What is new in data center networking?

What is new regarding data center networking software?
Cisco introduced three new subscription-based software suites for Cisco Nexus® 9000 Series Switches:

• Data Center Networking Essentials Subscription
  - Includes Cisco ACI™ and NX-OS licenses, offering customers flexibility to migrate to Cisco Application Centric Infrastructure (ACI) software-defined, policy-driven management and control
  - Designed to operate a leading-edge single data center fabric or site

• Data Center Networking Advantage Subscription
  - All the features in the Essentials license cited previously
  - Plus the advanced capabilities necessary to manage multiple data center fabrics or sites

• Data Center Networking Premier Subscription
  - All the features in the Advantage license (which includes Essentials)
  - Plus Cisco Day 2 Operations Suite:
    - Network Insights for Resources (NIR)
    - Network Insights Advisor (NIA)
    - Network Assurance Engine (NAE)
    - NAE Policy Explorer (NAE PE)

What new value do these offers provide to customers?
Customers now have a choice to consume Nexus 9000 Software through subscription. These new subscription offers contain the features necessary to run a Nexus 9000 Series switch in either Cisco ACI mode or Nexus Operating System (NX-OS) mode. These new offerings provide customers the flexibility to transition to policy-driven ACI when it is convenient for them. Customers could initially manage their Nexus 9000 infrastructure with NX-OS management capabilities, and then transition to ACI when ready without having to purchase any new licenses.

Offering alternatives for both multiple and single data center environments allows customers to tailor their investment to their specific data center landscape.

Subscription licensing brings particular customer value, including faster access to innovation, better financial planning and enhanced agility for a more rapid response to market demands.
What capabilities are included in Data Center Networking Essentials subscription?

This offer includes all key capabilities customers need to manage and operate a leading-edge single data center fabric or site, including routed fabric capability, monitoring and management. The specific features included in Data Center Networking Essentials Subscription are listed in Table 1:

Table 1. Features included in Data Center Networking Subscription

<table>
<thead>
<tr>
<th>Essentials (NXOS)</th>
<th>Essentials (ACI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enterprise LAN</td>
<td>Multi-POD</td>
</tr>
<tr>
<td>OSPF, BGP, IS-IS, PIM, SSM, MSDP PBR, GRE, EIGRP, VRF, VXLAN, BGP eVPN Control Plane</td>
<td>Support for ACI MultiPOD topology</td>
</tr>
<tr>
<td>Streaming Telemetry</td>
<td>Streaming Telemetry</td>
</tr>
<tr>
<td>Netflow</td>
<td>Netflow</td>
</tr>
<tr>
<td>DCNM-LAN</td>
<td>ACI Base License</td>
</tr>
<tr>
<td>Network Manager</td>
<td>Intent Based Networking Fabric mgmt., Ecosystem Security, Virtualization</td>
</tr>
<tr>
<td>Network Services</td>
<td>PTP</td>
</tr>
<tr>
<td>Catena, iCAM, Intelligent Traffic Director, Non-Blocking Multicast, Smart Channel</td>
<td>Precision time Protocol</td>
</tr>
</tbody>
</table>

What capabilities are included in Data Center Networking Advantage Subscription?

This offer includes all the features in the Data Center Networking Essentials suite plus the advanced capabilities to manage multiple data centers or sites. The specific features included in Data Center Networking Advantage Subscription are listed in Table 2.

Table 2. Features included in Data Center Networking Advantage Subscription

<table>
<thead>
<tr>
<th>Advantage (NXOS)</th>
<th>Advantage (ACI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VPN Fabric License</td>
<td>Multi-Site</td>
</tr>
<tr>
<td>Inter AS option B, MPLS Layer 3 VPN</td>
<td>Support for ACI Multi-Site deployments</td>
</tr>
<tr>
<td>Pervasive Load Balancing (PLB)</td>
<td>Physical Remote Leaf</td>
</tr>
<tr>
<td>Tenant Routed Multicast VXLAN EVPN Multi-Site L3 EVPN over segment routing MPLS</td>
<td>Includes: Essentials (NXOS)</td>
</tr>
<tr>
<td>Includes: Essentials (ACI)</td>
<td></td>
</tr>
</tbody>
</table>

What capabilities are included in Data Center Networking Premier Subscription?

This offer includes all the features in the Data Center Networking Advantage Subscription plus Day 2 Operations Suite which mathematically verifies the entire network for correctness and provides detailed insights. Cisco Network Assurance Engine (NAE). Built on Cisco’s patented network verification technology, gives operators the confidence of knowing that the network is operating consistent with stated intent. Predict the impact of changes. Verify network-wide behavior. Help assure network security policy and compliance.

What are the benefits of the Data Center Networking Subscription licensing?

The Data Center Networking Software Subscription suites bring customer flexibility when migrating to the software-defined, policy-driven management and control of Cisco ACI.

Key benefits include:

- **Flexibility**: Support for both Cisco ACI and NX-OS licenses in a single suite provides customer flexibility and choice in the mode of management and control.

- **Simplicity**: Instead of choosing from multiple separately priced software features, customers purchase a single Data Center Networking Software product for their data center networking requirements.

- **Investment protection**:
  - Investment grows in value through innovation, updates, and upgrades. And soon, customers will have the freedom to deploy licenses on both physical and virtual machines.
  - Data Center Networking Software Subscription licenses are not tied to specific hardware, so they are portable to the next generation of applicable devices.

- **Faster access to innovation**: Company competitiveness is tied to strategic use of innovative technology, and Cisco is increasingly delivering the latest features through subscriptions.

- **Better financial planning**: Subscription licenses support linear, predictable budgeting and tap into OpEx funding.

- **Enhanced agility to respond faster to the market**: Subscription licensing increases the ability to renew and scale what you want, when you want it.

- **Cisco Software Support Service (SWSS) included**: Data Center Networking Subscription licenses include SWSS, which provides Cisco Technical Assistance Center (TAO) support, knowledge base access, and software downloads.

What hardware is supported with these Data Center Networking Subscription offers?

The Data Center Networking Subscription offers support the Cisco Nexus 9000 Series switches today.

Purchasing

If a customer wants to purchase Data Center Networking Advantage, does the customer have to buy Data Center Networking Essentials also?

No. Data Center Networking Advantage includes the features and functions of Data Center Networking Essentials. It is just one SKU with one price that provides all the features.

Likewise, Data Center Networking Premier includes the features and functions of Data Center Networking Advantage and Data Center Networking Essentials.

What subscription terms are available?

These Data Center Networking Subscription offers are available for 3- and 5-year terms.

If customers prefer, may they still purchase the Cisco ONE perpetual licenses?

Yes. Cisco will continue to offer the Cisco ONE for Data Center Networking perpetual offers. However, instead of purchasing Cisco Software Support Service (SWSS), the customer will purchase an Data Center Networking Essentials Subscription license that will include SWSS for both the subscription license and the Cisco ONE perpetual license. This will be equivalently priced to what a Cisco ONE perpetual license plus SWSS would have been, thus it provides substantially greater value at no additional cost.
Is a software subscription license mandatory for the Nexus 9000 Series?
No. Subscription-based licenses are not mandatory. Customers may continue to purchase Nexus 9000 Software as they have in the past, through à la carte perpetual licenses, Cisco ONE perpetual licenses, or other perpetual software suites. However, Cisco will increasingly deliver the latest innovations first through subscription-based licenses. This enables Cisco to continue to deliver—and customers to receive the value from—new capabilities on an ongoing basis. We recommend that customers purchase Data Center Networking Essentials, Data Center Networking Advantage, or Data Center Networking Premier for their data center networking needs.

What use cases lead customers to these software subscription offers?
Both Data Center Networking Essentials and Data Center Networking Advantage combine the three key capabilities required to manage and operate a leading-edge data center fabric: routing capabilities, centralized fabric management, and access to granular fabric telemetry data. Customers seeking this complete tool set to operate a high-performance data center fabric will value these subscription offers.

Data Center Networking Premier will be attractive to customers who seek deep analytics and assurance that the network is operating in complete accordance with stated intent.

Data Center Networking Advantage will be attractive to customers who need to manage multiple data centers or sites with a single point of control.

Data Center Networking Essentials will be attractive to customers who need to manage a single data center or site.

Cisco Smart Licenses and Cisco Smart Accounts

What is a Smart License and why is it relevant?
Smart Licensing is a new, flexible software licensing model that simplifies the way customers activate and manage licenses across their organization. Instead of using Product Activation Keys (PAKs), Smart Licenses establish a pool of software licenses in a customer defined Smart Account that can be used throughout the enterprise.

What is a Smart Account and why is it relevant?
Smart Accounts are mandatory for any subscription. They help identify and connect the right customer account into which the subscription licenses will be deposited before they may be used. The combination of Smart Licensing and Smart Accounts delivers visibility into your license ownership and consumption (through a cloud portal) to help you reduce operational costs.

What software products offer Smart License?

How do I view and use a Smart License?
License availability and consumption through Smart License is visible through a portal called Cisco Smart Software License (CSSM). All licenses that are deposited and consumed are clearly visible through the user-id and password provided for the smart or virtual account for each customer.

Where can I learn more about Smart Licenses and Smart Accounts?
# Cisco ONE Software

## How are the existing perpetual offers, Cisco ONE for Data Center Networking Foundation and Cisco ONE for Data Center Networking Advanced, different from these Data Center Networking Subscription offers?

**A**

- **Feature parity:**
  - Data Center Networking Essentials subscription includes all the features from Cisco ONE Foundation and Cisco ONE Advanced, with the exception of Nexus Data Broker (available as an optional add-on). DCNM LAN features in Data Center Networking Essentials now include the functionality of Nexus Fabric Manager and Prime Infrastructure. In addition, Data Center Networking Essentials includes PTP, Streaming Telemetry (Netflow), and Multi-POD as differentiating features.

- **Hardware support:**
  - Cisco ONE Foundation and Cisco ONE Advanced are perpetual license solution suites offered on the Cisco Nexus 3000, 5000, 7000, and 9000 Series and Cisco MDS 9000 Series Multilayer Switches.

  - Data Center Networking Essentials, Data Center Networking Advantage, Data Center Networking Premier are subscription-based license solution suites offered on the Cisco Nexus 9000 series.

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### Table 3. Feature comparison between Cisco ONE Foundation and Cisco ONE Advanced (perpetual) and ACI Essentials and ACI Advantage (subscription), both on Cisco Nexus 9000 Series

<table>
<thead>
<tr>
<th>Data Center Networking Subscription Tier Offers</th>
<th>DC Networking Essentials (includes NXOS)</th>
<th>DC Networking Advantage (includes NXOS)</th>
<th>DC Networking Premier (includes NXOS)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3/5 year subscriptions</strong></td>
<td>ACI Base</td>
<td>VPN Fabric</td>
<td><strong>Day 2 operations:</strong></td>
</tr>
<tr>
<td>Single SKU</td>
<td>LAN Enterprise</td>
<td>ACI Multi-site</td>
<td>- Network Assurance Engine (NAE)</td>
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<td></td>
<td>DCNM LAN</td>
<td>Physical remote leaf</td>
<td>- Policy Explorer (NAE PE)</td>
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<tr>
<td></td>
<td>Network services</td>
<td></td>
<td>- Network Insights - Resource¹</td>
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<tr>
<td></td>
<td>Streaming telemetry</td>
<td></td>
<td>- DC Networking Advantage</td>
</tr>
<tr>
<td></td>
<td>ACI Multi-pod</td>
<td></td>
<td>- DC Networking Essentials</td>
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<td></td>
<td>PTP</td>
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<tr>
<td><strong>Single data center</strong></td>
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<td><strong>Multiple data center</strong></td>
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<td><strong>Multiple data center</strong></td>
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<td></td>
<td>and/or clouds</td>
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<td>and/or clouds with highest innovation</td>
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<tr>
<td></td>
<td><strong>Cisco Nexus® 9000 Series - ACI or NX-OS</strong></td>
<td></td>
<td><strong>Cisco Software Support Service (SWSS) included in all subscriptions</strong></td>
</tr>
</tbody>
</table>

¹ Appliances (APIC, ACI Multi-site controller vApp, and NAE vApp) are separate purchases. 1 - Q4 availability

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Is Cisco ONE only available as a perpetual license?

As part of delivering ACI capabilities to our data center customers, we had initially launched two Cisco ONE subscription tiers: Cisco ONE Essentials and Cisco DNA Premier. Those subscription offers have been renamed to Data Center Networking Essentials and Data Center Networking Advantage, respectively, to align the offer names to the ACI innovation that customers increasingly link with a software-based and policy-driven approach for data center networking. The underlying details and features of the offers remain the same. From now on, Cisco ONE is only available as perpetual offer.

Migration

How do existing Cisco ONE customers (perpetual and subscription) get the software-based and policy-driven functionality included in the Data Center Networking Essentials or Data Center Networking Advantage Subscription offers?

We are making it easier for our existing Cisco ONE customers to acquire and use these Data Center Networking innovations. Existing Cisco ONE Foundation or Advanced perpetual customers will automatically get Data Center Networking Essentials software that includes SWSS benefits at the time of SWSS renewal. At equivalent cost to what would have been SWSS renewal, customers can get the benefits of Data Center Networking (with SWSS included). These will be available as 1, 3, 5-year term. Customers will also retain their perpetual licenses.

For customers who had purchased Cisco ONE Essentials or Cisco DNA Premier subscription software, there will be no change needed as they had already acquired the ACI capabilities through their original subscription.

If a customer has a perpetual license for Data Center Networking Essentials, Data Center Networking Advantage, NX-OS Essentials or NX-OS Advantage, do you offer a migration promotion to the subscription offers?

If a customer has perpetual license for Data Center Networking Essentials, Data Center Networking Advantage, NX-OS Essentials or NX-OS Advantage with active Cisco Software Support Service (SWSS), Cisco will work on an individual basis to help the customer migrate to the subscription offers. Please raise the specific request to ask-ciscoone-pm@cisco.com.

If a customer stops paying for the subscription software license, does the data center network stop working?

No. The Cisco Nexus 9000 switch will continue to work. However, a customer needs to renew the subscription to receive new innovations added to the Data Center Networking suite after the subscription expiration date.

Additionally, because the subscription includes software support, a customer needs to renew the subscription to continue receiving software support.

Can customers get Data Center Networking Subscription as Cisco Enterprise Agreement?

Support

**How is software support provided?**

With the Data Center Networking Subscription offers, Cisco Software Support Service (SWSS) is included in the subscription. Customers receive TAC, knowledge base access and software downloads. No additional software support purchase is required.

For more information on what SWSS includes, please see [https://www.cisco.com/go/swss](https://www.cisco.com/go/swss).

**What hardware support services are available?**

Three options are available:

- Cisco Smart Net Total Care™ provides 24-hour global support for the base OS and underlying hardware platforms on which the software described in this document is deployed. Please refer to: [https://www.cisco.com/go/smartnet](https://www.cisco.com/go/smartnet)
- Cisco Solution Support is a high-value services offering that provides centralized support through our solution experts whether you have a problem with a Cisco product or one from a solution partner. Please refer to: [https://www.cisco.com/go/solutionsupport](https://www.cisco.com/go/solutionsupport)
- Partner Support Service provides technical support capabilities and insights that partners can select, customize, and deliver cost effectively to their customers. Please refer to: [https://www.cisco.com/c/en/us/partners/sell-integrate-consult/sell-services/partner-support.html](https://www.cisco.com/c/en/us/partners/sell-integrate-consult/sell-services/partner-support.html)