


**Boundless
Communications**



SkyEdge II LAN Architecture

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Agenda

- Hub VLANs
- Hub Switches
- LAN Topology
- IP Address Scheme

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LAN Architecture

Hub Switches

- In SE II Hub can be found two types of switches

- Cisco Catalyst 2960G-48TC



- 48 Ethernet 10/100/1000 ports
- Satellite Switch/NS1 Switch
- NS2 to NS4 Switches

- Cisco Catalyst 2960G-24TC



- 24 Ethernet 10/100/1000 ports
- Application Switch
- All the rest of the switches in the system
 - All the extension SW, VOIP SW, Abis SW



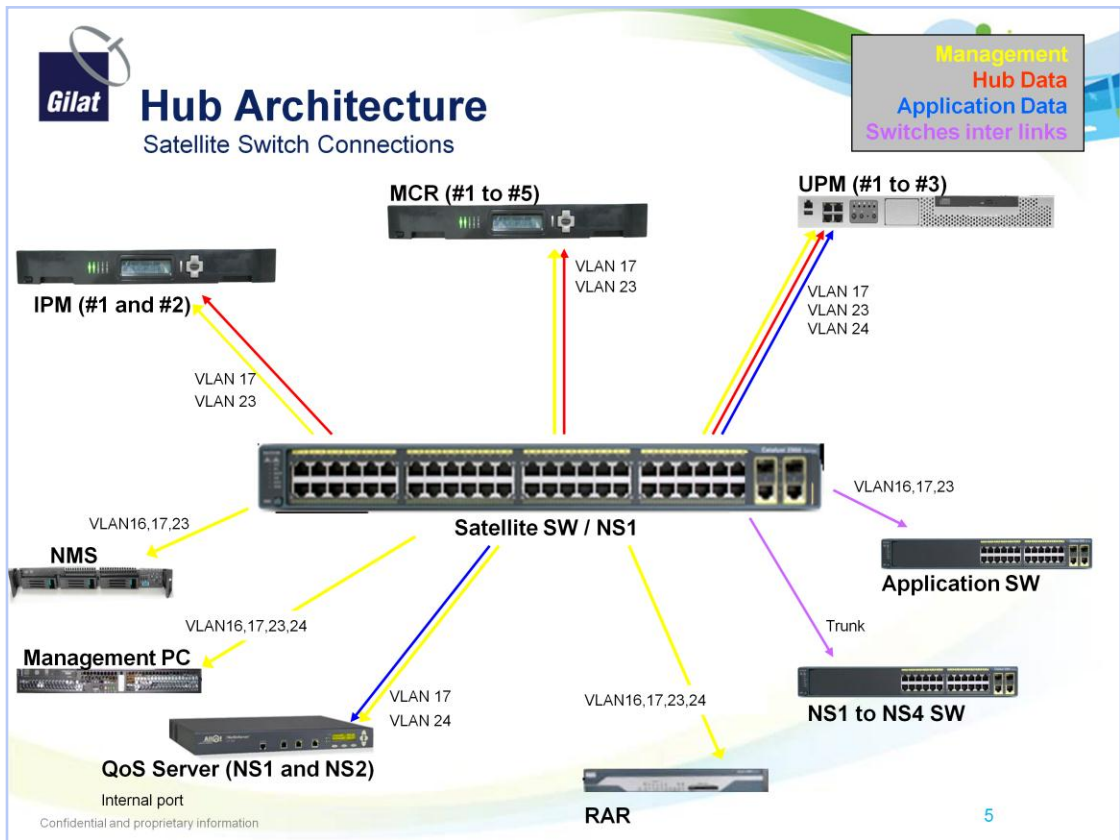
LAN Architecture

Hub VLANs

- **Hub VLANs:**
 - **VLAN 16 – NMS Browsers (172.16.x.x)**
 - **VLAN 17 – Management (172.17.x.x)**
 - **VLAN 23 – Data (172. 23.x.x)**
 - **VLAN 24 – Application default VLAN (172.24.4.x)**
 - **VLAN 31, 32 – VLAN Tagging Test (172.24.31/32.x)**
 - **VLAN 19 – Online redundant NMS backup (172.19.x.x)**

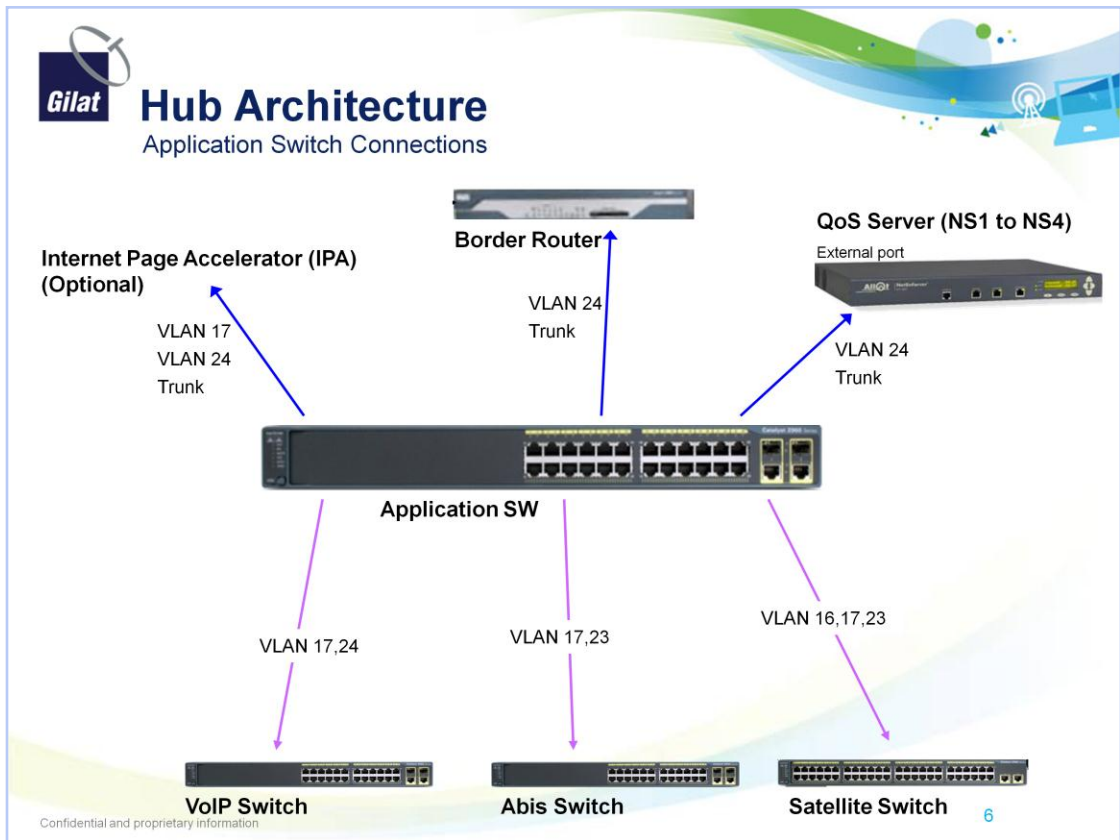
- **Hub LAN Cabling is colored using the following colors**
 - **Management (Yellow)**
 - **Hub Data (Red)**
 - **Application Data (Blue)**
 - **Switches inter links (Purple)**

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The Satellite Switch is core switch of the system; in this diagram it we can see all its connections. The colored arrows represent the physical cables.

- MCR Multi Channel Receiver
- UPM Unified Processor Unit
- RAR Remote Access Router

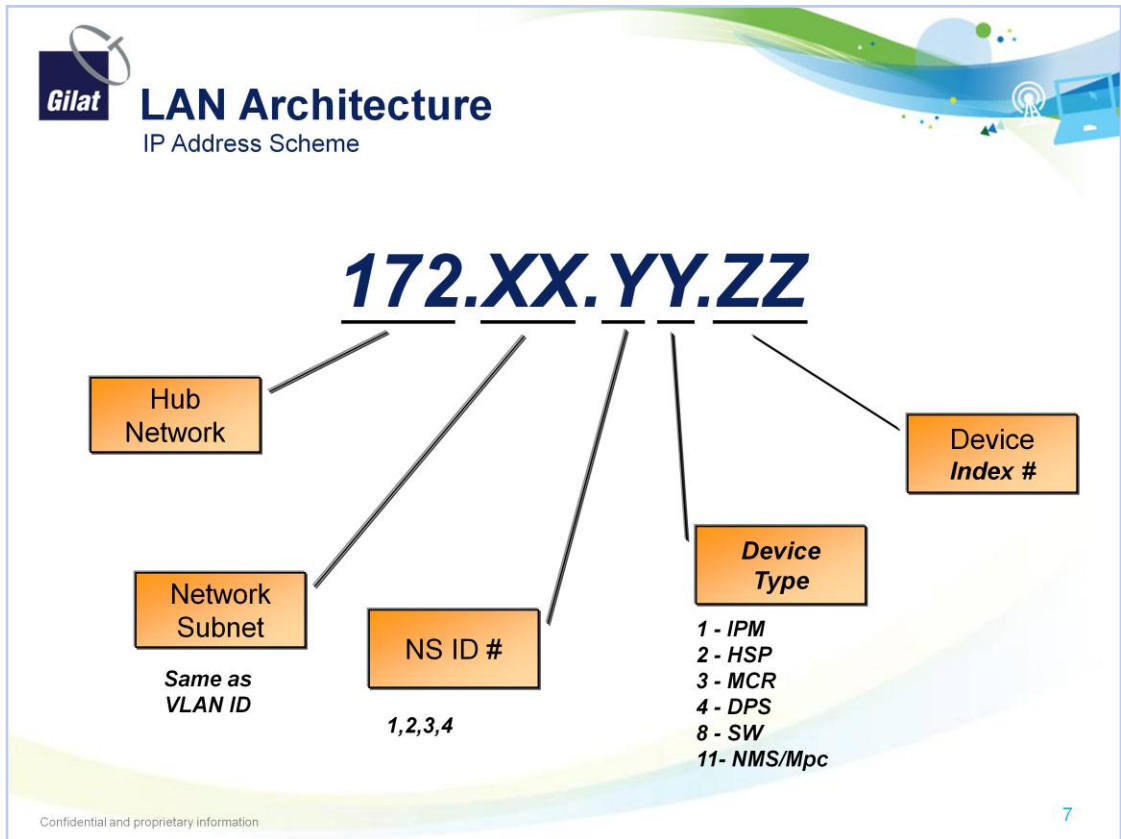


The Application Switch is part of the basic system; in this diagram we can see all its connections. The colored arrows represent the physical cables.

IPA Internet Page Accelerator – Optional Server Farm for HTTP acceleration

Abis SW is used only for system that have SkyAbis implemented it has connected the extra DPS and Abis Adaptors

VoIP SW is used in system that implement VOIP it has connected Soft SW, Gateways, etc.



Let's take the DPS as an example, The DPS is part of three VLANs, Hub Data and Management
The DPSs (#1 to #6) of the NS #1 will have the following IP Address

NS1 DPS 172.23.14.1 (to 8)
 172.17.14.1 (to 8)

A complete IP address list is found at the end of this book. Note that configuration for VLAN 24 does not follow the rule :172.24.4.11-18 for DPS IP address.

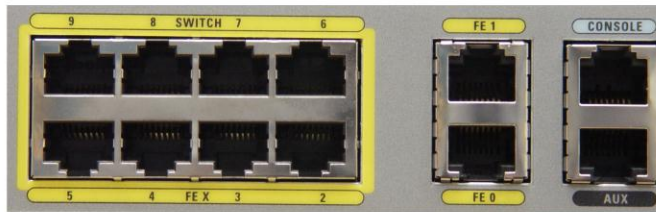


LAN Configuration

RAR Architecture

- The router has the following interfaces:

Interface	Description	Use	Configuration
FE0	RJ45 socket	Connection to the hub	Trunk: VLAN 16, 17, 22, 23 and 24
FE1	RJ45 socket	Connection to the internet	VPN for remote access via the Internet
FEX	8 x RJ45 socket	Connection to the intranet	VLAN #1 for the customer management intranet, including 8 switched ports
Console	RJ45 socket	Connection to the console	
Aux	RJ45 socket	Auxiliary connection	



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Thank You