Campus EXOS Switching and Routing

Course Overview

Students will learn methods to properly configure, deploy, manage and troubleshoot their Extreme Networks switching and routing environments using the Extreme Networks operating systems ExtremeXOS CLI. This knowledge will be reinforced through actual hands-on experience with networking equipment in a lab environment, where students will perform real world tasks.

Agenda

ExtremeXOS Switching and Routing New Features
- ExtremeXOS switches running 22.1 and 22.2 firmware

Switch Management
- Switch Management Access Methods
- Implementing Switch Management
- Firmware Management
- Configuration File Management
- Port Mirroring

Stacking
- Stacking Overview
- Stacking
- Stack Initialization & Operations
- Managing The Stack
- Stacking Commands
- Configuring The Stack
VLAN Configuration & Operation
• IEEE 802.1Q VLAN operation and configuration for ExtremeXOS switches
• VLAN Overview
• VLAN Forwarding
• VLAN Show Commands
• VLAN Creation
• VLAN Security
Spanning Tree
• Spanning Tree Protocol Overview
• Spanning Tree Protocol Support
• IEEE 802.1w, Rapid spanning Tree
• IEEE 802.1s, Multiple Spanning Tree (MST)
• Spanning Tree Configuration
• Show Commands
Extreme Loop Recovery Protocol
• Spanning Tree Extreme Switches - Extreme Loop Recovery Protocol
Ethernet Automatic Protection
• Understand EAPS Operation
• Configuring EAPS
• Verify EAPS Operation using EAPS Show Commands
Advanced EAPS
• Multiple Ring Topologies
• Common Link (Shared Port)
• Multiple Domain Configuration with Common Link
• Controller and Partner Node States
• EAPS Domains Priority
• Show Command
Link Aggregation Groups
• Product-Specific Information
• LAG Configuration
  • Dynamic
  • Static
• Show Commands
Multi-Switch Link Aggregation Group
• Multi-Switch Link Aggregation Group Overview
• MLAG Operation
• MLAG Configuration
• Show Commands
Access Control Lists
• ExtremeXOS packet filtering structure and components
• Policies and policy files
• ACL matching conditions, syntax, and troubleshooting
• Differences between Static ACLs and Dynamic ACLs
• ACL rule evaluation process
CLEAR-Flow
• CLEAR-Flow Operation
• CLEAR-Flow rules
• CLEAR-Flow matching conditions and actions
• How to configure and monitor CLEAR-Flow rules
Routing Overview
• OSI Model and Basic Routing Concepts
• Extreme Networks XOS Routing Portfolio
• Comparing the Products
• Basic configuration commands
OSPF Configuration
• Overview of OSPF
• OSPF areas and area types
• OSPF operation
• OSPF Hello protocol
• OSPF adjacency process
• Types of Link State Advertisements
• Configure a multi-area OSPF network
Policy Based Routing
• Deploying Policy-Based Redirects
Virtual Routing Redundancy
• Where to use VRRP
• Change from master router to backup router
• VRRP multicast and virtual MAC addresses
• Configure and verify VRRP
Multicast Routing
• IP Multicast
• IP Multicast addressing scheme
• Internet Group Multicast Protocol (IGMP) operation
• Configure IGMP
• Protocol Independent Multicast-Sparse Mode (PIM-SM) operation
• PIM-SM configuration
Extreme Management Center Introduction
• Monitoring the network health
• Use of automated tools
• Visibility of end user devices
• Remote management of devices
Extreme Management Center Configuration
• Manage your network using:
  • SNMP
  • CLI Credential
  • Site Template
  • Adding Devices