

# Software Upgrade Matrix for ONS 15454

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## Software Upgrade Matrix for the Cisco ONS 15454 (SONET and SDH) MSTP

The following table lists the upgrade paths supported in the Cisco ONS 15454 (SONET and SDH) platform:



**Note** The upgrade matrix contains the recommended upgrade paths. It is possible to upgrade to a release through a shorter upgrade path instead of multiple paths. The matrix does not include this shorter path, as this is not tested.



**Note** NCS2K-S, NCS2K-F, and NCS2K-L packages are not supported in ONS 15454 M12 during upgrade from any release preceding to R11.x and later.

**Table 1: Supported Software Upgrades for the Cisco ONS 15454 (SONET and SDH) MSTP**

Release	Upgrade Options
8.x	9.2.1.3
9.0.x <sup>1</sup>	9.2.1.3, 9.6.0.8 <sup>1,2,5</sup>
9.1.x	9.2.1.3, 9.6.0.8 <sup>1,2,5</sup>
9.2.0 <sup>3</sup>	9.2.1.3, 9.2.3 <sup>5</sup> , 9.6.0.8 <sup>1,2,5</sup>
9.2.1.x <sup>1</sup>	9.2.1.3, 9.6.0.8 <sup>1,2,5</sup> , 9.6.1.3 <sup>1,2,5</sup> , 10.0 <sup>1,2,4,5</sup> , 10.0.1.1 <sup>1,2,4,5</sup> , 10.0.1.2 <sup>1,2,4,5</sup> , 10.1.0.2 <sup>1,2,4,5</sup> , 10.5 <sup>4,6</sup> , 10.5.2.4 <sup>4,6,7,9</sup>
9.2.2.x <sup>1</sup>	9.2.3 <sup>4,5</sup> , 9.6.0.8 <sup>1,2,4,5</sup> , 10.0 <sup>1,2,4,5</sup> , 10.1.0.2 <sup>1,2,4,5</sup>
9.2.3 <sup>1,5</sup>	9.6.0.8 <sup>1,2</sup>
9.3.0.x <sup>1</sup>	9.6.0.8 <sup>1</sup>
9.4.0.x <sup>1</sup>	9.6.0.8 <sup>1</sup>
9.6.0 <sup>1,4</sup>	9.6.1.3, 9.8.1.3, 10.0.1.2 <sup>4</sup> , 10.3.0.2 <sup>4</sup>

Release	Upgrade Options
9.6.0.3 <sup>1,4</sup> , 9.6.0.4 <sup>1,4</sup>	9.6.1.3, 9.8.1.3, 10.0.2 <sup>4</sup> , 10.1.0.2 <sup>4</sup> , 10.3.0.2 <sup>4</sup>
9.6.0.5 <sup>1</sup> , 9.6.0.6 <sup>1</sup> , 9.6.0.7 <sup>1</sup> , 9.6.0.8 <sup>1</sup>	9.6.1.3, 10.1.0.2, 10.3.0.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup>
9.6.1.1	9.6.1.3, 10.1.0.2, 10.3.0.2, 10.5 <sup>6</sup> , 10.5.2.6 <sup>6,7,9</sup>
9.6.1.3 <sup>1</sup> , <sup>7</sup>	10.1.0.2, 10.3.0.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup> , 10.6.1.1 <sup>6,7,9</sup> , 10.6.2 <sup>6,7,9</sup> , 10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 10.8 <sup>6,7,9</sup> , 10.9 <sup>6,7,9</sup> , R11.0 <sup>6,7,9</sup> <sup>8</sup>
9.8.0 <sup>1</sup>	9.8.1.3, 10.0.1.2, 10.0.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup>
9.8.1.x <sup>1</sup>	10.1.0.2, 10.5 <sup>6</sup>
9.8.1.3 <sup>7</sup>	10.5.2.6 <sup>6,7,9</sup> , 10.6.1.1 <sup>6,7,9</sup> , 10.6.2 <sup>6,7,9</sup> , 10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup>
10.0.x <sup>1</sup>	10.0.1.2, 10.0.2, 10.3.0.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup>
10.0.1 <sup>1</sup>	10.0.1.2, 10.0.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup>
10.0.1.1 <sup>1</sup>	10.0.1.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup> , 10.6.1.1 <sup>6,7,9</sup>
10.0.1.2 <sup>1</sup>	10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup> , 10.6.1.1 <sup>6,7,9</sup>
10.0.2 <sup>1</sup>	10.1.0.2, 10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7,9</sup>
10.1.x.x <sup>1</sup>	10.3.0.2, 10.5 <sup>6,9</sup> , 10.5.2.4 <sup>6,7,9</sup> , 10.6.1 <sup>6,7,9</sup>
10.1.0.2	10.6.1.1 <sup>6,7,9</sup>
10.3.x.x <sup>1</sup>	10.5 <sup>6</sup> , 10.5.2.4 <sup>6,7</sup> <sup>10</sup>
10.3.0.1	10.5.2.7 <sup>6,7,9</sup>
10.3.0.2 <sup>7</sup>	10.6.2 <sup>6,7,9</sup> , 10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup>
10.5.x.x <sup>1,6</sup>	10.5.2.4 <sup>6,7,9</sup> , 10.6.1 <sup>6,7,9</sup>
10.5.0	10.6.1.1 <sup>6,7,9</sup> , 10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup>
10.5.2	10.6.1.1 <sup>6,7,9</sup>
10.5.2.3	10.5.2.6 <sup>6,7,9</sup>
10.5.2.4	10.5.2.7 <sup>6,7,9</sup> , 10.6.1 <sup>6,7,9</sup> , 10.8 <sup>6,7,9</sup> , 10.9 <sup>6,7,9</sup>
10.5.2.7 <sup>7</sup>	10.6.1.1 <sup>6,7,9</sup> , 10.6.2 <sup>6,7,9</sup> , 10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 10.8 <sup>6,7,9</sup> , 10.9 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup>
10.6.1 <sup>7</sup>	10.6.2 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 10.8 <sup>6,7,9</sup> , 10.9 <sup>11</sup> , 11.0 <sup>6,7,9</sup>
10.6.0.1	10.7.0.1 <sup>6,7,9</sup> , 10.7.0.2 <sup>6,7,9</sup>

Release	Upgrade Options
10.6.1.1	10.6.1.2 <sup>6,7,9</sup> , 10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 10.8 <sup>6,7,9</sup> , 10.9 <sup>6,7,9</sup>
10.6.2 <sup>7</sup>	10.7 <sup>6,7,9</sup> , 10.7.0.1 <sup>6,7,9</sup> , 10.7.0.2 <sup>6,7,9</sup> , 10.8 <sup>6,7,9</sup> , 10.9 <sup>6,7,9</sup> , 10.9.0.1 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup> , 11.1 <sup>6,7,9</sup> , 11.1.2 <sup>6,7,9</sup> , 11.1.2.3 <sup>6,7,9</sup>
10.7	10.8 <sup>6,7,9</sup> , 10.9 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup>
10.7.0.1 <sup>12</sup>	10.9 <sup>6,7,9</sup>
10.7.0.2	11.0 <sup>6,7,9</sup> , 11.1 <sup>6,7,9</sup> , 11.1.2 <sup>6,7,9</sup>
10.8	10.9 <sup>6,7,9</sup> , 10.9.0.1 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup> , 11.1 <sup>6,7,9</sup>
10.9	10.9.0.1 <sup>6,7,9</sup> , 10.9.0.2 <sup>6,7,9</sup> , 11.0 <sup>6,7,9</sup> , 11.1 <sup>6,7,9</sup> , 11.1.1.2 <sup>6,7,9</sup> , 11.1.2 <sup>6,7,9</sup>
10.902	11.1.2 <sup>6,7,9</sup>
11.0	11.1 <sup>6,7,9</sup> , 11.1.1.2 <sup>6,7,9</sup>
11.1	11.1.1.2 <sup>6,7,9</sup> , 11.1.2 <sup>6,7,9</sup>
11.1.1.2	11.1.2 <sup>6,7,9</sup> , 11.1.2.3 <sup>6,7,9</sup> , 11.1.1.4 <sup>6,7,9</sup>
11.1.2	11.1.2.3 <sup>6,7,9</sup>
10.6.2 <sup>6,7,9</sup> , 10.9.0.2 <sup>6,7,9</sup> , 11.1.1.2 <sup>6,7,9</sup> , 11.1.2 <sup>6,7,9</sup> , 11.1.2.3 <sup>6,7,9</sup> , 11.1.1.4 <sup>6,7,9</sup>	11.1.3
10.6.2 <sup>9</sup> , 10.902 <sup>9</sup> , 11.1.2 <sup>9</sup> , 11.1.1.2 <sup>9</sup> , 11.1.2.3 <sup>9</sup> , 11.1.3 <sup>9</sup> , 11.1.1.4 <sup>9</sup>	11.1.3.1
11.1.2 <sup>9</sup> , 11.1.2.3 <sup>9</sup> , 11.1.3 <sup>9</sup> , 11.1.1.4 <sup>9</sup> , 11.1.3.1 <sup>9</sup>	11.1.3.2

<sup>1</sup> To upgrade a TCC2/TCC2P node with more than three subtending shelves, upgrade the controller card in the node controller to TCC3. To upgrade a TCC2/TCC2P node in a multi-shelf configuration with less than three subtending shelves to R10.0 or later releases, it is recommended to upgrade the node controller to TCC3 due to memory limitations on the TCC2/TCC2P card. The TCC2/TCC2P cards can be used as a subtended controller and also in a stand-alone configuration.

<sup>2</sup> To upgrade a multi-shelf node to a release later than R 9.3.0, refer to the table, "Multishelf Configurations - Supported Packages in the *Cisco ONS 15454 Upgrade Guide*".

<sup>3</sup> To upgrade a SONET multi-shelf node from R9.2.0 and earlier, perform a step upgrade to R9.2.1.3.

<sup>4</sup> To upgrade SDH nodes from R9.6.0.5 and earlier, perform a step upgrade to R9.6.0.8 or R9.6.1.3 before upgrading to R10.x or later release.

<sup>5</sup> TSCE and TNCE cards are supported in R9.2.3 and later releases.

<sup>6</sup> TNCS cards are supported in R10.5 and later releases. TNCS-2 and TNCS-20 cards are supported in R11.0 and later releases.

<sup>7</sup> TCC2P is not supported from R10.6.2, it is mandatory to upgrade to TCC3, before upgrading the software to R10.6.2 or later releases. For releases, 10.5.2.4, 10.5.2.6, 10.5.2.7, 10.6.1, TCC2P is supported, but, it is recommended to upgrade to TCC3.

<sup>8</sup> The shelf with WSE card must not be directly upgraded from R9.x to R11.x; otherwise, the WSE card will not boot.

- <sup>9</sup> Upgrade can affect traffic for the 100GS-CK-LC card.
- <sup>10</sup> TNCS-O cards are supported in R10.5.2.x and later releases.
- <sup>11</sup> This upgrade is supported only on the WSON package.
- <sup>12</sup> The upgrade from R10.7.0.1 to 10.8 is not supported.

