IT 2011-12

Infrastructure Upgrade: LaneCC Tree Server Replacement Plan

Summary:

Providing server and network services to the college is a vital part of the operations of the college. This initiative serves to outline and document a server replacement plan that will support the entire college - both faculty/staff and students - in achieving our collegiate and individual student academic goals.

Description

We believe Lane Community College will be best served by an investment in virtualization of the existing server environment. What is virtualization? Virtualization is running multiple operating systems (virtual servers) on one physical file server as opposed to each individual operating system running on its own physical file server. There are many benefits to virtualization. 1)Run multiple virtual servers on a single box. The cost savings can be impressive. One $12,500 box can run the equivalent of eight $6,000 boxes. 2)Reduced number of physical boxes means reduced impact on the environment. A.manufacturing footprint of 1 vs. 8 physical servers. b. Increased energy efficiency. 80,942 Kwh (~$6,475(assuming .08 cost per kilowatt hour)) savings per year X the 5 year lifecycle of the servers! c. Less heat put out into the environment. Additional savings from less heat in the data center. 3) Business continuity is improved as various virtual servers can be moved from physical server to physical server for upkeep and disaster recovery of both the virtual and physical servers. 4)Administration is simplified by having “one stop” administration of the virtual servers for backup, clustering and new server creation. 5) It has an established track record here at Lane Community College. 6) The direct 5 year energy savings alone nearly cover the cost of the hardware in this request.

Questions and Answers

How is the initiative linked to the Unit Plans most recently submitted?

1. **How does it continue the achievement of those goals?**
2. **If this is a continuation of an initiative started last year, make sure that relationship is clear.**

How is this initiative linked to the efficiencies and productivities plans you had last year?

1. **How does it continue the achievement of these plans?**
2. **If this is a continuation of an efficiency or productivity plan started last year, make sure that relationship is clear.**

This initiative is linked to all technical unit plans (both last year's and this year's) as it provides the infrastructure necessary to support the technological needs of the college - providing support to ALL departments.

Describe the resources needed:

Server Replacement Plan

File Services

iFolder Servers (CH) $8,500.00

2 VM Server & Physical iFolder Web Server 1 VM Server iFolder DMZ Server 1 VM Server File Server (CH) $8,500.00

2 VM Server & Physical NetStorage Web Server 1 VM Server ESX Server (CH) $13,000.00

1 Physical Licensing for VMWare (LIC) $5,500.00

File Services Total (CH & LIC) $35,500.00

GroupWise Services

GroupWise Servers (CH) $36,000.00

3 Clustered Physical Web Access 1 VM Server Reload Server & Maint.(LIC) $23,500.00

1 Physical Server & Product Mobile Messaging Service TBD GroupWise Messenger 1 VM Server GroupWise Services Total (CH & LIC) $59,500.00

Storage Services

Storage Array (CH) $25,000.00

1 Sun Array - Shared by GW & File Services TouchStone consulting (INS) $9,800.00

Setup for File Services & GroupWise Computer Hardware (CH): $91,000.00

Licensing (LIC): $29,000.00

Installation (INS): $9,800.00

Grand Total: $129,800.00

What specific measurable program outcomes do you expect to achieve with this initiative? The outcomes should be specific enough to be measurable. Also, outline the method that will be used to determine the results.

IT would setup and operate multiple virtual servers on a single box. One $12,500 box can run the equivalent of eight $6,000 boxes - which equals a savings of $35,000.00. A reduced number of physical boxes means reduced impact on the environment and increased energy efficiency. 80,942 Kwh (~$6,475(assuming .08 cost per kilowatt hour)) savings per year X the 5 year lifecycle of the servers - which equals a savings of $32,375.00 in energy costs. Lowered administrative support costs due to “one stop” administration of the virtual servers for backup, clustering and new server creation. This can be measured through reviewing previous and future network services support records and purchase records.

Department Priority:

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Unit Resources:

Network staff time for tear-down and disposal of existing equipment, installation of new equipment, installation and configuration of servers and virtual servers, and testing time. Continued administrative support and upgrades for the life of the equipment.

Funding Request: Carl Perkins

Funding Request: Curriculum Development

Funding Request: Technology Fee