BUILDING SCALABLE AND MISSION CRITICAL NETWORKS

COURSE 4 OVERVIEW

CURRICULUM: Extreme Academy Course 4

CERTIFICATION LEVEL: Associate

CERTIFICATION FULL NAME: Extreme Networks Associate – Building Scalable and Mission Critical Networks

CERTIFICATION SHORT NAME: XNA – Building Scalable and Mission Critical Networks

WATCH COURSE ON DEMAND

DESCRIPTION

In this course you will gain understanding to why large-scale networks are needed worldwide and how the design basics are implemented. You will take a deeper look into the security and resiliency of a large network and what management tools can be used to understand the data. Using real world use cases, you will have a greater understanding into why a large-scale network design is so important.

DURATION

This course is designed for 2 days of training or 16 hours. Timings are recommended; however, an instructor may wish to spend more or less time on certain topics. The course can be delivered as a 2-day block or spread out over time.

STUDENT PRE-REQUISITES

Extreme Networks Associate – Building Secure and Robust Wireless Networks

MODULES		MAIN TOPICS
MODULE 1. DESIGNING FOR BUSINESS OUTCOMES	1.10	Effortless User Experience (It Just Works = It Must Work)
	1.20	Define the Term – 'Performance'
	1.30	Business Outcomes: Productivity, Collaboration & Governance
	1.40	Design Challenges: Past and Present
	1.50	Decoupling the Topology from the Policy
	1.60	WIFM: Become the Designer for the Future
MODULE 2. THE WHY: USE-CASE INTRODUCTION	2.10	Chaos and Accelerating Change
	2.20	Intelligent Buildings
	2.30	Healthcare
	2.40	Retail
	2.50	Large Public Venue
	2.60	Secure Remote Worker (Pandemic)
	2.70	Esports
MODULE 3. DESIGN BASICS: UNDERLYING SUPPORT	3.10	Management, Control, and Data Planes
	3.20	7 Layer Model Refresh
	3.30	Ethernet: The Good and the Bad
	3.40	L2 Loops: Spanning Tree and Alternative Approaches
	3.50	Routing Choices, Redundancy, and Impact on Convergence
	3.60	QoS and the Impact on RTT – Latency, Jitter, and Loss
MODULE 4. RESILIENCY AND REDUNDANCY	4.10	MTBF and MTTR
	4.20	Control Plane Convergence
	4.30	Extreme Campus Fabric
MODULE 5. SECURITY AND VISIBILITY	5.10	Security Landscape
	5.20	OODA Loop Approach to Security Design
	5.30	Practical Approaches Examined
MODULE 6. MODULARITY FOR LARGE-SCALE DESIGN	6.10	3 Tier Hierarchical Design
	6.20	2 Tier Hierarchical Design
	6.30	Network Virtualisation
	6.40	Past and Present Challenges
	6.50	Extreme Campus Fabric
MODULE 7. MANAGEMENT TOOLS	7.10	On-premise
	7.20	Cloud
	7.30	Perfsonar, XMC, Cloud IQ Demo
MODULE 8. MOBILITY AND DISTRIBUTED ENVIRONMENTS	8.10	Wi-Fi
	8.20	LTE
	8.30	Extending Services to Remote User
MODULE 9. DC AND CLOUD	9.10	What is a DC - It's All About the Workload
	9.20	High-level Anatomy of DC/Cloud Technology Silos - Compute, Storage, NW, Security
MODULE 10. NETWORKING HARDWARE AND OPERATING SYSTEMS	10.10	Extreme Portfolio Examined
	10.20	Iris Tool
	10.30	Switch, AP, etc. Selection Criteria
	10.40	Let's Create a BOM
MODULE 11. USE-CASE IN FOCUS: A DESIGN PERSPECTIVE	11.10	Esports – "The NW is the Field"
	11.20	The Gamer and The Spectator: Meeting Their Needs
	11.30	Arcade to Pro Designs and Typical BOM's
	11.40	Signpost to Course 3.1 – Esports and Extreme in Detail