Automated Upgrade/Downgrade Process

# Mesh Configured State (Test Case: 1 Controller, 2 Nodes (1 wired, 1 wireless))

1. Upgrade e.g. 3.0.00.15 > 3.0.00.16 (we should be able to use any version in this case)
   1. Log in to the Mesh Controller using specified credentials
      1. Username: araknis
      2. Password: SnapAV704
   2. Navigate to File Management
   3. Validate the connection status and firmware version for the controller, node1 and node2. E.g. 3.0.00.15
   4. Select Browse for the firmware file selection
   5. Select the next firmware, in this case, 3.0.00.16
   6. Open the firmware file into the Controller
   7. Select Upload
   8. Allow time for the firmware to upload.
   9. Upgrade All units based on the preconfigured test case above
   10. Select “yes” to the upgrade prompt
   11. Allow 10 minutes time to pass (or some sort of logical check to know when the controller is fully rebooted)
   12. Login to the controller using the same credentials
   13. Navigate to Wi-Fi setup
   14. Validate that the Controller and Nodes connection status (online – keeping checking until everything is online), and then validate that the version that was just uploaded, is now successfully shown for Controller1, Node1, and Node2.
   15. As part of the verification of step n, if the system did not fully upgrade to the expected version, put a retry mechanism in place to attempt that update 2 or 3 more times for which ever piece did not update (controller, node1, node2).
2. Downgrade e.g. 3.0.00.16 > 3.0.00.15 (we should be able to use any version in this case)
   1. Log in to the Mesh Controller using specified credentials
      1. Username: araknis
      2. Password: SnapAV704
   2. Navigate to File Management
   3. Check the firmware version for the controller, node1 and node2. E.g. 3.0.00.16
   4. Select Browse for the firmware file selection
   5. Select the next firmware, in this case, 3.0.00.15
   6. Open the firmware file into the Controller
   7. Select Upload
   8. Allow time for the firmware to upload.
   9. Upgrade All units based on the preconfigured test case above
   10. Select “yes” to the upgrade prompt
   11. Allow 10 minutes time to pass (or some sort of logical check to know when the controller is fully rebooted)
   12. Login to the controller using the same credentials
   13. Navigate to WiFi setup
   14. Validate that the Controller and Nodes connection status (online – keeping checking until everything is online), and then validate that the version that was just uploaded, is now successfully shown for Controller1, Node1, and Node2.
   15. As part of the verification of step n, if the system did not fully downgrade to the expected version, put a retry mechanism in place to attempt that update 2 or 3 more times for which ever piece did not downgrade (controller, node1, node2).
3. Cycle step 1 and step 2 for 3 rounds, ending the test with the firmware you started with, in this example 3.0.00.15.

# Upgrade/Downgrade Reliability

Running the test above, make sure to follow the guidelines below:

1. The ability to upgrade from the 5 most recent released firmware’s available to the test version.
2. Upgrade from the test version to the dummy version
3. Each upgrade of firmware (e.g. v1 > v2) should be performed 3 times each

# Fault Insertion Upgrade Reliability

Please use the guidelines and steps below:

1. Pulling power via PSU (Wireless Node)
   1. Disable Wattbox outlet at 25% of the progress bar - make sure to use a network port with PoE disabled.
   2. Disable Wattbox outlet at 50% of the progress bar - make sure to use a network port with PoE disabled.
   3. Disable Wattbox outlet at 75% of the progress bar - make sure to use a network port with PoE disabled.
2. Pulling Power via PoE (Wired Node)
   1. Disable the PoE on the connected network port at 25% of the progress bar
   2. Disable the PoE on the connected network port at 50% of the progress bar
   3. Disable the PoE on the connected network port at 75% of the progress bar
3. Pulling network (All Units)
   1. Disable the Data port on the connected network port at 25% of the progress bar. Make sure the PoE is disabled and the unit is being powered by the Wattbox.
   2. Disable the Data port on the connected network port at 50% of the progress bar. Make sure the PoE is disabled and the unit is being powered by the Wattbox.
   3. Disable the Data port on the connected network port at 75% of the progress bar. Make sure the PoE is disabled and the unit is being powered by the Wattbox.

Upgrade e.g. 3.0.00.15 > 3.0.00.16 (we should be able to use any version in this case)

* 1. Log in to the Mesh Controller using specified credentials
     1. Username: araknis
     2. Password: SnapAV704
  2. Navigate to File Management
  3. Validate the connection status and firmware version for the controller, node1 and node2. E.g. 3.0.00.15
  4. Select Browse for the firmware file selection
  5. Select the next firmware, in this case, 3.0.00.16
  6. Open the firmware file into the Controller
  7. Select Upload
  8. Allow time for the firmware to upload.
  9. Upgrade All units based on the preconfigured test case above
  10. Select “yes” to the upgrade prompt
  11. At the given times mentioned above, please execute all cases 1-3 at each status of the progress bar during the update process.
      1. Step k should be performed on all components, Controller, and each Node.
  12. After each step is executed, enable to the wattbox port/network port, and allow 3-5 minutes to attempt login to the controller.
  13. Login to the controller using the same credentials
  14. Navigate to Wi-Fi setup
  15. Validate that the Controller and Nodes connection status (online – keeping checking until everything is online), and then validate that the version that was just uploaded, is now successfully shown for Controller1, Node1, and Node2.
  16. As part of the verification of step n, if the system did not fully upgrade to the expected version, put a retry mechanism in place to attempt that update 2 or 3 more times for which ever piece did not update (controller, node1, node2).

**Print/log Results:**

Log results should look like something below (Minus the spaces, they are to show the different output types):  
  
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Firmware Upgrade/Downgrade Test Test Start Date : 2021-02-07 18:35

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Sun Feb 7 18:36:38 2021 – Upgrade Initiated  
Sun Feb 7 18:46:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success!!  
  
Sun Feb 7 18:56:38 2021 – Downgrade Initiated  
Sun Feb 7 19:06:38 2021 – Downgrade from 3.0.00.18 to 3.0.00.17 Success!!  
  
Sun Feb 7 19:16:38 2021 – Upgrade Initiated  
Sun Feb 7 19:26:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Failed (Controller, Node1, Node2)  
Sun Feb 7 19:36:38 2021 – Upgrade Retry to Mesh System  
Sun Feb 7 19:46:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success!!  
  
Sun Feb 7 19:56:38 2021 – Upgrade Initiated  
Sun Feb 7 20:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success (Controller, Node1)  
Sun Feb 7 20:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Failed (Node2)  
Sun Feb 7 20:16:38 2021 – Upgrade Retry to Node2  
Sun Feb 7 20:26:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Node2 Success  
  
Sun Feb 7 20:36:38 2021 – Upgrade Initiated  
Sun Feb 7 20:46:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success (Controller, Node1, Node2)  
Sun Feb 7 20:46:38 2021 – Node1 has been defaulted  
Sun Feb 7 20:56:38 2021 – Node1 configuration  
Sun Feb 7 21:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success!!  
  
Sun Feb 7 20:36:38 2021 – Upgrade Initiated  
Sun Feb 7 20:46:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success (Controller, Node1)  
Sun Feb 7 20:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Failed (Node2)  
Sun Feb 7 20:46:38 2021 – Node2 has been defaulted  
Sun Feb 7 20:56:38 2021 – Login setup to Node2  
Sun Feb 7 20:56:38 2021 – Upgrade Retry to Node2  
Sun Feb 7 21:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success Node3  
  
Sun Feb 7 21:16:38 2021 – Upgrade Initiated  
Sun Feb 7 21:26:38 2021 – Node2 has been defaulted  
Sun Feb 7 21:36:38 2021 – Login setup to Node2  
Sun Feb 7 21:46:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Success!!  
  
  
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Test Results:

Successful Upgrade/Total Upgrades: 17/20  
Successful Downgrade/Total Downgrades: 17/20  
Failed Upgrade/Total Upgrades: 3/20  
 - Sun Feb 7 19:26:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Failed (Controller, Node1, Node2)  
 - Sun Feb 7 20:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Failed (Node2)  
 - Sun Feb 7 20:06:38 2021 – Upgrade from 3.0.00.17 to 3.0.00.18 Failed (Node2)  
Upgrade Defaults/Total Upgrades: 2/20  
 - Sun Feb 7 20:46:38 2021 – Node2 has been defaulted  
 - Sun Feb 7 21:26:38 2021 – Node2 has been defaulted

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