



# Cisco Catalyst and Cisco DNA Software Subscription Matrix for Switching

	Network Essentials	Network Advantage	Cisco Catalyst (DNX) and Cisco DNA Essentials	Cisco Catalyst (DNX) and Cisco DNA Advantage
<b>License type</b>	Perpetual license compatible with Cisco Catalyst and Cisco DNA Essentials. Cannot be purchased as a standalone license	Perpetual license compatible with Cisco Catalyst and Cisco DNA Advantage. Cannot be purchased as a standalone license	3/5/7 year term subscription	Includes Cisco Catalyst and Cisco DNA Essentials, 3/5/7 year term subscription
<b>Management options</b>	Manual, WebUI	Manual, WebUI	Automation through Cisco Catalyst Center including Manual, WebUI	Automation through Cisco Catalyst Center including Manual, WebUI

Features						
	Network Essentials	Network Advantage	Cisco DNA Essentials	Cisco Catalyst Essentials (DNX)	Cisco DNA Advantage	Cisco Catalyst Advantage (DNX)
<b>Essential switch capabilities</b> Layer 2, routed access, OSPF, PBR, PIM Stub Multicast, PVLAN, VRRP PBR, Cisco Discovery Protocol, QoS, FHS, 802.1X, MACsec-128, CoPP, SXP, IP SLA responder, SSO, StackWise (Catalyst 9300/9200).	✔ ⊕	✔ ⊕				
<b>L3 Routed access</b> L3 Routed access (RIP, EIGRP Stub, OSPF (1000 routes)).	✔ ⊕	✔ ⊕				
<b>Programmability, NETCONF/RESTCONF/gRPC/YANG</b> Model-driven programmability lets you automate configuration and control of your network devices with programmable interfaces.	✔ ⊕	✔ ⊕				
<b>Zero Touch Provisioning</b> Automated provisioning of a new Cisco switch using the Zero Touch Provisioning functionality built into the switch.	✔ ⊕	✔ ⊕				
<b>128-bit MACsec encryption</b> Configure 128-bit MACsec for authenticating and encrypting packets between MACsec-capable devices.	✔ ⊕	✔ ⊕				
<b>Advanced telemetry SPAN, RSPAN</b> Manual/CLI or WebUI configuration of SPAN, RSPAN for providing near real-time access to operational statistics. No automation through Cisco Catalyst Center.	✔ ⊕	✔ ⊕				
<b>Streaming telemetry and visibility</b> Model-driven telemetry lets you monitor your network by streaming data from network devices, continuously providing near-real-time access to operational statistics.	✔ ⊕	✔ ⊕				
<b>Cisco Trustworthy Solutions</b> Help ensure hardware and software authenticity for supply chain trust and strong mitigation against man-in-the-middle attacks that compromise software and firmware.	✔ ⊕	✔ ⊕				
<b>Software Image Management (SWIM)</b> Manually manage software upgrades and control the consistency of image versions through CLI or WebUI. Automation through Cisco Catalyst Center not supported.	✔ ⊕	✔ ⊕				
<b>Full L3 routing functionality</b> BGP*, OSPF, IS-IS*.		✔ ⊕				
<b>Flexible network segmentation</b> VRF*, VXLAN, LISP* SGT, MPLS*, BGP-EVPN with VXLAN*.		✔ ⊕				
<b>BGP EVPN VXLAN Fabric</b> Industry-standard network segmentation and extension solution for enterprise campus networks.		✔ ⊕				
<b>High availability</b> Support operational continuity and maintain availability during routine maintenance, and perform disaster recovery. NSF*, GiR*, HSRP, Stackwise Virtual*, ISSU*/eFSU*.		✔ ⊕				
<b>Patch/SMU lifecycle management***</b> Manual/CLI operations or through WebUI only. Automation through Cisco Catalyst Center not supported.		✔ ⊕				
<b>Optimize bandwidth utilization (Advanced Multicast)</b> Multicast is used between routers so they can track which multicast packets to forward to each other and to their directly connected LANs. RP Discovery*, PIM BI-DIR*.		✔ ⊕				
<b>256-bit MACsec encryption</b> Configure 256-bit MACsec* for authenticating and encrypting packets between MACsec-capable devices.		✔ ⊕				
<b>Precision Time Protocol</b> Timing and synchronization for time sensitive applications with PTPv2 as default profile (IEEE 1588v2/PTPv2, gPTP (IEEE 802.1AS), AES67 and G8275.1 profiles with less than 100 nano seconds precision).		✔ ⊕				
<b>Audio Video Bridging</b> Cisco AVB simplifies digitization of audio and video and offers superior quality of experience with standards like IEEE1588v2 PTPv2, AES67 timing profile.		✔ ⊕				
<b>Full Flexible NetFlow</b> This next generation in flow technology optimizes the network infrastructure, reducing operating costs and improving capacity planning and security incident detection. (License is required for Manual/CLI, WebUI or automated Cisco Catalyst Center configuration).			✔ ⊕	✔ ⊕	✔	✔
<b>Cisco IOS Embedded Event Manager (EEM)</b> EEM is a powerful and flexible subsystem that provides real-time network event detection and onboard automation. It gives you the ability to adapt the behavior of your network devices to align with your business needs.			✔ ⊕	✔ ⊕	✔	✔
<b>Software Image Management (SWIM)</b> Automate software upgrades and control the consistency of image versions through Cisco Catalyst Center.			✔	✔	✔	✔
<b>Overall health dashboard</b> Gives a high-level overview of the health of every network device/client on the network, wired and wireless, through Cisco Catalyst Center or cloud monitoring for Catalyst.			✔ ⊕	✔ ⊕	✔	✔
<b>Overall health dashboard for Device, Network, Application and Client for 24 hours only</b> Gives a high-level overview of the health of wired network devices/clients on the network, managed by Cisco Catalyst Center.			✔	✔	✔	✔
<b>Network Plug and Play (PnP) provisioning application</b> Zero-touch provisioning for new device installation of Cisco devices to be provisioned simply by connecting to the network, managed by Cisco Catalyst Center.			✔	✔	✔	✔
<b>Out of box reports</b> Cisco Catalyst Center pre-built reports that can be consumed directly or exported to third-party tools such as Tableau.			✔	✔	✔	✔
<b>Cloud monitoring for Catalyst</b> Offers cloud monitoring options with Cisco® Catalyst® 9000 switches to deliver visibility and troubleshooting.			✔ ⊕ Limited visibility	✔ ⊕ Limited visibility	✔	✔
<b>Cisco Spaces Extend</b> A powerful end-to-end, indoor location services cloud platform that extends platform capabilities via integrations and partner applications. Includes Cisco Spaces See. Available for Cisco Catalyst 9300 and 9400 Series Switches.					✔ ⊕	✔ ⊕
<b>Cisco ThousandEyes Network and Application Synthetics**</b> Deliver superior network and application experience with Cisco ThousandEyes, now integrated into Cisco Catalyst 9300 and 9400 Series switches.					✔ ⊕	✔ ⊕
<b>ISE Advantage Licenses (included in Catalyst software subscription only)****</b> Achieve faster deployment of zero-trust network security solutions such as SD-Access, Client Assurance, and network authentication/authorization. ISE license quantity depends on switch model.						✔
<b>Controller Orchestrated Fabric Management and Configuration</b> Any Cisco or a third-party controller orchestrating a Fabric like EVPN, MPLS etc.					✔ ⊕	✔ ⊕
<b>EVPN VXLAN Micro-Segmentation</b> Industry-standard micro-segmentation solution extending policy-plane across BGP EVPN VXLAN fabric.					✔ ⊕	✔ ⊕
<b>EVPN VXLAN Aware Flexible Netflow (Macro and Micro)</b> Comprehensive application flow visibility for overlay Macro and Micro-segmented BGP EVPN VXLAN fabric networks.					✔ ⊕	✔ ⊕
<b>EVPN VXLAN Wide Area Bonjour Service Routing</b> Flood-free service-oriented mDNS service-routing solution for EVPN users and devices enabling immersive user-experience in enterprise campus networks.					✔ ⊕	✔ ⊕
<b>EVPN VXLAN with IPsec Underlay Transport</b> Encrypted EVPN fabric solution across LAN and WAN with Industry-standard IPsec Underlay transport.					✔ ⊕	✔ ⊕
<b>Fabric, Segmentation, and eWC</b> Enables policy-based automation with secure segmentation, complete visibility, and delivery of new services quickly on SD-Access devices, managed by Cisco Catalyst Center only.					✔	✔
<b>Cisco AI Network Analytics</b> AI and machine learning technologies are implemented on Cisco Catalyst Center and in the AI Network Analytics cloud to enhance the insight and remediation capabilities of Cisco Assurance.					✔	✔
<b>AI Endpoint Analytics</b> Identify and check compliance of endpoints, and use AI/ML techniques to classify them into groups.					✔	✔
<b>Group-Based Policy Analytics</b> Makes segmentation policy simpler by discovering traffic flows between scalable groups to determine the right policies.					✔	✔
<b>AI Trust Analytics</b> Verifies that connected endpoints are legitimate. Use this information to define security policies that isolate rogue or compromised endpoints to reduce threat proliferation.					✔	✔
<b>LAN automation</b> Automate configurations and deployment of networks with Cisco Catalyst Center.					✔	✔
<b>Patch/SMU lifecycle management</b> Automated management of SMU/Patches patching by Cisco Catalyst Center.					✔	✔
<b>Compliance</b> Compliance reports managed by Cisco Catalyst Center.					✔	✔
<b>IPsec</b> Supports 100G+ HW encryption for high-bandwidth secure L3 transport between sites or from cloud to site.					✔ ⊕	✔ ⊕
<b>Device 360, Client 360, and Network Health Insights</b> Display devices and client connectivity from any angle or context, providing for very granular troubleshooting in seconds.					✔	✔
<b>Application policy creation</b> Assign policies to applications based on business relevance and business-critical QoS priority for life-saving devices, manual through CLI or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕
<b>Application hosting</b> Allows third-party applications to be hosted in a secure container environment on the switch. License is required for both manual/CLI configuration or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕
<b>Third-party API integration</b> A flexible framework is provided to integrate third-party application software.					✔ ⊕	✔ ⊕
<b>Encrypted Traffic Analytics (ETA)*: (No Stealthwatch License Included)</b> Detect malware within encrypted traffic. License is required for both manual/CLI configuration or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕
<b>Cisco DNA Service for Bonjour</b> This software-defined, controller-based solution enables Bonjour services discovery and advertisement at scale across multiple domains. License is required for both manual/CLI configuration or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕
<b>ERSPAN*</b> Monitor and re-direct traffic. License is required for both manual/CLI configuration or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕
<b>Wireshark*</b> Packet capture for analysis. License is required for both manual/CLI configuration or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕
<b>AVC (NBAR2)*</b> Gain application visibility and control through Next-Generation Network-Based Application Recognition. License is required for both manual/CLI configuration or automation through Cisco Catalyst Center.					✔ ⊕	✔ ⊕

Support	Network Essentials	Network Advantage	Cisco DNA Essentials	Cisco Catalyst Essentials (DNX)	Cisco DNA Advantage	Cisco Catalyst Advantage (DNX)
<b>E-LLW</b> 90 days of Cisco TAC support; local business hours, 8x5; hardware replacement (next business day where available); Warranty duration is lifespan of hardware product.	✔	✔	✔	✔	✔	✔
<b>Software support</b> Software support service in the subscription software stack includes TAC support and software updates and upgrades in Cisco Catalyst Center.			✔	✔	✔	✔
<b>SNTC</b> <ul style="list-style-type: none"> <li>24x7 access to the Cisco TAC for hardware issues</li> <li>60-minute TAC response objective for severity 1 and 2 service requests</li> <li>TAC response objective for severity levels 3 and 4 service requests: <ul style="list-style-type: none"> <li>60 minutes during business hours</li> <li>Next Business Day during business hours if the request is made outside of business hours</li> </ul> </li> <li>OS updates</li> <li>Self-help resources (tools, documentation, and videos) via Cisco.com</li> <li>Return Materials Authorization (RMA) with eight service level options</li> </ul>	Optional	Optional	Optional		Optional	
<b>Base product-level software and hardware support:</b> <ul style="list-style-type: none"> <li>24x7 access to the Cisco TAC phone support for software and hardware issues: Cisco Catalyst Software for Switching, Catalyst 9000 Switches, and the OS.</li> <li>4-hr TAC response objective for severity 1 and 2 service requests</li> <li>Next business day TAC response objective for severity 3 and 4 service requests</li> <li>Access to the CX Cloud base experience: step-by-step adoption task lists and success tips, asset and license views, and case management.</li> <li>Software and OS updates</li> <li>Self-help resources (documentation and videos) via Cisco.com Hardware replacements with a next business day service level are accessed via the <a href="#">Catalyst 9000 Extended Lifetime Warranty (E-LLW)</a></li> </ul>	Included with Cisco Catalyst software subscription (DNX)	Included with Cisco Catalyst software subscription (DNX)	Not included	✔	Not included	✔
<b>Cisco Success Tracks</b> <ul style="list-style-type: none"> <li>Get streamlined support across software, hardware, and providers for faster complex issue resolution</li> <li>Improve operational efficiency and reduce risk with proactive and predictive analytics-driven insights</li> <li>Speed adoption with personalized use case guidance</li> <li>Avoid adoption pitfalls with best practices and one-on-one consulting</li> <li>Return Materials Authorization (RMA) with eight service level options</li> </ul>			Optional (recommended)	Optional (recommended)	Optional (recommended)	Optional (recommended)

The Cisco DNA Expansion Pack is a flexible way to purchase Cisco ISE, Cisco Spaces, Secure Network Analytics (Stealthwatch), ThousandEyes and other licenses, appliances, and services in one convenient bundle. Enhance your Cisco networking solutions such as SD-Access, Zero Trust solutions, Encrypted Traffic Analytics (ETA), location analytics, and assurance. You can add the pack to your Cisco DNA software licenses and choose the license count that fits your needs.

For more details, [contact](#) a Cisco sales or Cisco registered partner.

⊕ Does not require Cisco Catalyst Center.

\* Not supported on all platforms.

\*\* Cisco ThousandEyes Network and Application Synthetics entitlements will be provided as described in [ThousandEyes with Cisco Catalyst 9000 Switches](#).

\*\*\* Supported on Network Advantage from Cisco IOS XE Fuji 16.9.7 onwards. Prior to Cisco IOS XE Fuji XE 16.9.7, Cisco Catalyst or Cisco DNA Advantage is also required.

\*\*\*\* Not applicable for Catalyst 9200 series.