

EditShare[®]

Intelligent storage & media management



EditShare[®]

EFS Storage

Superior performance SSD and HDD scale-out solutions for media intensive workflows



EditShare®



Production MAM that expands
creativity and collaboration



WINNER
Broadcast Beat
Innovation Award
AirFlow & Flow 2015



WINNER
Best Editing
Product
Flow Story NAB 2016



WINNER
IBC Innovation
Award
Content Management



EditShare®

QScan AQC

AUTOMATED QUALITY CONTROL

Offload your workload

Media Compliance for ALL

POWERFUL SINGLE PASS INSPECTION
READY-MADE AS-11 DPP TEMPLATES



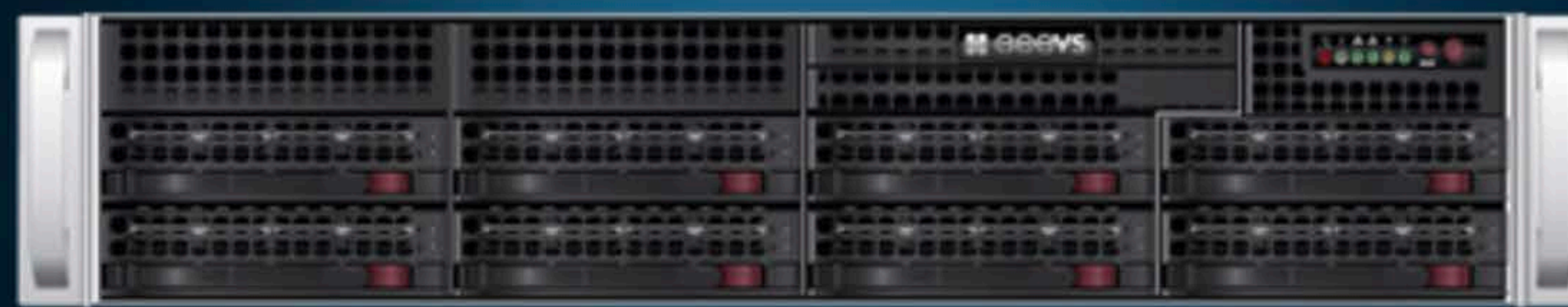
LEARN THE BUSINESS BENEFITS OF IMF



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NEW

Geevs



Next-generation media servers for Ingest and Playout

Faster CPU and RAM • Up to 8 streams of AVC-Intra in 1080i using Geevs 4/4+ model • Compact 2RU chassis
2 x 10GBASE-T copper 10G network ports (standard) • 6 x caddy media drives for local storage (RAID 6)

VBox

'Channel-in-a-Box'
Playout Automation



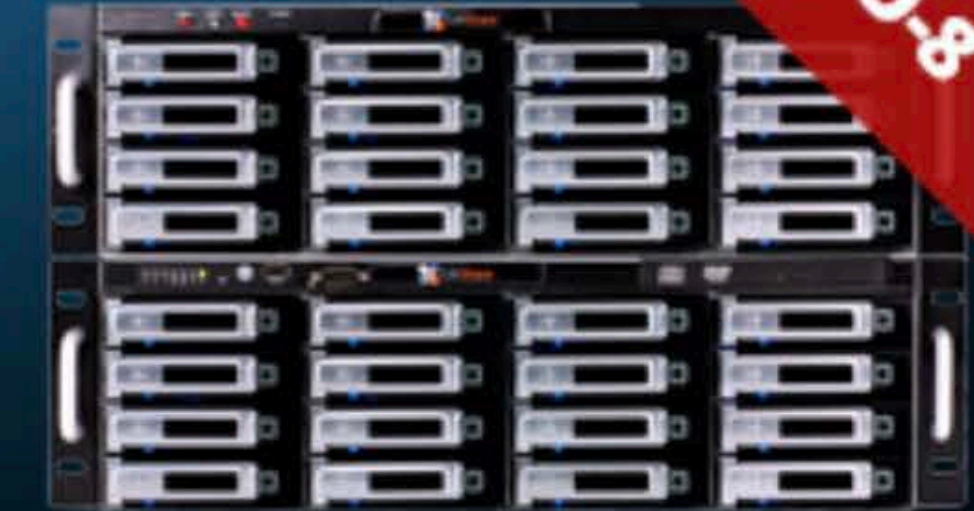
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ARK

Secure management of media assets,
on Tape and Disk



ARK TAPE



ARK DISK

NOW
SUPPORTS
LTO-8

Helmut

ADOBE PROJECT TOOLS
FOR PREMIERE PRO AND BEYOND



EditShare®

Data Security in Production Environments



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Content Creators vs IT department



What Content Creators Want

- ▶ High performance
- ▶ Flexibility for sharing, collaboration, and remote access



What Content Creators Want

- ▶ Nothing should slow down the delivery of data or restrict access



What the IT department (doesn't) want

- ▶ IT's job is to make sure the system isn't hacked or accessed by unauthorized people



**SONY
PICTURES**



HBO



NETFLIX

What the IT department (doesn't) want

CNN World » Africa | Americas | Asia | Australia | China | Europe | Middle East | India | UK Live TV U.S. Edition +

Cyberattack on TV channels, the first of its kind

By Don Melvin and Greg Botelho, CNN
Updated 3:56 PM ET, Thu April 9, 2015

Your personal files are encrypted. Documents, photos, databases and other important files have been encrypted and a unique key, generated for you, is stored on a secret Internet server. Without the private key, you cannot access the list of files you have been encrypted.

FUTURE OF YOU

The Crippling Ransomware Attack on a San Francisco NPR Member Station

By Jon Brooks Jan 8, 2018

Originally published Oct. 31, 2017

Lesley McClurg is trudging through the KQED newsroom, oozing distress.

KQED, one of the largest public media companies in America, was hit by a ransomware attack in July. The disruption was barely visible to the audience. Behind the scenes, employees struggled with Rube Goldberg problems while tech staff worked long months to rebuild a more secure system.

Operations Exploit Kit

Enlarge / Nipsey Hussle and YG pose backstage at Nokia Theatre LA Live on January 13, 2012.

The Challenge

- ▶ In the past, editing computers and production storage were typically located on an island
- ▶ Internet access -> separate computers
- ▶ Today, people need to move content in/out of production over the Internet, accessing cloud archives, difficult to have isolated storage and workstations



The IT Response

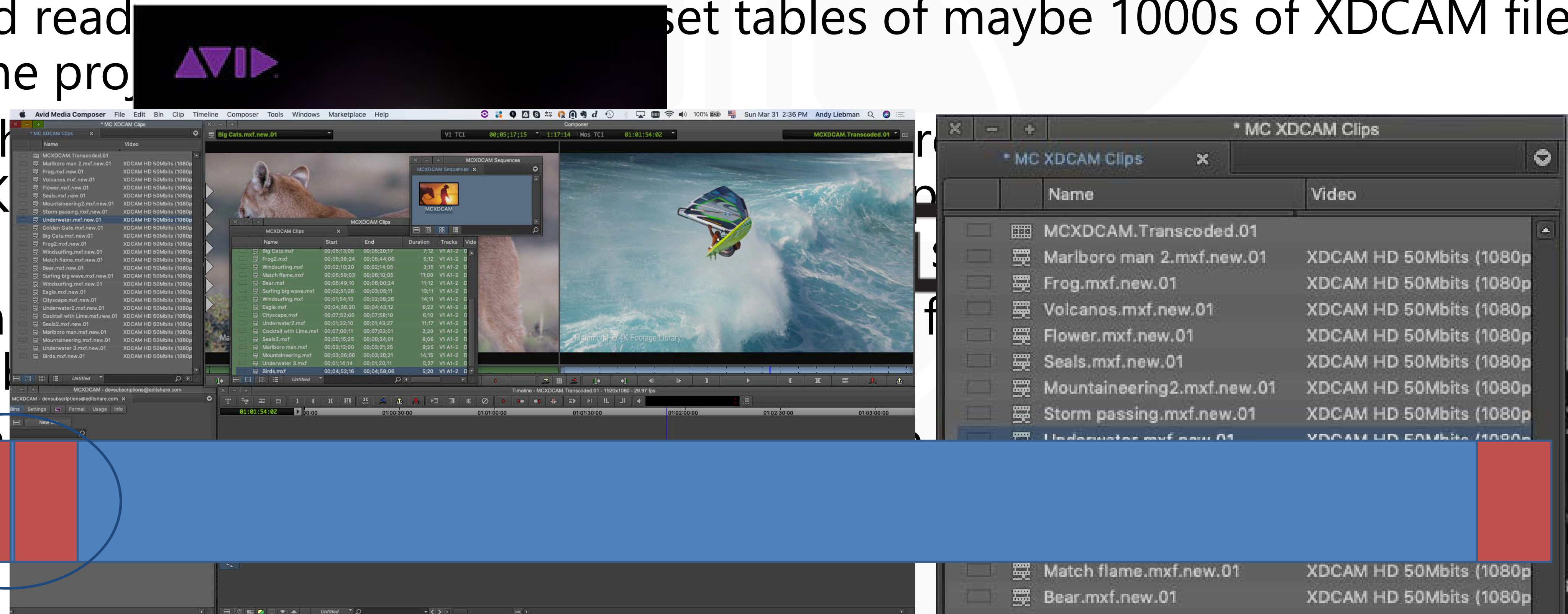
- ▶ Complain about systems with any CVSS (Common Vulnerability Scoring System) vulnerabilities
- ▶ Run as few services as possible
- ▶ Whitelist IP addresses for controlling access
- ▶ Run antivirus and anti-malware software on servers and workstations
- ▶ Does tightening everything up work in production?



Windows Defender Tale

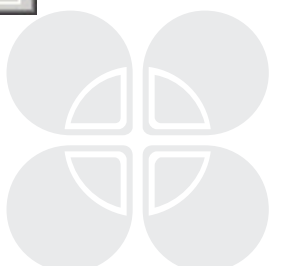
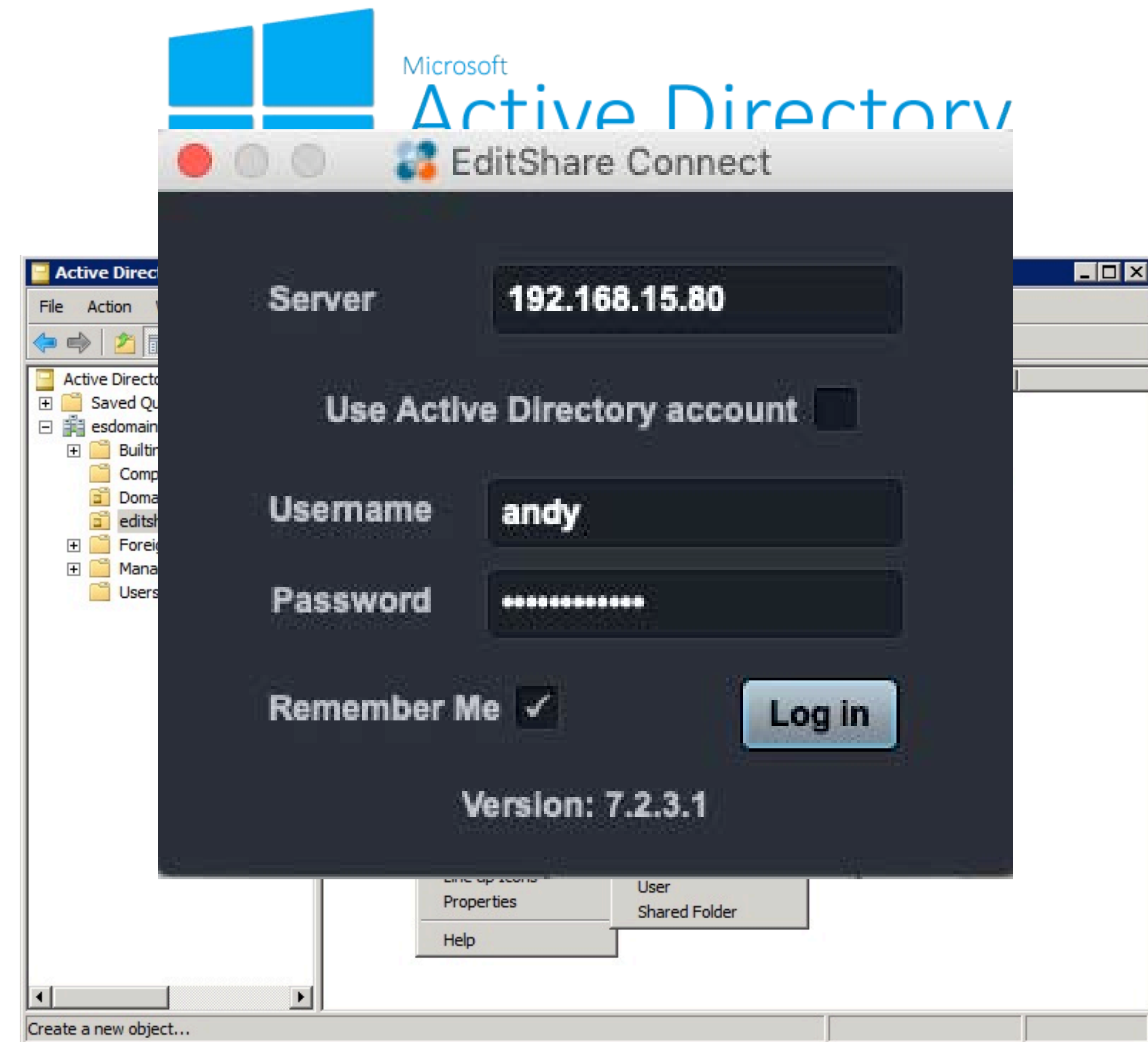
- ▶ Avid Media Composer projects based on LongGOP media like XDCAM
- ▶ When you launch an existing project, Avid opens all of the bins and sequences that were open last time you closed the project
- ▶ Avid reads in the project's metadata tables of maybe 1000s of XDCAM files in the project

- ▶ With 32K and can't read
- ▶ Can't read
- ▶ Can't read



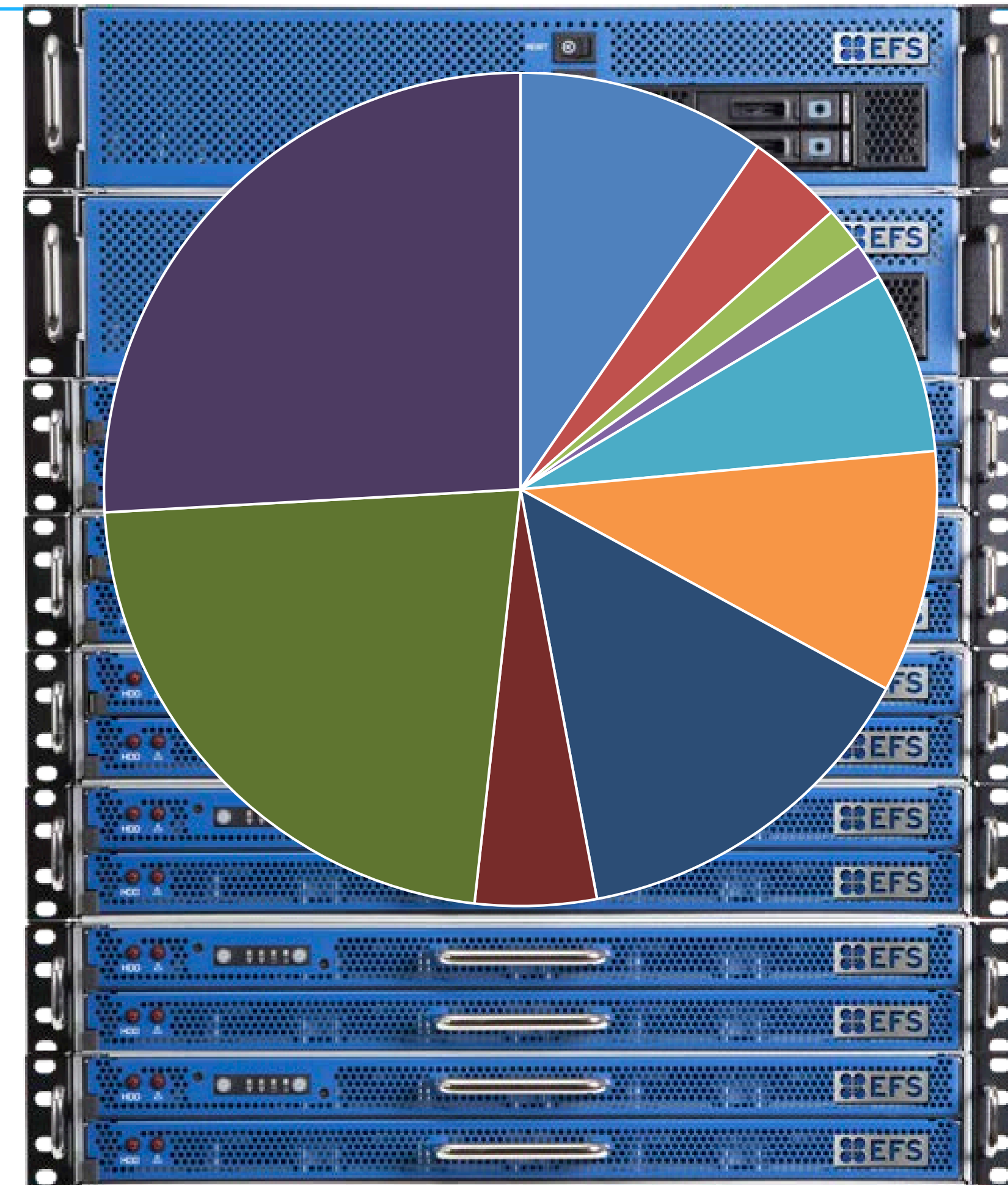
Good User and Password Management

- ▶ If a username and password is required to access storage, this is the first line of protection
- ▶ Active Directory integration
- ▶ Enforce good password policies
- ▶ Single Sign On



Virtual Spaces: Simple Permissions Model

- ▶ Divide storage into Spaces for different projects or departments.
- ▶ Each space has its own rules about who can access or not, read write or read only
- ▶ Easy, but not fine-grained enough for everybody



Access Control Lists

- ▶ Access Control Lists
- ▶ Fine-grained control over who can access each directory or file, and whether they have read-write or read-only access

Media Space: ACLDemo
Directory: .

Basic Permissions Apply?

Type	Name	R	W	X	Inherit Group (SetGID)	Sticky Bit
Owner:	editshare	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Group:	ACLDemo (Group)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Others:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

ACLs

Apply?	Name	Type	Read	Write	Execute	Inherit
<input type="checkbox"/>	acl managers	group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	ACLDemo (Group)	group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	ACLDemo (Read Only)	group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/>	interns	group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	power users	group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	restricted	group	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

How changes will be applied:

To this directory only To this directory and immediate contents (top level) Recursively

Modify selected entries Clear and replace all entries



An Inside Job!

Most Security Breaches Come from those with
Permissions to See Content



Auditing Deterrent

- ▶ Who did what, to which files
- ▶ Track creation, deletion, reads, writes, renaming, moving, etc.
- ▶ Filter by IP Address, User, type of action
- ▶ Search by file name
- ▶ Want this to not have any impact on performance

The screenshot displays the EditShare audit interface with the following components:

- Filters:** Client IP address: 192.168.175.1; User: andy.
- Bar Chart:** Shows EFS Event Count over time (11:01:00 to 11:13:00). The legend includes: mount, list-dir, write-file, create, rename-from, rename-to, read-file, delete, unmount.
- Table:**

Time	efs.user	efs.client_ip	efs.space_name	ef
October 14th 2018, 11:10:53.540	andy	192.168.175.1	-	de
October 14th 2018, 11:10:48.002	andy	192.168.175.1	-	lis
		192.168.175.1	-	lis
		192.168.175.1	-	lis
		192.168.175.1	-	lis
		192.168.175.1	-	re
		192.168.175.1	-	re
		192.168.175.1	-	lis
- Parent Directory (top 50):**

Parent Directory	Hits
/ACL/ACLDemo2_1/	3
/ACL/ACLDemo_1/	31
/ACL/ACLDemo_1/Content/	61
/ACL/ACLDemo_1/Content/Clips/	56
/ACL/ACLDemo_1/Content/MoveHere/	9
/AvidStyle/China Avid Style_1/	2
/Unmanaged/Mammoth_1/	11
/Unmanaged/Mammoth_1/Content/	38
- Event Type Detail Chart:** Shows a detailed view of event counts for specific time intervals (11:06:00, 11:08:00, 11:10:00). The legend includes: read-file, create, delete, mount, rename-from, rename-to, list-dir, write-file, unmount.



Mammoth_1

Back/Forward View Arrange Action Share Edit Tags Path Search

- iCloud Drive
- EditShare Pricing
- Financial
- IBC_2018
- Legal
- Manuals
- Marketing
- Partners
- Personnel
- Powerpoint Presentations
- Recents
- Sales
- Sales_Pipelines
- SnowLeopard_Lion_Mount...
- Trade Shows

Devices

- andymacbook
- OS X
- home
- Remote Disc
- DATA

Shared

- All...

Copies Bear.mov.mov Big Cats.mov.mov Eagle.mov.mov Frog2.mov.mov Marlboro man.mov.mov Seals.mov.mov

Storm passing.mov.mov Surfing big wave.mov.mov Volcanos.mov.mo v

No results found

Desktop

Back/Forward View Arrange Action Share Add Tags Path Search

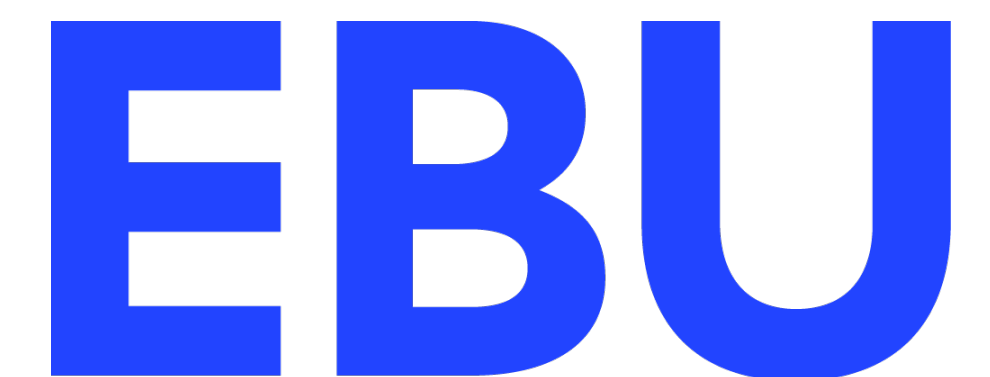
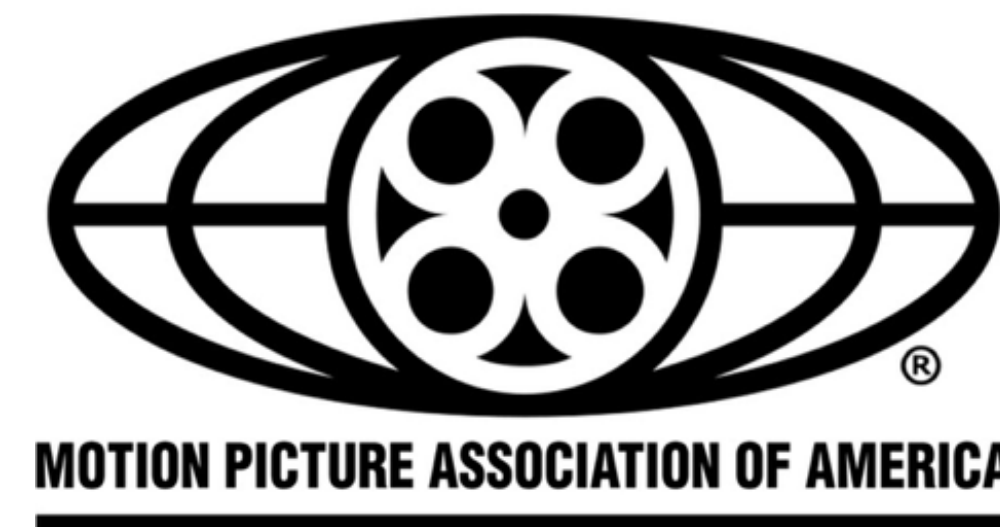
Favorites

- 119 Home
- AirDrop
- andy
- Applications
- CustomerConfigurations
- DATA_Documents
- Desktop
- Developers_Sept_2017
- Development_Storage
- Documents
- Downloads
- iCloud Drive
- EditShare Pricing
- Financial
- IBC_2018
- Legal
- Manuals

NAB NY Benchmark_AWS

Compliance with Emerging Industry Standards

- ▶ Digital Production Partnership (DPP)
- ▶ Motion Picture Association of America (MPAA)
- ▶ European Broadcasting Union (EBU)
- ▶ Studios like Disney, Marvel
- ▶ Many media companies soon won't be buying from vendors who don't meet security requirements



Summary

- ▶ IT departments and content creators need to be sensitive to the challenges that each side has
- ▶ There are measures that can be taken that provide security and that don't make production impossible
 - Password management
 - Limit access to the content people need to see
 - Have auditing that can act as a deterrent to ensure that people who do bad things with content will get caught



Thank You



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