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

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
| 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  

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