

Request for Technology Fee Funds: FY19

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):

| |
|---|
| Expansion of Instructional Virtualization Cluster |
|---|

Amount of Request (formula from detailed budget below):

| |
|----------|
| \$27,791 |
|----------|

Type of Proposal: Atlanta or Dist Lrng/Non-Atl

| |
|---------|
| Atlanta |
|---------|

Was this project request funded in FY18?

| | |
|----|-------------|
| No | (Yes or No) |
|----|-------------|

Are there installation/renovation costs associated with this request?

| | |
|----|-------------|
| No | (Yes or 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):

To expand our current resource for graduate and high-level undergraduate students to be able to have individual, customized VMs to aid in their academic endeavors. We aim to expand the numbers of VMs that we can offer to TAs and students for their use in senior design.

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

| |
|--|
| Graduate students and upper class Undergraduates |
|--|

Contact person for this request (incl. phone #):

| |
|-----------------------|
| David Mercer (5-2518) |
|-----------------------|

Indicate priority per department if applicable:

| | | | |
|--------|--|----|--|
| Number | | of | |
|--------|--|----|--|

Indicate priority per college or unit:

| | | | |
|--------|---|----|---|
| Number | 6 | of | 7 |
|--------|---|----|---|

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

Titles/Numbers of Course(s)

| |
|---|
| see Section III (cont) for impacted courses |
|---|

Anticipated Enrollments

| | | | | |
|----------------|-------|------|--|-------------|
| Graduate: | 761 | (per | |) sem or yr |
| Undergraduate: | 1,734 | (per | |) sem or yr |
| Total: | 2,495 | | | |

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.

The College of Computing maintains a large virtualization cluster to better distribute resources in a scalable and redundant manner. Virtualization results in significant overall equipment savings by allowing better utilization of a pool of physical servers and minimizing unused computing cycles. Virtualized server environments are also easier for technologists to manage, resulting in higher server availability and flexibility to accommodate specialized faculty requests. With this increased flexibility and agility, we gain the ability to provide more resources to students in a collaborative manner. Virtualization plays to the heart of the the Institute's Strategic Plan objective to "establish best business and administrative practices", maximizing the work that both the equipment and those supporting it are able to do for the cost. Regularly adding new machines to the cluster is critical to ensure that we can adequately adjust to increased demands as well as more responsibly phase out older servers that are no longer under warranty allowing us to ensure top performance for these critical services.

(continued below)

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 (\$) |
|---|--------------------------|-----------------|
| Virtualization Servers | 1 | \$27,345 |
| S&H | 1 | \$246 |
| Cables | 1 | \$200 |
| | | \$0 |
| | | \$0 |
| Total (linked to the total amount of request line above) | | \$27,791 |

III. Continuation of narrative justification, if necessary

We are proposing an addition and expansion to the existing virtualization environment at the College of Computing to enable us to allocate more and larger virtual machines (VMs) to students and student groups for projects related to their academic advancement. Because of the emphasis these project classes have on "entrepreneurial thinking", most resource requests do not fit with the more generalized instructional resources that the College currently offers. These VMs will allow students to create environments for their academic efforts that can be tuned to their own processes, providing much better results than if they had needed to adjust their ideas to fit a more generalized solution. Our particular hope is that this resource will provide a better environment for our undergraduate capstone design courses to work in, allowing them to focus more on good projects than identifying the resources on which to build them.

* Impacted Courses -

CS3311, CS3312, CS4699, CS4742, CS4792, CS4911, CS4912, CS4980, all on-premise Graduate students