

[1] CONTACT INFORMATION				
SUPPLIER	SUPPLIER SIGNATURE			
SUPPLIER NAME	Cisco Systems Inc. <i>Ashlee Panburana</i>			
SUPPLIER CONTACT EMAIL	ascummin@cisco.com <i>Ashlee Panburana (Apr 14, 2022 10:57 EDT)</i>			
ACCREDITED LABORATORY	ACCREDITED LABORATORY SIGNATURE			
LABORATORY NAME	UNH InterOperability Laboratory <i>Michayla Newcombe</i>			
LABORATORY CONTACT EMAIL	usgv6-sdoc@iol.unh.edu <i>Michayla Newcombe (Apr 14, 2022 16:36 EDT)</i>			
[2] PRODUCT VERSION TESTED	[3] PRODUCT ID			
IOS-XE 17.6	Cisco Catalyst ESS9300 Embedded Series Switch			
[4] PRODUCT FAMILY				
APPLICABLE SERIES HARDWARE	APPLICABLE SERIES SOFTWARE			
[5] UNITARY OR COMPOSITE SDOC				
<input checked="" type="checkbox"/> <b>Unitary:</b> All of the declared capabilities of this product are addressed by original test results reported in this SDoC.	<input type="checkbox"/> <b>Composite:</b> Some or all of the capabilities of this product are provided by the use and/or integration of unmodified components that have their own unique SDoCs. All of the relevant referenced SDoCs are identified in section 6 and linked.			
[6] REF	SUPPLIER	PRODUCT ID/STACK ID	CAPABILITY SUMMARY	COMPOSITE SDOC LINK
i.	Cisco Systems Inc.		USGv6-r1:Router+Core+SLAAC+Addr-Arch+OSPF+OSPF-Auth+Link=Ethernet	
[7] USGV6-CAPABLE REQUIREMENTS				
<input type="checkbox"/> USGv6-r1-Capable-Host <input type="checkbox"/> USGv6-r1-Capable-Router <input type="checkbox"/> USGv6-r1-Capable-Switch <input type="checkbox"/> USGv6-r1-Capable-NPP				
[8] PROFILE(S) REFERENCED				
i.	NIST SP 500-267Br1, USGv6 Profile			
ii.				
[9] SUPPLEMENTARY ATTESTATIONS				
<input checked="" type="checkbox"/> This product is fully functional in dual stack environments. That is, no claimed capabilities are invalidated if this product is operated in a dual stack (IPv6 and IPv4) network environment.		<input checked="" type="checkbox"/> This product is fully functional in IPv6 only environments. That is, no claimed capabilities are invalidated if this product is deployed in a network environment that does not support IPv4.		
<input type="checkbox"/> This SDoC contains a capabilities test report for each unique IPv6 stack in the product. If not, the stacks/ports not covered are documented, and how their IPv6 capabilities differ from those reported are explained.		<input checked="" type="checkbox"/> All of the products listed in the product family in section 4 are implemented such that their capabilities are identical in form and function across the entire product family. The specific conformance and interoperability test results for the capabilities of an identified member of this product family are provided in this SDoC. The SDoC attests that these tested capabilities are identical and unmodified for all the products cited above.		

## Host Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6-ONLY_R1v1.*_F		
-	Core	Core_R1v1.*_C		Core_R1v1.*_I		
-	Extended-ICMP	Self-Test		Self-Test		
-	PLPMTUD	Self-Test		Self-Test		
-	ND-Ext	Self-Test		Self-Test		
-	ND-WL	Self-Test		Self-Test		
-	SEND	Self-Test		Self-Test		
-	SLAAC	SLAAC_R1v1.*_C		SLAAC_R1v1.*_I		
-	PriAddr	Self-Test		Self-Test		
-	DHCP-Stateless	DHCP-Stateless_R1v1.*_C		DHCP-Stateless_R1v1.*_I		
-	DHCP-Client	DHCP-Client_R1v1.*_C		DHCP-Client_R1v1.*_I		
-	DHCP-Client-Ext	Self-Test		Self-Test		
-	DHCP-Prefix	DHCP-Prefix_R1v1.*_C		DHCP-Prefix_R1v1.*_I		
-	DHCP-Prefix-Ext	Self-Test		Self-Test		
-	6Lo	Self-Test		Self-Test		

## Host Capabilities

-	<b>Happy-Eyeballs</b>	Self-Test		Self-Test		
-	<b>Addr-Arch</b>	Addr-Arch_R1v1.*_C		Addr-Arch_R1v1.*_I		
-	<b>CGA</b>	Self-Test		Self-Test		
-	<b>DNS-Client</b>	Self-Test		Self-Test		
-	<b>URI</b>	Self-Test		Self-Test		
-	<b>NTP-Client</b>	Self-Test		Self-Test		
-	<b>NTP-Server</b>	Self-Test		Self-Test		
-	<b>DNS-Server</b>	Self-Test		Self-Test		
-	<b>DHCP-Server</b>	DHCP-Server_R1v1.*_C		DHCP-Server_R1v1.*_I		
-	<b>DHCP-Server-Ext</b>	Self-Test		Self-Test		
-	<b>DHCP-Relay</b>	DHCP-Relay_R1v1.*_C		DHCP-Relay_R1v1.*_I		
-	<b>IPsec</b>	IPsec_R1v1.*_C		IPsec_R1v1.*_I		
-	<b>IPsec-SHA-512</b>	IPsec-SHA-512_R1v1.*_C		IPsec-SHA-512_R1v1.*_I		
-	<b>SSHV2</b>	Self-Test		Self-Test		
-	<b>TLS</b>	Self-Test		Self-Test		
-	<b>TLS-1.3</b>	Self-Test		Self-Test		
-	<b>Tunneling-IP</b>	Self-Test		Self-Test		

## Host Capabilities

-	<b>Tunneling-UDP</b>	Self-Test		Self-Test		
-	<b>XLAT</b>	Self-Test		Self-Test		
-	<b>NAT64</b>	Self-Test		Self-Test		
-	<b>DNS64</b>	Self-Test		Self-Test		
-	<b>SNMP</b>	Self-Test		Self-Test		
-	<b>Tunneling</b>	Self-Test		Self-Test		
-	<b>DiffServ</b>	Self-Test		Self-Test		
-	<b>NETCONF</b>	Self-Test		Self-Test		
-	<b>SSM</b>	Self-Test		Self-Test		
-	<b>Multicast</b>	Multicast_R1v1 .*_C		Multicast_R1v1 .*_I		
-	<b>ECN</b>	Self-Test		Self-Test		
-	<b>Link =</b>	Self-Test		Self-Test		

## Router Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6-ONLY_R1v1.*_F		
PASS	Core	Core_R1v1.*_C	UNH-IOL/34624	Core_R1v1.*_I	UNH-IOL/34626	
-	Extended-ICMP	Self-Test		Self-Test		
-	PLPMTUD	Self-Test		Self-Test		
-	ND-Ext	Self-Test		Self-Test		
-	ND-WL	Self-Test		Self-Test		
-	SEND	Self-Test		Self-Test		
PASS	SLAAC	SLAAC_R1v1.*_C	UNH-IOL/34624	SLAAC_R1v1.*_I	UNH-IOL/34626	
-	PrivAddr	Self-Test		Self-Test		
-	DHCP-Prefix	DHCP-Prefix_R1v1.*_C		DHCP-Prefix_R1v1.*_I		
-	DHCP-Prefix-Ext	Self-Test		Self-Test		
-	6Lo	Self-Test		Self-Test		
PASS	Addr-Arch	Addr-Arch_R1v1.*_C	UNH-IOL/34625	Addr-Arch_R1v1.*_I	UNH-IOL/34627	
-	CGA	Self-Test		Self-Test		

-	DNS-Client	Self-Test		Self-Test	
-	URI	Self-Test		Self-Test	
-	NTP-Client	Self-Test		Self-Test	
-	NTP-Server	Self-Test		Self-Test	
-	DNS-Server	Self-Test		Self-Test	
-	DHCP-Server	DHCP-Server_R1v1.*_C		DHCP-Server_R1v1.*_I	
-	DHCP-Server-Ext	Self-Test		Self-Test	
-	DHCP-Relay	DHCP-Relay_R1v1.*_C		DHCP-Relay_R1v1.*_I	
PASS	OSPF	Self-Test		OSPF_R1v1.*_I	UNH-IOL/34628
-	OSPF-IPsec	Self-Test		Self-Test	
PASS	OSPF-Auth	Self-Test		OSPF-Auth_R1v1.*_I	UNH-IOL/34628
-	OSPF-Ext	Self-Test		Self-Test	
-	OSPF-Trans	Self-Test		Self-Test	
-	OSPF-Graceful	Self-Test		Self-Test	
-	ISIS	Self-Test		Self-Test	
-	IS-IS-Auth	Self-Test		Self-Test	
-	IS-IS-Ext	Self-Test		Self-Test	
-	IS-IS-MT	Self-Test		Self-Test	

-	<b>BGP</b>	Self-Test		<b>BGP_R1v1.*_I</b>		
-	<b>BGP-Reflect</b>	Self-Test		Self-Test		
-	<b>BGP-Graceful</b>	Self-Test		Self-Test		
-	<b>BGP-FlowSpec</b>	Self-Test		Self-Test		
-	<b>BGP-OV</b>	Self-Test		Self-Test		
-	<b>BGP-VPLS</b>	Self-Test		Self-Test		
-	<b>BGP-EVPN</b>	Self-Test		Self-Test		
-	<b>BGP-6VPE</b>	Self-Test		Self-Test		
-	<b>BGP-MVPN</b>	Self-Test		Self-Test		
-	<b>MPLS</b>	Self-Test		Self-Test		
-	<b>CE-Router</b>	<b>CE_Router_R1v1.*_C</b>		<b>CE_Router_R1v1.*_I</b>		
-	<b>VRRP</b>	Self-Test		Self-Test		
-	<b>IPsec</b>	<b>IPsec_R1v1.*_C</b>		<b>IPsec_R1v1.*_I</b>		
-	<b>IPsec-VPN</b>	<b>IPsec-VPN_R1v1.*_C</b>		<b>IPsec-VPN_R1v1.*_I</b>		
-	<b>IPsec-SHA-512</b>	<b>IPsec-SHA-512_R1v1.*_C</b>		<b>IPsec-SHA-512_R1v1.*_I</b>		
-	<b>IPsec-SHA-512-VPN</b>	<b>IPsec-SHA-512-VPN_R1v1.*_C</b>		<b>IPsec-SHA-512-VPN_R1v1.*_I</b>		
-	<b>SSHV2</b>	Self-Test		Self-Test		
-	<b>TLS</b>	Self-Test		Self-Test		

-	<b>TLS-1.3</b>	Self-Test		Self-Test		
-	<b>Tunneling-IP</b>	Self-Test		Self-Test		
-	<b>Tunneling-UDP</b>	Self-Test		Self-Test		
-	<b>GRE</b>	Self-Test		Self-Test		
-	<b>DS-Lite</b>	Self-Test		Self-Test		
-	<b>LW4over6</b>	Self-Test		Self-Test		
-	<b>MAP-E</b>	Self-Test		Self-Test		
-	<b>MAP-T</b>	Self-Test		Self-Test		
-	<b>XLAT</b>	Self-Test		Self-Test		
-	<b>NAT64</b>	Self-Test		Self-Test		
-	<b>DNS64</b>	Self-Test		Self-Test		
-	<b>6PE</b>	Self-Test		Self-Test		
-	<b>LISP</b>	Self-Test		Self-Test		
-	<b>SNMP</b>	Self-Test		Self-Test		
-	<b>Tunneling</b>	Self-Test		Self-Test		
-	<b>DiffServ</b>	Self-Test		Self-Test		
-	<b>NETCONF</b>	Self-Test		Self-Test		
-	<b>SSM</b>	Self-Test		Self-Test		



-	<b>PIM-SM</b>	Self-Test		Self-Test		
-	<b>PIM-SM-IPsec</b>	Self-Test		Self-Test		
-	<b>PIM-SM-BiDir</b>	Self-Test		Self-Test		
-	<b>Multicast</b>	Multicast_R1v1.*_C		Multicast_R1v1.*_I		
-	<b>ECN</b>	Self-Test		Self-Test		
<b>PASS</b>	Link = Ethernet	Self-Test	Self Declaration	Self-Test	Self Declaration	

## Application Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6- ONLY_R1v1.*_F		
-	App-Serv=			APP- ONLY_R1v1.*_F		
-	Link =			Self-Test		

## NPP Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6-ONLY_R1v1.*_F		
-	FW	FW_R1v1.*_C				
-	APFW	Self-Test				
-	IDS	FW_R1v1.*_C				
-	IPS	FW_R1v1.*_C				
-	Link =	Self-Test				

### Switch Capabilities

[10] PRODUCT ID/ STACK ID				CAPABILITY SUMMARY		
[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
-	IPv6-ONLY			IPv6-ONLY_R1v1.*_F		
-	DHCPv6-Guard	Self-Test		Self-Test		
-	RA-Guard	Self-Test		Self-Test		
-	MLD-Snooping	Self-Test		Self-Test		
-	Link =	Self-Test		Self-Test		

**DIRECTIONS:** Please use Adobe Acrobat to complete. Detailed instructions for completing and interpreting each numbered field are given below. Contact usgv6-program@nist.gov with questions.

1	CONTACT INFORMATION	Supplier name, email and signature (digital recommended). Include printed name and date if wet ink signed. Accredited laboratory name, email and signature (digital recommended). Include printed name and date if wet ink signed.
2	PRODUCT VERSION TESTED	Firmware/ software version of product declared
3	PRODUCT ID	Suppliers concise name for product declared
4	PRODUCT FAMILY	Applicable hardware or software with an unmodified IPv6 stack from "PRODUCT VERSION TESTED"
5	UNITARY OR COMPOSITE	Indicate if this is a unitary or composite SDoC. If composite is checked, composite SDoC must be linked in section 6.
6	REF	Reference number to profile(s) reference in this SDoC
	SUPPLIER	Supplier name
	PRODUCT ID/STACK ID	Product ID must match field 3. As there may be more than one unique IPv6 stack, stack ID identifies particular stack described in CAPABILITY SUMMARY. Each unique stack requires a CAPABILITY SUMMARY.
	CAPABILITY SUMMARY	The strong notation as described in NIST-SP-500-267Ar1 that describes the product capabilities of the given stack.
	COMPOSITE SDOC LINK	URL link to composite SDoC referenced.
7	USGV6-CAPABLE REQUIREMENTS	Refer to section 5 in NIST-SP-500-267Br1 for CSS strings referenced in this section. Check the appropriate box if the product meets the requirements.
8	PROFILE(S) REFERENCED	Profile(s) referenced in the SDoC.
9	SUPPLEMENTARY ATTESTATIONS	Attestations made by the supplier. Check all that apply.
10	PRODUCT ID/STACK ID	PRODUCT ID/STACK ID for stack documented on given page.
	CAPABILITY SUMMARY	CAPABILITY SUMMARY for stack documented on given page.
11	SUPPORTED CAPABILITY	"PASS" – All requirements of the capability have been met "NOTES" – See notes for details regarding the level of support for this capability "X" – Capability not supported BLANK – No declaration for this capability
	CAPABILITY	IPv6 Capability as described in NIST-SP-500-267Ar1.
	TEST SELECTION	Test Selection Tables version of capabilities with existing test programs. Capabilities without an existing test program are indicated with "Self-Test"
	RESULT ID	Abbreviation of accredited laboratory and unique identifier of test result. Capabilities with "Self-Test" can be self-declared by writing " <i>Self Declaration</i> " in the cell.
	NOTES	The cell must be filled out if "NOTE" is indicated for SUPPORTED CAPABILITY. Suppliers may use notes to clarify unsupported features or non-passing results.

**SUPPLIER GENERAL NOTES**









# NIST.SP.500-281Ar1s-ESS-9300

Final Audit Report

2022-04-14

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