| [1] SU           | [1] SUPPLIER CONTACT INFORMATION                          |   |  |  |  |  |  |  |  |  |
|------------------|---|---|--|--|--|--|--|--|--|--|
|                  |   |   | Signature: <u>Prabhakar Lakhera</u><br>Prabhakar Lakhera (Feb 4, 2022 13:40 PST)   |  |  |  |  |  |  |  |
| [2] PR           | ODUCT VERSION TE  | STED  | [3] PRODUCT ID   |  |  |  |  |  |  |  |
|                  | 1   | 2   | macOS  |  |  |  |  |  |  |  |
|                  |   | [4] PROE  | DUCT FAMILY  |  |  |  |  |  |  |  |
|                  | APPLICABLE SE   | RIES HARDWARE   | APPLICABLE SERIES SOFTW  | /ARE   |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   | COMPOSITE SDOC   |  |  |  |  |  |  |  |
|                  | itary: All of the declared on sed by original test result | capabilities of this product are ts reported in this SDoC.  | are provided by the use and/or integration of u components that have their own unique SDoC   | <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   |  |  |  |  |  |  |
| [6]<br>REF       | SUPPLIER  | PRODUCT ID/STACK ID   | CAPABILITY SUMMARY   | COMPOSITE<br>SDOC LINK   |  |  |  |  |  |  |
| i.               | Apple Inc.  | macOS/12  | USGv6-r1:Host+Core+SLAAC+Addr-Arch+Link=Ethernet   |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  |   |   |  |  |  |  |  |  |  |  |
|                  | Gvo-rii-Capable-Host                                      |   | USGv6-r1-Capable-Switch USGv6-r1-C   |  |  |  |  |  |  |  |
| i.               | NIST SP 500-267Br1,                                       |   | S) REPERENCED  |  |  |  |  |  |  |  |
| ii.              |   |   |  |  |  |  |  |  |  |  |
| 11.              |   | [9] SUPPLEMENT  | ARY ATTESTATIONS   |  |  |  |  |  |  |  |
| <b>√</b> Th      | is product is fully function                              | nal in dual stack environments.   | This product has been tested for the IPv6-   | only capability.   |  |  |  |  |  |  |
| That is          |   | are invalidated if this product is  | 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 n  | deployed in a network environment that does not support IPv4.  |  |  |  |  |  |  |
| unique<br>covere | IPv6 stack in the produc                                  | bilities test report for each<br>t. If not, the stacks/ports not<br>low their IPv6 capabilities differ<br>ed. | implemented such that their capabilities are ide<br>function across the entire product family. The s<br>conformance and interoperability test results fo<br>of an identified member of this product family a | All of the products listed in the product family in section 4 are<br>implemented such that their capabilities are identical in form and<br>function across the entire product family. The specific<br>conformance and interoperability test results for the capabilities<br>of an identified member of this product family are provided in this<br>SDoC. The SDoC attests that these tested capabilities are |  |  |  |  |  |  |

### Host Capabilities

| [10] PRODUC             | T ID/ STACK ID      |                                 |               |                                 | CAPABILITY SUMMARY |       |  |  |
|-------------------------|---------------------|---------------------------------|---------------|---------------------------------|--------------------|-------|--|--|
|                         |                     |                                 |               |                                 |                    |       |  |  |
| [11]                    | CAPABILITY          | CONFO                           | RMANCE        | INTEROPERABIL                   | ITY/FUNCTIONAL     | NOTES |  |  |
| SUPPORTED<br>CAPABILITY |                     | TEST<br>SELECTION               | RESULT ID     | TEST<br>SELECTION               | RESULT ID          |       |  |  |
| -                       | IPv6-ONLY           |                                 |               | IPv6-<br>ONLY_R1v1.*_F          |                    |       |  |  |
| PASS                    | Core                | Core_R1v1.*_C                   | UNH-IOL/34046 | Core_R1v1.*_I                   | UNH-IOL/34047      |       |  |  |
| -                       | 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/34046 | SLAAC_R1v1.*_I                  | UNH-IOL/34047      |       |  |  |
| -                       | PriAddr             | Self-Test                       |               | Self-Test                       |                    |       |  |  |
| -                       | DHCP-<br>Stateless  | DHCP-<br>Stateless_R1v1<br>_*_C |               | DHCP-<br>Stateless_R1v1<br>_*_I |                    |       |  |  |
| -                       | DHCP-Client         | DHCP-<br>Client_R1v1.*_C        |               | DHCP-<br>Client_R1v1.*_I        |                    |       |  |  |
| -                       | DHCP-Client-<br>Ext | Self-Test                       |               | Self-Test                       |                    |       |  |  |
| -                       | DHCP-Prefix         | DHCP-<br>Prefix_R1v1.*_C        |               | DHCP-<br>Prefix_R1v1.*_I        |                    |       |  |  |
| -                       | DHCP-Prefix-<br>Ext | Self-Test                       |               | Self-Test                       |                    |       |  |  |
| -                       | 6Lo                 | Self-Test                       |               | Self-Test                       |                    |       |  |  |

### Host Capabilities

| _    | Happy-Eyeballs      | Self-Test                  |               | Self-Test                  |               |  |
|------|---------------------|----------------------------|---------------|----------------------------|---------------|--|
|      |                     | Addr-                      |               | Addr-                      |               |  |
| PASS | Addr-Arch           | Arch_R1v1.*_C              | UNH-IOL/34048 | Arch_R1v1.*_I              | UNH-IOL/34049 |  |
| -    | 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-<br>Server_R1v1.*_C   |               | DHCP-<br>Server_R1v1.*_I   |               |  |
| -    | DHCP-Server-<br>Ext | Self-Test                  |               | Self-Test                  |               |  |
| -    | DHCP-Relay          | DHCP-<br>Relay_R1v1.*_C    |               | DHCP-<br>Relay_R1v1.*_I    |               |  |
| -    | IPsec               | IPsec_R1v1.*_C             |               | IPsec_R1v1.*_I             |               |  |
| -    | IPsec-SHA-512       | IPsec-SHA-<br>512_R1v1.*_C |               | IPsec-SHA-<br>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<br>.*_C |                  | Multicast_R1v1<br>.*_I |                  |  |
| -    | ECN             | Self-Test              |                  | Self-Test              |                  |  |
| PASS | Link = Ethernet | Self-Test              | Self Declaration | Self-Test              | Self Declaration |  |

### **Router Capabilities**

| [10] PRODUC                     | T ID/ STACK ID      |                             |                    |                                    | CAPABILITY SUMMARY          |       |  |  |
|---------------------------------|---------------------|-----------------------------|--------------------|------------------------------------|-----------------------------|-------|--|--|
|                                 |                     |                             |                    |                                    |                             |       |  |  |
| [11]<br>SUPPORTED<br>CAPABILITY | CAPABILITY          | CONFOR<br>TEST<br>SELECTION | MANCE<br>RESULT ID | INTEROPERABIL<br>TEST<br>SELECTION | ITY/FUNCTIONAL<br>RESULT ID | NOTES |  |  |
| -                               | IPv6-ONLY           | OLLOHON                     |                    | IPv6-<br>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                     |                             |       |  |  |
| -                               | PrivAddr            | Self-Test                   |                    | Self-Test                          |                             |       |  |  |
| -                               | DHCP-Prefix         | DHCP-<br>Prefix_R1v1.*_C    |                    | DHCP-<br>Prefix_R1v1.*_I           |                             |       |  |  |
| -                               | DHCP-Prefix-<br>Ext | Self-Test                   |                    | Self-Test                          |                             |       |  |  |
| -                               | 6Lo                 | Self-Test                   |                    | Self-Test                          |                             |       |  |  |
| -                               | Addr-Arch           | Addr-<br>Arch_R1v1.*_C      |                    | Addr-<br>Arch_R1v1.*_I             |                             |       |  |  |
| -                               | CGA                 | Self-Test                   |                    | Self-Test                          |                             |       |  |  |

#### **Router Capabilities**

|   |                     | Oalf 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-<br>Server_R1v1.*_C | DHCP-<br>Server_R1v1.*_I | 1 |
| - | DHCP-Server-<br>Ext | Self-Test                | Self-Test                |   |
| - | DHCP-Relay          | DHCP-<br>Relay_R1v1.*_C  | DHCP-<br>Relay_R1v1.*_I  |   |
| - | OSPF                | Self-Test                | OSPF_R1v1.*_I            |   |
| - | OSPF-IPsec          | Self-Test                | Self-Test                |   |
| - | OSPF-Auth           | Self-Test                | OSPF-<br>Auth_R1v1.*_I   |   |
| - | 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                |   |

|   |                       | Self-Test                      | BC  | GP_R1v1.*_I                |  |  |  |
|---|-----------------------|--------------------------------|-----|----------------------------|--|--|--|
| - | BGP                   |                                |     |                            |  |  |  |
| - | 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_R1v<br>1.*_C         |     | _Router_R1v<br>1.*_I       |  |  |  |
| - | VRRP                  | Self-Test                      |     | Self-Test                  |  |  |  |
| - | IPsec                 | IPsec_R1v1.*_C                 | IPs | sec_R1v1.*_I               |  |  |  |
| - | IPsec-VPN             | IPsec-<br>VPN_R1v1.*_C         |     | IPsec-<br>PN_R1v1.*_I      |  |  |  |
| - | IPsec-SHA-512         | IPsec-SHA-<br>512_R1v1.*_C     | 51  | Psec-SHA-<br>12_R1v1.*_I   |  |  |  |
| - | IPsec-SHA-512-<br>VPN | IPsec-SHA-512-<br>VPN_R1v1.*_C | VF  | ec-SHA-512-<br>PN_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 |  |

#### **Router Capabilities**

| - | PIM-SM       | PIM_SM_R1v1.*<br>_ <sup>C</sup> | PIM_SM_R1v1.*<br>_I    |  |
|---|--------------|---------------------------------|------------------------|--|
| - | PIM-SM-IPsec | Self-Test                       | Self-Test              |  |
| - | PIM-SM-BiDir | Self-Test                       | Self-Test              |  |
| - | Multicast    | Multicast_R1v1.<br>*_C          | Multicast_R1v1.<br>*_I |  |
| - | ECN          | Self-Test                       | Self-Test              |  |
| - | Link =       | Self-Test                       | Self-Test              |  |

### **Application Capabilities**

| [10] PRODUC                     | T ID/ STACK ID |                            |                     |                                    | CAPABILITY SUMMARY          |       |  |
|---------------------------------|----------------|----------------------------|---------------------|------------------------------------|-----------------------------|-------|--|
|                                 |                |                            |                     |                                    |                             |       |  |
| [11]<br>SUPPORTED<br>CAPABILITY | CAPABILITY     | CONFO<br>TEST<br>SELECTION | RMANCE<br>RESULT ID | INTEROPERABIL<br>TEST<br>SELECTION | ITY/FUNCTIONAL<br>RESULT ID | NOTES |  |
| -                               | IPv6-ONLY      |                            |                     | IPv6-<br>ONLY_R1v1.*_F             |                             |       |  |
| -                               | App-Serv=      |                            |                     | APP-<br>ONLY_R1v1.*_F              |                             |       |  |
| -                               | Link =         |                            |                     | Self-Test                          |                             |       |  |

### NPP Capabilities

| [10] PRODUC             | T ID/ STACK ID |                   |           |                        | CAPABILITY SUMMARY |       |  |
|-------------------------|----------------|-------------------|-----------|------------------------|--------------------|-------|--|
|                         |                |                   |           |                        |                    |       |  |
| [11]                    | CAPABILITY     | CONFOF            | MANCE     | INTEROPERABILI         | TY/FUNCTIONAL      | NOTES |  |
| SUPPORTED<br>CAPABILITY |                | TEST<br>SELECTION | RESULT ID | TEST<br>SELECTION      | RESULT ID          |       |  |
| -                       | IPv6-ONLY      |                   |           | IPv6-<br>ONLY_R1v1.*_F |                    |       |  |
| -                       | FW             | FW_R1v1.*_C       |           |                        |                    |       |  |
| -                       | APFW           | Self-Test         |           |                        |                    |       |  |
| -                       | IDS            | FW_R1v1.*_C       |           |                        |                    |       |  |
| -                       | IPS            | FW_R1v1.*_C       |           |                        |                    |       |  |
| -                       | Link =         | Self-Test         |           |                        |                    |       |  |

| [10] PRODUC             | T ID/ STACK ID |                   |           |                        |              | CAPABILITY SUMMARY |  |  |
|-------------------------|----------------|-------------------|-----------|------------------------|--------------|--------------------|--|--|
| [11]                    | CAPABILITY     | CONFOR            | MANCE     | INTEROPERABILIT        | Y/FUNCTIONAL |                    |  |  |
| SUPPORTED<br>CAPABILITY |                | TEST<br>SELECTION | RESULT ID | TEST SELECTION         | RESULT ID    | NOTES              |  |  |
| -                       | IPv6-ONLY      |                   |           | IPv6-<br>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              |              |                    |  |  |

|    | SUPPLIER CONTACT INFORMATION | Supplier name, address, phone, 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   |
| ŀ  | 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.   |
| 3  | PROFILE(S) REFERENCED        | Profile(s) referenced in the SDoC.  |
| )  | SUPPLEMENTARY ATTESTATIONS   | Attestations made by the supplier. Check all that apply.  |
| 0  | 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 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.  |

# NIST.SP.500-281Ar1s-macOS-12

#### Final Audit Report

2022-02-04

| Created:        | 2022-02-04                                   |
|-----------------|--|
| Ву:             | MICHAYLA NEWCOMBE (mnewcombe@iol.unh.edu)    |
| Status:         | Signed                                       |
| Transaction ID: | CBJCHBCAABAASirOVGeYo1LqlCyMi6e5No6_GFw0X161 |

## "NIST.SP.500-281Ar1s-macOS-12" History

- Document created by MICHAYLA NEWCOMBE (mnewcombe@iol.unh.edu) 2022-02-04 9:09:12 PM GMT- IP address: 24.63.13.179
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