



Low-Level Design - L66

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1. Low-Level Design Summary

This document represents Low Level Design information for site {} as of {}, containing {} managed network infrastructure devices.

System Hostname	demo4.ipfabric.io
System Version	3.8.2
Snapshots available	25
Snapshot ID:	7d06ee21-edab-4582-972b-70a3dcd438ce
Site Name:	L66
Number of devices	11
Number of hosts	51
Number of interfaces	185
Number of active ints	170
Number of edge ints	4
Detected Port-Channels	0
Detected unique VLAN IDs	0
Detected unique VRF names	0
Number of IPSec Tunnels	0
Number of IPSec Gateways	1
Routing protocols	['BGP', 'OSPF']



2. Inventory Data

Inventory presents information about hardware and software at the site.

2.1. Site {} Summary

The site contains {} network infrastructure devices supporting {} active endpoints. Traffic to {} networks is routed by {} routers in {} routing domains. Switching at the site is performed by {} switches connected in {} contiguous switching domains supporting {} VLANs.

2.2. Managed Devices

Managed network infrastructure devices are those devices that actively transfer the data between endpoints. The following table represents managed network infrastructure devices at the site.

2.3. Operating Systems

Information about unique operating systems include running OS images on managed devices for each platform family, including the number of devices of each specific platform where image is running.

Software installed for each platform should vary as little as possible to improve operational consistency, ease troubleshooting, and improve root cause analysis. While it is operationally difficult to introduce consistency as a standalone project, consistent software can be introduced as part of the lifecycle software upgrade project.

The following table represents software images running on individual platforms at the site. Device count represents the number of managed devices with the specific combination of platform and image.

2.4. Part Numbers

Managed network infrastructure devices are those devices that actively transfer the data between endpoints. The following table represents managed network infrastructure devices at the site.



3. Physical Layer

Information about physical connectivity and interfaces. The physical layer is mapped with the discovery protocols (CDP, LLDP, MDP, etc.)

3.1. Physical Connectivity Matrix

The following table represents physical connectivity between network infrastructure devices.

3.2. Half-Duplex Interfaces

All interfaces at the site are in full duplex state.

The following table represents the interfaces detected in half-duplex state.

3.3. Error-Disabled Interfaces

The Errdisable error disable feature was designed to inform the administrator when there is a port problem or error.

No interfaces have been disabled due to error events.

The following table represents the interfaces detected in half-duplex state.



4. Link Layer

Detailed operational parameters of link layer protocols such as discovery protocols, link aggregation channels, and spanning-tree protocols.

4.1. VLAN Summary

A virtual LAN is any broadcast domain that is partitioned and isolated in a computer network at the data link layer. Following table represents VLANs summary in site {}.

Following table represents VLANs summary per network device.

4.2. Spanning-Tree Protocol

Spanning tree protocol prevents loops and manages redundancy in a layer 2 network. Each spanning tree instance is managed separately.

4.2.1. Spanning-Tree bridges

Overview of Spanning-Tree bridges with information about STP mode, number of VLANs and number of virtual ports per bridge.

4.2.2. Spanning-Tree Connectivity Matrix

The following table represents spanning-tree binding between network infrastructure devices.

4.3. Discovery Protocols

Layer 2 discovery protocols such as CDP, LLDP or MNDP provide direct link visibility and ease of management. The sections describe specific operational state of those protocols in the network.

Following table represents detailed XDP (CDP/LLDP/MNDP) information per network device including remote IP or described capabilities.

4.3.1. Protocol Neighbors

The following table represents XDP (CDP/LLDP/MNDP) binding between network infrastructure devices.

4.3.2. Unmanaged Discovery Protocol Neighbors

Following table represents detailed information about unmanaged discovery protocol neighbors.

4.3.3. Unidirectional Discovery Protocol Neighbors

Following table represents detailed information about unidirectional discovery protocol neighbors.

4.4. Link Aggregation Channels

Following table represents detailed information about link aggregation interfaces.



5. Network Layer

The following section presents detailed information about Layer 3 addressing and routing at the site.

5.1. Routing Protocols

5.2. Managed IP Networks

A network connected to any of the managed devices at the site is considered a managed network.

The following table presents information about every Layer 3 managed network at the site. Users of the network are active non-network ARP entries (entries of unmanaged devices) observed on the corresponding network routers. Gateways are the IP address of the corresponding managed device or devices. Both primary and secondary addresses are considered as gateways. Virtual Gateways presents active virtual IP address of the First Hop Redundancy Protocol (FHRP) group active in the network.

5.3. Managed IP Addresses

Every IP address on every interface of every managed device is considered a Managed IP address.

The following table presents all managed IP addresses at the site.



6. Management Protocols

Gateway redundancy protocols (FHRP, VRRP, GLBP) provide router gateway redundancy for network endpoints.