Project: Data Center Aggregation

Q1. What do you mean by "data center aggregation"?

A1. The team is recommending that UW-Madison establish a campus data center service to create institutional capacity and perform a collection of services across campus that are now done by a multitude of data centers/server rooms on campus. This plan would eliminate duplicative infrastructures and substandard facilities and encourage best practices, including virtualization.

Q2. What do you mean by "virtualization"?

A2. Virtualization means that multiple servers are running on a single physical machine; this promotes efficiency, service enhancement, and sustainability.

Q3. Where does the 70% number come from when you indicate that this percentage of servers could be virtualized?

A3. The 60% current virtualization state is based upon two sources - the data center survey and a scan of the network with confirmation from the local network administrators. Conscious of the fact that not all servers are suitable for virtualization, but recognizing the existing virtualization efforts already in place, the team believes that a 12% increase in virtualized servers (70%+) over five years is a reasonable target.

Q4. We are a remote site. In order to locate our servers elsewhere, we would need reliable primary and backup links. Has that cost and exposure been considered in the Data Center Aggregation project?

A4. The data centers will be hosted on US locations (a major requirement); the service also will have redundancy of 3-5 server locations at any time - they also guarantee up time to 99.9999%.
The current state infrastructure limits the university's ability to apply consistent best practices and maximize efficiency. The AE team recommends a new model with a central data center organization to best position the university to do so. This organization will need to take many requirements into account including how remote connectivity with be handled.

Q5. Will the data center be hosted by non-UW out to 3rd party, or maintained by UW?

A5. That is a possibility, but that determination will be made by the central data center organization. We can expect that third party hosting, cloud solutions, and onsite facilities will all be a part our future data center picture.

There will not be a one-size-fits-all solution. Onsite, off-site, and cloud solutions should all be in our big data center portfolio.

Q6. Will SMTP servers be maintained on campus for notifications? Example, I send out notifications for servers down, rooms too hot, etc. Those messages MUST get through immediately; I can't send them to an off-campus provider.

A6. Performance and response times were a MAJOR requirement. We are confident the recommended solution will perform at (and really above) the incumbent systems - especially with up-time.

Q7. If a group has to move their servers to a centralized data center, who pays the hosting cost (some of the options outlined are cloud services and off-site private companies). If an on-campus group is deemed a central data center location, how do they recoup the additional costs of managing other groups' equipment (i.e. are they paid to host others' servers)?

A7. Going forward we want to see a lot more uniformity in the areas of data center costs to departments. The cost and associated funding model is something we are charging to the future team. We are hopeful that the costs presented to a department are minimal but that is really still to be determined.

We expect that the central data center organization will be bearing the costs of maintaining facilities deemed a central campus data center location, including things like cooling, power, security, etc.

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