Viterbi IT Colocation Service

Introduction

USC Viterbi School of Engineering has a limited amount of space available to host colocated servers at no charge for USC-tagged, project specific, rack-mountable server-class servers that are used by VSoE faculty, program or research unit (collectively referred to as VSoE Unit) in support of research funded through VSoE. These servers typically have space, power, or cooling requirements that are not compatible with placement in regular VSoE office space.

Viterbi IT Server Colocation Service provides an alternative to the fee-based ITS colocation services. ITS charges a fee for a half rack or a full rack unit. Any kind of servers may be placed in these ITS racks. VSoE Unit with high-availability requirements in terms of backup power, power conditioning, advanced fire suppression system, and redundant HVACs should consider fee-based ITS facilities in CAL building on 3434 Grand Avenue. Please refer to ITS website for details:

ITS Colocation Services

https://itservices.usc.edu/colo/

Service Description

- Viterbi IT will provide and assign rack space
- VSoE Unit shall be responsible for UPS backup power, all systems management, monitoring, and hardware and software maintenance of the servers in the Viterbi IT colocation space.
- VSoE Unit must pay for installation of Ethernet ports for each of the servers in Viterbi IT colocation space. This cost is assessed by USC ITS. Please refer to ITS Ethernet Port Installation web page for current pricing information.
- VSoE Unit must pay for installation of new power circuits if the existing power circuits are unavailable or inadequate.
- VSoE Unit must agree to controlled access for a designated number of individuals in the colocation space and provide updates at the end of each semester to Viterbi IT.
- VSoE Unit must designate a member of their unit as the focal point for contacting Viterbi IT Colocation Service. Viterbi IT will contact the focal point in the event of planned or unplanned outages affecting the co-located servers.
- Viterbi IT will provide minimal hardware intervention inside business hours; limited only to reading visible hardware indicators and attempting one power cycle of the server.

Because of the space and architecture of Viterbi IT colocation space, servers to be colocated must meet strict conditions.

- Servers placed in colocation space should be accessed remotely by users - Colocation space is not suitable for systems that require frequent access or are routinely used as a desktop system, or for tower-style desktop (available in EGG120 only) systems that are being used as a server.
- Servers must be rack-mountable in a standard 19" rack. Servers must capable of being remotely monitored and maintained; locally-attached keyboards and monitors cannot be accommodated.

VSoE Unit wishing to supply their own rack must discuss the requirements with Viterbi IT Colocation Service before obtaining the rack.

Server Maintenance

VSoE Unit shall be responsible for all system management, monitoring, and hardware and software maintenance of the servers in the colocation space. It is recommended that, at a minimum, the VSoE Unit ensures that servers intended for colocation come equipped with appropriate rack-mount rails and hardware, have appropriate firewall settings, current antivirus protection with automatic updates, current operating system and applications with automatic updates, strong administrator passwords, and a method of regular backing up critical data. VSoE Unit that is unsure about the state of their servers may request assistance through colo-mgmt@vsoe.usc.edu prior to deployment into the colocation space.

Backup device, backup media, software and scheduling, when needed, are the responsibility of the VSoE Unit. It is highly recommended to purchase extended maintenance warranties to cover server hardware issues over the life of a project.

At least one member of the VSoE Unit should be designated as the focal point for contacting Viterbi IT Colocation Service. The focal point will be responsible for communication and coordination within their unit, including ensuring their server is up to date with software revisions, security patches, antivirus and firewall settings, coordinating maintenance, performing backups, etc., for their server.

If there are multiple designees, colo-mgmt@vsoe.usc.edu may email any one of them, and that designee will then be expected to communicate with the other members of the VSoE Unit.

The focal point should promptly report via e-mail to colo-mgmt@vsoe.usc.edu any problems either in the room such as abnormally high ambient temperature, water leaks, etc., or problems in their rack, such as malfunctioning power strips.

The focal point must not make any changes to the colocation facility room. This includes, but is not limited to, air conditioning, electrical systems, network and server racks. Any needed changes can be requested via e-mail to colo-mgmt@vsoe.usc.edu.

In addition, the focal point should take care not to touch or interfere with other equipment located in the colocation space, including equipment that may be sharing rack space with their project's server. Equipment changes in assigned space must be coordinated in advance with Viterbi IT, so that weight, power, and air conditioning needs can be evaluated relative to overall capacity of the facility.

About the VSoE Colocation Facilities

There are two VSoE server colocation facilities on UPC that are available at no charge for VSoE Unit to house research servers funded through VSoE.

The facilities are connected to the USC ITS backbone network via two separate 10-Gigabit trunks for high availability. VSoE Unit is provided rack space with one (1) 20-amp circuit with eight (8) 110-volt outlets and hardware installation assistance.

FACILITY FEATURES	PHE 108C	EGG 120
Location	Main UPC	North UPC along Adams Blvd, between Figueroa and Hoover
Network	USC network (1Gbps)	USC network (1Gbps)
HVAC	Y	Y
UPS	N	Y
Power Generator Backup	N	Y
Power **If existing power circuits are unavailable, new circuits must be installed at VSoE Unit's expense.**	110V, 20A (NEMA 5-20R) 208V, 30A (NEMA L6-30R)	110, 20A (NEMA 5-20R) 208V, 30A (NEMA L6-30R)
Raised Flooring	Y	Y
Fire Suppression	N	Y – FM200
Water leak sensor	N	Y
Remote Hands Response during Business Hours (M-F 9am-5pm)	N	N
Security	Locked Premise/Card access	Locked Premise/Card access
Access	24 x 7 x 365	24 x 7 x 365

VSoE Unit that has research contracts with high availability requirements for their servers should contact colo-mgmt@vsoe.usc.edu to see how those requirements can be met. Research servers are allocated space in a rack that may be shared with other VSoE research servers. Racks are designed for rack-mount servers and are not suited for placement of tower-style systems. Servers are installed in the rack in a uniform way to ensure cool air intake faces the front of the room (toward the entrance), and warm air exhaust faces the rear of the room.

Other Considerations:

Assigned colocation space is not transferable to other VSoE Unit; each VSoE Unit must make their own application for colocation space and each individual must apply for access. All space should be considered assigned. VSoE Unit may not bring in additional systems or use what appears to be empty space without first submitting a request and receiving a colocation space assignment.

When the need for colocation space ends, colo-mgmt@vsoe.usc.edu must be notified promptly and arrangements made for the equipment to be removed so that other VSoE units waiting for space can be accommodated. **When individuals with colocation access leave USC or VSoE or their responsibilities no longer include management of their colocated server, they must inform colo-mgmt@vsoe.usc.edu and assign another to manage the server, or remove the server if there is no new focal point.**

Initial requests for access to VSoE colocation facilities should be made by completing the following application and should be limited to those member(s) of the VSoE Unit directly responsible for the maintenance of the server. When approved, the requester's USCard will be coded for access. Visitors should not be brought into the colocation facilities without prior coordination with the responsible Project Leader and VIT Colocation Services. Subsequent requests for additional access can be sent to colo-mgmt@vsoe.usc.edu.

USC VITERBI SCHOOL OF ENGINEERING

Viterbi IT Server Colocation Service
APPLICATION FORM

To have your system considered for placement in the VSoE Colocation facility, please complete this application as well as you can and forward the completed application to your Project Leader for review, approval, and forwarding via email to colo-mgmt@vsoe.usc.edu. Viterbi IT representative will contact you in within 2 business days. If your request is accepted, there is no charge for Viterbi IT Colocation Service. However, you must pay for installation of Ethernet ports for connection to the USC network and power circuits.

Project Leader Information

A person who has the ultimate responsibility for the server to be colocated. Project leader may designate one or more project focal points to liaise with VIT and to perform server maintenance.

Full Name:					
Department:					
Phone:		**Email:**		**Text Notification:***	

*Text Notification (opt-in): (Please provide cell number and provider (i.e xxx-xxx-xxxx / verizon). Text messages will be sent in addition to email notifications for emergency HVAC / power issues.

Project Focal Point(s) Information

The project focal point is responsible for communication and coordination within their project group, including ensuring the project's system is up to date with software revisions, security patches, antivirus and firewall settings, coordinating maintenance, performing backups, etc. The project focal point is also responsible to communicate with VIT.

	Full Name	Email	Text Notification*
Primary Focal Point			
Focal Point #2			
Focal Point #3			

*Text Notification (Please provide cell number and provider (i.e xxx-xxx-xxxx / verizon). Text messages will be sent in addition to email notifications for emergency HVAC / power issues.

Access Requirements

Are there any special requirements such as ITAR/EC or other limitations for physical or network access to this system?	☐ **No** *(default)* ☐ **Yes**
Will anyone else require?	☐ **No** *(default)* ☐ **Yes. Brief explanation below:** _____
What kind of physical access is required?	☐ **Business hours: M-F 8:30am – 5:00pm** *(default)* ☐ **Extended 7x24 access with justification below:** _____

Research Information	
What is the name of the contract or funded research project that this server is supporting?	
When does the contract or funded research project end?	

System Description	
Please provide a description of the server and any peripherals to be placed with it. Include manufacturer, model, USC property tag#, size in U, power requirements in watts, estimated thermal/cooling load in BTUs, for all CPU boxes and peripherals including RAID, tape, and other equipment.	
What kind of network access is needed?	**USC network** ☐ **1000Mbps RJ45**

Acceptance of Terms

By submitting this application, the Project Leader and designated focal point(s) agree that:

a) they are responsible for UPS backup power, all systems management, monitoring, and hardware and software maintenance of the servers in the VIT colocation space
b) they agree to notify us of any changes in equipment (i.e. adding or removing any equipment)
c) they understand that all Viterbi IT resources are managed and assigned and agree not to use any unassigned resources.
d) they understand non-working equipment or equipment no longer in use should be removed to free the VIT colocation facility resources.
e) they agree that any cost associated with removing abandoned equipment or equipment not removed by agreed specific date from facility will be charged to the department.
f) they have read all information associated with VIT Colocation Services, and they understand, agree with, and will comply with all terms and requirements listed, as well as any terms or directions that may be subsequently issued.

Project Leader Signature:	
Project Leader Name:	
Date:	

For Viterbi IT Use Only			
Date Received:		Received by:	
Note:			