

EXPERT L7

EXAM DATA SHEET



Exam format & structure

2-Day Hands-on Proctored lab-based exam

4hr pre-qualification exam required (see below)

Conducted virtually from your environment, no requirement to travel to an exam center

Open-book, timed sessions

Lab-based exam utilizes the same environment as the Arista Academy labs

SUMMARY OF EXAM

The **L7 Expert Exam** is the culmination of Arista Certified Engineer program. It is a rigorous practical exam designed to test advanced skills in configuration, automation, troubleshooting, and optimization across complex networking scenarios with focus areas of;

- Data Center Networking
- Multi-Datacenter Integration
- Service Provider Connectivity
- Automation and Orchestration

The purpose of this exam is to assess the candidate's ability to Implement and manage sophisticated network solutions and to evaluate proficiency in automation tools and modern networking practices.

HOW TO BE SUCCESSFUL / PREPARATION TIPS

- Be “workflow fast” not just “command-fast”
- Know where to find devices, compliance, tasks, events and dashboard in CloudVision quickly
- Bookmark resources, jump to sections vs. searching
- Be proficient in the courses lab and lab environment
- Although an open-book exam, you will not have time to look up everything, therefore familiarity with EOS commands and CloudVision will be imperative

PRE-REQUISITS

Due to the complexity of the L7 Expert Exam, we want to ensure a candidate's readiness for this intense 2-day practical exam. Therefore, we have a 4-hour L7 Qualification exam (see below for more information) that must be passed first before an attempt at the 2-day exam will be permitted.

DAY 1 - OVERVIEW

Day 1 lab scenario focused on migrating and interconnecting three distinct Data Centers (DC1, DC2, and DC3) via a WAN Core. The lab requires the configuration of a scalable network where each Data Center operates as a unique EVPN VXLAN domain (or L2LS domain) connected to the core via specific EVPN Gateways. The end-state goal is to establish a stretched Layer 2 broadcast domain and a shared Layer 3 Tenant VRF across all three sites, enabling seamless host-to-host connectivity via the new WAN core.

SKILLS & COMPETENCIES

To successfully complete the tasks on Day 1, the candidate must possess the following technical skills:

Advanced Routing & Switching:

- **OSPF & ISIS:** Ability to configure an IGP as a VXLAN underlay and with Segment Routing extensions for the WAN core.
- **BGP Architectures:** Proficiency in configuring both iBGP and eBGP overlays and specific address families (L2VPN EVPN, IPv4 Unicast).

Data Center Technologies

- **VXLAN EVPN:** Deep understanding of VTEP configuration, VNI mapping, and the distinction between Type-2 (MAC-IP) and Type-5 (IP Prefix) routes.
- **MLAG & L2LS:** Ability to configure Multi-Chassis Link Aggregation (MLAG) and Spanning Tree (MST) for Layer 2 Leaf-Spine topologies.
- **BUM Traffic Management:** Knowledge of ARP suppression techniques to reduce flooding in broadcast domains.

MPLS & Segment Routing

- **SR-TE:** Experience configuring Segment Routing Traffic Engineering, defining Node SIDs, and enabling MPLS data-plane forwarding.
- **Label Switched Paths:** Understanding how labels are bound to loopbacks and how traffic is switched across the core using label stacks.

Inter-Domain Connectivity

- **DCI Gateways:** Competency in configuring "Stitched" EVPN domains between the local DC and the WAN core.
- **L3 VPN Extension:** Ability to map VRFs to L3 VNIs to extend tenant routing across geographically separated data centers

DAY 2 - OVERVIEW

“Day 2” Lab Exam focused on using Arista AVD (Architect, Validate, Deploy) to automate the deployment of a multi-domain network architecture. The lab requires the candidate to configure two Data Center domains (DC1 and DC2) and interconnect them via an MPLS-SR (Segment Routing) WAN Core.

The primary objective is to establish end-to-end Layer 2 and Layer 3 connectivity for a specific tenant across all three domains. This involves setting up an automation environment, deploying an MPLS backbone using IS-IS and Segment Routing, and configuring EVPN VXLAN overlays in the data centers to support stretched subnets and shared VRFs.

SKILLS & COMPETENCIES

To successfully complete the tasks on Day 2, the candidate must possess the following technical skills:

Network Automation and Tooling

- **Git Proficiency:** Ability to clone repositories, manage directories, and navigate file structures within a terminal.
- **Ansible & AVD:** Understanding of Ansible playbooks, YAML syntax and how to utilize the Arista AVD data models to generate intended configurations.
- **CVP Interaction:** capability to execute Change Controls and manage tasks within CloudVision Portal.

Routing and Switching Protocols

- **MPLS & Segment Routing:** Knowledge of configuring IS-IS as an IGP, enabling Segment Routing, and managing Node SIDs and Loopback addressing for label distribution.
- **BGP & EVPN:**
 - Configuring iBGP.
 - Understanding EVPN route types (Type-2 for MAC-IP, Type-5 for IP-Prefix, and IMET for multicast).
 - Managing BGP communities (Route Targets) for VRF importation.
- **VXLAN Operations:** Configuring VTEPs, VNIs (L2 and L3), and mapping VLANs to VRFs for overlay services.

Data Center Interconnect (DCI) Architecture

- **Gateway Configuration:** Configuring devices to act as Multidomain Gateways that translate between VXLAN and MPLS encapsulations.
- **Tenant Extension:** Ability to configure stretched subnets and shared VRFs across geographically separated domains.

L7 QUALIFICATION EXAM

The L7 Qualification exam is a 4-hour practical hands-on, virtually proctored lab-based exam. The topics of the L7 Qualification will be based on a single data center and cover a subset of the L7 Expert exam topics. The intent of this exam is to assess the candidate's readiness for the 2-Day L7 Expert exam topics.

Focus areas include

- Data Center networking
- Automation and orchestration

SKILLS & COMPETENCIES

To successfully complete the tasks of the L7 Qualification exam, the candidate must possess the following technical skills:

Advanced Routing and Switching

- **OSPF & ISIS:** Ability to configure an IGP as a VXLAN underlay and with Segment Routing extensions for the WAN core.
- **BGP Architectures:** Proficiency in configuring both iBGP and eBGP overlays and specific address families (L2VPN EVPN, IPv4 Unicast).

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For more information, refer to exam policies and procedures
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