Site Documentation for BRANCH1

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DTG 20180604T103443

Abstract

This document provides the comprehensive installation instructions and reference diagram for BRANCH1. Everyone from the physical installers, to the Network Operations Center (NOC), to the design architects can reference this documentation. The contents below allow for easy navigation and automatic extensively as the document grows longer over time.

Exact configurations for devices are included as separate, per-device configuration files. Installers and network engineers are encouraged to copy/paste this text into their devices rather than hand-type every command. This speeds up deployment and reduces implementation errors.

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1 Site Installation

1.1 Instructions

1. Securely install the router and switch in the telecommunications area.
2. Power on both devices. While they are powering up, connect the console cable to the router
3. Issue the command `show version` and ensure `IOS-XE 3.16.05s` is loaded. Upgrade if necessary.
4. Move the console cable to the switch, use `show version` and ensure `IOS 15.2(4)` is loaded. Upgrade if necessary.
5. Connect the Ethernet last-mile fiber into port `GigabitEthernet0/0` per the reference diagram.
6. Issue the command `show interfaces GigabitEthernet0/0 transceiver detail`.
7. Annotate the optical TX/RX power readings in the diagram.
8. Issue the command `show interface GigabitEthernet0/0` to ensure it is in the up/up state. Ensure there are no errors.
9. Issue the commands `show bgp ipv4 unicast 192.0.2.0` and `show bgp ipv4 unicast 192.0.2.64`, ensuring the routes are in BGP.
10. Issue the command `ping 198.51.100.0` to ping the MPLS L3VPN PE.
11. Issue the command `show bgp ipv4 unicast neighbor 198.51.100.0` to ensure the BGP session to the PE came up.
12. Issue the command `ping 203.0.113.11` to test connectivity back to the corporate data center TACACS server.
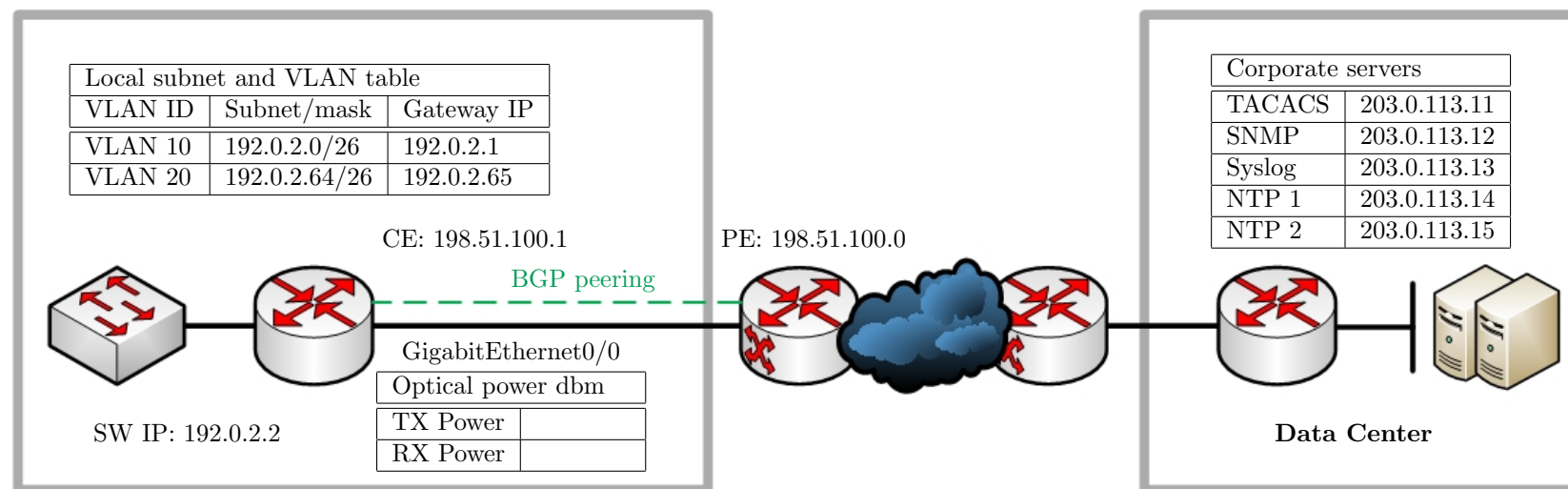
1.2 Reference Diagram

Figure 1: Branch Diagram