

FACILIS TECHNOLOGY

Software-Defined Shared Storage &
Asset Management for Collaborative
Media Production Networks



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“When compared to our previous storage, it’s faster, easier to use, and includes many more tools for us to manage our projects. Facilis delivered exactly what they promised, and I’m excited to see how the technology will grow.”

MIRKO MANTELLATO
DUDE ITALY



CASE STUDY

DUDE Italy – A Facilis Workflow



DUDE is an independent creative agency based in Milan, Italy and operating in various European markets. They cover the entire pipeline of creative design, production and post production to delivery for their customers. With over ninety employees in Milan and London offices, their creative resources and capabilities are substantial.

In 2020 they embarked on a project of another kind, finding a new shared storage network to centralize all their creative assets, and expand access to their central library for all employees worldwide. Antonello Di Vincenzo with Blutek Srl in Rome assisted with the research, and introduced them to Facilis Technology, a US company that Blutek has successfully deployed at several companies around Italy.

The Milan, Italy location of DUDE has forty creative people assigned to several different active projects. The eight post production suites deliver editorial, motion graphics, color grading and finishing content for broadcast. The DUDE facility can expand as needed by adding post suites when a project requires more collaboration or a shorter deadline. Now with Facilis, volumes now are accessible by the Creative team to add or modify graphic assets in a shared folder with editors and motion graphics artists. Each graphic rework now is updated in real time directly in the Premiere or After Effects project’s timeline.

One requirement of the new network was large capacity, with the capability to segment the capacity for multiple projects and make it available immediately. “With Facilis, the process to create new spaces for upcoming project ingest is so simple.” Said Mirko Mantellato, Digital Executive at DUDE, “Not only is the volume created with proper permissions and available in no time at all, but it can be mounted to the workstations that need it without any help from the editor. It makes life so much easier when dealing with so many different projects in a single week.”

DUDE has an extensive historic library, but never had an efficient way to ingest all the project media from years of production into a single location. With Facilis FastTracker MAM and Object LTO, high resolution camera media is ingested and sent to LTO, while low bitrate proxy files are created to be kept on active storage. This requires much less space on the spinning disk portion of the system and keeps the LTO files within easy reach if needed for projects in the future.

CUSTOMERS

With thousands of systems installed worldwide it’s hard to pick just a few customers. This small list represents major content creators; broadcasters and Fortune 500 companies; universities and sports entertainment. We’re just as popular with small owner-operator facilities, where our performance, ease of use and reliability are key to their long-term sustainable workflow.





FACILIS TECHNOLOGY'S TOP 5

ONE: Virtual Volumes

Facilis has a unique way of creating virtual disks on-demand that look and act like hard drives but are evenly distributed across a much larger drive set. The administrator can easily change the size of the virtual drives on the fly. Because of the virtual drive set, Facilis can promise that every virtual volume created has the same performance, no matter if the system is completely empty or almost full. If you consider that spinning disks on any other system get slower as they get full, this is a big deal.

TWO: The Facilis Shared File System

The Facilis Shared File System was developed exclusively for video and audio content on Facilis shared networks. It changes the old, clunky, and inefficient TCP-IP network file systems but keeps the scalability and reliability that they're known for. On top of that, it adds features that you'll never see in a NAS, and eliminates complex network filesystem permissions that can obstruct your workflow. If you'd like to leverage Fibre Channel speeds, or have some of that infrastructure in place already, the Facilis Shared File System supports Fibre Channel and Ethernet clients seamlessly, and can even failover between the two connection types.

THREE: Facilis Console Management

The Facilis Console is the interface to the **Facilis Shared File System** and virtual volume management. Content creation facilities have used project-based workflows for decades, and no one is better at volume management in project-based workflows than Facilis. Volumes of any size can be created, and size can be changed on the fly. Smart Access Rules are built for ultimate security, or volumes can be left globally open and accessible with basic permissions. The administrator has total control to monitor and prioritize bandwidth, view and change the volumes being used on the client desktops, and even set the client connectivity paths.

FOUR: FastTracker

FastTracker is an asset management application that runs on the Facilis server and indexes files on Facilis or any attached storage. Users can add tags and keywords for searching, and proxy clips can be generated automatically. Files can be moved or copied on the fly or automated on a schedule. FastTracker always knows every time files have been copied or moved, even if it's done outside FastTracker interface. When working in creative applications, the FastTracker Panel or client gives the editor direct access to all the files on the server for import. Complete the workflow by moving files to archive on **Object Cloud and Object LTO**, manage flush of archived files from the cache, and prefetch back from cloud or LTO - fully integrated and supported by our world-class tech team.

FIVE: Archive, Backup & Remote Access

Facilis offers simple backup and archive solutions that integrate directly with your post production workflow. So simple in fact, archive and restore is as simple as drag-and-drop. Use your own cloud account (AWS/Azure), or an account provided by us for a low yearly subscription fee. The cloud can serve as a backup location, and remote access point. For more direct remote access, use the Facilis WANLink Client, FastTracker Web or S3 Private Cloud option. Facilis also qualifies the best of breed remote desktop solutions for sharing workstation resources remotely. Facilis will consult with you on your best options for remote access because there isn't one solution that fits all workflows.

FACILIS CONSOLE

The Facilis Console delivers simple yet powerful control and management of post production environments. The Admin Web Console can be accessed from any desktop or mobile device, and provides secure access to all administrative tasks. As part of an administrator's toolset, it integrates seamlessly with Active Directory users and groups, or can work independently with a fully autonomous user database.

Volume & User Administration

The Admin Console provides volume create, delete and resize, user account creation and permissions to project-based volumes. Multi-server groups benefit from server roles for hosting and failover, and server groups for single point of user account administration.

Smart Access Rules

File and folder-level access policies that provide an optional layer of security through a simple interface. Unique features include file-type rules based on extension, active no-delete project locations, create-only spaces and many more. Policies for user access auditing and file un-delete are also included.

Real-time Access Management

Administrators can instantly place storage on all user desktops from a single interface, and determine which network path any workstation uses to access the storage. Push volumes onto remote workstations connected through VPN, and Facilis WANLink Client.

Dynamic Bandwidth Priority

Bandwidth priority can be set on client workstations to preserve performance for critical jobs during heavy load, while maintaining full performance for all clients during normal operation. System-wide load balance controls for read/write priority can also be set.

Admin Console - Volumes

The image displays two screenshots of the Facilis software interface. The top screenshot shows the 'Admin Console - Volumes' window, which features a table of storage volumes and a sidebar with navigation options. The bottom screenshot shows the 'Client Console' window, which includes a 'Mount Selected' list, a 'Volumes' table, and a 'Policy Editor' dialog box for configuring access rules.

Admin Console - Volumes

Volume	Capacity	Available	Server	Status	SQL
7500Project	2990 GB	RAID6-2	Host Server	Ready	O
ABCORP	893 GB	RAID6-2	hub16u	(M) Ready	Y
AfterTheStorm	789 GB	RAID6-2	hub16u	Ready	K
Backup	88 GB	RAID6-2	hub16u	Ready	O
Bill, n3Me	743 GB	RAID6-2	hub16u	(M) Ready	R
		RAID6-2	hub16u	(M) Ready	X
		RAID6-2	hub16u	(M) Ready	X

Client Console

Mount Selected

Volume	Capacity	Available	Server	Status
Online	2362 GB	2011 GB	facilid	Ready
Brandstar	2684 GB	1486 GB	facilid	Ready
Offshoreland	1073 GB	1046 GB	facilid	Ready
ABCORP	2798 GB	893 GB	facilid	Ready
Cloud	536 GB	536 GB	facilid	Mounted (W)
StockV	536 GB	486 GB	facilid	Ready
DJI	536 GB	462 GB	facilid	Ready
VA_TAP	300 GB	299 GB	facilid	Ready
LosAlamo	268 GB	264 GB	facilid	Mounted (W)
Proxy	268 GB	268 GB	facilid	Ready
NoDeleteProjects	260 GB			
Macys	161 GB			
DemoMedia2	214 GB			
Solidine	536 GB			
ENCORE	85 GB			
Coofire	60 GB			

Policy Editor

Policy Name: AvidMedia-NoDelete

Rule Editor

Rules	Domain	Principals
1	User	@editor@local
2	Group	Editors
3	Everyone	Add Principal

Order Grouping: Default

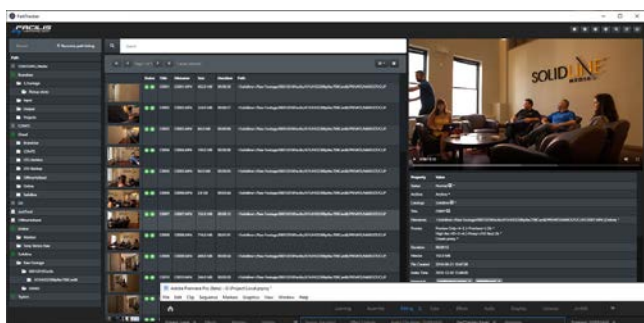
Mode: Add, Remove, Delete

Save, Cancel

Policy Editor

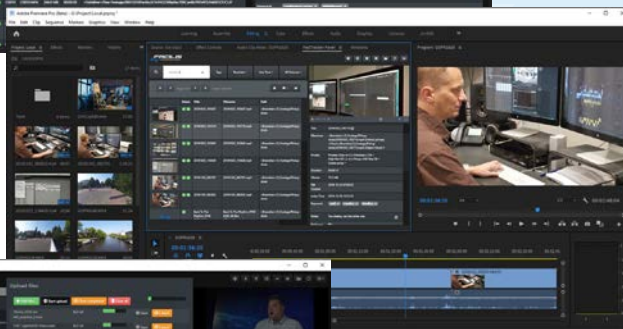
FASTTRACKER

FastTracker is an Asset Management system included with Facilis Shared Storage systems. It automatically indexes, catalogs and manages video, audio and still images as well as production documents and project files within your content creation workflow.



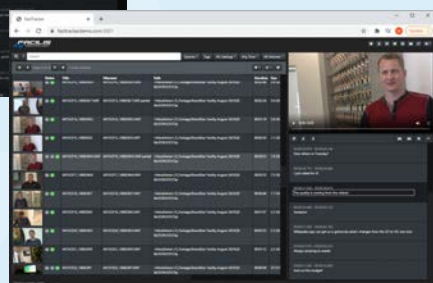
FastTracker
Browse View

Integrated
FastTracker
Adobe Panel



FastTracker
Asset Upload

FastTracker
Web Interface



“In the past to review or search footage and edits on DUDE’s archive, each team needed to sit beside a post producer. Now we’re able to share DUDE’s archive with all offices. Anyone can open FastTracker, search and view all proxies or edits from DUDE’s catalog.”

MIRKO MANTELLATO
DUDE ITALY

FASTTRACKER FEATURES

Simple Catalog Search or Folder Browse

Search in or across catalogs, defined by project and user accounts. Save queries with multiple criteria including size, index time, path and metadata text. Browse only folder locations that match user catalog permissions for security.

Duplicate and Lost File Tracking

Each record displays multiple locations of the file, whether in primary, active archive, or in offline state on cloud or LTO. Files can’t be lost because FastTracker links duplicates to the primary record.

Proxy Creation for Preview and Edit

Low bitrate preview clips can be created on index for full speed playback in the FastTracker client. Multiple formats of edit proxies can be created on index or on demand for remote offline workflow.

File Movement on Demand or Schedule

FastTracker can move and copy to external NAS, cloud and LTO with full location tracking through the archive stage. Copy files on a schedule for backup, and search backup locations to restore files.

Local Transcription Service

On index or on demand, transcribe spoken word to clip marker metadata. Export transcriptions for captioning, or import to Adobe as clip markers, visible on the timeline.

Web Client File Transfer

With FastTracker Web, set up a secure HTTPS link to your database and share catalogs with external contractors. Allow download of sources and proxies by account, and designate upload locations for remote ingest.

Adobe Panel, FCPX, Resolve and Avid Workflow

Import metadata and link proxies to Adobe projects through the Adobe Panel. Open FastTracker in Resolve to import clips to media library. Drag-n-drop media to FCPX events and link or import to Avid bins.

Browse LTO and Cloud Data without Restoring

Use FastTracker to preview assets prior to restore from LTO or cloud. Keep small preview clips online after full resolution files are sent to archive. Prefetch files from LTO and Cloud to make them available.

Thumbnail Scroll and Source Playback

For workflows where proxies aren’t necessary, FastTracker creates scrollable thumbnails, and enables source playback in the client player for most formats.



PRODUCTS

SHARED STORAGE SERVERS

Facilis HUB Shared Storage

Central to Your Production Workflow



HUB FLASHPoint 24S

24 SSDs on 12Gb SAS Controllers
Capacities: 24TB, 48TB, 96TB
Benchmark: 6GB/sec



HUB 8, HUB 16, HUB 24

8, 16 or 24 HDDs on 12Gb SAS Controllers
Capacities: 32 to 388TB
Benchmark: 1GB/sec to 3GB/sec



HUB FLASHPoint Hybrid

24 SSD & 16-24HDD on 12Gb SAS Controller
Capacities: Up to 480TB
Benchmark: 6GB/sec



HUB 32/HUB 48

16-24 HDD on Internal 12Gb SAS Controller
16-24 HDD on External 12Gb SAS Controller
Capacities: Up to 768TB
Benchmark: 3-4GB/sec



HUB One

32 to 128 HDD on 12Gb SAS Controllers
Facilis HUB One on 32Gb FC
Capacities: Up to 2PB
Benchmark: Starting at 4GB/sec



FastTracker Edge

8 HDD on 12Gb SAS Controller
10TB License for Object Cloud or S3
Capacity: 16TB
Benchmark: 1GB/sec

Facilis **HUB** systems are built from the ground up to be the most efficient way to access video on your multi-platform workstations. **HUB** is the evolution of the Facilis Shared File System, block-level virtualization and multi-connectivity performance.

The all-new **FLASHPoint 24S** server delivers bandwidth for days. Enough to power the most demanding workflows, FLASHPoint comes with a small form factor and affordable price point.

With 1GB/sec speeds through standard dual-port 10Gb, and options like 40Gb Ethernet and Fibre Channel, the **HUB 8** features are not entry-level.

The 16-drive **HUB 16** has all the power of the previous 24D server, and the HUB24 offers our best single-enclosure bandwidth and capacity options.

The **HUB FLASHPoint Hybrid** offers advanced SSD technology with an integrated, high capacity HDD-based group for use without exclusive DynaRAID2 storage tiering. Unlike many flash-caching systems, the HDD group is high-performance too!

The **HUB One** can be built fully redundant, with multi-server bandwidth aggregated into a single point of network connectivity. There is no better way to deliver high bitrate video to large workgroups while maintaining high availability and data integrity than the **HUB One**.

The **FastTracker Edge** server is designed to be a turn-key asset management, cloud cache or direct S3 remote access solution for any facility.

Every **HUB** product comes with unlimited seats of FastTracker asset management.

Benchmark speed is derived from optimal read-only aggregate speed tests and is not a guarantee of performance. Test reports available upon request.

HUB PERFORMANCE

Model Name	Capacity	UHD DPX 2160 24P	8K RED 16:9 7:1 24P	4K DNxHR HQ 4K ProRes HQ	UHD XAVC 480	HD Pro Res HQ DNxHD 220	HD Pro Res SQ DNxHD 145	XDCAM HD 50Mbps
HUB 8	32TB to 128TB	1	4	7	10	14	18	45
HUB 16	64TB to 256TB	2	7	11	16	24	36	75
HUB 24	96TB to 388TB	2	9	18	25	45	58	96
HUB 32	128TB to 512TB	3	11	22	30	53	66	112
HUB 48	192TB to 768TB	3	15	30	42	65	88	180
HUB FLASHPoint 24S	32TB, 64TB, 96TB	5	25	50	80	150	200	250+

Stream counts are based on a 99% full drive set. Facilis drive set virtualization maintains full performance at full capacity.



PRODUCTS

ARCHIVE & BACKUP

Nothing is more critical than our customer's data. We offer dynamic multi-disk drive failure protection and inter-server mirroring to avoid downtime, but data backup is still recommended. Facilis offers integration with localized object storage that virtualizes Disk, Cloud and LTO locations into the same folder and file structure.

Object Cloud & Object LTO

Object Storage Virtualized to your Desktop

Facility managers have concerns about deploying backup and archive workflows due to the additional administration involved. Users must learn new applications and processes that are often detached from their normal workflow. With Object Cloud & Object LTO, archive media is managed as easily as your primary storage, but doesn't take up any disk space.

With simple setup and deployment, any attached storage or native Facilis virtual volume can act as the cache drive for cloud and LTO data. After writing to the archive location, the disk-based data can be flushed but still remains in the file system, able to be searched and restored at a moment's notice.



When accessing cloud and LTO-based media through **FastTracker**, users can view a thumbnail scroll or a video and audio preview of the archived asset before restoring it. FastTracker reports the status of the file as "offline" if the media has been flushed from disk, but still available for restore from Cloud or LTO. FastTracker is location aware of archived data, and can display the cloud storage bucket, or tape cartridge ID for assets archived through Object Cloud. Restoring data from cloud or LTO is as easy as dragging the record from the FastTracker search or browse display, or downloading the source file locally. Even if the Object Cloud Cache volume is not available on the user desktop, source and proxy files can be downloaded to any connected workstation.

REMOTE ACCESS & EDIT

WANLink Client

Facilis delivers an "In-facility" workflow to remote editing clients with the integrated Shared File System WANLink Client, included with all Facilis servers. Though a secure and encrypted connection, remote users can mount volumes like they're on-premises, without the setup and latency of VPN.

Editors use the same credentials, the same user groups and access rules, for the ultimate in seamless workflow. Administrators can mount volumes directly to remote clients with a single button, and monitor their bandwidth. As always with Facilis, there's nothing else as simple or as powerful.



S3 Private Cloud

If external users don't have direct access to the Facilis storage, expose your Facilis server as a remotely-accessible cloud storage. Browse, download or mount the S3 volume to the desktop of the remote user for instant access to assets. Secret key credentials can be applied per-folder for ultimate security, and read-only access is available. Perfect for outside contractors with no credentials on the internal network. Upload speeds are several times faster than VPN, and the files are immediately usable on the internal Facilis server without download.



FACILIS SHARED STORAGE

Facilis means simple, and our approach is different. Instead of focusing on expensive and complex hardware to get around the inefficiencies of network-attached storage, we change the network. Our Shared File System is unique in the industry, delivering connectivity over Fibre Channel and Ethernet, with a custom protocol that avoids the overhead and latencies of commodity network storage. We then add the ability to run at full speed even when completely full. This benefit cannot be found in any other storage system in our market, and has a direct effect on your total cost of ownership.

The work of post-production and content creation is an art, but there's a lot of science involved with producing high quality programming consistently. Facilis is dedicated to the content creation market, supporting diverse workflows from offline craft editorial and low bitrate web delivery to 8K film restoration and HDR color grading for studio releases. Flexible, cost-effective and scalable, Facilis solutions can be found in great universities and local high schools, major networks and public access.

You won't find many of our product's key features in standard network-attached storage, and some can't be found in any other solution on the market. Our development team works hard to ensure that the software running Facilis storage products is reliable and usable; simple and powerful. Thousands of facilities worldwide have trusted Facilis Technology to keep their editors working, and clients happy. Hundreds of returning customers every year confirm the loyalty that the Facilis brand has maintained since 2003.



Shown with optional connectivity hardware

Available Capacities:	16TB to 768TB per server; Network Capacities up to 6PB
Capacity Scalability:	Up to 256TB per Virtual Volume; Unlimited Network Capacity
Base Unit Connectivity:	Dual 10Gb/25Gb/40Gb/100 Ethernet or Dual 16/32Gb Fibre Channel
System OS Drive(s):	Single or Mirrored 6Gb/s Solid State Drive
Server OS:	Standard Windows 10 IOT; Optional Windows Server 2019
Client Workstation OS:	Win 8/10/11; Mac OS 10.10 - OS 12 (including ARM/M1); Linux 2.6.18+ RHEL/CentOS
Drive Failure Protection:	DynaRAID dynamic, software-defined RAID (RAID5; 6; 6-3, 6-4; 60; 61)
Redundancy Options:	RAID61 Server Mirroring; Hub Server Failover; FC and Ethernet Client Multi-path Failover
Archive & Remote:	Object Cloud Integrated Cloud and LTO; S3 Private Cloud; WANLink Shared File System Client
Service & Support:	First Year Total Care Support and Warranty Included; 24/7/365 Support Available