

Request for Technology Fee Funds: FY18

NOTE: A separate request should be made for each initiative.

I. Department Number/Department Name: 360 College of Computing

Title of Request (please be brief): Virtual Linux Desktops to Support Instruction

Amount of Request (formula from detailed budget below): \$72,451

Are there any installation/renovation costs associated with this request? Yes No

If "Yes" then indicate the source of approved funding:

(Note: Tech Fees are not allowed for installation/renovation)

Executive Summary of Request (100 words or less):

Linux continues to be a core workhorse of both the private and public sector, but student exposure is on the decline. We propose to create a Linux Virtual Desktop Infrastructure to provide additional resources to faculty and students.

Specific class and/or lab initiative(s) if applicable:

Contact person for this request (incl. phone #): Andrew Leonard (5-2805), Bill Leahy, Dan Forsyth

Indicate priority per department if applicable: Number of

Indicate priority per college or unit: Number 3 of 9

II. Impact on Students - Provide course title, course number, and anticipated enrollments:

Titles/Numbers of Course(s)	All Computer Science Undergrads and Graduates		
Anticipated Enrollments	Graduate:	705	<input checked="" type="radio"/> per sem <input type="radio"/> per year
	Undergraduate:	2,109	<input checked="" type="radio"/> per sem <input type="radio"/> per year
	Total:	2,814	(select one)

NOTE: Other impacts on students should be described in narrative.

III. Narrative - Provide narrative justification for your intended use of the technology fee funds. Include narrative on how the education or research of the students will be enhanced. Also include how the request aligns with the Strategic Plan of Georgia Tech. Continue in the block below if necessary.

According to Netcraft's January 2017 Web Server Survey, Linux servers currently account for more than 40% of web servers hosting the top million busiest sites on the web. Add these to the hundreds of thousands of Linux servers in use for other purposes across the world, and it becomes obvious that an education that includes exposure to this platform is incredibly important for our students. However, with the continued emphasis on student laptop ownership across campus, student exposure to Linux during their time at Georgia Tech is largely limited to a few junior and senior level operating systems classes. In these courses, each student is given the task of installing Linux using virtual machines (VMs) installed on student laptops via VMWare or VirtualBox. Unfortunately, this poses many hurdles for classwork - each configuration is slightly different based on the student laptop configuration and operating system. In an informal survey of the College of Computing faculty, this turns out to be one of the main reasons that Linux exposure is not included in more courses.

IV. Detailed Budget - Requested Items by Category List separately any equipment, software, and other allowable expenses (see Tech Fee Guidelines). There is a formula in the "total column" that multiplies the number of items times the unit price. You may enter a figure into the total column if the unit pricing is not applicable. If you need additional rows, contact the Budget Office to receive a modified form.

Supporting documentation is required - Include price justification in some form, such as quotations, published price lists, etc. as a separate PDF attachment. All supporting information should be in a single PDF.

	Proposed Number of Items	Estimated Price per Unit	Total (\$)
Dell PowerEdge R730	5	\$14,490	\$72,451
			\$0
			\$0
			\$0
Total (linked to the total amount of request line above)			\$72,451

Please return form via e-mail in Excel format to: techfees@business.gatech.edu. Supporting information only in a PDF file.

III. Continuation of narrative justification, if necessary

We propose to provide a Linux Virtual Desktop Infrastructure (VDI) primarily geared towards usage by undergraduate students in CS courses. The resource would be similar to the existing Windows Virtual Lab setup already present on campus and would allow students to access a uniform Linux desktop through a web browser. The Virtual Lab team at OIT has a functioning Linux VDI prototype using the Institute's existing Citrix infrastructure. Leveraging this prototype, we will be able to swiftly create a resource to bridge the gap in Linux exposure for our students and give professors that previously dealt with the issues of student VMs the ability to provide this valuable exposure without sacrificing class or recitation time dealing with each student's specific configuration. We expect that once the resource is available, additional classes and professors will also find that access to a uniform Linux desktop will be a valuable tool. Providing this new Linux VDI aligns with Georgia Tech's Strategic Plan to "leverage technology to enhance knowledge transfer and learning", providing access to software that can inspire our students to "creative and entrepreneurial thinking" while creating students ready for "global leadership".