

NSF CC-NIE Working Group Meeting

Feb. 10, 2014

Agenda

Time: 3:30-4:30pm, Feb. 10, Monday

Location: UITS Library Subbasement Conference room

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1. Status of the monitoring infrastructure
2. Update from CEN
3. Status of Science-DMZ equipment at Storrs
4. Update from UCHC
5. Next step
6. Open discussion on other issues

Minutes

Present:

UConn & CEN: Scott, Bob, Bing, Jeff F., Richard (Jones), Ed Henry,

UCHC: Ion, Khamis, Jeff Dutton, David Christianson, and Steve DeWolf, Sophan Iv, Terry Wright, Leo Judge

1. Status of the monitoring infrastructure

Delay the purchase of perfSonar nodes with 10Gbps cards (no need until CEN's network is updated).

The two sets of monitoring nodes (one inside and the other outside UConn network, each set contains a pair of nodes, for throughput and delay monitoring, respectively) have been collecting data in the past several weeks. Initial analysis shows several interesting observations: the delay-monitoring node outside UConn network (firewall) observes much less delay variance; sometimes the traffic is very bursty (reaching very high aggregate bandwidth). Further and more automatic analysis is needed. Bing will ask one student to assist data analysis.

2. Update from CEN

The EKINOPS system has been ordered and is expected to be shipped middle of March.

3. Status of Science-DMZ equipment at Storrs

Interfaces to the core network are still not clear. Expect that the design/upgrade of the core network to be clearer in the next couple of weeks or month.

Bob and Jeff have looked into how to provide higher data rate to physics department. Since the building is relatively old (with cat-6 cabling, compared to cat-3 cabling to newer buildings, e.g., BECAT, that has 10Gbps connectivity), this requires installing some fibers to the building. Currently, Richard's lab is connected to the core network through a dedicated cable at the rate of 1Gbps, and the rest of the physics department has even lower bit rate (100Mbs?). The hope is to upgrade the bit rate to physics department to 10Gbps. Expected cost: 10-20K.

4. Update from UCHC

Because of other initiatives (including Bioscience Connecticut), the upgrade of UCHC network is well underway. A Juniper MX960 Router has already been ordered last December. A private cloud with exciting capabilities (656TB and expandable, fail-over capable, similar design as that used in Amazon) has been set up and will be the first set of resources to be added to the science DMZ. Additional authorization mechanisms are needed before this private cloud can be accessed by researchers in Storrs campus.

Next step is to order and place perfSonar nodes. Will start monitoring throughput and delay between Storrs and UCHC once the perfSonar nodes are up.

A project coming up soon is to transfer around 8TB of data from the University of Cambridge. Will use it as a test case to compare the performance before and after the CCNIE project.

5. Next step

Richard mentions that he will start the next data challenge on Feb. 26. It is expected to lead to 40TB of data. The previous challenge was in December 2012. It led to around 10TB of data (due to various performance bottlenecks, which have been discovered and improved upon).

Scott mentions CC*IE call from NSF, and a possibility of a proposal jointly with Yale. Campus CI Engineer might be an interesting direction to enable SDN capability. Ion is interested in looking into the area related to Identity and Access Management Integration.