[1] CONTACT INFORMATION

SUPPLIER		SUPPLIER SIGNATURE
SUPPLIER NAME	Cisco Systems Inc.	DocuSigned by: Kanishka Weerakkody 56CF075825FD467... 11/15/2023
SUPPLIER CONTACT EMAIL	kweerakk@cisco.com	
ACCREDITED LABORATORY		**ACCREDITED LABORATORY SIGNATURE**
LABORATORY NAME	UNH InterOperability Laboratory	DocuSigned by: Michayla Newcombe F07473996FBF4E1... 11/16/2023
LABORATORY CONTACT EMAIL	usgv6-sdoc@iol.unh.edu	

[2] PRODUCT VERSION TESTED	[3] PRODUCT ID
IOS XE 17.12.1	C9500-16X

[4] PRODUCT FAMILY

APPLICABLE SERIES HARDWARE	APPLICABLE SERIES SOFTWARE
C9500-12Q, C9500-24Q, C9500-40X, C9500-16X, C9500-32C, C9500-32QC, C9500-24Y4C, C9500-48Y4C	IOS XE 17.12.1

[5] UNITARY OR COMPOSITE SDOC

☑ **Unitary**: All of the declared capabilities of this product are addressed by original test results reported in this SDoC.	☐ **Composite:** 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.	C9500-16X/IOS XE 17.12.1	USGv6-r1:Router+Core+SLAAC+Addr-Arch+OSPF+OSPF-Auth+Link=Ethernet	

[7] USGV6-CAPABLE REQUIREMENTS

☐ USGv6-r1-Capable-Host ☐ USGv6-r1-Capable-Router ☐ USGv6-r1-Capable-Switch ☐ USGv6-r1-Capable-NPP

[8] PROFILE(S) REFERENCED

i.	NIST SP 500-267Br1, USGv6 Profile
ii.	

[9] SUPPLEMENTARY ATTESTATIONS

☒ 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.	☒ 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.
☐ 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.	☒ 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

-	Happy-Eyeballs	Self-Test		Self-Test		
-	Addr-Arch	Addr-Arch_R1v1.*_C		Addr-Arch_R1v1.*_I		
-	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		
-	IPsec	IPsec_R1v1.*_C		IPsec_R1v1.*_I		
-	IPsec-SHA-512	IPsec-SHA-512_R1v1.*_C		IPsec-SHA-512_R1v1.*_I		
-	SSHV2	Self-Test		Self-Test		
-	TLS	Self-Test		Self-Test		
-	TLS-1.3	Self-Test		Self-Test		
-	Tunneling-IP	Self-Test		Self-Test		

Host Capabilities

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

Router Capabilities

[10] PRODUCT ID/ STACK ID	CAPABILITY SUMMARY
C9500-16X/IOS XE 17.12.1	USGv6-r1:Router+Core+SLAAC+Addr-Arch+OSPF+OSPF-Auth+Link=Ethernet

[11] SUPPORTED CAPABILITY	CAPABILITY	CONFORMANCE		INTEROPERABILITY/FUNCTIONAL		NOTES
		TEST SELECTION	RESULT ID	TEST SELECTION	RESULT ID	
NOTES	**IPv6-ONLY**			**IPv6-ONLY_R1v1.*_F**	UNH-IOL/37339	The DUT displayed IPv6 addresses with characters ”a”, ”b”, ”c”, ”d”, ”e”, and ”f” in uppercase.
PASS	**Core**	**Core_R1v1.*_C**	UNH-IOL/37334	**Core_R1v1.*_I**	UNH-IOL/37336	The SDoC pertains to the IPv6 stack on the following ports: switched ports
-	**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/37334	**SLAAC_R1v1.*_I**	UNH-IOL/37336	The SDoC pertains to the IPv6 stack on the following ports: switched ports
-	**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/37335	**Addr-Arch_R1v1.*_I**	UNH-IOL/37337	The SDoC pertains to the IPv6 stack on the following ports: switched ports
-	**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/37338	The SDoC pertains to the IPv6 stack on the following ports: switched ports
-	**OSPF-IPsec**	**Self-Test**		**Self-Test**		
PASS	**OSPF-Auth**	**Self-Test**		**OSPF-Auth_R1v1.*_I**	UNH-IOL/37338	The SDoC pertains to the IPv6 stack on the following ports: switched ports
-	**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**		

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

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

-	**PIM-SM**	**Self-Test**		**Self-Test**		
-	**PIM-SM-IPsec**	**Self-Test**		**Self-Test**		
-	**PIM-SM-BiDir**	**Self-Test**		**Self-Test**		
-	**Multicast**	**Multicast_R1v1.*_C**		**Multicast_R1v1.*_I**		
-	**ECN**	**Self-Test**		**Self-Test**		
PASS	**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 CAPABILTY 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 “*Self Declaration*” 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