

Bus/CIT 2010-11

CIT Critical VMware Server Upgrade

Summary:

The IT Department has strongly emphasized that in order to be compatible with the new Data Center, two VMware computer nodes need to be purchased to replace the outdated CIT servers (computers) currently used for course curriculum delivery.

Description

Installation of two new VMware computer nodes to replace the old one-node setup is necessary because the current configuration is outdated, and the current virtual implementation does not support an optimized fail-over scheme in case of hardware failure.

Under IT guidelines for the new Data Center, we need at least two virtual nodes comprised of comparable hardware to provide appropriate redundancy. The existing node is housing two servers supporting multiple CIT courses. It is more cost effective to purchase two new computers to meet Data Center standards than to purchase one additional computer to supplement the existing older hardware that is due to be replaced anyway.

The current servers are used to support courses such as CIS 178, CS 133JS, CS 160, CS 195, CS 275, CS 295A, CS 295P, CS 296A and CS 296P. Numerous courses that will be developed in the near future, for programs such as HIT, will also require server support to meet course outcomes.

The CIT Department has been planning to convert to a virtualized configuration for computer imaging as soon as feasible.

This conversion meets the following efficiency and learning goals:

- Facilitates students meeting the learning outcome of knowing how to configure and install multiple operating systems much more efficiently than the current use of multiple removable hard drives.
- Eliminates the need for multiple hard drives used on bench lab machines.
- Eliminates the need for ongoing staff time spent configuring and overseeing the use of these hard drives.
- Eliminates the ongoing need to purchase hard drives and housing hardware.
- Increases the capacity for more student stations in the lab by eliminating the carts needed to store the hard drives.

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 consistent with the college's move to virtualization. It also continues the direction of the CIT Department over the past several years to house its department curriculum servers at IT. This is a more efficient use of hardware support funding because of an economy-of-scale argument.

Describe the resources needed:

The following rack mountable computers would provide two VMware nodes for the installation of at least two servers.

2 Rack Mountable Computers: (2 * \$8,000 = \$16,000)

2 VMware licenses: (2 * \$3,000 = \$6,000)

Request: Carl Perkins (CH) \$16,000

Request: Carl Perkins (CS) \$6,000

Request: Tech Fee (CH) \$16,000

Request: Tech Fee (CS) \$6,000

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.

A virtual configuration consistent with industry practice is important for support continuity, and for efficient and uninterrupted service. This initiative would result in more uptime and better throughput for CIT department students than the current configuration.

Department Priority:

01

Unit Resources:

The CIT department's lab staff and designated faculty will assist with the purchase and installation of the equipment/servers. Ongoing server management will be handled by CIT department staff.

Funding Request: Carl Perkins

Is this a Career & Technical Education program approved by the state and offered through Lane for credit?

Yes

If not a Career & Technical Education program, does your request provide considerable support for students enrolled in these programs?

No

Do you have an advisory committee that meets 2-3 times per year?

Yes

If request is for personnel, will funds be used to replace an existing position?

How will funding this initiative increase or sustain the academic achievement and technical skills attainment (GPA of 2.0 or better) of Career and Technical Education students?

The VMware servers will be used directly by students for educational purposes in professional technical degrees. Providing this equipment will allow students to learn contemporary practices in a hands-on manner to gain the technical skills needed for the workplace.

How will funding this initiative increase or sustain the number of CTE students that graduate or receive a one year certificate from Lane and help prepare the students for employment?

Utilizing a modern virtualized system will provide an efficient platform for instruction that is easily expandable to support more students in the future.

EQUIPMENT \$

COMPUTER HARDWARE \$

16000.00

COMPUTER SOFTWARE \$

6000.00

MATERIALS & SUPPLIES \$

CURRICULUM DEVELOPMENT (Hours)

PART-TIME FACULTY \$

TIMESHEET STAFF \$

TRAVEL \$

Can this initiative be partially funded?

No

EQUIPMENT \$

(E) Explanation of effect of partial funding:

COMPUTER HARDWARE \$

(CH) Explanation of effect of partial funding:

COMPUTER SOFTWARE \$

(CS) Explanation of effect of partial funding:

MATERIALS & SUPPLIES \$

(MS) Explanation of effect of partial funding:

CURRICULUM DEVELOPMENT (HOURS)

(CD) Explanation of effect of partial funding:

PART-TIME FACULTY \$

(PF) Explanation of effect of partial funding:

TIMESHEET STAFF \$

(TS) Explanation of effect of partial funding:

TRAVEL \$

(T) Explanation of effect of partial funding:

Funding Request: Curriculum Development

Funding Request: Technology Fee

1. Category of request

- **Maintain existing technology**
- **Increase student access to technology**
- **New technology**

Please type in the category of the request in the field below.

New Technology

2. Campus location

- **Main Campus**
- **Downtown Center**
- **Florence**
- **Cottage Grove**
- **CLC (list specific locations)**

Please type in the location of the request in the field below.

Main Campus

3. Names of the person(s) with more information (if needed):

Gary Bricher, Linda Loft, Pam Dotson, Kirsas Whedon, and Dale Duval

4a. Budget ORGN

641001

4b. Budget PROG

112000

5. How many students will benefit per year?

3500+

6. Describe the benefit?

This is a CRITICAL hardware upgrade that will be used directly by students for educational purposes in professional technical degree programs. Providing this equipment will allow students to learn contemporary practices in a hands-on manner to gain the technical skills needed for the workplace, which enhances their employability.

COMPUTER HARDWARE \$

16000.00

COMPUTER SOFTWARE \$

6000.00

STAFFING \$

INSTALLATION \$

LICENSING \$

Can this initiative be partially funded?

No

COMPUTER HARDWARE \$

(CH) Explanation of effect of partial funding:

COMPUTER SOFTWARE \$

(CS) Explanation of effect of partial funding:

STAFFING \$

(S) Explanation of effect of partial funding:

INSTALLATION \$

(I) Explanation of effect of partial funding:

LICENSING \$

(L) Explanation of effect of partial funding: