

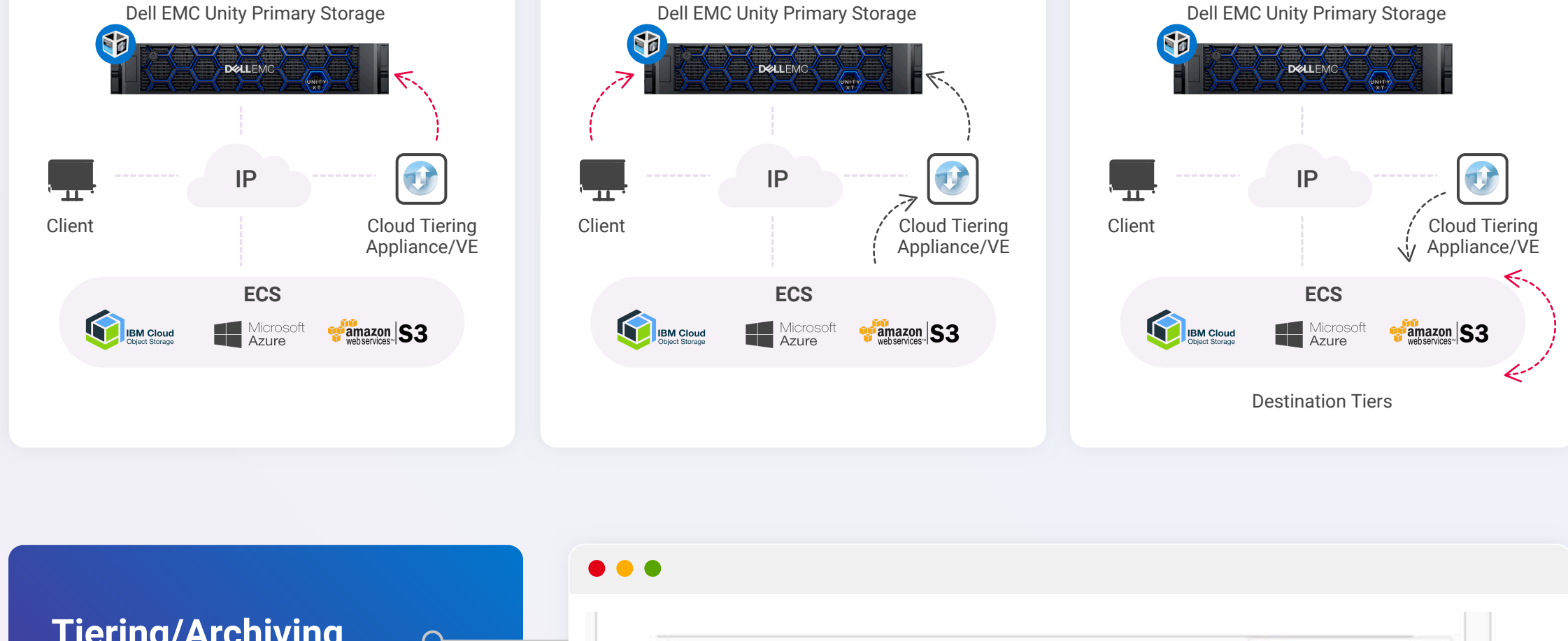
How it Works: Cloud Tiering Appliance

Recently, Dell EMC released an updated version of their Cloud Tiering Appliance, or CTA. Some of our readers may already be using this completely free virtual software appliance from Dell EMC, some may know about it but haven't utilized it, and some may ask "what's a CTA?" Allow us to explain.

The right-to-use license for CTA is included with every Dell EMC Unity XT array as part of its all-inclusive software model. The software comes packaged as a hardened SUSE appliance, in an .ova format which you can [download free](#), no additional licensing required, from here, Dell account required).

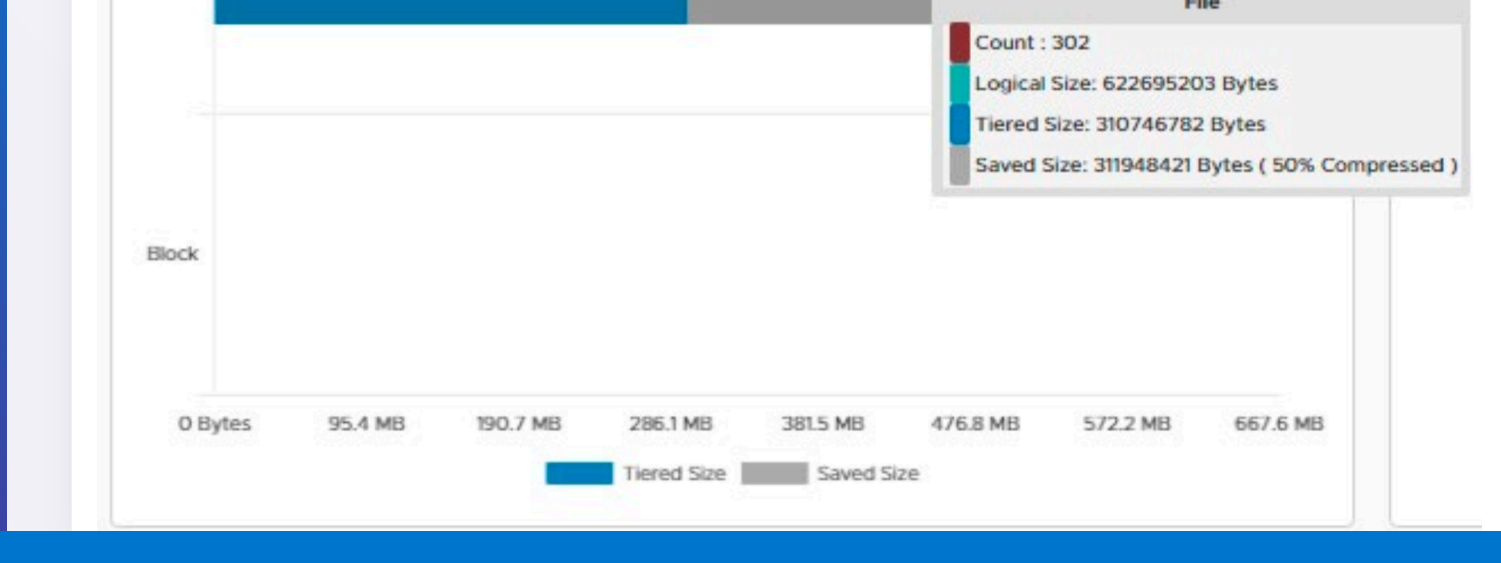
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Cloud Tiering Appliance Working Process



Tiering/Archiving

When moving data to the cloud, administrators can choose between fast or strong compression, and can monitor compression rates through the Tiered Usage Chart located on the Dashboard page of the CTA GUI.



What's New in CTA 13.0?

- UI Design:** We have to give credit to Dell EMC. Not only do they have a nice new, upgraded appliance, they have rolled out several new features to go with it. The new HTML 5 interface is crisp and responsive (goodbye Flash!), and **Dell EMC has done an excellent job with UI design, giving the CTA GUI an identical feel to a Unity XT, PowerStore or PowerMax GUI.** It's always easier to operate when the interfaces that engineers and administrators utilize feel seamless.
- SMB Support:** As far as this update goes, there is now added support for **SMB 3.0.2 as well as SMB 2.1, including SMB auto-negotiation, signing, Kerberos and NTLM authentication.** Additionally, performance improvements have been implemented for large files, with Dell EMC optimized R/W packet length to 512Kb.

Security is something to take seriously, and we're pleased that the Encryption option for the CTA requires an HA deployment.

Having a single point of failure key store in a security architecture that could potentially result in a loss of data if it failed, a serious risk, and Dell EMC makes sure you avoid it by requiring multiple CTAs. That's a good thing. They're keeping end users from doing bad things to themselves. We'd like to see more vendors adopt common-sense guard rails in their products.

Required

Primary CTA

- Hosts the CTA's GUI
- Manages all the tasks by hosting the database
- File recalls

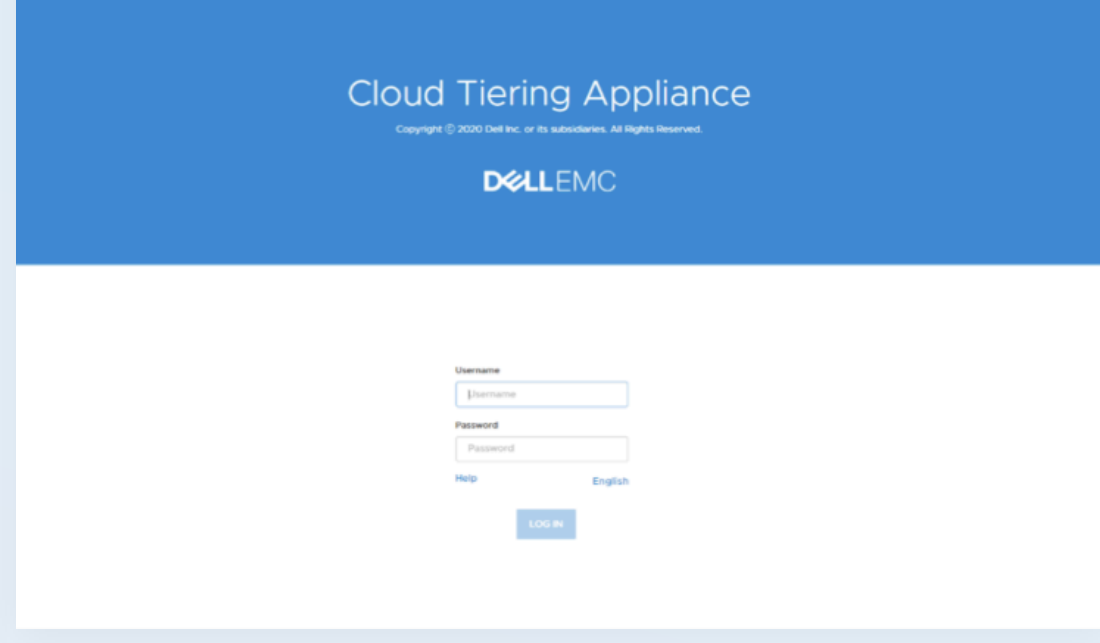
Optional

CTA-HA

- No GUI
- Used for file recalls when the Primary CTA is unavailable
- Used to load balancing the file recalls in the case of the primary CTA being overloaded
- Key store replication for encryption

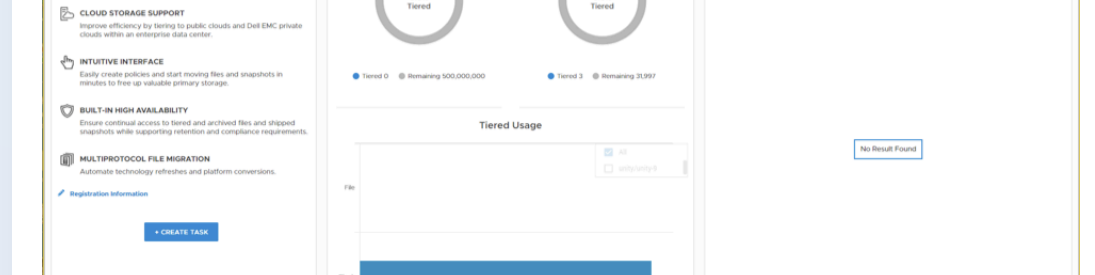
Cloud Tiering Appliance Setup

```
EMC Cloud Tiering Appliance Setup Tool
(1) Configure date and time (including time zone)
(2) Change CTA password
(3) Configure CTA networking
(4) Disable/Enable setup script at login
(5) Exit to command line interface [!]
(6) Configure System Security
(7) Configure Logging Options
(8) Configure Login Banner
(9) Configure CTA Mail Delivery Settings
(0) Exit EMC Cloud Tiering Appliance Setup Tool
Selection: _
```



Cloud Tiering Appliance Setup Tool
There is a small amount of guided CLI during the initial setup. However, it's not onerous, consisting mainly of time zone, networking, and setting the password. From deploying the .ova to logging into the GUI, this process took us approximately 5 minutes.

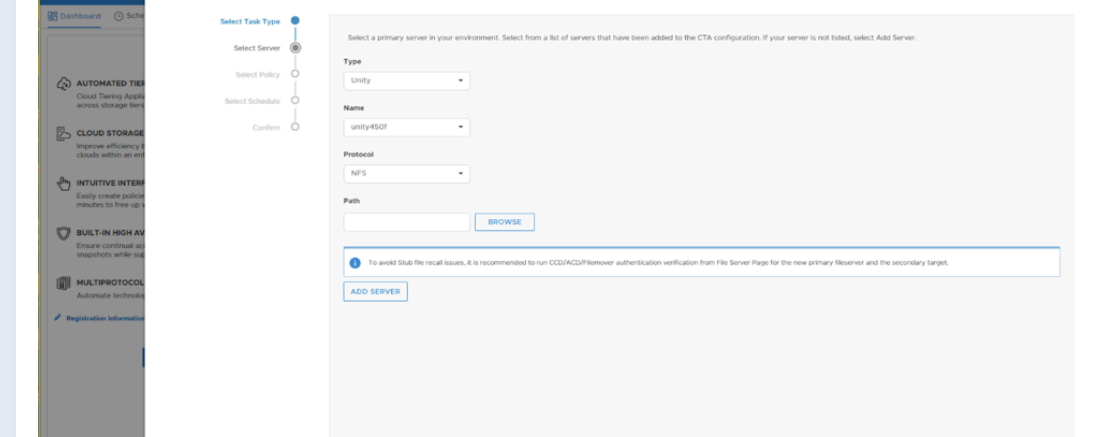
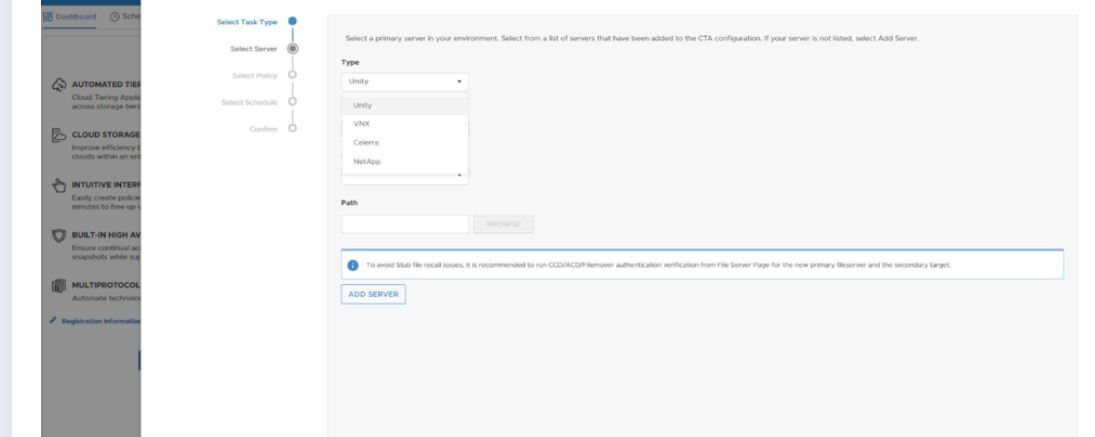
Log Into the GUI Interface
Once we've finished the CLI setup, it's time to log into the GUI interface. Again, we'd like to praise Dell EMC for the new clean UI design.



Dashboard
Once logged in, the default Dashboard page appears.

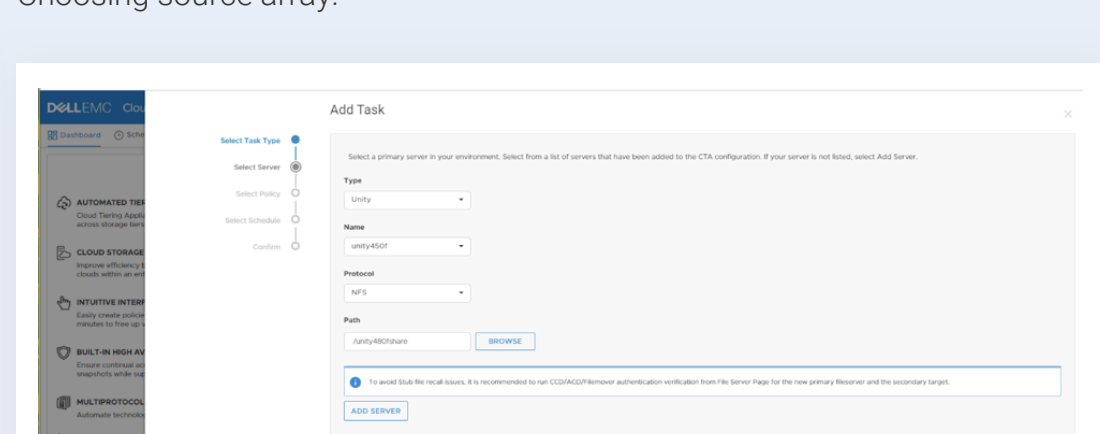
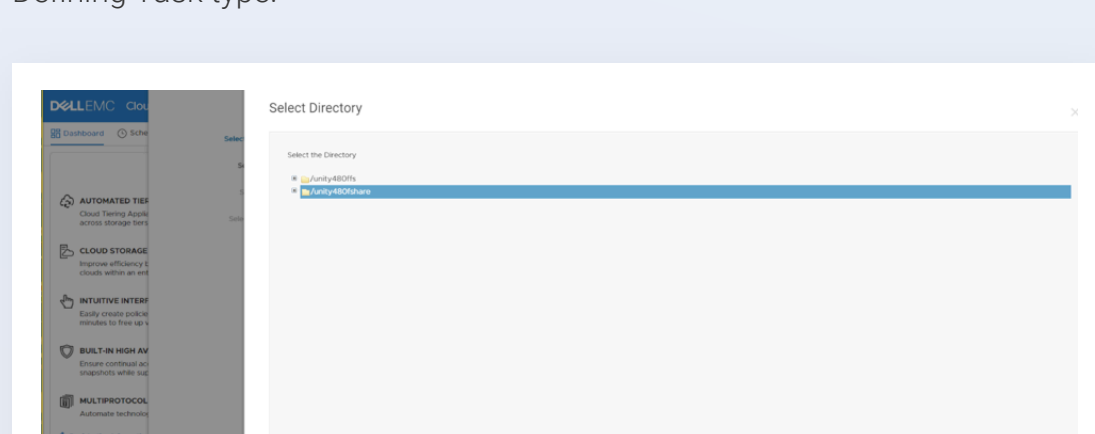
New Task Wizard
In the newest version, a quick walkthrough of the wizard appears as the following: select task type > select server > add ip > policy (or create policy) > schedule (or create schedule) > summary confirmation

The Dashboard shows total amount of Tiered Files and Snapshots that have been moved to cloud storage, any Alerts that have occurred, and the Task Wizard.



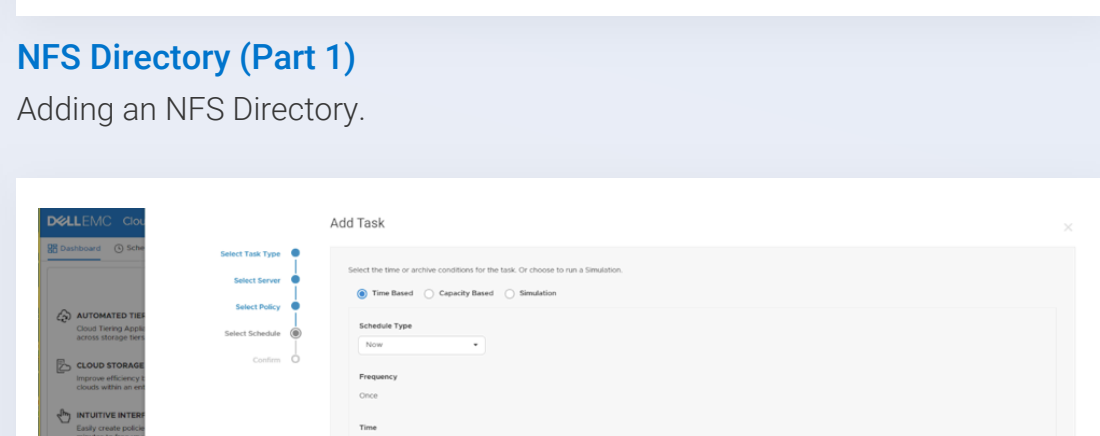
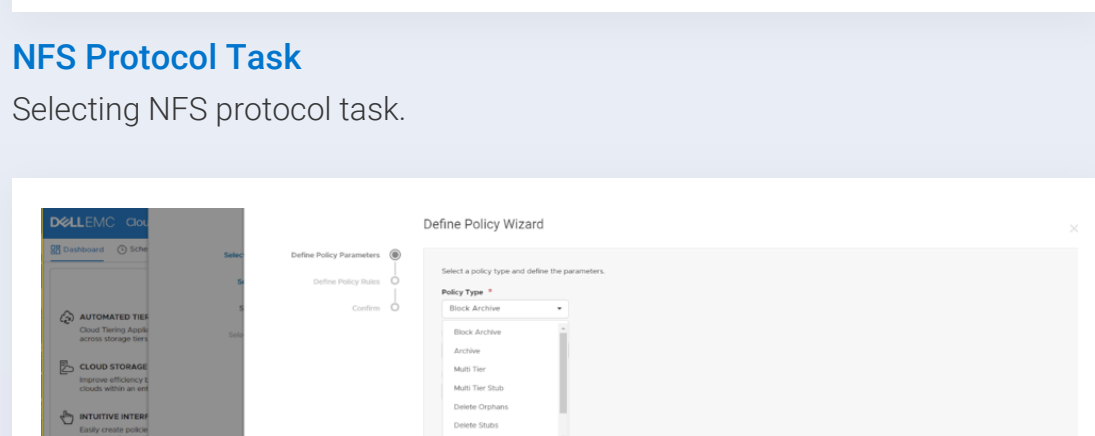
Task Type
Defining Task type.

Source Array
Choosing source array.



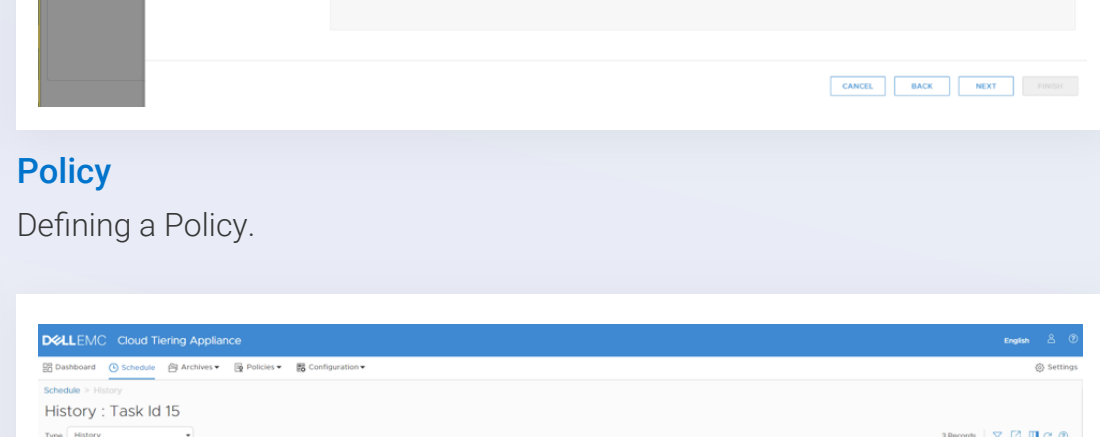
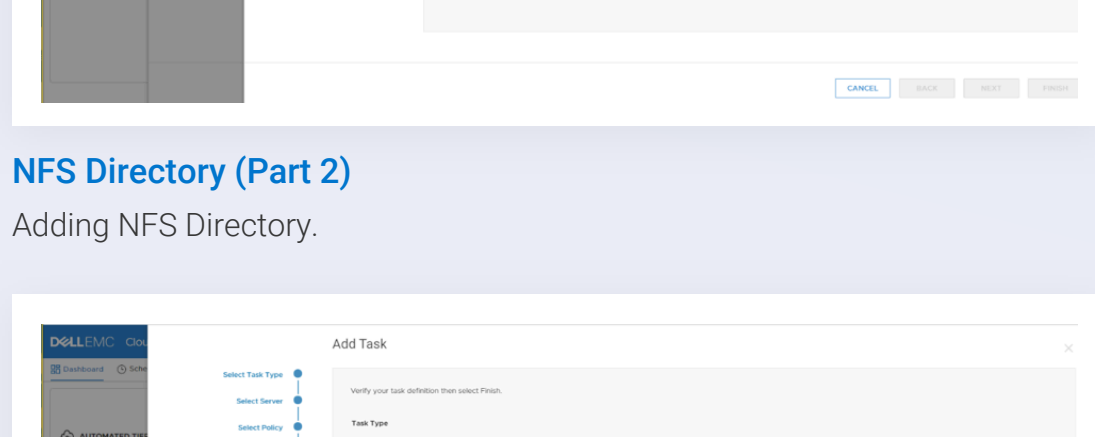
NFS Protocol Task
Selecting NFS protocol task.

NFS Directory (Part 1)
Adding an NFS Directory.



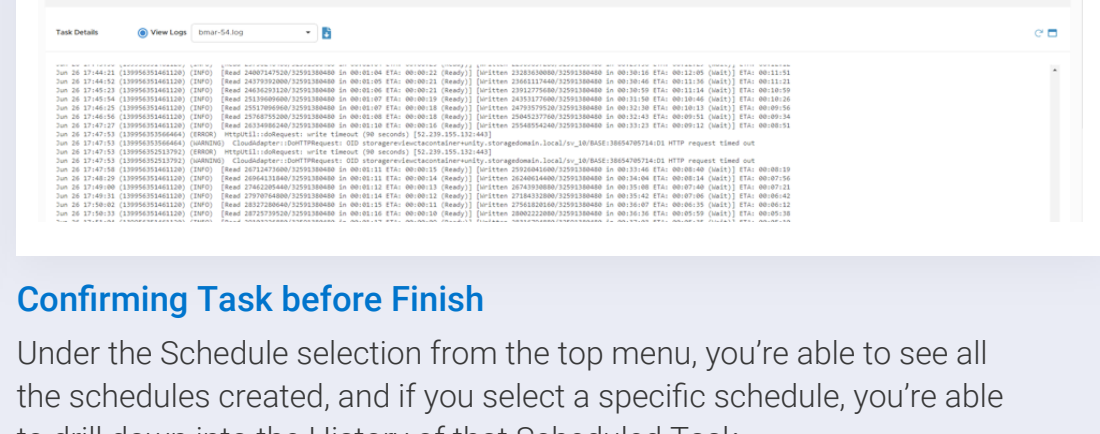
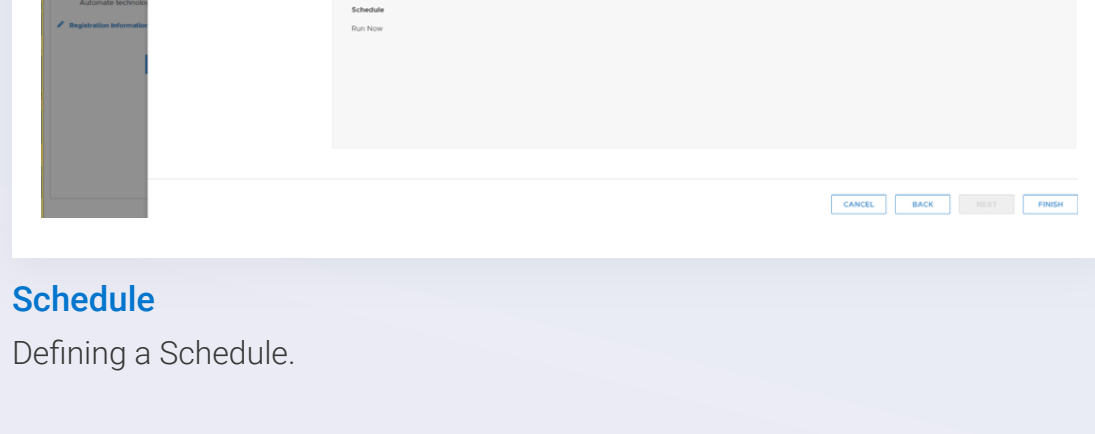
NFS Directory (Part 2)
Adding NFS Directory.

Policy
Defining a Policy.



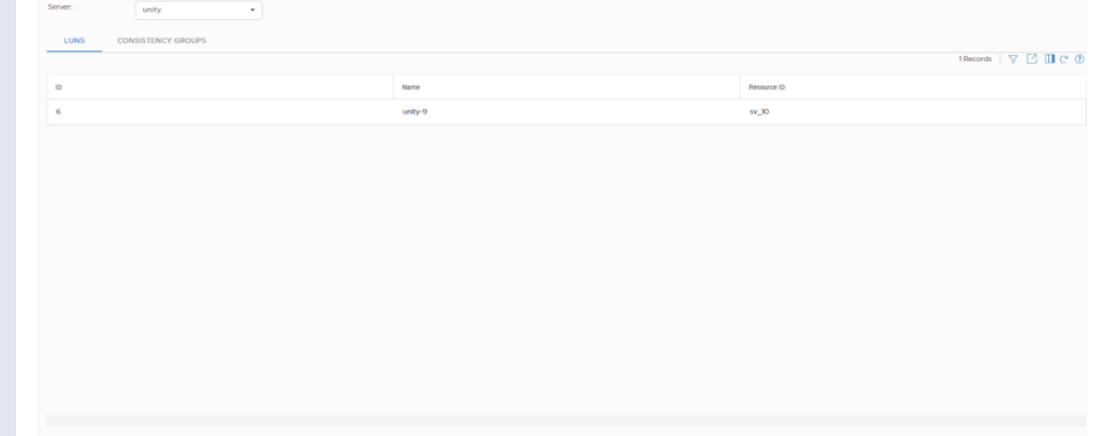
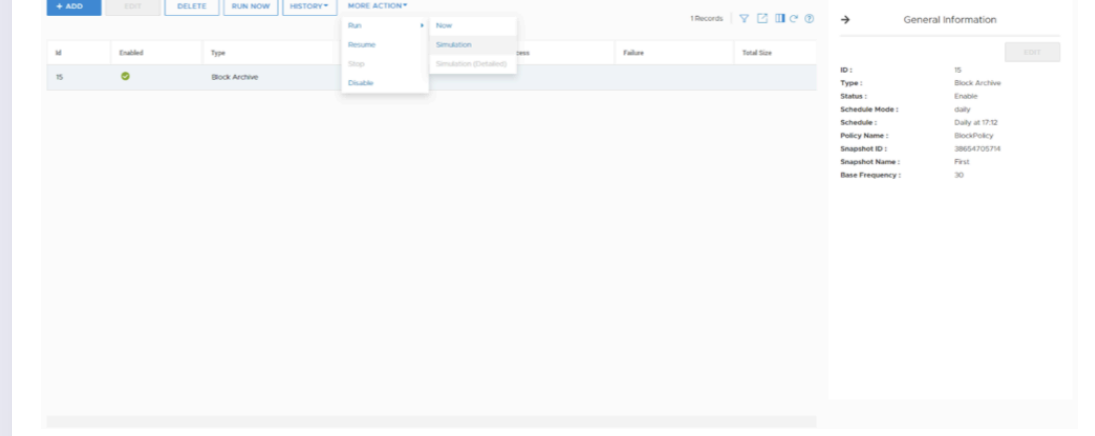
Schedule
Defining a Schedule.

Confirming Task before Finish
Under the Schedule selection from the top menu, you're able to see all the schedules created, and if you select a specific schedule, you're able to drill down into the History of that Scheduled Task.



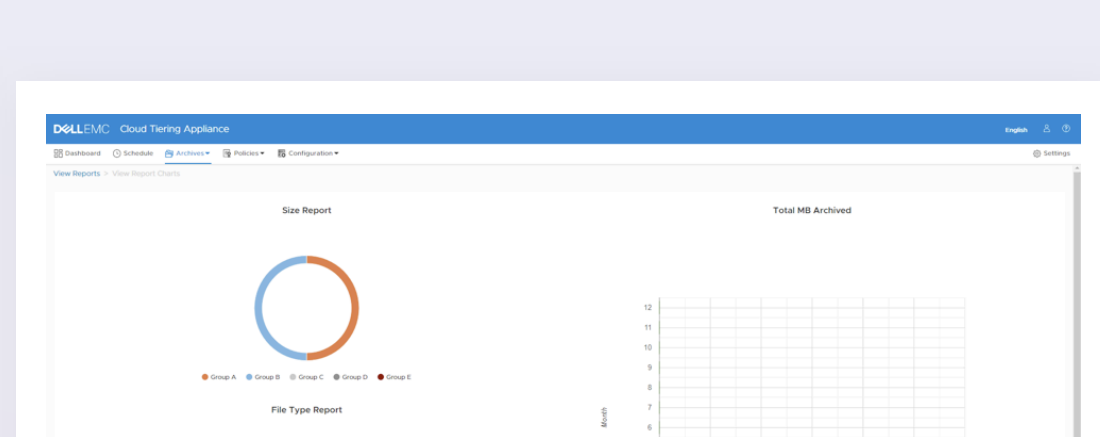
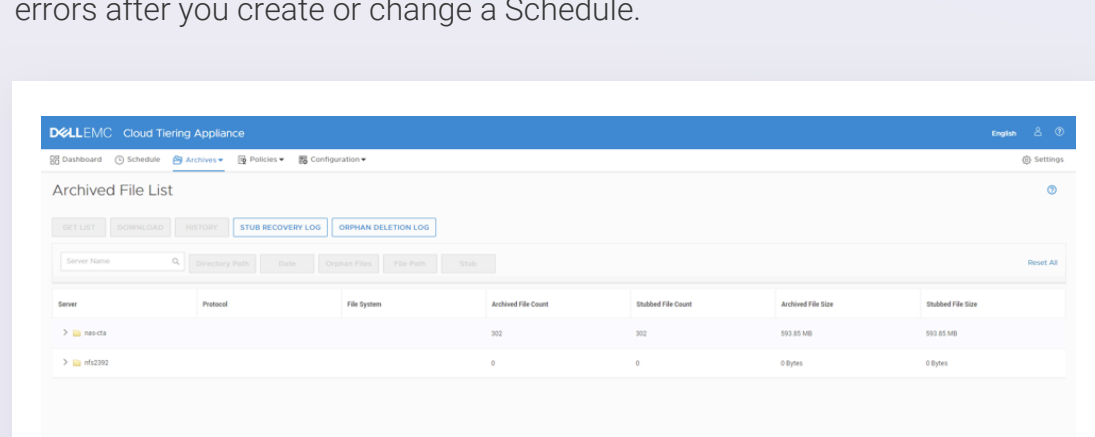
Run a Schedule as a Simulation
Another nice feature under Schedule, you can run a Schedule as a simulation, to ensure that a job will finish correctly and won't encounter errors after you create or change a Schedule.

Archives
Moving on to the Archives tab of the menu, this screen shows you which LUNs and Consistency Groups are setup for archiving.



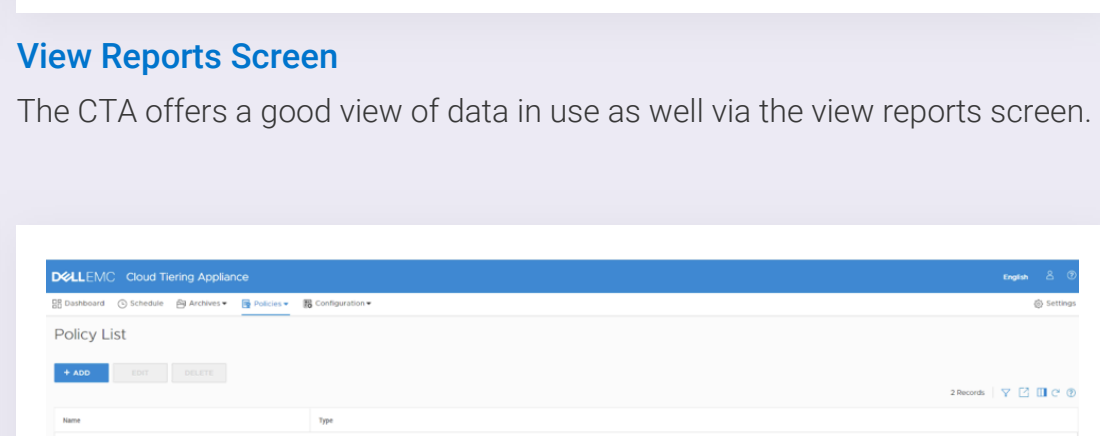
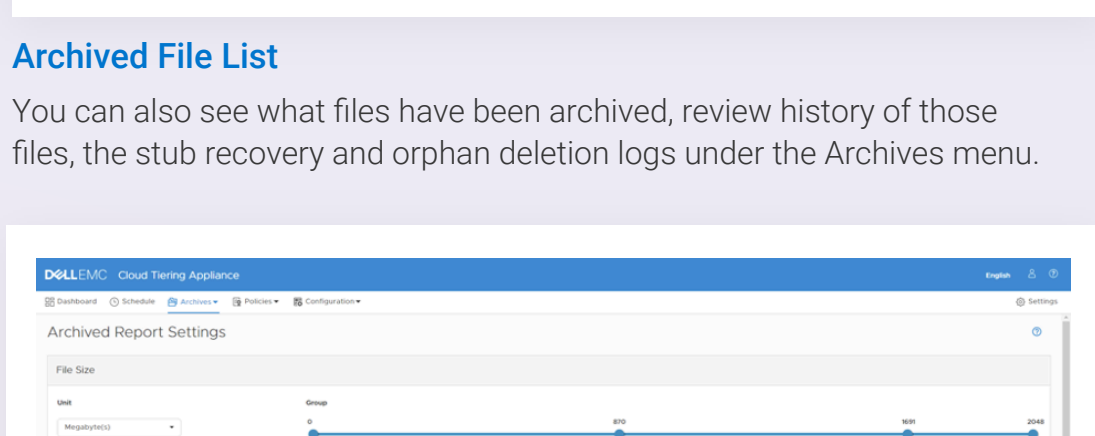
Archived File List
You can also see what files have been archived, review history of those files, the stub recovery and orphan deletion logs under the Archives menu.

View Reports Screen
The CTA offers a good view of data in use as well via the view reports screen.



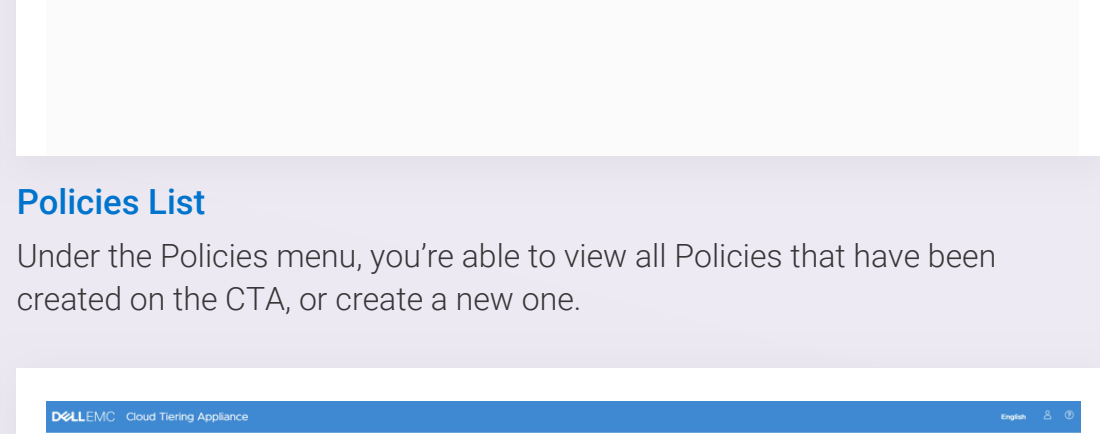
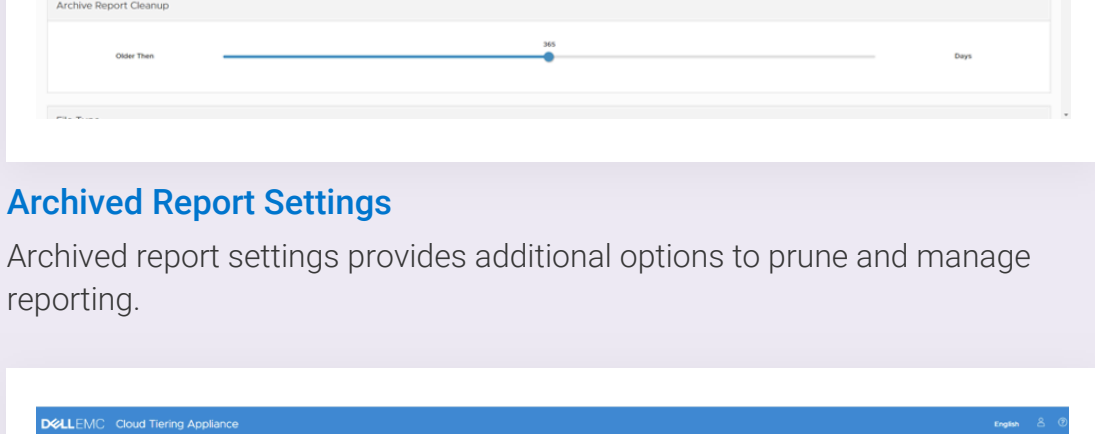
Archived Report Settings
Archived report settings provides additional options to prune and manage reporting.

Policies List
Under the Policies menu, you're able to view all Policies that have been created on the CTA, or create a new one.



Policy Screen (General Information)
Note that on the Policies screen, when you choose a policy, a General Information pane will appear, offering more information about that particular policy.

Encryption Setting
The final menu item available in the CTA GUI is the Configuration. It's under here that you'll find items such as encryption.



Additional Arrays, Cloud Storage and File Servers
Adding additional arrays, cloud storage, and file servers.

Common API Settings
As well as common API settings including File Mover and Unity Credentials.

Conclusion

To close, we at StorageReview are rather impressed with the Dell EMC Cloud Tiering Appliance overall and especially the newly released version 13.0, with much improved UI. It's bringing the benefit of tiering and cloud archiving to organizations as a zero-cost engine (reminder: it doesn't include your cloud storage or network costs) for existing and prospective Unity XT storage array customers. We highly expect to see an uptick in market adoption of the Unity XT Cloud Tiering Appliance moving forward.

