Request for Technology Fee Funds: FY20
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)*:

Virtualization Cluster File Servers

Amount of Request *(formula from detailed budget below)*: **$37,335**

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

Dist Lrng/Non-Atl

Was this project request funded in FY19? **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):

The College of Computing, in a partnership with the College of Science and Aerospace Engineering, are working to implement a new software (mooseFS) to serve as the file system supporting the College's virtualization cluster.

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

Contact person for this request (incl. phone #): **David Mercer (5-2518)**

Responsible faculty for this request (incl. phone #) **David Mercer (5-2518)**

Indicate priority per department if applicable: Number _____ of _____

Indicate priority per college or unit: Number **5** of **5**

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

Titles/Numbers of Course(s) **OMSCS Enrollment**

Anticipated Enrollments	Graduate:	*8,656*	*(per* sem *)* sem or yr
	Undergraduate:		(per ___) sem or yr
	Total:	8,656	

The estimated percent use of the resources in the item by:

Students	60%
Faculty	30%
Other	10%
Total:	100%

Brief explanation of how estimate was achieved.

The virtualziation cluster is primarily used for academic courses, with some usage by faculty, and limited usage by staff helping setup resources.

NOTE: Other impacts on students should be described in narrative to include benefits to the students affected.

III. 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. Software or data license proposals should indicate how many years the item has been funded through student tech fees in narrative.*

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 ($)
Relion XE4112 w/ 8TB HDDs	2	$18,667	$37,335
			$0
			$0
			$0
			$0
Total *(linked to the total amount of request line above)*			**$37,335**

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

IV. **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. To include curricular, co-curricular, and extracurricular benefits expected to accrue to students through provision of this resource, including students outside the unit. Briefly state how information regarding similar technology use elsewhere on campus to benefit from lessons learned, to standardize, or differentiate, and to avoid duplication. Also include how the request aligns with the Strategic Plan of Georgia Tech.

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.

The College of Computing is partnering with the College of Sciences and Aerospace Engineering to purchase a license for mooseFS, a breakthrough concept in the Big Data storage industry. It allows users to combine data storage and data processing in a single unit using commodity hardware thereby providing an extremely high ROI. The technology included in this request will serve as the file storage servers running the mooseFS software, which has been paid for using existing College funds, and will serve as the file server back end behind the College's virtualization cluster.

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