Cisco Collaboration Project
TelePresence Technology Committee Minutes
Thursday, March 24, 2016

2016 Committee Members: Tonnette Graham, Elise Durham, Victor Ibeanusi, Andrew D Chin, Yves Anglade, Desmond Stephens, Robert Seniors, Errol Wilson, Jason Mobley, Edward Jones, Antonio Soares, Keith Gavin, Wayne Dunwoody, Douglas McDonald, Willie Stubbs, Cedric Spradley, Augustus Mitchell, Charles Collins, Michael Simmons.

Members Present: David Cantrell**,** Wayne Dunwoody, Jason Mobley, Keith Gavin, Cedric Spradley, Thomas Moore, Desmond Stephens, Michael Simmons.

Guests: Mike Roberts, TJ Lewis (Cisco Employees).

Meeting called to order at 11:00 a.m.

Reminders:

The next regularly scheduled meeting Thursday, May14th, 2016 at 11:00 am.

<u>FAMU/Cisco Collaboration Project</u>

<u>TelePresence</u>

- Michael Simmons started the meeting by requesting a vote on meeting minutes. Minutes were approved.

- Michael Simmons asked if a review of the new Video Infrastructure design was necessary. Everyone said no. He explained the important of high availably and redundancy throughout new system design. He also spoke of the Expressway Core being clustered with The Expressway Edge will be housed in two separate locations in the event of power outages or ac failure, etc.

- TJ, said that it should be possible. And he explained that the new design would include separate physical servers for two Virtual Machine (VM) Controllers and two VM Expressways on the inside and two VM Controllers and VM Expressways on the outside, so if you were to lose one server due to a power outage, the system would remain operational.

- Wayne asked will the new system failover to the secondary in an outage and how would the primary be restored. TJ said the primary would be restored automatically when the primary system come back up.

- Jason, ask if the Expressway Core clustered with The Expressway Edge would automatically perform replications and failover in the event of a down server like a true cluster. TJ said no.

- TJ, said that it would be necessary to make updates on the Virtual Machines. He also would investigate into this matter and see if there is a cluster management piece to automate the failover process.

- Michael Simmons, said with the WebEx Client the Jabber Guest may not be necessary. And the new jabber client can be easily downloaded and configured by remote users.

- Wayne was concerned about WebEx being able to auto detect the user's bandwidth and provide them the best possible picture and sound quality the same as the Jabber Movi Client. TJ said yes.

- TJ explained that the old jabber movi client is going away and the new jabber client you access presence, instant messaging (IM), voice, video, voice messaging, desktop sharing, and conferencing.

- TJ also explained by using the Jabber App on a smart phone a students with an Active Directory Accounts can access the Expressway and Communication Manager to register and connect directly to a bridge call or a student class.

- Jason asked if TMS will be able to schedule WebEx CMR classes.

- TJ said that the Professors will still need to manually launch WebEx CMR for a class.

- Jason, found were CMR Hyper can call into a WebEx CMR Room, but still requires the professor to hit a button to launch the room.

- TJ, said he was aware of CMR Hyper, but will still requires the professor to hit a button to launch the room.

- TJ said the advantage of using WebEx in the cloud, is that users can access it from anywhere in the world. A disadvantage would be that you would need to go into CMR to bring a video source into a room.

- Mike and Jason both agreed that WebEx and Telepresence provide two options depending on the confront level of the professor teaching a class. Some professor will prefer the Telepresence system that require them to only hit Xpanel icon and the classes' audio, video and recording starts automatically. While other Professors may prefer to record their classes on their own or ahead time in case they are out of town, to be shown in their absence.

Storage Archive Policy

- Michael Simmons spoke about the need to reclaim storage space and creating an Archive policy. He stated that the current NAS space is 8 TBs with only 3 TB Free.

- Wayne said the recording shouldn't be kept no longer than a year.

- The committee voted to keep class recordings until the end of the Summer Semester, except in special cases.

- Michael Simmons spoke of increasing the storage to an estimated 20 Terabytes to last the next five years. The Committee all agreed.

Storage Workflow Design

- TJ explained how VBrick uses our existing Unified Communications (UC) environments, including Cisco Telepresence end points and the Cisco Telepresence Content Server (TCS), for integrated scalable streaming for video webcasts and centralized video-on-demand delivery.

- TJ then explained the new video infrastructure design workflow will store videos, by first starting with the Conductor use to control bridge resources registered in communication manager that will calls the TelePresence Content Server (TCS). TCS will then connect to the Digital Media Engine (DME) and post the recordings into the Vbrick Cloud or store locally using Application Programming Interface (API) Workflow Process. This also includes WebEx recording that will be imported into Vbrick using an API Workflow Process. Cisco and Vbrick partner in building this API Workflow Process interface.

- TJ said when viewing a Live Video or Recorded Video Conductor will detect the source of a remote device and send a high or low resolution depending on the requesting device bandwidth capacity.

- TJ explained that Student will be able to connect directly to the DME and view all the recordings.

- TJ said DME doesn't care about what device the student is using to view the video or whether their device is a Mac, Windows, iPad, iPhone or Android phone. The video is viewed and not downloaded.

- Michael is proposing to allow TCS to continue to store locally on a new storage, but allow Vbrick Cloud to store upload user videos and WebEx videos.

- TJ process to store all video data in the Vbrick cloud for six months to one year and the download it local storage.

- Michael Simmons and Jason asked how VBrick and TCS works with Active Directory does.

- TJ said both Vbrick and CUCM can authenticate users as a single signal on via Active Directory user accounts for easy authorized access to live webcasts and video-on-demand via a web browser from any device.

- TJ said Blackboard has the ability to pull files from Vbrick and place them into Blackboard.

- Wayne asked how Vbrick works with Cavanas. TJ answered the same as Blackboard.

Cisco Hyperflex

- TJ demonstrated Cisco HyperFlex and explained how it combines computing, storages, and networking. Some of the features includes:

    o Built on a UCS Platform, with cloud speed
    o Storage or Compute can be added as needed.
    o Externally adaptable is scales as you grow.

- Mike Roberts, said the system comes ready to go for VM's and storage.
- Jason asked do you lose anything in the RAID. TJ said no.
- Michael Simmons asked does the drive sizes need to be the same size. TJ said Yes.
- Jason asked if VM machines can create like TCS, VCS and TMS on the Hyperflex.
- TJ said he will investigate and get back to us.
- Mike Robert said the system will automatically compress and cleanup files.

- TJ recommend the mid-range 240c Node, because they are larger servers with great capacity. The mid-range 240c M4 will handle our initial 20 Terabytes requirement and we shouldn't out grow this server for some time. Some features and specification of the Cisco HyperFlex HX240c Node:

    - 2 x Intel Xeon E5 2600 v3 processors on a Cisco UCS B200 servers
    - Memory and cache 256 Gb to 784 Gb 2133 MHz DIMMs
    - 1.6-Tb high-endurance (Intel 3610) cache SSDs
    - HDD 15 x 1.2 TB 10K RPM 12gbps SAS disks
    - Software VMware 5.5 or 6.0 u1 Cisco HyperFlex HX Data Platform Software, version 1.7
    - Cluster Minimum of 3 nodes Cisco UCS-Managed
    - Management Cisco UCS Manager and vCenter plugin

Meeting Adjourned at 1:35 p.m.