Synology servers as Hybrid Clouds for office and labs

Agenda

- What is a Synology server?
- What is a Hybrid cloud?
- How can the Synology servers be used as Hybrid clouds for our UCD offices and labs?
- Synology Hybrid cloud examples in our departments
- Backup process of Synology servers
- The cost for the Synology servers
- Questions?

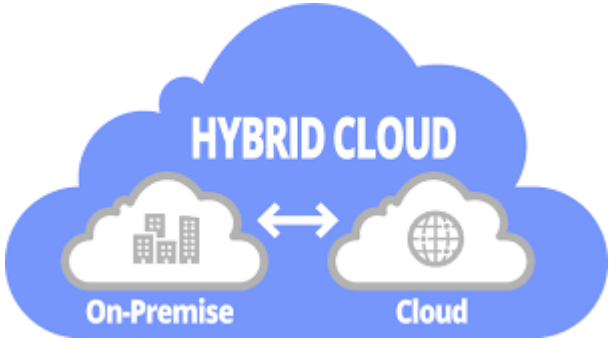
What is a Synology server?

- Synolgy Inc. was founded in 2000. Synology creates network-attached storage (NAS), IP surveillance solutions, and network equipment that transform the way users manage data and manage network in the cloud era
- Synology NAS servers are engineered for high-performance and data intensive tasks, designed to meet on-the-fly encryption and scalability demands.
- Synology has different types of NAS server but the Plus Series seem to fit our networks and storage needs

Synology®
NEW NAS Experience

What is a Hybrid cloud?

- Hybrid cloud architecture is the integration of on-premises resources with cloud resources
- For most organizations with on-premises technology investments, operating in a hybrid architecture is a necessary part of cloud adoption
- Hybrid clouds makes use of existing in-house infrastructure and a public cloud to provide the best of both worlds



How can the Synology servers be used as Hybrid clouds for our UCD offices and labs?

- File Sharing:
- The Synology servers provide fast and secure ways to share your office and lab data as local file servers
- With File Station, you can share files on your Synology NAS and customize access permissions for optimal security
- File Station makes it easy to share files across multiple platforms — whether it's Windows, Mac, and Linux computers

How can the Synology servers be used as Hybrid clouds for our UCD offices and labs?

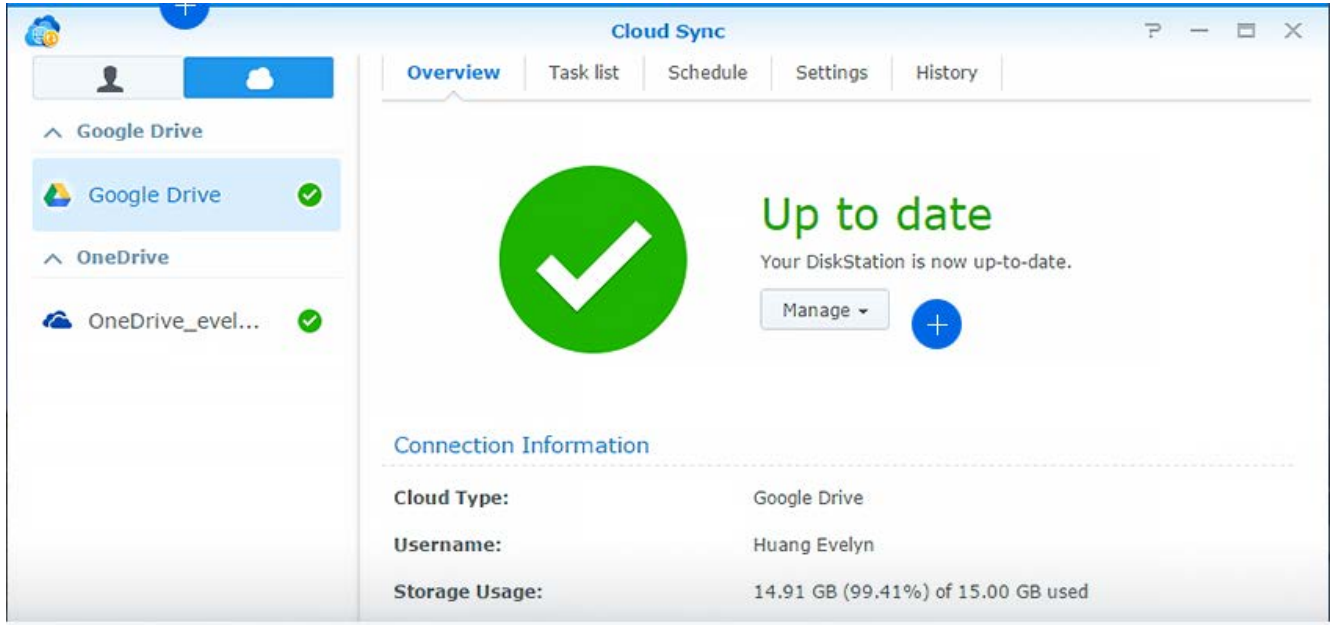
- The operating system, DSM, comes with comprehensive support of networking protocols — FTP, SMB2, SMB3 (encrypted), AFP, NFS, and WebDAV — and provides seamless file sharing across Windows, Mac, and Linux platforms.
- The Recycle Bin feature supported on AFP, SMB, File Station, and WebDAV, allows you to flexibly decide when to permanently remove the files, according to the different rules.

How can the Synology servers be used as Hybrid clouds for our UCD offices and labs?

- Cloud Sync integrates the advantages of public cloud and private cloud, enabling you to effortlessly connect your Synology NAS to public cloud services, such as our UCD-Box services where you can access your lab data securely from anywhere at anytime with any device
- With Cloud Sync, you can enhance the collaboration with your lab when accessing your lab data between your local NAS and other remote cloud services
- Select two-way synchronization to flexibly backup or sync your data between your NAS (file server) and UCD-Box services

How can the Synology servers be used as Hybrid clouds for our UCD offices and labs?

- Cloud Sync allows administrators to monitor file synchronizations to cloud storage services, ensuring resource usage adheres to departmental and security policies



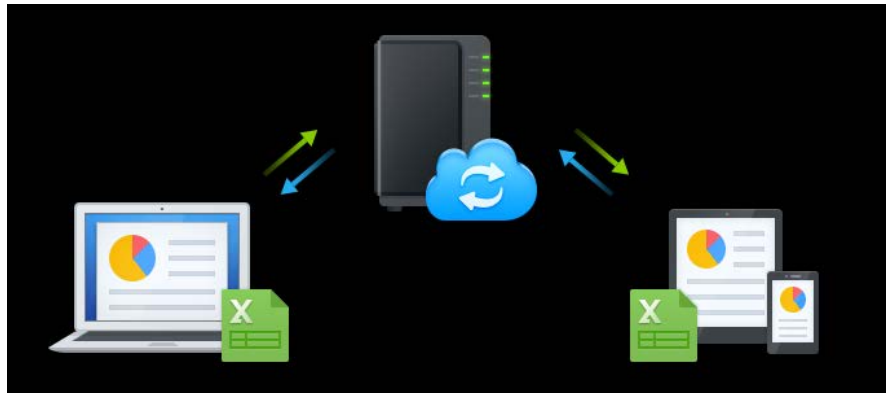
How can the Synology servers be used as Hybrid clouds for our UCD offices and labs?

- With File Station and Cloud Sync you can easily create a Hybrid cloud for your office and lab

Synology Hybrid cloud examples in our departments

- Entomology: The Hammock's lab – Using 2 Synology servers to share the data of the lab administration office, Dr. Hammock's office and lab members – File sharing locally and Cloud Sync to Box to access the files anywhere

- Plant Pathology: The Cook's lab – Running 2 Synology servers – will be used for file sharing and storage solution – Accessing them remotely using SSH from an iMac to work between the Synology server and the FARM – These new Systems are in their final testing process, before they are set in production



Backup process of Synology servers

- To back up a Synology server, Hyper Backup app is the best to use. With this applications, lost data can be retrieved from multiple recovery points and with its differential backup, it minimizes the storage consumption of the backup device
- Your backup destination can be a local shared folder, an external device, another Synology NAS or a public cloud service like Box, Google Drive, Amazon Drive, Dropbox, Microsoft Azure or the Synology C2, a cloud backup service dedicated to Synology users

The cost for the Synology servers

- **Case 1**:
- Synology DS916+ (8GB) NAS DiskStation (Diskless) for $599.00 **+** 4 Hard Drives: WD RE 3 TB Enterprise Hard Drive: 3.5 Inch, 7200 RPM, SATA III, 64 MB Cache for $199.85 each **+** 4-Year Protection for $46.41
- **Total cost for a 9 TB Synology sever**: $599.00 + (4 x $199.85) + $46.41 = **$1444.81**

The cost for the Synology servers

- **Case 2:**
- Synology DS1817+ (8GB) 8 - bay NAS Disk Station for $949.99 **+** 3 x Seagate 6TB IronWolf NAS SATA 6Gb/s NCQ 128MB Cache 3.5-Inch Internal Hard Drive (ST6000VN0041) at $199.99 each = $599.97 **+** 4-year Protection for $15.55
- **Total cost for a 12 TB Synology server**: $949.99 + $599.97 + $15.55 = **$1,565.51**
- The cost of a **new Dell PowerEdge R540** with a similar storage capacity as the Synology server is **about $5,600.00**

Questions?