Management

- There shall be a single login to view and manage the entire networking system.
- The entire system shall be managed via single-management IP address.
- The user interface shall be web browser-based.
- The user interface shall be locally hosted on the networking equipment.
- The user interface shall be in graphical format.
- The user interface shall support all required operations via point-and-click interaction.
- The user interface shall be supported on a tablet or smartphone.
- The user interface shall provide configuration of all items as per Table A (see Appendix A).
- The graphical user interface (GUI) shall support bulk configuration of all items as per Table A.
- The GUI shall display the manufacturer name of all connected devices.
- The GUI shall graphically display all items as per Table B (see Appendix B).
- The system shall alert the user either graphically or via email for all items as per Table C (see Appendix C).
- The user shall be able to perform a PoE reset for any individual device in the system with a single click from the GUI.
- The system shall maintain historical information for all data in Table B.
- The tables in the GUI shall be sortable and filterable based on relevant data, including but not limited to:
  - Bandwidth
  - PoE consumption
  - Text description
  - VLAN
  - Connection status
- The system shall provide a backup and restore mechanism in a user editable format i.e., CSV.
- The system shall support bulk firmware upgrades for all edge switches in one operation.
- The system shall allow system-wide auto-creation of a VLAN simply by specifying one or more ports to be on that VLAN, and automatically ensure that traffic passes between the selected ports. There must not be any restriction on port location.

Appendix A

Item	Setting	Location
PoE	Enable/Disable	Per port
VLAN	Access/Trunk/Local	Per port
VLAN	ID	Per port
PoE	Weekly schedule	Per port
Port status	Enable/Disable	Per port
Port label	Text description	Per port
Switch label	Text description	Per switch
Switch status	Enable/Disable	Per switch
Port security	MAC filter	Per port
System name	Text description	Per system
System details	Text description	Per system

Table A: Configuration Settings (Read/Write)

Appendix B

Item	Information	Location
Link Status	Up/Down and Speed	Per Port
PoE	Power Consumption	Per port
PoE	Power Budget (Used/Available)	Per switch
Connected Device	Manufacturer Name	Per Port
Connected Device	MAC Address	Per Port
Traffic	Upstream Bandwidth	Per Port
Traffic	Downstream Bandwidth	Per Port
Traffic	Upstream Bandwidth	Per Switch
Traffic	Downstream Bandwidth	Per Switch
Traffic	Upstream Bandwidth	Entire System
Traffic	Downstream Bandwidth	Entire System

Table B: Status Information (Read Only)

Appendix C

Item	Information	Location	Threshold
PoE	Power Consumption	Per port	User configurable
PoE	Power Budget (Used/Available)	Per switch	Fixed warning levels
Connected Device	Manufacturer Name	Per Port	Notification on change
Connected Device	MAC Address	Per Port	Notification on change
Traffic	Upstream Bandwidth	Per Port	User-Configurable
Traffic	Downstream Bandwidth	Per Port	User-Configurable
Traffic	Upstream Bandwidth	Per Switch	User-Configurable
Traffic	Downstream Bandwidth	Per Switch	User-Configurable
Traffic	Upstream Bandwidth	Entire System	Fixed warning levels
Traffic	Downstream Bandwidth	Entire System	Fixed warning levels

Table C: Alarms