

21st Century Campus Network Responsibility Matrix

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Definitions:

- **DoIT Standards** – This column details the minimal configuration, which DoIT has defined in order to provide a campus-wide standard level of service. Departments may request services, which exceeds these standards. DoIT will develop a review process to address these requests.
- **Central Management** – This column details the responsibilities for managing the network components when a department/division elects to have DoIT provide support to the faceplate. There is no Authorized Agent to provide onsite support.
- **Collaborative Management** – This column details the responsibilities for managing the network components when a department/division elects to have management where a local Authorized Agent within the department may manage specific network functions. Although the Authorized Agent may perform specific network functions, DoIT will provide support and backup.
- **Delegated Management** – This column details the responsibilities for exceptional instances where DoIT has delegated responsibilities for managing portions of the building network to the site’s Authorized Agent. Management is delegated only with a request from the Dean or division head and approval from the campus IT Executive Committee.
- **Authorized Agent** – Department personal who are certified by DoIT to perform data network operations in telecommunication rooms.
- Information in cells extending across more than one column apply to all the columns which the cell extends under.

Components/Activity		DoIT Standards	Central Management	Collaborative Management	Delegated Management
Workstation & Horizontal Network					
1.1	Network Interface Card (NIC)	Primary: 10/100 Mbps NIC Secondary: 10/100/1000 Mbps NIC	Departments are responsible for providing, installing and servicing the user’s NIC, unless the department has contracted DoIT to provide desktop services.		
1.2	NIC to Wall-plate patch cable	Primary: Category 5e cable, any color Secondary: Category 6 cable, any color	Department’s are responsible for providing, installing and servicing any patch cable, mini-switch or hub used in an office, lab or server space outside the building’s telecommunication rooms, unless the department has contracted DoIT to provide desktop services.		
1.3	Wall plate	Primary: Category 5e compatible RJ-45 jacks Alternate: Category 6 compatible RJ-45 jacks	DoIT is responsible for providing, installing and servicing the communications wall plate for initial installations and additional requirements. Departments are responsible for cost of relocating wall plates resulting from remodeling projects.		
1.4	Horizontal wiring - copper	Primary: Category 5e wire Alternate: Category 6 wire	DoIT is responsible for providing, installing and servicing the horizontal copper wiring. DoIT will provide and install additional horizontal wires as required by departments. Upgrades will be coordinated with building remodeling projects were appropriate. FP&M or outside contractors will perform the installations.		
1.5	Horizontal wiring - fiber	Primary: Multi-mode fiber	DoIT is responsible for providing, installing and servicing the horizontal fiber cabling. DoIT will coordinate installation of additional horizontal cables as required by departments. Upgrades will be coordinated with building remodeling projects were appropriate. FP&M or outside contractors will perform the installations.		

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Building Network					
2.1	Main Distribution Facility (MDF) and Intermediate Distribution Facility (IDF) Telecommunication Rooms	See " Telecommunication Room Design Standards "	The departments along with Space Management are responsible for providing adequate space for telecommunication rooms. DoIT is responsible for configuring the space and installing equipment. DoIT will coordinate upgrades with building remodeling projects where appropriate. DoIT will maintain physical access to the MDF and IDF rooms.	The departments along with Space Management are responsible for providing adequate space for telecommunication rooms. DoIT is responsible for configuring the space and installing equipment. DoIT will coordinate upgrades with building remodeling projects where appropriate. DoIT will maintain physical access to the MDF and IDF rooms. Authorized Agents will have access to the rooms.	
2.2	Copper wire patch panels	Primary: Category 5e patch panels Alternate: Category 6 patch panels	DoIT is responsible for providing, installing and servicing copper wire patch panels, including connecting horizontal wires to the ports. DoIT will coordinate the installation of additional patch panels as required by departments. Upgrades will be coordinated with building remodeling projects where appropriate. FP&M or outside contractors will perform the installations.		
2.3	Fiber cable patch panels	Primary: Multi-mode fiber	DoIT is responsible for providing, installing and servicing fiber cable patch panels, including connecting horizontal cables to the ports. DoIT will coordinate the installation of additional patch panels as required by departments. Upgrades will be coordinated with building remodeling projects where appropriate. FP&M or outside contractors will perform the installations.		
2.4	Patch panel to network access equipment patch cables	Primary: Category 5e cabling Alternate: Category 6 cabling	DoIT is responsible for providing, installing and servicing telecommunication room patch cables and fiber jumpers. DoIT will stock additional cables as required.	DoIT is responsible for providing, installing and servicing telecommunication room patch cables and fiber jumpers. The Authorized Agent may install Cat 5e or 6 patch cables as part of an upgrade project or to add additional capacity. The Authorized Agent must open a service request for Cat 3 cable connections. DoIT will stock additional cables on site.	DoIT is responsible for providing patch cables to the department's Authorized Agent. The Authorized Agent will install and service these patch cables.

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2.5	Network access equipment	See “ 21st Century Network Standard: Network Electronics ”. This document defines the standard network capacity as 100 Mbps between the workstations and network access equipment and 1Gbps between the network access equipment and building concentration equipment.	DoIT is responsible for providing, installing and servicing network access equipment. DoIT will maintain ownership of the equipment and maintain appropriate maintenance as required.	DoIT is responsible for providing, installing and servicing network access equipment. DoIT will configure and install the equipment with the assistance of the Authorized Agent. DoIT and the Authorized Agent will monitor capacity, and as required, DoIT will size, configure and install the additional equipment with assistance of the Authorized Agent. DoIT will maintain ownership of the equipment and maintain appropriate maintenance as required.	DoIT is responsible for providing the network access equipment. DoIT will design the network access equipment with the department’s Authorized Agent. The Authorized Agent is responsible for installing and configuring the equipment as well as monitoring capacity. If additional capacity is required, DoIT will size and provide additional equipment with assistance of the Authorized Agent. DoIT will maintain ownership of the equipment and maintain appropriate maintenance as required.
2.6	Network access equipment IOS	Latest DoIT approved Cisco IOS with appropriate patches.	DoIT is responsible for providing, installing and servicing campus standard IOS version and patches. DoIT will perform installation through a centralized update method. Departments will be notified prior to activation of the IOS upgrade. DoIT will maintain current backup copies of access equipment configurations.		DoIT is responsible for defining campus standard IOS version and patches. Authorized Agents are responsible for obtaining, installing and servicing the standard IOS. DoIT will notify the Authorized Agent when IOS upgrades are required and an upgrade compliance date. If the department wishes to use additional IOS features approved by DoIT, they are responsible for purchasing and installing the software.
2.7	Network access equipment spares	DoIT will maintain on campus, a sufficient quantity of each network access equipment models used in the network.	DoIT is responsible for maintaining spare equipment at a central location and replacing equipment as required. DoIT will load the most recent backup configuration. DoIT will maintain ownership of the equipment.	DoIT will maintain equipment at a central location for pickup and replacement by the Authorized Agent. DoIT will maintain ownership of the equipment.	

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2.8	Network access equipment to vertical fiber jumper cables	Dependent on the detail requirements of the building.	DoIT is responsible for providing, installing and maintaining these jumper cables for the network access equipment. DoIT will maintain ownership of these cables.		DoIT is responsible for providing and the departments are responsible for installing and maintaining these cables. DoIT will maintain ownership of these cables.
2.9	Vertical fiber cables	Minimum of two pair, plus growth, of multi-mode fiber optic cable to each IDF.	DoIT is responsible for providing, installing and servicing the vertical fiber cables. DoIT will coordinate installation of additional vertical cables as required. Upgrades will be coordinated with building remodeling projects were appropriate and performed by FP&M or outside contractors.		
2.10	Vertical fiber to building aggregation equipment jumper cables	Dependent on the detail requirements of the building.	DoIT is responsible for providing, installing and maintaining these jumper cables with the building aggregation equipment installation. DoIT will maintain ownership of these cables.		
2.11	Building aggregation equipment	See “ 21st Century Network Standard: Network Electronics ”. This document defines the standard network capacity as 1Gbps between the network access equipment and MDF equipment as well as 1 Gbps between the building aggregation equipment and the node/supernode equipment.	DoIT is responsible for providing, installing and servicing the building aggregation equipment. DoIT will monitor capacity and install additional equipment as needed. DoIT will maintain ownership of this equipment.	DoIT is responsible for providing, installing and servicing the building aggregation equipment. DoIT will design and install the building aggregation equipment in conjunction with the department’s Authorized Agent. DoIT and the Authorized Agent will monitor capacity and install additional equipment as needed. DoIT will maintain ownership of this equipment.	DoIT is responsible for providing, installing and configuring the building aggregation equipment for buildings with multiple networks. DoIT will design and install the building aggregation equipment in conjunction with all Authorized Agents. In buildings with a single network, the Authorized Agent is responsible for configuring the equipment and monitoring capacity. If additional capacity is required, DoIT will size and install additional equipment with assistance of the Authorized Agent. DoIT will maintain ownership of the equipment and maintain appropriate maintenance as required.
2.12	Building aggregation to backbone equipment jumper cable or inter-building connection	Dependent on the detail requirements of the building.	DoIT is responsible for providing, installing and maintaining these jumper cables with the building aggregation equipment installation. DoIT will maintain ownership of these cables.		

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2.13	Electrical service	See " Telecommunication Room Design Standards "	DoIT is responsible for contracting with FP&M or outside contractors in providing, installing and maintaining appropriate electrical service for the telecommunication room. Electrical circuits installed for the network will be for use of the 21 st Century Network equipment or department equipment approved by DoIT. Electrical upgrades will be coordinated with building remodeling projects were appropriate.
Backbone Network			
3.1	Inter-building fiber	Primary: Single-mode fiber Alternate: Multi-mode fiber which supports 1Gbps connections. Fiber termination will be locked in fiber cabinet.	DoIT will install, maintain and allocate inter-building fiber.
3.2	Node and Supernode Network equipment	See " 21st Century Network Standard: Network Electronics "	DoIT will provide, install and service any node and supernode equipment as well as the IOS. DoIT will retain ownership of this equipment.
3.3	Jumper cables	Dependent on the detail requirements of the Node or Supernode.	DoIT will provide, install and service all jumper cables connected to the backbone equipment. DoIT will retain ownership of these jumper cables.
3.4	Protocols	IP	DoIT will only route IP traffic on the backbone network.

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Network Management and Functions					
4.1	Centralized network monitoring	HP Openview 6.4 - NNM	DoIT will provide 24x7 monitoring of the network. Departments are required to maintain contact information for events that occur in the building's network. DoIT will monitor the network performance and take appropriate action.	DoIT will provide 24x7 monitoring of the network. Departments are required to maintain contact information for events that occur in the building's network. DoIT will monitor the network performance and take appropriate action. Authorized Agents will have access to traffic statistics, MAC address tracking, and IP tracking. DoIT will also monitor the network performance and take appropriate action in collaboration with the Authorized Agent.	DoIT will provide 24x7 monitoring of just the department's network connection to the network. The department is required to maintain current contact information in Openview by notifying DoIT DCO of any changes.
4.2	Local network monitoring	No standard	Departments may maintain network-monitoring systems for their own use so long as they do not interfere with the centralized network monitoring system or any part of the network.		
4.3	Management Access Network		DoIT will provide, install and maintain a separate network for remote access to the building aggregation equipment by DoIT network engineers.		
4.4	Configuration backups	Nightly backup of changed network equipment configurations.	DoIT will capture and store configuration backups on a central server and provide recovery of the configuration in case of hardware failure.		The departments are responsible for configuration backups.
4.5	VLANs		DoIT is responsible for defining VLANs and assigning ports to VLANs as identified by the department.	DoIT is responsible for defining VLANs and assigning ports to VLANs as identified by the department. The Authorized agent may assign ports to VLANs utilizing the Edge Port Management Tool.	DoIT is responsible for defining cross-campus VLANs. The Authorized Agent is responsible for assigning ports to VLANs.
4.6	Multicasting		DoIT is responsible for maintaining multicasting functionality on the backbone and building networks.		The Authorized Agent is responsible for maintaining multicasting functionality for the building network.

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Network Security			
5.1	Physical access	To be defined	DoIT will maintain physical access to all telecommunication rooms.
5.2	Firewalls	To be defined	Departments may continue to use firewall solutions, however, they should be aware of redundancy and capacity shortfalls of the systems.
5.3	Intrusion detection	To be defined	
5.4	Vulnerability scanning	To be defined	