



Facilis HUB Shared Storage

Web Console Setup & User Guide

Version 7.2

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Overview

The Facilis Web Console is a web browser based user interface used to connect to and administer one or more Facilis HUB Shared Storage servers. The following guide explains installation setup, and operational instructions for administrators, and operators.

Chapter 1 - Installation and Access

Installing and accessing the Facilis Web Console are discussed in this section.

Server Setup

All Facilis HUB Shared Storage servers shipped with version 7.2 come pre-installed with the Facilis Web Console software. To install the Facilis Web Console on an existing Facilis server upgrade to version 7.2 by running the Facilis Server Installer obtained from the [Download Center](#). Full Instructions for performing an upgrade to version 7.2 can be found in the version 7.2 Release Notes. Upgrades from version 7.0.7 or earlier will require a new 7.1 license.

Once installed on the server the Facilis Admin Console can be accessed by either using the Facilis Admin Console shortcut found within the Windows Start Menu or by launching a web browser and entering the address: <http://localhost>.

Launching the Web Console from the Facilis server will always connect to the Admin console. For additional information on the Facilis Admin Console see **Chapter 2 – Facilis Admin Console**.

Client Setup

All Facilis HUB Shared Storage servers shipped with 7.2 come with a USB thumb drive containing client installers for Windows, Mac, and Linux clients. In addition to this all client installers are found on the server in 'C:/Program Files/Facilis/TerraBlock/Client Installers'. For systems upgrading, the client installers will be obtained from our [Download Center](#) along with the server installer.

Windows Client Setup

Install the Facilis Web console on a Windows client by copying the Facilis Windows Client installer to the machine and double clicking to launch. Once launched choose the install now option. After installation you will receive a message saying "Installation complete".

Once installed on the client launch the Facilis Client Console from applications in the Start menu or by launching a web browser and entering the address <http://localhost:1860>.

The Admin Console can be accessed from the client by an admin at any time by clicking the server link of the desired server in the server column. Accessing the Admin Console does require Ethernet connectivity to the server.

Mac Client Setup

Install the Facilis Web console on a Mac client by copying the Facilis Mac Client installer to the machine and double clicking to launch. Once launched choose the install now option. After installation you will receive a message saying "Installation complete".

Once installed on the client launch the Facilis Client Console from the applications directory on the boot drive or by launching a web browser and entering the address <http://localhost:1860>.

The Admin console is accessed from the client by an admin at any time by clicking the server link of the desired server in the server column. Accessing the Admin Console does require Ethernet connectivity to the server.

- ◆ **For Fibre Channel connectivity with the Facilis Web Console Mac OS 10.9.x or newer is required. Earlier version of Mac OS are not supported for use with Web Console over Fibre Channel.**
- ◆ **For Ethernet Connectivity with the Facilis Web Console Mac OS 10.7.x or newer is required.**

Linux Client Setup

Install the Facilis Web console on a Linux client by copying the Facilis Linux Client installer to the machine and double clicking to launch. Depending on the Linux distribution you may need to launch from terminal. Once launched choose the install now option. After installation you will receive a message saying "Installation complete".

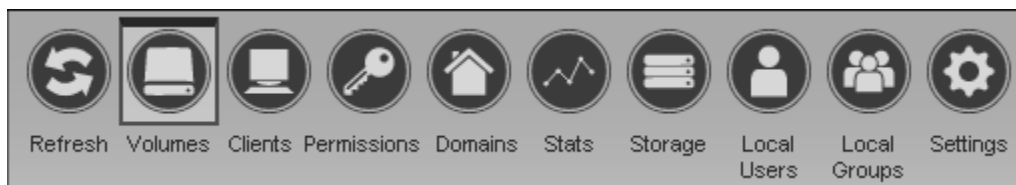
Once installed on the client launch the Facilis Client Console from applications in the KDE menu or by launching a web browser and entering the address <http://localhost:1860>.

The Admin console is accessed from the client by an admin at any time by clicking the server link of the desired server on the server column. Accessing the Admin Console does require Ethernet connectivity to the server.

- ◆ **On Linux the Facilis Web Console GUI is only available to Ethernet connected systems. For Fibre attached Linux systems please see the section on [Linux Fibre Channel Mounting](#) later in this document.**

Chapter 2 - Facilis Admin Console

This section will outline the usage of the nine tabs of the Facilis Admin Console. The Facilis Web Console can be used to administer any Facilis HUB Shared Storage server by launching the Facilis Admin Console from any Facilis server or by logging into the Admin Console from any client on the same Ethernet network as a Facilis server. Instructions for logging into the Admin Console from the client see **Chapter 3 - Using the Facilis Client Console**.



Facilis Admin Console Tabs in Default Theme

Each tab can be accessed by clicking on the corresponding icon at the top of the window.

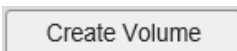
Volumes Tab

The Volumes tab contains two panes, the Volumes pane and the Permissions pane, which allow you to view details about current volumes including available capacity, permissions and current mounts. It also provides the functionality for creating new volumes as well as managing, changing and deleting existing volumes.

Volumes Pane

The Volumes pane has two function buttons for administration of volumes.

Create Volume



Choosing the Create Volume button opens the create volume window. The function of each field is described below.

Name - A volume name of at least 2 and up to 16 characters can be given at time of creation. NTFS illegal characters and spaces are not supported in a volume name. The name field will flash red should you enter an unsupported name.

❖ **External tandem volumes may only be a maximum of 14 characters.**

A screenshot of the "Create Volume" window. It features a table of available storage on the left, configuration options on the right, and input fields at the bottom.

Server	Disk Group	Available	
x9	1	1594.5 GB	<input type="checkbox"/>
x9	2	898.1 GB	<input type="checkbox"/>
x9	1+2	1796.3 GB	<input type="checkbox"/>
x10	1	2567.4 GB	<input type="checkbox"/>
x10	2	2214.5 GB	<input type="checkbox"/>
x10	1+2	4429.1 GB	<input type="checkbox"/>

☐ Enable External Storage

Name:

Size(GB): Max: 0 GB

DynaRAID
☐ Unprotected
☐ Mirror
☒ RAID5

External Tandem RAID
☐ Stripe ☐ Mirror

Everyone access
Write (Default)

Copy volume

Enter a name

Size - The size you wish to create your volume. The maximum size a volume can be created will be listed in the field before entering any values.

Disk Group - Select the drive groups which you wish to create the volume on. Selecting the 1+2 group for a tandem volume is recommended as a best practice when available.

DynaRAID - Select the protection type for volume you are creating.

- ✓ The RAID5 option is for use with single server configurations. This option uses ~9% additional space spreading the Raid5 data across the drive set and protecting against a single drive failure.
- ✓ The Mirror option is for use creating Single group volumes with single server configurations. This option uses 100% additional space mirroring the data.
- ✓ The Unprotected option is intended for use on a single server creating single group volumes. This option provides no protection.

◆ **Volumes created in web console will be formatted as NTFS and defaulted to Multi User access. Single User volumes will need to be manually formatted on a Fibre connected client.**

◆ **Volumes intended to store Avid projects should be created with a DynaRAID type of Mirror. RAID5 protection may cause Avid project performance issues.**

External Tandem Raid – This field gives you RAID options for external tandem volumes (volumes spanned across two or more servers). Stripe creates a RAID50 volume between the selected servers. Mirror creates a RAID51 volume mirrored between two systems. If only one Facilis server is present or selected the options will be grayed out as they are not applicable.

Default everyone access - This field shows the current setting for permissions for the Everyone group upon creation of a new volume. This can be changed at the time of volume creation on a per volume basis. The default setting can be changed within the servers Administration Console Settings tab. This can be set to Write, Read or None.

Copy volume – Have your new volume inherit the permissions of an existing volume by choosing the existing volume from this drop down list.

Enable External Storage – This checkbox allows you to select external servers when choosing drive groups. By default this is not enabled to prevent accidental volume creation on a drive group of an incorrect server.

Create Volume Progress

Create Volume Progress			
Volume	Capacity	Status	Error Message
Video2	1000	Successful	
Created volume Video2			
Back		Close	

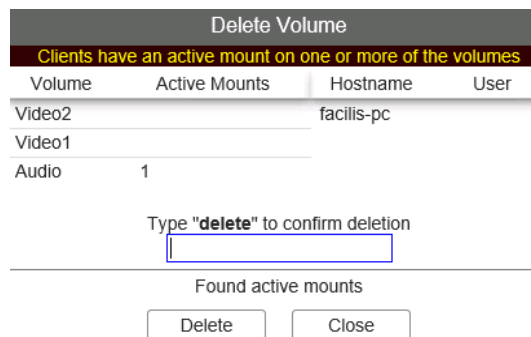
Upon creation of a volume the Create Volume Progress window appears. The window will list a history of recently created volumes with status and any error messages. Choose the back button to go back to the Create Volume window.

Bulk Action

Bulk Set Settings ▼

The Bulk Action button allows you to take action on many volumes at once. These include set settings, delete, mount, online, offline, take ownership, and clear settings.

Selecting a group of volumes then an action performs the action on all of the selected volumes.



The dialog box titled "Delete Volume" contains a warning message: "Clients have an active mount on one or more of the volumes". Below this is a table with four columns: Volume, Active Mounts, Hostname, and User. The table lists two volumes: "Video2" with 0 active mounts, hostname "facilis-pc", and user "Video1"; and "Audio" with 1 active mount, hostname "facilis-pc", and user "Audio". Below the table, there is a text input field with the placeholder text "Type 'delete' to confirm deletion". At the bottom, there are two buttons: "Delete" and "Close".

Volume	Active Mounts	Hostname	User
Video2	0	facilis-pc	Video1
Audio	1	facilis-pc	Audio

Type "delete" to confirm deletion

Found active mounts

Delete Close

Volume list

The Volume list displays the six column headers outlined below. Click any column header to sort alpha numerically. The volume list will show the volumes from all Facilis servers on a network. However, user permissions for these volumes should be administered on each server individually.

Volume - The name of the volume as given by the administrator at time of creation.

Capacity - The overall capacity of the volume.

Available - The current available space on the volume. This will read *0 GB* until the volume is mounted.

DynaRAID - The type of protection on the volume. This will show RAID5, Mirrored, or 'blank' for unprotected volumes.

Create Time - The date and time at which the volume was created.

Status - The current status of the volume. Volumes status states include:

- **Ready-** The volume is ready to be mounted.
- **Degraded-** The volume has been marked for a drive failure and needs to go through recovery.
- **Recovering-** The volume is currently going through a drive recovery.
- **Missing-** The volume is an external tandem volume and is missing a volume member.

Owner - The server that owns the volume. By default this will be the server that the volume was created on.

SDL - The server drive letter assigned in the volume properties. This is the drive letter the volume will mount to on the server.

Columns can be shown or hidden from view at any time by clicking the disclosure arrow to the right of the column headers and selecting or deselecting the desired columns. The Search volumes field allows you to filter by volume name.

Above the volume list two filtering options exist. The volume search field which will filter the list by any alpha numeric characters entered, and the show unowned volume checkbox.

The image shows two UI elements: a text input field labeled "Search volumes" and a checkbox labeled "Show unowned volumes" which is currently checked.

When checked, the show unowned volume checkbox will list volumes from other servers that are connected over fibre channel. When unchecked the number of hidden unowned volumes is displayed. The process of taking ownership of a volume is covered later in this guide.

Global Volume Settings and Volume Action List



The Global Volume Settings can be accessed by the gear icon to the left of each volume in the volume list. In addition to the Global Volume Settings the disclosure arrow will show a list of volume actions that can be taken on each volume. The volume action list can also be accessed by right clicking on a volume.

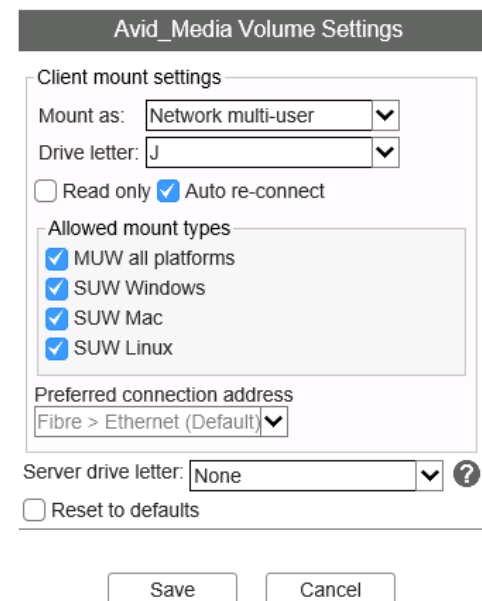
Client mount settings:

Mount as - This drop down allows you to change the default mount type for all clients.

- ✓ **Network multi-user (default)** - Presents the volume to the client as a network attached Multi-user Write volume.
- ✓ **Local multi-user** - Presents the volume to the client as a locally attached Multi-user Write volume.
- ✓ **Single-user** - Presents the volume to the client as a Single-user Write volume.

◆ **All volumes created in web console and converted to SUW will be formatted NTFS. SUW volumes for Mac and Linux will need to be manually formatted.**

◆ **SUW volumes may only be mounted on one client at a time with the web console.**

The image shows a dialog box titled "Avid Media Volume Settings". It contains several sections: "Client mount settings" with a "Mount as:" dropdown set to "Network multi-user" and a "Drive letter:" dropdown set to "J"; checkboxes for "Read only" (unchecked) and "Auto re-connect" (checked); a section titled "Allowed mount types" with four checked options: "MUW all platforms", "SUW Windows", "SUW Mac", and "SUW Linux"; a "Preferred connection address" dropdown set to "Fibre > Ethernet (Default)"; a "Server drive letter:" dropdown set to "None" with a help icon; and a "Reset to defaults" checkbox (unchecked). At the bottom are "Save" and "Cancel" buttons.

Drive Letter – The preferred drive letter when mounting on a windows client.

Read only - This checkbox forces the volume to be read only on any client who mounts it.

Auto re-connect- This checkbox specifies if the volume will re-connect automatically after a reboot. This checkbox is selected by default.

Allowed mount types – Sets which mount types are allowed by the client. Deselecting a specific mount type will make it unavailable as an option to all clients.

Preferred connection address – This field allows you to set a preferred server IP address when mounting that volume.

Server drive letter – Allows you to select the drive letter you prefer the volume to mount with on the server itself.

Volume action list:

The volume action list will give you the following actions when logged into an admin console session on a server that owns the volume:

Settings
Mount
Offline
Clear Settings
Delete Volume
Rename Volume
Resize Volume

Settings - This opens the volumes Global Volumes settings.

Mount – This mounts the volume on the server assigning the specified server drive letter if there is one.

Offline – This takes the volume offline on the server. Taking a volume offline unmounts it from the server and makes it unavailable to clients. After setting a volume offline the volume will be highlighted yellow in the list and the volume action option will change to online.

Clear Settings – Restores the settings of the selected volume to defaults.

Delete Volume – Deletes the volume.

Rename Volumes – Opens the rename volume window.

Resize Volume - Opens the resize volume window allowing you to increase or decrease the size of a volume by entering the desired volume size.

Volumes in the list that are owned by another server will only show settings and Take Ownership options in the Volume action list. In order for the server to take ownership a volume it must not be mounted on the server that currently owns it. In most cases this will require taking the volume offline on the owner server first. Once ownership of a volume is taken over the volume permissions will need to be set up on the new server.

Permissions Pane

The permissions pane itself has three tabs. The Permissions tab, the Mounts tab and the Storage tab. These tabs allow you to view, add, remove and change permissions on volumes, view and manage who has volumes mounted as well as the storage groups associated with the highlighted volume.

Permissions Tab

The permissions tab has two functions buttons for administration of volume permissions. The permissions can also be filtered using the search field.

Add permission

Add Permission

Add permission allows you to add users or groups to a selected volume or volumes.

Domain - Select the domain the user or group you wish to add is from. There are three types of domains Desktop, Facilis, and LDAP/Active Directory. For more information on Domains see the section on [Domains](#).

User - Use this radio button to select a user to add to the selected volume(s). Clicking the drop down icon will reveal existing users. Typing a partial name will also autofill for existing users.

Group - Use this radio button to select a group to add to the selected volume(s). Clicking the drop down icon will reveal existing groups. Typing a partial group name will also autofill for existing groups.

Everyone - Use this radio button to add the 'Everyone' group to the selected volume(s).

Permissions - Select whether you wish to add the user or group to the volume(s) with Write or Read access.

Remove permission

Remove Permission

Use the remove permissions to remove a group or user from the selected volume(s). You can remove multiple users and groups by shift or control click to highlight multiple entries.

Permissions list

The Volume list displays the four column headers outlined below. Click any column header to sort alpha numerically.

Permission - The name of the user or group given permission to the selected volume(s).

Domain - The domain the user or group originates from.

Access - Whether the user or group has write or read access for the selected volume(s).

Type - Displays whether the entry is a user or a group.

Users added to a volumes permissions list can also be selected and copied using right click or ctrl+c and pasted into another volumes permission list.

The screenshot shows a dialog box titled "Add permission to volume". It contains the following elements: a "Domain" dropdown menu with "(desktop)" selected; three radio buttons for "User" (selected), "Group", and "Everyone", each followed by a dropdown menu; a "Permissions" section with "Write" (selected) and "Read" radio buttons; a checked checkbox for "Close dialog after"; and "Ok" and "Cancel" buttons at the bottom.

Mounts Tab

The mounts tab displays a list of clients actively connected to the highlighted volume(s). There is one function button on the Mounts tab.

Remote Unmount

Remote Unmount

Remote unmount allows you to remotely unmount the highlighted volume(s) from any client currently connected to the volume(s).

Mounts List

The mounts list displays the three column headers outlined below showing the users and machine names connected to the selected volume(s).

Client -	The hostname of the machine connected
Desktop User -	The OS user of the connected machine.
Access -	Whether the user has the selected volume(s) mounted for write or read access.

The disclosure arrow to the right of the column headings allows you to show or hide the column headings as desired.

The Search mounts field allows you to filter by Client name.

Storage Tab

The storage tab displays the storage server and drive groups of the selected volume(s).

Storage server list

The storage server list displays two columns headers showing the server and drive groups the volume was created on.

Server – The name of the server the volume was created on.

Disk Group – The disk group the server was created on. Tandem volumes will show 1+2.

Clients Tab

The clients tab displays a searchable list of connected client systems. By default the left pane will list the systems by hostname as well as display the desktop user of the machine. This disclosure arrow allows you to choose additional columns to display. There is also the ability to remote upgrade clients.

Client List

The client list column headers are outlined below. Highlighting a client in this list displays the client's current volume list in the Client console view pane to the right.

Hostname -	The hostname of the client machine.
Desktop User -	The OS user logged into the client machine.

- OS -** The operating system of the client machine. Windows, Mac or Linux.
- Address -** The connection address of the machine. The IP Address if Ethernet or WWN if Fibre Channel.
- Version -** The version of Facilis Client Console running on the client.

Upgrade Clients

In order to set up remote upgrades the remote upgrade packages must be downloaded and place in C:/Program Files/Facilis/TerraBlock/Packages. Once this is done select the clients you wish to upgrade and choose the Upgrade Clients button. Your client list will come up with a list of the available upgrade packages. Select the upgrade package of the version you wish to install and choose upgrade.

The feature will also allow you to remote downgrade a client by checking the Force Reinstall (for downgrades) checkbox. In the event of a failure the status column will display an error message and the machines hostname will highlight red. Upgrading or downgrading will disconnect a clients mounted volumes.

In order for client remote upgrades to be available the contents of the Remote Install Packages from the Client Manager Installers download must be copied to C:\Program Files\Facilis\TerraBlock\Packages.

Note: Remote upgrading is only supported on clients running version 7.1. or newer. Upgrade to 7.1 from 7.0.x or older will require the Client Installer to be run manually on all clients.

Client console view



The Client console view has three tabs integrated into it. The volumes, settings, and logins tab. The Volumes tab displays a searchable volume list of the volumes currently available to the selected client. This view is the same as the Client console on the client machine. From this view you can remote mount and unmount volumes to the selected client and manage settings and logins.

Volumes Tab

The volumes tab within the Client console view shows much of the same information as the volumes view in the admin console with some added features.

The Volume column has a Mount/Unmount function button, a mount selected button for simultaneous mounts, as well as a status icon to the left of the volume name. The Mount and Mount Selected buttons will push out remote mounts to the client machine. Once mounted the button text will change to unmount. Mounted volumes can also be remote unmounted. A volume line highlighted in green indicates read only permissions.

The volume status icon has 6 states.



Grey - Not Mounted. The user has access but the volume is not mounted.



Green - Mounted Writable. The user has access and the volume is mounted Writable



Blue - Mounted Read Only. The user has access and the volume is mounted read only.



Yellow - Mounting. The user has access and the volume is currently mounting.



Orange - Failed Mounting. The user has access but the volume failed to mount.



Red - Unavailable. The user had the volume mounted but has become unavailable or is no longer visible by the server.

Individual volume settings for the selected client can also be set by clicking the settings icon to the right of each volume.

Settings Tab

The settings tab allows you to add or remove preferred server addresses and reset any drive warning messages the client may be seeing. These are identical to the settings available to the client on the client side.

Logins Tab

The logins tab allows you to view and manage any logged in Facilis domain users on the selected client. You can Login, Logout, and change the password of a user here.

Permissions Tab


The permissions tab allows you to view and remove current permissions as well as filter user permissions by domain or user. The search bar can also be used to search by volume name.

Domain Filter – Pull down to filter by domain. Options will be All, Desktop, The local Facilis domain as well as any Facilis or LDAP domains added on the Domains Tab.

User Filter – Choose the drop down to show a list of users from the chosen domain. The Filter will only be active if a specific domain is chosen. It will not show results

Domain Filter: User Filter:

editor

 Remove permission

Volume ▾	Principal	Domain	Type	Access
Editor1	editor1	terrablock24d	User	Write
Editor1	editor2	terrablock24d	User	Write
Editor1	editor3	terrablock24d	User	Write
Editor1	editor4	terrablock24d	User	Write
Editor1	editor5	terrablock24d	User	Write
Editor2	editor1	terrablock24d	User	Write
Editor2	editor2	terrablock24d	User	Write
Editor2	editor3	terrablock24d	User	Write
Editor2	editor4	terrablock24d	User	Write
Editor2	editor5	terrablock24d	User	Write
Editor3	editor1	terrablock24d	User	Write
Editor3	editor2	terrablock24d	User	Write
Editor3	editor3	terrablock24d	User	Write
Editor3	editor4	terrablock24d	User	Write
Editor3	editor5	terrablock24d	User	Write
Editor4	editor1	terrablock24d	User	Write
Editor4	editor2	terrablock24d	User	Write
Editor4	editor3	terrablock24d	User	Write

if the Domain Filter is set to all. To apply a filter to the list you must choose the Apply button.

The permission list has 5 columns displayed. This view is fixed.

Volume – The name of the volume the permission is assigned to.

Principal – The user or group the permissions belongs to.

Domain – The domain the Principal User or group belongs to.

Type – Whether the Principal is a user or group.

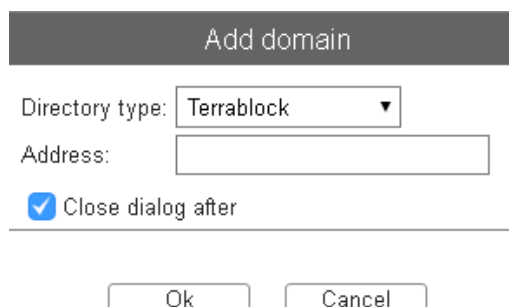
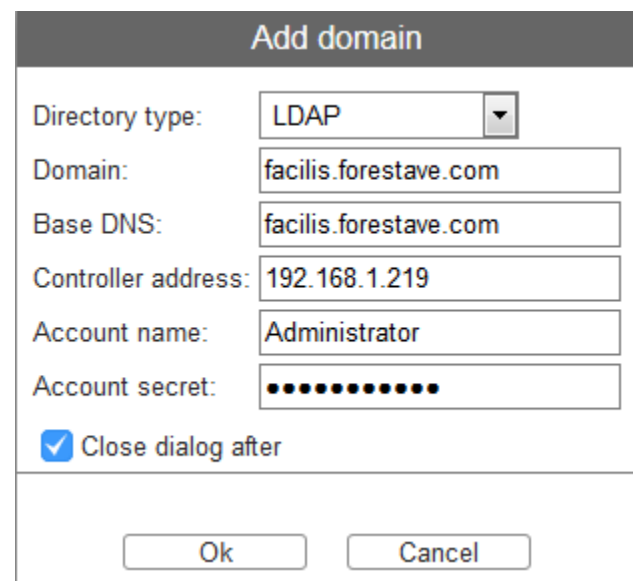
Access – The access type assigned to the Principal user or group. Write or Read.

To remove permissions from the view highlight the permission(s) you wish to remove and choose the Remove permissions button. A dialogue will prompt for confirmation.

Domains Tab

The domains tab allows you to add and remove additional Facilis servers and LDAP/Active Directory servers as domains. This allows users created on these domains to be added to groups and volumes to the server you are adding the domain to.

Bring up the Add domain window by choosing the Add domain button. There are two directory type domains that can be added. To add a Facilis directory select the Facilis Directory type. Type the hostname or IP Address of the server you wish to add then choose ok.



To add a domain from an LDAP/AD server select LDAP from the Directory type drop down. Enter the required fields as follows.

Domain – The name of the LDAP/AD domain you are adding.

Base DNS – The Base Domain name. In most instances this will be the same as the domain.

Controller Address – The IP Address of the LDAP/AD server

Account Name – The account name of the

LDAP/AD administrator.

Account secret - The password for the account name specified.

Adding an LDAP/AD domain will allow you to assign users in your active directory account to groups and volumes from that specific domain. Only users logging into the domain will have access to those permissions.

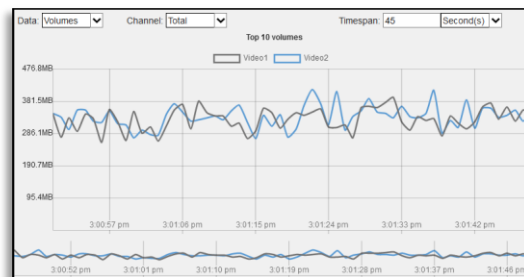
Remove Domain

Remove domain will delete any highlighted domain. You will be prompted of confirmation of the remove.

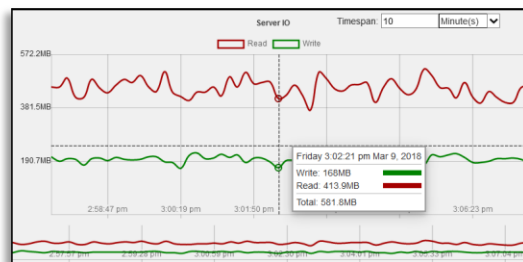
Adding Facilis domains is important in multi server environments wishing to use password protected logins. A user on each Facilis domain is a unique user even if it is given an identical name therefore adding the users from the same domain is recommended to avoid confusion of permissions and logins.

Stats Tab

The stats tab is where you can monitor client, volume and server IO. There are two graphs within the status tab. The top graph can show top 10 client or volumes by bandwidth usage depending on your selection from the data pull down. The status pull down can be set to Write Read or Total depending on the data you wish to display. The time span can be customized by entering a value and setting the pull down to seconds, minutes, hours or days.



The bottom graph shows the total server IO load broken down by writes and reads. The Server IO graphs time span can also be customized.



If the mouse cursor is hovered over an area of either graph a window appears showing more detailed information about the data point. Click and drag within a graph to zoom into a snapshot of that timeframe.

Storage Tab

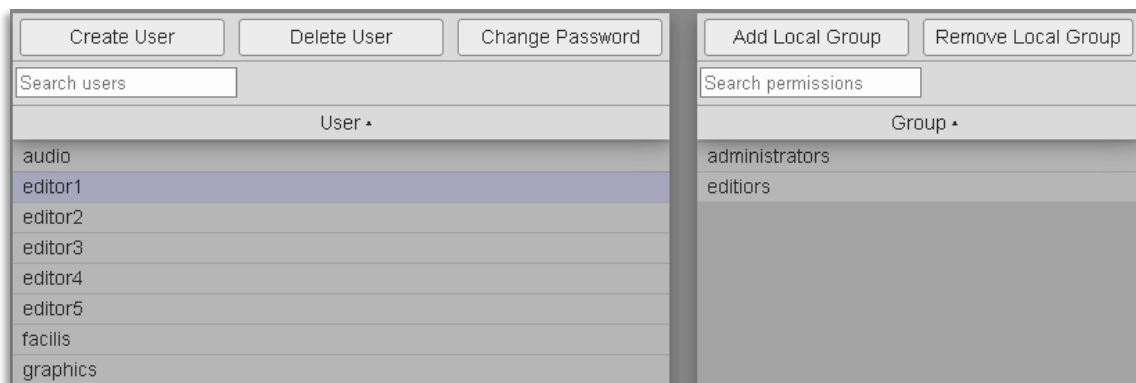
The storage tab lists the physical storage drives of all Facilis servers on a network. The Volume list displays the nine column headers outlined below. Click any column header to sort alpha numerically. Highlighting a drive and choosing the Locate drive button will flash the physical activity light for that hard drive. This can help to locate the physical location of a drive when there is little activity on the system. The locate feature must be used from the Admin console of the server you are trying to locate the drive.

- Server -** The name of the server the listed drive is installed in.
- Location -** The Slot location that drive is located in. This will be displayed as Slot # (Row # Column #), or a SAS controller string on older systems. Facilis Support can assist in updating these older systems to display the slot numbers instead.
- Group -** The drive group the listed drive is a member of.
- Serial -** The serial number of the hard drive.
- Size -** The capacity of the hard drive.

If a drive is reporting errors all users will get a prompt when logging into the client console. The prompt can be suppressed but the users should contact their systems administrator or Facilis support. The errors can be reset from the settings tab of the Admin Console.

Local Users Tab

The users tab is where Facilis domain users will be managed and added to groups. These users are in addition to the desktop users automatically pulled from the OS user name. Users added here are members of the Facilis server domain from which you are adding them.



To create new users choose the Create user button. The Create user window allows you to create new user names and assign passwords. User names can be up to 32 characters.

Create user

User

Audio

Password

Confirm password

☐ Close dialog after

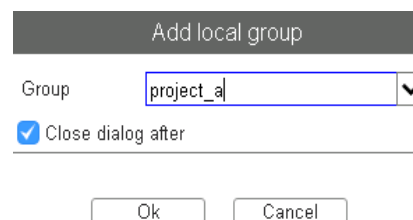
Ok

Cancel

To delete users highlight the user(s) you wish to delete and choose the Delete user button. You will be prompted with a confirmation.

To change the password of a user highlight the user whose password you wish to change and choose Change password.

Users can be added to groups by highlighting the user(s) you wish to add choosing the Add local group button to bring up the Add local group window. Type the name of the group and choose ok. The dropdown list in this window will auto filter available groups as you type.

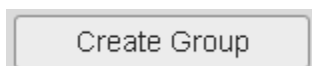


Remove groups by selecting the User then the group(s) you wish to remove and selecting remove local group. You will be prompted to confirm.

Creating groups is outlined in the Groups Tab section next.

Local Groups Tab


The groups tab is where groups will be managed and have users added to them. Groups allow you to combine permissions for groups of users. There are two groups set up by default - the 'everyone' group, which is composed of all users, and the 'administrators' group. Add the 'everyone' group to volumes you wish all users to have access to. Add users to the 'administrators' group to give them privileges to log into the Admin console.



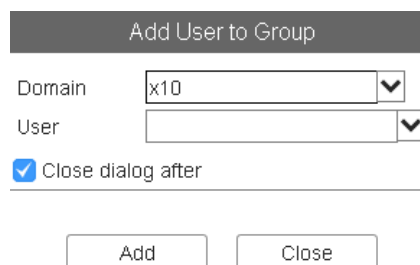
Select create group to open the Create Group window. Type the desired name and hit Ok.



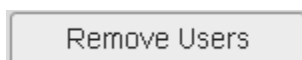
To delete groups highlight the groups you wish to delete and select the delete group button. A confirmation window will appear. Choose Ok to proceed with the delete.



To add users to a group select the groups you wish to add users to and choose Add users. This will bring up the Add users window. Here you will be able to select the Domain to pull users from and the users to add. The Domain may be your collection of desktop users, the Facilis server you are on or other Facilis, or LDAP domains added on the Domains tab.



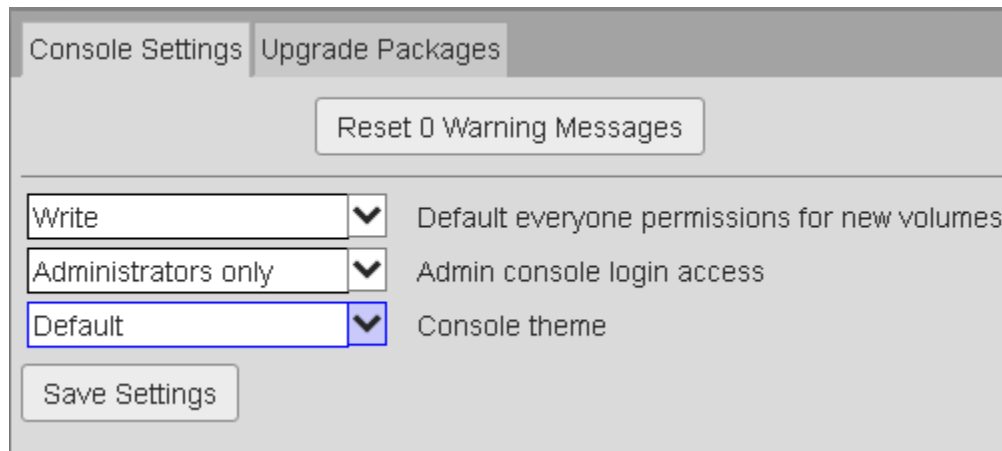
Once you select the Domain the user drop down menu will populate with the users from that domain and will auto-filter as you type. For more information on Domains see the section on Domains Tab.



Select users within a group and choose remove users to remove them from a group.

Settings Tab

The settings tab allows an administrator to create default permission settings for the Everyone group as well as set access levels to the Administration console from client machines. The settings tab also allows you to reset drive error messages and download upgrade packages from the Upgrade Packages tab. New in 7.2 is the ability to change the UI to a dark theme.



The screenshot shows the 'Console Settings' tab selected. At the top, there are two tabs: 'Console Settings' and 'Upgrade Packages'. Below the tabs is a button labeled 'Reset 0 Warning Messages'. Underneath this is a section with three dropdown menus and their corresponding descriptions: 'Write' (selected) for 'Default everyone permissions for new volumes', 'Administrators only' for 'Admin console login access', and 'Default' (selected) for 'Console theme'. At the bottom of this section is a 'Save Settings' button.

Default everyone permissions for new volumes - Sets the default permission for the 'everyone' group upon new volume creation. By default this will be set to none. If you want everyone to have access to newly created volumes you can set the default permissions as follows:

- ✓ **Write** - Assigns the 'everyone' group with write access to the volume.
- ✓ **Read** - Assigns the 'everyone' group with read access to the volume.
- ✓ **None** - Assigns no permissions to the volume.

Admin console login access - specifies the level of authentication needed to log into the Admin console from any system other than the server. Accessing from the server will never need a login.

- ✓ **Administrators only** - Only members of the Administrators group can access the Admin console. Launching the Admin Console will require entering the username and password of a Local user that has been added to the Administrators group.
- ✓ **Any User** - Any Facilis domain user can log into the Admin console. This excludes desktop users. . Launching the Admin Console will require entering the username and password of any Facilis domain user.
- ✓ **Everyone** - Everyone, including Desktop users can access the Admin console. There will be no prompt to log in.

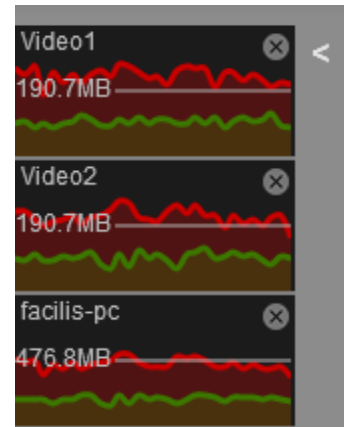
Choose the Save Settings button to save any changes made.

Stats Pane

The stats pane is accessible on any tab of the Facilis Admin Console by clicking on the white disclosure arrow towards the top left of the screen. The Stats pane allows you to drag volumes from the volumes tab or a client from the clients tab to the pane and get a real time snapshot of the bandwidth.

The graph will show the Volume or Client name as well as display its average bandwidth. The graph wave will display green for writes, red for reads. Hover over an area on the graph to obtain a more in depth breakdown of the bandwidth output.

To remove a graph from the stats pane click the x in the top right of the graph, or click and drag it out of the pane.



Chapter 3 – Facilis Client Console

This chapter will outline the functionality and operation of the Facilis Client Console. The Facilis Client console provides the functionality to connect, login, and mount/unmount your volumes on any client connected to a Facilis Server. There are three tabs on the Facilis Client Console: Volumes, settings, and Logins.



Volumes Tab

The volumes tab lists accessible volumes, specific volume information, mount properties, and provides the functionality to mount and unmount said volumes. You can also log into a servers Admin Console from this view by clicking the link in the server column. The search volume field allows you to filter by volume name.

Client Volume list

The Volume list in the Client Console can display up to eight columns which can be shown or hidden from view at any time by clicking the disclosure arrow to the right of the column headers and selecting or deselecting the desired columns. Click any column header to sort alpha numerically.

Volume- The name of the volume as given by the administrator at time of creation.

Capacity- The overall capacity of the volume.

Available- The current available space on the volume. This will read *0 GB* until the volume is mounted by any client.

Mount Type- Specifies the means the volume will be or is currently mounted as.

- ✓ **Network Multi-user** - Standard Multi User Write volume
- ✓ **Local Multi-user** - Multi User volume presented as local storage
- ✓ **Single-user** - Standard Single User Write Volume

Server- The name of the server hosting the volume. Click the server name to log into the servers admin console.

Connection address - The IP address or fibre card WWN of which the volume is mounted.

Mount Point -The mount point of a mounted volume. Clicking the mount point will open the volume in Explorer (windows) or Finder (mac).

Status - The current status of the volume.

- ✓ Ready - Ready to be mounted
- ✓ Mounted - Currently mounted

- ✓ Offline - Not currently available to mount
- ✓ Mount failed - Mounting of the volume has failed

Client volume settings

Client volume settings can be accessed by right clicking a volume or choosing the drop down to the right of each volumes mount/unmount button. Client volume settings override and server default settings.

Read only - This checkbox forces the volume to be read only when mounted on the client. Any volume set to read only will highlight green in the volume list.

Mount as - This drop down allows you to change how the mount appears to the client.

- ✓ **Network multi-user (default)** - Presents the volume to the client as a network attached Multi-user Write volume.
- ✓ **Local multi-user** - Presents the volume to the client as a locally attached Multi-user Write volume.
- ✓ **Single-user** - Presents the volume to the client as a Single-user Write volume.

Drive letter (Windows only) - Set the drive letter you wish the selected volume to mount to. Setting it to none will mount the volume to the C:/Volumes directory.

Preferred connection address - This setting allows you to specify the preferred connection address of the volume if multiple are available. The preferred connection address will always prefer Fibre channel when available.

Accessing the Facilis Admin Console

There are two ways to access the Facilis Admin Console from the client. The first, as covered above, is to click the server name link you wish to administer from the server column in the volume list. The second is by typing the servers IP address directly into the address bar of a web browser.

By default you will be prompted to log in when attempting to access the Admin Console. Enter the credentials of a Local user that has been added to the Administrators group. This setting can be changed on the Settings tab of the [Admin Console](#) from the server.

Settings Tab

The settings tab allows you to add or remove server addresses. This feature allows you to enter the preferred connection address for the client. If an address is not set, the client will automatically discover an address.

To set a preferred connection address, choose the Add server address button, enter the IP Address in the server address field and choose Ok.

To return the client to automatic discovery highlight the added server and choose Remove server address.



A dialog box titled "Add server address". It contains a text input field labeled "Server address" with the value "10.0.0.1". Below the field is a checkbox labeled "Close dialog after" which is checked. At the bottom are two buttons: "Ok" and "Cancel".

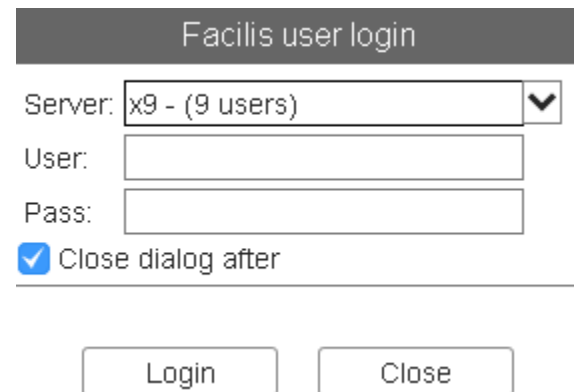
Any drive warning messages can be reset from the console settings tab within the settings tab. This will suppress any old error messages.

Logins Tab

By default the Client Console will log in automatically as the desktop user you've connected with. This is the username of your OS login. If additional login permissions are required you can log in using the Logins Tab.

To log a user in choose the Login button to open the Facilis user login window.

Select the server the user is hosted from and then type the user name and password and choose Ok.



A dialog box titled "Facilis user login". It contains a dropdown menu labeled "Server:" with the value "x9 - (9 users)". Below it are two text input fields labeled "User:" and "Pass:". Below the fields is a checkbox labeled "Close dialog after" which is checked. At the bottom are two buttons: "Login" and "Close".

As you log users in you will see them populate the Logged in user list.

In addition to logging in users you can change the passwords of logged in users as well as log out users. The amount of users that can be logged in is unlimited.

To have fully password protected logins setup your desktop users with no volume access. This will require users to log in using the Logins tab before gaining any access.

Logins will persist after system restarts and shutdowns. In environments where volume permissions are unique to users, it is important to remember to log out at the end of a session.

Mounting Volumes

To the left of each mountable volume is a Mount button. Click this button to mount the volume. After mounting a volume the button will turn to unmount. Click this button to unmount the volume.

To mount multiple volumes Shift click or Control click (windows) or Command click (mac) and then click the Bulk Mount button above the volumes list. This will issue a mount for each volume. Do the same to unmount a group of volumes.

Unmount ▾		Avid_Master_Proj	200 GB	14.7 GB	Network Multi-user	x9	x9	X\
Unmount ▾		Avid_Media	1000 GB	0.757 GB	Network Multi-user	x9	x9	W\
Mount ▾		Avid_media_New	2000 GB	1831 GB	Network Multi-user	x9		

As you mount and unmount volumes you will see the drive icon to the left of the Mount/Unmount button change in color. Below is the color key:



Grey - Not Mounted. The user has access but the volume is not mounted.



Green - Mounted Writable. The user has access and the volume is mounted Writable



Blue - Mounted Read Only. The user has access and the volume is mounted read only.



Yellow - Mounting. The user has access and the volume is currently mounting.



Orange - Failed Mounting. The user has access but the volume failed to mount.



Red - Unavailable from hosting server. The user had the volume mounted but has become unavailable.

Any volume row highlighted green indicates that volume has read only access.

Linux Fibre Channel Mounting

As of version 7.1.1 linux now supports mounting Console volumes over Fibre Channel using the Terminal command line interface.

To mount volumes use the command:

```
factbcmd legacy_fc_mount <server name> <volume name>
```

To unmount volumes use the command:

```
factbcmd legacy_fc_unmount <volume name>
```