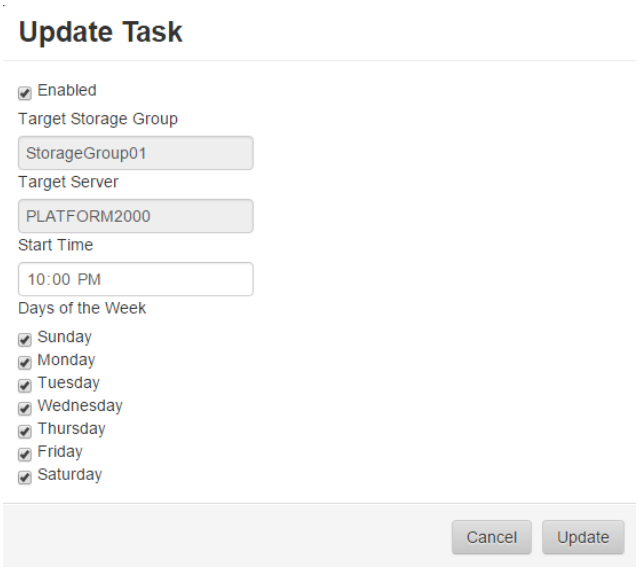
By clicking on the 'Dismounted' URL, the operator can mount the Platform Space as it was when the snapshot was taken. The workstation will open a simple file browser (Apple Finder or Windows Explorer) and show the Platform Space as it was previously. This allows an operator to recover accidently deleted files or restore files of a previous modified version.

Maintenance

Storage Group maintenance performs a series of optimization tasks on a storage group to insure its best performance for video streaming. When this maintenance process is run frequently, it will only take a few minutes even for very large (64TB – 96TB) groups. However, if it is many days, weeks or months between maintenance operations, the process can take hours or even days. Therefore, it is best to schedule maintenance for a daily operation.

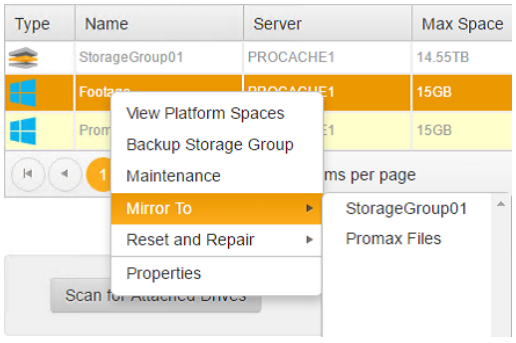
Users can be using the Platform System when the maintenance task is run and it will not affect their ability to perform operations. However, as a rule of thumb, Storage Group Maintenance can impose a 30-50% penalty on system storage performance for that particular group.

Storage Group maintenance by default is set to run nightly at 10:00 PM. However, this schedule can be changed by the administrator by right-clicking on the Storage Group and selecting the start time and day(s) of the week. The administrator can also turn off maintenance by de-selecting the 'Enabled' checkbox.



Once the maintenance task is scheduled, it is listed in the Task screen under 'Maintenance' operations. Please see the Task Screen for more details on how to see the results of maintenance per storage group.

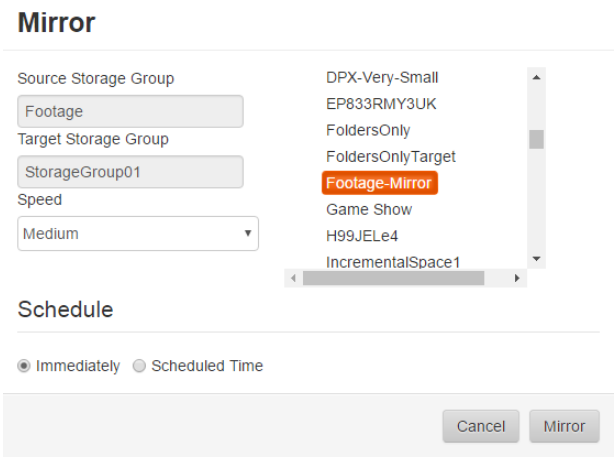
Mirror To



The Mirror command provides the ability to create a continuous backup of one storage group to another storage group or Platform Space within a Storage Group. Mirror operations check the source Storage Group every 60 seconds for changes. When changes are encountered, the updated files will be copied to the Destination Storage Group.

To set up a Storage Group Mirror, the administrator will right-click on the Storage Group and select 'Mirror To'. The menu system will then display a list of Destination Storage Groups that can be selected.

After selecting a destination Storage Group, the administrator has the option of selecting the root of the Storage Group or a Platform Space within that Storage Group.

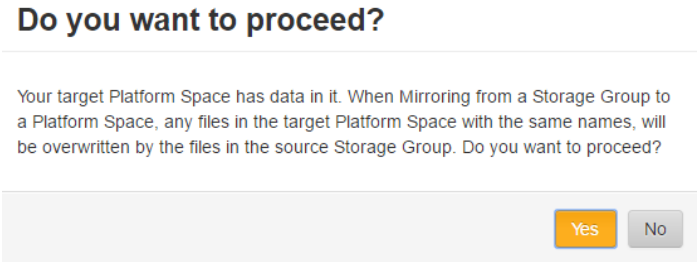


By clicking on the 'Mirror' button the system will then submit a task to the task service that will start the mirror copy. The Mirror copy task will run indefinitely until it is stopped by an administrator.

Speed – The Speed option allows the operator to choose from Slow, Medium or Fast depending on how much storage bandwidth the user wishes to use. Generally, slow will use 25% capacity, Medium (the default) will use 50% and Fast will attempt to use 100% of the possible storage system speed.

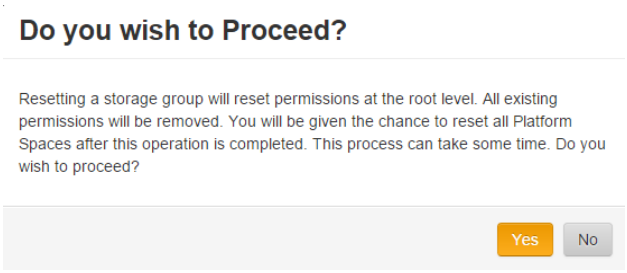
Schedule - The scheduling of a task can be done immediately or for a future date. This is the time the mirror will begin copying for the first time. See task scheduling options for more details.

Note: The destination of a Storage Group Mirror will have all data overwritten or erased. Please be careful to insure that the destination location selected is correct before proceeding.

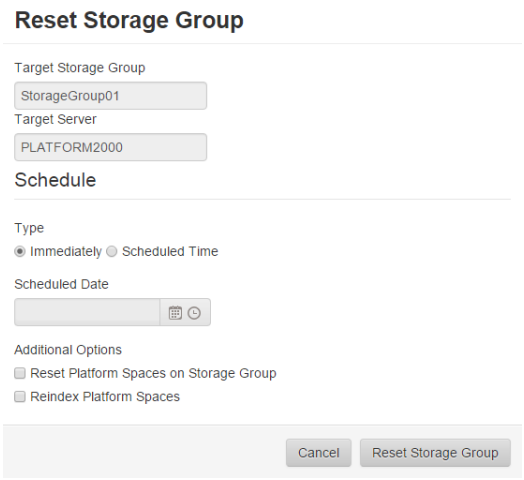


Reset Storage Group

This option is used to reset the security permission on a Storage Group. This is an option that is not normally used in daily operations of the Platform it has the effect of "Stripping Permissions" on the Storage Group back to the default. After selecting this option, the system will bring up a question confirming that the operator wishes to proceed:



This procedure should only be used when the administrator wants to clean out all the permissions on a particular storage group and start over. If the operator answers yes, the system will bring up a window allowing the operator to schedule the Storage Group Reset.



This window has the option to start the process immediately or to schedule it at a future time. There are also two additional options that can be used:

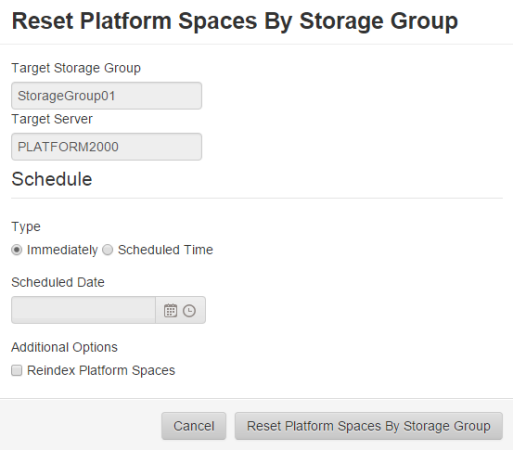
Reset Platform Spaces on a Storage Group – This has the effect of running a Platform Space Reset (see below) on every Platform Space that is stored on the Storage Group. This feature is particularly valuable when resetting a storage group. If you do not choose this feature, then any user that previously had access to Platform Spaces on this Storage Group will no longer have access to their volumes until the Platform Spaces have been reset.

Reindex Platform Spaces – This option will perform an asset management re-index of all the data within Platform Spaces that have been set to be indexed.

After the operator has clicked the 'Reset Storage Group' button, the system will schedule the reset into the task system and it can be monitored from that screen.

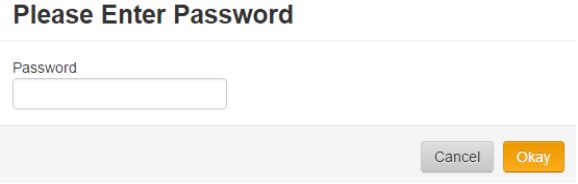
Reset Platform Spaces by Storage Group

This has the effect of running a Platform Space Reset (see below) on every Platform Space that is stored on the Storage Group. Once the operator clicks on the option, a scheduling window will appear allowing the operator to choose to run it immediately or schedule the reset for a future time. The operator will also have the option of Re-indexing all the Platform Spaces on the storage group.

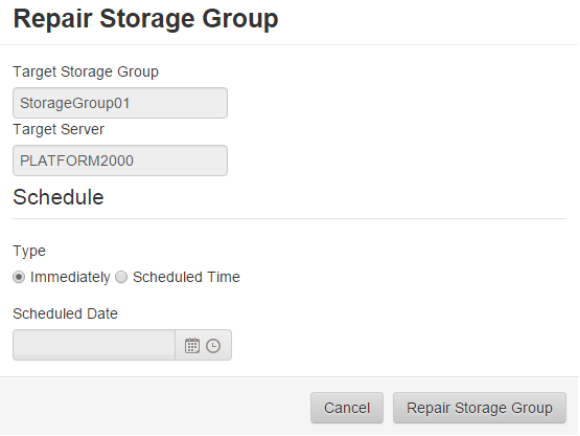


Repair Storage Group

This option should only be used if you suspect file corruption or index corruption on the storage group. The option has the effect of running a windows repair-volume (chkdsk) on the specified storage group. The system brings up a dialog screen and requires the operator to enter the administrator password. This is the password of the Admin user on the Platform.



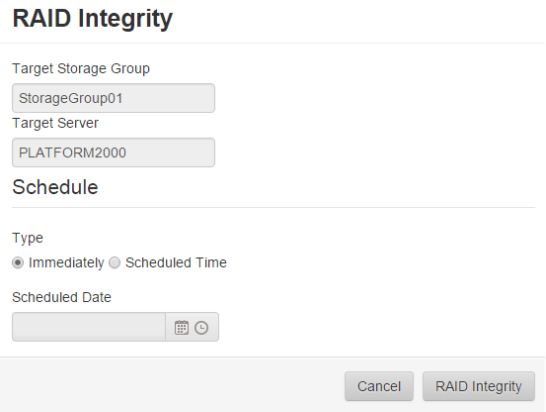
After the validation is complete, the system will allow the operator to schedule the repair immediately, or for a future time specified.



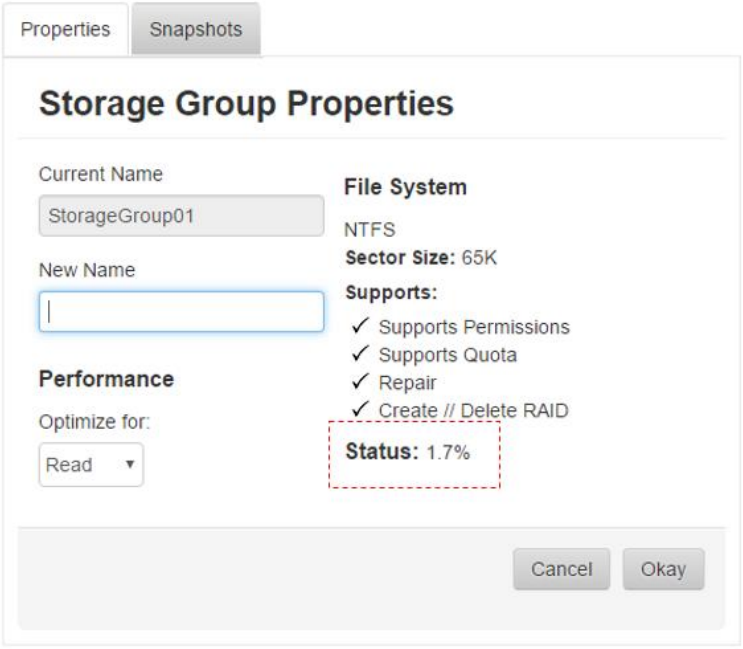
Please note: After a repair operation starts, all Platform Spaces on the Storage group will be taken offline until the repair operation is completed. This could have the effect of causing users to lose data on files that are currently open. Do not perform a Repair Storage until all users have logged off of the system. You can validate the all files are closed by checking the Open Files Screen.

Start RAID Integrity

The RAID Integrity option is used to check the file system at the level of the RAID structure. It is not normally used or necessary in daily operations. The RAID integrity check is started within the RAID controller software and can run for many hours. This option can be scheduled to run immediately or at a future time and date as desired.



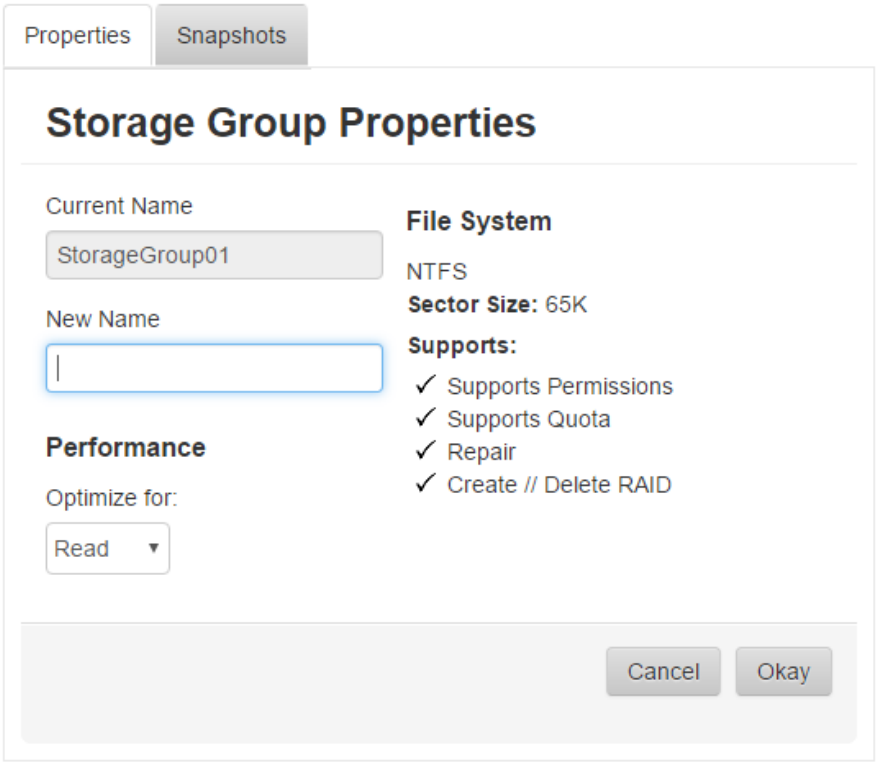
Once it is scheduled, the operator can monitor the percentage complete by clicking on the Storage Group Properties options.



If issues with the RAID structure are found, the system will automatically attempt to repair them. Users can continue to use the system while RAID Integrity is running. Normally it will not significantly impact the performance of the Storage Group while it is running.

Properties

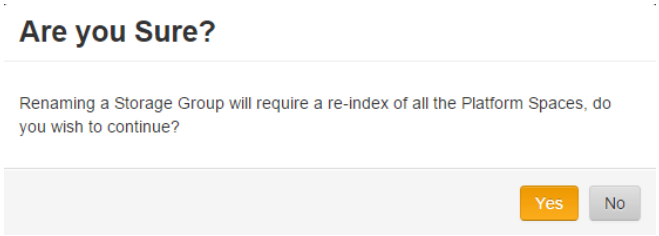
When selecting Storage Group Properties option, the system brings up the Storage Group Properties window and displays key information about the Storage Group. Based on the type of Storage Group, not all information is available.



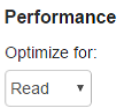
The first tab, listed as properties, shows the basic information about the Storage Group including the File System type and sector size. The system also shows key information about some of the functions supported by this storage group type.

Rename Storage Group: This screen also shows the Current Name of the Storage Group and allows the Administrator to Rename the Group by typing in a new name. After the new name is entered, the operator will press the Okay button to rename the group.

Considerations for Renaming a Storage Group: It is critical to note, that when a Storage Group is renamed, the asset management database for all entries in that storage group will become invalid and all Platform Spaces on the Storage Group must be re-indexed.



If the operator answers Yes to this question, the system will proceed with renaming the storage group and it will start a task in the task system to re-index all Platform Spaces on the Storage group. It is critical to note, that any Platform Spaces that have been Removed from the Storage Group will not be included in the re-index process.



Performance: The Performance option only appears on native Platform Storage Groups and allows the Administrator to change the performance characteristics of the Storage Group. The options include:
Read: Favors streaming read performance. This is the default and is the best for standard video editing and streaming environments.

Write: Favors ingest or multiple update performance. Best for users with significant ingest requirements (loading data onto the Storage Group).

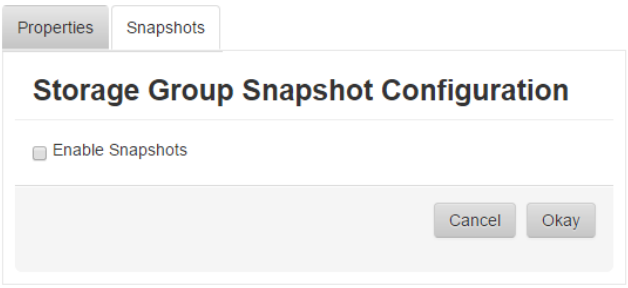
Mixed: Supports a combination of reads and writes. Best for environments when users will typically be doing both reading and writing to the disk system at the same time.

Storage Group Snapshots

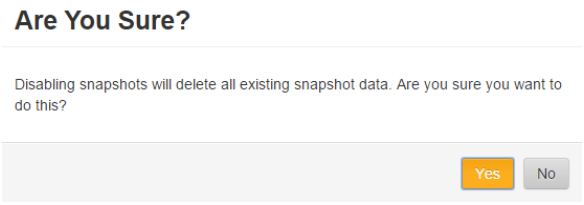
Snapshots allow administrators to set up Time Machine® like versions of information on the Storage Group. This feature will cause the system to take "snapshots" or moments in time of the storage system. These are stored on the Storage Group itself and the information is available later by mounting the Platform Spaces within the snapshots.

Snapshots are only available on Native Platform Storage Groups.

Enabling Snapshots

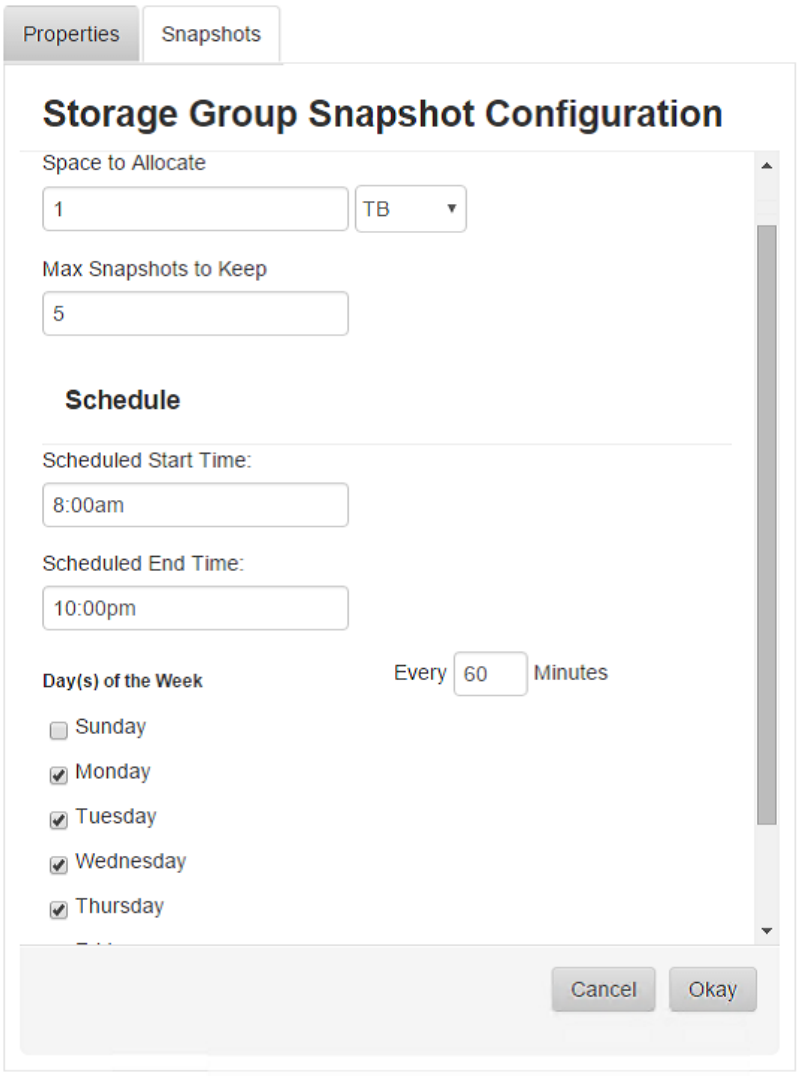


By clicking on the Snapshots tab in the Properties screen, the Administrator can enable or disable Snapshots on the Storage Group. The 'Enable Snapshots' checkbox, when checked, will open configuration options for the administrator to configure snapshots.



If snapshots are enabled, and the administrator deselects the checkbox, the system will ask the administrator to validate the selection. If they answer yes to this question, the system will remove all data associated with existing snapshots.

Configuring Snapshots



The administrator will configure the snapshots for the Storage Group by selecting the following:

Space to Allocate: This indicates the total space on the Storage Group to use for the storage of the snapshots. Snapshot histories are very efficient and the system only copies 'changes' with each snapshot so you do not need to allocate a huge amount of space if there is minimal data change on the Storage Group.

Max Snapshots to Keep: This indicates the number of 'versions' or snapshots to be taken before prior snapshot versions are deleted. If you select 5, as in the example, upon the 6th snapshot, the Platform will automatically delete the 1st.

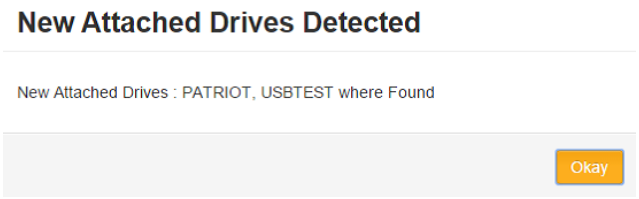
Schedule: The administrator has the option of setting a start and end time or the "window" when snapshots will be taken. Included in this is the days of the week. The last parameter is how long in between snapshots. The example above shows that the system will take a snapshot every hour, however, you can set this to perhaps 1,439 minutes (60*24) and the system will take only one snapshot per day.

Connecting a New Storage Group

Most storage groups can be connected to the Platform without powering down the unit. SAS or Fibre channel units are the exception and when connecting this type of storage, a power down before connecting is strongly recommended. However, USB, Firewire, eSata, and Thunderbolt can be connected while the Platform is operating.

When a new storage group is connected to the system, if the system has permissions to the drive, the Platform will automatically bring the device online. The new storage group will automatically show up in the storage group screen. This polling process occurs every 5 minutes.

The Administrator also has the option of clicking on the Scan for Attached Drives button. This function will force the system to go out and look for new storage groups immediately and bring them online. After pressing the scan button and when a new Storage Group is found, the Administrator will receive a dialog box describing the results.



Considerations when attaching new Storage

When connecting Thunderbolt Storage to the Platform, you will need to ensure that the Platform System has the appropriate Windows Driver for the Thunderbolt Device you are connecting. Many Thunderbolt drivers are pre-loaded onto the system. However, not all manufacturer devices have been pre-set or configured.

Once you have connected your device to the Platform, if it does not show up in the Platform interface after performing a 'Scan for Attached Drives', you will need to login to the Platform Server Console and check the drivers for the device you are attaching. If you are unfamiliar with loading drivers into a Windows System, please contact the ProMAX Support Team for assistance.

The First Time a Storage Group is Attached

The first time a Storage Group is connected to the system, if the storage group uses a permissions system, you will need to run a Storage Group Reset which is found in the right-click menu of each storage group. This is also true if you reinstall the Platform software or move a storage group to a Platform Server on a different domain.

Offline a Storage Group

When a Storage Group is removed from the system, all files and data from that Storage Group are no longer available to operators using the system. Although because of the integrated catalog and asset management system, if Platform Spaces on the Storage Group were indexed before the Storage Group was taken offline, operators can still perform searches on files on that storage group.

Platform Spaces

Platform Spaces are one of the most fundamental concepts in the Platform workflow system and are used to separate and organize groups of files and folders. Platform Spaces are placed on a particular Storage Group and are accessed via a mount point on a client workstation.

Platform Spaces are also sometimes known as "Project Spaces". This moniker demonstrates the primary use of the Platform Space which is to separate like content into sizable chunks that can be used, consumed and later archived.

Platform Space Features

Platform Spaces have many feature capabilities that create flexibility and powerful workflows for media professionals. The table below lists these features and their description. This section of the manual will describe how to enable and use them within the Platform System.

Platform Space Feature	**Description**
Volume Size Limit	The administrator of the Platform Space can establish the total space that can be used for the Platform Space. Users of the space will be limited to the size set.
Allow Auto Mount	Should the Platform Space automatically mount when the user logs into the Platform Interface? On Windows, the user can select a fixed drive letter to mount. This option is set on a per user basis.
Include in Search	If selected, the contents of this Platform Space be automatically included in the asset management database. This includes maintaining changes as files and folders are updated.
Generate Proxies	If selected, the Platform System will automatically generate proxies for files that are included in this Platform Space. The administrator also has the option of selecting specific folders only.
Avid Collaboration Volume	When selected, this option causes the Platform Space to be mounted just like an Avid ISIS® volume and will cause Media Composer® to allow multiple users to edit in the same project simultaneously.
AE Render Space	This option causes the system to look for After Effect render jobs saved to the Platform Space. When a new render is saved to the space, the system will submit the job to the AE renderer on the Server for processing.

Platform Space Feature	**Description**
Mirror	This function allows the Platform space to participate as a source or destination mirror for immediate replication backup of information.
Replication	This function allows the Platform space to participate as a source or destination of a two-way replication process across multiple nodes of the Platform Network.
Metadata	Custom metadata can be automatically added to contents of the Platform Space. This can be applied to existing files or just new files added to the space.
Transcoding	This Platform Space can transcode video source into different formats based on the options set in the Transcoding Tab.

Table 2 Platform Space Features

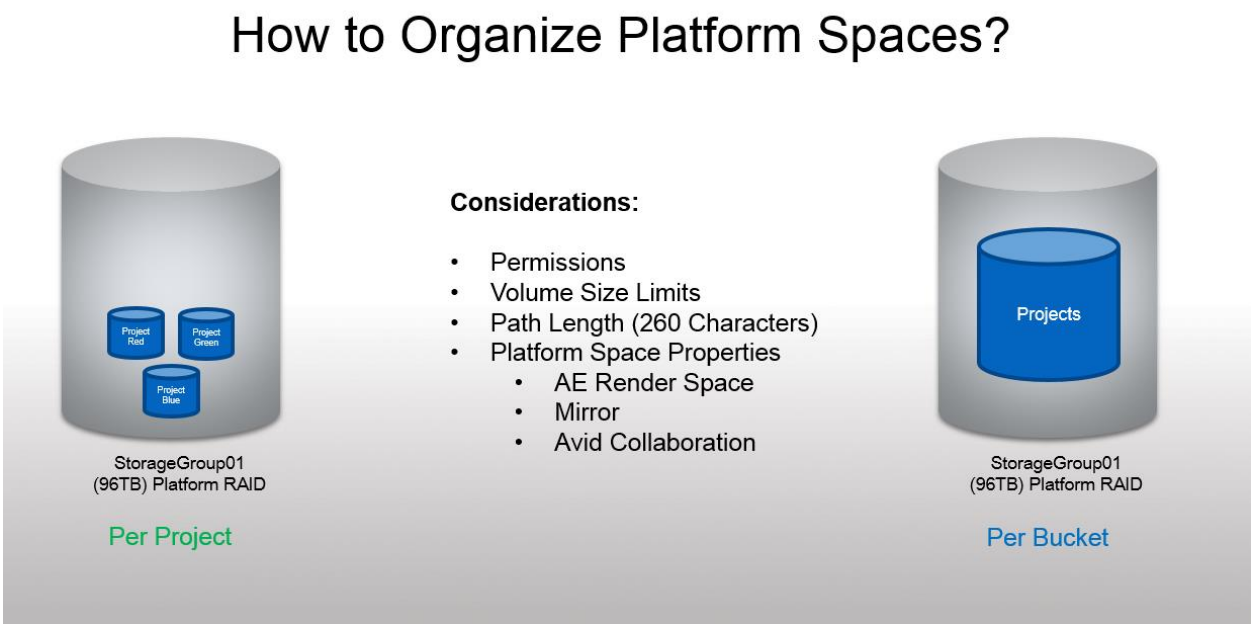


Figure 9 How to Organize Platform Spaces

When setting up the Platform System, the Administrator should determine how the organization will use Platform Spaces to organize the media they will work on. One method is to establish Platform Spaces per Project, i.e. “Project Spaces”. The other method is to create larger “Buckets” of information and for example put all projects in one Platform Space. There are pro’s and con’s to each approach.

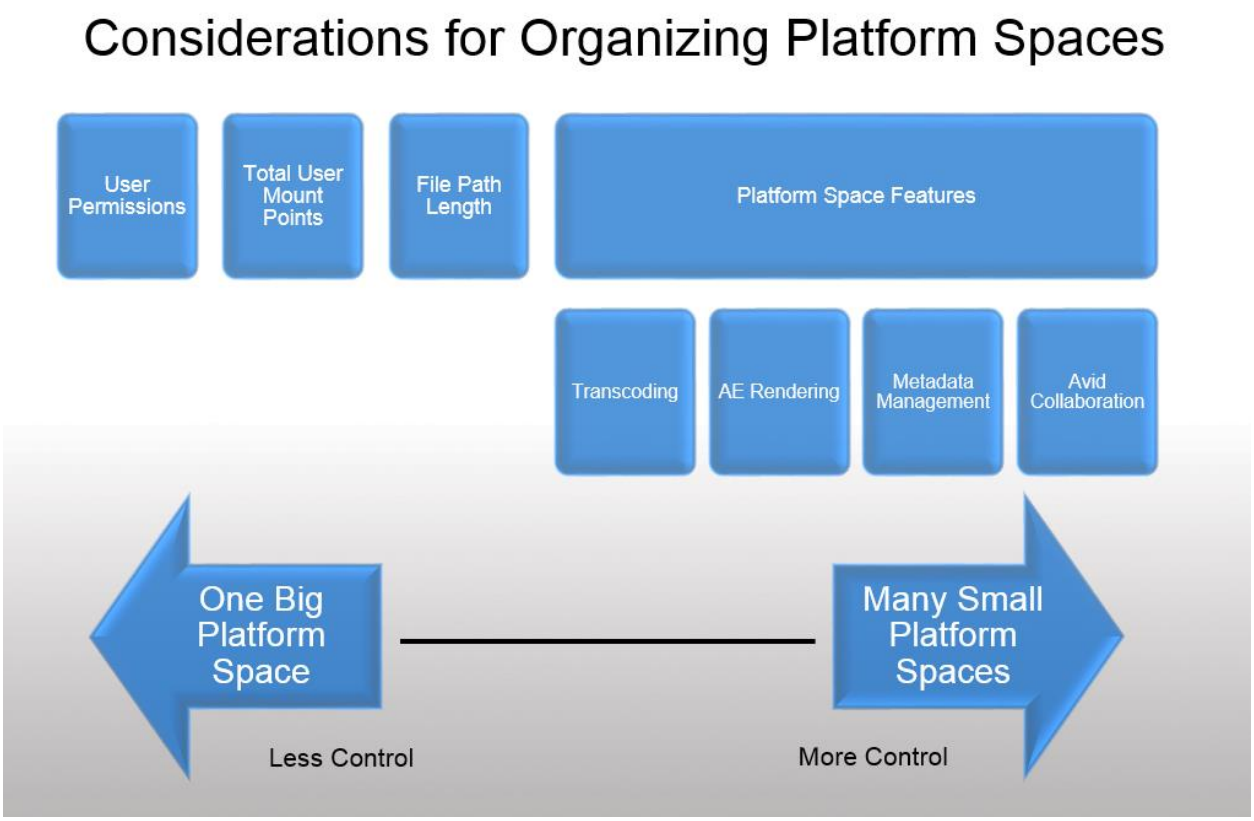


Figure 10 Considerations for Organizing Platform Spaces

Generally, the less Platform Spaces the less control the user has over certain capabilities of the system. These include User Permissions, and Platform Space Features. An example is if the administrator sets up *one* Platform Space, they can only create *one* set of user permissions to that Platform Space. Because any user using the system would need access to the Space, all users would effectively have Read/Modify access to the Space. This approach severely limits the flexibility of the system.

However, the more Platform Spaces defined, the more user mount points that exist and that could be open by users at the same time. This can possibly create confusion for users when they have too many mount points. Many users prefer a single mount point because they can have access to all of the data on the storage system at the same time. This is sometimes in conflict with the administrator's goal of keep data safe and controlling security of the content.

One of the largest considerations is to make sure that the total path length, including all of the directories in the file path, does not exceed 260 characters. If it does, the Platform cannot store files in paths beyond that size.

Platform Spaces Screen

The Platform Spaces screen is the default screen that appears when a user logs into the Platform System and is the typical focal point to access information from the Platform.

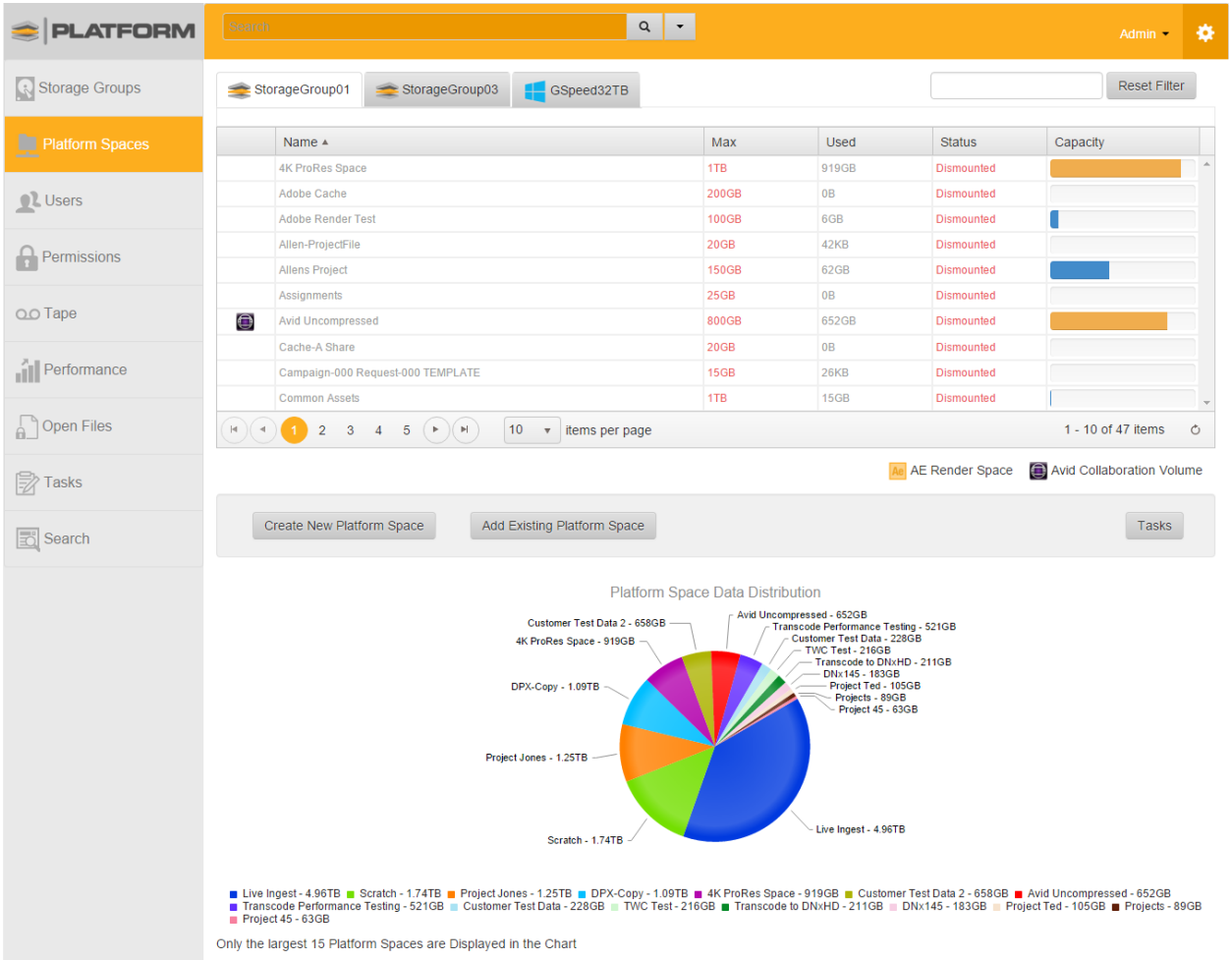


Figure 11 - Platform Spaces Screen with Storage Groups

There are two possible views for the Platform Spaces screen. The first as demonstrated above in Figure 11, shows the screen when a user has feature permissions to the Storage Group screen. In this view, the system will separate and list Platform Spaces associated with each Individual Storage Group. This is the default view for the System Administrator and provides the ability to easily create new Platform Spaces and place them on a particular storage group.

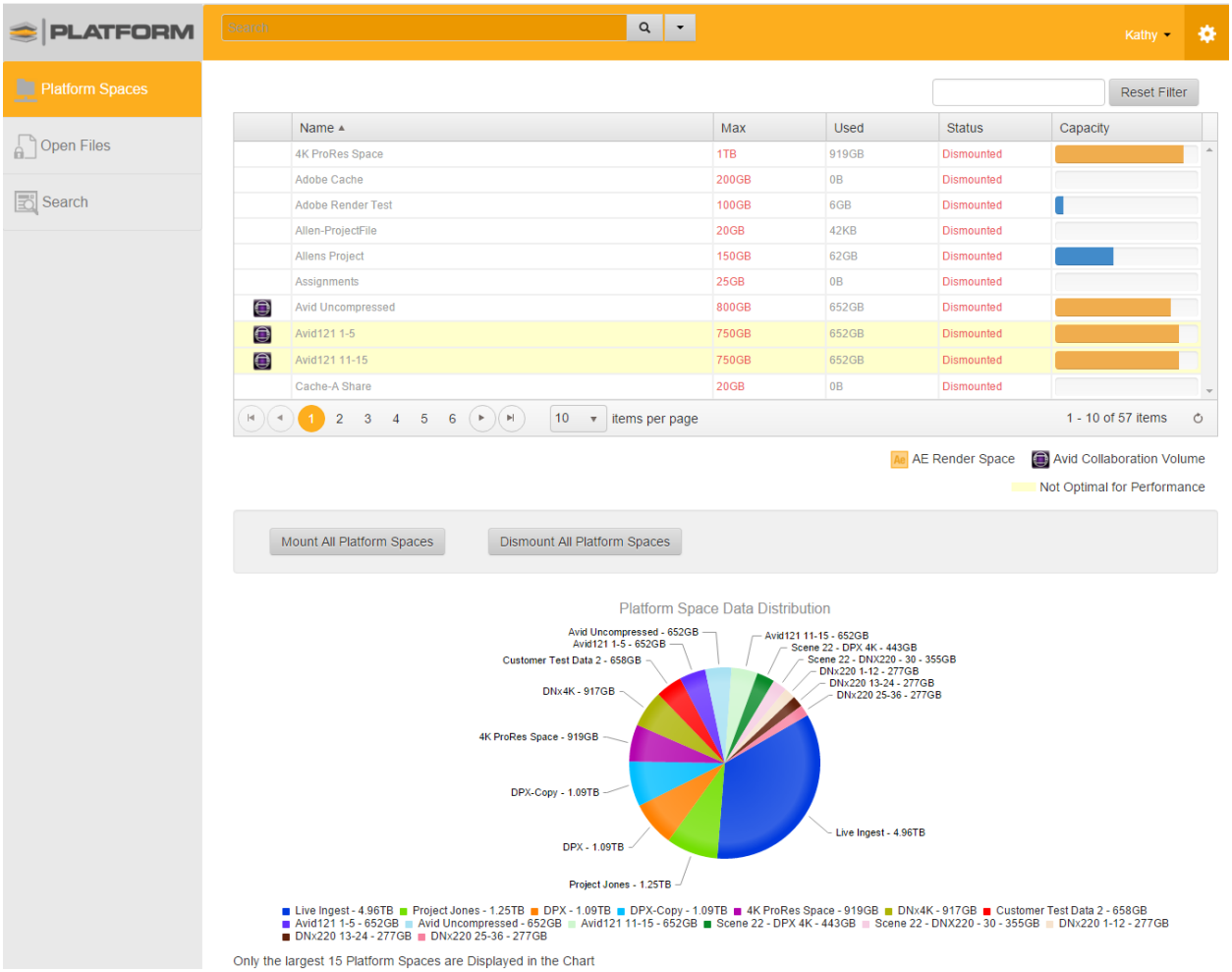


Figure 12 - Platform Spaces Screen without Storage Groups

The second view (Figure 12 – Platform Spaces Screen without Storage Groups) lists all Platform Spaces when a user does not have Feature Permissions access to the Storage Group screen. This view provides a simplified version allowing users to just see Platform Spaces.

Storage Group Tabs

When logged into the system with a user name that has feature permission access to the Storage Group Screen, tabs representing the currently attached Storage Groups will appear at the top of the Platform Space Information Grid. These tabs automatically separate Platform Spaces that are attached to the storage group. By clicking on the tab, the operator will see the Platform Spaces for each Storage Group.

Platform Space Filter

If there are more than 10 Platform Spaces listed for the logged in user, the system will present a

Platform Space filter box in the upper right hand corner of the screen. This filter can be used to pare down the list of Platform Spaces that are displayed. This feature is valuable when users have multiple-pages of Platform Spaces to easily find one or more by a common name. For instance, if you label all of your project spaces with 'Project' that can be typed into the Filter and the System will just display Platform Spaces with Project in the name. This filter also remains in place when the operator moves away from the Platform Spaces screen and then comes back.

Platform Space Information Grid

Users that have been given feature permissions to the Platform Spaces screen will see one line in the grid for each Platform Space that they have at least read access to. If a user has not been given any access to a Platform Space, it will not show in the grid. This approach allows administrators to give specific content access to specific users.

The Platform Spaces grid is an 'auto-refresh' grid. This means the system will automatically update the grid with information every X seconds as defined in the Administration screens under Platform Spaces.

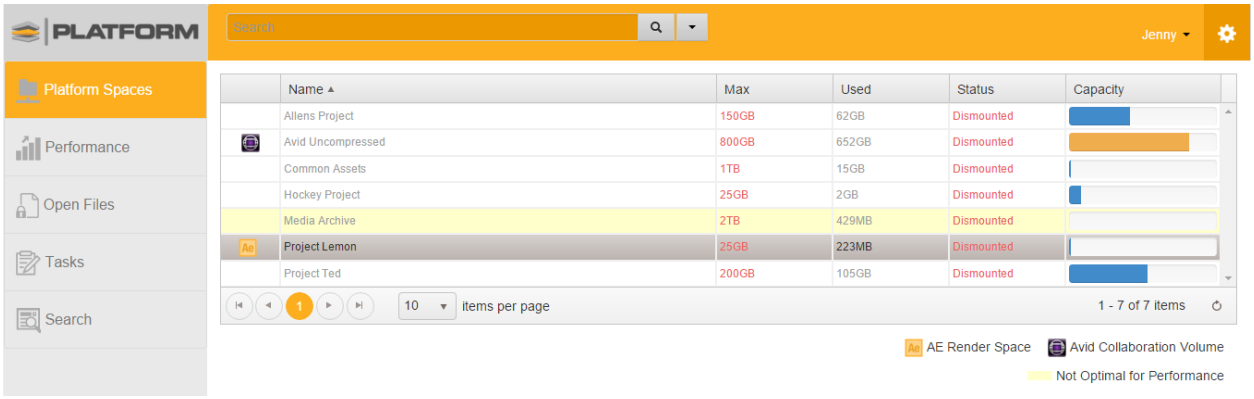


Figure 13 Platform Spaces Grid

Platform Space icon – This icon provides a visual indicator of Platform Space features or current activity within the Platform Space. Options include:

Avid® Collaboration Volume. See details below.

Avid® Collaboration Volume without the Collaboration Option installed on the workstation. When the Platform Listener is installed on a given workstation, the administrator chooses if they wish to install the collaboration software. If they do not install the option, this red line is displayed for Avid® Collaboration Volumes.

After Effects® render Space. When properly enabled, this icon indicates that a Platform Space has been designated an After Effects® render space. Finished projects submitted to the server and saved in this space will be picked up by the Platform and submitted to be rendered on the server.

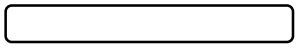
 This animated icon indicates that the system is currently collecting or re-indexing file information into the Platform Catalog database.

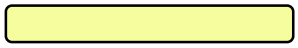
 This icon indicates that proxies or a transcoding operation is being performed on videos in the Platform Space. If the operator right-click's on the Platform Space and chooses Properties, they can see the number of files being transcoded and the total duration of those files.

 This Platform Space is a mirror of another Platform Space. See Platform Space Mirrors below for detailed information on mirror functionality.

 Representing an active copy or move operation, this icon tells the operator that data within a Platform Space, or the entire Platform Space is currently part of a task. The operator can look further at status in the Task Screen or the Performance Screen.

Platform Space Background Color – The background color of the Platform Space row provides key information to the operator about the volume:

 If the Platform Space background color is white, it means the Space is housed on a Standard Platform RAID Storage Group which can offer the fasters and most reliable performance.

 A light yellow background indicates the Platform Space was created on an external 3rd Party Storage Group and is colored to show the user that it may not be optimized for streaming performance.

 A light Red color indicates one of two possibilities. First, it could mean that the Storage Group has a failed drive in it and therefore the RAID is degraded. This is a serious condition and could result in data loss if it is not addressed. See Storage Group Legend Color for more information about this possibility. Second, it can mean that this Platform Space participates in a Mirror and the mirror set is not yet completely synced. Normally a mirror sync operation will finish over type and the color will turn back to white or yellow depending on the storage group type. If this Space is part of a mirror and the color does not change back over time, check the status of the Mirror Task in the Task Screen.

Platform Space Grid Columns

Name – This is the name of the Platform Space.

Max- The maximum amount of data that can be added to the space. Users will receive a disk is full message if they attempt to add beyond this number.

Used – Indicates that amount of data that is currently in the Platform space. Since the Platform is an active server with potentially many user's activity updating, this information can change as the Platform Space Grid is automatically refreshed.

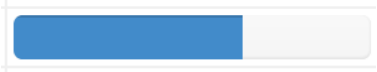
Status – There are four possibilities for the Platform Status column:

Dismounted – Indicating that the Volume is not mounted on the current workstation.

Mounted – The Volume is mounted on the current workstation and the operator may use their OS file browser (Apple Finder® or Windows Explorer®) to push and pull information from the Platform Space.

Dismounting… - The system is currently in the progress of closing the mount point to the server.

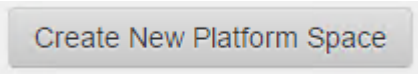
Mounting… - The system is currently attempting to mount the Platform Space to the local workstation.



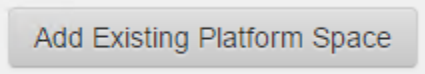
Capacity – a graphical representation of the amount of space used vs. the total space available.

Platform Space Buttons

When logged into the system with Feature Permissions to the Storage Group screen, the system will display the following buttons below the Platform Spaces Grid:

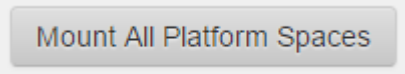


Clicking this button allows the operator to create a new Platform Space on the Storage Group they are position upon. See Create a New Platform Space below.

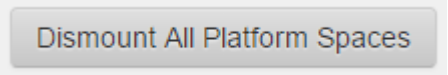


When a user wants to add a Platform Space that already exists on the Storage Group (root folder at the top of a storage group), they can use this button. See Adding an Existing Platform Space below.

When a user is logged into the system without Feature Permission to the Storage Group screen, they will have the following buttons available below the Platform Spaces Grid.



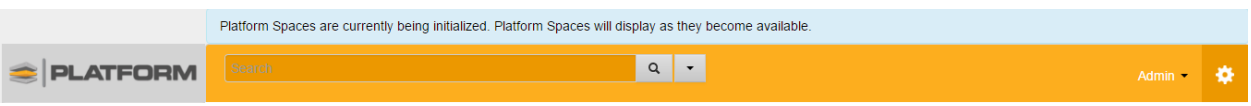
When clicking this button, the Platform client software will begin to mount all of the Platform Spaces available to the client.



The Platform client software will begin to dismount each Platform Space already mounted for the client.

Platform Space Initialization

After the Platform Server first starts up, upon login, the user may receive the message “Platform Spaces are currently being initialized. Platform Spaces will display as they become available”.



This message indicates to the operator that the system is not finished setting up all the Platform Spaces in the system. The operator may proceed to utilize the system; however, they should be aware that not all of their Platform Space volumes will be listed until the message is no longer displayed. It is also important to be aware that any jobs listed in the task service will not start until all Platform Spaces are initialized.

Mounting Platform Spaces

Platform Spaces are mounted on a client workstation and represent a storage mount point on the Platform Server. The mount point provides access from the workstation to the space defined on the Platform server which is located on a specific Platform Storage Group.

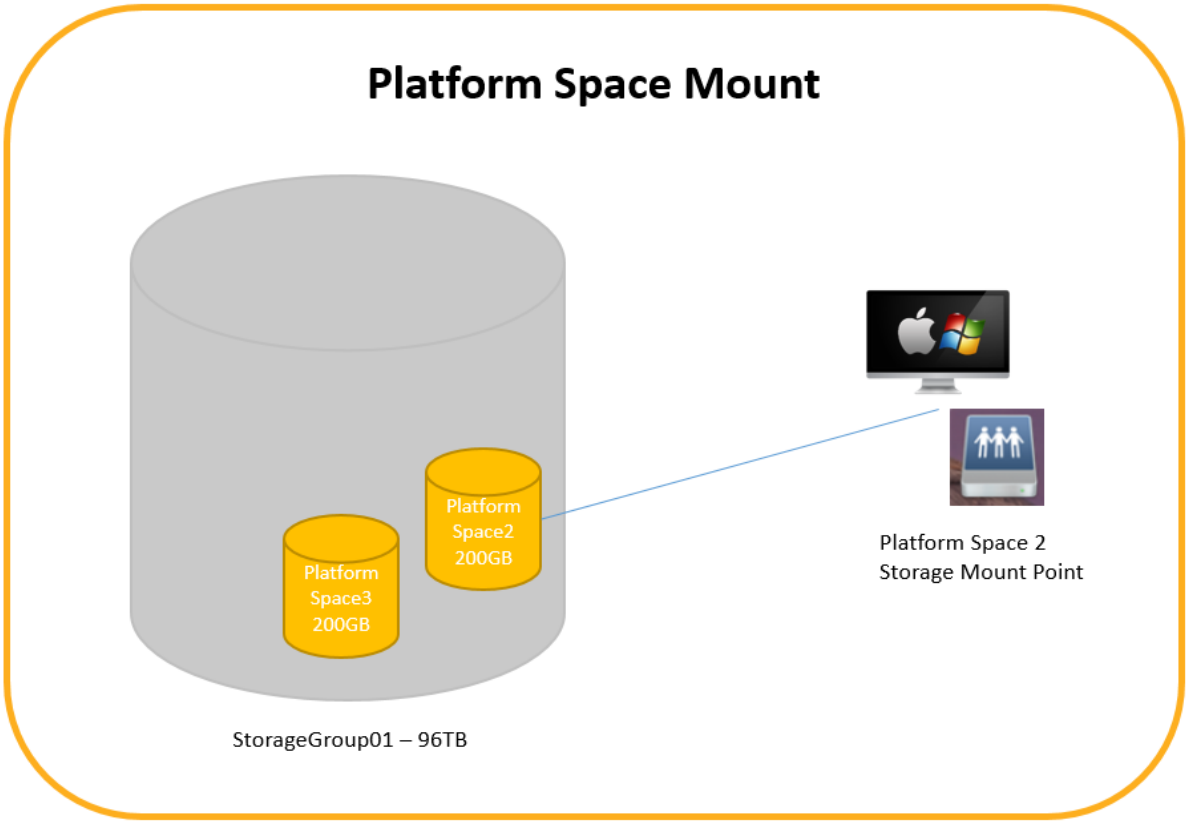
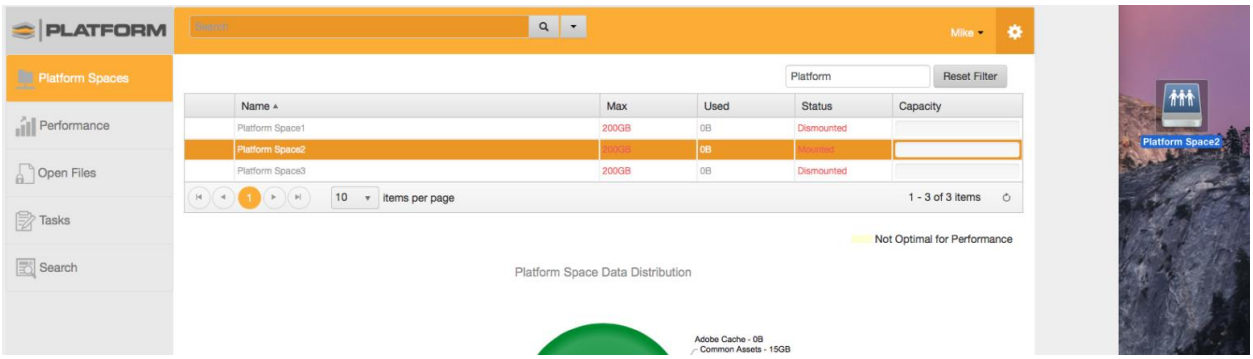


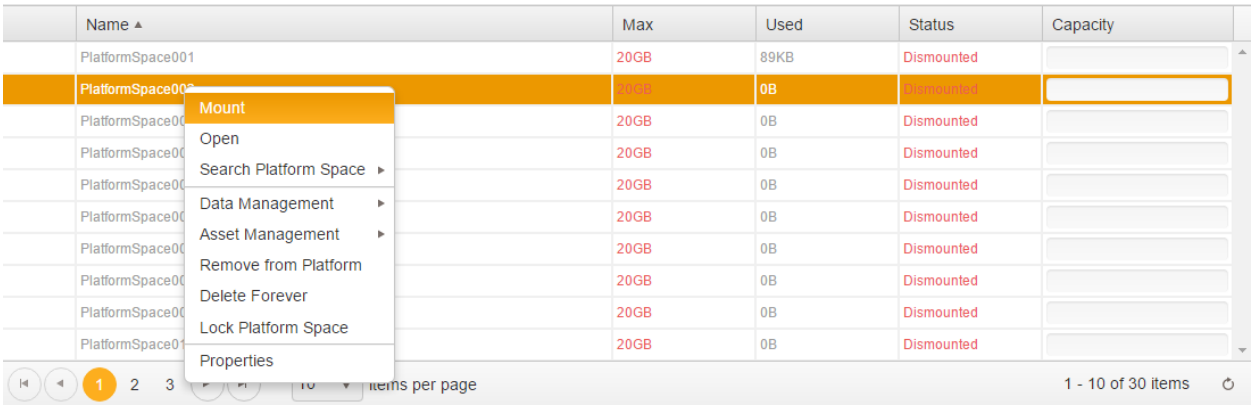
Figure 14 - Platform Space Mount Point

On the workstation, depending on the type of operating system, the mount point will show as remote storage or network storage.



Mounting the Space

Using the Platform web browser, users can mount a Platform Space a number of different ways:



1) Click on the "Dismounted" Status in the Platform Spaces grid.
2) Right Click on the Platform Space and select Mount

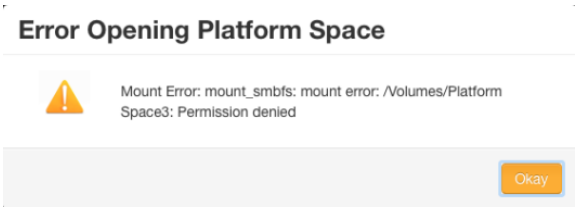
Each of these options will cause the workstation OS to make the connection and create a remote mount point on the Platform Server.

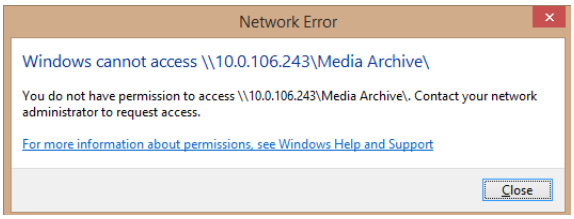
Errors when mounting Platform Spaces

Although unusual, it is possible to receive an error when mounting a Platform Space. If this happens, the operator should check the following conditions that could cause this:

Mounting Errors due to Permission

When mounting a Platform Space, if the permission in the Platform server database is inconsistent with the Platform Server itself, you can receive a permissions error.

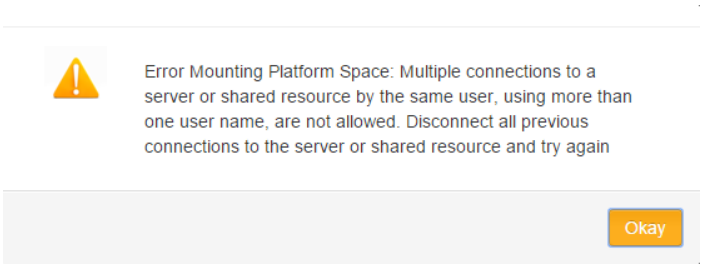




If this occurs, the system administrator should run a Platform Space Reset to update permissions on the Platform Space in question.

Multiple Connections with Different Users (Windows Only)

When mounting a Platform Space with a Windows Workstation, if a user has created a manual network mount to the Platform Server under a different user name than how they logged into the Platform Server, they could receive the following message:



If this occurs, the best solution is to manually dismount all network mounts, dismount all Platform Spaces in the Platform Web Interface, log out of the workstation and log back in.

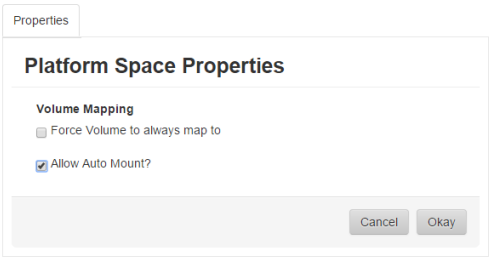
Network Path Not Found

When mounting a Platform Space if you receive the error "The network path was not found", this is typically caused by inconsistent permissions in the Platform Server. To resolve this, have the system administrator perform a Platform Space Reset on the Platform Space in question.

Setting up Auto Mounting

The Platform supports the ability to automatically mount Platform Spaces when a user logs into the Platform Interface. This feature is particularly valuable when uses have spread out content to multiple Platform Spaces.

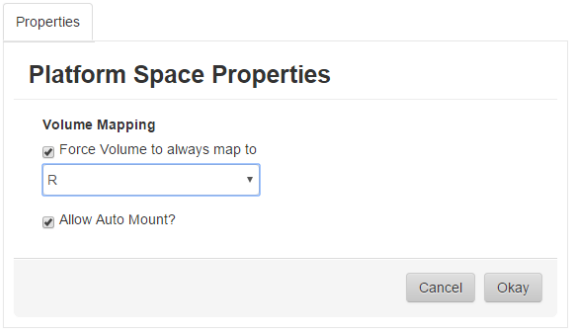
In order to use this feature, first the user must have enabled auto mounting in the System Administration Screens under the Platform Spaces Tab. That global option must be turned on or Platform Spaces will not automatically mount upon login.



Next by right-clicking on a Platform Space and choosing Properties, the user can easily set options to automatically mount the Platform Space upon login. This check box should be checked for each Platform Space the user wishes to auto mount.

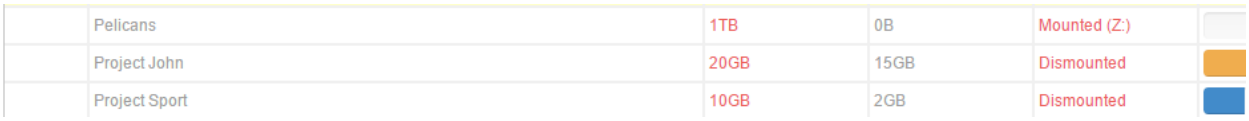
Force Mounting to a Drive Letter (Windows Only)

For operators working on a Windows Operating System®, the Platform offers an additional ability to select a drive letter that will always be mapped when mounting the Platform Space. This is particularly valuable when working with some client software as file paths can be saved with the drive letter in them which can cause problems if they are not subsequently opened with the same drive letter. After choosing this option, the Platform will always mount the Platform Space with the drive letter chosen.



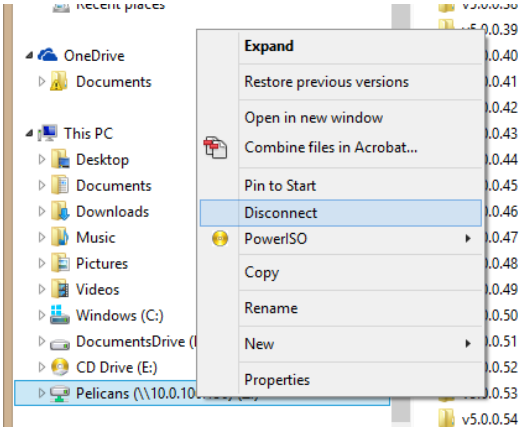
Dismounting Platform Spaces

If a user wishes to disconnect a mounted volume, they will simply click on the 'Mounted' URL in the Platform Interface. The system will then attempt to dismount the volume.



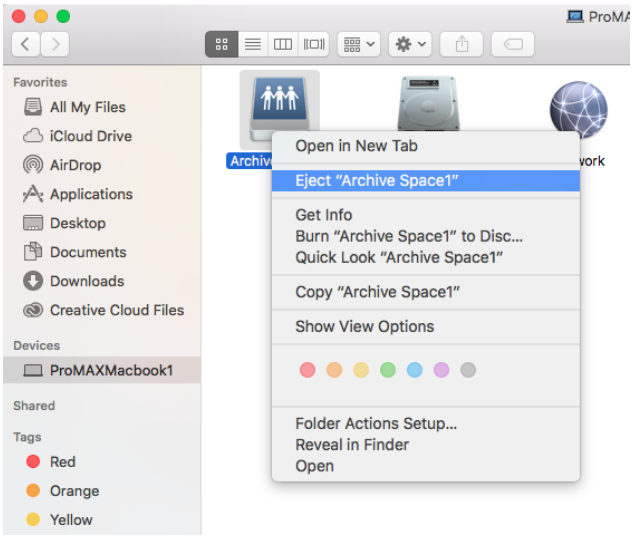
If for any reason, there is a problem dismounting a volume, the user can use the local operating system commands to dismount the device.

Windows Manual Dismount



In Microsoft Windows® the operator will simply right-click on the network mount point and choose 'Disconnect' from the menu.

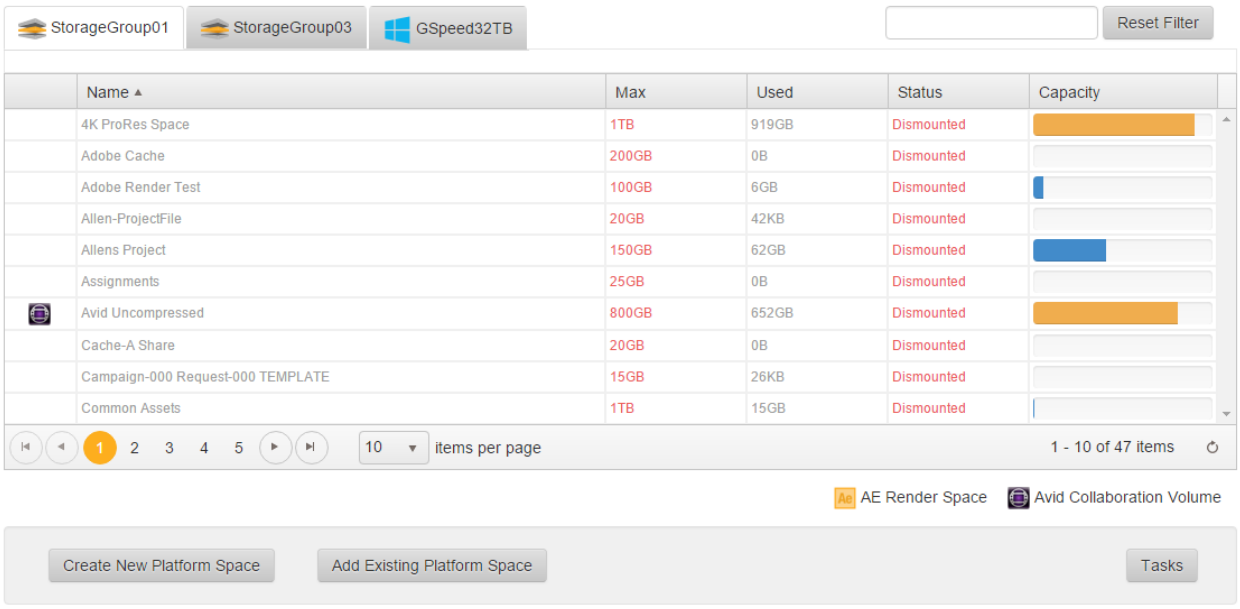
Apple Mac Manual Dismount



For the Mac, the user will locate the mounted volume in Finder or on the desktop, right-click on the volume and select 'Eject'.

Creating and Adding Platform Spaces

Platform Spaces can be easily created or added to a Storage Group through the Platform Interface. The operator must have Admin Feature Permission rights to the Platform Spaces screen in order to create a new Platform Space



When a Platform Space is created or added to the system, the following steps are taken:

1) The Platform Space will be Created or added to the System
2) The Platform Space will be sized based on the total capacity specified by the user.
3) Permissions are applied to the Platform Space based on the Default Platform Space Permission value in the Configuration Screens. Each user added into the Platform System will either receive

full access, read access, or no access to the Platform Space being added based on how this value is set.

4) Certain features are added an enabled on the Platform Space.

Create a New Platform Space

When a user creates a new Platform Space, they are creating a mountable volume on a particular Storage Group. The user must have Admin Feature Permission access to the Platform Spaces screen and at least User Feature Permission access to the Storage Group screen.

The operator will start the process by clicking on the 'Create New Platform Space' button on the Platform Spaces screen. When completed, the system will bring up the New Platform Space Window:

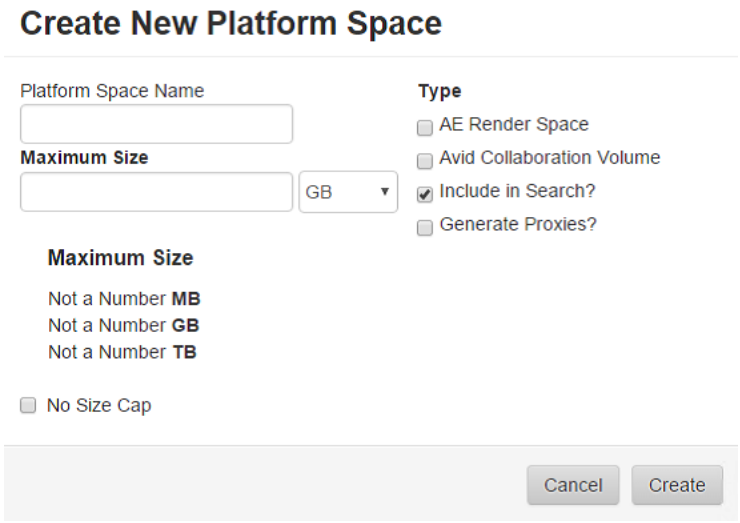


Figure 13 Creating a New Platform Space

When creating a new Platform Space, the operator will enter the following information:

Platform Space Name – The user will give a specific name to the Platform Space. This name will show when users mount the space on their workstation. It cannot contain certain special characters but the system will warn the user if they attempt to use invalidate characters in the name. This name must be unique across the Platform Network.

Maximum Size – This feature allows the user to specify the maximum amount of data that can be added to the space before it is considered full. The user has the choice of specifying the number in Megabytes, Gigabytes, or Terabytes. The system will then convert the selection to show the number below the entry box in MB, GB and TB.

No Size Cap – If selected, the system will allow this space to grow as large as the available space on the storage group to which it is hosted. Therefore, this is a variable size volume whose size will grow and shrink with the available space of the storage group.

Type – AE Render Space – When selected, this space will be created and monitored for After Effects® render jobs. See AE Render Space feature set below.

Type – Avid Collaboration Volume – Allows this space to act as an Avid ISIS® like volume allowing multiple Avid Media Composer® editors to work in a project at the same time. See Avid Collaboration Volume below.

Type – Include in Search – When selected, the system will automatically index files and folders in this Platform Space for inclusion into the integrated database catalog. This feature must be selected if the operator wants to search on files within this Platform Space. See Integrated Catalog and Asset Management for detailed information.

Type – Generate Proxies? - If the operator selects the 'Include in Search' option above, this Generate Proxies option will be displayed. If selected, the Platform Space will be set to automatically generate proxies for applicable video files added to the space.

After entering this information and selecting the options above, the operator will click on the 'Create' button. The system will then submit the request to the Task System to create the Platform Space.

Add an Existing Platform Space

This option can be used when an operator wishes to add a Platform Space that was previously created and then removed (see Remove a Platform Space below) or if a 3rd Party Storage group is added to the Platform that has existing folders at the root level of the Storage Group.

After clicking on the 'Add Existing Platform Space' button, the system will display the following window allowing the user to continue:

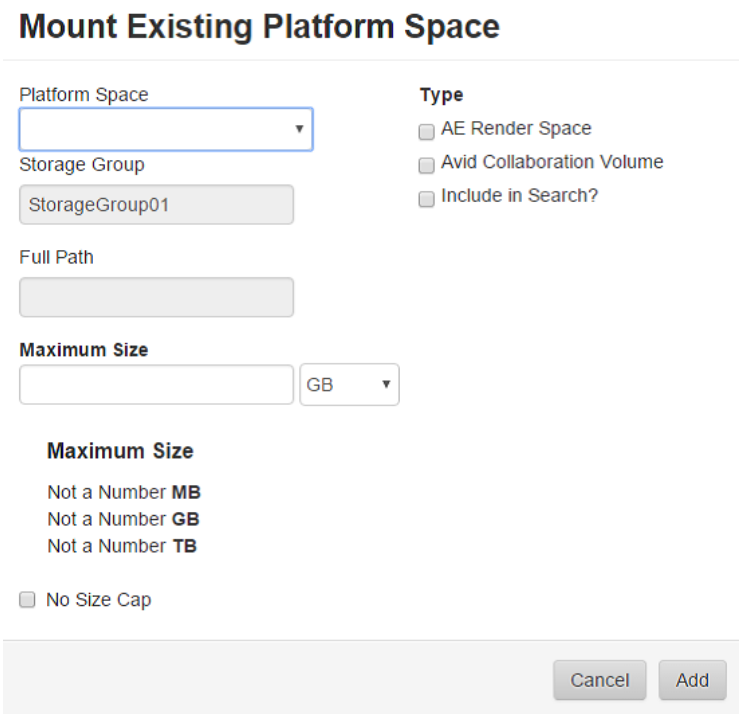


Figure 14 Mounting an Existing Platform Space

The operator will enter the following information to continue:

Platform Space – This drop down box will show the operator the folder names at the Root of the Storage Group that can be added as a Platform Space. Once selected the system will display the full Path of the Platform Space under the Full Path field.

Storage Group – This field is automatically filled in and allows the operator to see what Storage Group they are adding the Platform Space under.

Maximum Size – This feature allows the user to specify the maximum amount of data that can be added to the space before it is considered full. The user has the choice of specifying the number in Megabytes, Gigabytes, or Terabytes. The system will then convert the selection to show the number below the entry box in MB, GB and TB.

No Size Cap – If selected, the system will allow this space to grow as large as the available space on the storage group to which it is hosted. Therefore, this is a variable size volume whose size will grow and shrink with the available space of the storage group.

Type – AE Render Space – When selected, this space will be created and monitored for After Effects® render jobs. See AE Render Space feature set below.

Type – Avid Collaboration Volume – Allows this space to act as an Avid ISIS® like volume allowing multiple Avid Media Composer® editors to work in a project at the same time. See Avid Collaboration Volume below.

Type – Include in Search – When selected, the system will automatically index files and folders in this Platform Space for inclusion into the integrated database catalog. This feature must be selected if the operator wants to search on files within this Platform Space. See Integrated Catalog and Asset Management for detailed information.

Type – Generate Proxies? - If the operator selects the 'Include in Search' option above, this Generate Proxies option will be displayed. If selected, the Platform Space will be set to automatically generate proxies for applicable video files added to the space.

After entering this information and selecting the options above, the operator will click on the 'Add' button. The system will then submit the request to the Task System to create the Platform Space.

Right-Click Options for a Platform Space

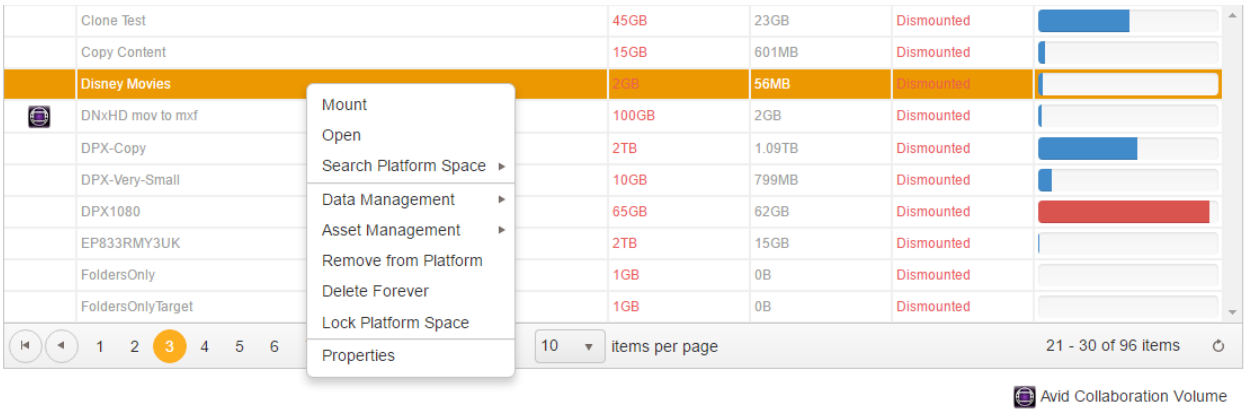


Figure 15 Right Click Options for Platform Spaces

In order to take full advantage of the capabilities of Platform Spaces, users must select a Platform Space and use the right-click option. This will bring up an active context-sensitive menu of available options. Note that these options can and will change based on the following conditions:

1) The operators feature permissions to the Platform Spaces Screen (See Feature Permissions).
2) The operators access rights to the Platform Space (Read or Modify – See File Permissions)
3) The features that have been enabled on the Platform Space.

Below is a full list of possible right-click options for a Platform Space. Each option's function is described as well as the permission required by the operator to use it.

Platform Space Right-Click Options

Menu Option	Description	Required Permission
Mount	Used to connect the workstation to this Platform Space and create a mount point	'Read' Platform Space Permission
Open	Will mount the Space if required and open an OS file finder/explorer window at the root of the Platform Space. This option is the default option when a user double-click's on a Platform Space.	'Read' Platform Space Permission
Search Platform Space	If set to indexed, this option will perform a search on all indexed files in the Platform Space by redirecting to the Search screen.	'Read' Platform Space Permission
Search Query 1	If the user has saved search parameters, these will be available as sub selections to the Search Platform Space menu. By clicking on a saved search, the system will perform a Platform Space search using the saved search as additional parameters	'Read' Platform Space Permission
Data Management		
Copy	Allows the user to copy the entire Platform Space to another Platform Space. The destination Platform Space can be on the existing storage group, a different storage group or even a storage group on another server.	'Read' Platform Space Permission
Move	When selecting this option, the user has the ability to move an entire Platform Space to another Platform Space or move the contents of this Platform Space to another Platform space.	'Modify' Platform Space Permission
Backup	If an authorized LTO tape drive or tape library is connected to the Platform system, this option will allow the user to copy all information in the Platform Space to tape.	'Read' Platform Space Permission and Admin Feature Permission to the Tape Screen
Archive	If an authorized LTO tape drive or library is connected to the Platform system, this option allows the user to copy, verify and then remove the selected Platform Space from the System.	'Modify Platform Space Permission and Admin Feature Permission to the Tape Screen

Table 3 Platform Space Right-Click Options

Platform Space Right-Click Options

Menu Option	Description	Required Permission
Clone	This option gives the user the ability to duplicate a Platform Space including all of its data and attributes.	Admin Feature Permission to the Platform Space Screen
Mirror	Setting up a mirror allows an operator to create a near real-time ongoing copy of all the information in this Platform Space to another Platform Space.	Admin Feature Permission to the Platform Space Screen
Asset Management		
Add / Update Metadata	This option will open up the Platform Properties window and position on the Metadata tab allowing the operator to make changes to the rule based metadata update system.	Admin Feature Permission to the Platform Space Screen
Regenerate Proxies		
All Proxies	When selected, this option will cause the Platform System to regenerate all possible proxies for the Platform Space selected.	Admin Feature Permission to the Platform Space Screen
Missing Proxies	When selected, this option will cause the Platform System to regenerate only missing proxies from the Platform Space selected.	Admin Feature Permission to the Platform Space Screen
Reset Search and Index Permissions	This will update the Platform Space, resetting file permissions and updating the Catalog index with current information.	Admin Feature Permission to the Platform Space Screen
Remove from Platform	Removes the Platform Space from the Platform interface but does not delete the data from the Storage Group. This option will also allow the operator to remove the data form the search catalog.	Admin Feature Permission to the Platform Space Screen
Delete Forever	Deletes the Platform Space from the Platform and removes all information from the search catalog.	Admin Feature Permission to the Platform Space Screen

Table 3 Platform Space Right-Click Options

Platform Space Right-Click Options

Menu Option	Description	Required Permission
Lock / Unlock Platform Space	Used to lock down a Platform Space so that users have no access to the content until it is unlocked.	Admin Feature Permission to the Platform Space Screen
Properties	Displays the Platform Space Properties window (see below).	User Feature Permission to the Platform Space Screen.

Table 3 Platform Space Right-Click Options

Mount

The selected Platform Space will be connected to the Platform Server and a mount point will be created in the local workstation operating system. See Mounting Platform Spaces above for more information.

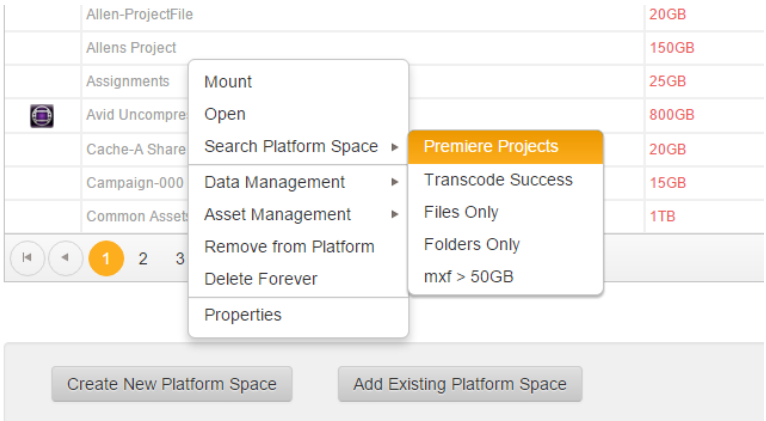
Open

Selecting open on the Platform Space has the effect of performing a mount if the space is not already mounted and launching the workstation's file browser. (Apple Finder® Windows Explorer®). This is also the default command if the user double-clicks on a Platform Space.

Search Platform Space

The search Platform Space command by default will redirect to the search screen and list all of the files/folders in the Space that have been indexed into the Platform Database Catalog. See Integrated Catalog below for details.

The search Platform Space also provides the option of further refining the search by a user's saved searches. In the example below, an operator right-clicks on the Platform Space 'Allens Project' and then selects 'Search Platform Space' and further selects 'Premiere Projects'. This approach will cause the system to search the Platform Space, redirect to the search screen and filter the results by the parameters defined in the Saved Search.

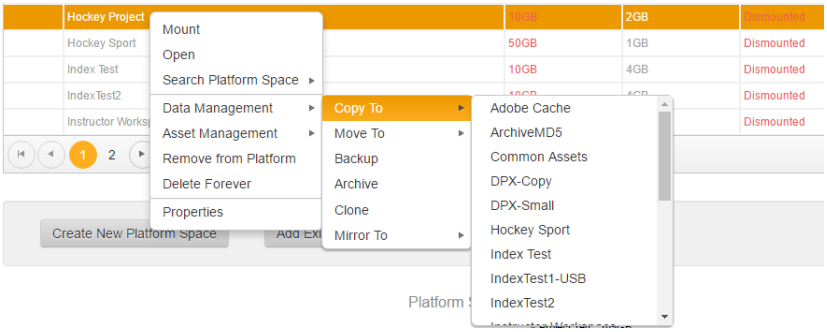


Data Management Options

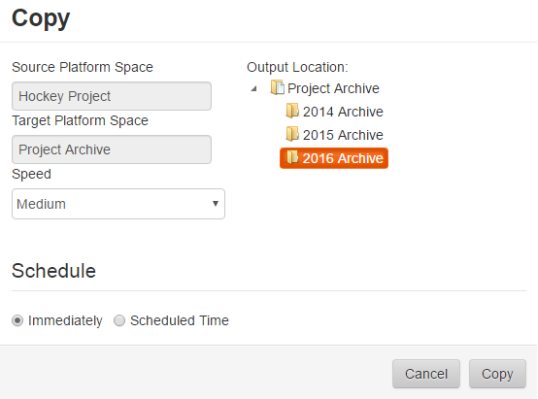
One benefit of using the Data Management commands from the Platform Interface is that after the command is submitted to the server, the workstation is no longer involved. This means that the data is being moved between Platform Space's on the server or between servers but no information is being pulled down to the workstation and then sent back up to the server.

This has the distinct advantage of allowing users to manage Terabytes of data from their workstation, perhaps over a slow connected VPN and not have to worry about connection speeds.

Copy



Copying a Platform Space to another space can be easily done with the Copy option. After right-clicking on a Platform Space, the system will present a list of Platform Space's to copy to. When the operator selects a space they will be presented with the copy screen to complete the request.



When the copy screen appears, the operator has the choice of copying the data to the root of the destination Platform Space or a folder within that Space. Note, the copy command will copy all of the data beneath the Platform Space to the destination space. It does not copy the Platform Space Name to the destination Space.

After submitting the job, the system will begin the operation. If there are files with the same names in the target Platform Space, those files will not be overwritten. No information will be removed from the source Platform Space.

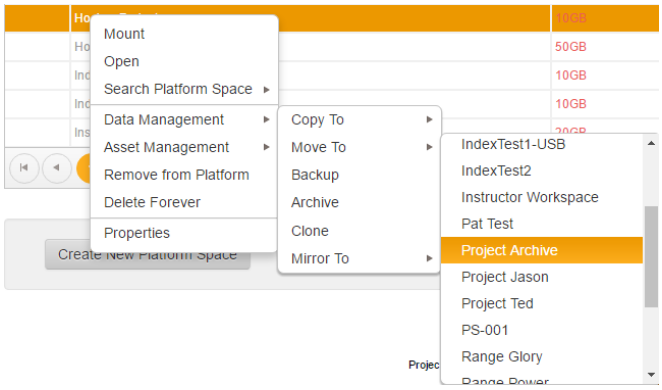
This copy option can be set up to be recurring by using the checkbox below the scheduled date. If selected, the user has the option of causing the Platform Space Copy to happen on a set schedule. This is particularly valuable when a user wants to set up a disk-to-disk backup of a Platform Space.

> **Speed –** The Speed option allows the operator to choose from Slow, Medium or Fast depending on how much storage bandwidth the user wishes to use. Generally, slow will use 25% capacity, Medium (the default) will use 50% and Fast will attempt to use 100% of the possible storage system speed.

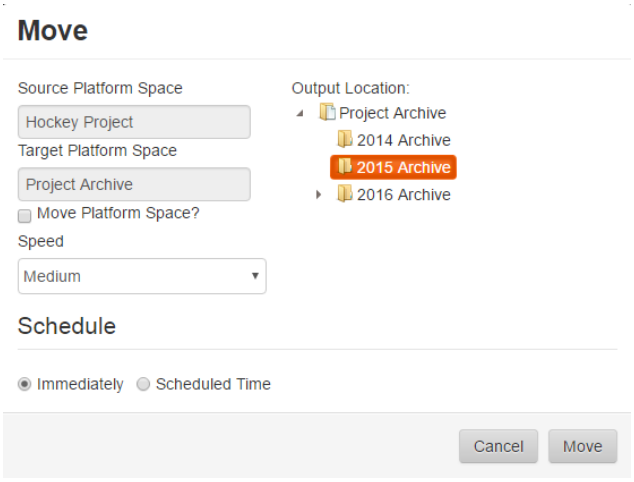
Schedule - The scheduling of a task can be done immediately or for a future date. See task scheduling options for more details.

Move

The Move Platform Space option allows an operator to move the entire Platform Space to a different Storage Group or alternatively move the contents of the Platform Space to another Platform Space. When selected, from the Platform Space menu, the operator will be given a list of Platform Spaces to move data to.



When moving the Platform Space to a new Storage Group, the operator can simply select any Platform Space to bring up the Move Task window.



When the Move screen appears, the operator has the choice of moving the data to the root of the destination Platform Space or a folder within that Space. Note, the move command will move all of the data beneath the Platform Space to the destination space or destination folder. It does not move the Platform Space Name to the destination Space.

In order to move a Platform Space to a destination Platform Space, the destination Platform Space must be empty.

If the operator selects the 'Move Platform Space?' checkbox, the system will display a list of Storage Groups. This option allows the operator to move the entire Platform Space including the Platform Space root folder over to a new Storage Group.

After submitting the job, the system will begin the move operation.

Speed – The Speed option allows the operator to choose from Slow, Medium or Fast depending on how much storage bandwidth the user wishes to use. Generally, slow will use 25% capacity, Medium (the default) will use 50% and Fast will attempt to use 100% of the possible storage system speed.

Schedule - The scheduling of a task can be done immediately or for a future date. See task scheduling options for more details.

Backup

The Backup and Archive operation is only available if the Platform System has an LTO tape drive installed and is used to copy all the information in a Platform Space to an LTO tape drive. The backup process and backup options are described below in the Tape section of this manual.

Archive

Archiving a Platform Space allows the operator to copy the entire Platform Space to LTO tape, automatically verify that the copy was successful and the delete the Platform Space from the Storage Group. The details for the archive window and archive process are described in the Tape section of this manual.

Clone

Cloning a Platform Space allows the operator to create a complete duplicate of all the features and data in a particular space. It is particularly useful if a user has created a template space that they wish to use when new projects are created. After selecting the clone option, the system will display the Clone Platform Space Window:

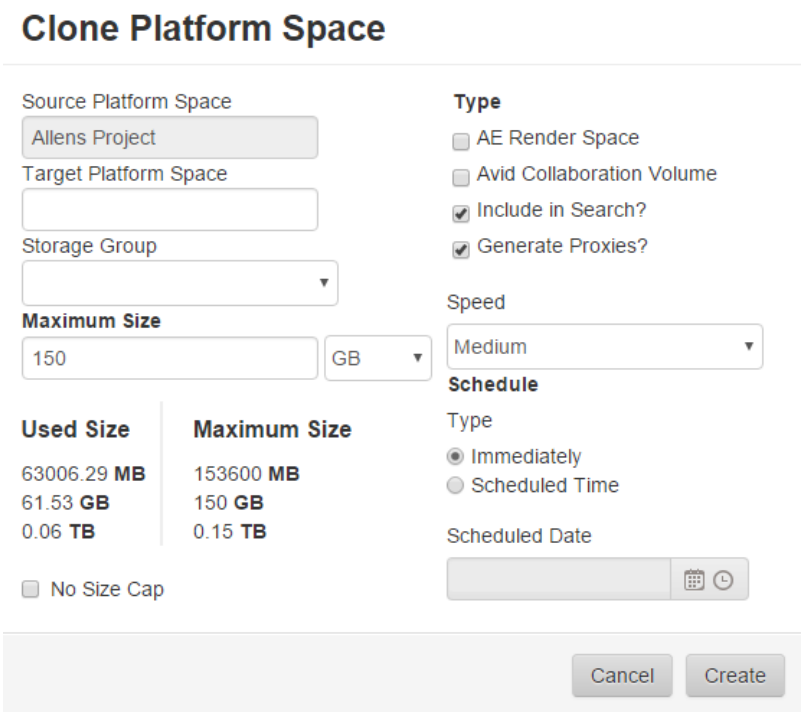


Figure 16 Clone Platform Space Window

The system accepts the following input for the clone operation:

Source Platform Space – This will be filled in by the system and cannot be updated from the Clone Window.

Target Platform Space – This is the new Platform Space name which must be unique across the Platform system.

Storage Group – The operator must choose which Storage Group the Platform Space will be created on. This can be the same as the Source Platform Space or a different Storage Group.

Maximum Size – This feature allows the user to specify the maximum amount of data that can be added to the space before it is considered full. The window will fill in the same size as the source Platform Space.

No Size Cap – If selected, the system will allow this space to grow as large as the available space on the storage group to which it is hosted. Therefore, this is a variable size volume whose size will grow and shrink with the available space of the storage group.

Type – AE Render Space – When selected, this space will be created and monitored for After Effects® render jobs. See AE Render Space feature set below.

Type – Avid Collaboration Volume – Allows this space to act as an Avid ISIS® like volume allowing multiple Avid Media Composer® editors to work in a project at the same time. See Avid Collaboration Volume below.

Type – Include in Search – When selected, the system will automatically index files and folders in this Platform Space for inclusion into the integrated database catalog. This feature must be selected if the operator wants to search on files within this Platform Space. See Integrated Catalog and Asset Management for detailed information.

Type – Generate Proxies? - If the operator selects the 'Include in Search' option above, this Generate Proxies option will be displayed. If selected, the Platform Space will be set to automatically generate proxies for applicable video files added to the space.

Speed – The Speed option allows the operator to choose from Slow, Medium or Fast depending on how much storage bandwidth the user wishes to use. Generally, slow will use 25% capacity, Medium (the default) will use 50% and Fast will attempt to use 100% of the possible storage system speed.

Schedule - The scheduling of a task can be done immediately or for a future date. See task scheduling options for more details.

Mirror

The mirror function allows the operator to set up a continuous backup of a Platform Space to another Platform Space. The idea of the mirror is to choose a Platform Space that is on a different Storage Group than the Source Platform Space. This is to ensure that the copied data is kept on a physically different disk system than the source, thus spreading the risk of disk failure and data loss.

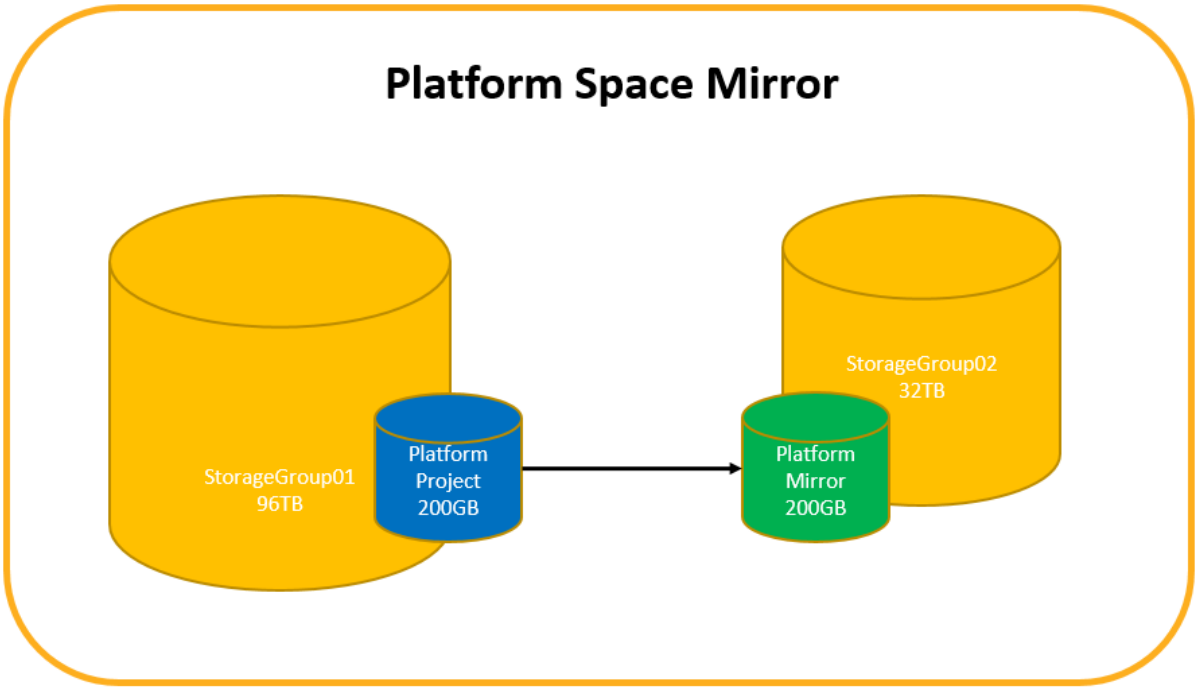


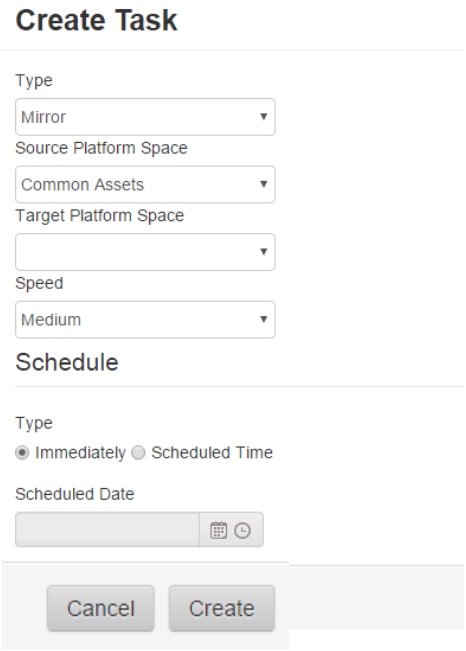
Figure 17 - Platform Space Mirror

The Mirror Operation begins by copying data from the source Platform Space to the destination Platform Space, creating an exact "Mirror" of the source space. These Platform Spaces can be on the same Platform node or on a different node. Depending on the size of the space, and the location of the storage groups, the initial synchronization of the mirror can take a while.

Platform Space Mirror Best Practice

When creating the destination Mirror Platform Space, it is best to set the permissions on the Mirror to Read only for Administrators and no access for users. This will keep the mirror data safe and prevent users from accidently mounting the mirror space and making changes that would be overwritten by the mirror process.

When creating the mirror, the operator will specify the Target Platform Space, the speed of the operation and when the mirror should begin synchronizing.

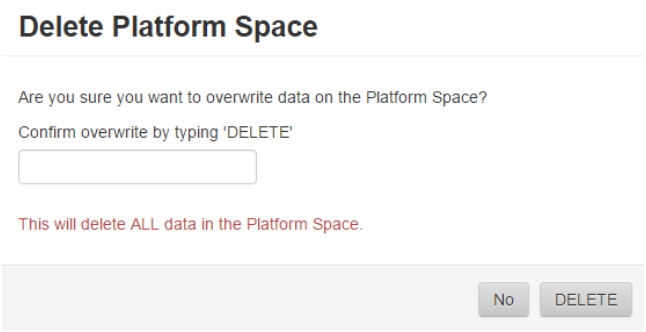


Target Platform Space – This is the Platform Space name which will receive the data from the Source Platform Space. This space must be empty when the mirror is originally created.

Speed – The Speed option allows the operator to choose from Slow, Medium or Fast depending on how much storage bandwidth the user wishes to use. Generally, slow will use 25% capacity, Medium (the default) will use 50% and Fast will attempt to use 100% of the possible storage system speed.

Schedule - The scheduling of a task can be done immediately or for a future date. This schedule indicates when the initial mirror process will begin. It has no affect after the mirror has been established.

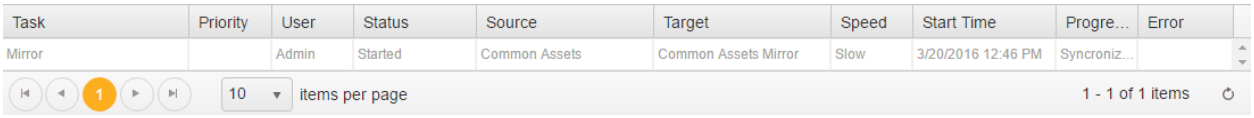
Starting a Mirror: After the operator clicks on the Create button, the system will attempt to schedule the mirror process.



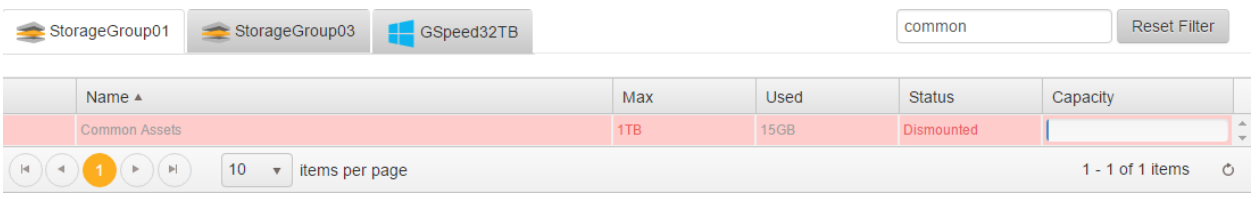
If the Target Platform Space has data already in it, the operator will receive the following message. This indicates that if they proceed, the target Platform Space will have all its information erased by the mirror operation. To continue the operator must type the word 'DELETE' and click the DELETE button.

Mirror Synchronization

Once the mirror process has begun and during the synchronization process the task screen will show the progress of the operation. The user can see the status of the mirror in the task service.



Additionally, the Source Platform Space background color will change during the synchronization process informing the operator that the mirror is incomplete. In the example below, a mirror task was created

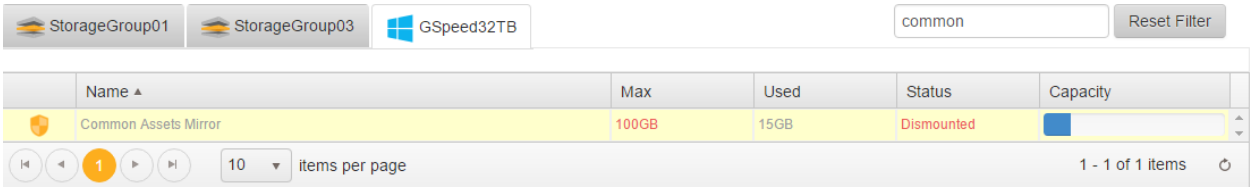


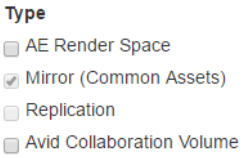
between the Platform Space 'Common Assets' and a Mirror Space called 'Common Assets Mirror'. When the mirror first begins, the source Platform Space the mirror Platform Space will show 'degraded'. This informs the operator that the mirror is not yet intact and is still synchronizing.

The Platform System checks the byte count on mirror spaces during each synchronization cycle. If the byte count is not the same, a sync will take place. During the sync operation the system may show the degraded color showing that the mirror is not in sync.

When looking at the source Platform Space properties, under the Type section, the user can see that the Platform Space is mirrored to another space and can also see the name of the mirror.

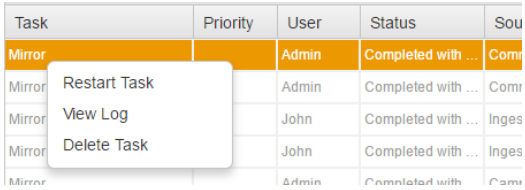
The same is true when the user views the mirror Platform Space. Mirror Platform Spaces will show a mirror icon next to the space and the properties window will show the source of the mirror.





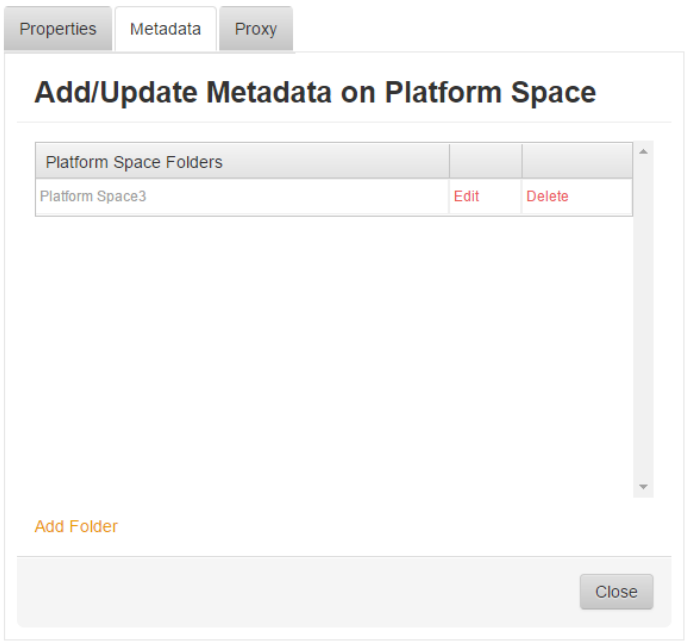
Restarting a Mirror

If a mirror task fails, the best way to restart the mirror is on the task screen. The user can right-click on the failed mirror task and select "Restart Task". This has the advantage of causing the mirror task to start where it left off instead of starting over from the beginning.



Add/Update Metadata Rules

When selecting this option, the operator has the ability to update metadata rules on the Platform Space. First, the system will bring up a dialog window under the Platform Space Properties Screen.

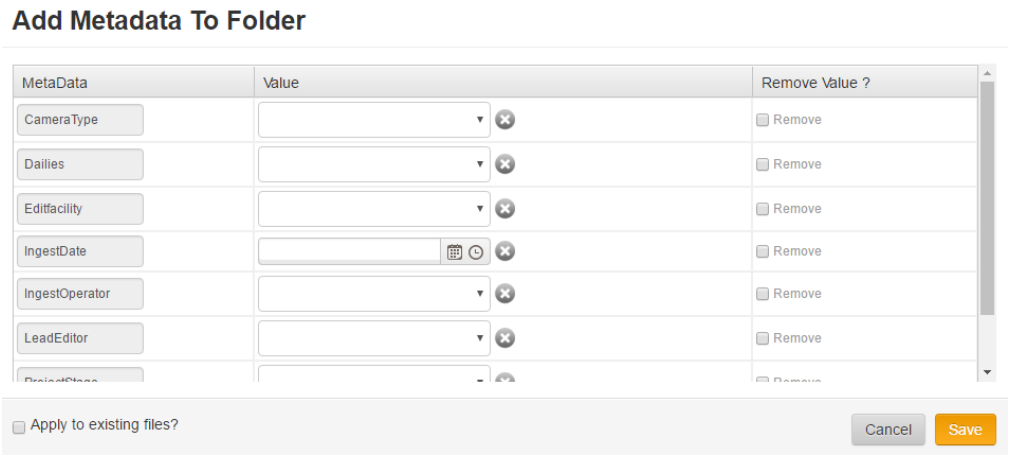


This window allows the operator to edit metadata rules on the root Platform Space or add rules for individual folders within the Platform Space hierarchy.

When the Platform Space is created and the "Include in Search" property is selected, a default blank rule is created and listed in this tab. In order to establish metadata rules the operator will click on the "Edit" URL for the root Platform Space or for other folders within the Space.

This will bring up a list of metadata fields that can be used to establish rules.

The screen below shows example metadata fields. These metadata fields are custom to each implementation and are entered in the Metadata configuration screen.

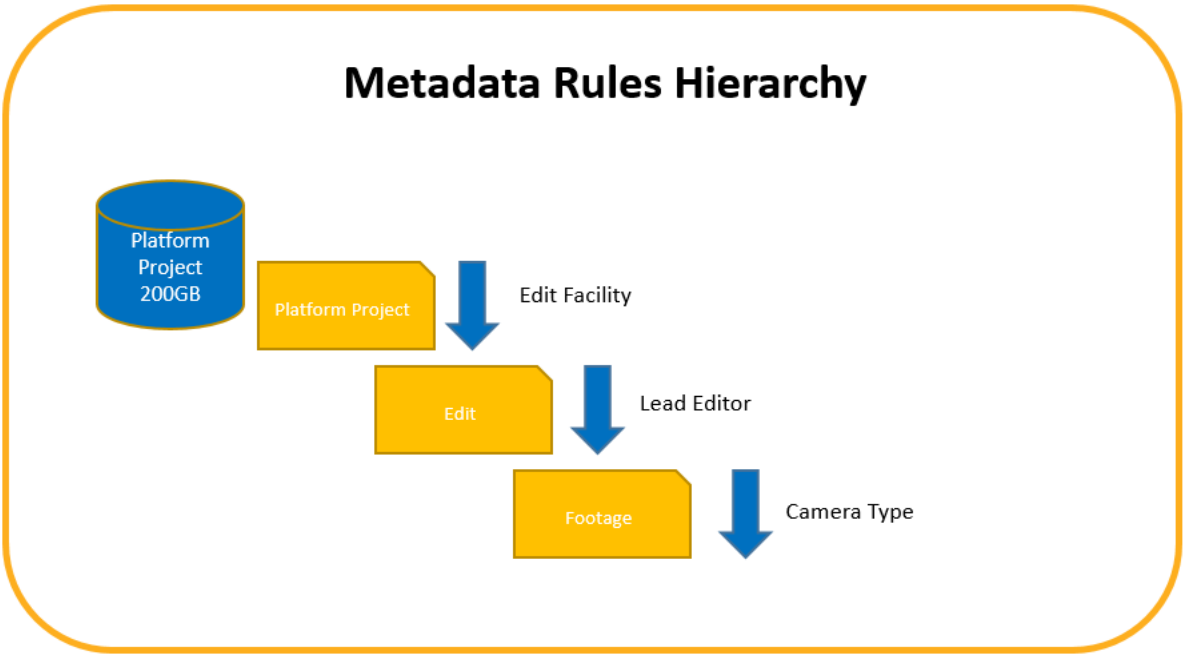


By clicking in the 'Value' box next to the Metadata field name, the user can set up metadata rules that will be applied to the Platform Space or folder selected. Please see the Platform Metadata section below for more information on how metadata is applied.

Remove Value? – When this box is checked, instead of adding a value to the metadata field, any existing values in the metadata field will be removed.

Apply to existing files? – if this is checked, the system will apply the metadata to all data already in the Platform Space or folder. If it is not checked, the system will only apply metadata to files that are added to the folder from this point forward.

Because metadata can be applied to folders in a hierarchy, operators have the ability to set rules on parent and child folders in a Platform Space.



Each folder will inherit the rules from the parent folders above it. However, metadata rules applied to child folders will override rules from the parents.

Figure 18 - Metadata Rules Hierarchy

Regenerate Proxies

This option will only show up for Platform Spaces that have proxy generation enabled. This feature allows the operator to regenerate proxies for the Platform Space. See the full description of proxy generation below. The operator has two options to regenerate proxies:

All Proxies – The system will regenerate all proxies in the Platform Space based on the proxy generation rules set up in the Platform Space Properties window. Proxy files will be recreated regardless of whether they already exist. Each proxy creation request is submitted to the task service and can be monitored there.

Missing Proxies – The system will only generate proxies that are missing in the Platform Space based on the proxy generation rules set up.

Reset Search and Index Permissions

Although not normally used in daily operation, this feature allows administrators of the Platform to reset file permissions and possibly re-index the database catalog of files in the Platform Space. One task window can be used to request one or both operations and will submit multiple jobs to the task system to complete the work.

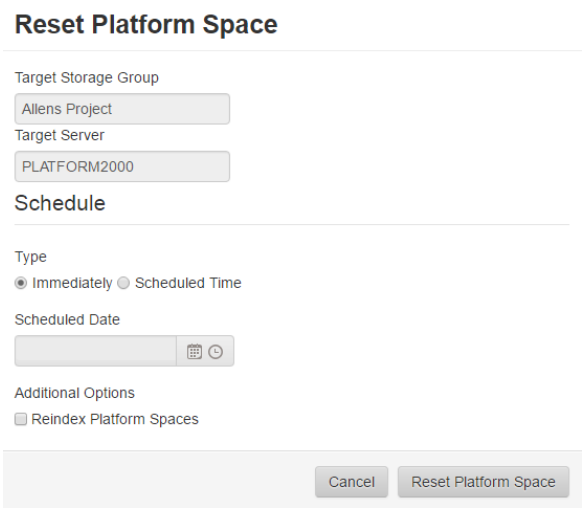
Reset Platform Space

The Reset Platform Space option is valuable when a user is experiencing permission problems:

Users are having permission problems accessing files within the Platform Space. In this case, it is possible that the permissions for files and folders on the Platform Space needs to be reset.

Users cannot mount the Platform Space. In this situation it is possible that the Platform Space share is missing or has the wrong permissions.

When requested, the system will bring up a request window and allow the operator to choose options:

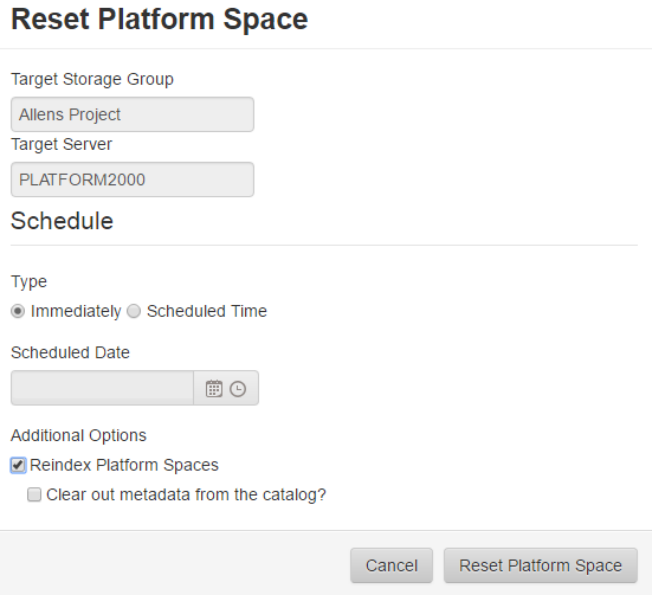


In the example listed, the operator will reset a Platform Space by selecting their schedule option, immediate or future date, and clicking on the 'Reset Platform Space' button. The system will then submit a task to the task screen and run the reset in the background. See the Task Screen for details on how to monitor tasks.

Re-index Platform Space

In the case where an administrator wishes to rebuild the database search catalog for a Platform Space, the operator can select the 'Reindex Platform Spaces' checkbox from the Additional Options section. This

feature can be used if for any reason the database catalog index is not in sync with the actual files on the disk system.



When selected, the system will provide an additional option to "Clear out metadata from the catalog?". This option allows the operator to remove any existing file information from the database catalog for the Platform Space before the indexing occurs.

After selecting the schedule options and pressing the 'Reset Platform Space' button, the system will submit a task to the task service to being the indexing and Platform Space Reset. (Note, Platform Space Reset must be done before the re-index operation can begin).

Remove from Platform

Removing a Platform Space causes the space to be unavailable for access by workstations, although it does not delete any of the data from the Storage Group. When clicking on remove Platform Space the system will ask the operator:

The first prompt comes up when the Platform Space has been added to the search index. If the operator answers yes too this question, the system will remove the entry and metadata in the catalog for the file. Please note however, this will not remove entries in the catalog when the Platform Space has been backed up to tape.

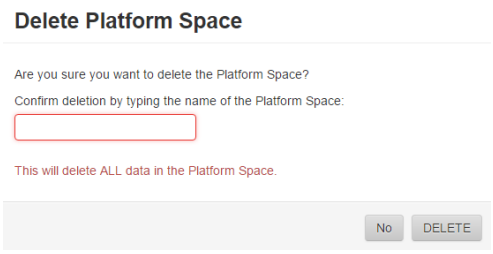
Additionally, if the Platform Space had proxies generated on it, the system will ask the operator if they would like to remove the proxies.

After answering this question, the system will finally ask if the operator is sure they want to proceed. When this occurs, the system will remove the Platform Space from the interface and users will no longer be able to mount or work with that space.

Under any case, if the operator wishes to bring the Platform Space back online, they can click on the 'Add Existing Platform Space' button and then re-add it back to the Platform.

Delete Forever

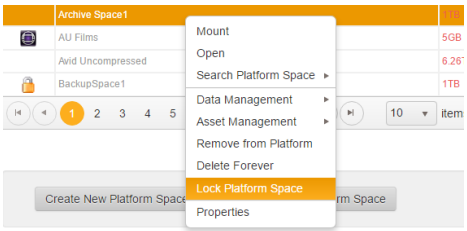
If a user wishes to delete the Platform Space and all of the data within it, the 'Delete Forever' option will be used. After clicking on the option, the system will show a dialog box to the operator.



This screen forces the user to type in the exact name of the Platform Space (this is case sensitive) and then press the DELETE key. Within seconds after the DELETE is pressed, the system will delete the data from the appropriate Storage Group.

Lock / Unlock Platform Space

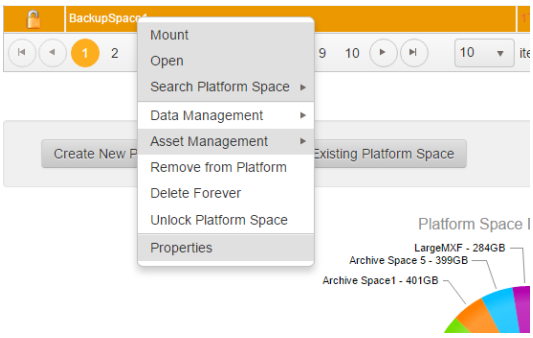
Locking a Platform Space allows an administrator to disable all access to data in a Platform Space. This function is only available to users with administrator rights to the Platform Space's screen.



When enabled, a 'padlock' icon will appear next to the Platform Space and no users, including the administrator, will be able to mount or use data within that space.

Warning: After locking a Platform Space, any user that has the space mounted will no longer have access to the data in that volume. Administrators should first validate that all users have files closed before using this command.

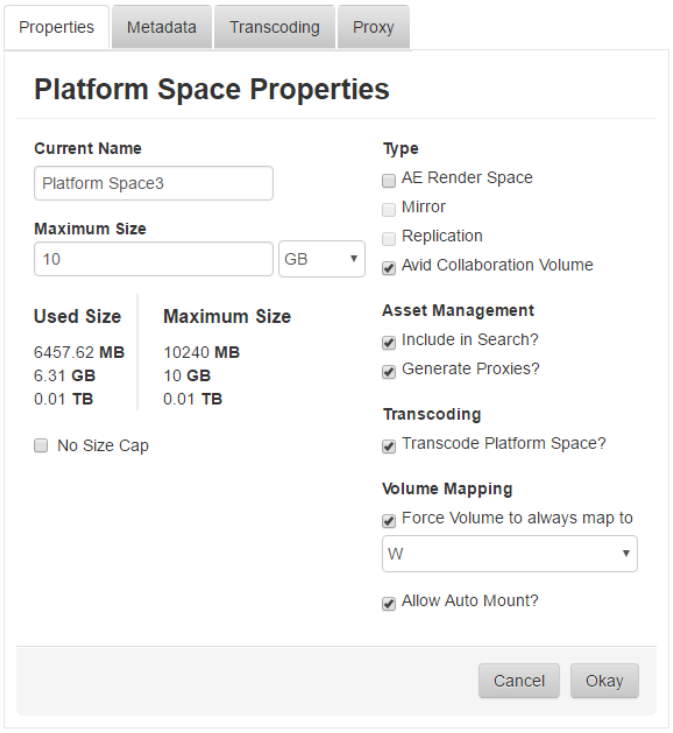
When a Platform Space is locked, certain right-click functionality for the Platform Space is disabled and that menu item will be grayed out. The functions that are disabled are done so to prevent updates to any Platform Space that is locked.



Generally, any function that could update data in a Platform Space is not allowed when the Platform Space is locked. Similarly, any current task that is operating or scheduled to operate on a newly locked Platform Space, could fail after the Platform Space is locked. An example is a mirror or copy operation that uses the destination Platform Space which is locked.

Platform Space Properties

The Platform Space Properties window is the main setup screen for an individual Platform Space. It is used by the administrator of the space to set a number of key features and characteristics for the Platform Space. The example below shows all of the attributes when an operator has 'Admin Feature Permission' to the Platform Spaces screen.



Properties Tab

Platform Space Name – The operator will give a specific name to the Platform Space. This name will show when users mount the space on their workstation. It cannot contain certain special characters but the system will warn the user if they attempt to use invalidate characters in the name. This name must be unique across the Platform Network.

Maximum Size – This feature allows the user to specify the maximum amount of data that can be added to the space before it is considered full. The user has the choice of specifying the number in Megabytes, Gigabytes, or Terabytes. The system will then convert the selection to show the number below the entry box in MB, GB and TB.

No Size Cap – If selected, the system will allow this space to grow as large as the available space on the storage group to which it is hosted. Therefore, this is a variable size volume whose size will grow and shrink with the available space of the storage group.

Type – AE Render Space – When selected, this space will be created and monitored for After Effects® render jobs. See AE Render Space feature set below.

Type – Avid Collaboration Volume – Allows this space to act as an Avid ISIS® like volume allowing multiple Avid Media Composer® editors to work in a project at the same time. See Avid Collaboration Volume below.

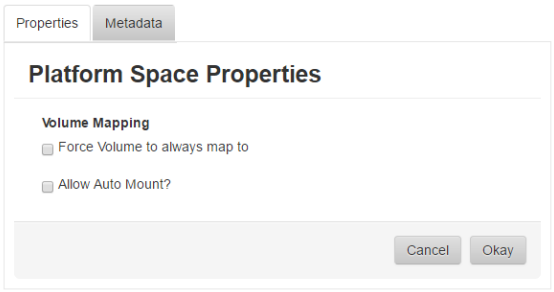
Type – Include in Search – When selected, the system will automatically index files and folders in this Platform Space for inclusion into the integrated database catalog. This feature must be selected if the operator wants to search on files within this Platform Space. See Integrated Catalog and Asset Management for detailed information.

Type – Generate Proxies? - If the operator selects the 'Include in Search' option above, this Generate Proxies option will be displayed. If selected, the Platform Space will be set to automatically generate proxies for applicable video files added to the space. (See the Proxies Tab below for proxy options).

Type – Transcode Platform Space? – When selected, this option enables the Transcoding Tab, listed below, and allows the user to set up this Platform Space to automatically process transcodes in the space.

Volume Mapping – Force Volume to always map to: For operators working on a Windows Operating System®, the Platform offers an additional ability to select a drive letter that will always be mapped when mounting the Platform Space. This is particularly valuable when working with some client software as file paths can be saved with the drive letter in them which can cause problems if they are not subsequently opened with the same drive letter. After choosing this option, the Platform will always mount the Platform Space with the drive letter chosen.

Allow Auto Mount? - This check box allows a user to automatically mount the Platform Space upon logging into the Platform. The operator must also ensure that the global configuration option, auto mount available Platform Spaces, is also turned on.



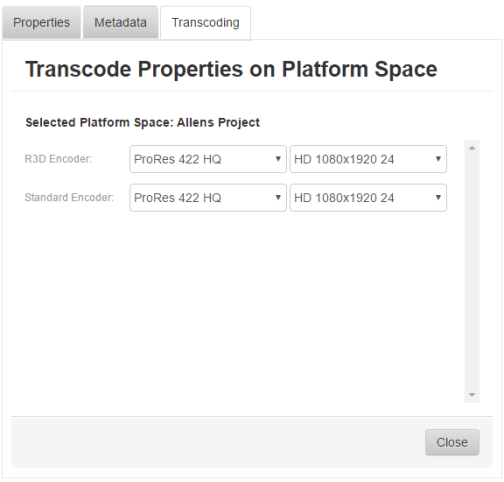
Note that this option is available to any user that has 'User Feature Permission' access to the Platform Spaces screen. If an operator has only user feature permission to the Platform Spaces screen, their Platform Space Properties screen will look like the example to the left.

Metadata Tab

The Metadata tab on the Platform Space Properties window allows administrators to set up Metadata Rules for the Platform Space. These rules to add/update metadata can be applied to the root Platform Space and/or to folders within the space. See Add/Update Metadata Rules above for details.

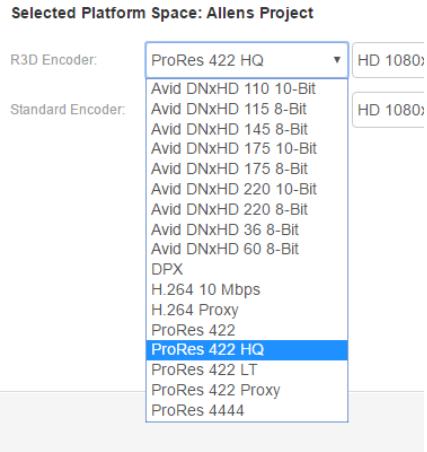
Transcoding Tab

The transcoding tab appears when the user selects the "Transcode Platform Space?" option on the main properties screen of the Platform Space.



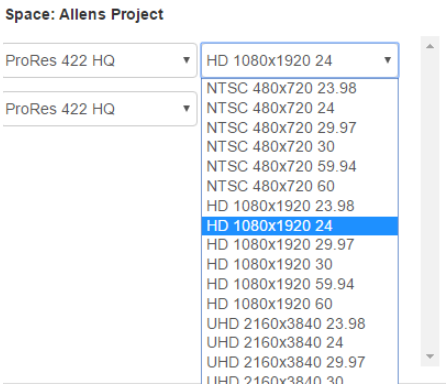
On the Transcoding tab, the system shows two different encoders. One for Red R3D files and one for all other formats. When setting up a Platform Space to utilize transcoding, the user should select an encoder for both.

The list of standard encoders is described in the Transcoding Section below. System Administrators can add custom transcoding formats to the system if they are not listed in the standard encoder list.



By clicking on the drop down, the user can select from many different encoding formats.

The Frame Size and Frame Rate options can be selected in the drop down box to the right as soon as the encoder is selected.



Platform Space Transcoding

After the encoder options are selected and the Platform Space Properties window is closed, the Platform System will automatically create the following directories at the root of the Platform Space. These directories are used for inputs and outputs to the transcoding system.

Platform Space Transcoding Folder Structure

Directory Name	Purpose
Transcode-In-Source	Source files that the user wants to be transcoded will be added to this folder. The system "watches" this folder for new video assets to be added. Shortly after they are added, the system will begin to attempt the transcode.
Transcode-Out-Failed	For any transcode where the system is unsuccessful, Platform will move the source file from the Transcode-In-Source directory to this directory.
Transcode-Out-Source	When a transcode job is successful, the system will move the original source file from the Transcode-In-Source folder to this folder.
Transcode-Out-Success	This folder will contain the newly created Transcoded Assets.

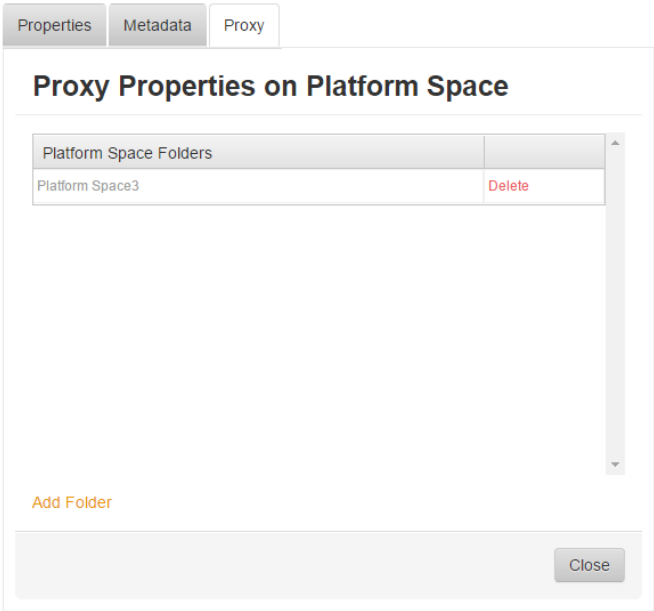
Platform Space Transcode Monitoring

As noted above, after files are dropped into the "Transcode-In-Source" watch folder, the system will begin the transcoding process. Platform performs all transcodes thru the Task Service and submits a new task for each Video to be transcoded.

The operator can see the status of the transcoding jobs running in the task service.

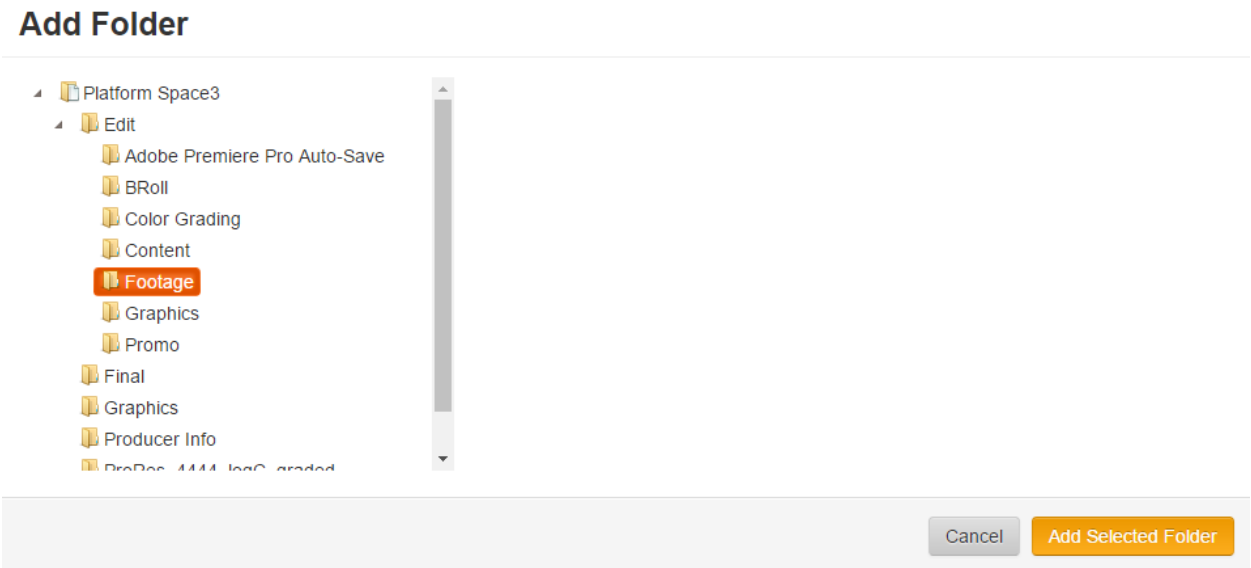
Proxy Tab

If the check box to enable Proxies is selected, the Proxy Tab will appear along the top of the Platform Space Properties window and allow the operator to define the folder(s) within the Platform Space that should generate proxy files.



By default, when selected, the system will assign the root of the Platform Space to generate proxies. However, the administrator can remove the Platform Space and add one or more folders to the list so that only videos in those folders will generate proxies.

In the example below, the operator will add the folder "Platform Space3/Edit/Footage" and proxies will only be generated for videos in the "Footage" folder.



By pressing the 'Close' button and then the 'Okay' button on the Platform Space Properties window, the system will finish the operation. If this is the first time proxies have been established for the Platform Space, the system will submit a job to the task service to begin to generate proxies.

Integrated Catalog and Asset Management

Platform's MAM (Media Asset Management) System or Asset Management System is built into every Platform System and provides significant value to media managers and creative users. Some of the features include:

Platform Media Asset Management Features

Automatic Indexing	By setting up Platform Space with the searching option, all files land information placed in the space will be automatically indexed for searching in the Platform Interface.
Offline Catalog	Files and folders that are indexed are always available for searching even if the files are no longer on an online storage group.
Custom Metadata	Platform provides the ability to create custom metadata fields and save data to these fields into the video assets. Searching customer metadata thru the search window is described below.
Automatic Metadata Rules	With the ability to set up rules on Platform Space's and folders, Platform can add or update metadata on files automatically.
Proxy Generation	Users can set up a Platform Space or certain folders to generate video proxies. Since proxies are kept on the main Storage Group, even if files are pulled off the system or archived onto tape, proxies can still be viewed.
Integrated LTO Tape Archiving	If set to indexed, this option will perform a search on all indexed files in the Platform Space by redirecting to the Search screen.

Table 4 - Platform Media Asset Management Features

One Integrated Catalog

Underpinning the entire asset management system is the Integrated Catalog. This key database is maintained by the Platform System to provide fast and accurate search results to the Platform Interface regardless of the Storage Group or Platform Node the file is located on. The database is housed on the

Platform Core Home Server and each Platform Node communicates to the home server to make updates to the catalog.

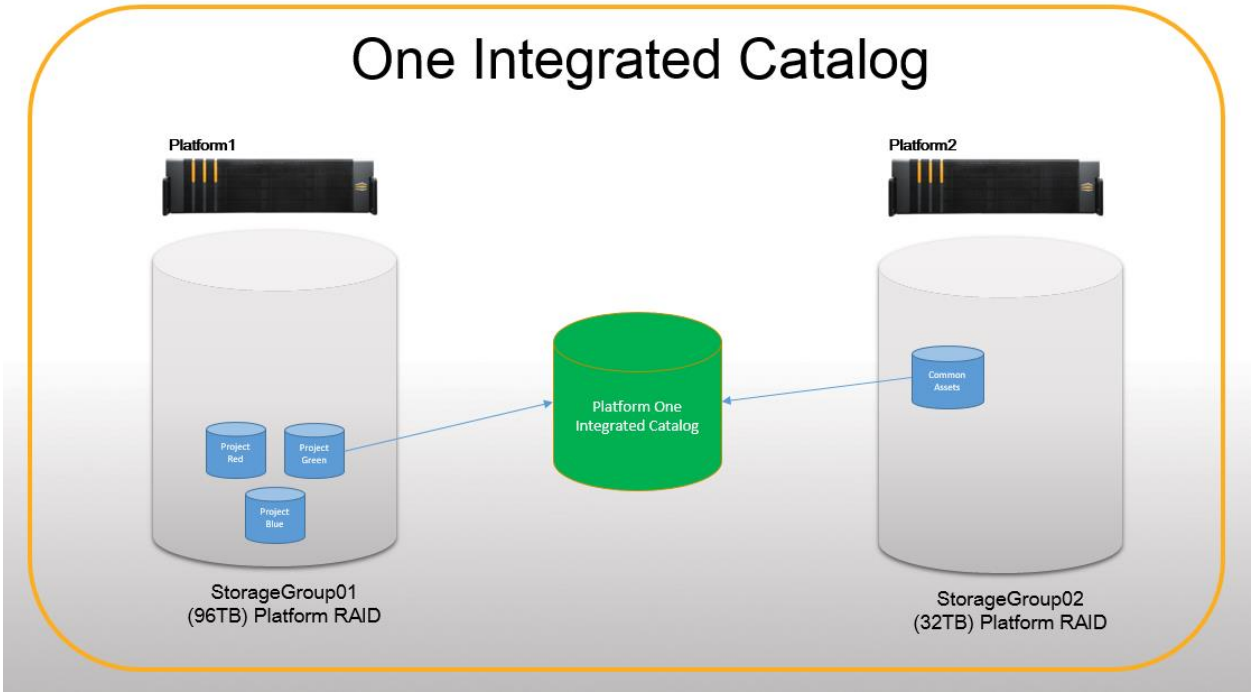


Figure 19 - One Integrated Catalog

In the diagram above, the example lists two native Platform Storage Groups with Platform Spaces on each. As users add or update content on Platform Space's that are indexed, the system will automatically add those files to the search catalog. Although the storage groups depicted above are native Platform Storage Groups, they could also be attached 3rd party drives. This allows users to temporarily connect drives to the Platform, index them and then be able to search the contents even if the drive is offline.

The Platform System determines what files or folders to index, from the configuration options in the Asset Management configuration screen. This screen provides a default list of file suffixes that will be indexed. The administrator also has the option to index or not to index folders. Every file or folder that is indexed into the integrated catalog can be queried on using the search system defined below.

Platform Metadata

Platform uses the XMP® Standard to store and retrieve metadata from media assets. This XMP® approach writes the metadata directly to the file which allows metadata to travel with the file if the operator moves the file from the Platform to another system. Currently, Platform does not create XMP sidecar files, but rather stores metadata only in files that support XMP within the file.

In the system configuration screens on the Asset Management Tab, uses can define files that support the XMP standard. Platform provides a default list of files. For any files suffix in the list, Platform will attempt to extract and write custom metadata to the file.

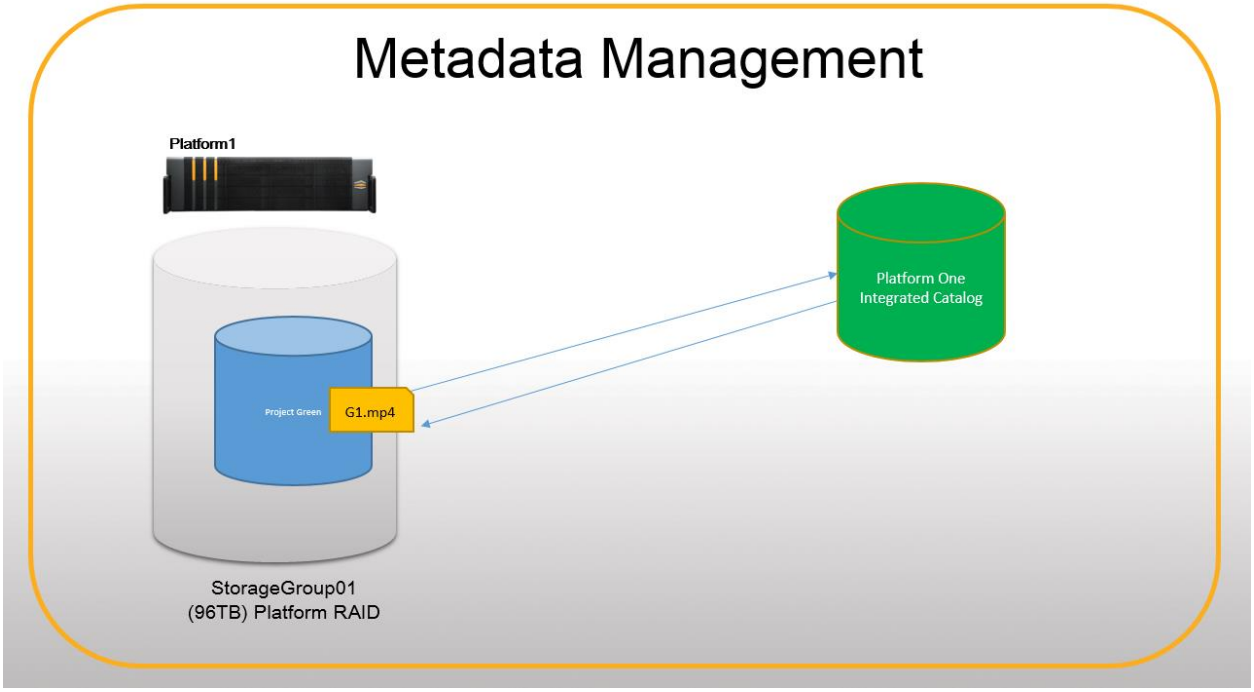


Figure 20 - Platform Metadata Management

However, Platform also writes metadata to the Integrated Catalog Database. Platform Metadata is automatically maintained both within the media asset and in the Platform Database Catalog. As new files are added to the file system, metadata is automatically extracted and written to the Integrated Catalog.

This process also works when metadata is added to a file. The Platform System first adds the custom metadata to the Integrated Catalog and then attempts to add it to the file. In this way, metadata is always stored in the Platform Database, even if the metadata cannot be added to the file.

Like the list of file suffixes that Platform should index, there is also a list of file suffixes that should accept custom XMP metadata. If the administrator defines a file suffix as a type that should accept custom metadata thru XMP, the Platform will attempt to add the metadata to that file. The Platform will make multiple attempts over a period of time to update the file. If it cannot, the update to the database will still be in place.

Disk and Tape Catalog Management

Like files that are indexed and added to the Integrated Catalog Database, all files written to LTO tape are also added to the index. This allows system administrators to search and easily find any file that has been backed up or archived to tape.

Simple and Advanced Searching

Searching the file system within Platform provides a simple yet powerful approach for users and administrators to find assets no matter where they are located. And because the system is powered by a

SQL database, search requests can be submitted through a web browser and multiple terabytes of data can be searched within seconds to find key information.

A couple of key points should be defined to start.

Key Points of Understanding

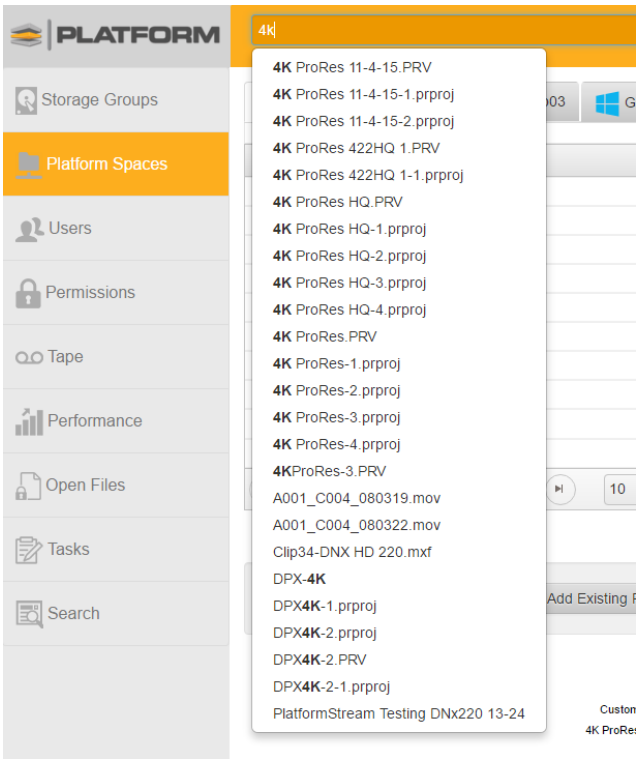
1) The Platform Search System only provides access to assets and folders in a Platform Space based on the access permissions of the logged in user. Therefore, if a user does not have at least access to a particular Platform Space they cannot search for assets in that space.

2) Additionally, the Platform Search System will search for files across Platform nodes regardless of what Node or Storage System that Platform Space is located upon.

Simple Search

The Platform Search system is available at the header of every Platform Interface screen and allows any user the ability to search for a file name in the integrated catalog.

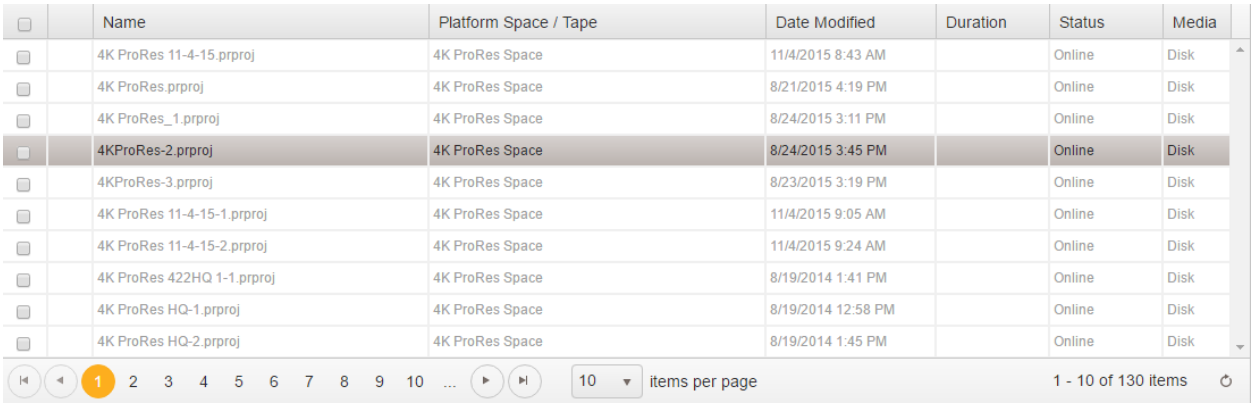
This simple searching approach provides the fastest and easiest access to finding files throughout the Platform infrastructure.



When a user types a file name in the search box, the system will attempt to auto complete the search box with file names that are on the storage system. This approach makes it very easy for a user to locate a file by it's file name, in any space they have access to.

In the example provided, by typing in 4K, the system brought up a list of files and folders with the letters '4K' in the name. The operator can use the up/down arrow keys to scroll down the list and select a particular file, or just press enter and the system will display the search results.

If the operator presses enter, the system will bring up the Search results screen and display a list of files that match the criteria.



In the illustration above, there were 130 files which met the criteria. These can and do exist on multiple Platform Nodes, Storage Groups and Platform Spaces.

The Advanced Search Window

The dropdown box next to the search icon at the top of every screen provides the method to engage the advanced search window. When the operator clicks it, they are provided advanced search options:

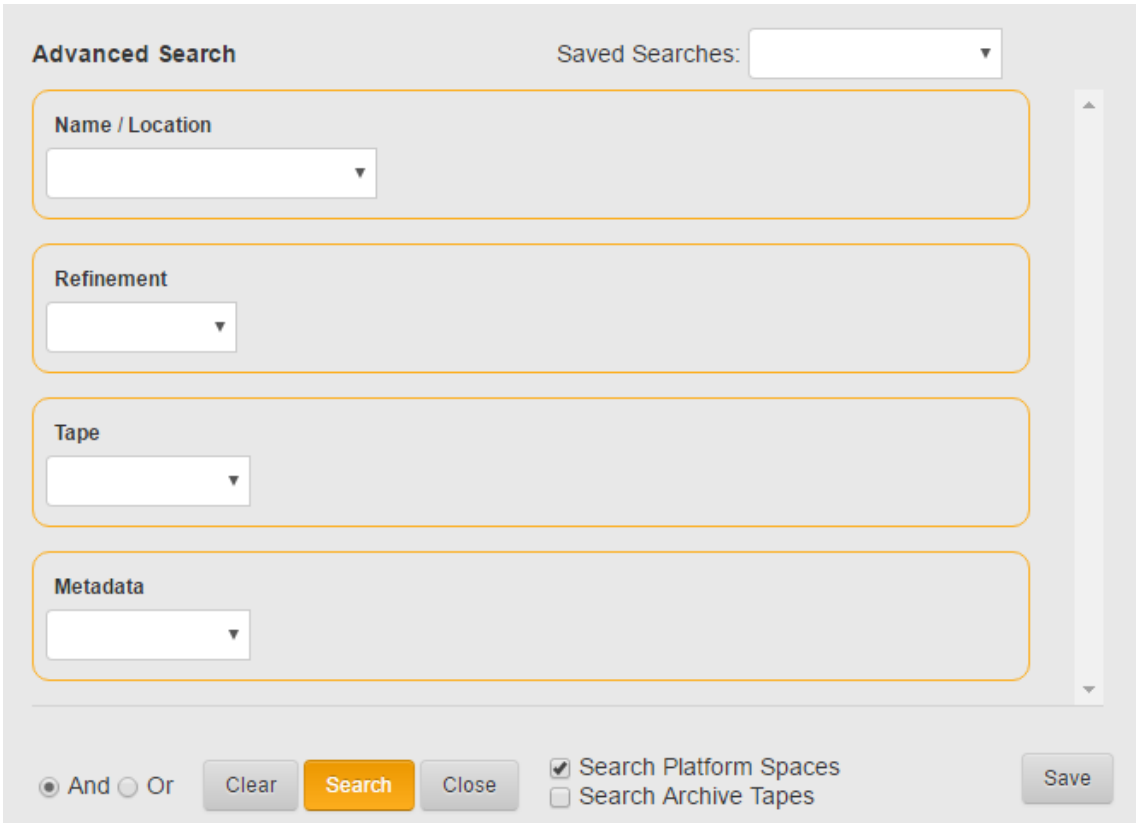
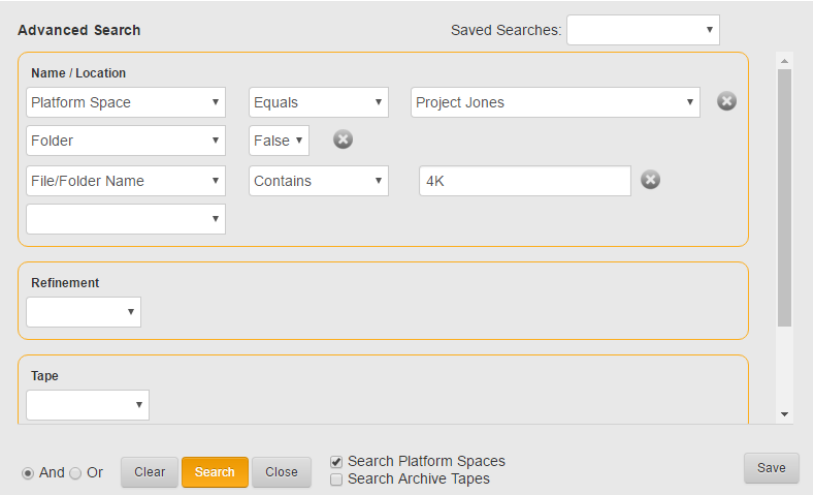


Figure 21 - Advanced Search Window

The Advanced Search Window is broken down into multiple sections described below. Once a user selects one of the drop down fields in this window the system will dynamically allow them to create Boolean search conditions.



Each criterion has a set of operators that apply. Examples of operators include:

Advanced Search Condition Operators

Equal	Must match exactly to what is entered. These are not case sensitive.
Does Not Equal	Must not match exactly what is entered. These are not case sensitive.
Contains	The criteria can be in any part of the search. For instance, if searching for the value “4K” in files, that value can be in any part of the file name.
Does Not Contain	The criteria cannot be in any part of the search. For instance, if searching for the value “4K” in files, that value cannot be in any part of the file name.
True	The condition is true. For example, if the operator selects the criteria Folder and the Operator True, the system will only look for Folders.
False	The condition is false. For example, if the operator selects the criteria Folder and the Operator False, the system will look for anything except folders.
Has Value	The system will return search results if the Criteria has some data in it. For instance, if an operator searches on “Camera Type” and Has Value, the system will find files that have any data in the Camera Type field.
Online / Offline	Used to search for files that are currently online vs. files that are not accessible. Offline files can be due to a storage group being offline or files that have been written to LTO Tape.

Table 5 - Advanced Search Condition Operators

Name / Location

This section allows the user to select search criteria regarding the name and location of files / folders. Clicking on the drop down option on the field will bring up a list of criteria that can be selected:

Criteria Name	Description
File / Folder Name	The file or folder name to be searched on.
Platform Space	The Platform Space name. The system will provide a drop down list of Platform Space names for convenience. If the name is missing, the user should use the "contains" operator to type in another name.
File Type	This is the file suffix. For example, 'mov', 'jpg'. The operator does not need to enter the dot.
Folder	This is to search only for folders or only for files based on the operator selected.
Folder Path	Used to search for files that are within a specified folder path. For example, if the folder path is "Project Jones/Editing/Footage" and the users chooses "Contains" for the operator and "Editing" for the value, the system will find all files that have "Editing" in the folder path.
Root Platform Space Name	If chosen, the system will search for just the root Platform Space name. These entries are typically used for restoring Platform Spaces written to LTO tape.
Storage Group	Search for files on a specified storage group.

Refinement

The refinement section provides additional criteria for more advanced searches. The options are listed below:

Criteria Name	Description
Status	Searches for files that are online or offline. Files that are online include files on any storage group currently connected to the system. These files can be acted upon from the search results screen. Offline files include files on storage groups not connected to the system or files that have been written to LTO Tape.
Proxy	Files that have a proxy video generated.

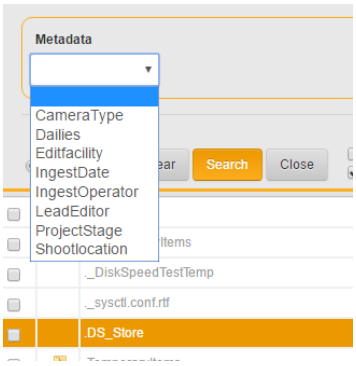
Locked File	This includes files that have been explicitly locked using the Platform File Locking feature. These files are differentiated from Open Files listed on the Open Files screen.
Creation Date	The date the file was originally created.
Modified Date	The date the file was last updated or modified by any user.
File Size	The size of the file. The user will have the option of specifying MB, GB or TB in the search value box.

Tape

The section only applies to files that have been written to LTO tape, either in a backup or an archival operation. This section also corresponds to the "Search Archive Tapes" checkbox explained below. If that checkbox is not selected, criteria specified in this section will not apply.

Criteria Name	Description
Tape Label	When a tape is formatted, the operator assigns a tape label name to the tape cartridge. Platform keeps track of all files that are written to each tape and a user can search for files on a tape by using the tape label.
Tape Bar Code	Tape Bar Codes are only available when using Tape Libraries and the Platform System will automatically populate the tape bar code by reading it from the tape library.
Tape Location	The tape location can be assigned at any time to a particular tape cartridge. These criteria allow the user to search for files on tapes in a particular location.
Archive Date	The date that the file was backed up or written to an LTO tape.

Metadata



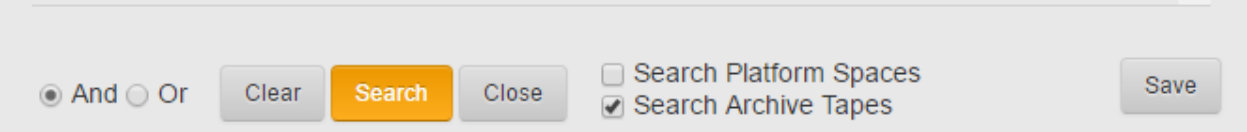
The metadata section will list each custom metadata field created in the Metadata tab of the system configuration screen. They can be added any time when additional metadata needs to be tracked.

The table below shows the types of metadata values that can be defined and how the advanced search window will handle them.

Criteria Name	Description
Custom Metadata Fixed Value	This metadata type allows the system administrator to create fixed values. It makes it much easier for users to search on

	metadata as the system will provide a drop down list of the possible values to search upon.
Custom Metadata Text Value	This type can be used to enter free form text.
Custom Metadata Date	This will allow the user to search on custom metadata used for date/time values.
Custom Metadata Number	This will allow the user to search on custom metadata used for integer values.

Search Footer



The bottom of the Advanced Search Window contains key controls:

And / Or Checkbox – The default "And" is selected by default and indicates that a file or folder must meet ***all*** of the criteria to be displayed. If the user selects the "Or" checkbox, the system will display a file or folder that contains ***any*** of the criteria selected.

Clear Button – After clicking this button, the system will clear out all of the search criteria entered into the search window.

Search – This button will cause the system to submit the search to the Platform System and redirect the results to the Search Results Screen.

Close – This button will close the advanced search window.

Search Platform Spaces Checkbox – When selected, this option will search the integrated catalog for files that are in Platform Spaces. These can be online or offline Platform Spaces.

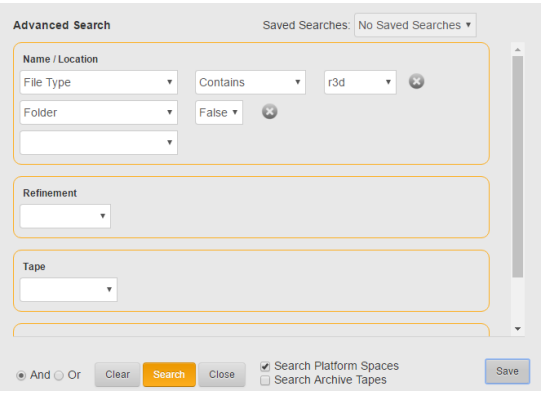
Search Archive Tapes – When selected, the system will search the integrated catalog for files that have been written to an LTO Tape. Note both of these checkboxes can be checked and the system will search both Platform Spaces and Tapes.

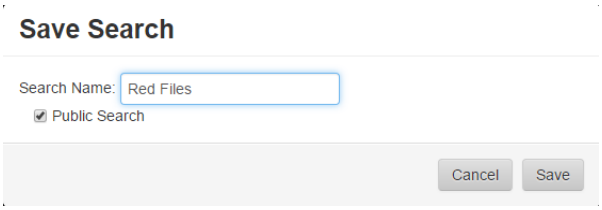
Save – Allows the user to save the search criteria and use it later. See Saved Searches below.

Saved Searches

The Platform Search system provides a powerful option to allow individual users to save search criteria and easily recall the search later. This approach saves time and eliminates the complexity of building detailed search criteria each time.

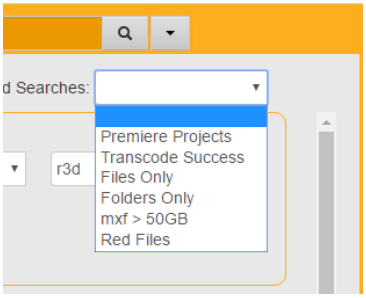
Searches are first created in the Advanced Search Window and can also be saved there. For instance, the user may commonly perform a search for Red Footage. It is easy then for the operator to create search criteria to just search for .R3D files. IN the example below, the user has created their search criteria and they will save it by clicking on the 'Save' button.





After pressing the Save button, the user names this file “Red Files”. After saving, these search criteria are available to be used in quick searches as described below. Note that saved searches cam ne saved as ‘Public’ which will be available to all users. If the ‘Public Search’ box is not checked, they are saved per user so that if an operator logs into the system with a different user name, their saved searches will not be available.

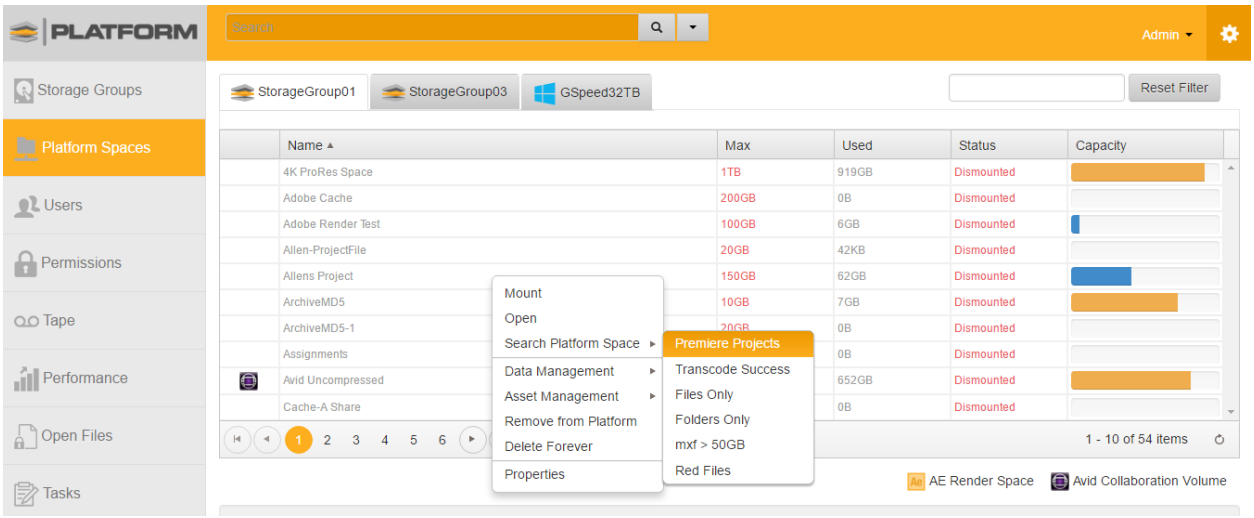
Using Saved Searches



In order to recall and use a saved search, the operator simply needs to bring up the Advanced Search Window and click on the Saved Searches drop down in the upper right hand corner of the screen. By clicking on one of the saved searches, the system will automatically perform the search and redirect the operator to the search results screen.

Using Saved Searches in the Platform Spaces Screen

Additionally, users also have the option of a using saved searches in the Platform Spaces screen. This is accomplished by right-clicking on a Platform Space and choosing ‘Search Platform Space’. If the user has saved searches the will be displayed as sub-menu options to the right of the Search Platform Space option.



If the user clicks on one of their saved searches, the system will search the Platform Space adding the criteria found in the saved search. In the example above, if the user clicked on 'Search Allens Project' and then selected 'Premiere Projects', the system will perform search just for Premiere Projects in that Platform Space.

The Search Results Screen

The Platform Search screen displays files and folders from the integrated catalog. Users can review proxies, update metadata, or make group updates to files listed. See the complete list of right-click options from files on the search screen below.

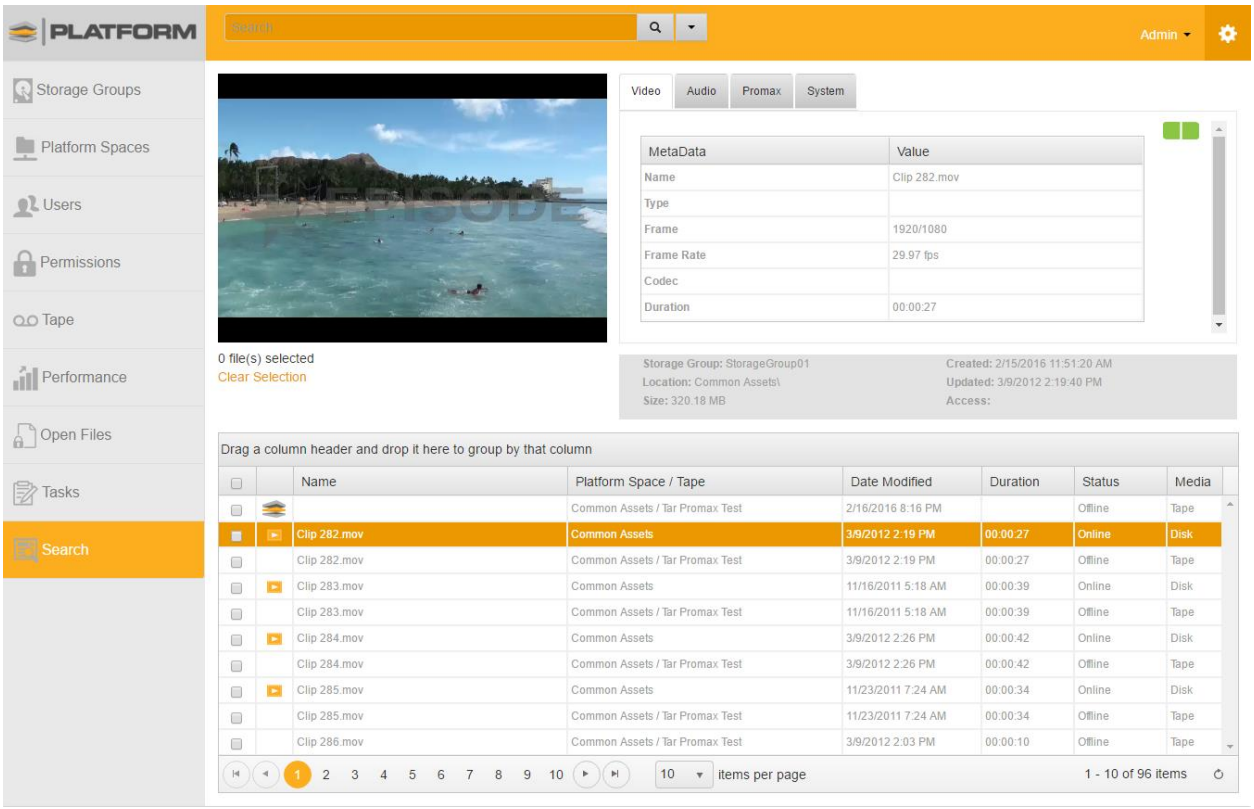


Figure 22 - Platform Search Screen

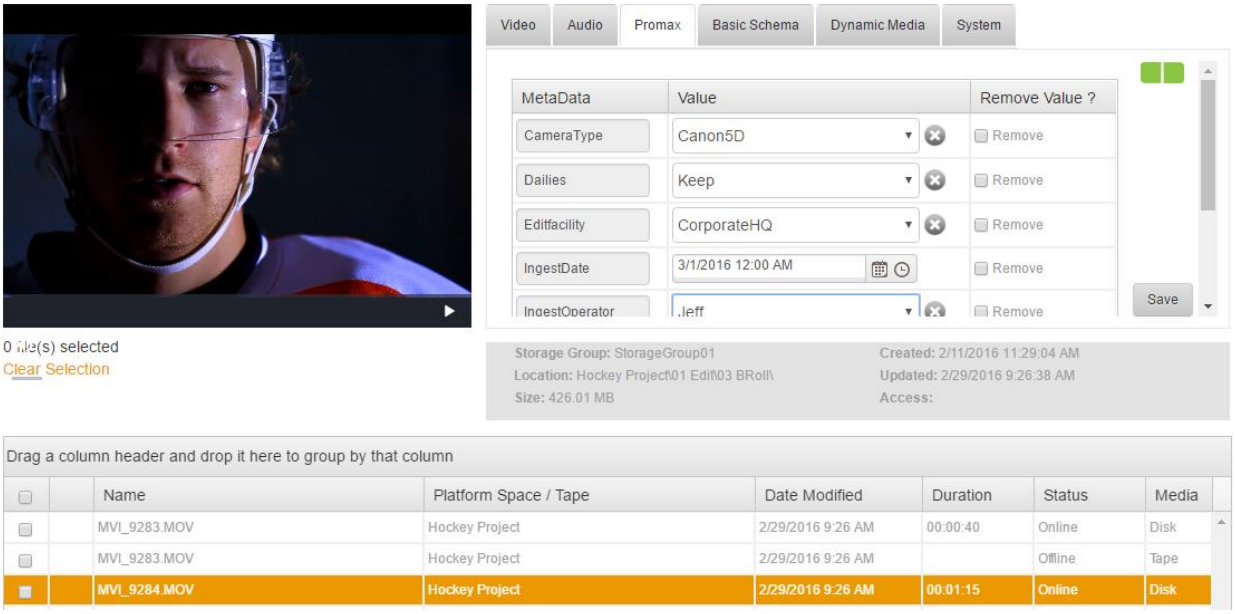
Video Player

Video Player – This HTML5 player will play H.264 videos from the file system or proxy files that were created with the Platform's proxy generator. When an operator clicks on a line in the search results grid, the system will attempt to bring up the first frame of the video in the Player. If it can be played the first frame will be displayed.

Playing a proxy – If an operator clicks on a video asset in the search results grid that has a proxy, if the original file cannot be played the proxy will be loaded into the player. However, if the original file can be played the system will attempt to play that first. If an operator wishes to specifically play the proxy, they can click on the proxy icon on the specific row.

Metadata

The metadata section of the search result screen allows operators to view and possibly update metadata on assets.



In the upper right hand corner of the search result screen, metadata is separated into XMP schema tabs. Each tab represents a different XMP schema and in the grid below the tab, each individual piece of metadata is displayed. To enable or disable the tabs from showing in this screen, the system administrator can update the Metadata Configuration Screen.

The ProMAX schema lists all of the custom metadata that has been set up by the system administrator. These values can be updated either on individual files or on groups of files. See Updating Metadata below. The following XMP schemas are available:

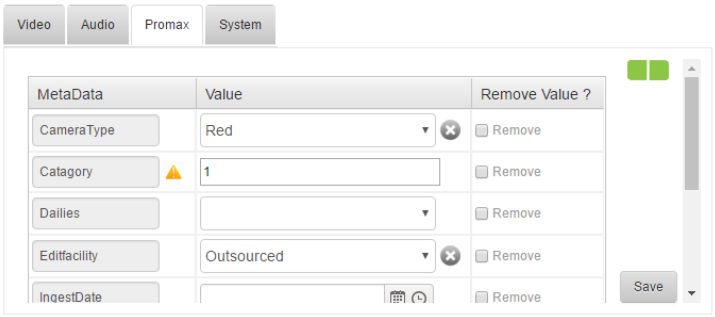
Available XMP Schemas

XMP Schema	Description
Video	Includes basic Video information including Name, Frame Size, Frame Rate. This schema shows by default.
Audio	Shows basic audio information extracted from video and/or audio Files. This schema shows by default.
ProMAX	Includes all custom metadata set up in the Metadata Configuration screen. This schema shows by default.
Basic Schema	This is the default XMP basic schema. http://ns.adobe.com/xap/1.0/ It does not show by default.

Dublin Core	http://purl.org/dc/elements/1.1/
Dynamic Media	http://ns.adobe.com/xmp/1.0/DynamicMedia/
Media Management	http://ns.adobe.com/xap/1.0/
System	Metadata values listed in this schema are extracted from the Windows File system.

Table 6 - Available XMP Schemas

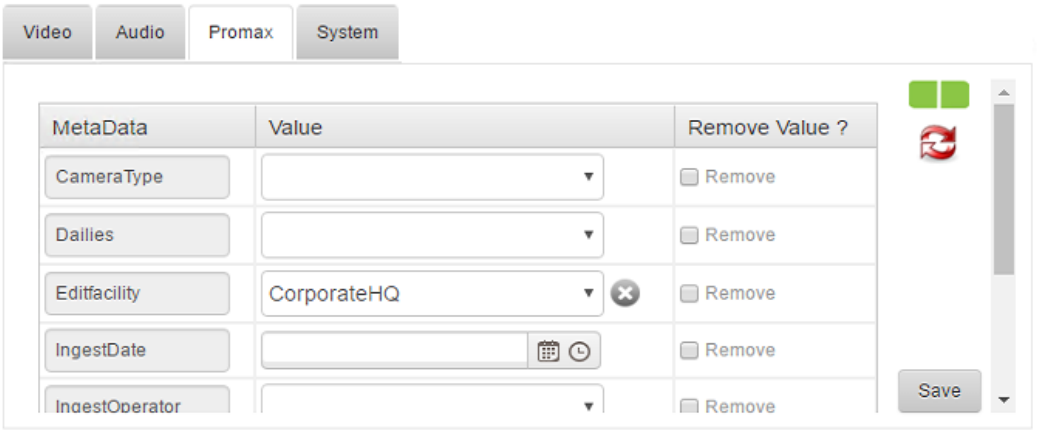
ProMAX Metadata Import



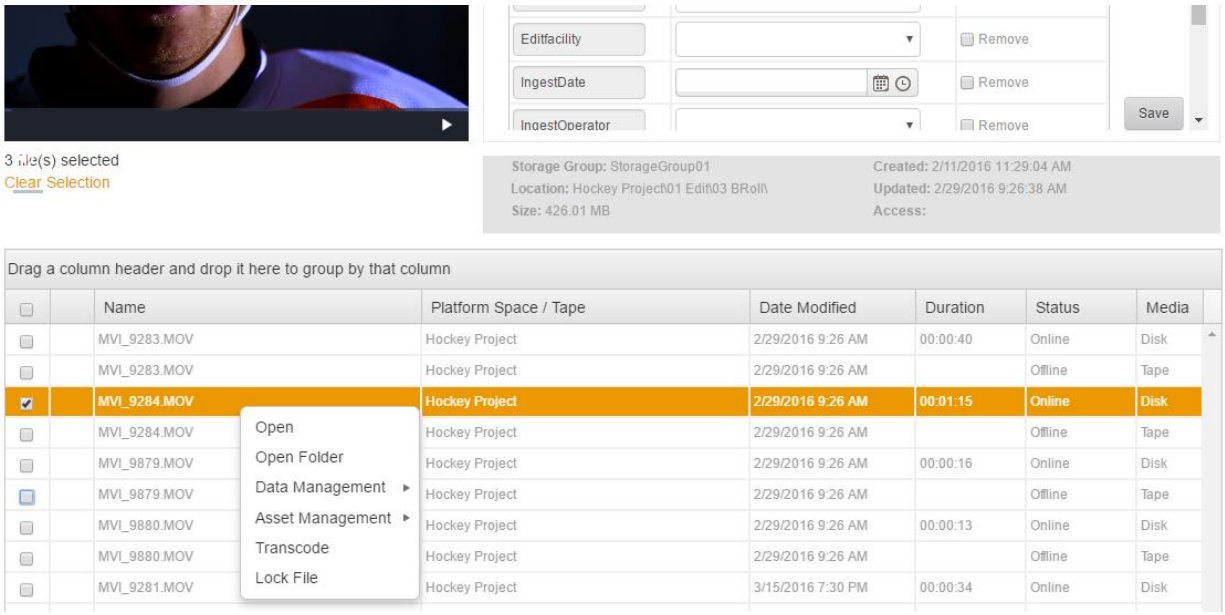
When displaying the ProMAX metadata fields, if the yellow hazard symbol is displayed next to a metadata field, this indicates that the metadata record exists in the file but has not been imported into the ProMAX Schema. By clicking on the symbol, the system will allow the operator to import the metadata field into the system.

Metadata Sync

If a Red double circular arrow below the status field in the metadata section, it means that Custom Metadata has been applied to the database, however, the file is not yet in sync with the database. This can occur when the file does not support XMP or when the file is open by another operator. The system will attempt to try to sync the file 10 times, once per hour to resolve the condition.



Search Results Grid



Search Grid Columns

The search grid contains the following columns:

Search Grid Columns

Column Name	Column Description
Checkbox	This column allows the operator to select the asset. Selecting one or more assets on one or more pages allows the operator to perform the right-click options listed below.
Name	This is the name of the file.
Platform Space / Tape	For files that have a media type of 'Disk' (see Media Type below), this column will show the Platform Space name that the file is currently in or was in (Online vs. Offline). For files that have a Media Type of 'Tape', this will show the name of the Platform Space and the Tape Label name of the tape the file was written to.
Date Modified	The date the last time the file was updated.
Duration	If a video asset, the running length of the video
Status	If the column shows 'Online', the file is on media type 'Disk' and is currently on a Storage Group that is connected to the Platform. If 'Offline' the file is either on a LTO Tape or is on a Storage Group that is not connected or not currently online.
Media	Media type can be 'Disk' or 'Tape'. Tape files cannot be opened, however if a proxy exists the proxy can be played in the Video Player.

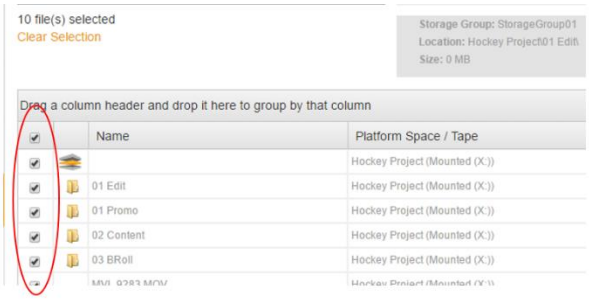
Selecting Files in the Search Grid

The search results grid allows operators to select individual files or a group of files and perform certain actions upon them. There are multiple methods for this ability:

Click on a grid line – this approach will select a single asset. The asset's information will be displayed in the upper right hand corner of the screen which includes the metadata and the detailed file information section.

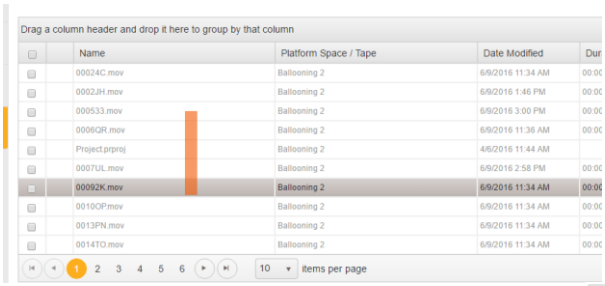
Click on the checkbox – This approach allows the operator to select multiple assets on one or multiple in the search display. The right-click options reflect only the operations that can be performed on all of the selected assets.

Click on the 'Select All' checkbox – If the user selects the checkbox in the column header, the system will select *all of the file results*. The number of files and folders selected will display above.

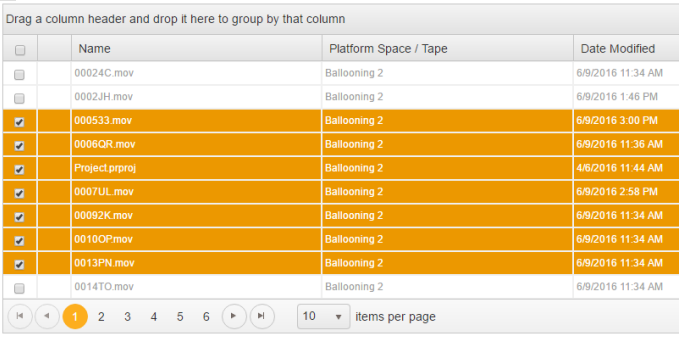


Select a folder – When a user selects a folder, the system will automatically select all of the files/folders within that folder.

Select Multiple Rows by Click and Drag – The user also has the option of selecting multiple rows in the grid by clicking on one row and dragging the cursor over other rows.

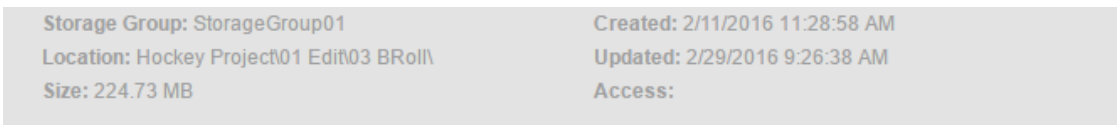


After the operator releases the left mouse button, the system will then automatically select all of the rows that were indicated.



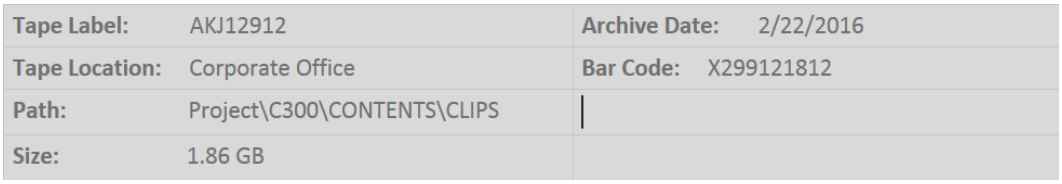
Detailed File Information

The grey window below the metadata display section shows detailed information about the individual file currently selected. If the user selects a file is on 'Disk', the system will display the following information.



Detailed File Information (Disk)

Column Name	Column Description
Storage Group	The name of the storage group that the file exists on or did exist on when it was inserted into the integrated catalog.
Location	The file path starting with the name of the root Platform Space.
Size	The file size in MB, GB or TB.
Created	The date the file was originally created.
Updated	The last modified date of the file.



Detailed File Information (Tape)

Column Name	Column Description
Storage Group	The name of the storage group that the file exists on or did exist on when it was inserted into the integrated catalog.
Location	The file path starting with the name of the root Platform Space.
Size	The file size in MB, GB or TB.
Created	The date the file was originally created.
Updated	The last modified date of the file.

Search Grid Right-Click Options

If an operator selects a single row or multiple rows on in the search results grid, they have the ability to right-click on one of those rows and they will see a menu of choices. These choices are dependent on the following factors:

1) The file(s) they chose and the status of those files
2) The operator's feature permission to the Search Screen
3) The operator's file permission to the file(s) in question.

Below is a full list of possible right-click options for the file(s). Each option's function is described as well as the permission required by the operator to use it.

Search Results Screen Right-Click Options

Menu Option	Description	Permission Rights
Open	The Platform will use the Operating System's default program to open the file. The system will mount the Platform Space if it is not already open.	'Read' Platform Space Permission
Open Folder	Opening the workstation operating systems default file browser, the system position on the file in question. This is particularly valuable when trying to locate a file in a deep folder structure.	'Read' Platform Space Permission
Search Folder	This option exists when the user has selected a single folder. When clicked on, the system will update the search criteria adding in the folder name to the folder path criteria and performing the search again. This has the effect of searching 'down' into the sub folder.	'Read' Platform Space Permission
Data Management		
Copy To	Under the Data Management menu, the 'Copy To' option allows users to copy the selected files and folders to another Platform Space. The destination can be at the root of the Platform Space or deeper within the folder structure.	'Read' Platform Space Permission to the Source Platform Space and 'Modify' to the Target Platform Space
Move To	Under the Data Management menu, the 'Move To' option allows users to move the selected files and folders to another Platform Space. The destination can be at the root of the Platform Space or deeper within the folder structure.	'Modify' Platform Space Permission to the Source and Target Platform Space
Backup	If an authorized LTO tape drive or tape library is connected to the Platform system, this option will allow the user to copy the selected file(s) and folder(s) to tape.	'Read' Platform Space Permission to the Source Platform Space and Admin Feature Permission to the Tape Screen.
Archive	If an authorized LTO tape drive or library is connected to the Platform system, this option allows the user to copy, verify and then remove the selected file(s) and folder(s) from the System.	Admin Feature Permission to the Search and Tape Screen.
Restore	Allows the user to copy from an LTO tape back to a Platform Space or to a Storage Group.	Admin Feature Permission to the Search and Tape Screen.

Table 7 - Search Results Right-Click Options

Search Results Screen Right-Click Options

Menu Option	Description	Permission Rights
Delete	Selected file(s) and folder(s) can be deleted with this command. The user has the option to confirm the delete.	'Modify' Platform Space Permission to the Source Platform Space
Asset Management		
Update Metadata	Platform custom metadata can be added or update to a group of files at a time.	'Modify' Platform Space Permission
Generate Proxy	Users can submit proxy generation requests to the server for single or multiple files.	Admin Feature Permission to the Search Screen
Remove from Search	This option is only available to file(s) and folder(s) copied to LTO Tape. It is a valuable approach when an administrator wishes to clear out Tape data from their Platform System.	Admin Feature Permission to the Search Screen
Transcode	Transcoding allows a user to encode a single or group of files into a particular format.	Admin Feature Permission to the Search Screen
Lock	Locking a file so that no other user can update it. See Platform File Locking below for details.	'Modify' Platform Space Permission

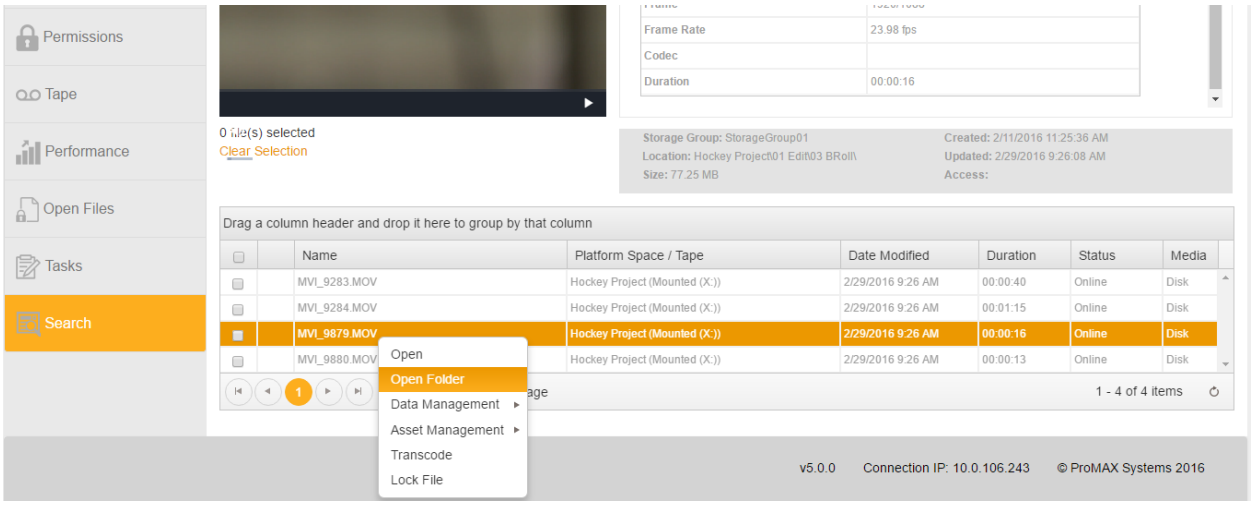
Table 8 - Search Results Right-Click Options

Open

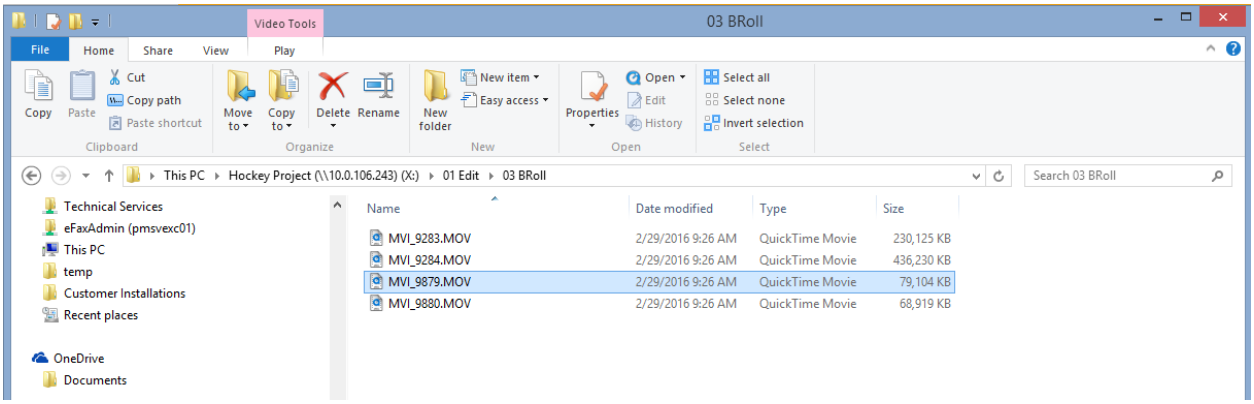
When an operator clicks on the open command the system will engage the local operating systems default program to open the requested file. For instance, if the file is a .mov, the system may start the Quicktime® Player and open the file in Quicktime.

Open Folder

Opening a folder will cause the local operating system to open a file browser and position on the file in question. This can be deep in the folder structure in the Platform Space. In the example below, the user right-clicks on the .mov file and then selects Open Folder.

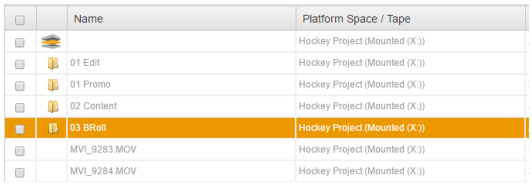


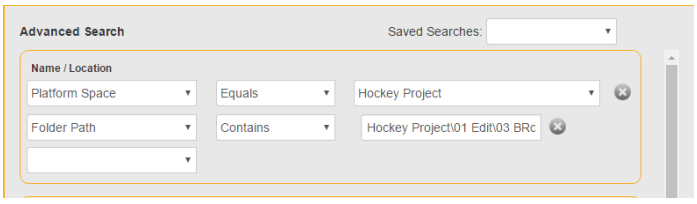
Then on windows, the Platform will open the Windows Explorer and position on the file two folders deep in the Platform Space 'Hockey Project'.



Search Folder

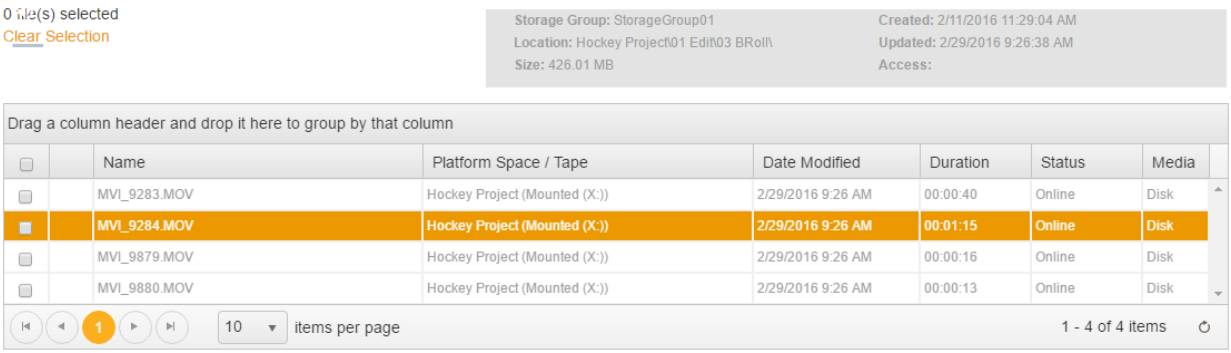
When selecting the Search Folder option, the system simple updates the current search criteria to add the targeted folder. For instance, if the user has executed a search and then is positioned on the '03 BRoll' folder and performs a 'Search Folder' command, the system will add the search criteria of the '03 BRoll' folder to the Search Path.





Then the system will automatically perform the search again.

The system then displays search results within that folder:

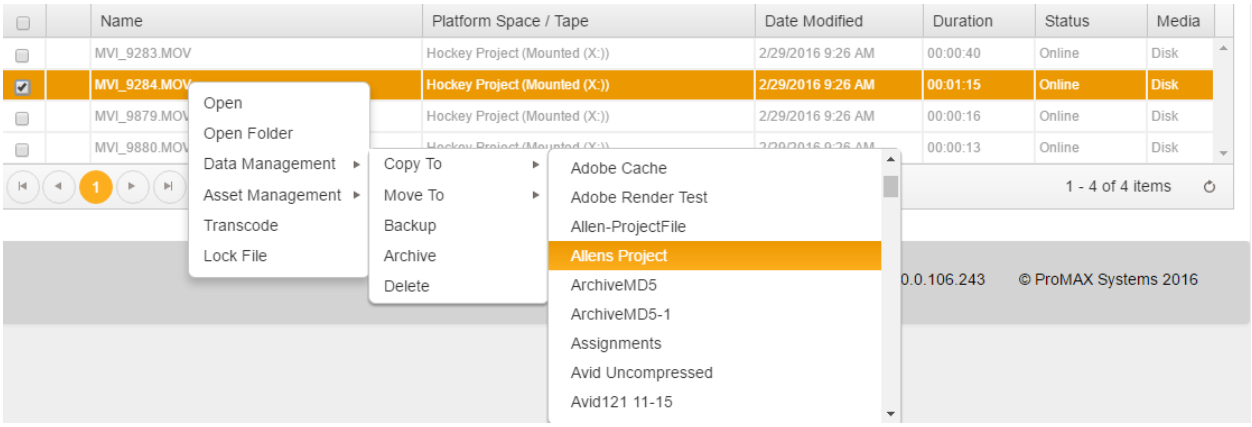


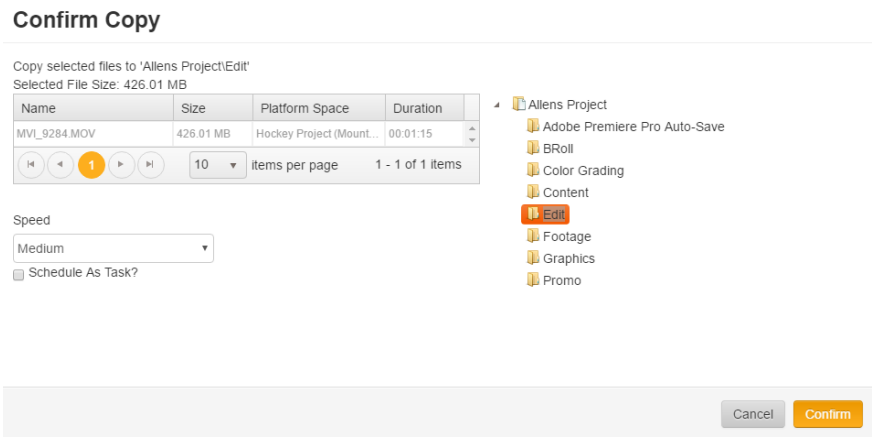
Data Management

The Data Management commands provide powerful capabilities to work with the media selected right from the integrated catalog. Note that when using these commands, the operator *does not* need to have the Platform Space mounted. These commands are executed on the server and therefore do not require a high-bandwidth connection to be used effectively.

Copy To / Move To

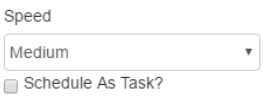
After selecting file(s) and folder(s), and selecting 'Data Management' and 'Copy To' or 'Move To' the system will display a list Platform Spaces to choose from. These Platform Spaces can be on any storage group and any node on the Platform System.





After selecting the Platform Space, the system will bring up a window asking the operator to further choose where in the Platform Space to copy or move the data.

In this example, the operator will choose to place the data in the 'Edit' folder in the Platform Space.



When using these commands, the operator has the choice of scheduling it as a task which is submitted to the task service, or executing the copy/move immediately. When run immediately, the system will bring up a progress window showing the results and in this case the operator must wait until the work is completed. If the operator chooses to submit the work as a task the can proceed to work in the Platform interface.

The copy/move commands actually move data on the server or from server to server. No data actually moves down to the workstation which makes this method very efficient.

Speed - The speed command tells the system how much Storage Group bandwidth to use when executing the commands. The operator can choose from Slow, Medium or Fast depending on how much storage bandwidth the user wishes to use. Generally, slow will use 25% capacity, Medium (the default) will use 50% and Fast will attempt to use 100% of the possible storage system speed.

Backup

The Backup and Archive operation is only available if the Platform System has an LTO tape drive installed and is used to copy the selected file(s) and folder(s) to an LTO tape drive. The backup process and backup options are described below in the Tape section of this manual.

Archive

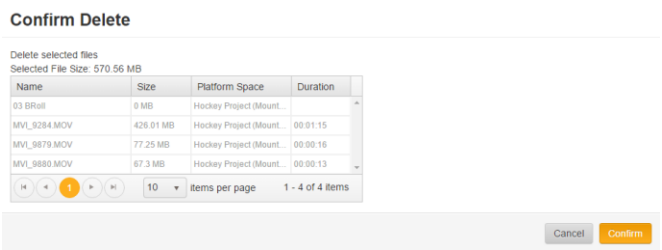
Archiving file(s) and folder(s) allows the operator to copy to LTO tape, automatically verify that the copy was successful and the delete information from the Platform Space. The details for the archive window and archive process are described in the Tape section of this manual.

Restore

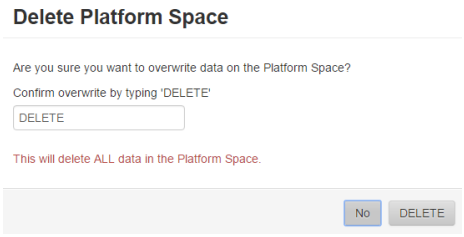
Restoring file(s) and folder(s) from tape is used to copy data from an LTO tape, back to disk. The Restore Window in the Tape Section of this manual describes the features and options for restoring data from an LTO tape. After selecting the Platform Spaces or individual files/folders to restore, and clicking on Restore, the restore window will open so that the operator may continue the restore process.

Delete

When a user selects the Delete option from the Data Management / Right-click menu, the system will first bring up a dialog box showing all of the files and folders that will be deleted. The user has the option of scrolling thru the candidates to ensure that the selection is correct. When the user clicks on the 'Confirm' button, the system will bring up a final delete confirmation.



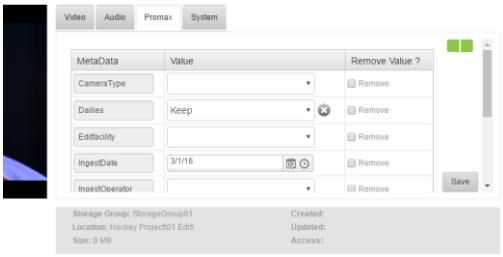
This dialog box requires that the operator type in the word 'DELETE' in capitals to ensure that the data will be removed from the system.



Update Metadata

Selected file metadata updates can be made in groups using the right-click Update Metadata command. In order to utilize this option, the user must have only selected file(s) to update. Folders cannot have metadata updates applied.

After selecting file(s) and right-clicking on the 'Update Metadata' option, the user can then click on the 'ProMAX' Tab in the metadata display area. Then the operator will choose what metadata updates they wish to apply to all of the files selected. Clicking on the 'Save' button will complete the process and the system will update the metadata. (See Update Metadata process).



Generate Proxy

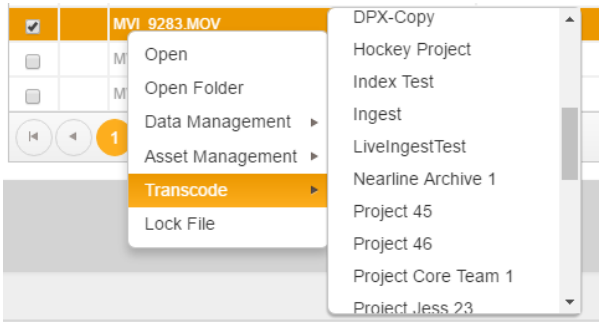
If a user wishes to generate a proxy on one or more videos that does not have a proxy, they can simply select the file(s) and click on the 'Generate Proxy' option. By requesting proxy generation on individual files, this option allows users to request proxies on demand vs. having them always generated on a particular Platform Space. The system will submit the request to the Task Service and server will begin the proxy encode when resources are available. See the Task Screen for more details about executing tasks.

Remove from Search

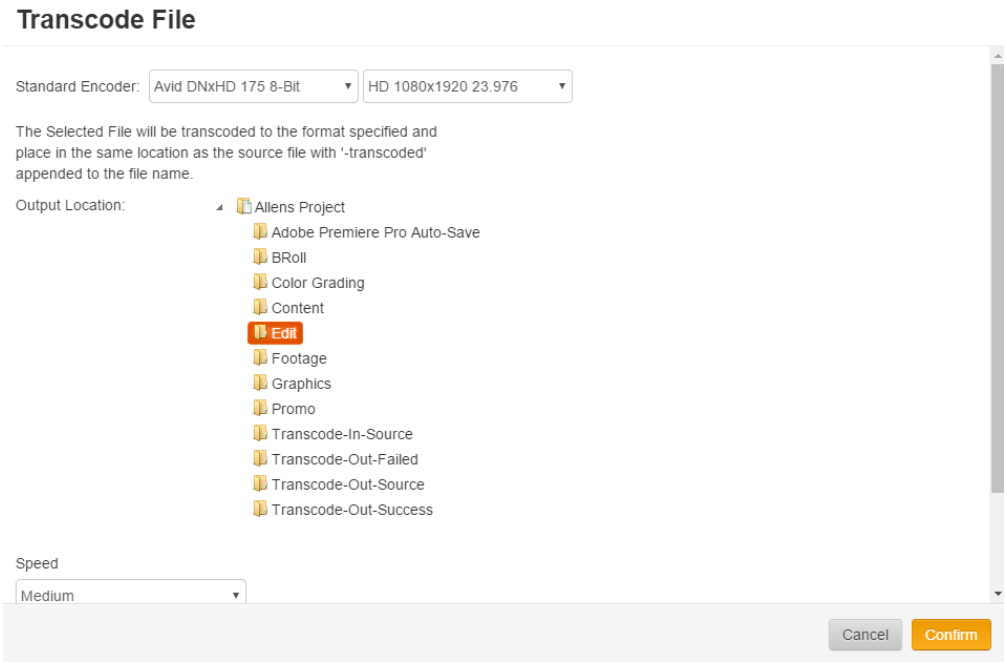
This command is only available for files/folders that have a Media Type of Tape, meaning the data selected has been copied to an LTO Tape. This option allows a system administrator to remove record of the details of LTO backups from the Platform Integrated Catalog.

Transcode

Additionally, if a user wishes to transcode a file or a group of files to a particular encode format, they can simple select the files and select the Transcode menu option. The system will show the list of Platform Space's the user has access to which will be used as the destination location for the resulting transcode.



The system will then bring up the Transcode Window and allow the user to select the transcode format.



The user will select the encoder format and then also have the option of choosing the folder for the resulting encode. After the encode is complete the system will place the resulting encoded file in the directory chosen with the '-transcoded' suffix added to the file.

Schedule - The scheduling of a task can be done immediately or for a future date. See task scheduling options for more details.

Platform File Locking

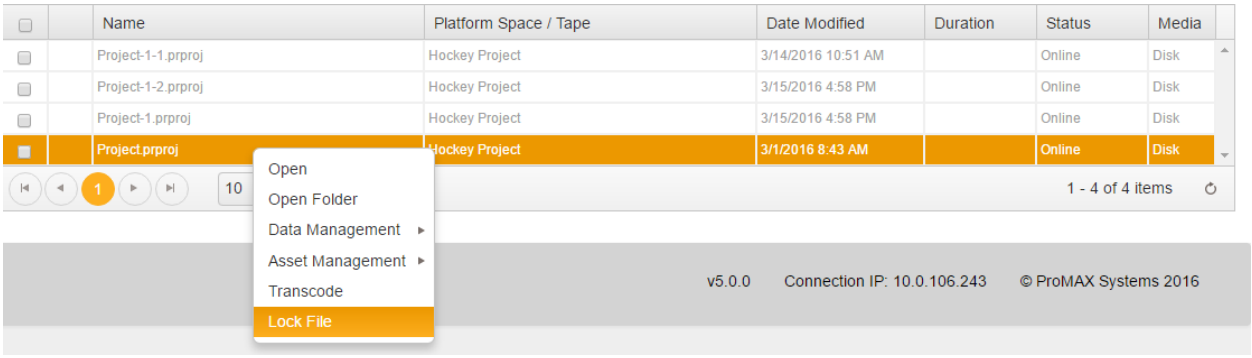
The file locking option in the Search Result screen allows users to put an exclusive lock on a file so that no other user can update or modify the file while it is locked. When requesting a lock, the system requires that no other user have the file locked and the system will only allow a user to select one file to lock at a time.

Lock File and Project Locking

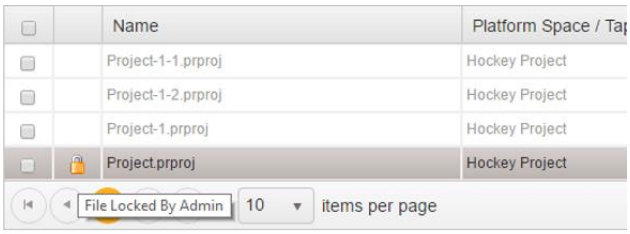
Although the File Lock option can be used with any file in the Platform System, it is typically used with certain project files like Adobe Premiere Pro® project files. This option is valuable to ensure that no other editor updates a project file while another user has it open.

Results of a Lock File – It is important to note that after a file is locked by a user, no other user will be able to modify the file with a program. Depending on the program, if a user attempts to open a locked file, the user may receive an error from the program. Errors are dependent on the individual program and may say the user does not have permission or give a more general error.

To lock a file, the user will right-click on the file and click on the 'Lock File' command:



After the lock command is complete, the system will add an icon next to the file. Any user viewing search results for the file can move their mouse over the file and see who has the file locked.



Unlock a File

Unlocking a file is only available if the lock icon appears next to a file and the user has 'Modify Permission' to the Platform Space that the file resides in. To unlock a file, the operator will select the file and select unlock. After the unlock is performed the lock icon will disappear.

Proxy Generation

Platform's proxy generation feature provides a powerful automatic method to create lower-resolution video files of camera footage for the purpose of low-bandwidth viewing of the material. To generate proxies on video files, the operator has a couple of different choices:

Proxy Generation on a Platform Space or Folders – This option is described in the Platform Space section of the manual and allows users to generate proxies on an entire Platform Space or on individual folders within the Platform Space.

Proxy Generation of a Specific File – As noted above, the operator can also select files on the search result screen and request a proxy file to be created.

Proxy Location

Proxy files are stored at the root of a Storage Group as defined in the Asset Management Tab of the System Configuration screen. This screen allows the system administrator to decide if the proxies should always be stored on a specific storage group or on the storage group that the source file's Platform Space exists on.

Regardless, the proxy file location is always located at the root of the Storage Group under a folder named 'PlatformProxies'. This folder is a 'hidden' folder in the Windows Operating System so if an administrator wants to find the folder they must first turn on the ability to see hidden files in Windows Explorer.

Proxy files are written under the PlatformProxies directory in a mirror folder structure of the Platform Space. For instance:

Platform Proxy Location

Source File Location	Proxy Location
StorageGroup01\Hockey Project\01 Edit\03 BRoll\MVI_9283.mov	StorageGroup01\PlatformProxies\ Hockey Project\01 Edit\03 BRoll\MVI_9283.mov.mp4

In this example the proxy is storage in the same folder structure as the source file under the PlatformProxies directory. Additionally, the Proxy type suffix is added to the end of the proxy file name. The proxy suffix is determined by the system's proxy encoding format which is selected in the Asset Management Tab of the System Configuration Screen.

Proxy Consumption

Proxy files can be played using the Platform Player in the search screen. Another method is for the system administrator to share the PlatformProxies directory and then allow users to mount an SMB share to that directory.

Transcoding

Platform's Transcoding System is a powerful element of the workflow server technology. Integrated into the Platform User Interface, is the ability to manage video encoding for files coming from cameras or final results going to delivery. All transcoding operations take place on a Platform Server Node and therefore offloads the work from the client workstation.

The transcoding global configuration is set up in the Transcoding Tab of the System Configuration Screens. System administrators are able to set up and choose options on how the transcoding system will work in these screens.

Transcoding is requested two different ways in the Platform System.

Transcoding thru a Platform Space – This option allows a user to set up a "Watch Folder" in the Platform Space and when files are added to the space, the transcode begins. See Platform Space Transcoding above for more details.

Transcoding from Search Results – This optional gives the operator the choice of transcoding a selected file or a group of files from the search results screen.

Standard Encoding Formats

The Platform System provides the following encoding formats. These formats are subject to change without notice and will be updated during releases of the Platform Software.

Platform Standard Encoding Formats

Standard Encoder	Red R3D Encoder	Comments
Avid DNxHD 110 10-Bit	Avid DNxHD 110 10-Bit	*1 (See below)
Avid DNxHD 115 8-Bit	Avid DNxHD 115 8-Bit	*1 (See below)
Avid DNxHD 145 8-Bit	Avid DNxHD 145 8-Bit	*1 (See below)
Avid DNxHD 175 10-Bit	Avid DNxHD 175 10-Bit	*1 (See below)
Avid DNxHD 175 8-Bit	Avid DNxHD 175 8-Bit	*1 (See below)
Avid DNxHD 220 10-Bit	Avid DNxHD 220 10-Bit	*1 (See below)
Avid DNxHD 220 8-Bit	Avid DNxHD 220 8-Bit	*1 (See below)
Avid DNxHD 36 8-Bit	Avid DNxHD 36 8-Bit	*1 (See below)
Avid DNxHD 60 8-Bit	Avid DNxHD 60 8-Bit	*1 (See below)
Avid DNxHR 444 12Bit UHD	Not Available	*1 (See below)
Avid DNxHR HQ 12Bit UHD	Not Available	*1 (See below)
Avid DNxHR SQ UHD	Not Available	*1 (See below)
Not Available	DPX	
H.264 10 Mbps	H.264 MP4 10 Mbps	
H.264 MP4 Proxy 200 kbps	H.264 Proxy	
HEVC MP4 20 Mbps	Not Available	
HEVC MP4 5 Mbps	Not Available	
ProRes 422	ProRes 422	*2 (See below)
ProRes 422 HQ	ProRes 422 HQ	*2 (See below)
ProRes 422 LT	ProRes 422 LT	*2 (See below)
ProRes 422 Proxy	ProRes 422 Proxy	*2 (See below)
ProRes 4444	ProRes 4444	*2 (See below)

For each encoder selected, the system will present applicable frame size and frame rates that are available for the format.

*1 = Standard Encoder requires upgrade from Telestream Episode® Standard to Episode Pro. Please contact your technology partner or ProMAX Systems for details on upgrading your Platform.

*2 = Standard Encoder requires upgrade from Telestream Episode® Standard to Episode Engine. Please contact your technology partner or ProMAX Systems for details on upgrading your Platform.

Creating Custom Encoding Formats

The system administrator can also create custom encoding formats and load those into the system configuration screen under the transcoding tab.

Users and Permissions

The security approach to the Platform System is based on Microsoft's Active Directory® technology. Because Platform Servers run on Microsoft Windows Sever® operating system, they employ the AD (Active Directory) technology to manage users, groups and file permissions throughout the Platform System. This enterprise security system provides the most robust file security protocols available.

Active Directory

The Platform System utilizes an AD and domain controller to read & write user's information to the Windows Operating System. Each user that logs into the Platform System is authenticating against the Windows Domain using Active Directory security.

There are two ways that Active Directory can be employed for Platform. The first is when the Platform is a domain controller and it hosts the Active Directory Server on the Platform itself.

Platform as a Domain Controller

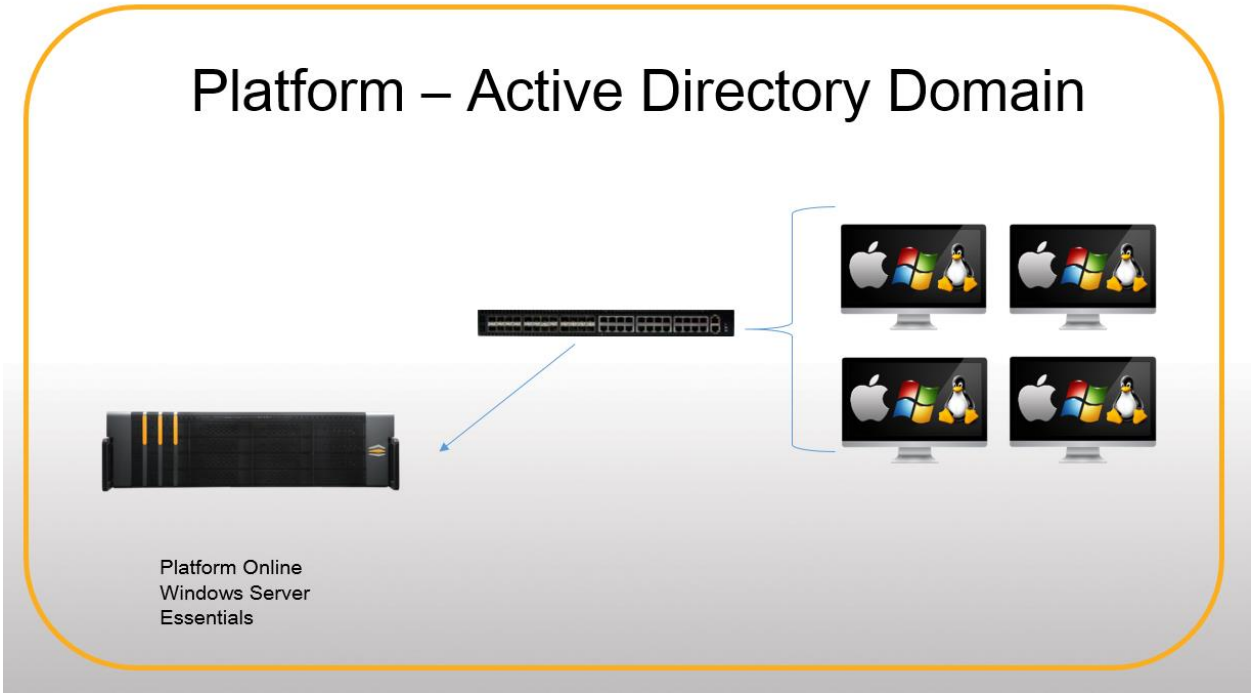
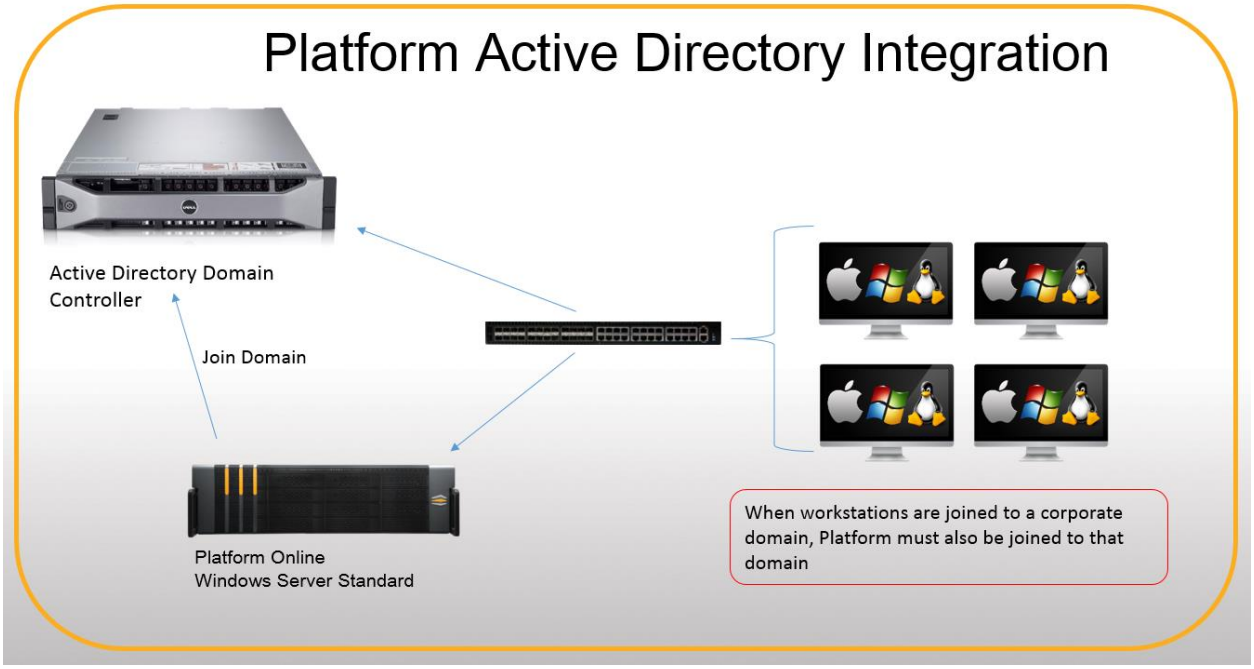


Figure 23 - Platform as an AD Domain Controller

By default, each Platform Server is shipped with Microsoft Windows Server Essentials® edition. This is a full Windows Server Operating System acting as a domain controller and which houses the Active Directory. In this case, Platform Security services interact with the AD on the Platform itself when validating user logins and permissions.

Platform connecting to a Separate Domain Controller

The second option is when the Platform joins another Microsoft domain and utilizes the Active Directory on another AD Controller. This option is typically used when Platform is installed in a corporate environment that has a Microsoft Windows® infrastructure in place and that organization wishes to utilize the existing security approach.



When the Platform joins an existing domain, the operating system used is Microsoft Windows Server Standard®. After joining the other domain, Platform communicates to that AD and can pull users, groups and security information from that domain.

For security to operate consistently in a user environment, if any workstations that are already joined to a Windows domain are going to be connecting to Platform, that Platform system must also be joined to the same domain.

An important decision before installation

Because the Platform must be joined to the domain before the Platform software can be installed, it is important to know the domain will be set up before installing the Platform. Please consult ProMAX or a Platform reseller if you have questions regarding these choices.

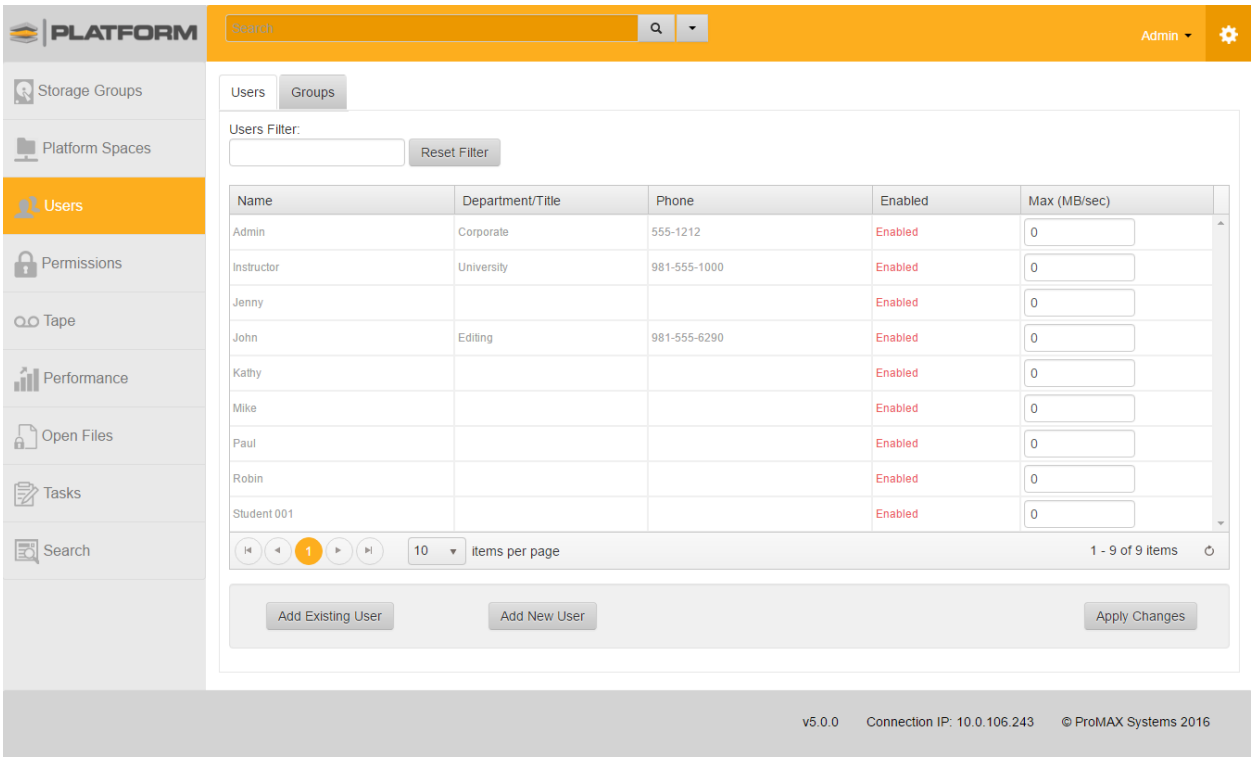
Updating the Active Directory

Depending on the Platform installation, the system may or may not be allowed to update the Active Directory. In the General Tab of the System Configuration screen, the system administrator can select 'Ad is Read Only'. This option tells the system to not allow the Platform to update the AD. If this is true, certain options described below will not be available and are marked accordingly.

Users

Users Screen

The Platform Users screen is used by system administrators to provide access to an individual user to the Platform System.



Key Points of Understanding

When adding, modify or updating users, changes to Platform Space Permissions, can take up to 15 – 20 minutes to populate in the Platform Interface and in the file system. This is because permission changes take place as a background task and have to potentially propagate over terabytes of data.

Users Tab

Any user that wishes to gain access to Platform resources must be explicitly added to the Users tab before login is possible. On the Users tab, the system has the following elements:

Users Filter – This filter box is a useful way to narrow down the specific user the operator is searching for. It auto filters with every character that is typed and the users displayed in the grid are reduced to only those that match what the operator types in the filter box.

Add Existing User – Used to find a user in the existing active directory and add them into the Platform (see below for details).

Add New User – (only available of Platform can update the AD) Used to create a new user in the Active Directory and then connect them to the Platform System. (See below for details).

Users Information Grid

The Users Information grid shows a list of users that have been added to the Platform Interface. This may or may not be all of the users in the Active Directory. The following columns are listed in the Users information grid.

Name – The user name which is the Display Name of the user in the Active Directory.

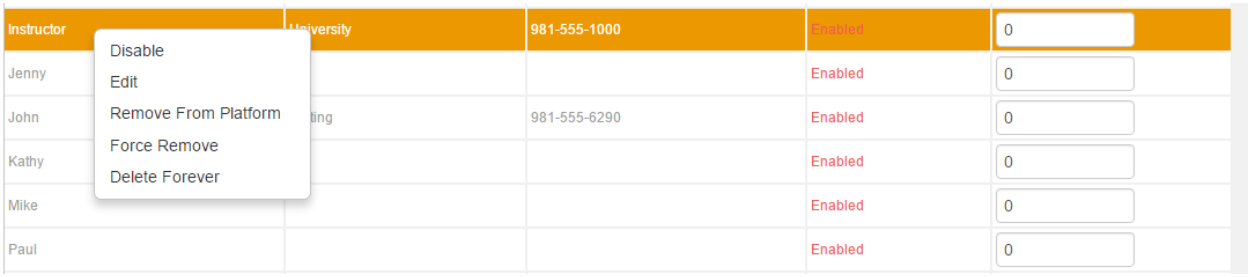
Department / Title – This is the Department field in the Organization tab of the Active Directory

Phone Number – This is the Telephone number found on the General Tab of the AD.

Enabled – This URL type field indicates of the user is active and can login to the Platform or disabled and cannot login. Clicking on the URL will toggle the field.

Max (MB/sec) – Allows system administrator to set a bandwidth limit on the amount of data that can be pulled from the Platform per second. Because the administrator is entering a field within the grid, once they complete the entry they must press on the Apply Changes button on the footer of the grid.

Users Grid Right-Click Options



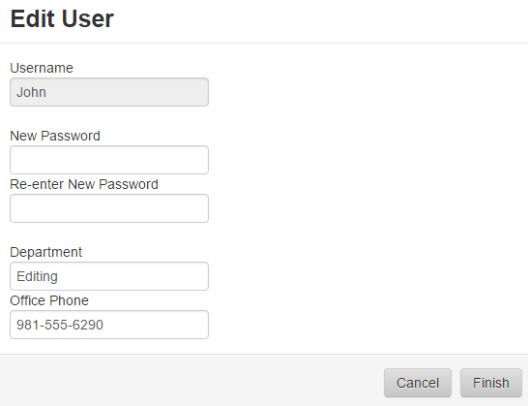
When an operator right-clicks on a user in the grid, the have a number of options:

Enable / Disable User

This option allows the administrator to enable or disable a user from the Platform. It is the same option as clicking on the Enabled column in the grid. When a user is disabled, it has the effect of 'Disable Account' in the Active Directory. If the account is disabled in the AD, the user will also not be able to login to the Windows domain. This option also prevents that user from connecting to the domain or the Platform Space Shares manually thru standard SMB connections.

This option is only available if the Platform can update the AD.

Edit



The Edit option is used by the system administrator to update password, Department and phone number in the Active Directory.

Remove from Platform

This option effectively 'unhooks' the user from the active directory. The user and user rights are removed from the Platform and all permissions for that user are removed from the Platform Spaces. However, the user is not deleted from the Active Directory.

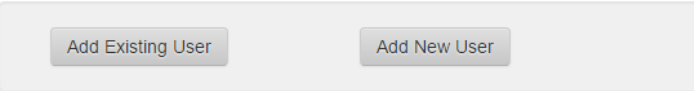
Force Remove

This option should only be used if there is an error on a standard remove. During the remove process, the system attempts to pull out all references of that user from all Storage Groups and all Platform Spaces. If that process fails in any way, the standard remove process will not remove the user. This option allows the administrator to disconnect the user anyway.

Delete Forever

When used by the system administrator, this option will delete the user in the Active Directory and remove all permissions for the user from all Platform Spaces in the Platform. This option is only available if the Platform can update the AD and should only be used when no more record of the user should exist. Please review the disable option as an alternative.

Adding Users

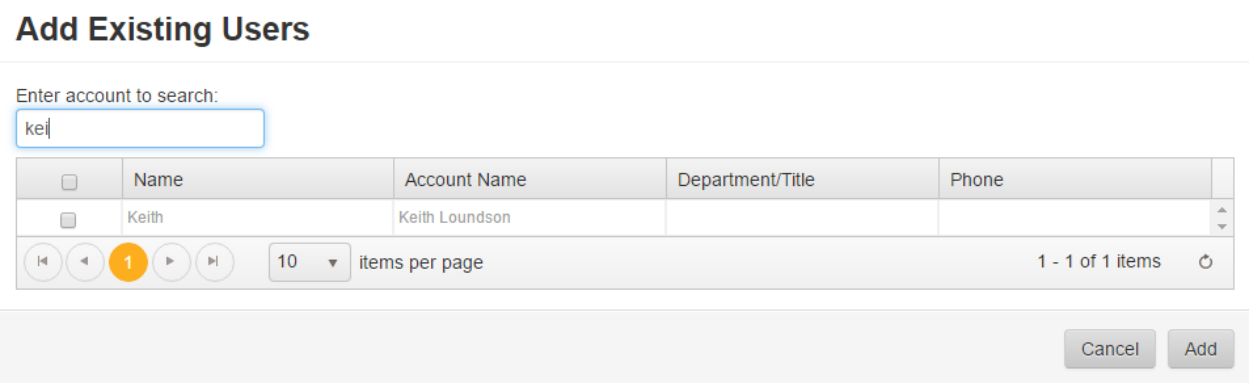


When a new user must be added to the Platform, the system administrator has three options.

1) They can add an existing user that is already in the Active Directory
2) They can add a New User that will be added to the Active Directory
3) They can import a Group listed in the Active Directory and the system will import all of the users in the group to the Platform

Adding an Existing User

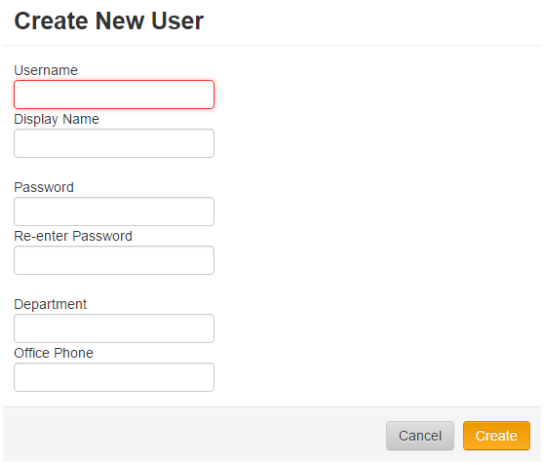
When clicking on the Add Existing User button, the Platform will bring up a Search window which is used



to locate the user in the Active Directory. This option is normally used when Platform is connected to another Domain and is utilizing an existing AD. The administrator will type in the user name in the search box and the system will search the AD for the name or names.

After locating the correct user, the administrator will select the check box of each user and then click on the 'Add' button.

Adding a New User



If the system administrator wishes to create a new user in the Active Directory, they will click on the Add New User button. The Platform will bring up a 'Create New User' Window and require the administrator to fill out the stand fields of:

Username – This is the login name of the user
Display Name – This is entered into the Display Name in the Ad. It can be different than the user name.

Password – This must follow the password rules of the AD and must be re-entered on the following field.

Department – The department name in the AD.

Office Phone – The Office Phone number in the Ad.

Importing a Group

See the Importing Members of a Group below in the Groups section. This option allows an administrator to add a batch of users into the Platform by importing the members of a specific AD group.

After Adding the User

After the user has clicked on the add button for either an existing AD user or a new AD user, the system must review and add user permissions for Platform Spaces. The approach is based on a key field in the Platform Spaces Tab of the System Configuration Screens called "Default Platform Space Permission".

If this field is set to Allowed, then the system will add 'Modify' permission to every Platform Space that is Online and connected to a Storage Group for that user.

If this field is set to Denied, then the system will not set any Platform Space access for the user and the Administrator must set these permissions manually. See Platform Space Permissions below.

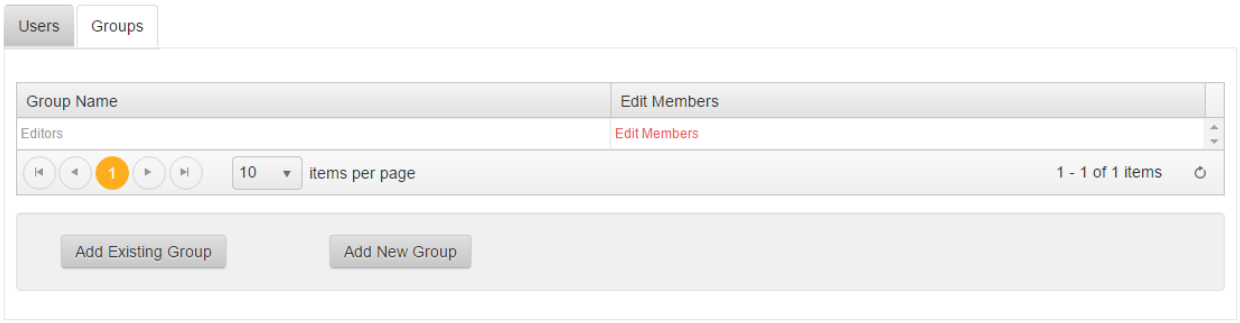
Groups Tab

Groups allow administrators to set up 'sets or groupings' of users and then apply file permission to those groups in the permissions screen. Groups are valuable to setting file permissions in the system because administrators can apply permissions to Platform Spaces by groups and then just add users into or pull users out of groups.

Groups can be added to the Platform System and have no effect until two conditions occur:

1) Users are added to the group
2) Groups are given permission to one or more Platform Spaces

Groups Information Grid

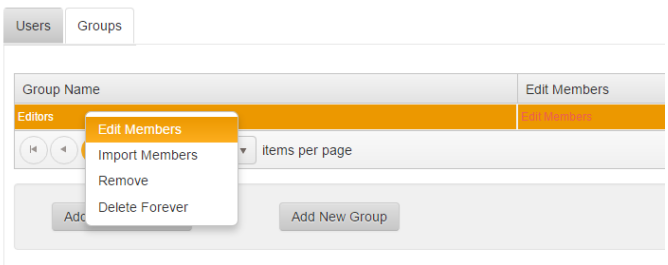


The Groups information grid has two columns:

Group Name – This is the name of the Security Group as specified in the Active Directory.

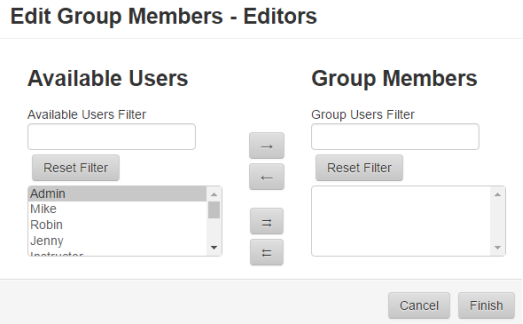
Edit Members – This URL field allows the administrator to add or delete members from the group.

Groups Right-Click Options



When an administrator wishes to work with a group in the information grid, the have the following right-click options:

Edit Members



The Edit Group Members screen is used by the administrator to add or remove Platform Users to the Group in question. By using the arrows between the Available Users and the Group Members, the administrator can add or remove members in the Group.

Import Members

Importing Members from a Group is a simple method to allow System Administrators to easily add users to the system that are already members of an existing group. By right-clicking on the group name, and selecting 'Import Members', the system will create a Platform User for every user in that group. If the user is already in the Platform, no updates will be made.

Remove

This option removes the selected group from the Platform System. Any Platform Space Permissions defined with this Group will also be automatically updated and the group will be removed from those Platform Spaces.

Delete Forever

When the system administrator issues this command, the system will delete the Group from the Active Directory and remove all permissions for the Group from all Platform Spaces in the Platform. This option is only available if the Platform can update the AD and should only be used when no more record of the Group should exist.

Permissions

Platform permission system allows administrators to define access levels to Platform Spaces and access levels to features in the Platform Interface. When users are set up in the system, they need to be set up with both access types.

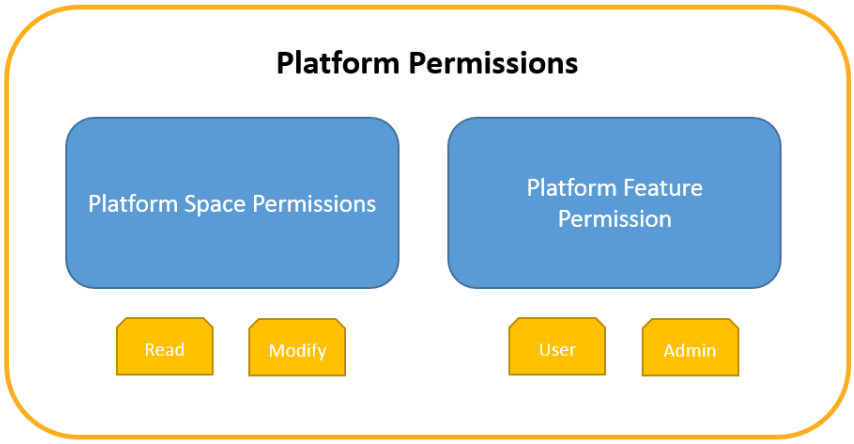


Figure 26 - Platform Permission Types

Platform Space Permissions

Platform Space Permissions define what access levels a user or group has to a mount point in the system (See Platform Spaces for details of how these volumes are defined and used). The table below describes the types of user access available for Platform Spaces:

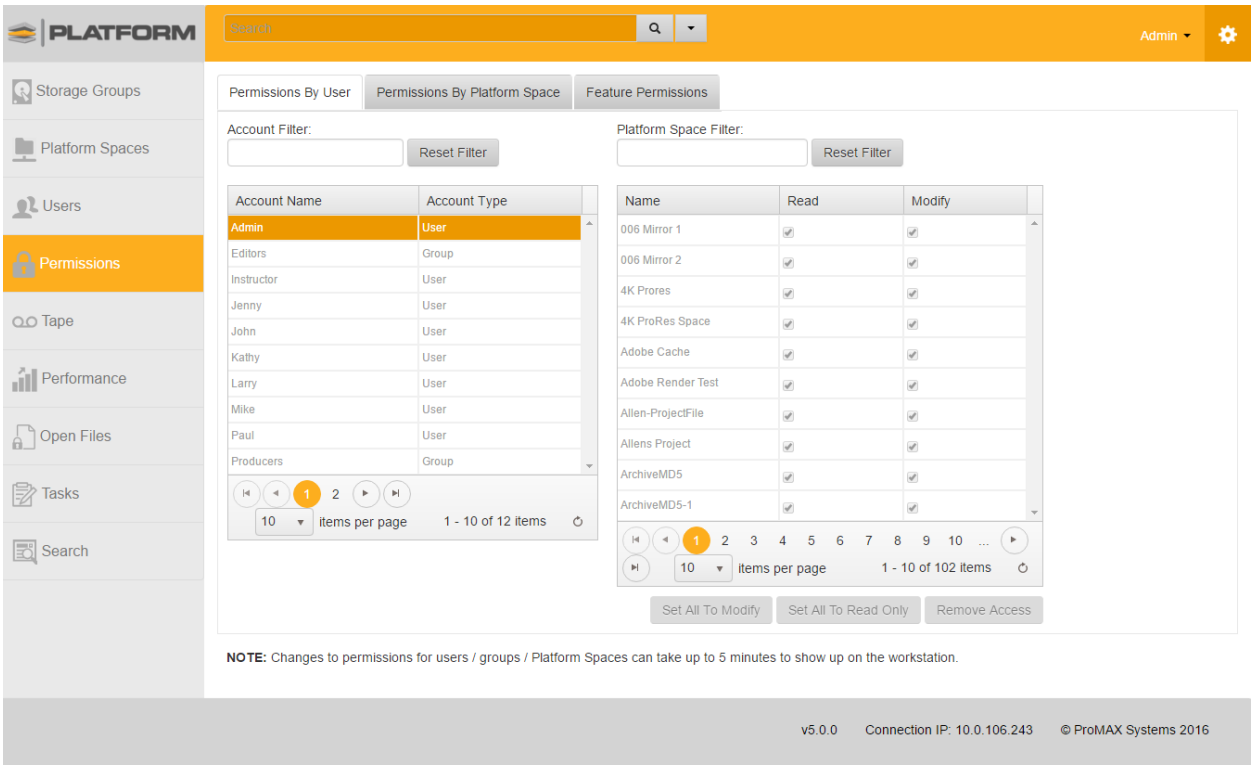
Platform Space Permission Access Types

Type	Description
Read	Users will be able to stream information, copy data and ready anything from the space. They will not be able to make any changes to the Platform Space nor will they be able to add any information or folders to the Space. Note that by giving a user Read access to a Platform Space, they will be able to search any information in that Space that has been indexed into the Integrated Catalog.
Modify	Modify Access allows the user to make any changes to data in the space. This includes updating files, adding new files and deleting files from the Space. Users are still restricted by the Platform Space size restriction defined in the Platform Space Properties window. All privileges available to users with Read Access are also automatically granted to users with Modify Access.
None	If a user or group does not have either Read or Modify, they will not even be able to see the Platform Space or any information in it.

Table 9 - Platform Space Permission Access Types

Permissions Screen

The permission screen is used to establish a user's access to the Platform's capabilities including access to Platform Space's and Platform Features.



The screen has three distinct tabs which allows the administrator to establish the permissions. When the screen opens, it starts on the Permissions by User tab. The three tabs are described below:

Permissions By User – By selecting a user from the list, the administrator can set Platform Space permissions for that specific user.

Permissions by Platform Space – By selecting a Platform Space from the list, the administrator can update all the system users access to that Platform Space.

Feature Permissions by User – By selecting a user from the list, the administrator can set Platform Feature Permissions for that specific user.

Key Points of Understanding

When adding, removing or updating Platform Space Permissions, changes can take up to 15 – 20 minutes to populate in the Platform Interface and in the file system. This is because permission changes take place as a background task and have to potentially propagate over terabytes of data.

Permissions by User Tab

When setting Platform Space permissions by user, the administrator selects a user from the list as shown in the example below:

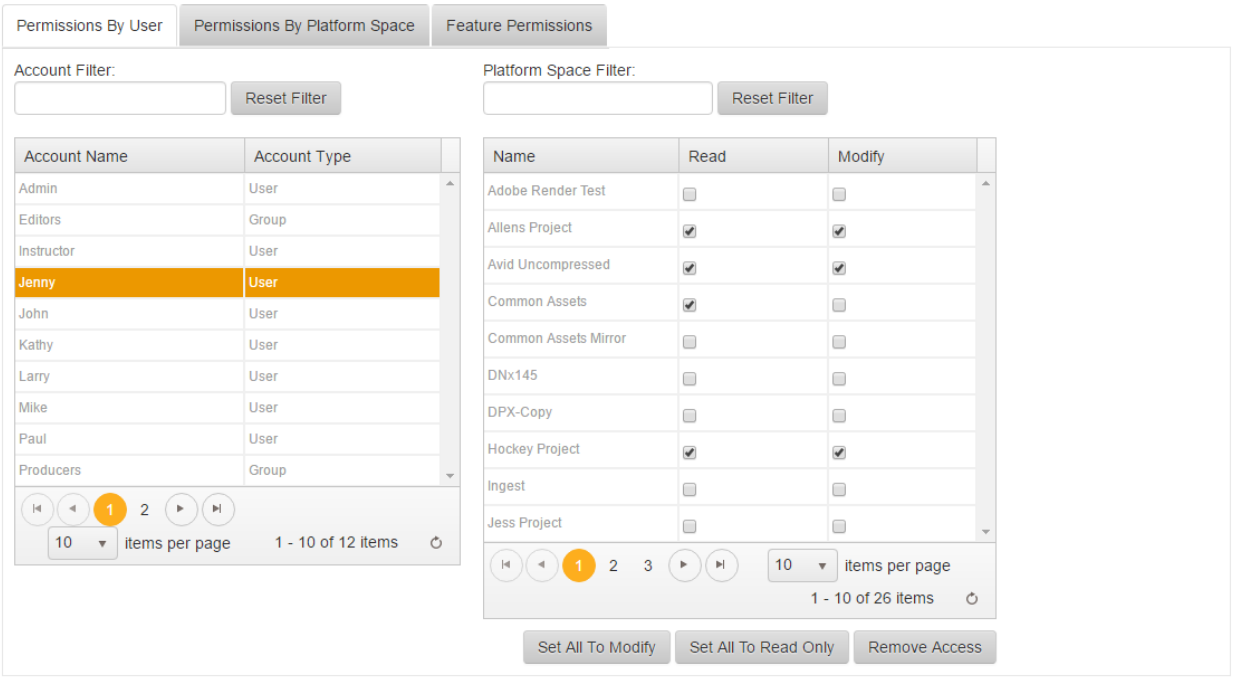
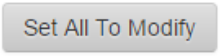


Figure 27 – Permissions by User

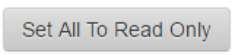
When selecting a user, Platform files in a list of Platform Spaces that the selected user has access to. The administrator can then set either 'Read' or 'Modify' privileges for that user for each Platform Space. If the administrator does not check anything for a Platform Space the user will not be able to see that Platform Space when they login.

Account Filter – This filter box automatically reduces the available user list by matching the characters typed into the box.

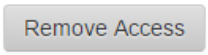
Platform Space Filter - This filter box automatically shows the Platform Spaces that match the characters typed into the box.



Will grant modify privilege to all Platform Spaces for the selected user. This includes Platform Space's on other pages in the list.



Will grant read privilege to all Platform Spaces for the selected user.



Will remove all access to all Platform Spaces for the selected user.

Permission by Platform Space Tab

If an administrator wishes to assign access rights to a specific Platform Space, they can use this tab of the Permissions screen.

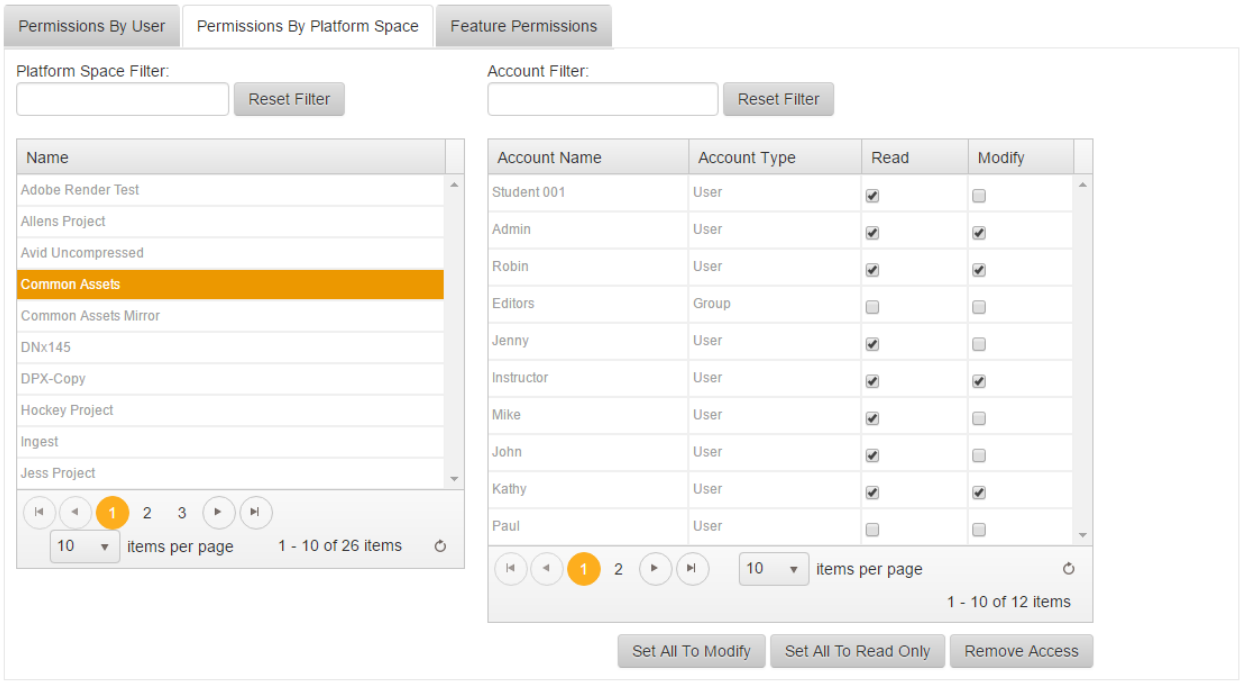
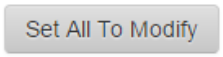


Figure 28 - Permissions by Platform Space

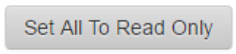
When an administrator clicks on a specific Platform Space, the system will then list all of the users in the system in the right-hand grid. The administrator can set either 'Read' or 'Modify' privileges for that Platform Space for each user that is connected to the Platform. If the administrator does not check anything for a user, they will not be able to see that Platform Space when they login.

Platform Space Filter - This filter box automatically shows the Platform Spaces that match the characters typed into the box.

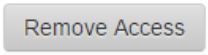
Account Filter – This filter box automatically reduces the available user list by matching the characters typed into the box.



Will grant modify privilege to all Platform Spaces for the selected user. This includes Platform Space's on other pages in the list.



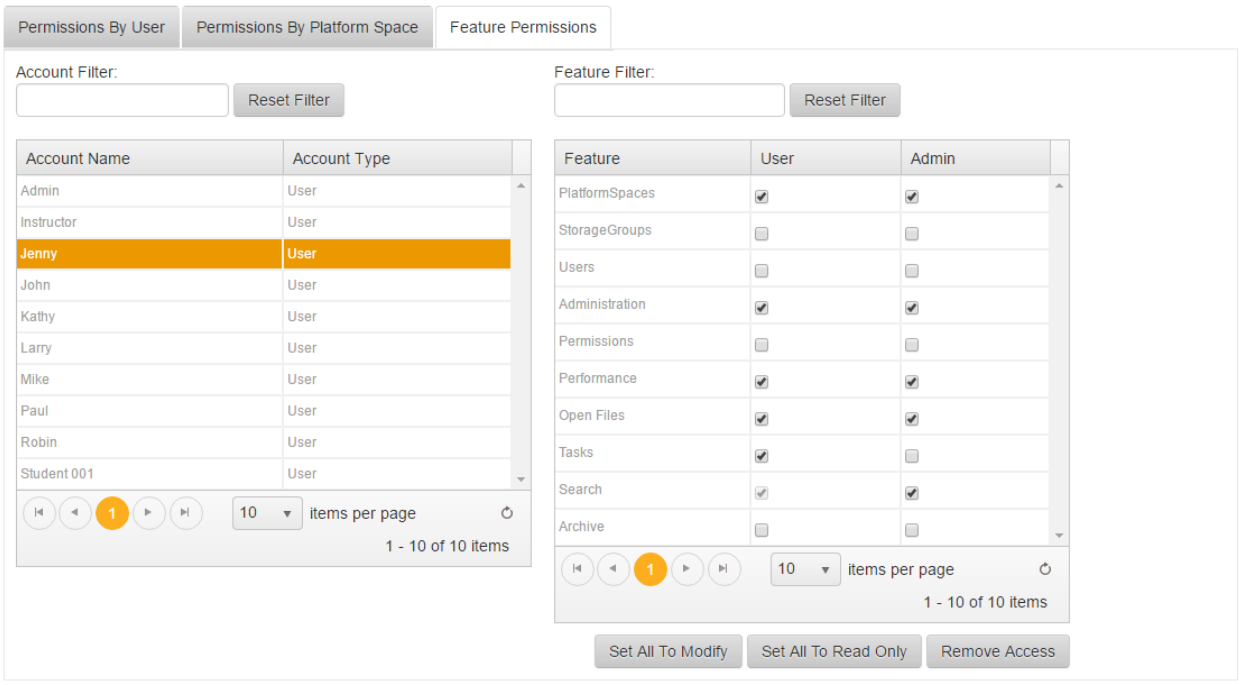
Will grant read privilege to all Platform Spaces for the selected user.



Will remove all access to all Platform Spaces for the selected user.

Feature Permissions

In order for users to have access to functions and capabilities of the Platform Software, they must be given Feature Permissions by the System Administrator. Feature permissions are loosely based on the Platform Menu system and contain an option for each Menu Item.



Each Feature Permission has three possible options:

Feature Permission Access Types

Type	Description
User	With this access users have the ability to use the screen as a standard user. This normally means the user has access to see information and act upon the Platform Spaces they have access to but not make administrative level changes.
Admin	With Admin access to a particular feature, the user will have access to all features within the menu item screen.
None	If a user does not have either User or Admin, they will not even be able to see the menu item when they login.

Feature Permission Descriptions

The table below describes the capabilities that are assigned when a user receives 'User' or 'Admin' privilege to each Feature Permission.

Feature Permission Descriptions

Feature Permission	User Privilege	Admin Privilege
Storage Groups	The user has the following options: - View Platform Spaces - View Snapshots	Full access to all right-click commands to the Storage Group Screen.
Platform Spaces	The user has access to the following options:	Full access to all right-click commands on the Platform Space

Feature Permission Descriptions

Feature Permission	User Privilege	Admin Privilege
	- Mount - Open - Search Platform Space - Data Management/Copy - Properties	Screen. Still restricted by what rights the user has to Platform Spaces.
Users	Users that login with this privilege can only see 'User' and 'Group' information. They cannot add or make any changes.	Full access to all buttons and commands on the Users Screen.
Permissions	Users can view permissions in the system but cannot make any changes.	Full access to all buttons and commands on the Permissions Screen.
Archive (Tape)	Users can view tape drive, tape catalog and library status but cannot request any updates or submit any jobs to the task service.	Full access to all buttons and commands on the Tape Screen.
Performance	Users can monitor all system performance statistics.	Users can monitor all system performance statistics.
Open Files	Users can view all open files for all users in the system.	Users can view all open files for all users in the system and have the option of force closing files.
Tasks	Users can view jobs and maintenance tasks but no options to change, cancel or stop jobs in progress.	Full access to all buttons and commands on the Task Screen.
Search	Users can only view all files, folders and Platform Spaces they have file permission access to. Based on their file permission access, they have the ability to other data management features. Users with this permission cannot use the Backup, Archive, Restore, Generate Proxy and Transcode features.	Full access to all buttons and commands on the Search screen, but must have Read/Modify permission to the file/folder they select.
Administration	Users will see a subset of options that affect the individual user's interaction with the Platform. This only configures the individual user's experience.	Used for administrators to configure how the Platform operates for all users of the system.

Default Feature Permissions

When a new user is created in the Platform, by default, they will automatically receive the following feature permissions:

New User Default Feature Permission Access

Feature	Permission
Platform Spaces	User
Storage Groups	None
Users	None
Administration	User
Permissions	None
Performance	None
Open Files	User
Tasks	None
Search	Read
Archive	None

Updating Feature Permissions

After feature permissions updates have been recorded, the user must log out and back into the Platform in order form the changes to take effect.

Tape

The integrated LTO tape backup and archival system within Platform provide system administrators powerful capabilities to safely backup and delivery media assets directly from the Platform Interface.

ProMAX Platform supports a number of different types of LTO tape devices including both standalone drives and LTO tape libraries.

The Tape Screen allows users and administrators information about the status of tape drives and management of catalog and tape libraries.

Key Points of Understanding

It is important to note that the ability to use the Tape functions in the Platform System requires the use of a ProMAX approved tape drive that must be licensed by ProMAX Systems. If the license has not been added to the Platform System, the tape screen and tape functionality will not be available to the administrator.

Key Tape Definitions

Platform defines tape backup and archive as follows:

Backup Definition – Backups mean copying file and folder information from a disk device (Platform Space or Storage Group) to one or more LTO Tapes. As seen later, backups can be full or incremental.

Archive – An archive also copies file and folder information from a disk device to LTO tape, but it also automatically performs an MD5 checksum on those operations and then deletes the data from the Platform Space. Users that just want to make copies of files should use the backup option.

Tape Formats

Platform supports both standard LTFS and Tar (tarball) formats so that operators can move tapes to other tape systems. The tar format is written in 5GB file chunks and contains elements of an XML file for the tape directory. The Platform system can also read existing Cache-A tapes.

When a new tape is inserted into the system it must be formatted. During the format process the operator will choose which format, tar or LTFS, to use. The table below describes some differences between tar and LTFS formats.

TAR vs. LTFS tape Format

Characteristic	TAR	LTFS
Read / Write Speed	LTFS will be slower on file restores because of the design of the tape format. LTFS can be faster on large file writes for the same reason. Each time a new tape write job is completed, the LTFS tape will spin to the beginning of the tape to write the table of	

TAR vs. LTFS tape Format

Characteristic	TAR	LTFS
	contents. This design causes LTFS to be a poor backup format. Tar is a better format for many small files (image based files like DPX, etc.).	
Compatibility with other systems	Tar is generally not compatible with other 3rd party tape systems so it should be used when using data between ProMAX Platform Systems only.	LTFS is an industry standard and is compatible with other systems that follow the LTFS specification.
Best Used for	Tar works well for both full backup, incremental backup and delivery. A tar tape can have multiple versions of the same file (file path) on it.	LTFS is best as a delivery format to send to 3rd parties. The design of LTFS is like a disk file system on tape and therefore only allows saving one copy of a file in a given file path to a single LTFS Tape.

Table 10 - Tar vs. LTFS Tape Format

Backup Types

The Platform System uses the traditional definition of Full and Incremental backup to allow system administrators to keep data safe and minimize the time to complete backups.

Full Backup – The full backup copies every file in a Platform Space or every file selected to the tape and then sets the 'archive bit' for the file on disk. The 'backup flag' tells the Platform System that the file has been backed up.

Incremental Backup – The Incremental Backup option copies files to tape that have changed since the last Full Backup. Each time a file is changed on a Storage Group, the Platform will update the 'backup flag' to indicate the file has changed. Then when an incremental backup is requested, the system will backup these files to tape.

Tape Generations

The ProMAX Platform supports the following tape drives and formats.

LTO Tape Generation Support Matrix

Tape Drive Generation	LTO1-LTO3 Cartridge	LTO4 Cartridge	LTO5 Cartridge	LTO6 Cartridge	LTO7 Cartridge
LTO 4 Drive	Not Supported	Read Only	Not Supported	Not Supported	Not Supported
LTO 5 Drive	Not Supported	Read Only	Read/Write	Not Supported	Not Supported
LTO 6 Drive	Not Supported	Read Only	Read/Write	Read/Write	Not Supported
LTO 7 Drive	Not Supported	Not Supported	Read Only	Read/Write	Read/Write

Table 11 - LTO Tape Generation Support Matrix

Tape Screen

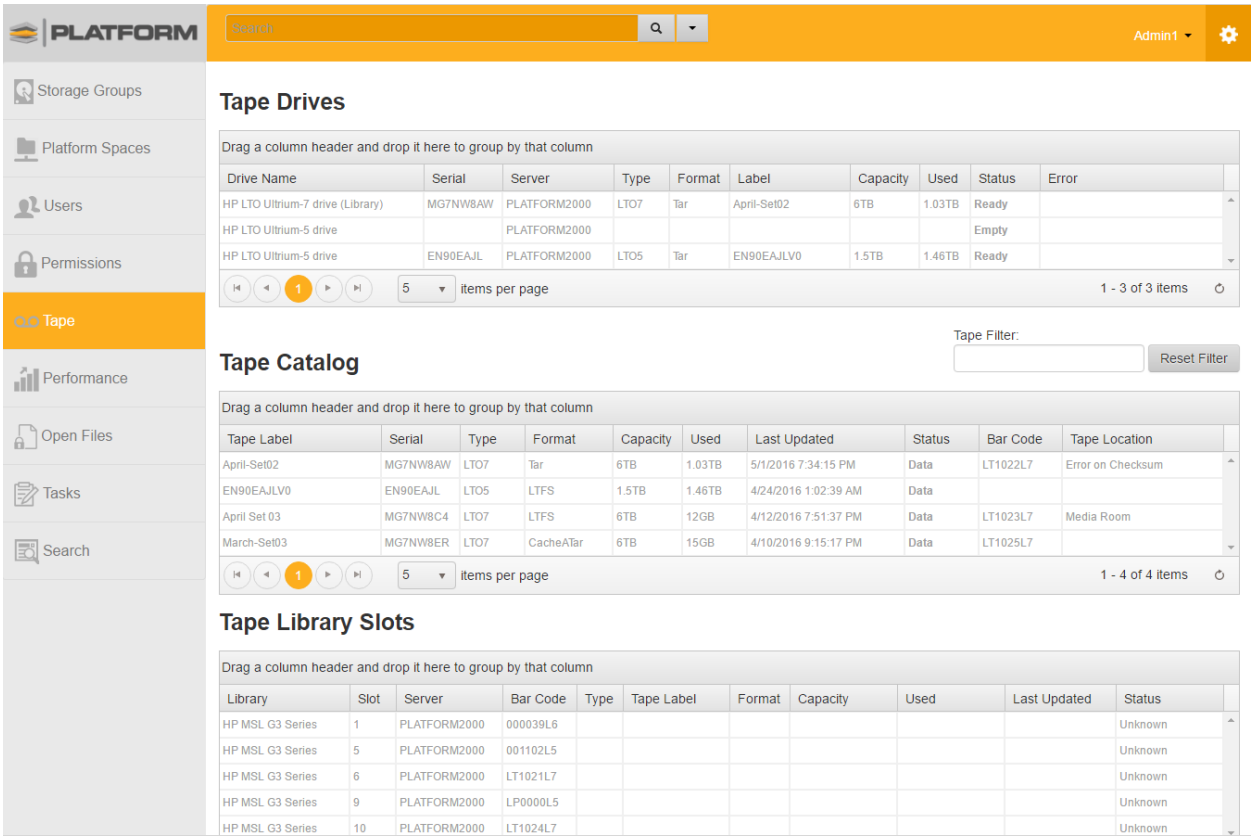


Figure 29 - Platform Tape Screen

The tape drive screen has three sections allowing administrators full control of LTO Tape operations from one screen.

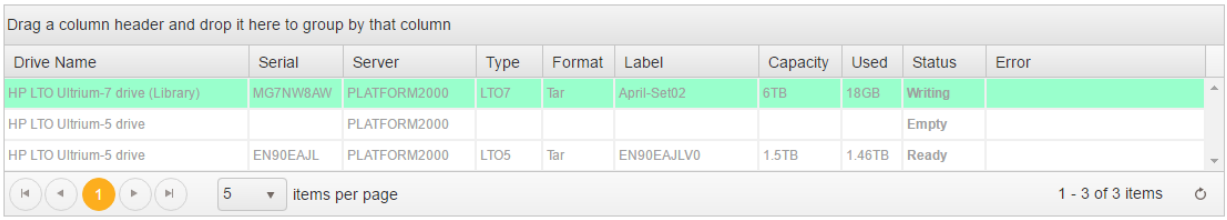
Tape Drives – This grid shows all of the tape drives connect to the Platform Network and their current status.

Tape Catalog – Lists one entry for each tape that has been used or imported into the Platform System.

Tape Library Slots – Lists one entry for each slot in each tape library connected to the Platform Network.

Tape Drives

The Tape Drives information grid allows operators to see the current status of tape drives and perform various requests to tape drives. Both individual and library tape drives will be displayed in this list. This grid refreshes every 2 seconds.



The Tape Drives Information Grid Columns

The tape drive information grid provides the current status of all supported tape drives connected to the Platform System which refreshes frequently.

Tape Drives Grid Columns

Column Name	Column Description
Device Name	Shows the name of the tape drive. When working with a tape drive in a tape library (automation drive), the system will show (Library) at the end of the name.
Serial	This is the serial number of the tape inserted into the drive. If no tape is inserted in the drive this will be blank.
Server	This is the name of Platform Node that the tape drive is connected to. Because Platform allows multiple nodes, system administrators can connect tape drives to different servers.
Type	The generation of LTO tape that is inserted. Typical options range from LTO4 thru LTO7.
Format	This is the format of the currently inserted tape. Options include tar, LTFS, Cache-A tar, Cache-LTFS.
Label	The tape label is the user defined name for the tape. This is established when the tape is initially formatted. The Platform System generally refers to a tape cartridge by the tape label name.
Capacity	Based on the LTO Type (Generation), the system will describe the total uncompressed capacity for the tape.
Used	An approximate total space used on the tape. Please note that this includes the tape drive compression so even though a particular tape operation may copy 50 GB to the tape for instance, the space ***used*** may show less than 50GB.
Status	**See Tape Drive Status below.**
Error	This is a status message of any errors that have occurred for this tape drive / tape cartridge combination.

Table 12 – Tape Drive Status

Tape Drive Status'

The following Status indicators can be listed for each of the tape drives in the system. Status' are broken down between active (tape drive is moving), and inactive.

Tape Drive Status'

Tape Drive Status	Description

Active Tape Drive Status'	
Reading	The drive is currently reading data from the tape.
ReadingTOC	The drive is reading the Table of Contents (TOC) from the tape.
Rewind	The drive is rewinding the tape to the beginning.
Seeking	The drive is positioning to a location on the tape.
Writing	The drive is writing data to the tape.
WritingTOC	The drive is writing the Table of Contents (TOC) to the tape or writing the TOC to the database.
Inactive Tape Drive Status'	
Empty	There is no tape cartridge in the tape drive.
Data	Tape is formatted has data written to it.
Blank	Tape has been formatted but has no data on it.
Full	The tape is part of a multi-tape backup or archive operation. This tape can no longer be written to until it is reformatted.
Read Only	Tape is formatted with a Platform Native Format but is marked as read only (write protected). This can be caused by the physical read lock on the tape.
Read Only (Cache-A)	Cache-A formatted tar tapes inserted into Platform can be read by not written to.
Error	There was an error during the current or prior tape operation. The operator can click on the 'Error' URL in the status column to see more details.
Suspect	The tape has been marked suspect due to an unrecoverable write error. The operator can attempt to recover the contents of the tape with the recover command.

Tape Cartridge Status'

The following tape cartridge status are available in the Platform System:

Tape Cartridge Status'

Cartridge Status	Description
Data	Tape is formatted has data written to it.
Blank	Tape has been formatted but has no data on it.
Full	Tape is part of a multi-tape backup and has reached its capacity. No more data can be written to the tape.
Read Only	Tape is formatted with a Platform Native Format but is marked as read only. This can be caused by the physical read lock on the tape.
Read Only (Cache-A)	Cache-A tar formatted tapes inserted into Platform can be read but not written to.
Read Errors	The read operation to the tape had recoverable Read Errors. This is a warning that the tape could become unreliable.
Suspect	The tape has been marked suspect due to an unrecoverable write error. The operator can attempt to recover the contents of the tape with the recover command.

Right-Click Options for Tape Drives

The following Right-Click options are available for administrators that have 'Admin' feature permission to the Tape Screen:

Format – The format command causes all existing information on a tape to be erased and the tape specific format (LTFS or tar) is established.

Eject –

For standalone drives, this option causes the tape drive to release the current tape so that the operator may extract it. This option will only appear if there is a tape loaded into the drive and the unit is not active.

For tape automation drives (tape libraries), this option causes the tape library to return the current tape to the slot that it was previously positioned in. If there is another tape in that slot, the system will produce and error message and the operator can use the 'Move' command to move the tape to another slot.

Sync Catalog / Import Tape – When a tape is inserted in the system, if the tape is a ProMAX tar, Cache-A tar, or another LTFS tape, the system will show the error message 'Must Sync Tape'. This means the inserted tape is not in the Platform Catalog and must be imported (synced) before it can be used. The Sync Catalog option will submit a task to the task service to perform the sync operation. After the tape has been synced, the operator can search the tape results in the catalog.

Search Tape – This is the same option described below under the Tape Catalog grid allowing the operator to inquiry on the contents of the tape.

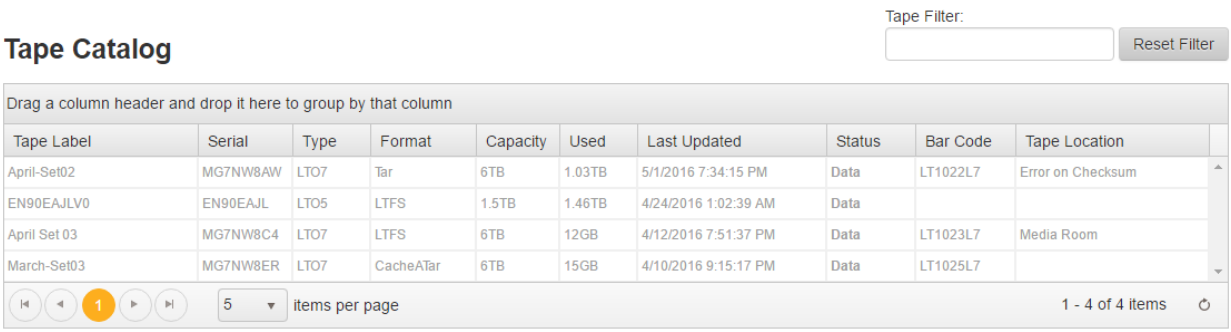
Tasks – When selecting this option, the Platform will redirect to the Task Screen and show the user jobs for the current tape drive.

Stop – If a tape job is running (Backup, Archive, or Restore), the operator has the option of requesting the job to stop. This command will stop the job before it is completed if possible. The job will not complete and the job status will result in a warning or an error. *The operator should be aware that issuing a stop command will not immediately cancel the job. The tape system must clean up the work it is doing and therefore a stop command can take many minutes before the job is canceled.*

Recover – This option only appears of the tape status is marked as Suspect. A tape marked Suspect indicates there was an unrecoverable write error during a write operation. The Recover operation is a low level attempt to pull files from the tape and should be used only as a last resort to recovery data from a tape cartridge.

Tape Catalog

The tape catalog grid shows information all of the tape cartridges (a catalog of tapes) that have been imported or used in any tape drive connected to the Platform System. Each time a new tape is formatted or imported, the tape cartridge information is captured and stored.



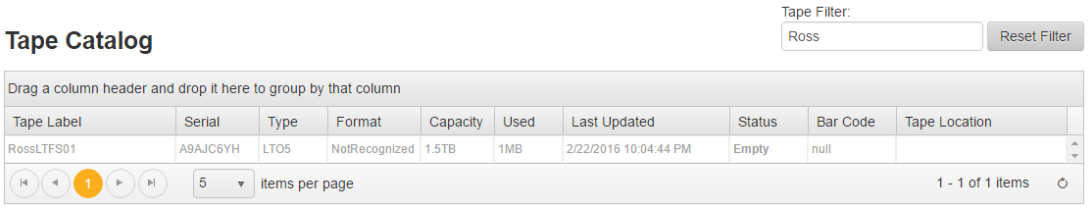
Tape Catalog Information Grid

Tape Catalog Grid Columns

Column Name	Column Description
Tape Label	The tape label is the user defined name for the tape. This is established when the tape is initially formatted. The Platform System generally refers to a tape cartridge by the tape label name.
Serial	This is the serial number of the tape which is established when the tape is manufactured and cannot be changed.
Type	The generation of LTO tape that is inserted. Typical options range from LTO4 thru LTO7.
Format	This is the format of the currently inserted tape. Options include tar, LTFS, Cache-A tar, Cache-LTFS, or Not Recognized.
Capacity	Based on the LTO Type (Generation), the system will describe the total uncompressed capacity for the tape.
Used	An approximate total space used on the tape. Please note that this includes the tape drive compression so even though a particular tape operation may copy 50 GB to the tape for instance, the space ***used*** may show less than 50GB.
Last Updated	This tells the operator the last time the cartridge was written to by the Platform System.
Status	**See Tape Cartridge Status Above.**
Bar Code	If the tape was used in a ProMAX Tape Library, the bar code will be recorded and displayed here.
Tape Location	This field is entered and can be easily updated by the operator to keep track of the physical location of the tape.

Tape Catalog Search Filter

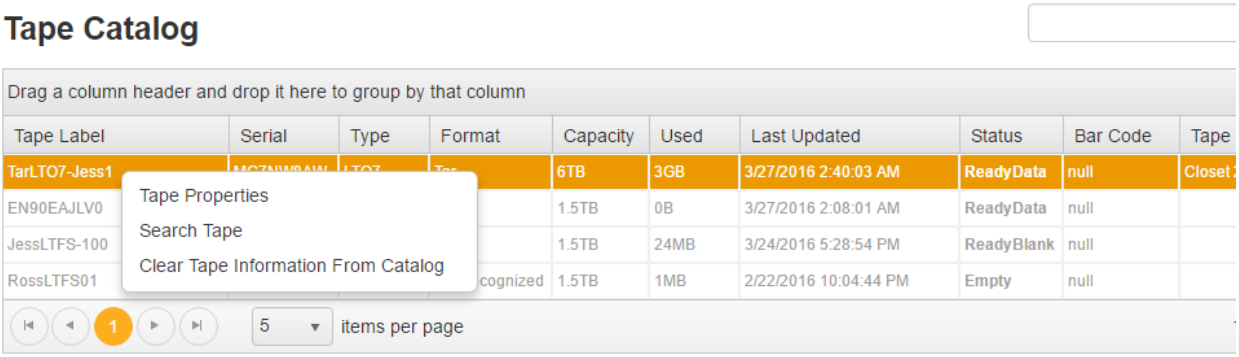
Above the tape catalog grid is a search filter that allows the user to easily find tape catalogs by name.



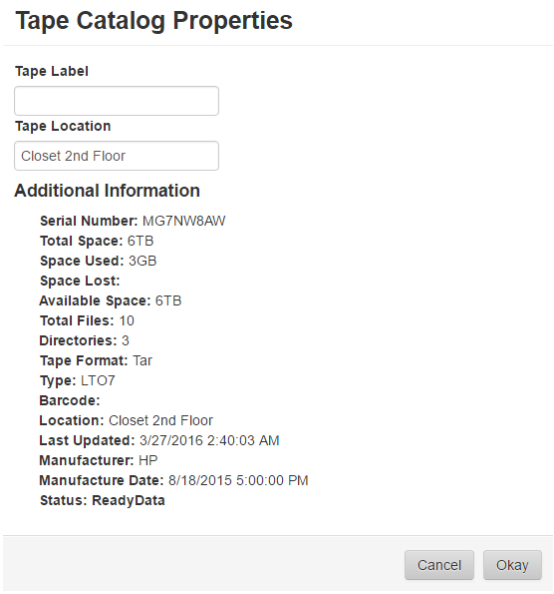
By typing in part of a tape label, the system will search for all tapes that contain the filter criteria.

Right-Click Options for Tape Catalog

The following right-click options can be used by the system administrator for tape cartridges.



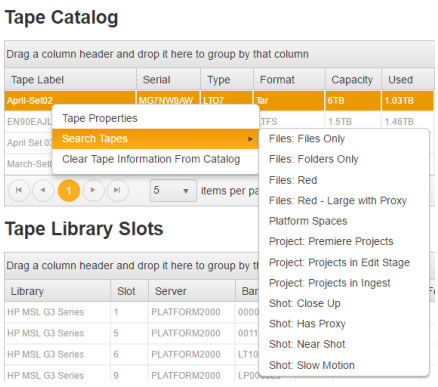
Tape Properties – The tape properties window shows detailed information about the cartridge.



Tape Properties

Column Name	Column Description
Tape Label	This is the user created tape identifier
Tape Location	This screen allows the user to update the tape location.
Serial Number	This is the serial number of the tape which is established when the tape is manufactured and cannot be changed.
Total Space	Based on the LTO Type (Generation), the system will describe the total uncompressed capacity for the tape.
Space Used	An approximate total space used on the tape.
Space Lost	The approximate amount of space that could not be used on the tape.
Available Space	Total capacity – space lost – space used
Total Files	The total number of files written to the tape.
Directories	The total number of directories written to the tape.
Tape Format	This is the format of the currently inserted tape. Options include tar, LTFS, Cache-A tar, Cache-LTFS.
Type	The generation of LTO tape that is inserted. Typical options range from LTO4 thru LTO7.
Barcode	If the tape was used in a ProMAX Tape Library, the bar code will be recorded and displayed here.
Location	Used to show the physical location of the tape.
Last Updated	The last date/time the tape was written to.
Manufacturer	The manufacturer of the tape cartridge.
Manufacturer Date	The date the cartridge was manufactured
Status	**See Tape Cartridge Status Above**

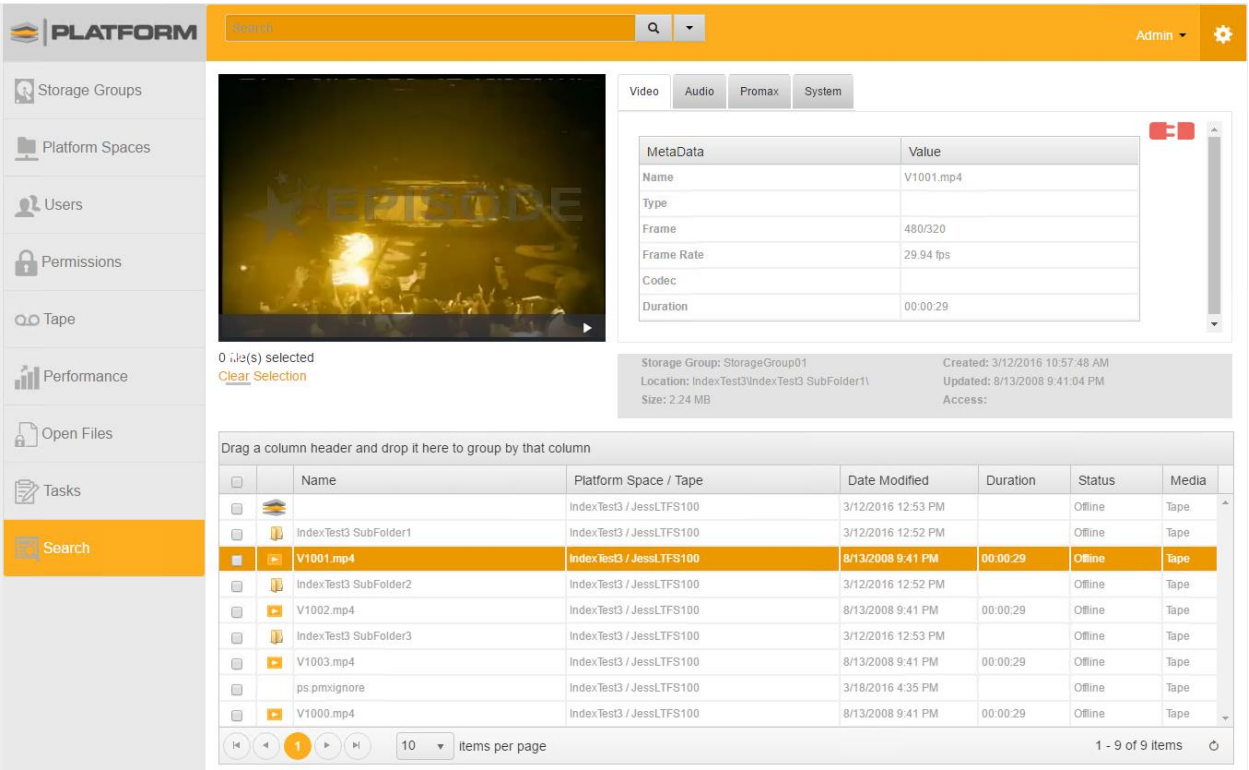
Search Tape – This option redirects to the search results window and displays a list of all files and folders on the tape. The operator can use the advanced search window then further define the search parameters.



Clear Tape Information From Catalog – This option allows the user to delete all record of the tape from the Platform Integrated Catalog. It would be used when an operator wishes to throw away a tape or deliver a tape to a user and no longer have access to the information on the tape.

Search Tape

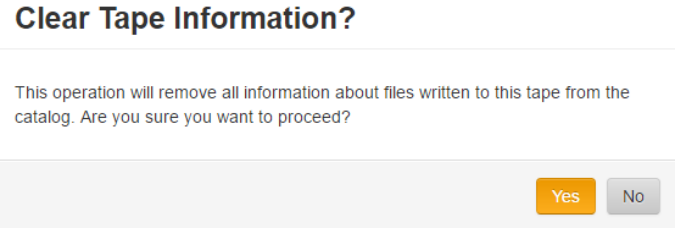
When a user clicks on the Search Tape option, the system will automatically create search parameters in the advanced search so that the system searches for the tape label name of the tape in question. Then the system will execute the search and redirect to the Search Results Screen.



In the example above, the search result screen shows files on a specific tape. Looking at the right most columns, the Media type listed is 'Tape' and the status is offline. Because proxies were generated for the video assets before files were copied to tape, the operator can still review the proxies on the tape.

Clear Tape Information From Catalog

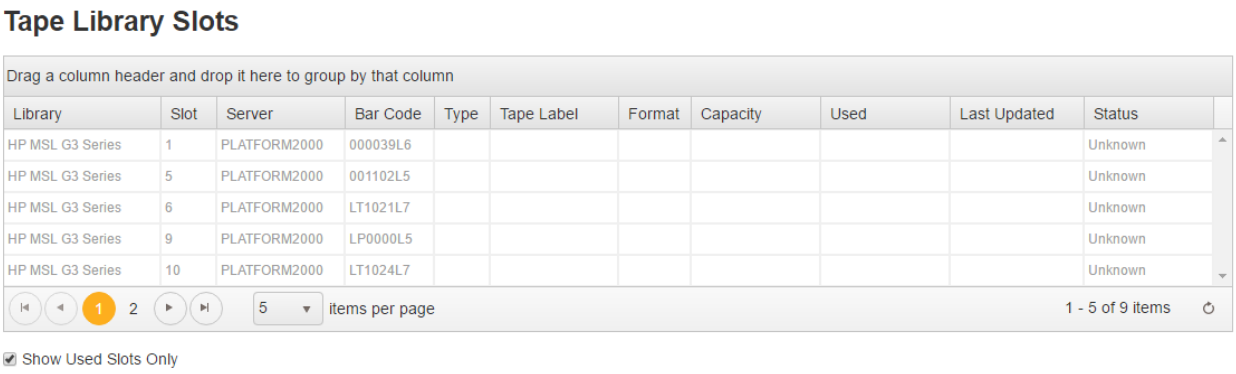
An operator would choose this option to delete all information about a specific tape from the database. When selected, the system will ask a verifying question:



If the operator proceeds by clicking on 'Yes', the system will simply remove all the information about this tape. This is a final operation and cannot be reversed, however if the tape is inserted into a drive the operator can perform a Sync Catalog / Import Tape option to bring the information back into the database.

Tape Library Slots Information Grid

The Tape Library Slot grid displays a list of tape library slots for each tape library connected to the Platform Network and is used to allow operators to manipulate tapes in a tape library.



Tape Library Slots Information Grid

Tape Library Slots Columns

Column Name	Column Description
Library	The name of the Tape Library
Slot	The individual slot within the tape library. (1-24 etc.).
Bar Code	If the tape is inserted in the slot, a library bar code will be displayed.
Type	The generation of LTO tape that is inserted. Typical options range from LTO4 thru LTO7.
Tape Label	The tape label is the user defined name for the tape. This is established when the tape is initially formatted. The Platform System generally refers to a tape cartridge by the tape label name.
Format	This is the format of the currently inserted tape. Options include tar, LTFS, Cache-A tar, Cache-LTFS.
Capacity	Based on the LTO Type (Generation), the system will describe the total uncompressed capacity for the tape.
Used	An approximate total space used on the tape.
Last Updated	This tells the operator the last time the cartridge was written to by the Platform System.
Status	**See Tape Cartridge Status Above.**

Show Used Slots Only

When checked, this option restricts the entries in the Library Slot grid to slots that have tape cartridges loaded.

Right-Click options for Tape Library Slots

When an operator selects a tape drive slot, they have the following right-click options available:

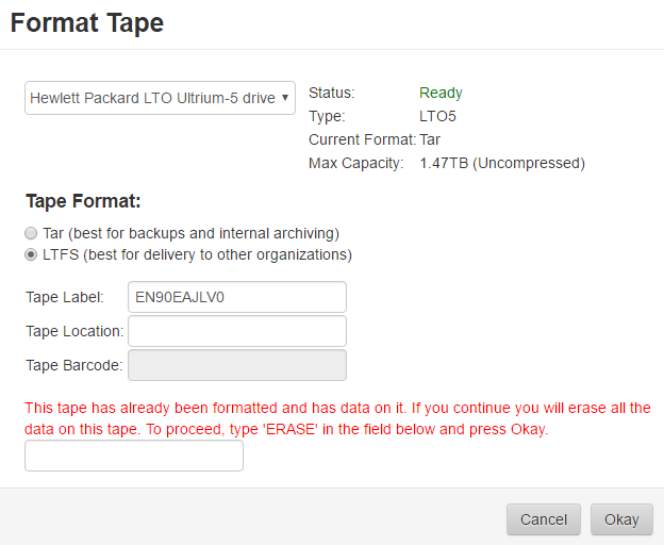
Format – When requesting the format operation, the system will bring up the Format Window (see below) and ask the operator to fill in the request parameters. Once completed, the system will move the tape cartridge from the specified slot to any Library Automation Tape Drive and submit the format job to the task service. If no Tape Drives are available, the task will fail.

Inventory – This command causes the tape library to begin a review of every tape slot in the library for tapes. During the process, the tape library will read the barcode of each tape an attempt to correlate it to tapes found in the Platform Catalog. If the tapes found in the library are not tapes that have been used before, the status of the tape will be 'Error' and the error description will be 'Must Sync Catalog'

Move – The move window allows an operator to move a tape in the slot selected to another slot in the tape drive or a particular Automation Tape Drive.

Format

The tape format window is available by right-clicking on a tape drive with a tape inserted, or from the Tape Library Slot command. The operator will select the type format (LTFS, Tar) and the system will bring up the format window:



The user may choose or change the tape drive and the system will display:

Status: The status of the Tape Drive
Type: LTO Tape Generation
Current Format: If the tape in the tape drive is already formatted, it will show Tar or LTFS
Max Capacity: The maximum capacity of the current tape cartridge (based on the type).

Tape Format – The operator will choose from Tar or LTFS.

Tape Label – The operator will name the tape cartridge. This is user definable and typically will be written on the cartridge to easily locate it later.

Tape Location – This an optional field and allows the user to specify a physical location where the tape is to be stored.

Tape Barcode – This is a read only field which is automatically entered from a tape library.

Format Verification

If the operator is sure that they want to format the tape, the system requires the operator to type in the word 'ERASE' (without quotes). This ensures that the operator is sure they want to erase all the data on the tape. Once a format has begun, it cannot be stopped.

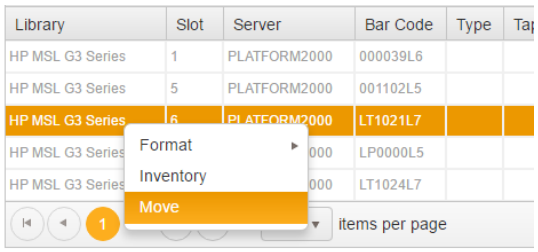
When the operator enters the ERASE and presses the 'Okay' button, the system will submit the format command to the task service and the format will begin.

Inventory

The inventory command causes the tape library to move the robotic arm to each tape slot and perform an inventory on each tape in the system. This will update the interface with the current tape cartridges, barcodes and slots for each tape in the library. This command should not be needed in normal operations and will only be run when the administrator feels that all cartridges are not showing in the tape library slots grid.

Move

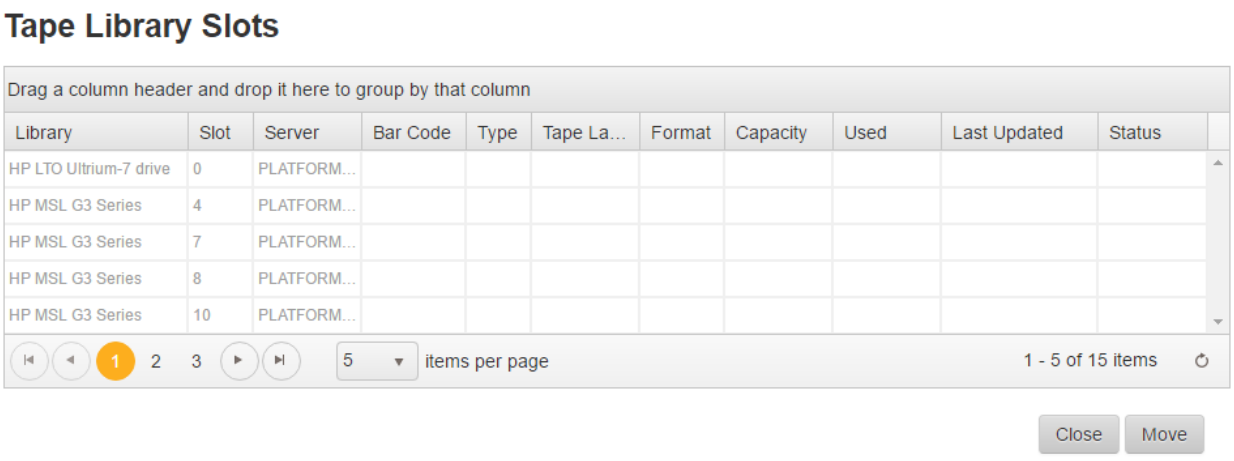
By selecting a Tape Library Slot row and right-clicking on the move option, the system will allow the operator to move the current tape cartridge from:



1) The slot to a library automation drive
2) The slot to another tape slot.

This command is only available for tape slots that have a tape cartridge inserted.

After clicking on the move command, the system will bring up a window allowing the operator to choose the destination location for the tape cartridge. By clicking on a row and then clicking the 'Move' button, the system will schedule a task to move the tape form source slot to the destination slot or to a library drive.



Eject

In the cast of a standalone tape drive, when a Tape Eject command is requested, the system will first rewind the tape, then disengage the tape cartridge and remove it from the drive. If an Eject is requested for an automation drive in a tape library, the system will move the tape from the tape drive back to the slot that it originally came from.

Sync Catalog / Import Tape

The Sync Catalog / Import Tape option allows an operator to synchronize the Table of Contents stored on a tape (LTFS or Tar) with the Platform Integrated Catalog (Database). This is critical as the Platform System uses the Platform Integrated Catalog to determine information about what is on a tape. There are three conditions that will allow this command to be used:

Importing a Platform Formatted Tape – When a tape that was written by another Platform System or the tape is no longer in the Platform Database, this command can be used to update the Platform Database with the Table of Contents of the tape. The Tape Table of Contents is a file on the tape telling the system what files are on the tape.

Importing a Cache-A Formatted Tape – When reading a Cache-A tar tape, this command will allow the operator to import the Table of Contents of the Cache-A tape so that the tape can be used. Cache-A tar tapes will remain read only after this process.

Importing a LTFS Formatted Tape – When reading a tape which has been written with the LTFS Standard format, this command will allow importing the table of contents so that the tape may be further used.

Inserting a Tape

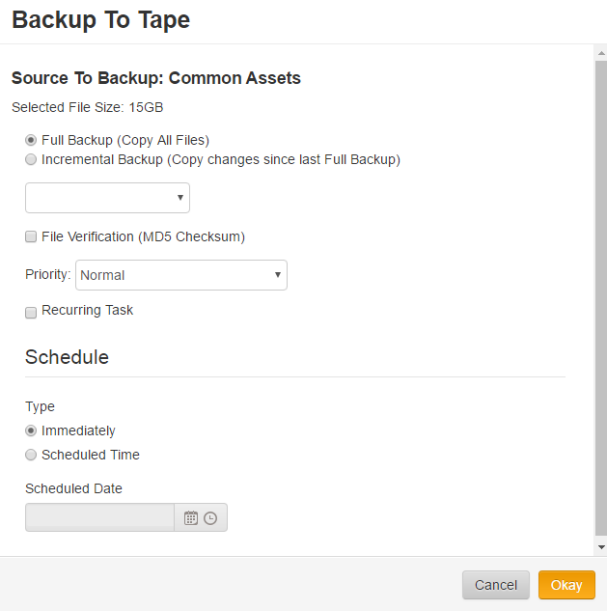
When an operator inserts a tape into a tape drive (manually or through a library drive), the Platform will attempt to read the tape. If it is not a tape format that Platform recognizes, the Format will be displayed as 'Not Recognized'. If Platform cannot read a particular tape, the only option available to the operator will be to format the tape.

If the tape is in a format the Platform can read (ProMAX Tar or LTFS), the system will then check to see if the tape has already been in the database. Platform requires that any tape inserted into a tape drive must have its table of contents (TOC) imported into the Platform Database. This is called an import or syncing process.

If the administrator has enabled automatic importing of tapes upon insert (see system configuration tape tab), when a tape is inserted, the system will attempt to automatically import or synchronize the table of contents. If this option is not turned on, then the Error Status will show that the operator must Sync the Tape before it can be used.

Backup Window

The backup window can be initiated from multiple places in the Platform interface including the Platform Space screen, the Storage Group Screen and the Search Results Screen.

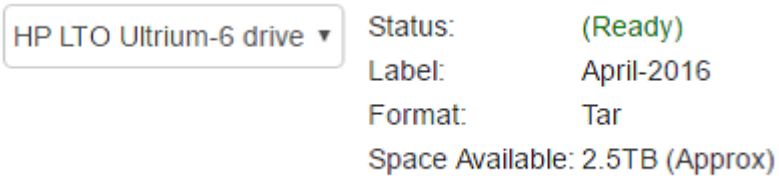


Source to Backup – This header in the window shows either the Platform Space to backup or a list of files. When showing the files, the system will only show the beginning list of files. Not all files will be listed.

Selected File Size – The total space of the files/folders selected will be listed. This is the amount of space that will be copied to the tape.

Backup Type – This allows the operator to select a Full Backup or an Incremental Backup type. See the definition of Full and Incremental Backups above.

Tape Drive – Selecting the tape drive allows the user to choose which tape drive the backup will use. The tape drive can be a standalone drive or an automation drive in a tape library. After selecting the tape drive, the system will display information about the current tape including the approximate space available.



In this example, the tape drive has an empty 2.5TB LTO6 tape in the drive.

File Verification (MD5 Checksum) – If selected, during the file backup process, the system will perform an MD5 checksum process on each file. See File Verification below for details.

Priority – The Priority field allows the operator to determine the task queue priority of the job. If tasks are queued in the task system, the will be run in priority order. By default, tasks go in as medium priority. This allows the operator to schedule a job with high priority which will run before any medium tasks in the queue.

Schedule – The task scheduling options allow the operator to have the task start immediately or at a future time. The system will also allow the backup to be run on a recurring schedule. See Task Scheduling Options in the Task section for more details.

After clicking on the Okay button, the system will submit the backup job to the task system and it will start when the tape drive is available.

File Verification (MD5 Checksum)

When this option is selected, the system will perform an MD5 checksum hash on each file before it is written to tape and then write the hash result to the catalog. After all files have been written to tape, the

system will rewind the tape and read each file from tape, rehash the file and compare it to the hash in the database catalog. If all MD5 hash results match, the backup or archive is successful. If any files do not hash to the same number, the system will fail the backup or archive operation.

It is important to note that the MD5 process can add significant time to the backup process. Therefore, the administrator must weigh the benefit of verification against the additional backup time. Because of the way the Platform performs MD5 checksum, each backup essentially performs a backup and a restore operation. Therefore, the time required is at least double a regular backup. Additionally, large files that are backed up using MD5 checksum can take a significant amount of time to hash the file.

Tape Spanning

If the 'Allow Tape Spanning' Configuration option is not turned on and the system determines that total space being backed up is greater than the amount of space available on the tape cartridge selected, the operator will get a warning when attempting to submit the job. Because of tape compression algorithms, Platform cannot guarantee that the space will or will not fit on the tape.

Full Backups

When the operator requests a 'Full Backup', the system will copy every file in the source list to the tape drive. Additionally, during a Full Backup operation, the system will reset the 'archive' flag on each file. This approach allows the incremental backup (listed below) to know which files to backup since that last full backup occurred.

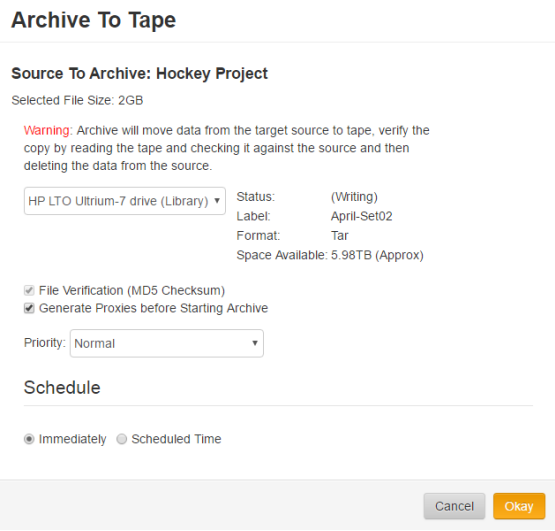
Incremental Backup

Incremental backups search the source list (Storage Group, Platform Space or specific list of files) to see if any files have been modified since the last full backup. This is especially useful in video environments since the actual source video files rarely change. If any files have changed since the original 'Full Backup', they will then be copied during the incremental backup job. If an incremental backup job is requested and no files have changed, no updates will be made to the tape.

Archive Window

The Archive can be initiated from a Platform Space or from the Search Results Screen and is used to move data from the disk storage system to an LTO tape. The goal of the archive option is to safely remove data from the shared storage system onto tape.

Once the archive command has been initiated, the system will bring up an Archive window and the operator will choose the archive options:



Source to Archive – This header in the window shows either the Platform Space or a list of files to Archive. When showing the files, the system will only show the beginning list of files. Not all files will be listed.

Selected File Size – The total space of the files/folders selected will be listed. This is the amount of space that will be copied to the tape.

Tape Drive – Selecting the tape drive allows the user to choose which tape drive the backup will use. The tape drive can be a standalone drive or an automation drive in a tape library. After selecting the tape drive, the system will display information about the current tape including the approximate space available.

File Verification (MD5 Checksum). See the explanation of MD5 Checksum above.

Generate Proxies before Starting Archive – This option will cause the system to submit a transcode request for each video file that is *missing a proxy* in the source archive list. Only proxies that are not already generated will be created for this option.

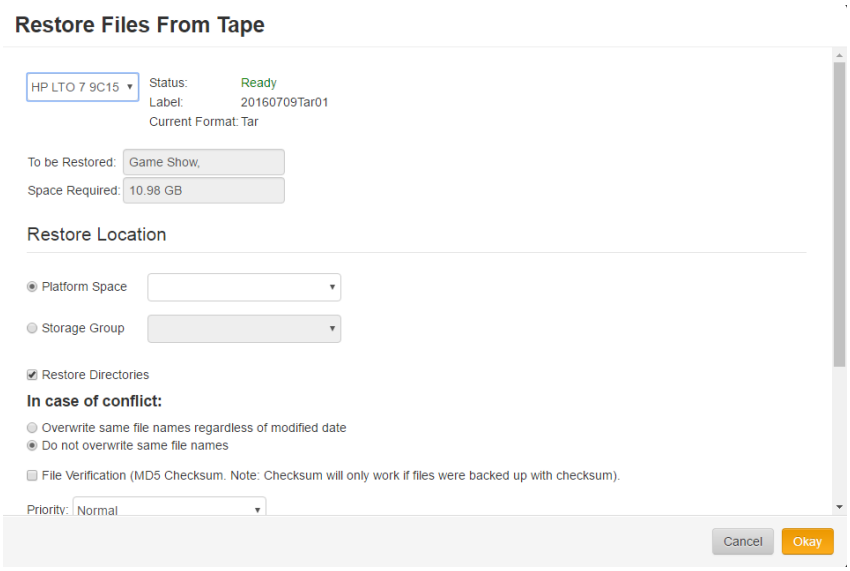
Priority – The Priority field allows the operator to determine the task queue priority of the job. If tasks are queued in the task system, the will be run in priority order. By default, tasks go in as medium priority. This allows the operator to schedule a job with high priority which will run before any medium tasks in the queue.

Schedule – The task scheduling options allow the operator to have the task start immediately or at a future time. The system will also allow the backup to be run on a recurring schedule. See Task Scheduling Options in the Task section for more details.

After clicking on the Okay button, the system will submit the archive job to the task system and it will start when the selected tape drive is available.

Restore Window

The restore is initiated from the Search Results screen. Once files, folders and/or Platform Spaces are selected for restore, the restore window will open.



Tape Drive Section

Tape Drive.
The first drop down field is the tape drive. When multiple tape drives are connected to the Platform Network, the operator will choose which tape drive has the tape for the files to be restored.

Status. The current status of the tape drive. Note that because jobs can be queued in the task service, this is only describing the tape status at the current moment in time.

Label. The label of the current tape in the tape drive.

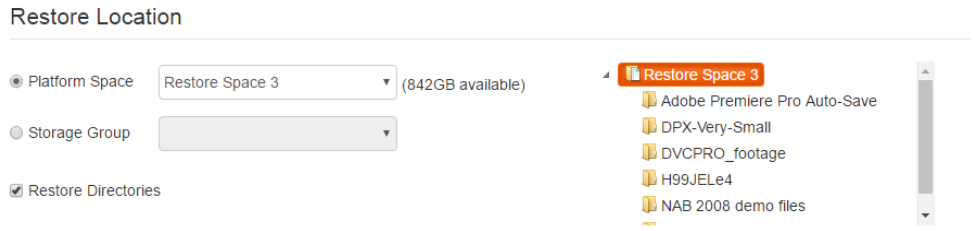
Current Format. The format of the current tape inserted into the drive selected.

To be Restored. This box shows a few files in the list of files or Platform Spaces that have been requested for restore. It will not be a comprehensive list of the restore request.

Space Required. Platform will calculate and estimate the total size of the files to be restored. This is an estimate only, however, it provides the operator an idea of how much space they will in and will allow them to properly select a Storage Group or Platform Space for the restore.

Restore Location

The Restore Location section is used to determine the destination for the files being restored.



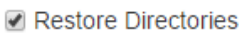
Restore to a Platform Space

When restoring the request to a Platform Space, the system will restore all of the files, folders or Platform Space's requested underneath the chosen Platform Space. When the operator chooses to restore to a Platform Space, the system will bring up list of folders within that Platform Space. The default location of the root of the Platform Space will be selected, however, the operator may choose any folder in the hierarchy as the destination for the restore.

Restore to a Storage Group

If an operator chooses to restore the request to a Storage Group, files, folders and Platform Spaces in the restore request will be copied to the root of the storage group. Normally operators should only restore Platform Space's to Storage Groups.

Restore Directories



This option is selected by default and causes the Platform to restore the entire file path as it was originally copied to tape to the destination location (Platform Space or Storage Group). This is normally the option chosen when restoring a Platform Space back to a Storage Group.

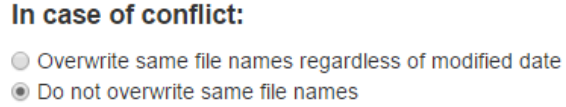
If an operator wishes to restore a simple list of files that were selected form the Search Results screen, they may wish to deselect the 'Restore Directories' checkbox. When deselected, the system will restore only files to the root of the destination location (Storage Group or Platform Space).

Key Points of Understanding

When an operator chooses to restore files without directories, it is important to understand if there are multiple files within the source directory structure with the same name. If there are two or more files with the same name, the restore process will run into an error overwriting the second file with the same name. (See 'In case of conflict:' below).

In Case of Conflict

During the restore process, if the Platform System encounters a file already located in the destination location, by default it will not overwrite the same files and will report an error in the restore log. If this happens, the system will still continue with the restore, however, the restore job will show an error when finished.



The Platform has the option of choosing the option to 'Overwrite same file names regardless of modified date'. If this option is chosen, the system will restore the files on tape to the destination location. This occurs in the order in which the files are on tape. i.e. even files earlier on tape can be overwrite by files later on tape in the same restore task.

File Verification (MD5 Checksum). See the explanation of MD5 Checksum above.

Priority – The Priority field allows the operator to determine the task queue priority of the job. If tasks are queued in the task system, the will be run in priority order. By default, tasks go in as medium priority. This allows the operator to schedule a job with high priority which will run before any medium tasks in the queue.

Schedule – The task scheduling options allow the operator to have the task start immediately or at a future time. The system will also allow the restore to be scheduled for a future date/time. See Task Scheduling Options in the Task section for more details.

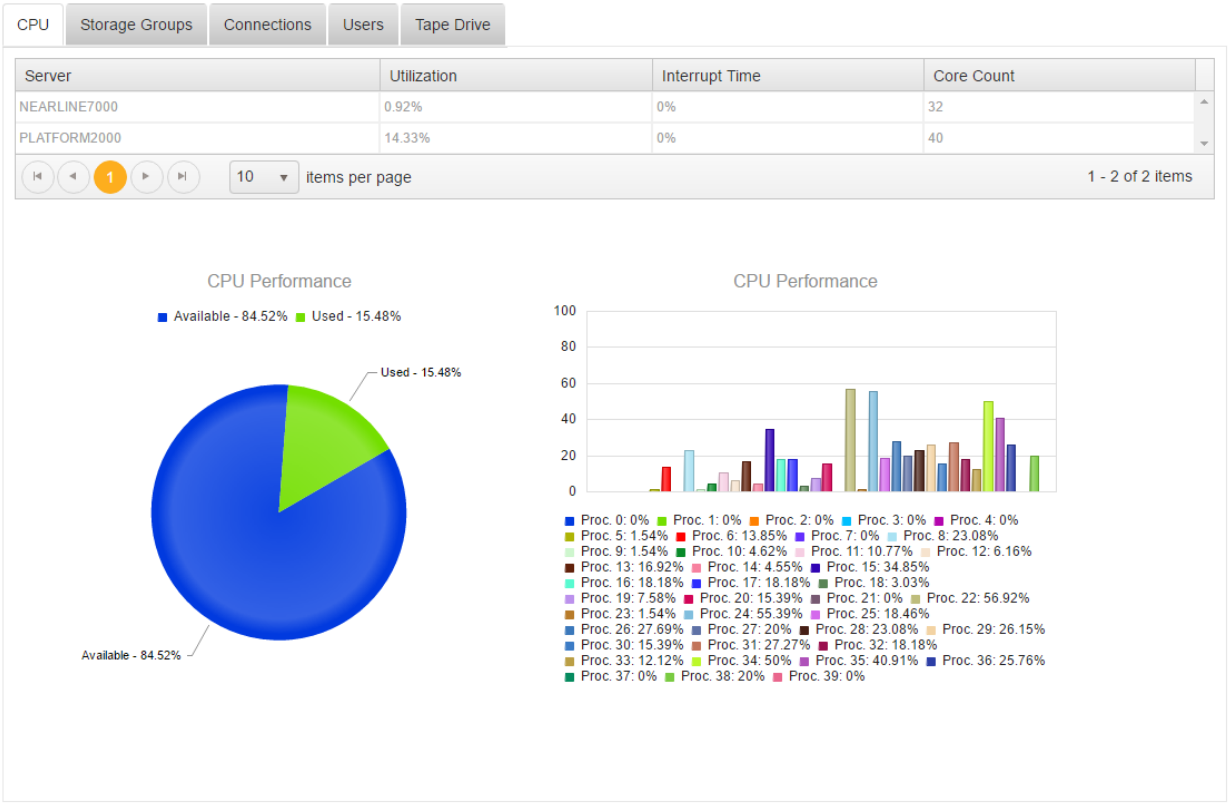
After clicking on the Okay button, the system will submit the restore job to the task system and it will start when the selected tape drive is available.

Performance

The Platform Performance screen is used by system administrators to monitor resource usage and diagnose issues with the Platform System. Performance is broken down in the multiple sections described below.

CPU Performance

CPU performance measures the usage of the Central Processing Unit on each Platform node. The screen will display one line for each Platform Server in the network. By clicking on one of the nodes, the screen will show details about the CPU usage for that server. By default, performance information is refreshed every second, however, this can be changed in the Configuration screens under performance refresh rate.



For the line selected, the Pie chard shown on the left, shows the total CPU resources used and available for the entire node. For Platforms with multiple CPU's the system will aggregate all CPU resources into the one Pie chart.

Each CPU or (NUMA Node) contains a number of cores. Each core can run programs or processes. The chart to the right shows the individual cores for the CPU's and their current activity.

Storage Group Performance

The Storage Group tab provides detailed information on each Storage Group connected to each node of the Platform Network. In the upper grid of the tab the following information is presented:

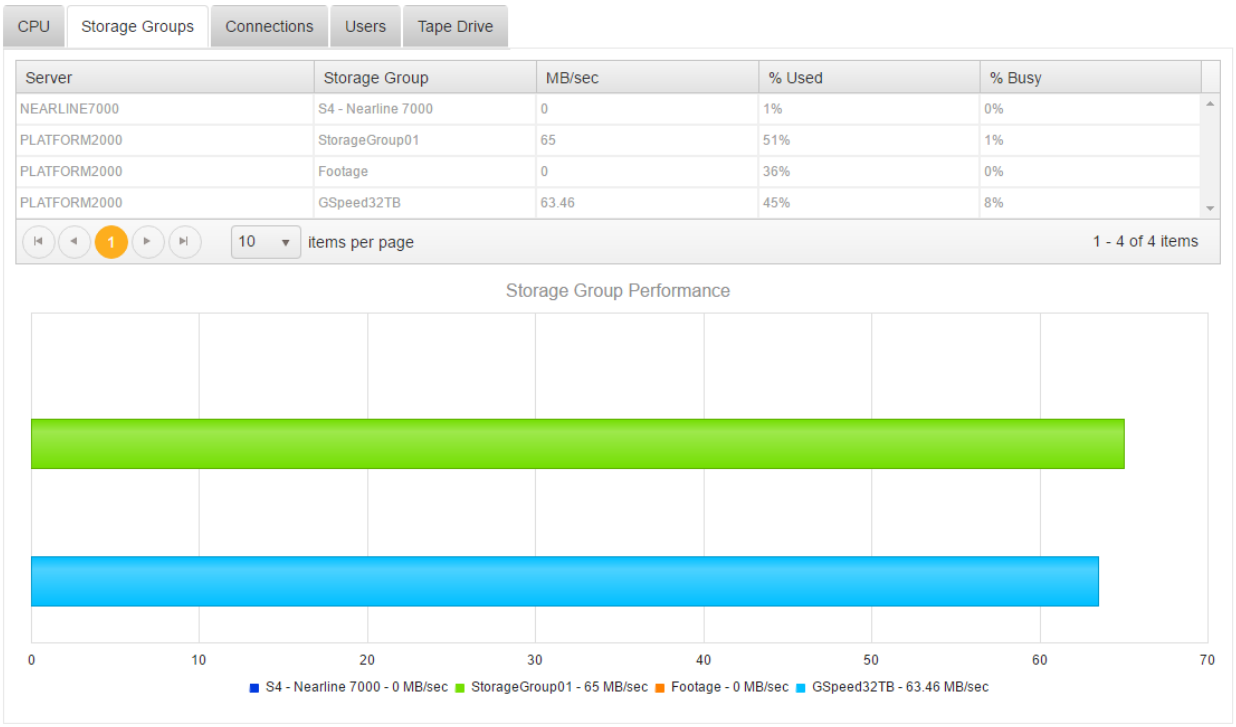
Server – This is the name of the Platform Node which the storage group is attached.

Storage Group – This is the name of the Storage Group.

MB/Sec – The total megabytes per second transferred (to and from) the storage group during the last sample size (See performance refresh rate below).

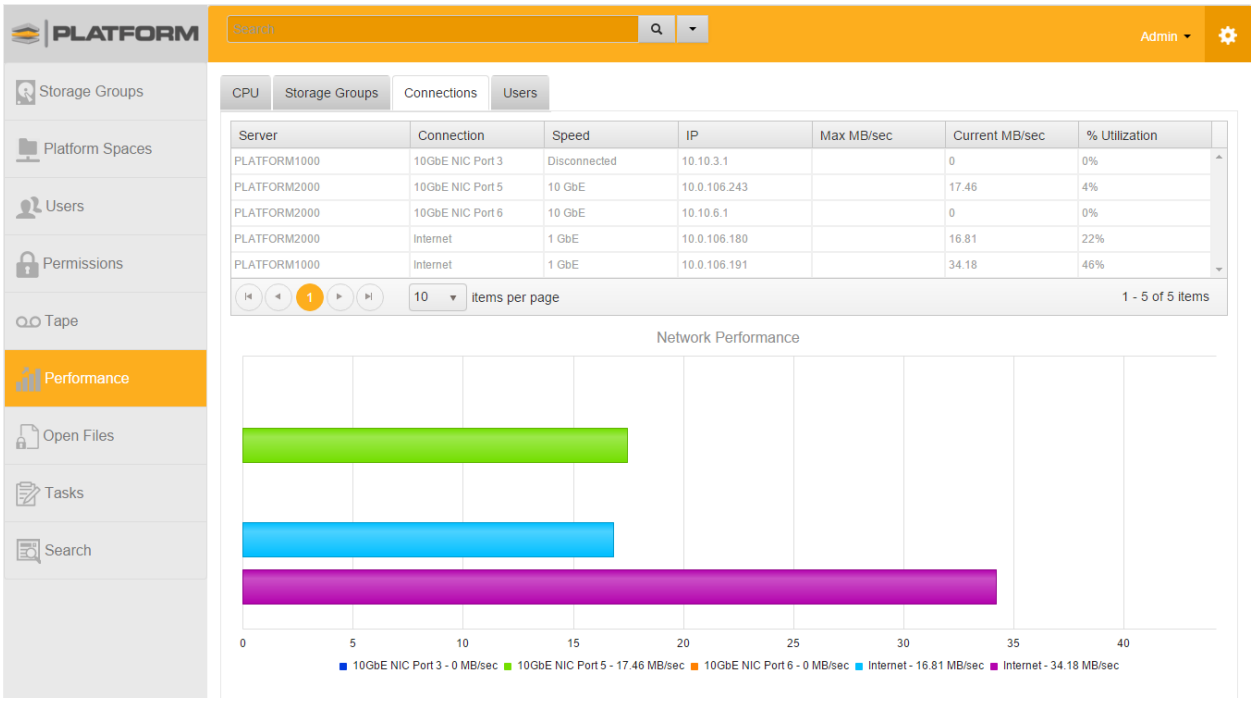
% Used – This is the percentage of the total storage group size capacity that is used on the storage group.

% Busy – This is an indicator of how busy the storage group is during the last sample. When operating less than 75%, typically the system is operating in the norm and the storage group is not a bottleneck for performance. Sustained % busy greater than 75% can indicate that the storage group is slowing down the performance of the system operation.



By default, the storage group performance tab will refresh information once per second. This is defined in the system configuration screens under Performance Refresh Rate.

Connections Performance



The connections tab shows data flowing through the NIC ports during the last performance sample. Each Network Interface Port, or Connection, is listed in the Connections grid. (See Connections Types for more information).

The Connections grid has the following information:

Server – This is the name of the Platform Server Node in the Platform Network.

Connection – The name of the connection.

Speed – Represents that base connection speed between the server and the device it is connected to. Both sides of the connection limit the speed, whichever is slower. Therefore, if a 10GbE (10 Gigabit) server port is connected to a 1GbE (1 Gigabit) workstation, the speed will show up as 1GbE.

IP – This is the IP (internet protocol) address of the connection.

MAX MB/Sec - If an administrator has placed a bandwidth throttle on this connection, that throttle restriction will be listed. Bandwidth throttling per connection is set in the network connections screen.

Current MB/Sec – The total megabytes per second (read and write) being used on this connection during the sample period.

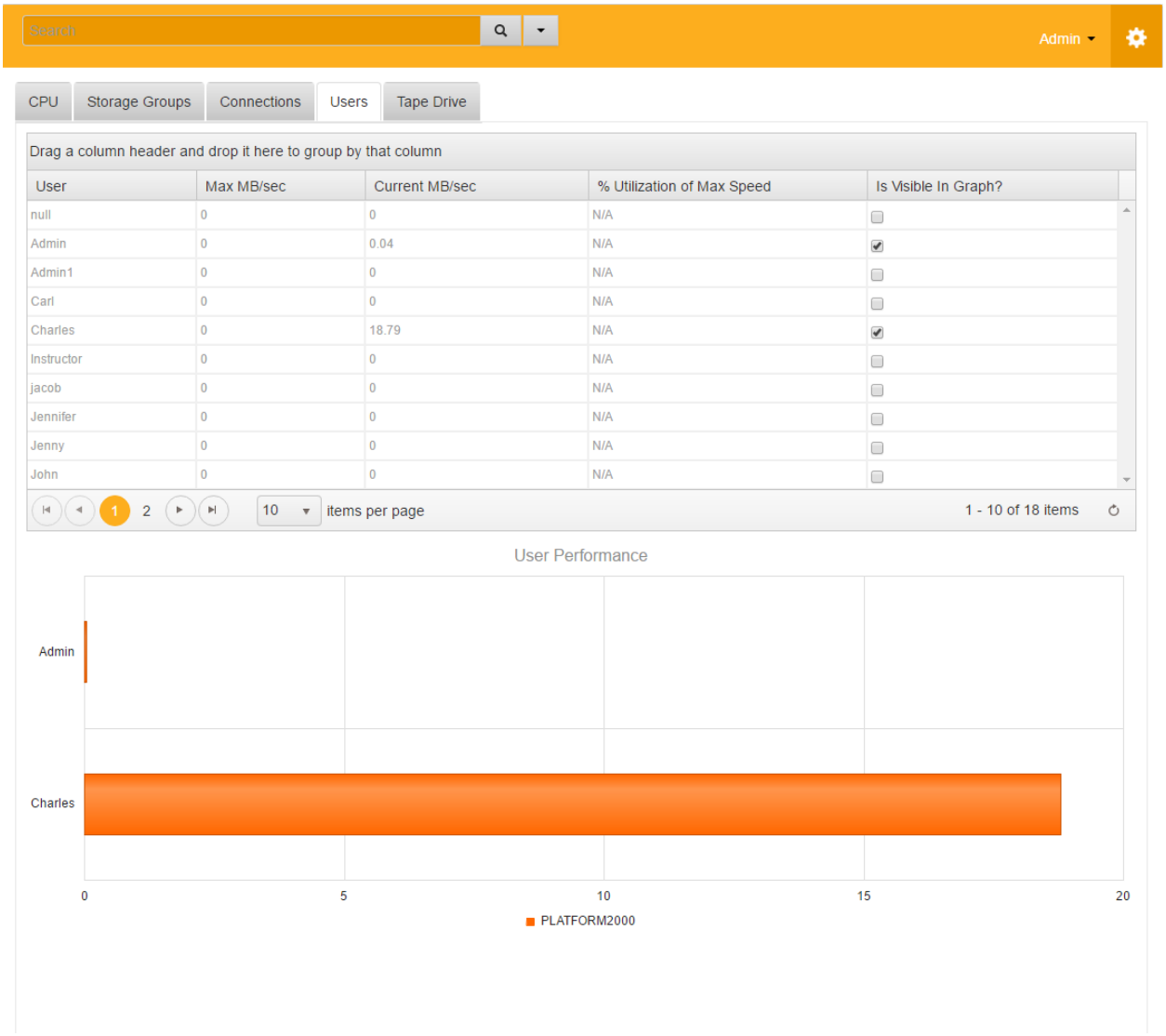
% Utilization – Presented as a guideline to understand relative bandwidth, the % utilization shows the % utilization of each NIC connection. Because of the design of Platform's IP tuning, the utilization percentage can go over 100%.

By default, the connections performance tab will refresh information once per second. This is defined in the system configuration screens under Performance Refresh Rate.

Multi-Node Configurations

Platform can utilize SMB 3.1 protocol to transfer data from one server to another. Because of this, in Multi-node configurations, Platform will use all NIC ports connected between servers to transfer data. This is especially true when using Platform's built in data management tools.

Users Performance



The Users Performance tab allows the administrator to see network resources being used by individual users connected to the system. The Users grid has the following columns:

User – The user name that is used to login to the Platform.

MAX MB/sec – If the administrator has placed a throttling restriction on the user, it will show up in this column. Bandwidth throttling for users is set up in the Users Screen.

Current MB/sec – This is the total Megabytes per second that the user is using from the Platform during the last sample size.

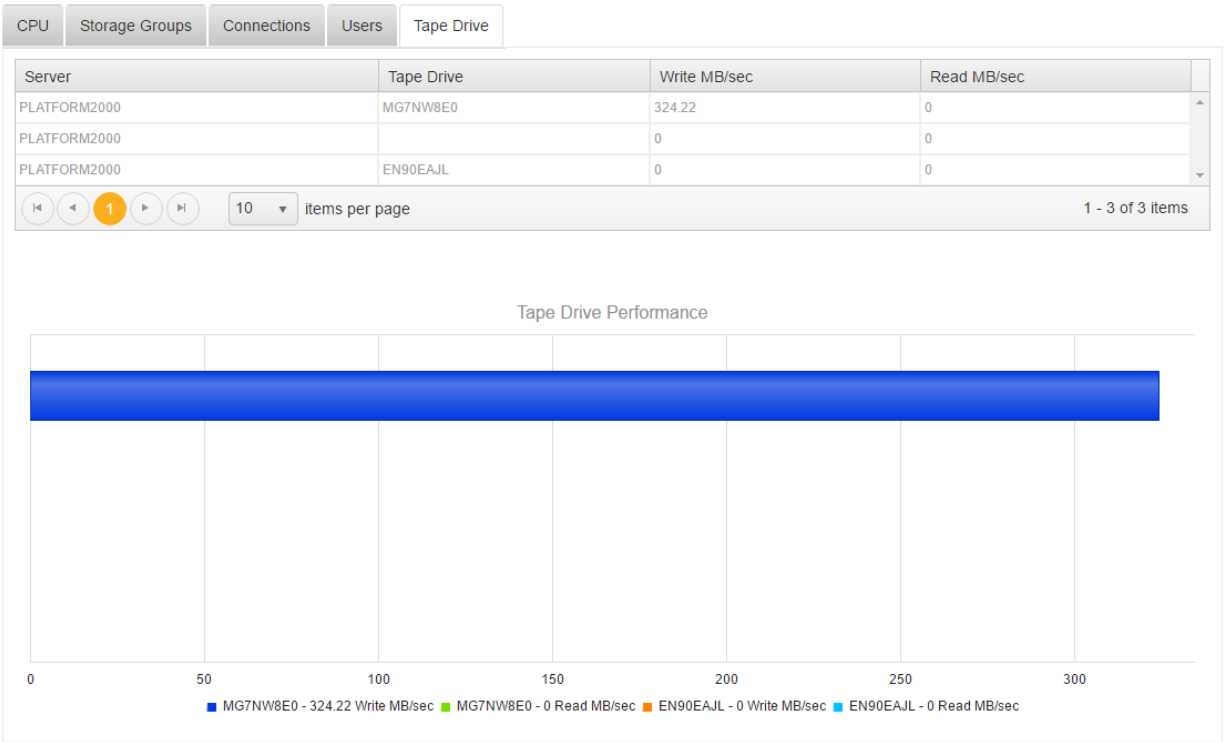
% Utilization of Max Speed – Presented as a guideline to understand relative bandwidth, the % utilization shows the % utilization of each User compared to the total bandwidth available for that user. Because of the design of Platform's IP tuning, the utilization percentage can go over 100%.

Is Visible in Graph? – The graphic below the grid only shows users that have been selected in the grid to display. This checkbox is a toggle. If selected, the specified user will show in the graph. If de-selected the user will no longer show in the graph.

By default, the Users performance tab will refresh information once per second which is also referred to here as the sample size. This is defined in the system configuration screens under Performance Refresh Rate.

Tape Performance

The Tape Performance tab show read and write performance of each tape drive connected to the Platform Architecture. The system design is to take an average of the last 10 tape drive performance samples and display it to the screen.



The tape grid has the following information:

Server – This is the name of the Platform Server Node in the Platform Network.

Tape Drive – The name of the Tape Drive.

Write MB/Sec - The total Megabytes written during the last sample Period.

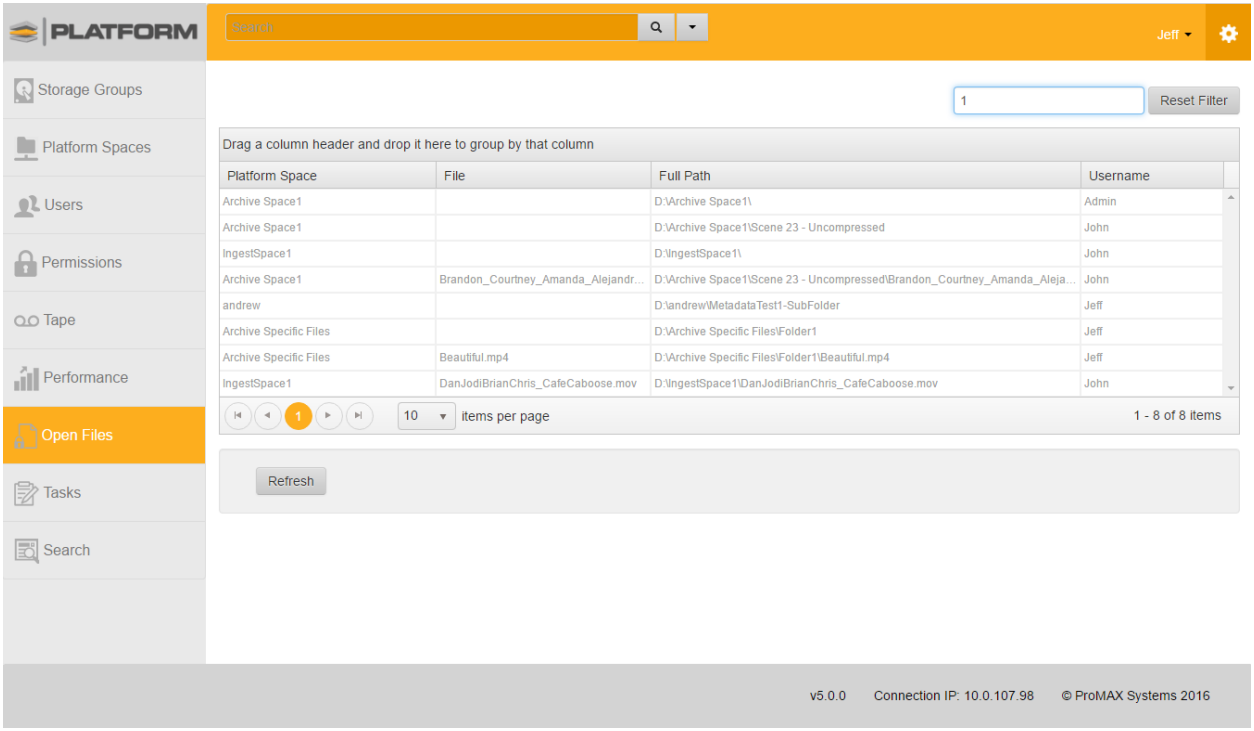
Read MB/Sec – The total Megabytes read during the last Sample Period.

By default, the tape performance tab will refresh information once per second. This is defined in the system configuration screens under Performance Refresh Rate.

Open Files

The Open Files screen can be used to see all the open files and folders in the Platform System. Open files are defined as files that have been recently or are currently in use by an operator logged into the Platform System. These files may or may not be exclusively locked; this screen shows files that are currently open.

Folders are listed if an operator has a file open or has recently opened a file within that folder path.



The Open Files information grid shows the following:

Platform Space – The name of the Platform Space that holding the file in question.

File – The name of the file.

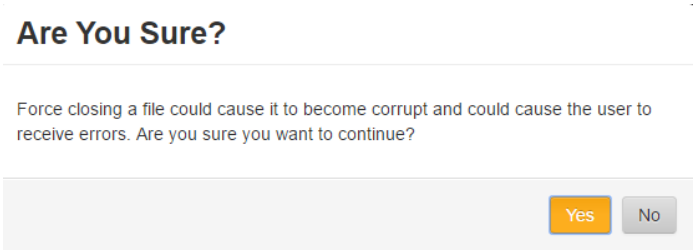
Full Path – Includes the name of the Platform Space as well as any sub folders to the full path of the file.

User Name – The name of the user that has the file open.

Open File Right Click Options

Close File - If the logged in user has 'Admin' Feature Permissions to the Open Files screen, they will have the right click option to 'Close File'. This option will only show up on files not on folders. If this option is used, the system will force close the specified file. This Close-File option can be used when the user that has the file open cannot be contacted or perhaps has left the office and left the file open.

Warning – The close file option should only be used when the operator is certain that the file being closed is no longer in use. Closing a file though this method can potentially create file damage and is not recommended. Also note, that sometimes, the close request will be temporary as the user's computer program that had the file open, can sometimes automatically reopen the file.



After performing the Close-File command, the system will prompt the operator to ensure they want to proceed. After answering yes, the system will attempt to force close the file.

Tasks

The Tasks Screen is an important and powerful foundation for the Platform System. In order to take full advantage of the Platform 'Server' capabilities, Tasks have been provided to allow Jobs to be run on the server which offloads the work from user workstations and laptops.

Task operations are referenced throughout this manual including but are not limited to data management tasks, asset management tasks, tape operations and transcoding.

Key Points of Understanding

Task Jobs run on the Platform Server with each Job running on the Platform Node that holds the Platform Space that the job is operating on. Jobs will run concurrently (at the same time) or consecutively (in sequence) based on the job type and the available resources as defined below.

Task Types

The task system has many different types of tasks that are categorized for easy searching and are also linked to the Notification System. Jobs for each task type listed below can be run concurrently (at the same time) or consecutively (in sequence) as defined below.

Task Types

Task	Description	Concurrent / Consecutive
Data Management		
Move	Platform Space or file/folder moves	User Defined
Copy	Platform Space or file/folder moves	User Defined
Clone	Platform Space Duplication	User Defined
Mirror		Concurrent
Tape Operations		
Backup	Full or Incremental Backups.	Consecutive per tape drive. One job per tape drive, concurrent operations with multiple tape drives.
Archive	Archive Platform Spaces or Individual file/folders	Consecutive per tape drive. One job per tape drive, concurrent operations with multiple tape drives.
Restore	Restore Platform Space or file/folders	Consecutive per tape drive.
Format	Format a tape	Consecutive per tape drive.
Eject	Eject a tape drive	Consecutive per tape drive.
Stop	Stop a current tape operation	Consecutive per tape drive.
Move	Move a tape from one slot or drive to another	Consecutive per tape drive.
Sync Catalog	Import or Sync a catalog on tape	Consecutive per tape drive.
Inventory	Inventory of Tape Library	Consecutive per tape drive.
Recovery	Recover files from a tape	Consecutive per tape drive.
Storage Maintenance		
Repair Storage Group	Strip permissions and reassign ownership to Storage Group	Consecutive Only.
Reset All Platform Spaces	Reset permissions on all Platform Spaces for a Storage Group	Consecutive Only.
Reset Platform Space	Reset Permissions on a Platform Space	Consecutive Only.

Table 13 - Task Types

Task Types

Task	Description	Concurrent / Consecutive
Storage Maintenance		
RAID Integrity	Perform low-level consistency check on RAID	Consecutive Only.
Maintenance	Storage Group Maintenance	Consecutive Only.
Catalog Maintenance	Database Catalog performance	Consecutive Only.
Snapshot	Storage Group Snapshot	Consecutive Only per Storage Group.
Asset Management		
Generate Proxies	Create Proxy Transcodes for Videos	Concurrent but restricted by transcoding settings in config screen.
Transcode	Transcoding	Concurrent but restricted by transcoding settings in config screen.
Update Metadata	Metadata updates based on metadata rules	Concurrent per Platform Space
AE Render	After Effects® Render job	Concurrent
Remove from Search	Remove a Platform Space or individual files/folders from the Search Catalog	Concurrent
Platform Spaces		
Add Existing Platform Space	Add an existing Platform Space to a Storage Group	Consecutive.
Add New Platform Space	Add a new Platform Space to a Storage Group	Consecutive.
Delete a Platform Space	Delete a Platform Space from a Storage Group	Consecutive.

Table 14 – Task Types

Task Screen

The task screen provides detailed information to the operator on the status of tasks for the Platform Server System. This screen is broken down into two sections, standard tasks and maintenance tasks.

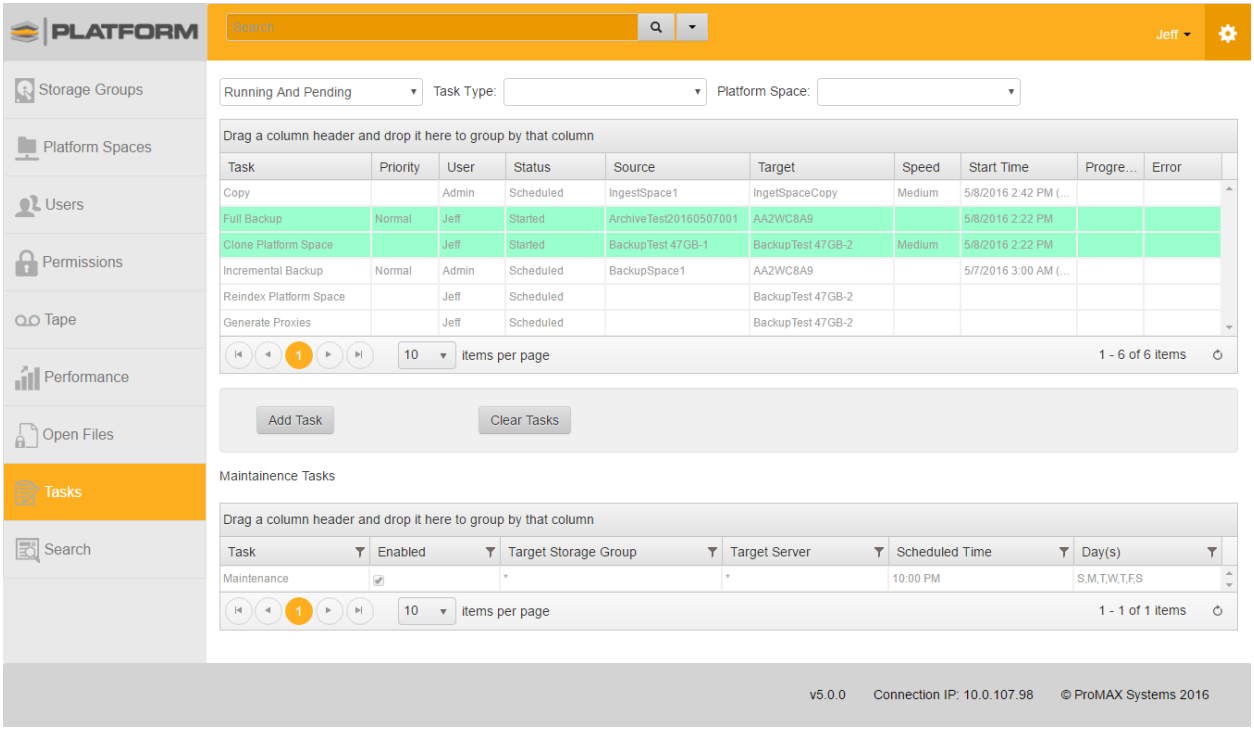


Figure 30 - Task Screen

Tasks

The task information grid is controlled by (3) three filter boxes at the top of the task grid. Each filter box has a number of drop down options.

Task Filters

Task Status Filter – This filter allows operators to filter the tasks in the grid to a particular status. The default status is 'Running and Pending'.

Task Status Filters

Status	Description
Running and Pending	Shows only tasks that are currently running or are waiting to run.
Running	Shows only tasks that are currently running.
Pending	Shows only tasks that are currently waiting to run.

Task Status Filters

Status	Description
Historical (All)	This shows all tasks and includes all tasks that have run in the past regardless of their result. It also includes all tasks that are running and pending.
Completed – Successful	All historical jobs that have completed successfully.
Completed – Warning	All jobs that have completed but had a warning.
Completed – Failed	All jobs that have completed but had a status of failed.

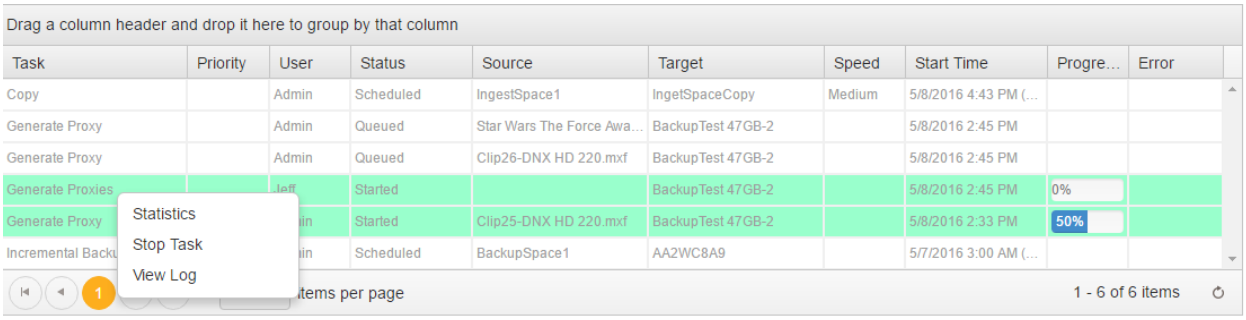
Task Type Filter – Used to filter tasks of a particular type (see table below).

Task Type Filters

Status	Description
Metadata Updates	Tasks that update metadata.
Clone	Platform Space Clones
Restore	Tape Restores
Delete	Platform Space Delete
After Effects® Render	AE Render jobs
Proxies / Transcodes	All transcode or proxy generation tasks
Indexing	Metadata indexing updates
Mirrors	Data / Platform Space Mirrors
Moves / Copies	Data Management move and copy jobs
Maintenance / Permissions	Any database Catalog, Storage Group Maintenance, Platform Space or Storage Group Permission Updates
Backup / Archive	All LTO Tape backup and Archive Jobs

Platform Space Filter – Used to show any jobs that are operating on a particular Platform Space.

Task Information Grid



The Task Information Grid provides detailed information about task jobs currently running or the status of jobs already run on the Platform System. Each Task has a number of Columns which are described below:

Task – The name of the task

Priority – The priority (Low, Medium, High) is used to determine the order in which jobs with the status of 'Queued' are run.

Status – Job status tells the operator the current condition of the job. Valid Status' are:

Status	Description
Started	Job is currently running and the background color of the job row will be green.
Queued	Job is waiting to run until another job is finished
Scheduled	Job is scheduled to run at a particular time. See Start Time column for next start time.
Completed	Job completed successfully.
Completed with Errors	Job completed but had errors
Completed with Warning	Job completed but had a warning

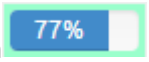
Table 15 - Task Status Types

Source – Typically describes the source Platform Space but can also show the source as a Tape Drive or other device. This is the source location that the task is getting the data.

Target - Describes the destination location for the particular task type.

Speed – Lists the speed of the task operation. Task speeds are **Slow, Medium** and **Fast** which are indicators of how much Platform resources are used to conduct the operation.

Start Time – The start time of the particular job. If this is a recurring job, the start time is automatically updated each time an instance of the job is completed.

Progress – The progress column displays an indication 

of how far along the job is in comparison to the entire job. The system will attempt to provide a percentage complete for many jobs.

Error – Displays a URL which can be clicked upon to see the full error message for this particular job. If no error occurred, the column will be blank.

Task Grid Right-Click Options

The task jobs in the task grid options which are dependent on the task status:

Status	Right-Click Options
Started	Stop, View Log, Delete Task
Queued	Edit, Stop, View Log, Delete Task
Scheduled	Edit, Delete Task
Completed	View Log, Delete Task
Completed with Errors	View Log, Delete Task
Completed with Warning	View Log, Delete Task

Table 16 - Task Grid Right-Click Options

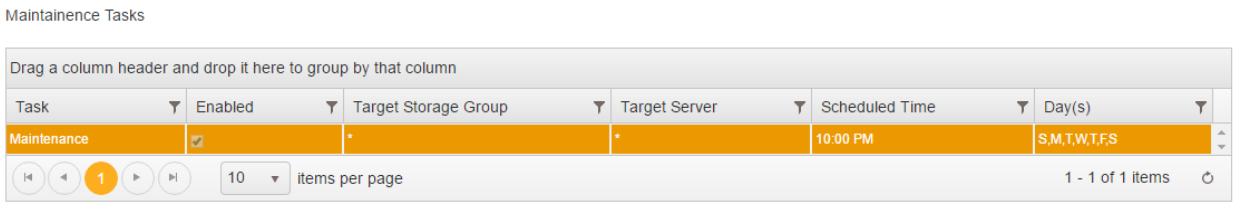
Stop – Attempts to stop a job that is currently running. Please note, tape jobs cannot be stopped from the task screen. If an administrator needs to stop a tape task, the will do that in the Tape screen by right-clicking on the Tape Drive and selecting Stop.

Edit – Allows an operator to update the parameters of a job waiting to run.

View Log – Shows the detailed historical log of the job operation.

Delete Task – Stops the current operation and deletes the job from the task system.

Maintenance Tasks



Maintenance Tasks run in the background at specified time intervals to keep the server running well and at peak performance. The specific activities in maintenance include defragmenting disks and performing error checking on storage groups.

By default, the system enables one storage maintenance task that runs on all Storage Groups connected to the server and is called 'Maintenance'. If the administrator wishes to create separate maintenance tasks per storage group, the will use the Storage Group Screen to update the maintenance times on each storage group individually.

The Maintenance Task Information Grid shows the following:

Task – The task name, Maintenance.

Enabled – This check box indicates if the maintenance task is currently scheduled to run based on the Scheduled Start Time.

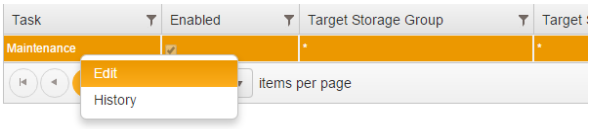
Target Storage Group – The name of the storage group for the maintenance task. If an asterisk '*' is displayed, it means that this maintenance task will apply to all storage groups attached to the system.

Target Server – The Platform Node that the maintenance task applies to. If an asterisk '*' is displayed, it means that this maintenance task will apply to all nodes in the Platform Infrastructure

Scheduled Time – This is the start time of the maintenance task**.**

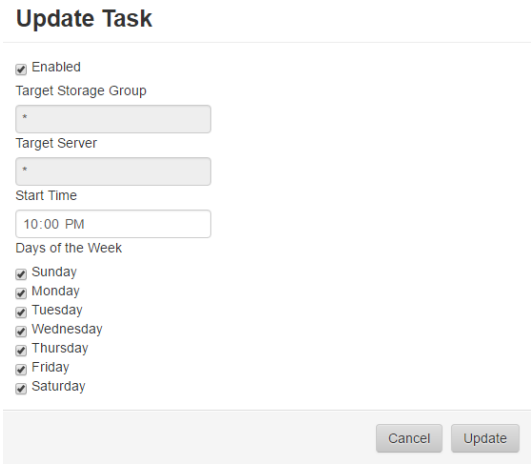
Day(s) – The days of the week that maintenance is intended to run. The default task runs each day of the week.

Maintenance Grid Right-Click Options



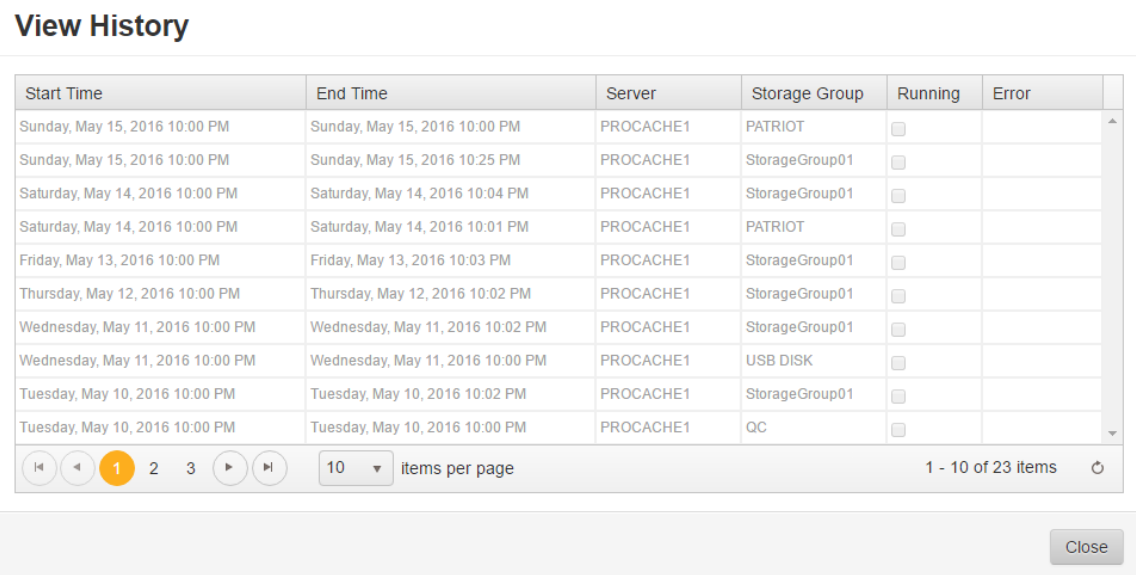
The administrator has the following right-click options when working in the system maintenance grid:

Edit – Used to update the schedule settings for the maintenance task. The system will bring up a window allowing the administrator to make changes to the maintenance schedule:



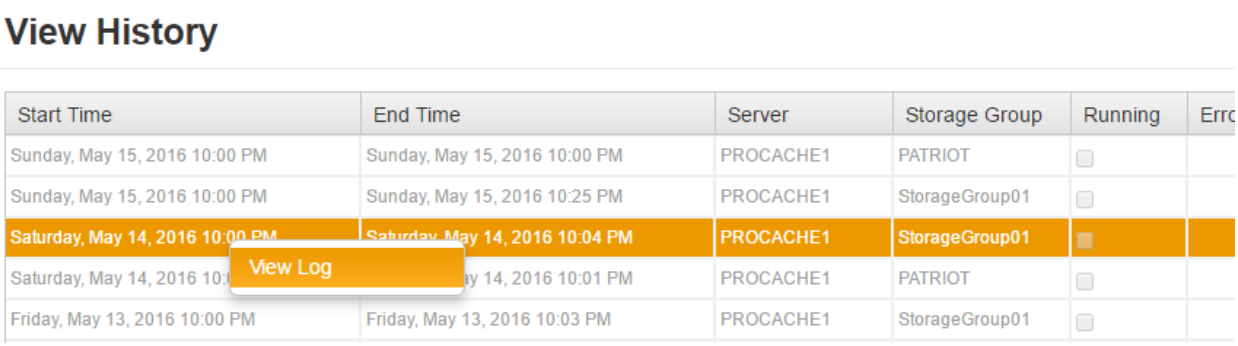
The system will allow the administrator to enable or disable the maintenance task by checking the 'Enabled' checkbox. They can also update the start time of the maintenance task and the days of the week that the maintenance will start.

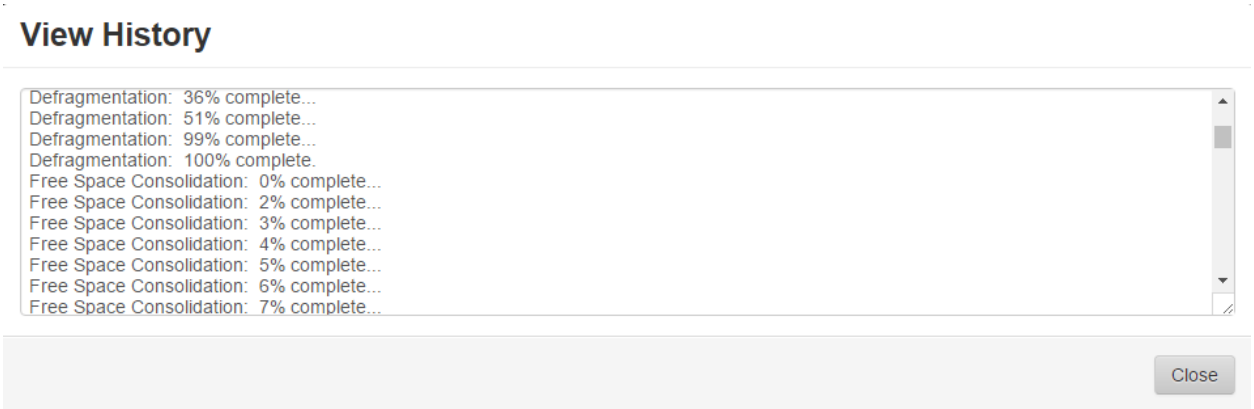
History – See a list of each time the maintenance task has run and allow the administrator to view the detailed maintenance logs. The system brings up a grid with a list of each maintenance task that has run on each storage group.



The columns listed include the Start and End time of each job, the Platform Server Node Name, the Storage Group and a column indicating if the job is currently still running. If the 'Running' checkbox is checked, that means that the maintenance job is still executing. The 'Error' column will provide an indication of there was a problem with the maintenance job. If something is listed in the column, the view log command below can provide details.

If the administrator wishes to see more detail on each maintenance job, they can right-click on a line in the grid. The system will then bring up the option to 'View Log'.



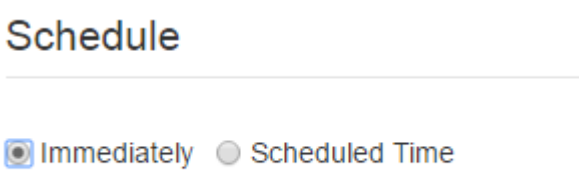


The History Log shows a detailed line-by-line description of the job execution status.

Task Scheduling Options

When an operator is ready to schedule a task, the individual task screen has a number of options. Many a specific to the job at hand, however, there are common elements to each task including the task scheduling options.

Task Schedule

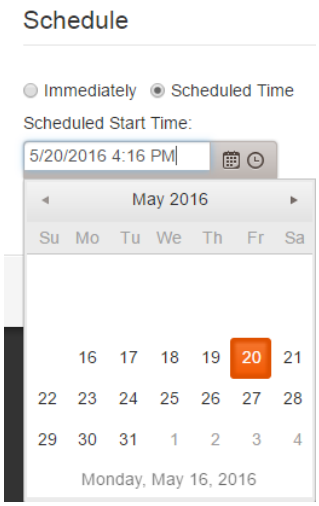


When scheduling a task, the operator has the option of scheduling the task to run immediately or opting for scheduling it to run at a future date/time.

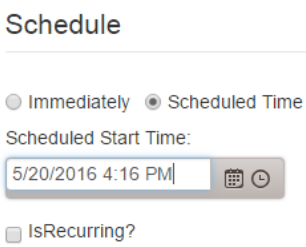
By selecting the button under “Schedule”, the operator has the choice.

Scheduled Time

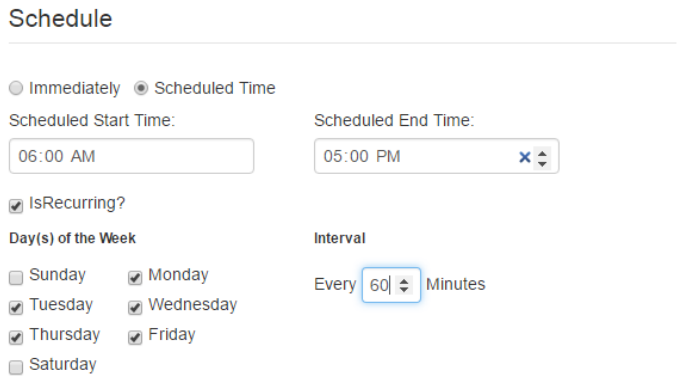
If the operator selects “Scheduled Time”, the system will present an input field allowing the operator to choose the future date and time for the task to begin.



Recurring



Additionally, if the operator chooses the 'IsRecurring' checkbox, the system will provide a schedule allowing a recurring task scheduled to be created. A recurring schedule allows the user to set the following fields:



Scheduled Start Time – Recurring tasks will not start executing before this time.

Scheduled End Time - Recurring tasks will not start executing after this time.

Days of the Week – Tasks will only begin executing on days of the week checked.

Interval – The number of minutes in between the start of one task and the start of another task. This does not include the amount of time the job runs.

Recurring Task Schedule Examples

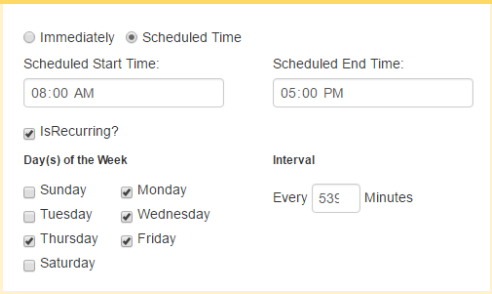
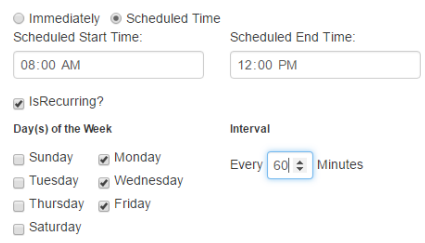
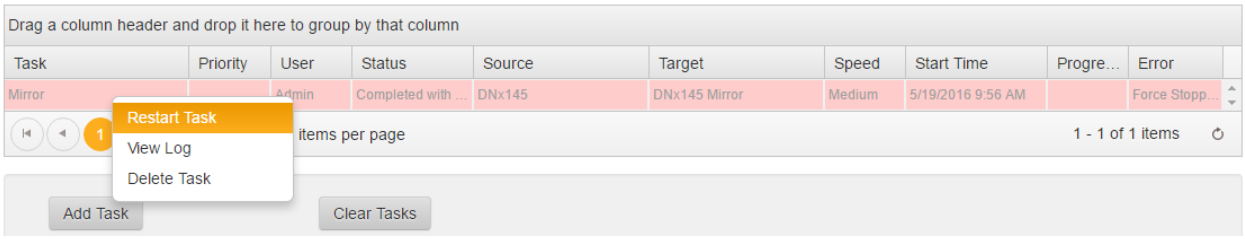
Requirement		
Run a job every day of the week during normal business hours, once per day.		By setting the job to run every 539 minutes (9 hours @ 60 minutes = 540 minutes), the system will only schedule one job during the start and end time specified.
Run a job every hour on Monday, Wednesday and Friday mornings.		By setting the start and end time to by between 8:00 AM and Noon, and only selecting M,W,F, and to execute the job every 60 minutes.

Table 17 - Recurring Task Schedule Examples

Restarting a Task

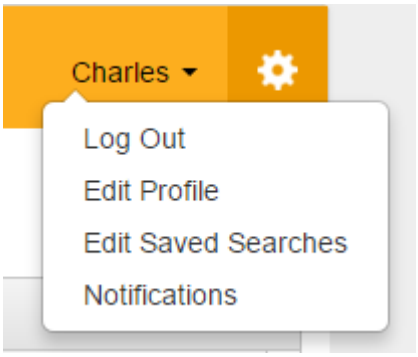
Certain tasks have the option of being restarted if they fail. They include but are not limited to Platform Space Mirrors.



When the operator right-clicks on a task that has stopped, they can select ‘Restart Task’.

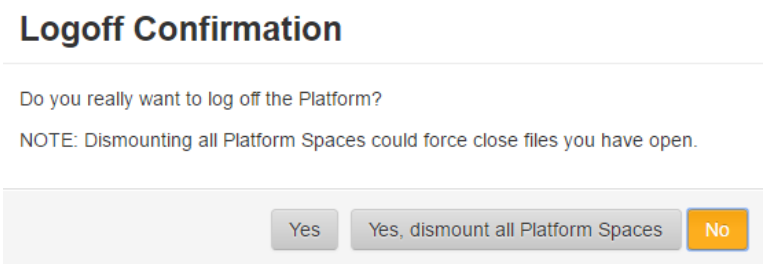
User Options

The user options in the upper right hand corner of every Platform Space screen allows the user to quickly get access to the following features:



Log Out

After selecting the Log Out option, the system will ask the operator to confirm the operation:

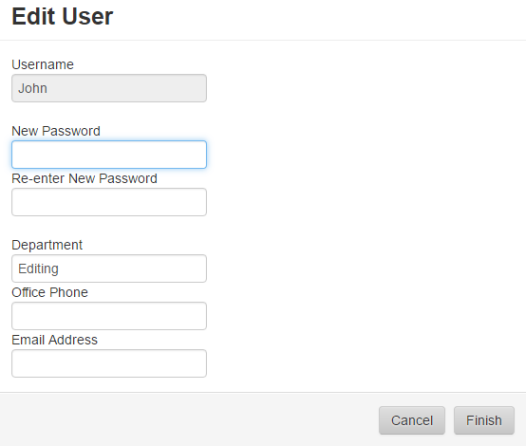


Yes: If the operator answers 'Yes', they will be logged off of the system immediately. However, any Platform Spaces that are mounted will remain mounted. In this case, they are only logging out of the Platform Interface and since these mount points are still active, the user may continue to use the access to the shared storage without restriction.

Yes, dismount all Platform Spaces – If this option is selected, the system will first attempt to dismount mounted Platform Spaces and then log the operator off of the Platform.

No – The system will cancel the request and return to the Platform Interface.

Edit Profile



The Edit Profile option allows the operator to change profile information.

New Password – This will update the user's password in the Active Directory. Passwords must adhere to the password rules set in the Active Directory security policies.

Re-enter New Password – Required for update and both passwords must match.

Department – This is the department field in the Active Directory.

Office Phone – This is the office phone number defined in the Active Directory

Email Address – This is the email addressed defined in the active directory. This address will be used when sending notifications to the user when email notifications have been specified (see below).

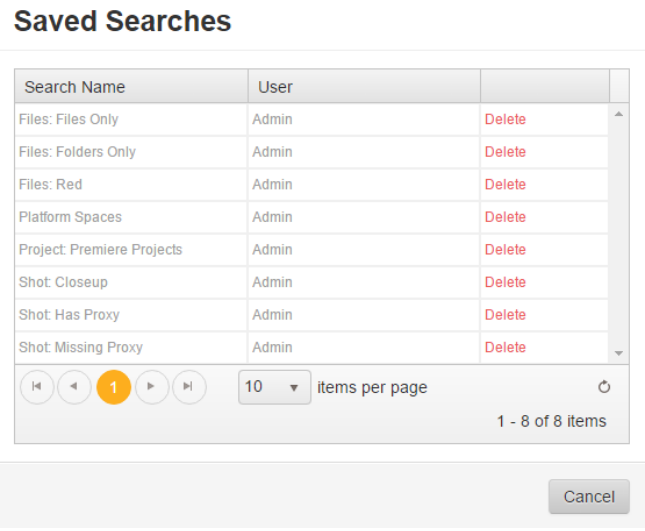
Cancel

The cancel button will disregard any updates made on the screen and return the user to the Platform Interface.

Finish

When the operator selects finish, the system will attempt to commit all of the operator's changes and then close the window.

Edit Saved Searches

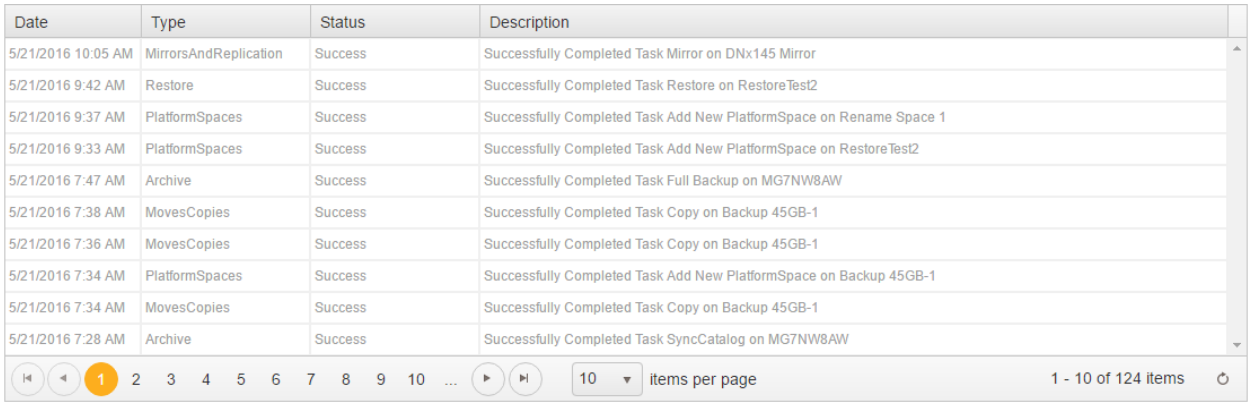


After selecting the Edit Saved Searches option from the user options menu, the system will bring up a list of Saved Searches. This list will include all searches created by that user and all public searches defined by others.

Currently, the system only allows the user to delete an existing saved search. If the user wishes to update a saved search, they will use this screen to delete it and then recreate the search in the Save Search Window.

User Notifications

This window will allow users to see a historical list of notifications sent to the logged in user. Each time a notification (Pop-up or Email) is sent to the user, it is also logged in this list. This gives the user the ability to review prior notifications from the system.

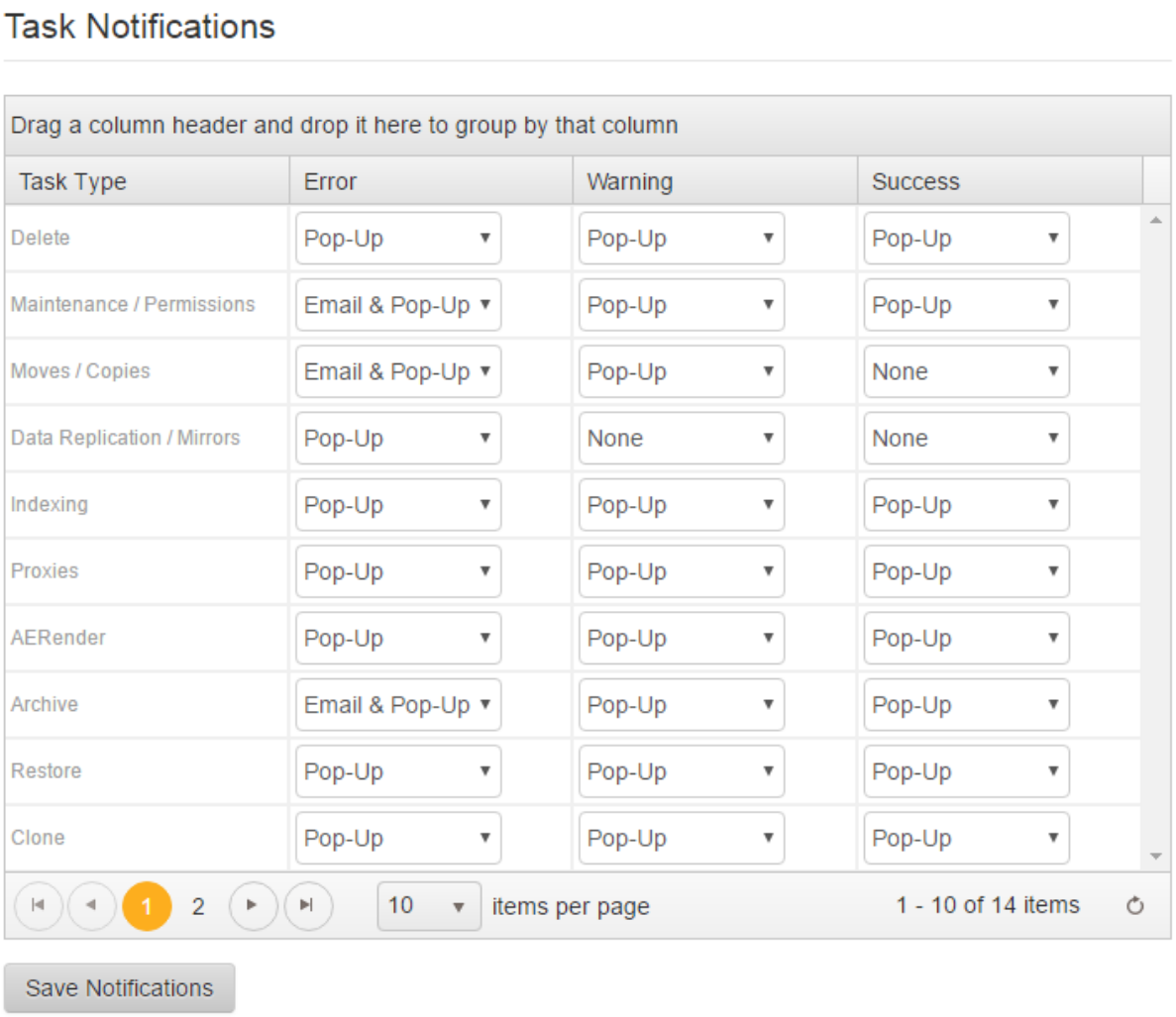


Date	Type	Status	Description
5/21/2016 10:05 AM	MirrorsAndReplication	Success	Successfully Completed Task Mirror on DNx145 Mirror
5/21/2016 9:42 AM	Restore	Success	Successfully Completed Task Restore on RestoreTest2
5/21/2016 9:37 AM	PlatformSpaces	Success	Successfully Completed Task Add New PlatformSpace on Rename Space 1
5/21/2016 9:33 AM	PlatformSpaces	Success	Successfully Completed Task Add New PlatformSpace on RestoreTest2
5/21/2016 7:47 AM	Archive	Success	Successfully Completed Task Full Backup on MG7NW8AW
5/21/2016 7:38 AM	MovesCopies	Success	Successfully Completed Task Copy on Backup 45GB-1
5/21/2016 7:36 AM	MovesCopies	Success	Successfully Completed Task Copy on Backup 45GB-1
5/21/2016 7:34 AM	PlatformSpaces	Success	Successfully Completed Task Add New PlatformSpace on Backup 45GB-1
5/21/2016 7:34 AM	MovesCopies	Success	Successfully Completed Task Copy on Backup 45GB-1
5/21/2016 7:28 AM	Archive	Success	Successfully Completed Task SyncCatalog on MG7NW8AW

1 2 3 4 5 6 7 8 9 10 ... 10 items per page 1 - 10 of 124 items

Notifications

Platform provides convenient method to alert users upon the execution of certain events. These events are defined in the system configuration screen under the Notification Tab.



Notification Task Categories are listed below:

Notification Category	Description
Delete	Used when a delete task operation such as a file deletes have been requested.
Maintenance / Permissions	Used for system maintenance tasks and user permission updates.
Moves / Copies	Tasks that move Platform Spaces or individual files
Data Replication / Mirrors	Primarily used for Mirror task notifications
Indexing	Used for Platform Space indexing tasks.
Proxies	Tasks that generate video proxies.
AERender	Used for After Effects® Render Jobs
Archive	LTO Tape archive operations
Restore	LTO Tape restore operations
Clone	Platform Space Clone operations
Metadata	Tasks that update metadata on files or groups of files
Backup	LTO Tape Backup operations
Create Platform Spaces	Tasks that Create New or Add Existing Platform Spaces
Groups	Used to keep Active Directory groups synchronized

Table 18 - Notification Categories

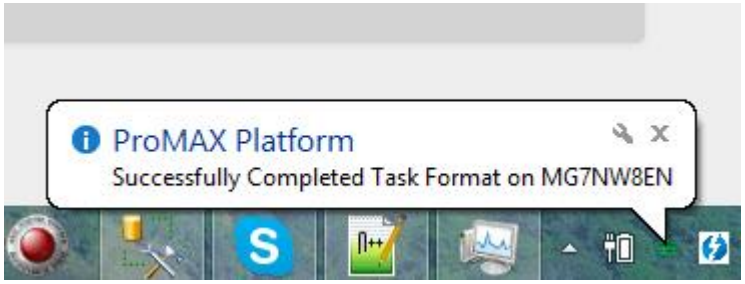
Notification Alerts

Notifications can occur two different ways and are configured in the System Configuration Settings under the Notifications tab.

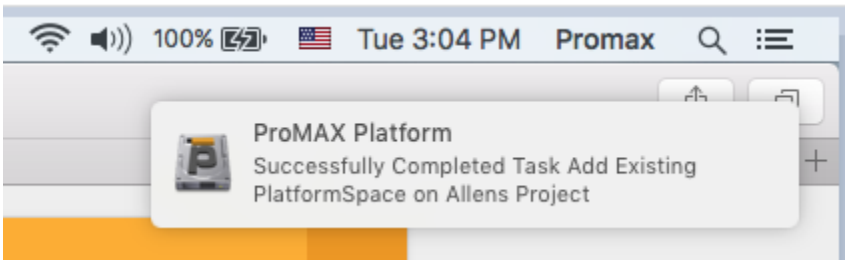
Pop-Up Notifications

These notifications alert the operator thru the Client Listener on the client workstation. The notifications will appear in a 'Pop-up' window and display for 1-2 seconds before they automatically disappear.

Windows – Notifications for windows commands pop up from the system tray.



Mac - Notifications for Mac show in the menu bar at the top right hand side of the screen.



Adobe Premiere® Panels

Platform's Adobe Premiere Pro® interface is designed to allow media creators to harness the power of the Platform within Adobe Premiere Pro. Key features include:

Powerful Searching - The ability to use the Platform's powerful search engine to search across the entire Platform Network for specific assets. Utilizing the custom metadata fields, powerful searches can be created and saved that increase productivity in the media creation process.

Media Import and Timing Dragging – Media can be easily imported or easily dragged directly to the current timeline.

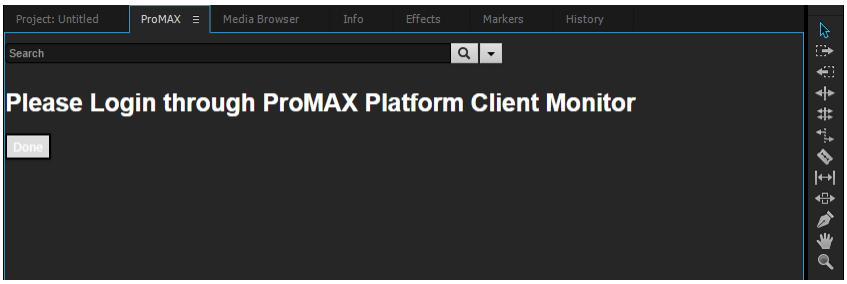
Data Management – The ability to copy files / folders from server location to server location including the ability to initiate tape backup operations right within the interface.

Transcoding & Proxies – Initiate jobs on the Platform Server to create proxies on high-res media or generate final output on the server with the transcoding option.

The Platform Panels interface must be installed on each individual workstation and is accomplished when installing the Platform listener.

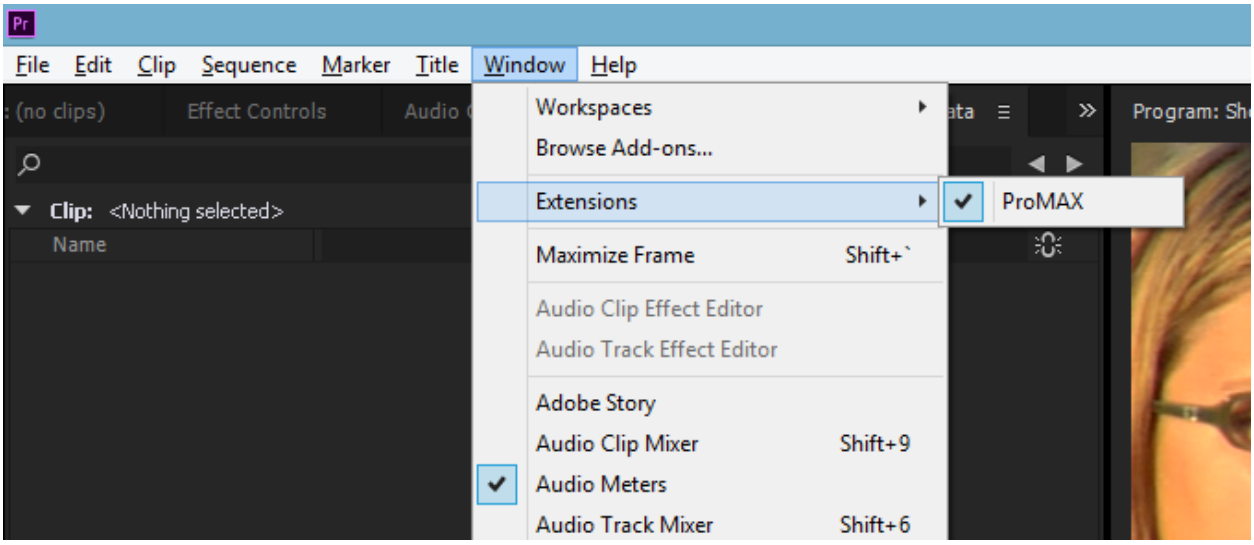
Starting Adobe Premiere Pro®

Before starting Adobe Premiere Pro®, the user must be logged into the ProMAX web browser. Currently the panel interface does not allow the user to login to the ProMAX Platform. If a user starts using Adobe Premiere Pro® before logging into the interface, they will receive the following message in the panels window:

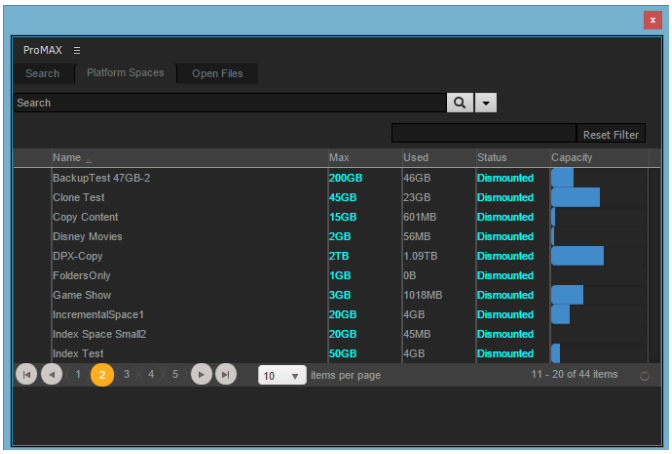


After logging into the Platform using the web browser, the user can simply click on the 'Done' button and they will see the normal panel interface listed below.

After starting the editing application, the user must enable the ProMAX Platform Panels Extension by clicking the 'Window' menu and then choosing 'Extensions'.



Select the 'ProMAX' extension and the system will open the Platform Panel.



The panel can be docked to any location within the Premiere interface by clicking and holding on the panel bar and dragging it to another panel location.

Platform Adobe Premiere Pro Panel Interface

The panels interface has been designed for maximum flexibility allowing access to key features of the Platform Server. For ease of use, features have been restricted to the capabilities used most in an editing environment. However, users can also use the full web browser GUI interface at the same time they are using the Premiere Pro Panel Interface.

> *Because the capabilities here are duplicates of the Platform Web Browser Interface, details of the functions will not be repeated in this section of the document. Please refer to the sections of this manual that describe the features in detail.*

Panel Layout

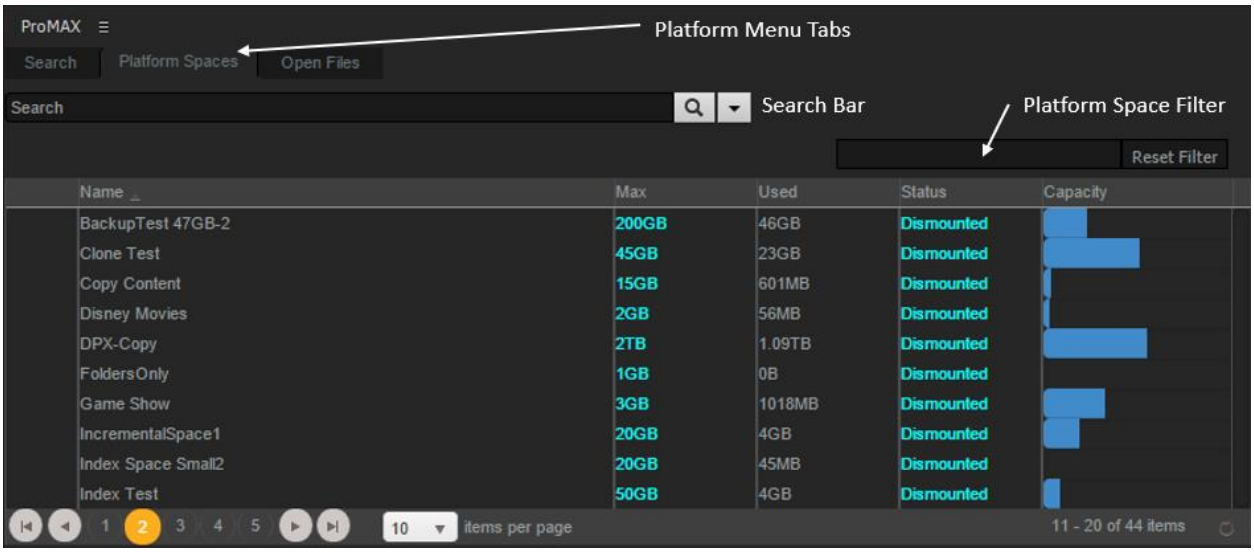


Figure 31 – Adobe Premiere Pro® Panels Layout

The Panel Layout provides an intuitive similar to the Platform web browser interface. The search bar is always present in the panel window for quick access to files by name. The Platform Menu Tabs are shown at the top of the panel (in the web browser interface they are listed down the left hand side of the screen).

Search – The search tab replicates portions of the search screen in the standard Platform interface. This includes the ability to perform simple and advanced searches.

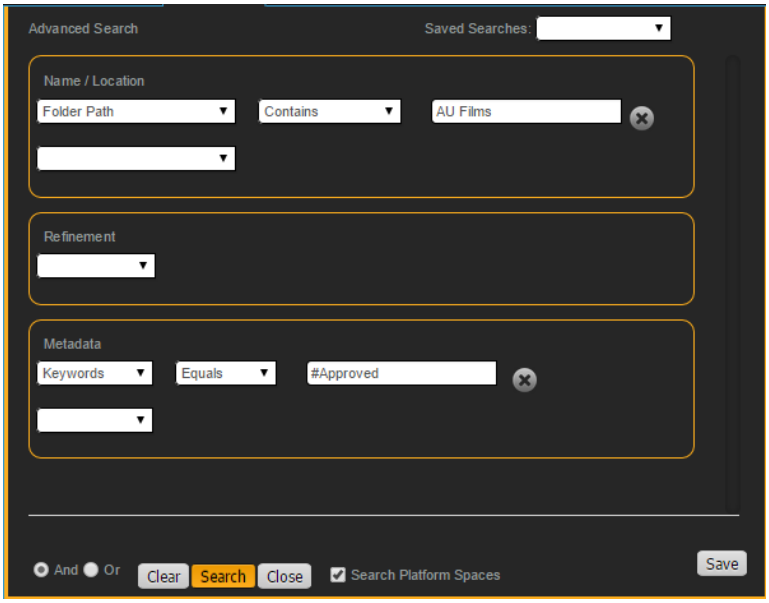
Platform Spaces – This tab replicates the Platform Spaces screen and allows the operator to mount, dismount and search Platform Spaces.

Open Files – The operator can easily see what files are open across the Platform System.

Searching

The same powerful capabilities available in the web browser interface is also available in the Panels Interface. The user has the standard simple search bar and the advanced searching capabilities. Although the window interface looks different, the same capabilities are available from the panels interface.

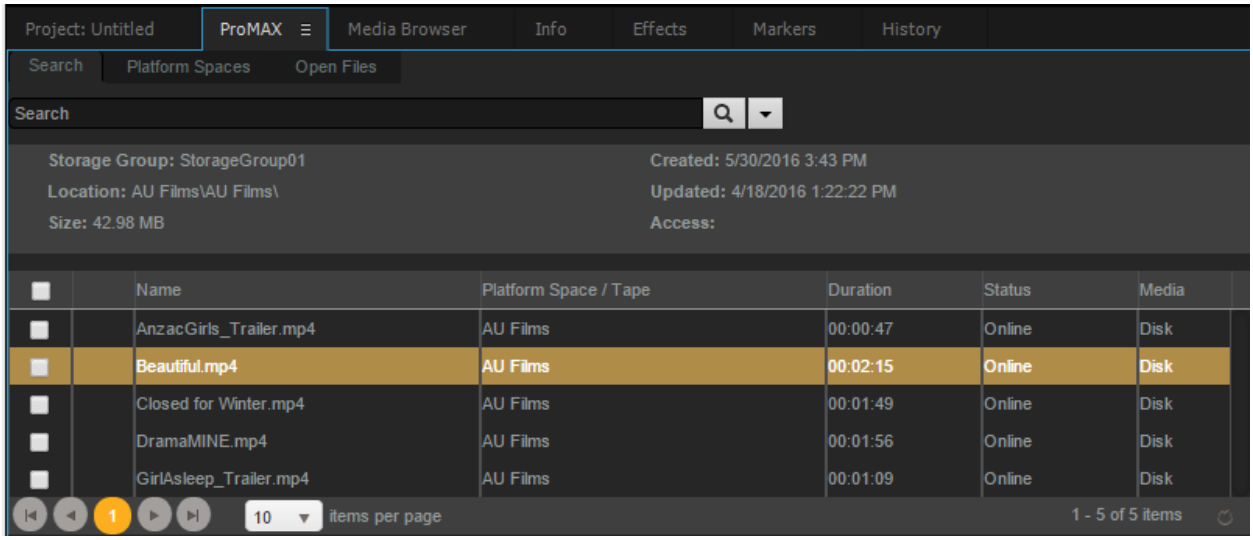
By using the panels advanced search window, the editor can easily find the necessary clips and media for the task at hand.



In this example, the editor is looking for any files where their stored path contains 'AU Films' and have the metadata keyword '#Approved'.

Search Results Tab

After completing a search, the search results show in the 'Search' tab or Search Results tab.



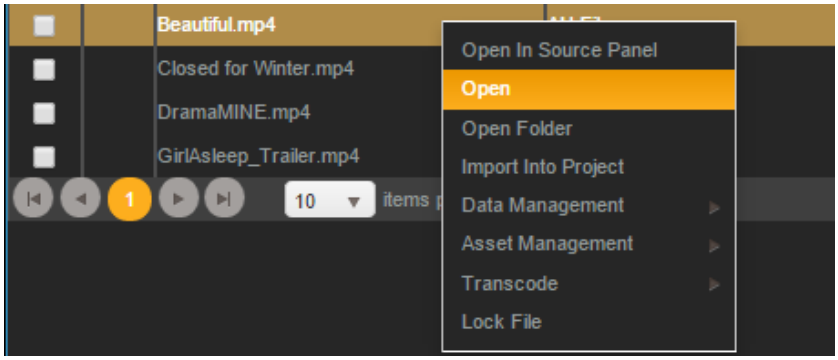
Similar to the Search Results Screen in the Platform Browser Interface, the editor can browse thru the search results and select files and folders to work with. Right-Click options for files in the search result screen are similar to the Platform browser interface but also include some unique commands for inside the Premiere Pro Interface. These include:

Open in Source Panel – By choosing this option, the editor can easily play the footage in the source monitor. Double-clicking on the asset activates this command as well.

Import into Project – This option will add the asset to the project at the root of the project structure.

Standard search result right-click options also include:

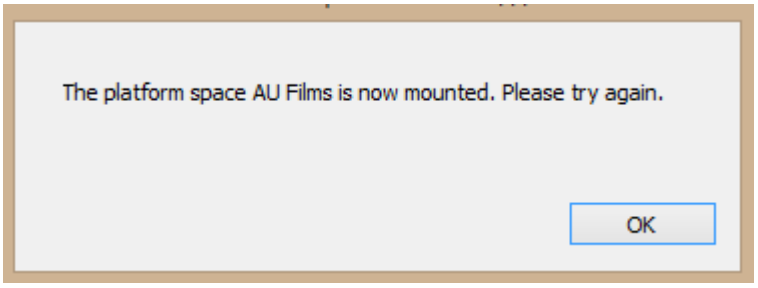
- Open
- Open Folder
- **Data Management**
  - Copy To
  - Move To
  - Backup
  - Archive
  - Delete
- **Asset Management**
  - Generate Proxy
- Transcode
- Lock File



Dragging Assets to the Timeline

Editors can Easily select and drag items from the search results grid directly to the editing timeline. By left-clicking on a file and holding down the left-click button and dragging the cursor over to the timeline, the system will automatically pull the file into the sequence.

Platform Space must be Mounted



If an editor attempts to drag a file from the search result scree when the underlying Platform Space is not mounted, the cursor will show a circle with line thru it during the drag operation. Then the system will automatically mount the Platform Space and present this message. After clicking on the 'OK' button, the operator can drag the file again to the timeline.

Platform Spaces Tab

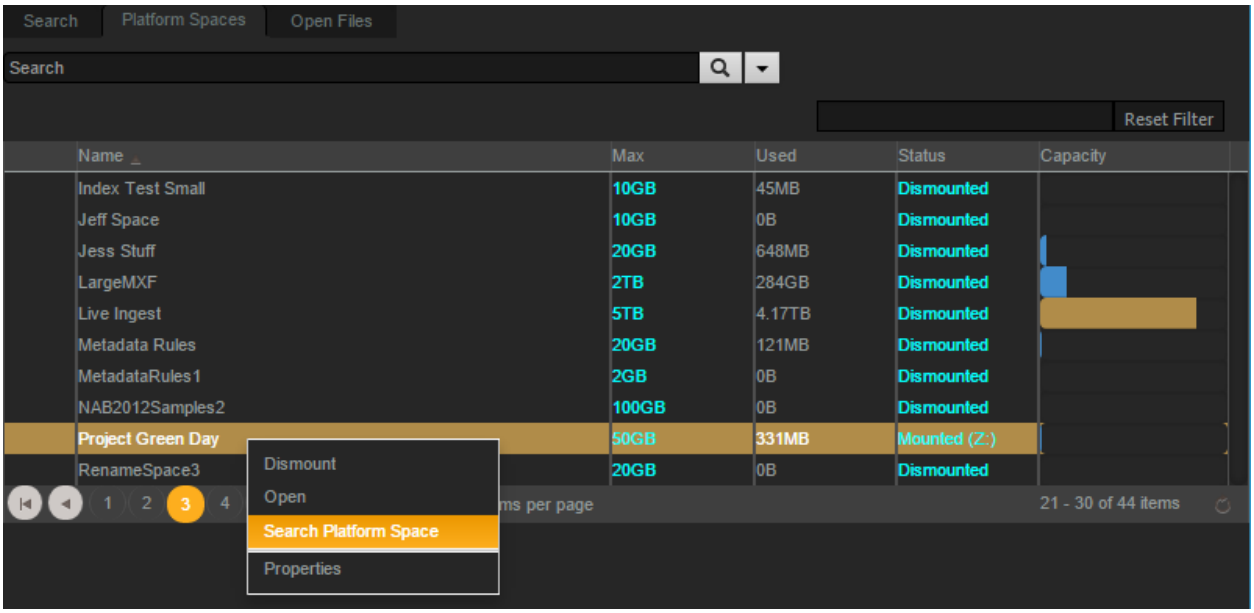


Figure 32 - Adobe Panels - Platform Spaces Tab

If the Platform Spaces Filter box appears in the upper right hand corner of the window, the user may filter the Platform Spaces on the screen.

The Platform Spaces tab duplicates the capabilities of the Platform web browser with restricted features. Operators will see all of the Platform Spaces they have access to and can mount, dismount, open and see properties of each space. See the Platform Spaces Screen for full details on the features that are listed in the menu.

Menu options for Platform Spaces include:

Mount / Dismount

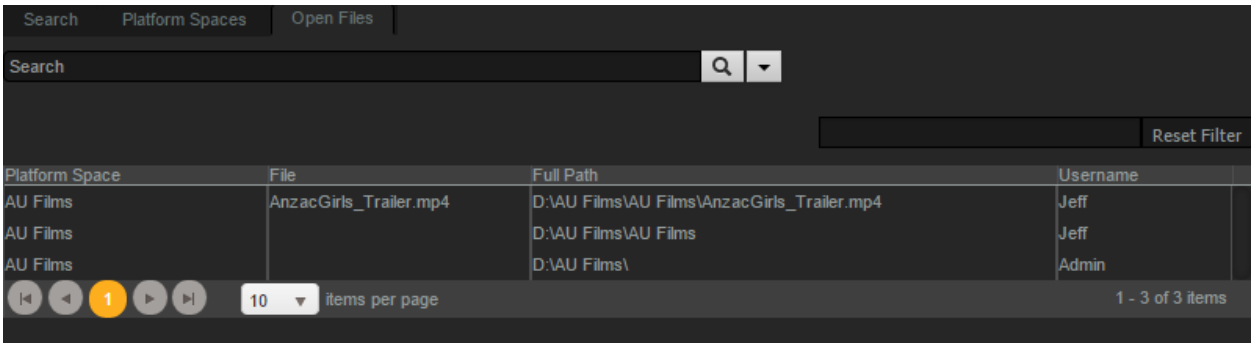
Open

Search Platform Space

Properties

Open Files Tab

This tab duplicates the feature set found in the Open Files menu option on the Platform browser interface. It is specifically designed for conflict situations where an editor cannot open, move, or delete a file that another user has open.



By selecting the Open Files tab, the system will display a list of files open by different users in the system.

Administration Screens

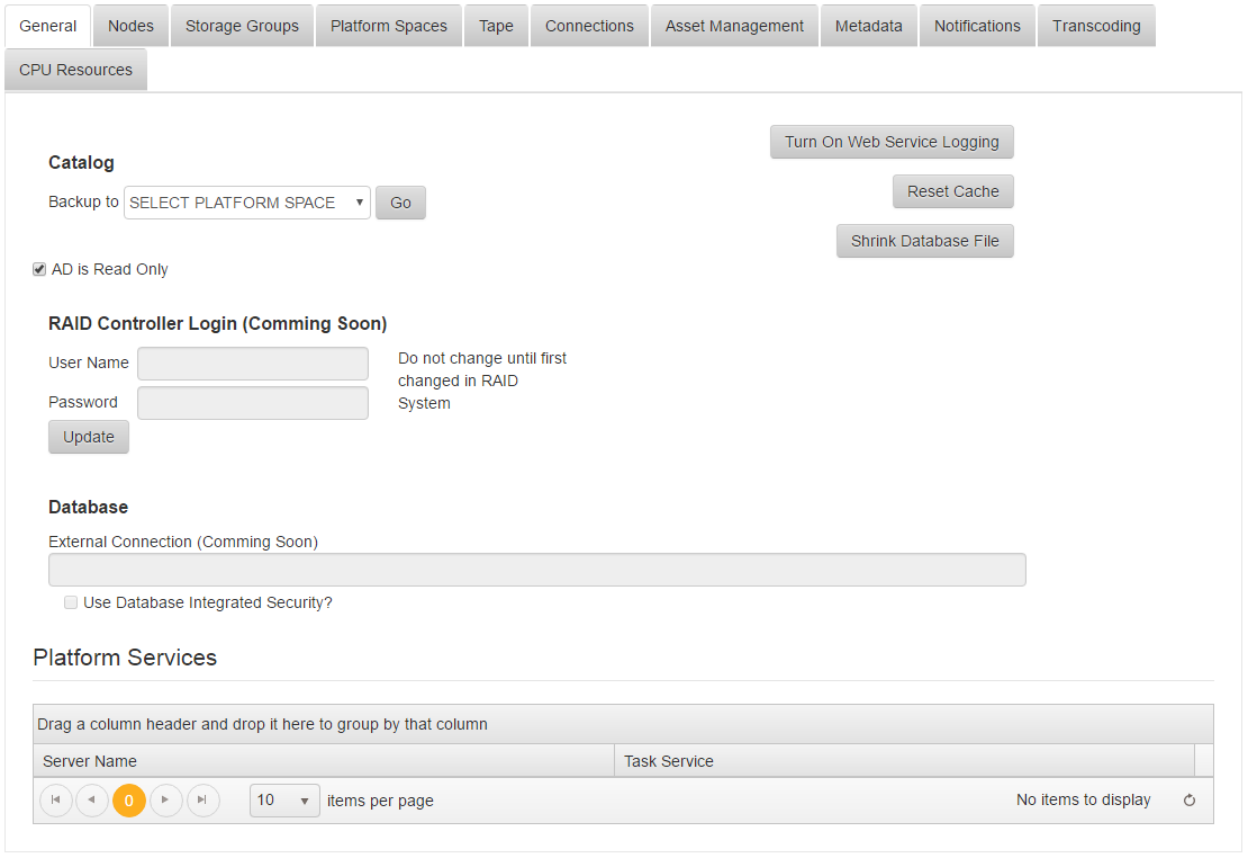
The Administration screens allow the system administrator to configure system wide options on how the Platform environment will operate and an individual user to configure how the system will operator for that particular logged in user.

The Administration or Configuration Screens are accessed by clicking on the gear wheel  in the upper right-hand corner of the screen.

Most options listed below are exclusively set up for operators that have been given 'Admin' Feature Permission Access to the Administration screens. In the following descriptions, this manual will show the options available when logged in as an administrator and as a user.

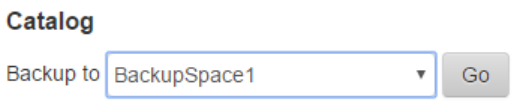
General Tab

The general tab provides options that affect the entire Platform environment which is configured by the system administrator.

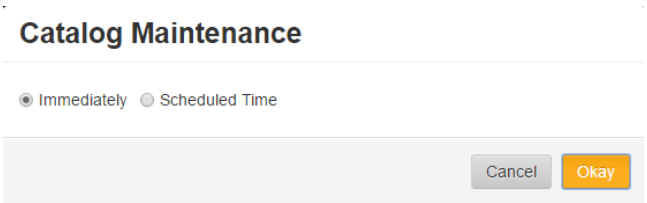


Catalog Maintenance

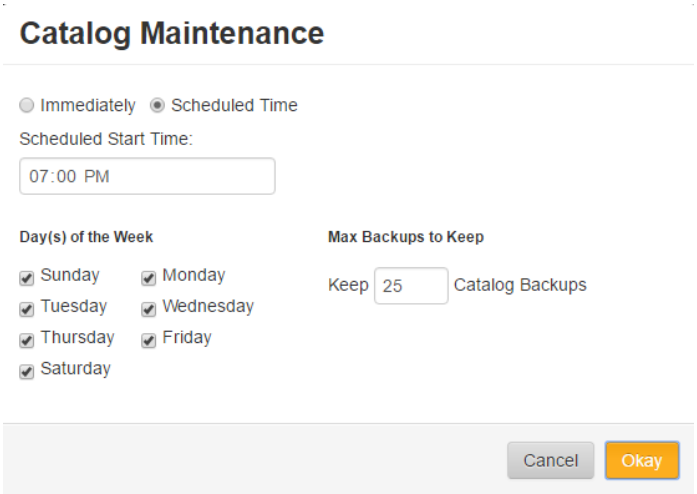
This option allows the administrator to perform *database catalog back up and maintenance*. The maintenance operation consists of rebuilding search indexes. The user will first select the Platform Space that will be used for backups.



After selecting the space and clicking on the 'Go' button, the system will bring up a scheduling window allowing the backup to be run one time or a recurring schedule.

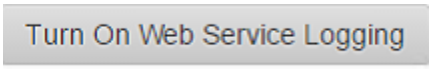


If the operator selects Immediately, the job will be submitted to the task service then. If they choose Scheduled Time, they then have the following options:



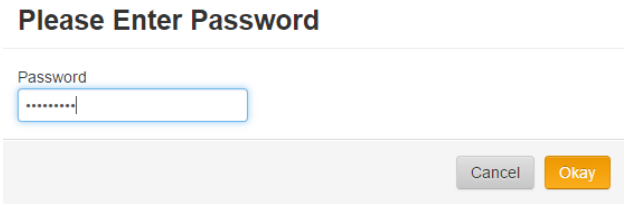
In the example to the left, the operator will configure the maintenance to run each night at 7:00 PM. When the maintenance job starts, it will first backup the catalog and then perform database maintenance. ***It is highly recommended that Catalog Maintenance be performed during low user activity periods.***

Turn On Web Service Logging



This button is should only be enabled when working with the ProMAX Customer Service team when diagnosing problems. This feature enables detailed logs to be written to the c:\Program Data\ProMAX directory and can fill up the Operating System drive if left on too long.

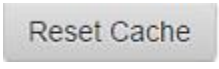
After clicking the button, the system will require the administrator to enter the 'Admin' password. This is the password that was used to set up the Admin user (or administrator user when joining another domain) on the Platform.



When an administrator enables this feature, each user logged into the Platform will show the following banner at the top of their browser:

This is designed to ensure that the administrator does not leave the web service logging running when it is not necessary.

Reset Cache



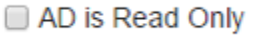
Platform utilizes a sophisticated caching algorithm to keep core information like Platform Space's in memory and synced to the browser for improved performance. During a caching

cycle, key information on the Platform Space's screen, like space used may be out of date. The Reset Cache button allows the administrator to force a cache sync. This option is generally unnecessary and will not be used under normal operating conditions.

Shrink Database

This option allows the system administrator to reduce the file of the Platform Catalog file. This option should only be used under the supervision and direction of the ProMAX Platform customer service team and requires a special password. Shrinking a database (or catalog) file can reduce amount of space used on disk, however, it ***can also have a negative impact on system performance.***

AD is Read Only (Active Directory)



This option is set upon initial system configuration. When a Platform System is set to join a company's existing active directory domain, the domain administrator may only want the Platform to read from that AD. When this option is checked, certain functions such as Add New User, Create New Group, etc. will not be available in the Platform interface. When selected this option forces the Platform from only reading from the Active Directory and will not make any updates to the AD.

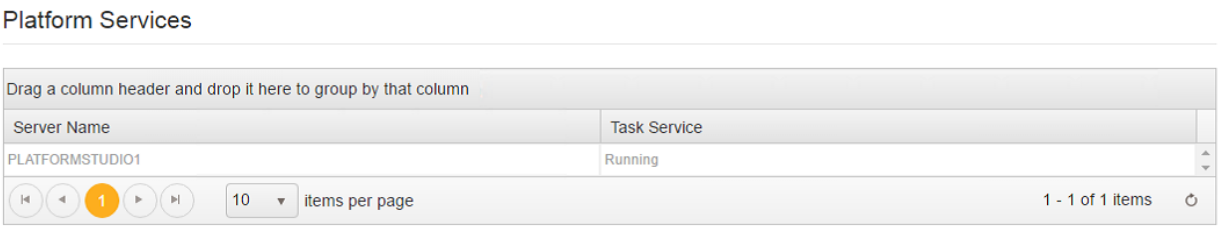
RAID Controller Login

This feature allows the system administrator to change the RAID controller default login information. The default login for the Platform RAID controller is 'admin' and the password is '0000'. If the administrator changes the login or password, they must do so in the separate RAID controller software first and then make the change to the configuration screen.

Database Connection

The database connection option sets the external connection screen for the database catalog. This feature allows the system administrator to use a different SQL server instance than the one provided by the Platform System by default.

Platform Services

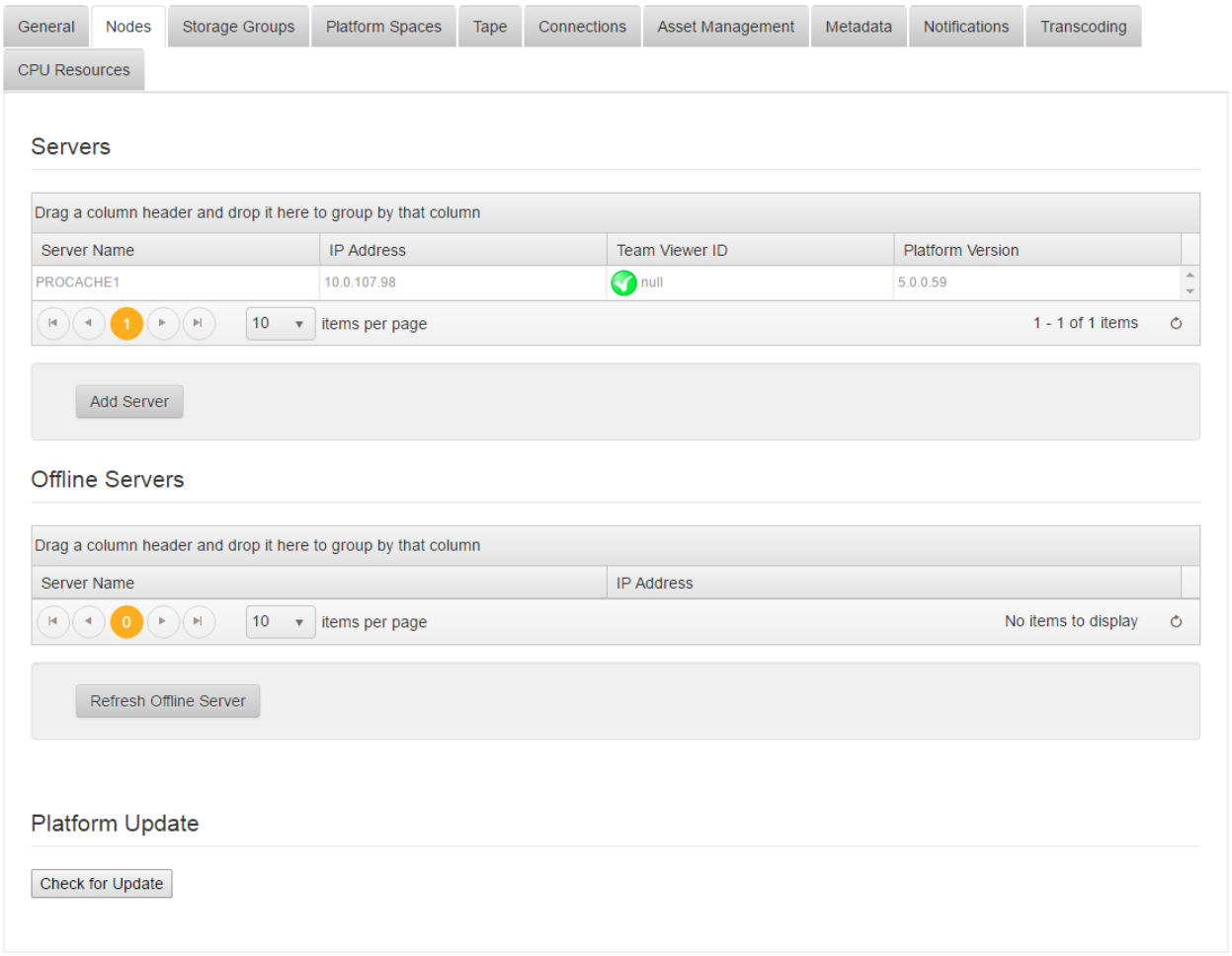


Platform utilizes a service task called the 'Task Service' that manages and schedules jobs to run on the Platform Server. For each Platform Node on the network, the system will display the Server Name and the Task service status.

The Task Service Status should normally be in a 'Running' condition. If it is not running for some reason, the administrator can right-click on the link and select 'Restart Services'.

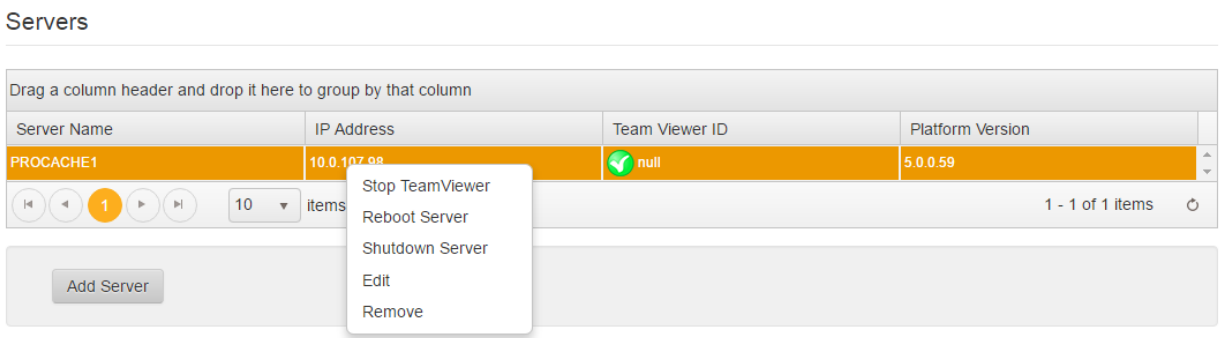
Nodes Tab

The Nodes Tab is used by the administrator to see the status and manage options for each Server Node in the Platform Network.



Servers Grid

This Grid shows all of the Platform Nodes that are connected in the network. Servers listed in this grid are online and properly communicating in the network.



Servers Grid Columns

Server Name – The Computer Name of the Windows Server

IP Address – The Fixed IPv4 Address of the Server

Team Viewer ID – If enabled, the remote TeamViewer ID number that can be provide to the ProMAX technical support team for remote login.

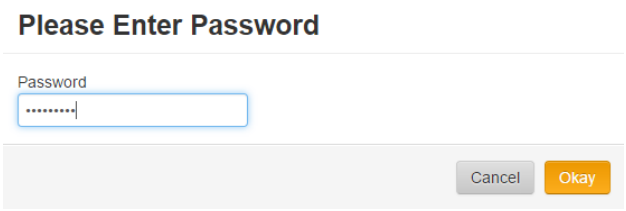
Platform Version – This is the revision number of the Platform Software installed on the node.

Servers Grid Right-Click Options

Administrators that right-click on a server have the following options:

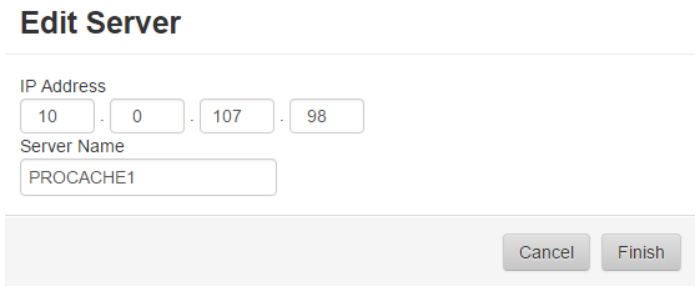
Start / Stop TeamViewer – This allows the administrator to start or start the team viewer remote connection program on the Platform node. This program is used by the ProMAX Customer Service team to connect to the server and resolve reported issues.

Reboot Server – After selecting this option, the system will require the entry of the System Admin password. After entry the system will display a warning insuring that the administrator really wishes to reboot the server. If confirmed, the system will issue the command to restart this node in the Platform Network. ***All users will then be disconnected from the system without warning.*** The administrator should ensure that users are logged off of the system before proceeding with this option.



Shutdown Server – Similar to the 'Reboot Server' option above, this option will require the administrator to enter the Admin password. If confirmed, the selected Platform Server Node will be shutdown. In order to start the server again, the administrator must have physical access to the Platform Server to press the power button. When a Shutdown request has started, ***all users will be disconnected from the system without warning.*** The administrator should ensure that users are logged off of the system before proceeding with this option.

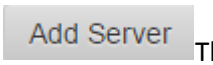
Edit Server – This option is used to change the Server IP address or Server Name.



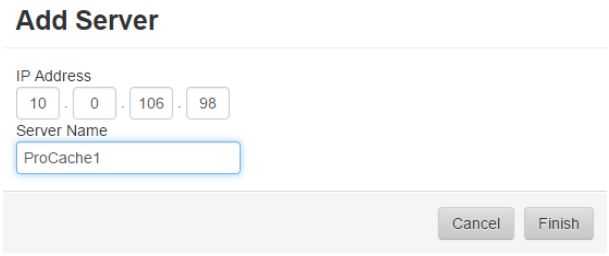
This option should be used with caution and generally under the supervision of the ProMAX technical support team.

Remove – When selected, the system will remove this node from the Platform Network infrastructure. Normally only used for sub-nodes, this option is valuable when taking a node offline.

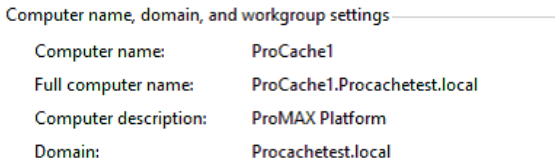
Add Server



The Add Server Button is used when an administrator is adding a new Platform Node to the Platform Server Network. Sub-Nodes must be licensed and configured from ProMAX before they are added into the network.



The Add Server screen requires a fixed IP address and a server name. Note that the Server Name must be the Exact server name in the Windows Server Computer Name on the Computer Properties Screen, and must match both upper and lower-case letters.



After the server is added in can take up to 3-5 minutes before the server will move from the 'Offline Servers Grid' to the Online Servers Grid.

Offline Servers Grid

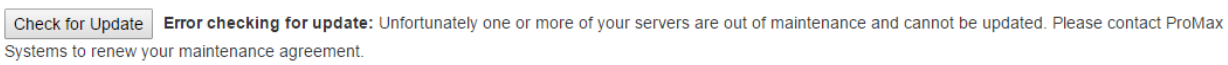
The Offline Servers Grid should normally have no entries in it. If it does, it indicates that a Platform Node is not communicating with the Platform Network. This could be caused by the

Platform Update

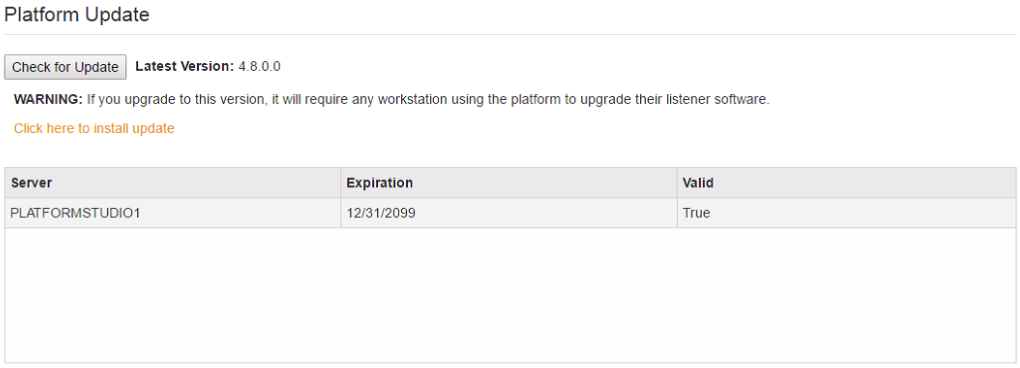
This section allows the administrator to check for updates to the Platform Software and update the server software. After clicking on the 

button, the system will contact the ProMAX Platform cloud licensing server and check to see if an update is available. Some possible responses include:

> **ProCARE out of Date –** ProMAX requires a valid up to date ProCare agreement to obtain updates to the Platform Software. If you receive the message below, please contact ProMAX Systems to update your ProCARE agreement. All servers in the node structure must be on a maintenance agreement in order to update the servers to the new release.



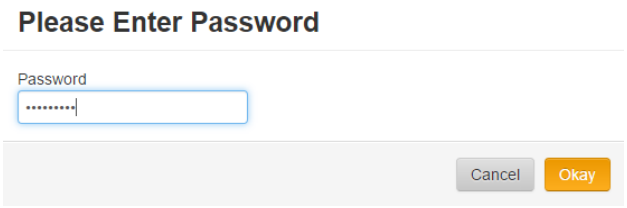
Update Available – When a software update is available the system will display the latest version to the right of the 'Platform Update' button and an URL below it 'Click here to install update'.



Considerations before installing a Platform Software Update:

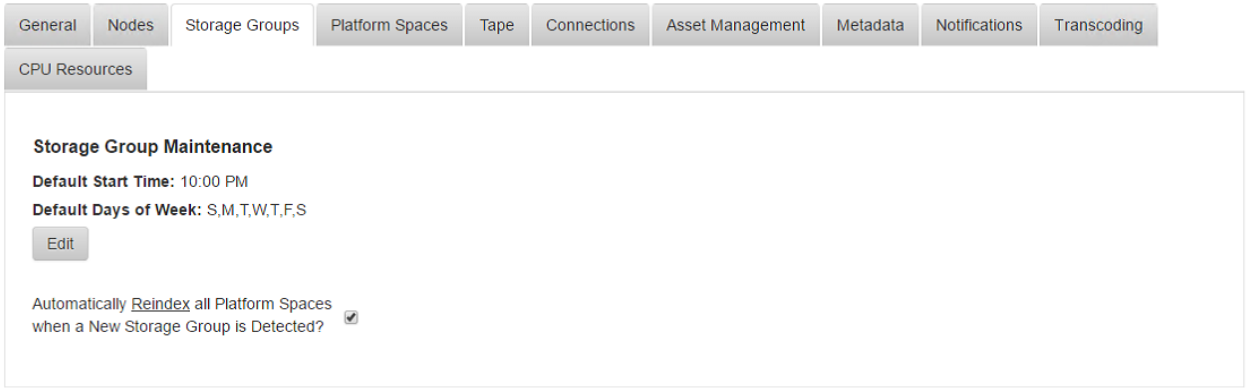
1) **Make sure you back up the Platform Catalog Database (see Catalog Maintenance).**
2) **Log out all users –** All Platform Users should be logged out of the Platform Browser and Panels Interfaces.
3) **Listener Software –** Be aware that some versions of Platform Software can require the reinstallation of the Platform Listener software to be reinstalled. This can also require a reboot of these workstations. Please consider this before installing the update.

When the Administrator clicks on the **Click here to install update,** the Platform will require the entry of the system administrator password.



After the password is entered, the Platform will communicate with the ProMAX cloud services and begin to download and install the new release on all Platform Nodes in the infrastructure.

Storage Groups Tab



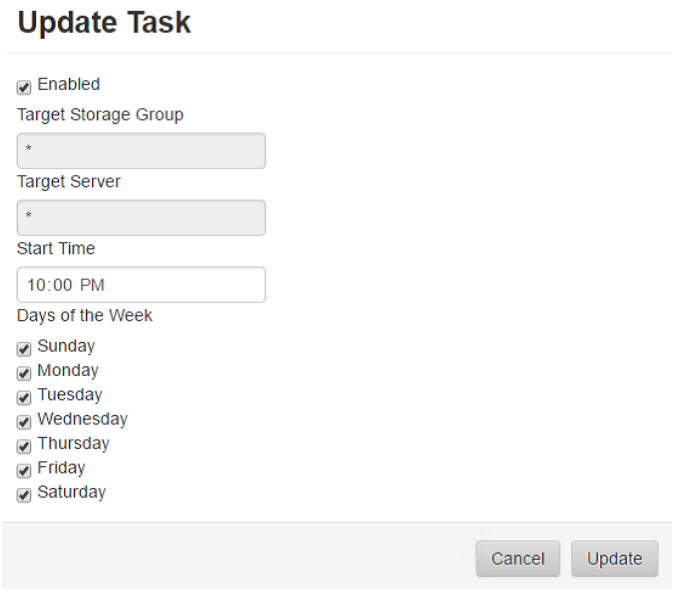
The Storage Group tab is used to set up default options for Storage Groups connected to the Platform network.

Storage Group Maintenance

By default, maintenance is performed on each storage group attached to the system nightly at 10:00 PM. Each storage group can have its only maintenance time and/or can be deselected. To set individual storage group maintenance, the administrator will use the Storage Groups screen.

In order to change the default maintenance time, the administrator can choose the Edit 

button from this tab.



Enabled – Checking this box enables maintenance to be run on all storage groups.

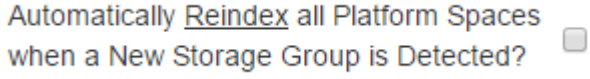
Target Storage Group – the '*' indicates that all storage groups connected will have maintenance run on them.

Target Server – the '*' indicates that all Platform Nodes on the network will be affected.

Start Time – The time that storage group maintenance will automatically begin.

Days of the Week – a check box for each day of the week that maintenance should run.

Reindex Platform Spaces



When this option is selected, any storage group that is connected to the Platform will automatically have all its Platform Spaces re-

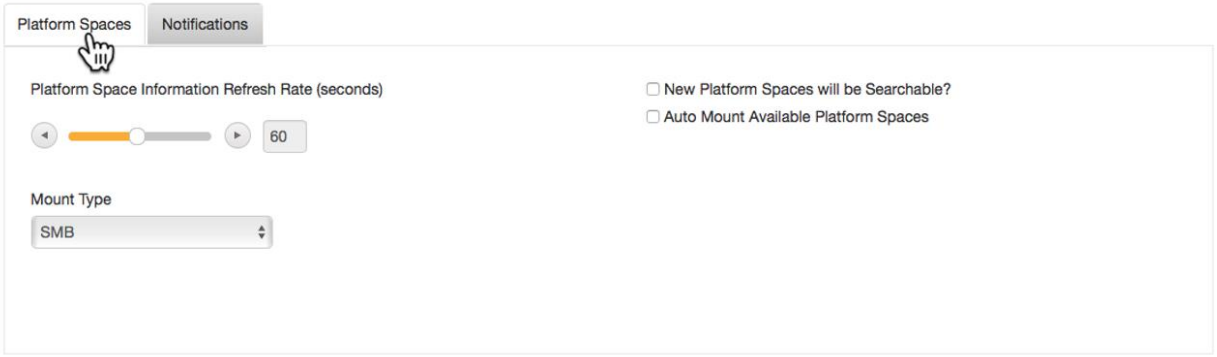
indexed. This option is valuable when working with a Platform System that uses remote storage like USB or Thunderbolt drives. In these situations, when users add data to the drive on another system and the reconnect it to the Platform, that information will not be included in the Platform Catalog. This option insures that as drives are reconnected, the index is kept in sync.

Platform Spaces Tab

The Platform Spaces Administration screen allows operators to set up options that control how Platform Spaces are used in the system.

User Access for Platform Spaces Configuration Options

When logged with ***User*** Feature Permission access, these options will be available to the user.



Platform Space Information Refresh Rate (seconds) – This slider will select the number of seconds between a refresh request on the Platform Spaces screen. After the number of seconds specified here has expired, the system will query the Platform Server for updated information.

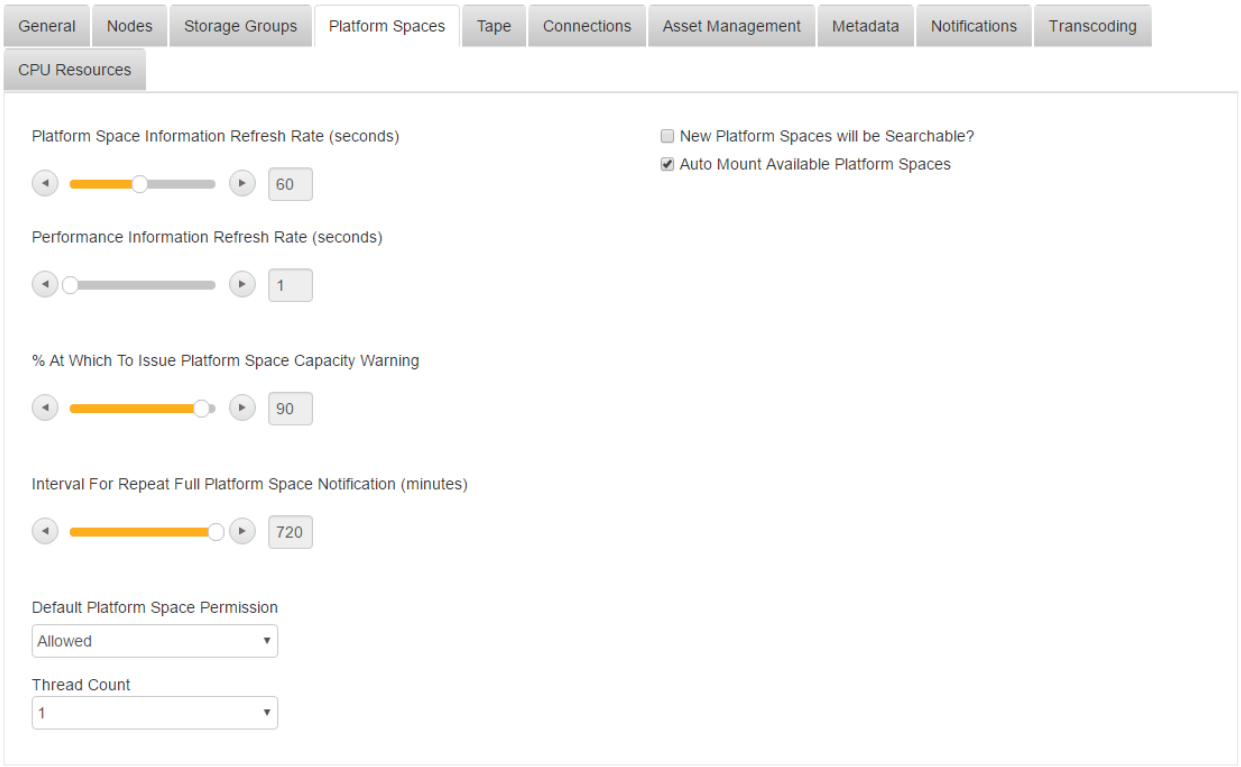
New Platform Spaces will be Searchable? – If checked, when creating a new Platform Space, the system will automatically make that Platform Space part of the global indexed catalog.

Auto Mount Available Platform Spaces – If checked, when this user logs into the system, the Platform Client Software will automatically mount any Platform Space that has been designated as auto mount.

Mount Type (Mac only) – Mac workstations have the option of default mounting Platform Spaces as SMB or AFP. If the user chooses AFP, the Platform Server must have special software installed to allow mounting AFP. Please contact ProMAX Technical Support for details.

Admin Access for Platform Spaces Configuration Options

When logged with ***Admin*** Feature Permission access, these options will be available to the operator.



Platform Space Information Refresh Rate (seconds) – This slider will select the number of seconds between a refresh request on the Platform Spaces screen. After the number of seconds specified here has expired, the system will query the Platform Server for updated information.

Performance Information Refresh Rate (seconds) – This is the rate in seconds at which the Platform System takes performance samples and displays to users. All performance information is available on the Performance Tab.

% At Which To Issue Platform Space Capacity Warning – When a Platform Space reaches the percentage full listed in this field, the system will automatically alert the system administrator thru an email. The email settings are listed on the Notification screen in the configuration section.

Interval for Repeat Full Platform Space Notification (minutes) – This is the number of minutes the system should wait after a full notification to send another full notification to the administrator.

Default Platform Space Permission

The Platform System uses this option to determine default permissions (Allow (modify), Read Only, Denied) when adding a new Platform Space or adding a new user/group to the system.

New Platform Space – When a new Platform Space is added to the system, the Platform will apply the permission listed here (Allow, Read Only, Denied) for all users to that Platform Space.

New User Group – When a new User or new Group is added to the system, the Platform will apply the permission listed here (Allow, Read Only, Denied) to that user/group to all Platform Spaces.

It is important for the system administrator to choose the right option for their organization. If they primarily want an open system where all users have access to all information, they would set their default permission to 'Allow'. However, if they want a more closed environment where users do not have access to all information, they should choose 'Denied'.

Thread Count

This indicates the number of simultaneous processes that should be used to manage Platform Spaces which includes re-caching information for the Platform Interface. A good rule is to set this to 4-6 but no more than ½ of the number of cores in the system. Smaller systems like a Platform Pro-Cache or Portable can be set to 1-2 threads.

New Platform Spaces will be Searchable?

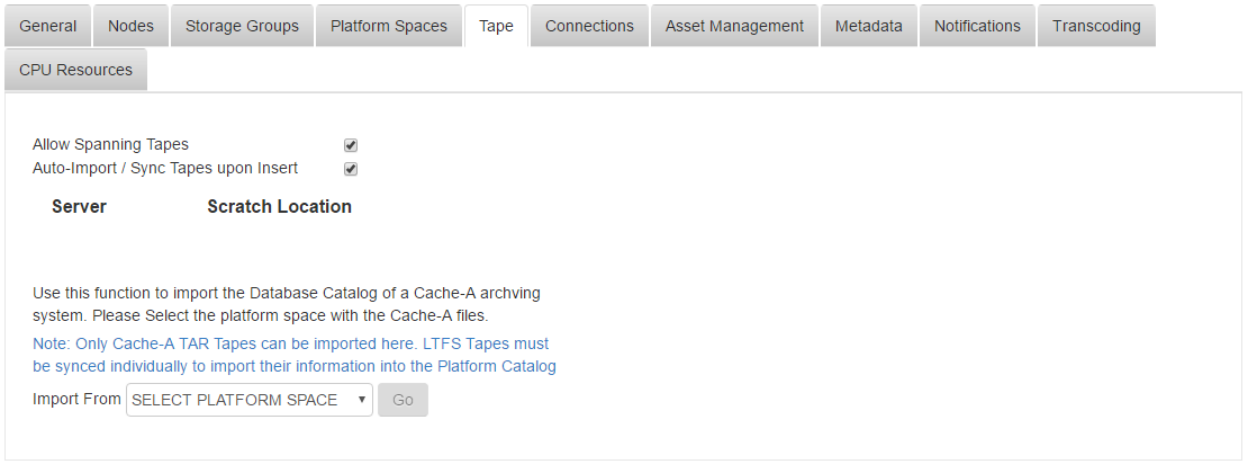
If checked, when any user creates a new Platform Space, the system will automatically make that Platform Space part of the global indexed catalog.

Auto Mount Available Platform Spaces

If checked, when this user logs into the system, the Platform Client Software will automatically mount any Platform Space that has been designated as auto mount.

Tape Tab

If the Platform System is licensed to use LTO Tape backup and archiving, the tape tab allows the administrator to set configuration options for this feature.



Allow Spanning Tapes

Allow Tape Spanning must be turned on if a user wants to run an Archive or Backup operation across more than one tape. If an administrator wishes to keep individual tape jobs from writing to only one tape, they will keep this option off.

Allow Spanning Tapes: Off – If deselected, when a backup or archive operation is requested, the system will pre-check to see if there is enough space on the target tape to complete the operation. The Platform performs a conservative estimate attempting to ensure that the tape selected will have enough room to complete the job. This is a warning only and the operator will be allowed to submit the job even when the warning has been issued. When a job reaches the end of the tape and not all the data is written, the following occurs:

Backup Job – a notification warning is issued to the user that not all files in the backup were written to tape before the job finished. However, files written to tape will remain on tape and recorded in the catalog.

Archive Job – a notification error is issued to the user that the archive failed. The files written to the tape are removed and the tape is placed back to the position before the job started.

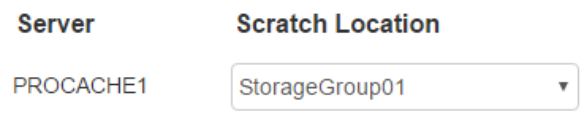
Allow Spanning Tapes: On – If selected, when a backup or archive operation is requested, the system will ignore all checks and begin the operation on the tape selected. If the tape fills up before the job is completed, the system will rewind the current tape, eject it, and will issue a notification warning that another tape must be inserted.

Auto-Import / Sync Tapes upon Insert

This option is selected by default and will cause the system to automatically perform a Platform Tape import or Catalog Sync operation when a new tape is inserted into

a tape drive. If the system attempts to automatically sync a tape and an error occurs, the error will be listed next to the tape drive so the operator can correct the issue.

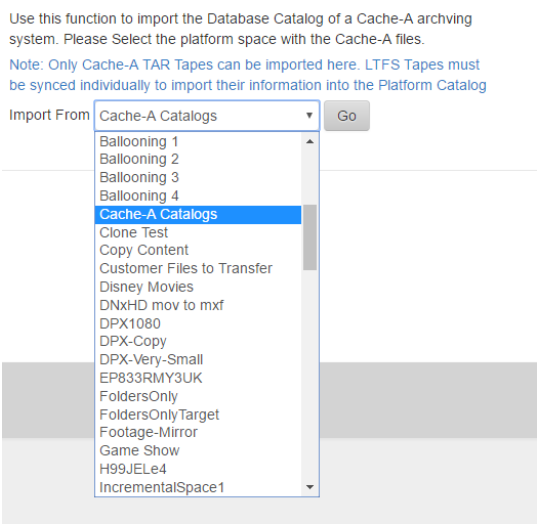
Scratch Location



The Platform LTO tape management system uses a 'scratch' location for certain tape operations including some MD5 checksum operations. This scratch location must be specified in order to properly configure the tape operation. The administrator should choose a scratch location that has least enough space for the largest single file they will write or read from a tape. When the tape system starts, it will create a directory called 'PromaxScratch' on the storage group specified.

Cache-A Database Import

Designed for existing ProMAX / Cache-A Customers to easily transition to the ProMAX Platform system, the Cache-A Database Import process is used to import an existing set of tar XML TOC files into the Platform Catalog. After this import is complete, all files and folders copied to any Cache-A tar tape will be searchable in the Platform system.



Key Points of Understanding

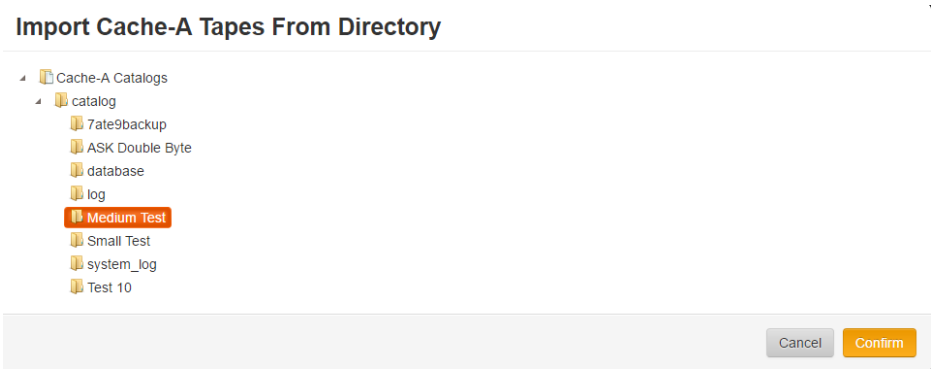
Only Cache-A Tar tapes will be imported during this process. Unfortunately, LTFS TOC files do not contain the necessary information to perform an import. LTFS tapes must be inserted into a tape drive individually which will perform an import for that tape.

Step1. The first step in the database import process is to back up the Cache-A database catalog to a tape which is an option in the administrative section of the Cache-A interface. That tape can then be inserted into the Platform System and the Cache-A database backup can be restored to a Platform Space the administrator wishes to use.

Step 2. When the Cache-A database backup has been restored to a Platform Space, there will be a tar archive file saved in the space. This has the format 'databasefile.tgz'. The administrator will need to extract all the data from that archive into the Platform Space. The files in this archive are individual tape TOC (Table of Contents) files from the Cache-A database which end in the suffix 'XML'. The administrator must note the directory within the Platform Space that these files are saved to.

Step 3. Next, in the Platform Configuration screen, Tape Tab, the administrator will select the Platform Space that these files were saved to. After selecting the Platform Space, the operator will click on the 'Go' button.

Step 4. The Platform interface will then bring up a window allowing the administrator to select the director where the 'XML' files have been stored.



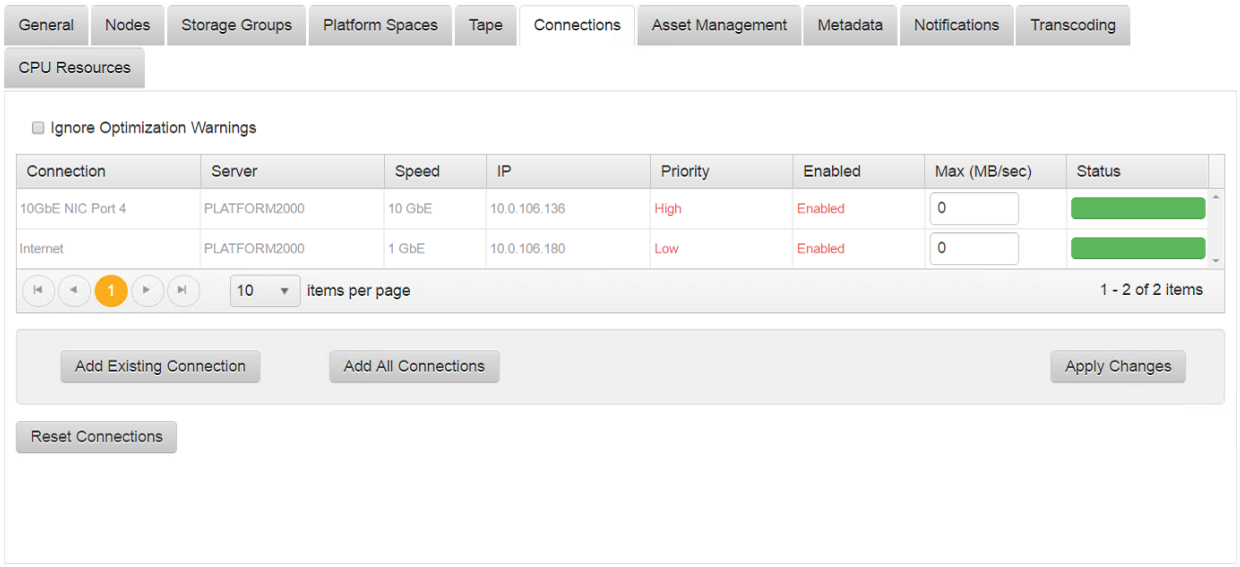
After selecting the directory, the administrator will click on the 'Confirm' button. The system will then submit a 'Sync Catalog' task to the Task System to process the import.

Connections Tab

The Network Connections tab is used to add or remove NIC (Network Interface Connection) connections into the Platform System. NIC connections must be added to the connection tab before any users can log into the system.

Without NIC connections added to this grid, the only way to log into the Platform System is through the monitor and keyboard connected to the server itself.

Additionally, until NIC Connections have been added, the Task Server will not Operate and Jobs scheduled will not start.



Ignore Optimization Warnings

Optimization warnings occur when the Client Workstation Listener determines that the workstation settings are not optimal for streaming to the Platform. Normally, this checkbox should remain unchecked. When it is checked, client workstations will not be notified that their system is running in a sub-optimal configuration.

Network Interface Connections Grid

The Connections Grid contains the following information about each connection in the system.

Connection. This is the name of the connection and can be changed within the Windows Operating System on the Platform Server.

Server. This is the Platform Server Node where the connection is physically located.

Speed. This is the current speed that the NIC is operating under. The speed is determined by the highest possible speed of the NIC card and the speed of the client computer it is connected to, whichever is lower.

IP. This is the IP address of the NIC on the server.

Priority. The NIC priority can either be High or Low. By clicking on the URL (High, Low), the operator can change the priority. The priority is used by the system when mounting volumes from a client workstation. If a client workstation has 2 possible routes (2 different IP connections) to the server to mount a Platform Space, the system will always use the high priority connection. The administrator should always set the high speed, lowest latency NIC connection to High.

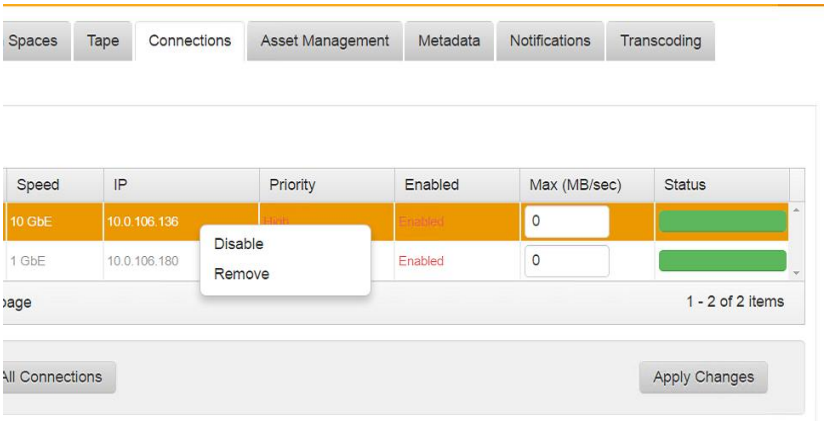
Enabled/Disabled. This indicates that the connection is enabled or disabled. When disabled, no communication can occur on the NIC. This field is a toggle which allows the operator to enable or disable the NIC as necessary.

Max MB/sec. If an administrator wishes to place a total speed restriction on this connection, they can update this field. By entering a MB/sec value here, the system will restrict all data pulled form that connection to the total Megabytes per second entered. To remove the restriction, the administrator can delete the entry or set it to zero and click on the Apply Changes.

Status. The status graph will show either Green or Red indicating if the connection is active and con communicate or inactive and cannot communicate.

NIC Connection Right-Click Options

The administrator has the following right-click options available on the connections grid:

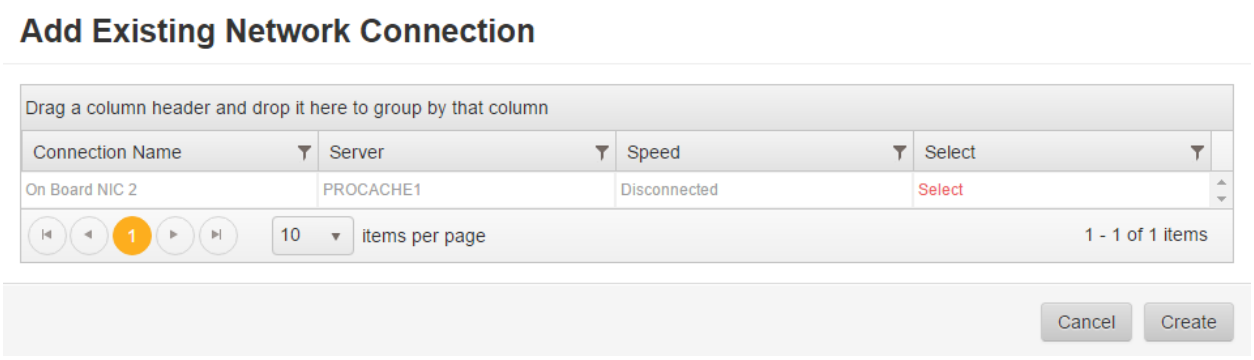


Disable. This performs the same function as Enable / Disable described above.

Remove. The remove command is used to cause the NIC to not show in the system any longer. It is a best practice to only add NIC connections to the grid if they are being used in the Platform system.

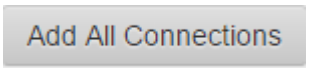
Add Existing Connection

The add existing connection button brings up a dialog window with a list of NIC ports that have not yet been added to the Platform.



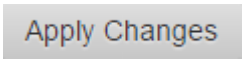
The administrator will click on the 'Select' URL next to the connection they wish to add. The administrator can only add one connection at a time with this button.

Add All Connections



This button will add all connections that exist in the Windows Operating System that have not yet been added to the Platform.

Apply Changes



The Apply Changes button will take any changes made to the connections in the connections grid and apply them to the system. This typically means changes to the Max MB/sec field.

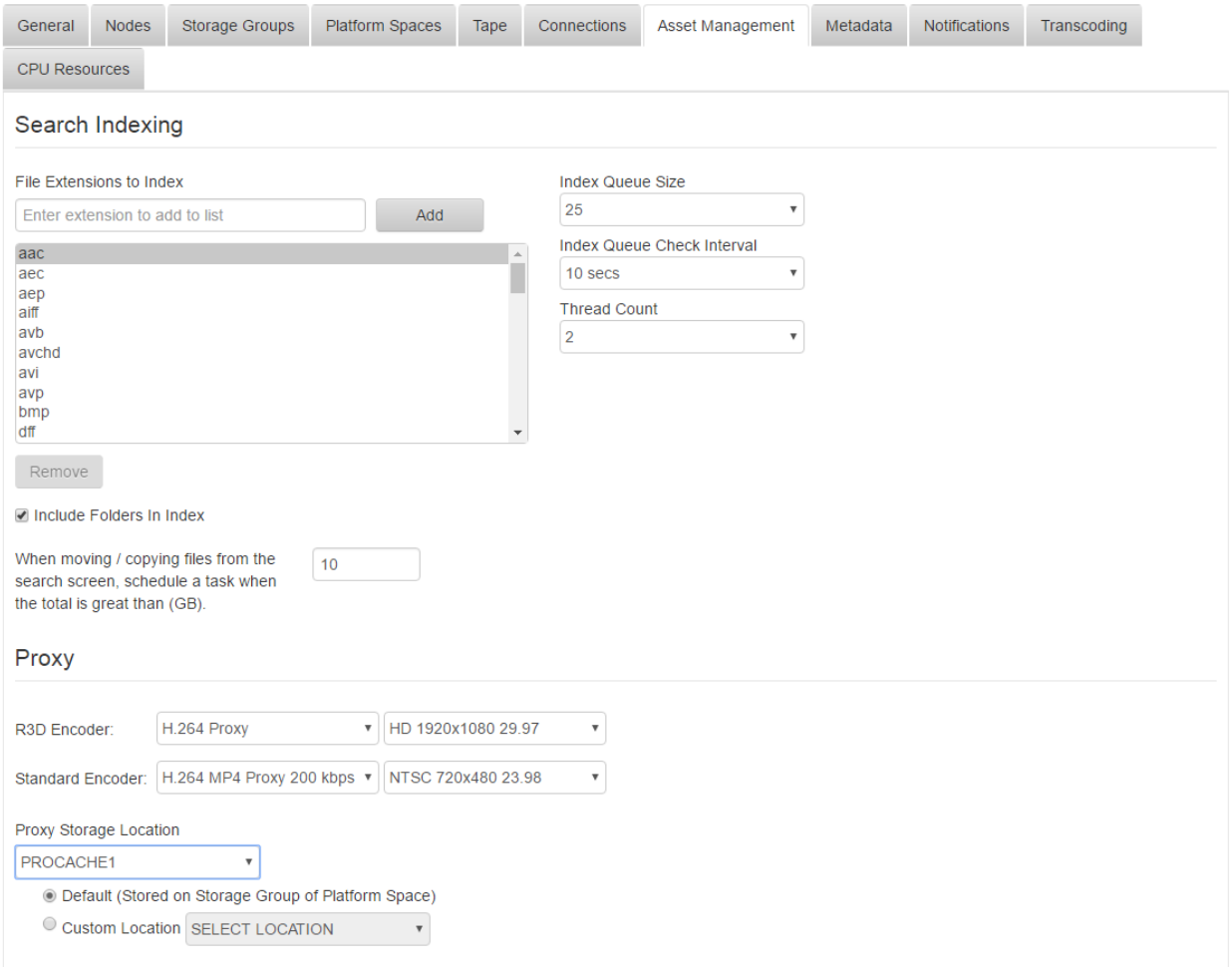
Reset Connections

Most Platform Network Connections can issue DHCP (Dynamic Host Configuration Protocol) addresses to client machines when connected to a Platform NIC. Normally when a new client is connected directly to a Platform NIC, the system will issue A DHCP address to that client automatically.

This Reset Connections button, allows the administrator to force issue new DHCP addresses to any client system connected to a Platform NIC that is waiting for a DHCP address. Pressing this button will not affect any client that is already connected to the system.

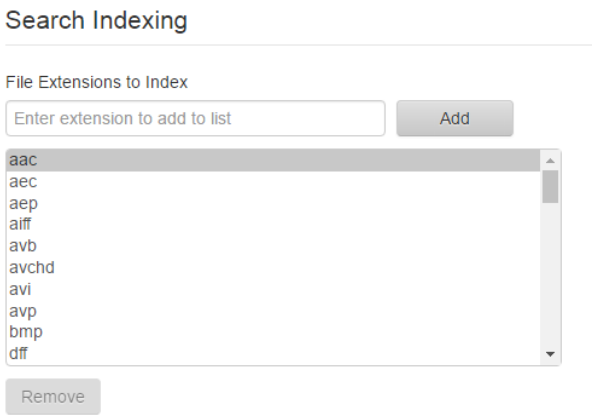
Asset Management Tab

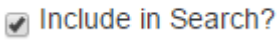
The Asset Management Configuration tab is used by the system administrator to set up the global asset management options for the Platform. The screen is broken down into a number of sections including Search Indexing, Proxy Encoding Parameters, and Video Proxy File Extensions. Each section is described below.



Search Indexing

File Extensions to Index



When a Platform Space has been set to 'Include in Search' 

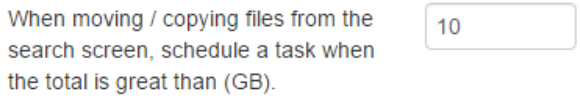
in the Platform Space Properties screen, the system will add files to the Catalog which are located in that space. This section of the asset management configuration screen informs the system which file types (suffixes) to index. Only files with the suffixes listed here will be indexed.

To add new indexes to the list, the administrator should type in the file suffix and click the add button. Once the suffix has been added, the administrator will have to Reindex the spaces in order for those files to be picked up and added to the catalog. The same is true if an administrator wishes to remove file types from the index. Once the file suffix has been removed from the list, the spaces will have to be re-indexed.

Include Folders in the Index

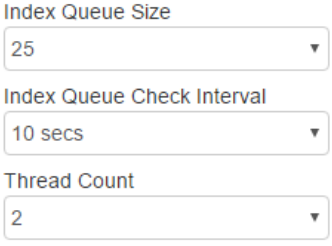
This option is enabled by default and causes the system to index all folders (directories) within Platform Spaces. If it is turned off, the system will not show directories in the search results. If it is turned on or off, it will only affect new directories added until the administrator runs a re-index on all Platform Spaces.

GB Limit before Forcing Background Task



When an operator uses the search screen to see files in Platform Spaces, they have the option of also using the Platform Interface to Copy or Move those files to another Platform Space. During those requests, if the total GB requested to copy/move exceeds this configuration number, the system will cause the interface to schedule a background task instead of allowing the operator to wait for the copy to finish in the GUI.

Indexing Performance Parameters



File indexing in the Platform can be a resource intensive process. Because each Platform System can have different processing capabilities, these parameters allow the administrator to tune amount of resources used for indexing.

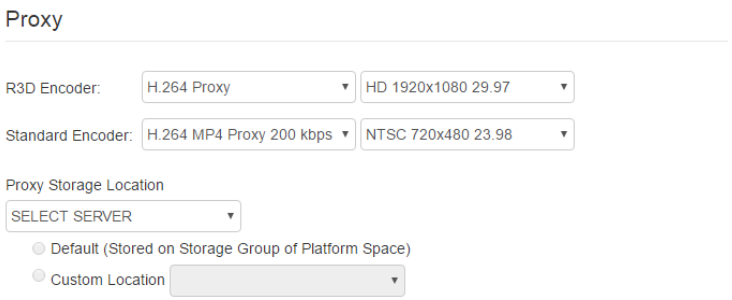
Normally no changes need to be made to these options

Index Queue Size & Index Queue Check Interval. Platform Indexing occurs by adding file changes to a change queue. This allows the system to be the most efficient and batching up changes to occur in groups. These parameters tell the system how many file changes or how long in seconds before it should begin an index operation. Therefore, if these parameters are set to 25 Files and 10 seconds, it means that the system will wait for up to 25 changes or 10 seconds, whichever comes first, before it begins another indexing operation.

Thread Count. This option can tell the system the number of unique processes (threads) to run simultaneously working on Platform Space indexing. In Platform Systems with good CPU power and many spaces, this number can be increased so that the Platform can keep all file indexing up to as real time as possible.

Proxy Encoding Parameters

This section sets default encoding parameters for the system when generating proxies.



Proxy Encoder

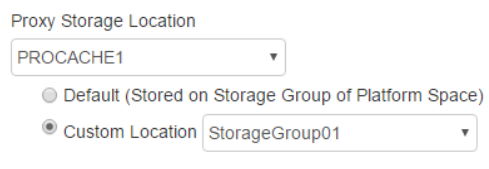
The section allows the administrator to set the proxy encoder types for various file types. To allow the Platform to play proxies in the Search Results screen, it is recommended that proxy formats be set to H.264.

R3D Encoder. Use this drop down to set the encoder settings for RED r3d files. The system allows the administrator to set the output format in one drop down box and the Frame Size and Frame Rate in the corresponding drop down box to the right.

Standard Encoder. For all other files beyond '.R3D', the administrator will choose the encoding format. The system allows the administrator to set the output format in one drop down box and the Frame Size and Frame Rate in the corresponding drop down box to the right.

Proxy Storage Location

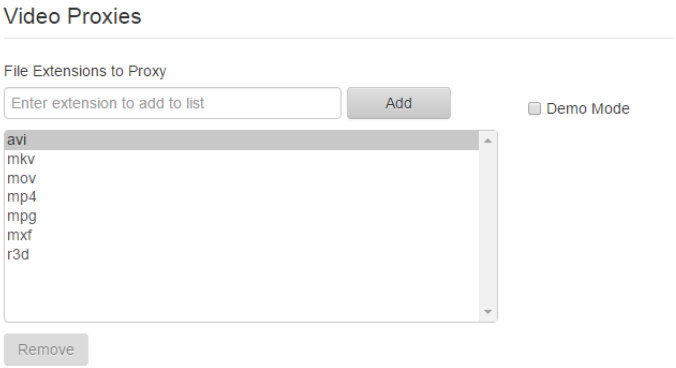
This section sets the Storage Group location for the proxy files per Platform Node. The administrator will first choose the Platform Node and then set the storage group that proxies will reside upon.



It is generally recommended that proxies be stored on a 'Fixed' storage group. Therefore, it is best that the administrator set the storage group to a Platform Storage Group instead of a removable 3rd party storage

group. By default, the system will store proxies on the same storage group as the Platform Space exists upon. However, if a 'Custom Location' is set, proxies for all Storage Groups connected to that node will be stored on the same Storage Group.

Video Proxy File Extensions



This section tells the system which file extensions to look for when generating proxies. If a file suffix is not in this list, the system will not attempt to generate proxies for that video file.

When the administrator adds a new file suffix to this list and presses the 'Add' button, the proxy process will only begin to create proxies for new files added to Platform Spaces. If the user wishes to generate proxies for existing files of a new type added, they must use the Regenerate Proxies option.

Demo Mode

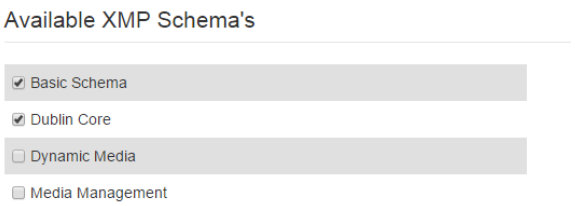
When this checkbox is selected, the system assumes that the transcoding system is not licensed and all proxy generation and transcoding requests will be done in 'unlicensed' mode. This causes the transcoding system to place a watermark over all videos transcoded. Normally this switched should be unchecked.

Metadata Tab

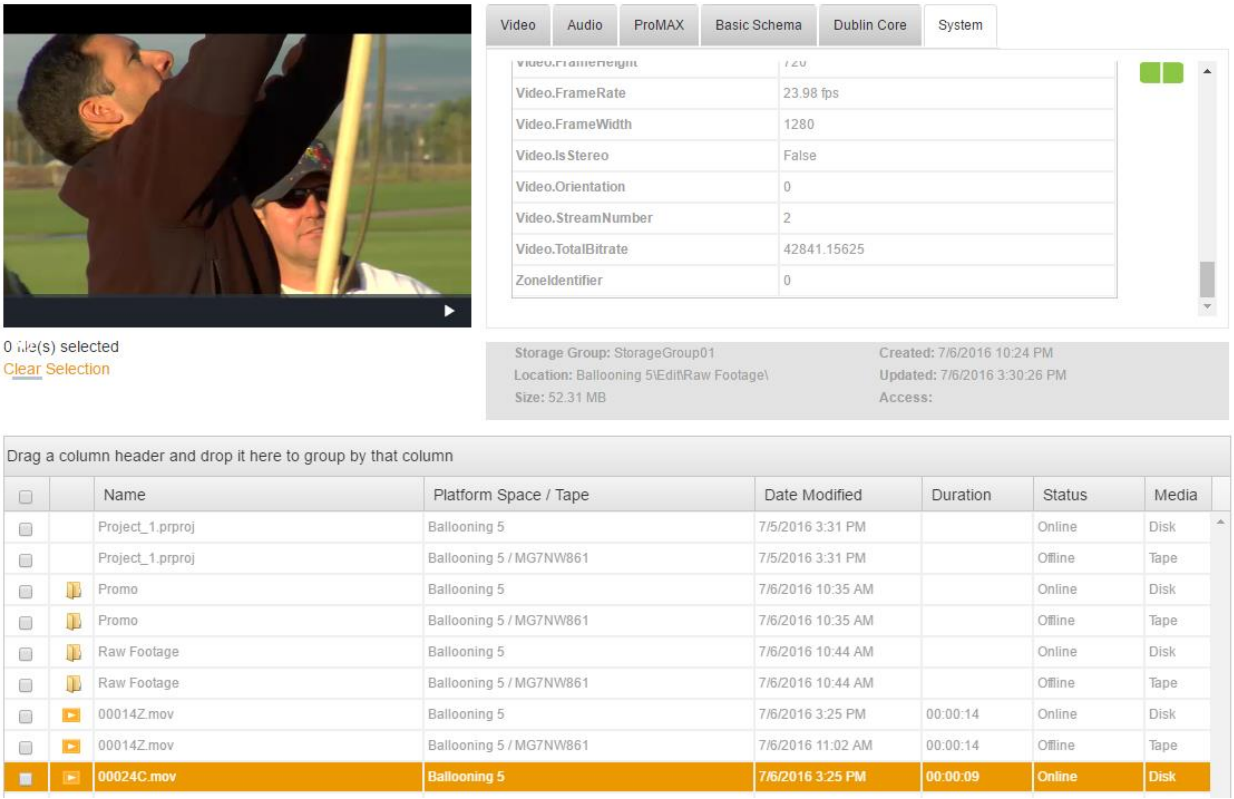
The Metadata Configuration Tab sets options for system wide metadata management. All options listed here affect all Platform nodes in the Platform network.

Available XMP Schema's

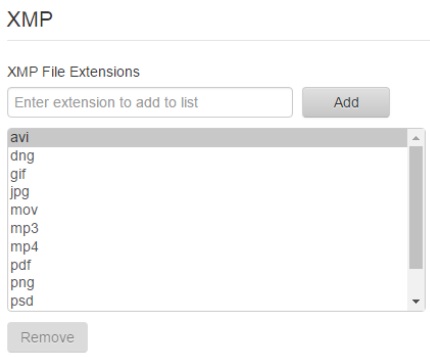
Platform's Metadata management is based on the XMP metadata design. Within this design, the administrator has the option of adding certain metadata schemas into the system. When added, the metadata fields for the schemas appear in the search result screen. By default, only the Platform metadata schema is enabled.



After enabling other XMP schemas, the administrator must re-index Platform Spaces in order for metadata to be collected and indexed using those schemas.



XMP File Extensions



As described in the Asset Management Overview, Platform stores metadata both in the Platform Catalog and in individual files. In order for Platform to determine if it should apply metadata to files, the must be listed in the XMP file extension list.

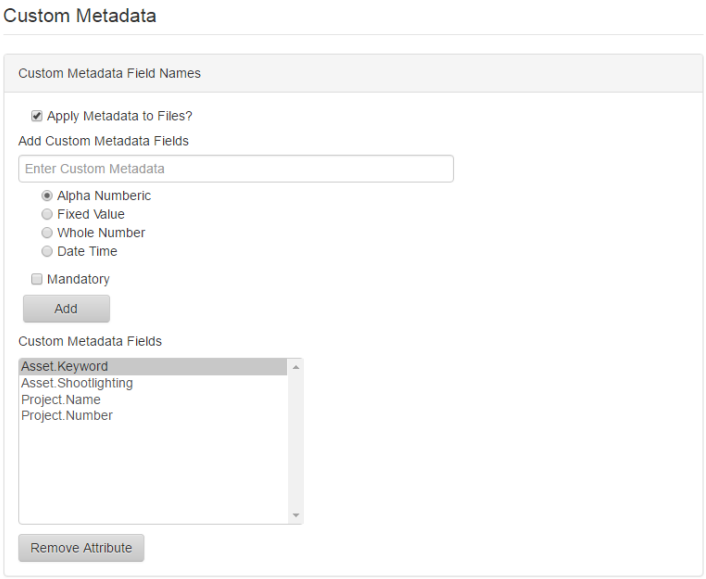
This list is used by the system to determine if it should attempt to apply metadata to a file.

Key Points of Understanding

If the administrator wishes to track metadata on any file, that file must be added to the XMP file list. Although not all files can have metadata, any file can be added to this list and metadata will be tracked in the Platform Catalog for that file.

As an example, if an administrator wishes to add metadata to a Premiere Project File, they would add the suffix 'prproj' to this list. After doing so, they will be able to store metadata for these project files. Metadata will then be stored in the Platform Catalog for these files but not in the file itself because 'prproj' files cannot accept XMP metadata.

Custom Metadata



In order to add custom metadata to files within the Platform System, the administrator must first define the metadata fields.

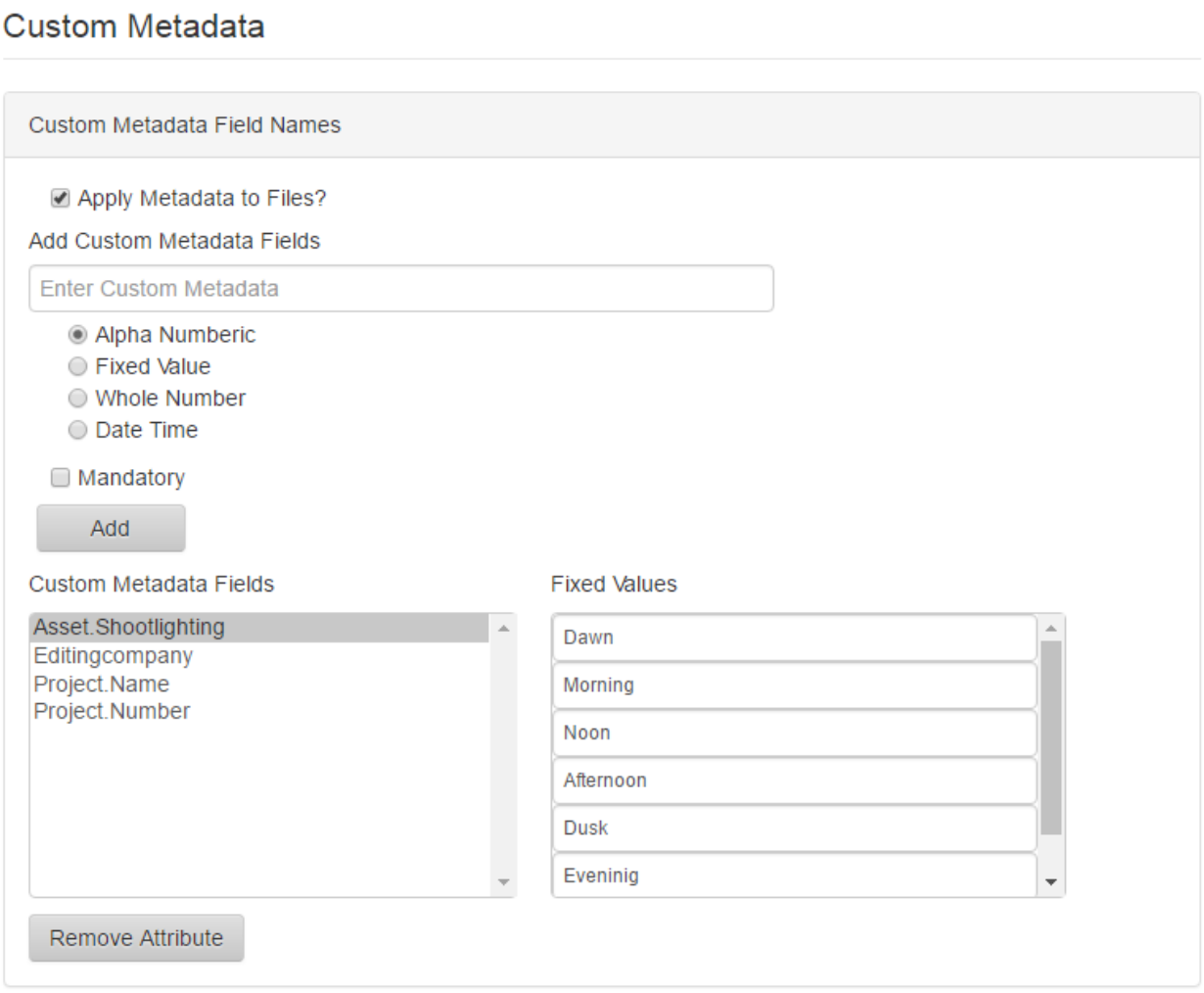
This section allows the administrator to add or update metadata fields that are used by all users in the system.

Apply Metadata to Files?

This checkbox determines if metadata updates will be attempted on files or just in the Platform Catalog. If checked, the system will write metadata to any XMP file (see XMP File Extensions above) defined. If the option is not checked, the system will only add metadata to files in the Platform Catalog. The option exists for organizations that wish to not update video files with metadata.

Custom Metadata Fields

Platform's Asset Management System allows administrators to define Custom Metadata fields that can be used to tag and categorize assets stored on disk or on tape. This section is used to define the names and types of these metadata fields.



Apply Metadata to Files?

By default, when this checkbox is selected, the system will automatically attempt to apply metadata to any file listed in the XMP file extension list. If this checkbox is not selected, the system will only store the metadata requests to the Platform Catalog.

Add Custom Metadata Fields

This section is used by the administrator to add the names and types of custom metadata fields. Currently, after field name is added, the system will remove any spaces in the name. The administrator has the ability to choose between the following field types:

Alpha Numeric: Any keyboard data can be stored in this field. The field can contain hundreds of characters.

Fixed Value. Used to create a list of choices that will be available to operators entering metadata. When this option is chosen, operators will only be able to select one of the values entered here. There is no limit to the number of values entered.

Whole Number. This field type accepts only numbers without decimals.

Date Time. Used to enter date/time values.

Mandatory

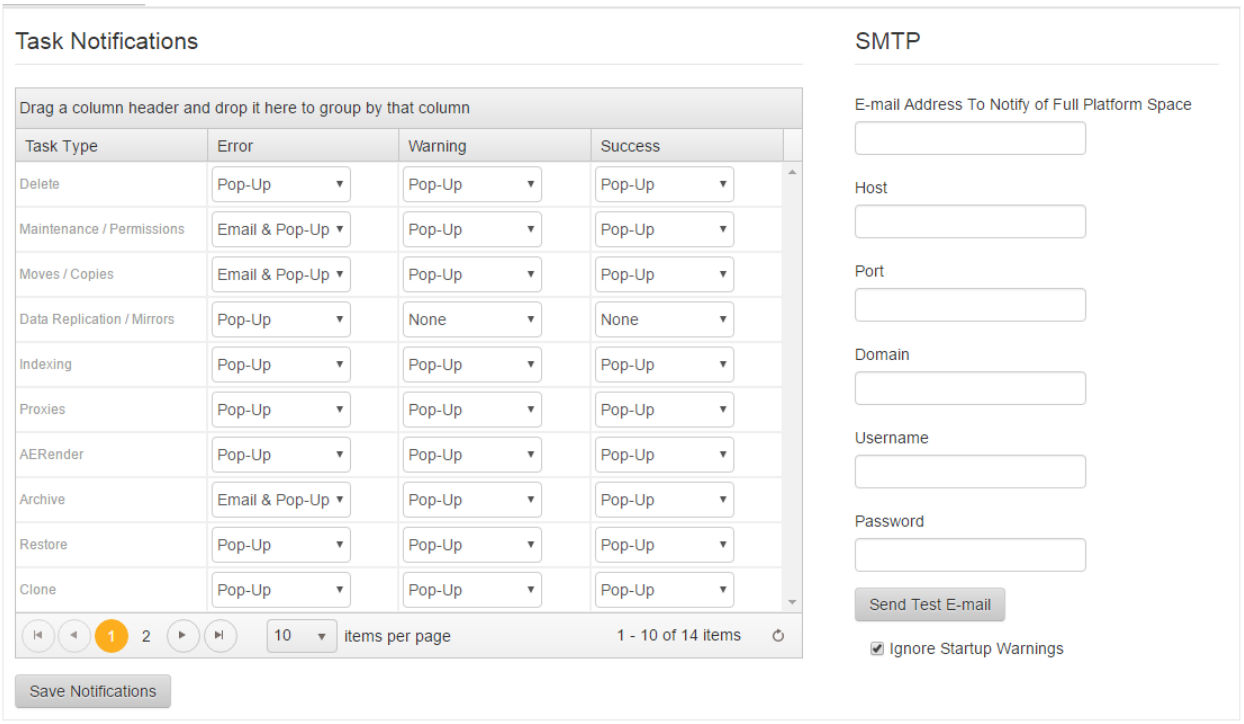
If selected, the Mandatory checkbox requires this field to have a value when metadata is entered for the asset. If the operator attempts to skip the value, an error will be displayed and they will not be able to save the record.

Remove Attribute

The Remove Attribute button allows the administrator to metadata field stored in the Platform Catalog. If removed, data within the assets is not affected. Removing a metadata field here only removes the ability to add metadata to new files in the system.

Notifications Tab

The Notifications tab is used to set up the logged in user will be notified from system events. This tab is available to all users, not just system administrators.



Notification Status

Each task type listed in the Notification Grid, has Notification Status Types: Error, Warning and Success.

Error. These are conditions that are considered serious and will require the attention of the operator or the administrator. An example might be a task or job that failed.

Warning. Warnings provide information to the operator to inform them that a job or task needs attention but it is not necessarily serious.

Success. Success status indicates the task or job worked without issue.

Notification Options

For each notification status, the operator can choose one of the following notification options:

None. The operator will not receive a notification when the event occurs.

Pop-Up. The operator will receive a pop-up balloon in the operating system for the notification.

Email. Based on the email settings below, the operator will receive an email notification.

Email & Pop-Up. The operator will receive both an email and a pop-up balloon in the operating system for the notification.

SMTP

The SMTP (Simple Mail Transport Protocol) settings are used to set up how the Platform will communicate with a mail server for sending mail. In order for the Platform to be able to send notifications thru email, these settings must be established and tested.

Email Address to Notify. This will be the email address that the email is sent from. An example would be PlatformAdmin@mycompany.com.

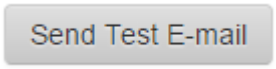
Host. This is the IP address or Host name of the mail server.

Port. The is the Port Number that the email will be sent on. For standard email, this is usually set to port 25.

Domain. This is the domain name of the email server.

Username. This is the login name for the account that has access to the email server.

Password. This is the password for the account that has access to the email server.



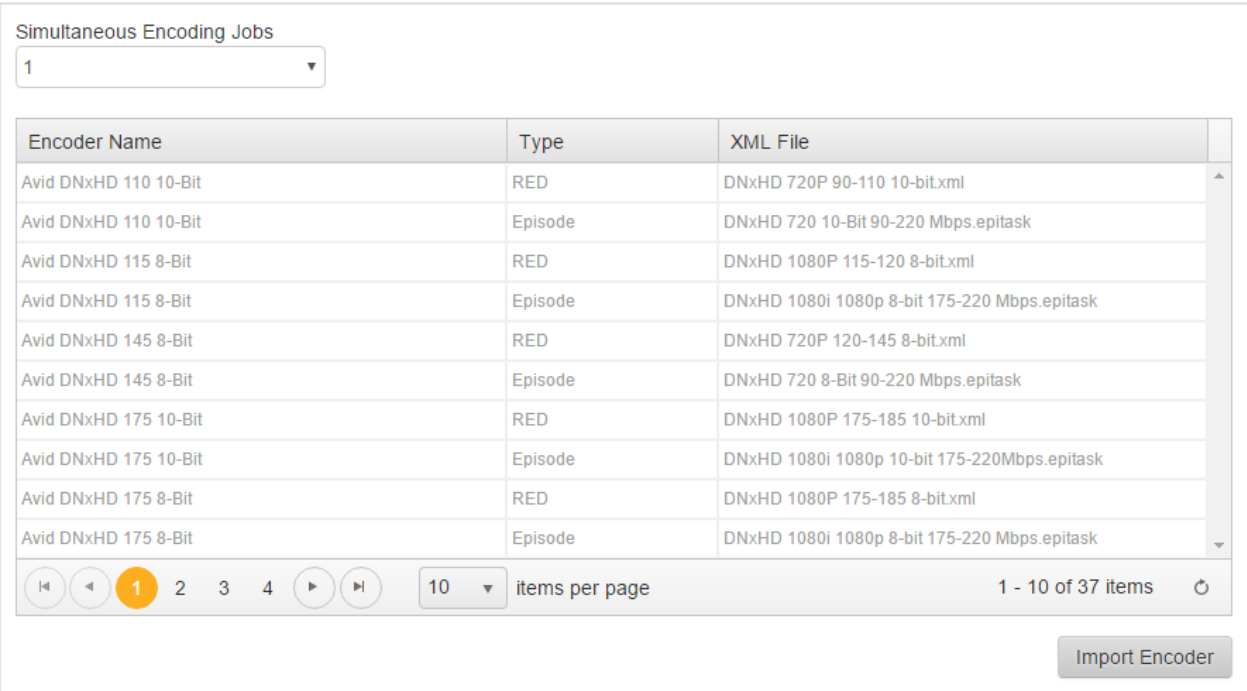
When all the SMTP fields have been setup, the administrator will use this button to send a test email.

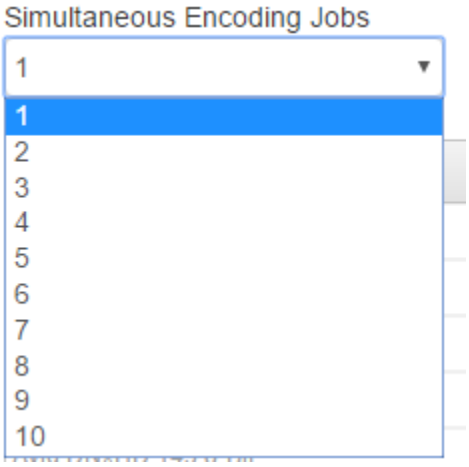
Ignore Startup Warnings

When users log into the Platform, if this option is not selected, the user will receive certain warnings if applicable. Warnings may be displayed if the email system configuration has not been completed.

Transcoding Tab

The Transcoding configuration tab is designed to let the administrator set Platform's Transcoding options.





This field indicates how many transcoding jobs can run on the server at the same time. However, the actual number of jobs that will run simultaneously may also be limited by the transcoding software versions installed on the Platform.

Limitations: Platform uses Telestream Episode® to encode all video formats except RED '.r3d'. The standard Episode version only allows 1 Encode at a time. If the system was licensed with Episode Pro, the system can have 2 encodes of these files at once. If the system was Licensed with Episode Engine, the system is not limited. Additionally, the system will encode both RED 'r3d' files and Episode files simultaneously.

Standard Encoders

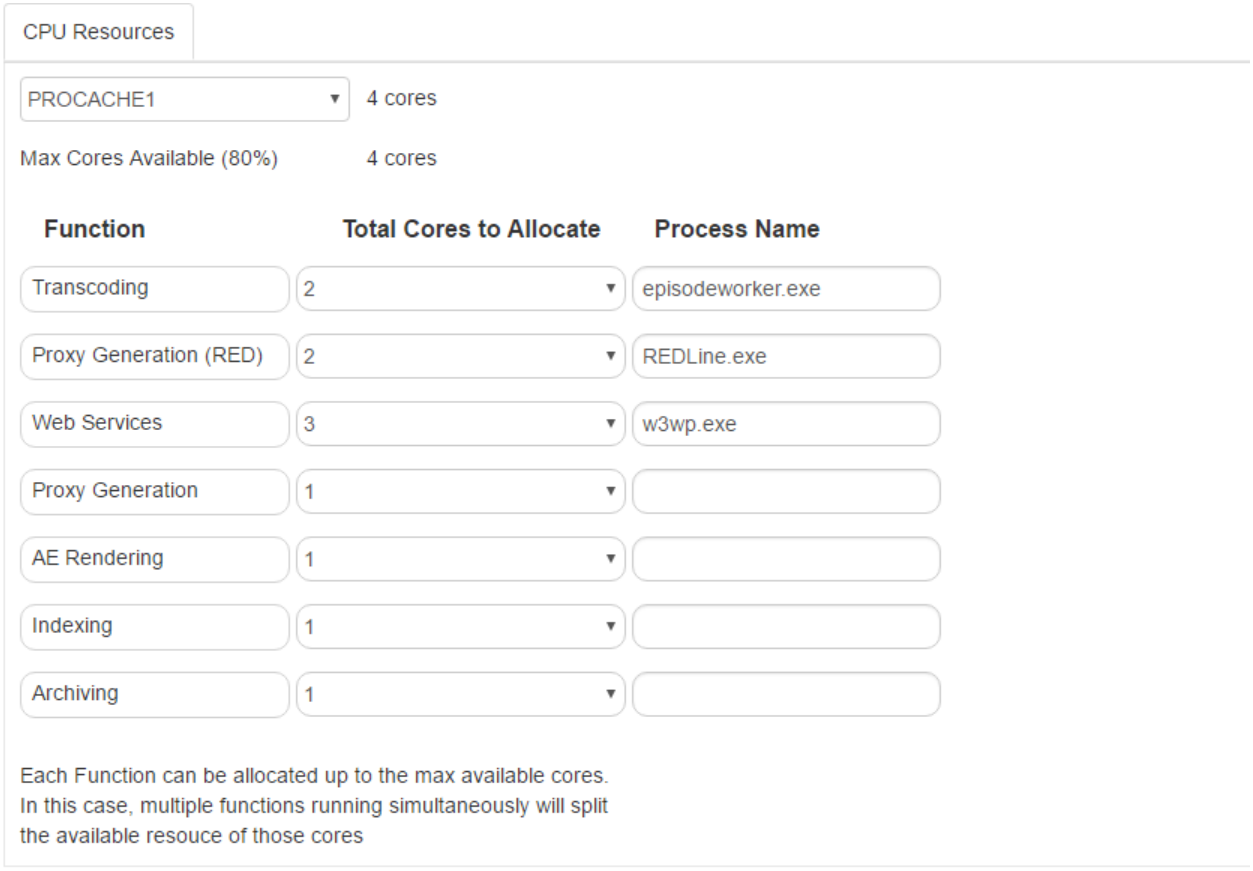
The grid lists the standard encoders that are available with Platform. These encoders cannot be changed, however, the user can import custom encoders by clicking on the Import Encoder button.

Import Encoder

This option allows the user to set up encoders (XML for RED and .epitask for Episode) in those software programs and then import them into Platform.

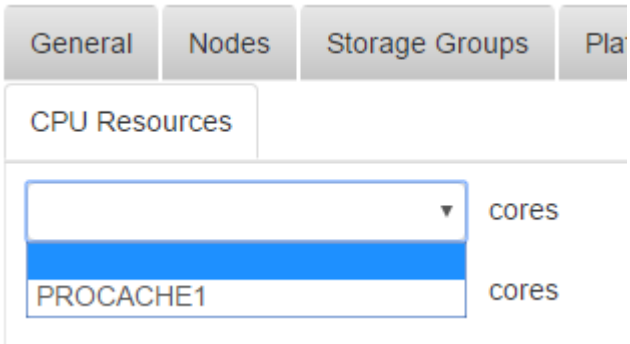
CPU Resources Tab

The CPU Resources Tab is used to manage the available CPU resources on each Platform Node so that the optimal work can be done for a particular user environment.

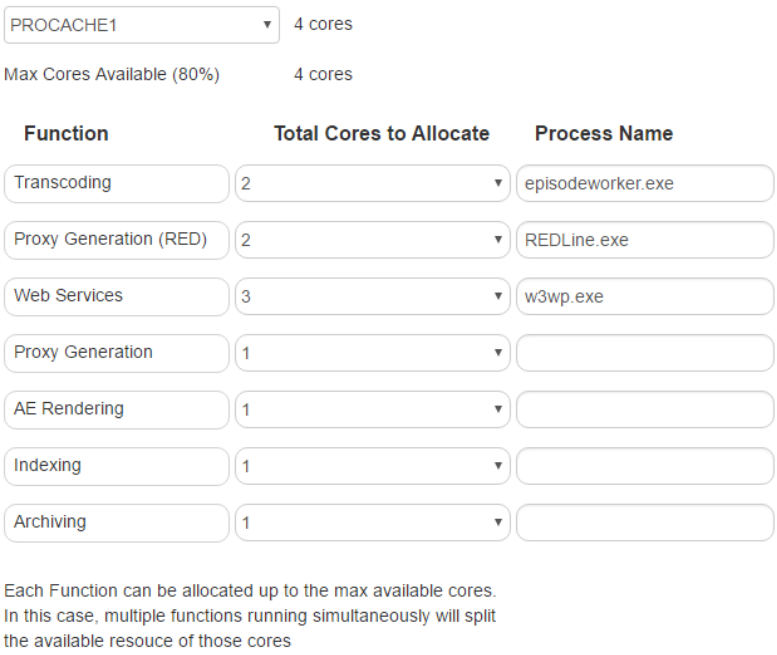


Platform Node Name

The first field is a dropdown list of Platform Nodes on the network. The administrator will select the Node they wish to make changes to.



Once the Node name is chosen the system will list the total number of CPU cores for that Platform Node. A core is a section of the CPU that allows a thread to operate within. The Platform system can run one function or task in each core at the same time.



In the example to the left, the system has 4 cores. The administrator has allocated 2 cores to Episode Transcoding, 2 cores to RED 'r3d' Transcoding, and 3 cores to Web Services. Note that it is normal to 'over allocate' cores because the system will perform many tasks in each core, just not at the exact same time.

Function. This is a function name defined by the Platform System. This is a fixed name and cannot be changed. However, each function can be used for any process the administrator wishes. For instance, the administrator could use the AE Rendering Function and assign a different Windows® process name to it.

Total Cores to Allocate. This drop down allows you select the total number of CPU cores to allocate to this function. Note that each function can allocate up to a maximum of 80% of the total cores on the Platform node. Also, the same cores can be allocated to different functions by design.

Process Name. The process name is the Windows® process executable file name that will run in the Windows® operating system.

Logging into the Platform Server Console

There may be circumstances that require you to login to the Platform Server Console itself. This can be accomplished with a direct keyboard/mouse/monitor connection to the physical server, or you may have the option of using the Microsoft Remote Desktop program. The 'RDP' program is available for Windows and Mac.

Once you have established a login window, you may use the Standard Administrator (Admin) login credentials to login to the server.

Errors

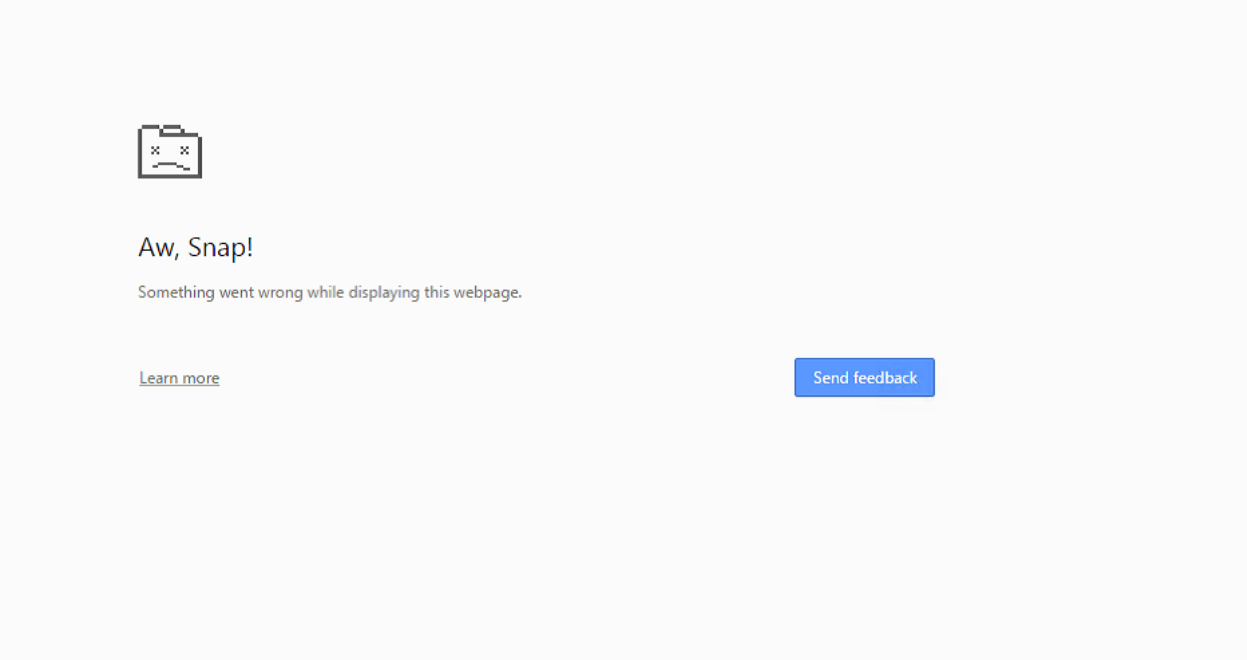


Table of Figures

Contact Support

For more information about ProMAX Platform and Platform Manager Software please refer to the ProMAX Platform User Guide or visit our website at www.promax.com Technical support requests and parts replacement in the US and North America are handled directly by ProMAX, and in all other markets are handled by the local reseller. Please see below for complete contact information:

USA & North America Please contact your reseller or: ProMAX Systems 2850 S. Fairview Street Santa Ana, CA 92704 Sales (949) 861-2700, Option 1 sales@promax.com Technical Support (949) 861-2700, Option 2 support@promax.com
International (Asia/Pacific, Europe, South America) For all international sales and support inquiries please contact your local reseller.