Cisco DNA Software
SD-WAN and Routing Matrix

<table>
<thead>
<tr>
<th>License Type</th>
<th>Essentials</th>
<th>Advantage or Premier</th>
<th>Essentials</th>
<th>Advantage or Premier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management options</td>
<td>CLI, Web UI</td>
<td>CLI, DNA Center, vManage</td>
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<td>CLI, DNA Center, vManage</td>
</tr>
</tbody>
</table>

### Features

#### Network Essentials
- **Feature**: Layer 3 troubleshooting
  - **Description**: High-availability achieved by routing packets to a specific next-hop IP address based on the destination IP address.

- **Feature**: Intuitive visual interface
  - **Description**: Makes DP/DP programmability easy, allowing you to automate configurations and control of your network devices, managed by Cisco DNA Center.

- **Feature**: Secure multi-tenant access
  - **Description**: Interfaces with external security enforcers to ensure only authorized users are granted access to critical network data.

#### Network Advantage
- **Feature**: Network programmability
  - **Description**: Enables automating network configurations and network services in a single, unified interface, managed by Cisco DNA Center.

- **Feature**: Network visibility
  - **Description**: Enables virtual network monitoring, allowing for real-time visibility into traffic flow and performance metrics.

#### Cisco DNA Essentials
- **Feature**: Includes Cisco DNA Essentials, 3- or 5-year term subscription
  - **Description**: Includes Cisco DNA Essentials, 3- or 5-year term subscription.

#### Cisco DNA Premier
- **Feature**: Includes Cisco DNA Premier, 3- or 5-year term subscription
  - **Description**: Includes Cisco DNA Premier, 3- or 5-year term subscription.

- **Feature**: CLI, Web UI
  - **Description**: Provides a command-line interface and web-based user interface for managing network devices.

#### Essentials subscription license
- **Feature**: Essentials subscription license
  - **Description**: Includes Cisco DNA Essentials, 3- or 5-year term subscription.

#### Advanced security
- **Feature**: Cisco Umbrella Insights and Cisco Threat Grid.
  - **Description**: Integrates threat intelligence with Cisco Umbrella to provide real-time protection against a wide range of threats.

#### Application experience
- **Feature**: Essentials (SBC, classifications, policies, re-marking, scheduling), RRI, IPv4, IPv6, PVP, DPI visibility (full Flexible NetFlow)
  - **Description**: Provides advanced network visibility and packet classification for optimized network performance.

#### Router management
- **Feature**: IOS, IOS-XR, IOS-3D, AIP, AIPs, AIRP
  - **Description**: Enables comprehensive management of Cisco and third-party routers.

#### Cisco trustware solutions
- **Feature**: Cisco Umbrella Insights and Cisco Threat Grid.
  - **Description**: Enables real-time threat intelligence to protect against emerging threats.

#### High availability and resiliency (backup)
- **Feature**: Support operational continuity, and maintain availability during routine maintenance and disaster recovery.
  - **Description**: Ensures network reliability and availability through redundant systems.

#### Develop integration
- **Feature**: Web APIs for your development and operations teams to continuously deliver applications.
  - **Description**: Facilitates seamless integration with development tools and operations teams.

#### Essential unified communications
- **Feature**: EasyQoS dynamic monitoring
  - **Description**: Provides dynamic traffic optimization to maximize network bandwidth.

- **Feature**: Overlay tunneling encapsulates IPv6 packets in IPv4 packets for delivery across an IPv4 infrastructure (a core network or the Internet).
  - **Description**: Enables seamless communication across different network environments.

- **Feature**: IPv6 tunnel capabilities
  - **Description**: Supports IPv6 connectivity for Next Generation Services (NGS).

#### Essential security
- **Feature**: Enterprise Threatfeed with application awareness, Smart IPS with signature updates, automated Cisco Umbrella DNS monitoring.
  - **Description**: Enhances security by providing real-time threat intelligence.

#### Value optimization
- **Feature**: Advanced security and control of packet duplication.
  - **Description**: Improves network performance by optimizing packet duplication.

#### Full-featured Firewall
- **Feature**: Software-defined networking (SDN)
  - **Description**: Enables automatic security policy enforcement across the network.

### Limited segmentations and SD-WAN-based
- **Feature**: 10 Gigabit Ethernet interfaces are restricted to four GbE devices or fewer, and 40GbE are limited to two 10 10Gigabit Ethernet interfaces.
  - **Description**: Limits the number of interfaces available for network deployment.

### SD-WAN functionality
- **Feature**: Basic SD-WAN functionality
  - **Description**: Provides basic connectivity, network segmentation, and basic security.

- **Feature**: Advanced SD-WAN functionality
  - **Description**: Enables advanced features such as SD-WAN and Layer 3 meshed and multi-homed networks.

### Essential routing capabilities
- **Feature**: Essential routing
  - **Description**: Supports essential routing protocols such as OSPF, BGP, and IS-IS.

- **Feature**: Advanced routing functionality
  - **Description**: Extends routing capabilities with protocols such as BGP, HSRP, IS-IS, and GLBP.

- **Feature**: Advanced routing functionality
  - **Description**: Adds advanced routing features such as VRF, Cisco TrustSec (SGT, SGACL), and VRF-lite.

#### Essential unified communications
- **Feature**: Essential unified communications
  - **Description**: Supports collaboration and communication tools.

### Advanced routing functionality
- **Feature**: Advanced routing functionality
  - **Description**: Supports advanced routing protocols such as OSPF, BGP, HSRP, IS-IS, and GLBP.

### Essential security capabilities
- **Feature**: Essential security
  - **Description**: Provides basic security features such as SSH, TACACS+, and RADIUS.

- **Feature**: Advanced security
  - **Description**: Enhances security features with advanced threat protection.

- **Feature**: Essential unified communications
  - **Description**: Supports VoIP and video conferencing for seamless communication.

#### Cisco innovations
- **Feature**: Cisco innovations
  - **Description**: Incorporates the latest advancements in networking technology.

### DevOps integration
- **Feature**: DevOps integration
  - **Description**: Enables streamlined development and deployment processes.

#### Support
- **Feature**: Support
  - **Description**: Offers comprehensive support services to ensure network availability.

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1. Functionality available in a routing-only implementation.