

# DESIGN, ASSOCIATE (JNCIA-DESIGN)

*Earn an associate-level certification that demonstrates competency in Juniper Networks design principles and associated technologies.*

As part of the Juniper® Design track, the JNCIA-Design, Associate, is for networking professionals and designers with beginner knowledge of network design, theory, and best practices. During the multiple-choice exam, you will demonstrate your understanding of network design fundamentals.

## Exam Preparation

We recommend the following resources to help you prepare for your exam. However, these resources aren't required, and using them doesn't guarantee you'll pass the exam.

### Recommended Training

- [Juniper Networks® Design Fundamentals \(JNDF\)](#)

### Exam Resources

- Industry/product knowledge
- [Juniper TechLibrary](#)

### Additional Preparation

- [Juniper Learning Portal](#)

## Exam Objectives

Here is a high-level view of the skillset required to successfully complete the JNCIA-Design certification exam.

### Customer Network Design Requirements

Identify initial network design requirements for:

- Juniper Networks life-cycle service approach
- Proposal boundaries and considerations
- Greenfield and brownfield deployments
- Top-down networks
- Capacity planning

Identify the roles of different Juniper products and solutions, including:

- Routers
- Switches
- Security
- WLAN

- Software-defined networking (SDN)
- Network management

### Securing the Network

Identify security design principles for:

- General security design and considerations
- Securing a data center
- Securing the campus WAN
- Zero-trust security
- Secure access service edge (SASE)

### Network Management or Reliability

Identify network design considerations for business continuity, including:

- High-resiliency design
- Link- and device-level redundancy
- Multihomed Ethernet Segment Identifier Link Aggregation Groups (ESI LAGs)
- Juniper Networks SRX Firewalls redundancy
- Virtual chassis
- Campus redundancy best practices

Identify design considerations for network automation, including:

- Benefits of network automation
- Juniper automation products
- Junos® XML, Representational State Transfer (REST), JET service process (JSD) APIs
- Junos OS on-box and off-box automation

Identify design considerations for network management strategies, including:

- Network management methodologies
- Separation of production and management traffic
- Configuration backups
- Remote console access
- Juniper network management strategies

## Campus and Branch LAN Design

Identify considerations for a wired campus or branch LAN, including:

- Campus LAN design best practices
- Modular design
- Subnet and VLAN design
- Access control design
- Ethernet VPN-Virtual Extensible LAN (EVPN-VXLAN) architecture
- Campus oversubscription ratios
- Campus design architectures

Identify considerations for a wireless LAN, including:

- WLAN design phases
- Gathering business requirements
- Gathering technical requirements
- Device types
- Designing secondary coverage
- Designing real-time location services
- Access point (AP) coverage patterns
- Co-channel contention
- Gathering RF requirements
- RF modeling

## Campus and Branch WAN Design

Identify considerations for a campus or branch WAN, including:

- Campus or branch WAN connectivity functions
- Best practices for designing the campus or branch WAN
- Campus WAN performance
- Campus WAN VPN design
- Campus active/active and active/passive high availability (HA)

Identify considerations for an SD-WAN, including:

- SD-WAN design considerations
- SD-WAN devices
- Assurance models
- SD-WAN intersite connectivity

## Data Center Network Design

Identify considerations for general data center network, including:

- Data center design best practices
- Traffic patterns
- Virtual chassis
- Environmental considerations
- Data center fabric architectures

Identify considerations for IP fabric-based data center network, including:

- Benefits of IP fabric over other data center architectures
- Design options with IP fabrics
- Spine-and-leaf device placement recommendations
- Underlay and overlay design
- Routing protocol selection
- IP fabric best practices
- IP fabric scaling

## Exam Details

Exam questions are derived from the recommended training and the exam resources listed above. Pass/fail status is available immediately after taking the exam. The exam is only provided in English.

### Exam Code

JNO-1103

### Prerequisite Certification

None

### Delivered by

Pearson VUE

### Exam Length

90 minutes

### Exam Type

65 multiple-choice questions

### Recertification

Juniper certifications are valid for three years. For more information, see [Recertification](#).

#### Corporate and Sales Headquarters

Juniper Networks, Inc.  
1133 Innovation Way  
Sunnyvale, CA 94089 USA  
Phone: 888.JUNIPER (888.586.4737)  
or +1.408.745.2000  
Fax: +1.408.745.2100  
[www.juniper.net](http://www.juniper.net)

#### APAC and EMEA Headquarters

Juniper Networks International B.V.  
Boeing Avenue 240  
1119 PZ Schiphol-Rijk  
Amsterdam, The Netherlands  
Phone: +31.207.125.700  
Fax: +31.207.125.701



Driven by  
Experience