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):*

Managed Instructional OpenStack Cluster

Amount of Request *(formula from detailed budget below):* **$89,203**

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):

Self service VM clusters provide students with the ability to create VMs and see their interactions with eachother allowing for a richer learning environment than can be had from working within a single machine. We are looking to create a managed "private cloud" for CS students to be able to create these small clusters on the fly using Openstack.

Specific class and/or lab initiative(s) if applicable: Gradute 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 __4__ of __7__

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

Titles/Numbers of Course(s)

Anticipated Enrollments

Graduate:	761	*(per* yr *)* sem or yr
Undergraduate:	1,734	(per yr) 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.*

Using funds from FY18 the College of Computing has begun a pilot for OMS to have a private cloud cluster available for the creation of self service VMs. This proposal is looking to create a similar service for our on premise students to use using a managed version of OpenStack. This differs from our other on-prem virtualization resource in a few significant ways. The first primary difference is that rather than students requesting a resource that either a TA or member of TSO must create for them; using the Openstack cluster will allow for professors to request that their students are granted a select amount of resources available to them at the beginning of the semester. From that point students will be able to launch VMs in various configurations themselves without any need for a third party. The other major difference is that these VMs will not be persistent throughout or between semesters. In addition they will largely be contained in their own private environment and thus not accessible from the world.

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 ($)
Compute Nodes	3	$21,282	$63,847
Zerostack	24	$1,000	$24,000
Cables	1	$200	$200
S&H	1	$1,156	$1,156
			$0
Total *(linked to the total amount of request line above)*			**$89,203**

III. Continuation of narrative justification, if necessary

This private cloud will allow students the freedom of controlling their environment from beginning to end. Using a software suite built on Linux called OpenStack, students are able to request a virtual machine or set of machines to work on, customize it to their needs, and break it down when they are done. In this scenario, the quality of learning is enhanced because students will be making a cake from scratch, instead of from a box recipe, if you will.