# SmartMedia Minor upgrade

## with minimal downtime

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# SmartMedia Minor upgrade

**Introduction**

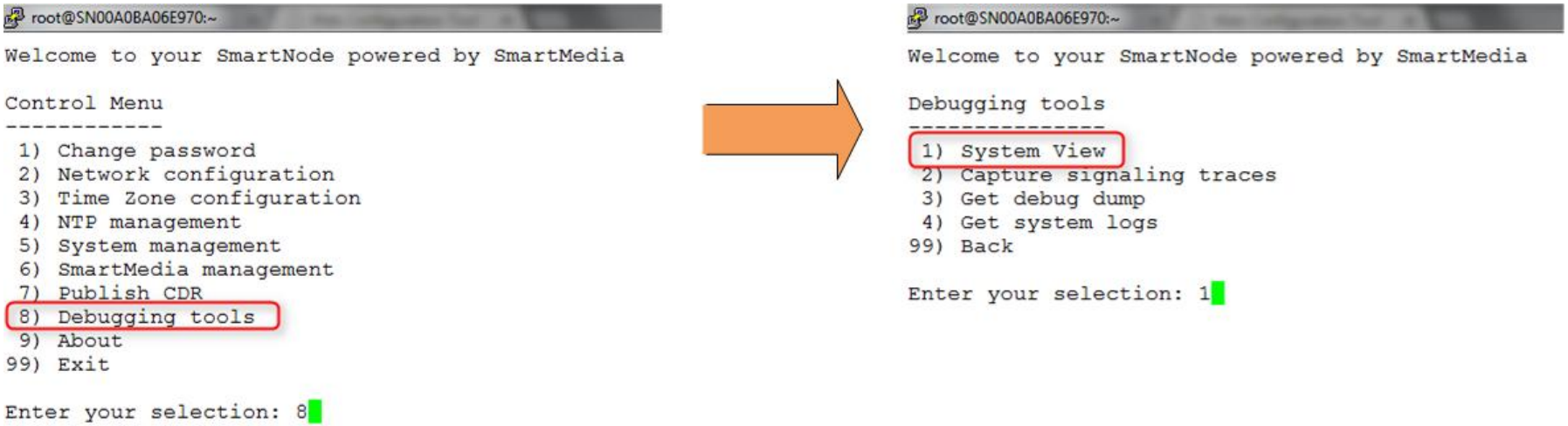
- SmartMedia upgrade around the same Major release (fe. 2.8) is considered Minor upgrade (our example will present a 2.8.63 to 2.8.68 upgrade)
- start by downloading an appropriate SmartMedia software update from http://www.patton.com/support/upgrades/ website
- procedure is divided into two parts:
  - **non service affective** – all activities will be performed in background and should be transparent for production traffic
  - **service affective** – SmartMedia software will be restarted, TelcoBoard will be taken offline for a while, calls will be dropped
- on SN10300 running N+1 it's possible to avoid service downtime since N+1 Backup Unit will kick in when Active Units will be upgraded. Still however calls will be dropped.
- **please be sure that you have created and downloaded to your computer an up to date configuraton backup before proceeding with this procedure**

# SmartMedia Minor upgrade

**Non service affective**

- **further presented steps are transparent for the normal operations performed by SN10k Units**
- good practice is to monitor the whole upgrade process from the ‘System View’ CLI application
- it allows to maintain a comprehensive overview of the performed tasks and progress

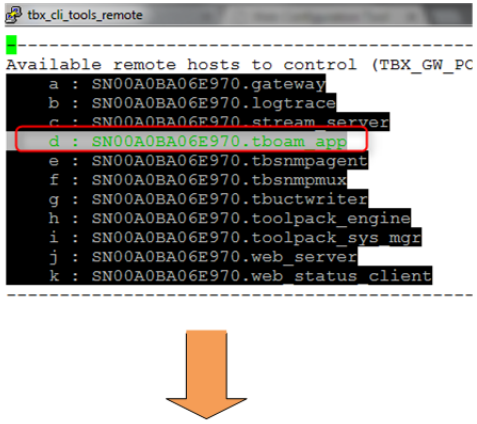
- log into the SSH CLI using ‘admin’ user and navigate to ‘8) Debugging Tools -> 1) System View’

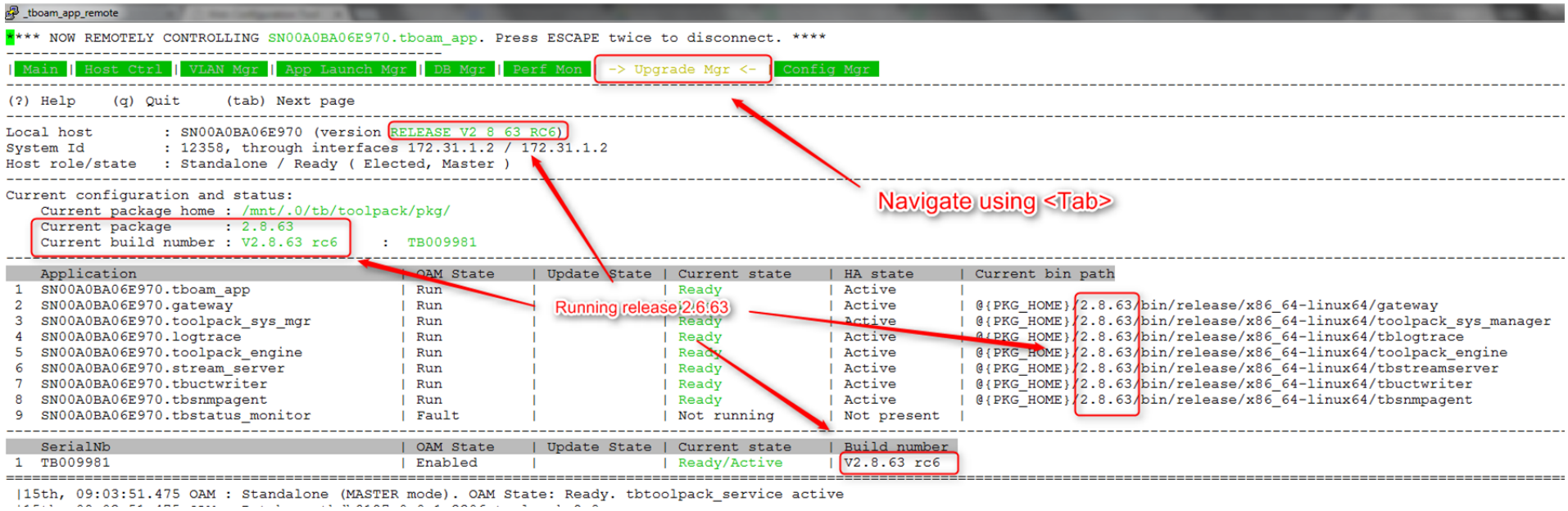


# SmartMedia Minor upgrade

**Non service affective**

- be sure to run your terminal in full screen mode
- in the first window of 'System View' tool navigate to 'tboam_app' application and press Enter
- using Tab key navigate to '-> Upgrade Mgr <-' view
- **please remember that from this point on in order to exit tboam_app monitor you should pres 2x Escape button**; using '(q) Quit' will shutdown tboamapp process

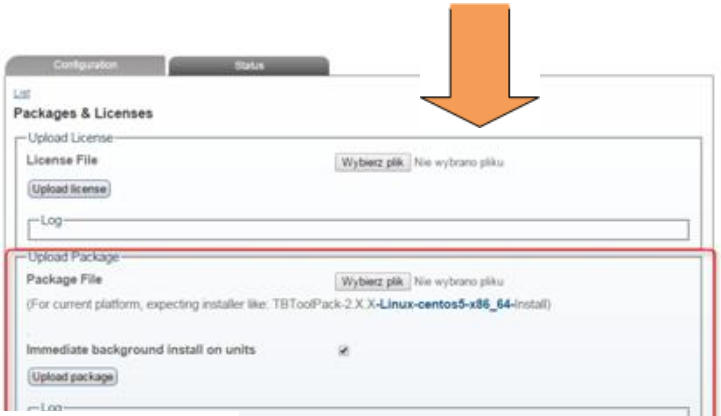


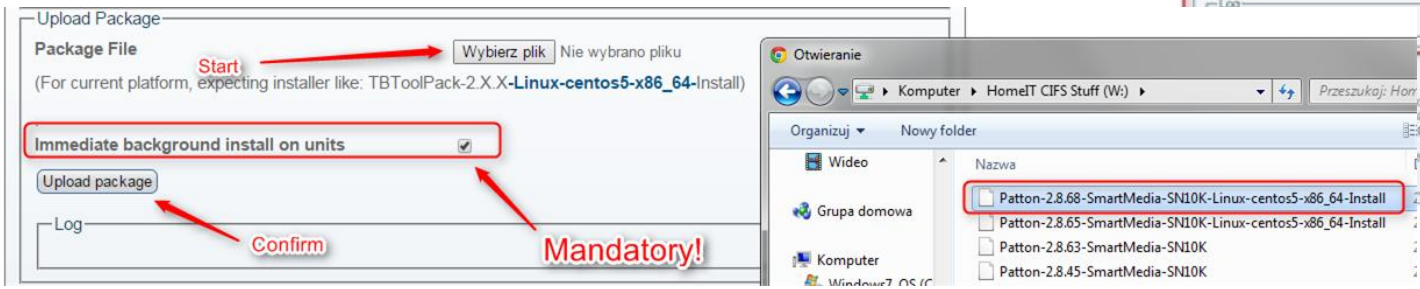



# SmartMedia Minor upgrade

**Non service affective**

- login to the Web Portal and navigate ‘Menu -> Maintenance -> Packages and Licenses’
- in the ‘Upload Package’ section choose the SmartMedia file downloaded to your computer
- **be sure to check ‘Immediate background install on units’ option**
- confirm the upload process with ‘Upload package’ button

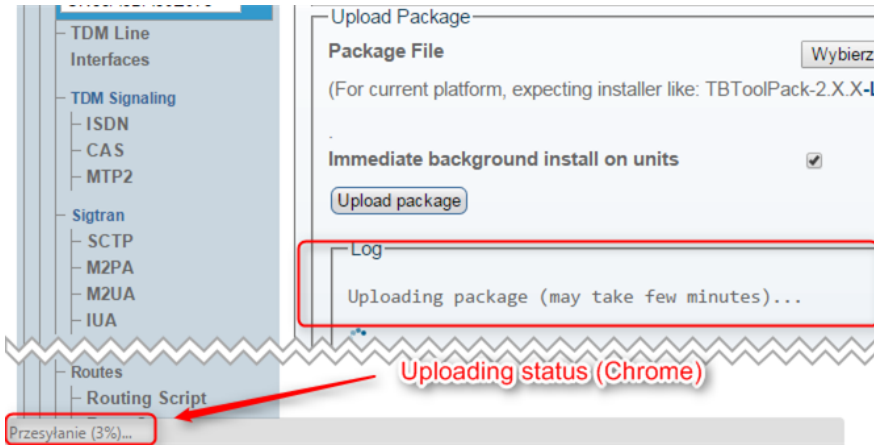


# SmartMedia Minor upgrade

**Non service affective**

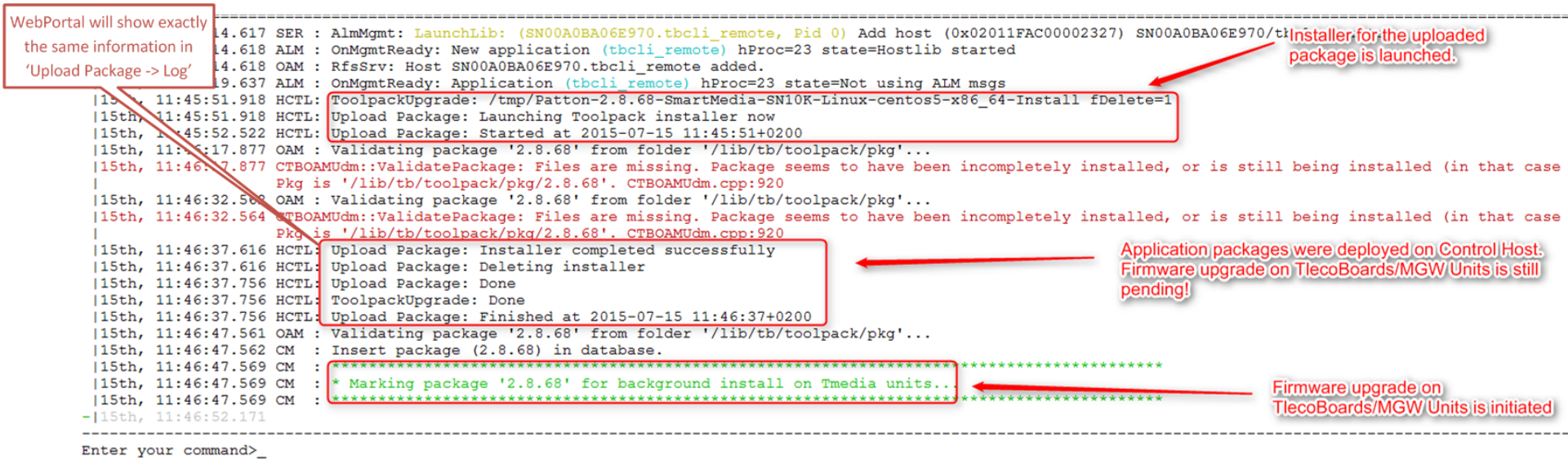
- wait until the package is uploaded to the Control Host
- Smart Media package is around 200 MB
- upload speed is directly related to the connection you have with SN10k Unit
- fe. Chrome browser informs you about the HTTP POST operation progress on the window bottom status bar
- **please note that Upload Log state „Installer completed succesfully" doesn't mean the Minor Upgrade is over!**



# SmartMedia Minor upgrade

**Non service affective**

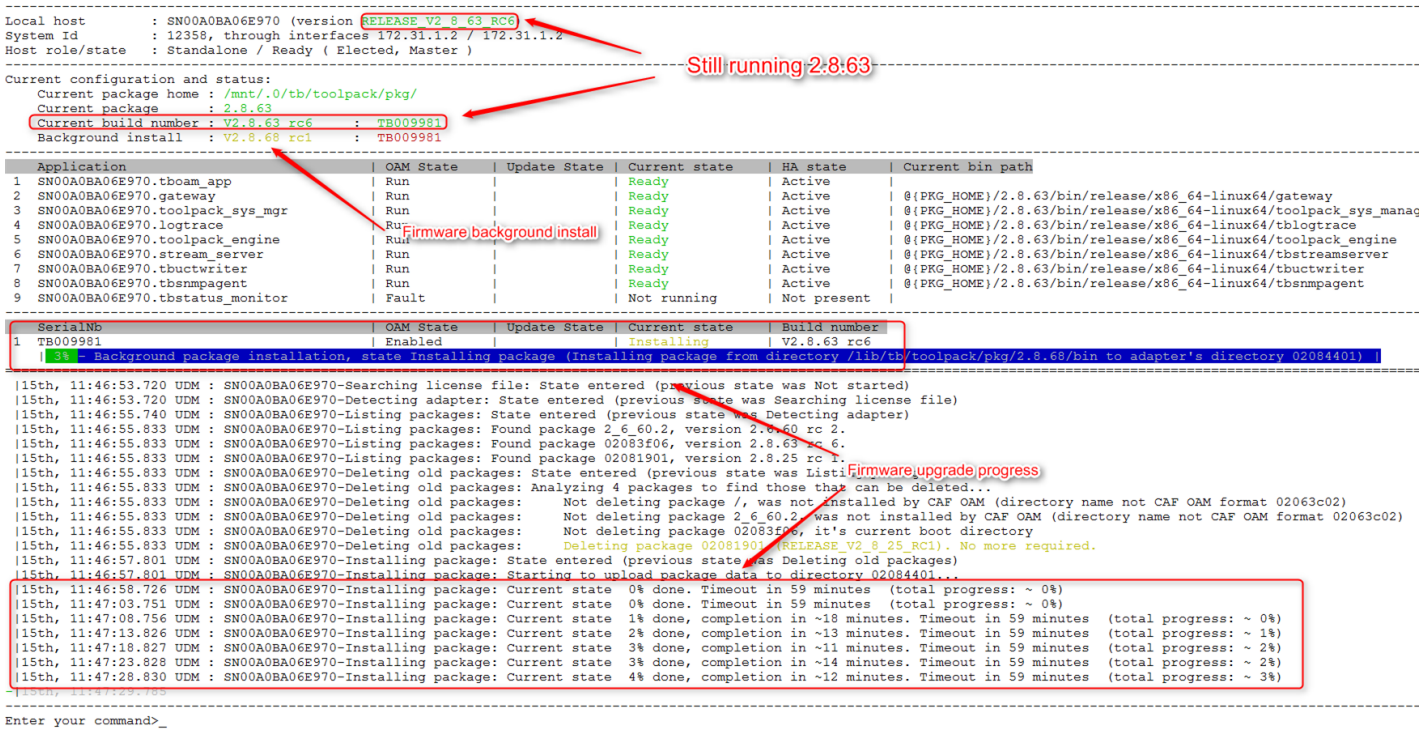
- switch to ‘System View’ terminal and observe the current upload status
- after the package is uploaded, SmartMedia installer copies the binaries to the Control Host filesystem /mnt/.0/tb/toolpack/pkg directory; completing this task is reported with „Installer completed successfully”
- from this moment on background installation on TelcoBoards is started
- background installation uploads appropriate firmware on the TelcoBoard’s flash storage



# SmartMedia Minor upgrade

**Non service affective**

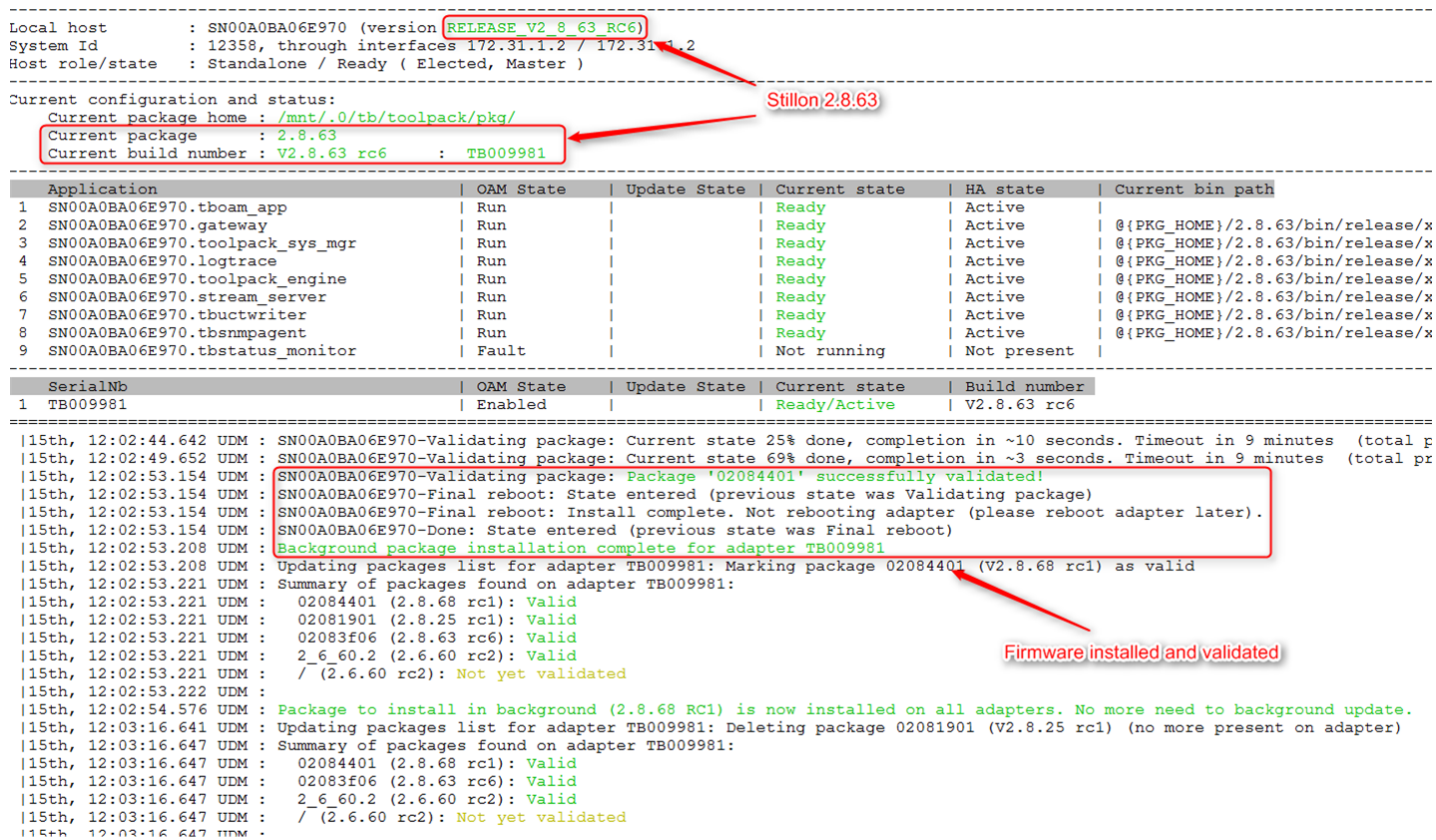
- please note that the system is still running the old software release
- background installation process may take even up to 15 minutes per TelcoBoard, depending on the processed traffic
- please monitor the background upgrade status using ‘System View’ application



# SmartMedia Minor upgrade

**Non service affective**

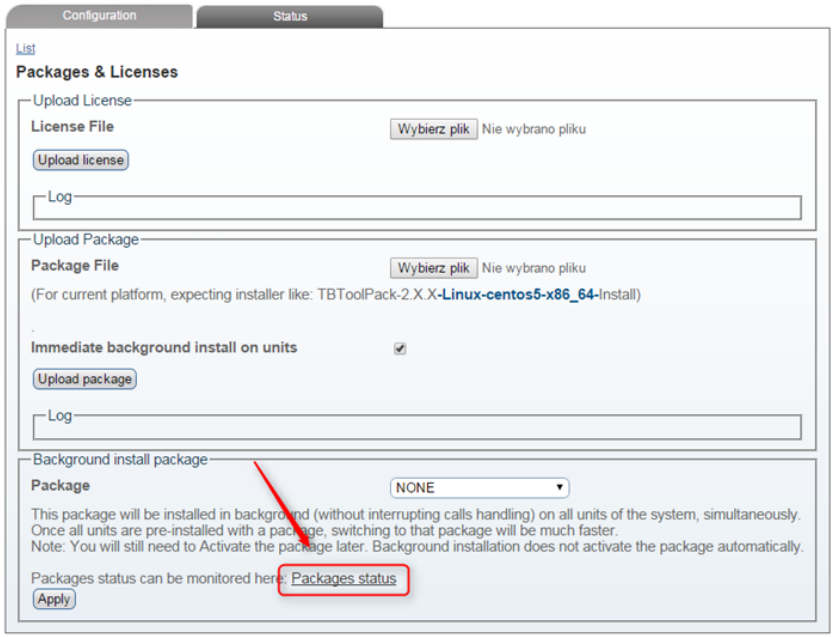
- please wait until tboam_app monitor presents a „Background package installation complete” log entry
- now you can be sure that the firmware is properly installed on the TelcoBoard(s)

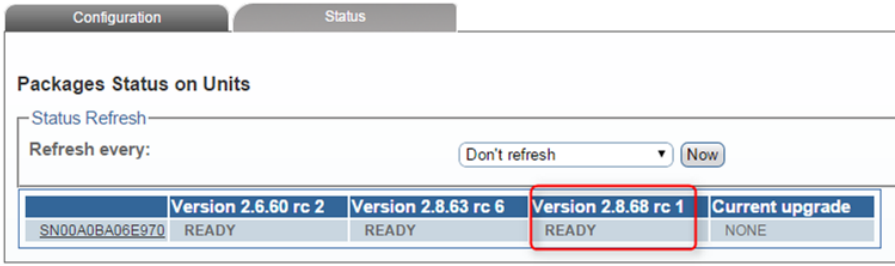


# SmartMedia Minor upgrade

**Non service affective**

- we can confirm the TelcoBoard firmware status from WebPortal
- go to the Web Portal and navigate ‘Menu -> Maintenance -> Packages and Licenses’
- in the ‘Background install’ section choose ‘Packages status’
- on the next window you can confirm the informations presented by ‘System View’ application





# SmartMedia Minor upgrade

**Non service affective - validation**

- in order to receive a final confirmation of the upgrade process and simulate a package switchover (including database upgrade) proceed with Web Portal to ‘Menu -> System’
- from the ‘Validate package’ section drop down list choose the SmartMedia release you would like to test and press ‘Validate’
- process may take a while and after down successfully you should receive a ‘Package is valid’ result
- you can follow the validation process in ‘System View’ CLI

# SmartMedia Minor upgrade

**Requirements for package activation**

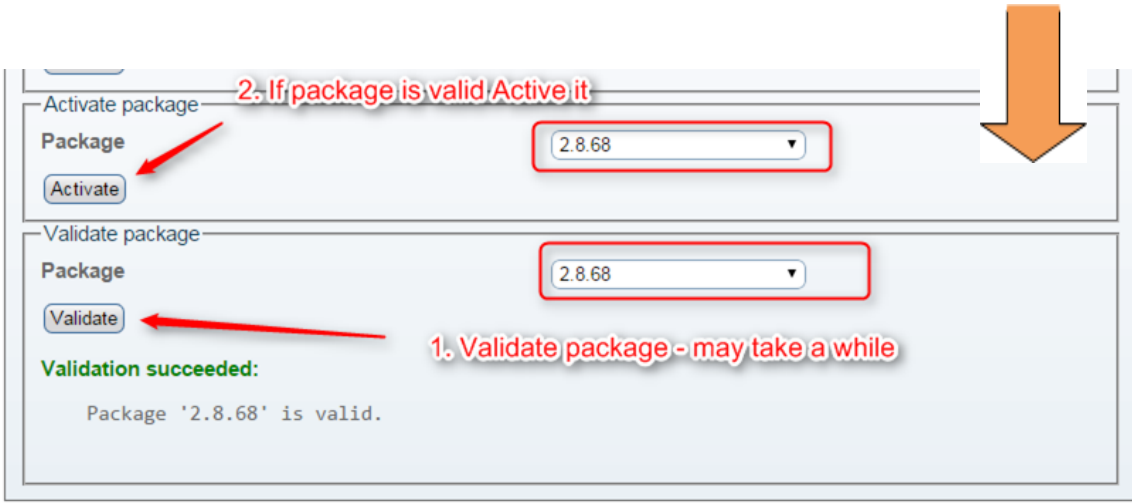
- **the new SmartMedia release is ready for activation ONLY if:**
  - **appropriate firmware version is available on TelcoBoards/Units**

    **and**
  - **validation of the new SmartMedia relese is successfull**
- remember that the newly installed software package doesn't need to be immediately Activated; you can wait for example for a maintanance window

# SmartMedia Minor upgrade

**Service affective**

- **steps described from this point on will lead to disturbances in service availability and loss of active calls**
- be sure you are still running the ‘System View’ CLI
- start in WebPortal ‘Menu -> System’
- you can perform another package validation
- if all „requirements for package activation” are met you can proceed with the ‘Activate Package’ section dropdown list, choose the appropriate software package and press Activate
- **please be sure what software version you are Activating, because from this point on there is no possibility to Cancel the process, other then wait until it’s done and issue a software release rollback**



# SmartMedia Minor upgrade

**Service affective**

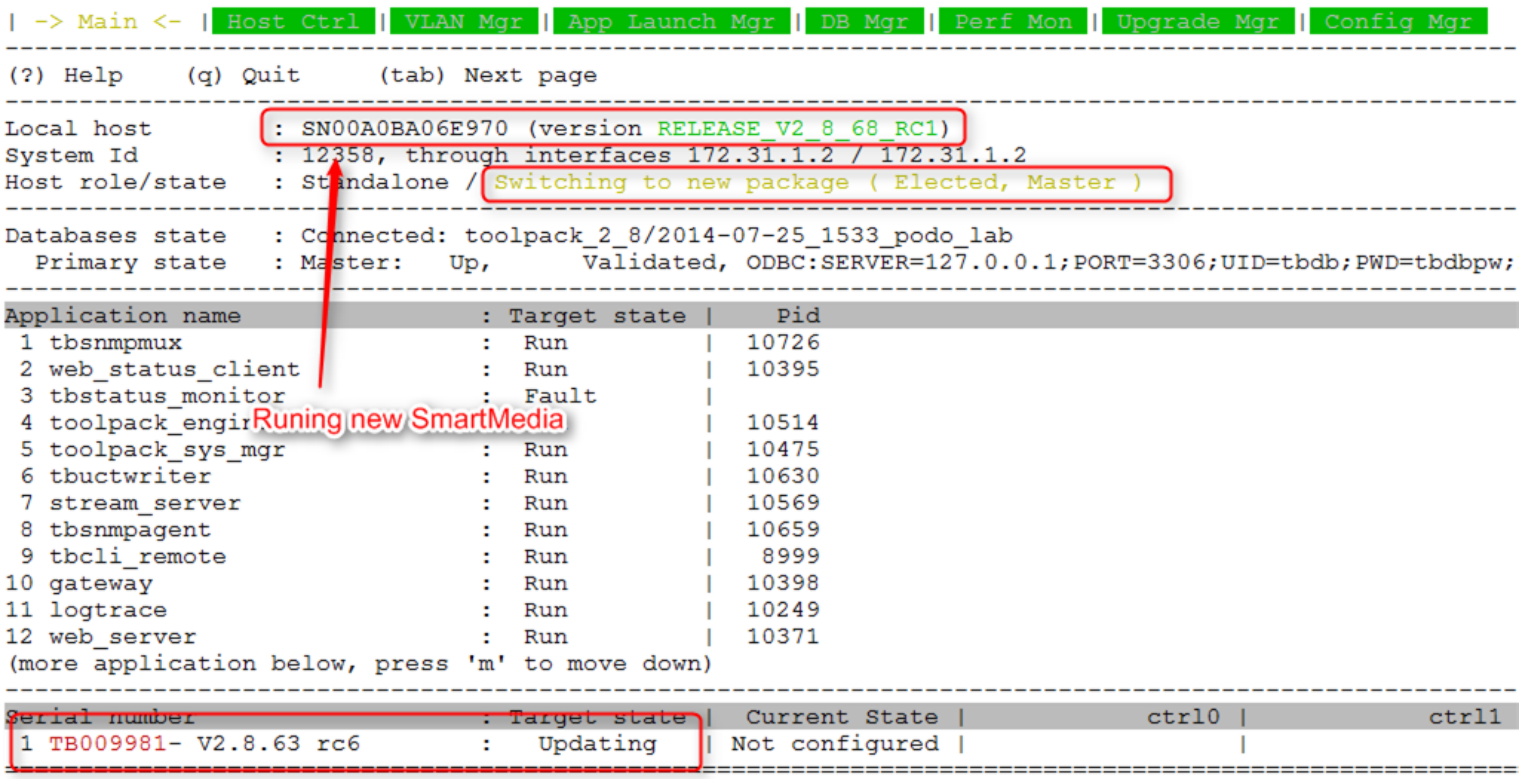
- go back to ‘System View’ CLI
- please be advised that you may experience a restart of the ‘System View’ monitor caused by the SmartMedia package switchover; this is nothing to be worried and no actions are required – just wait until done
- you will notice few states reported by ‘System View’
- ‘Database update’ – performing data scheme upgrade

```
| Main | Host Ctrl | VLAN Mgr | App Launch Mgr | DB Mgr | Perf Mon | -> Upgrade Mgr <- | Config Mgr

(?) Help    (q) Quit     (tab) Next page

Local host        : SN00A0BA06E970 (version RELEASE_V2_8_63_RC6)
System Id         : 12358, through interfaces 172.31.1.2 / 172.31.1.2
Host role/state   : Standalone / Updating database ( Elected, Master )

Current configuration and status:
    Current package home : /mnt/.0/tb/toolpack/pkg/
    Current package      : 2.8.63
    Target package       : 2.8.68
    Target build number  : V2.8.63 rc6     :  TB009981

   Application                          | OAM State | Update State | Current state | HA state
1  SN00A0BA06E970.tboam_app             | Run       |              | Ready         | Active
2  SN00A0BA06E970.gateway               | Run       |              | Ready         | Active
3  SN00A0BA06E970.toolpack_sys_mgr      | Run       |              | Ready         | Active
4  SN00A0BA06E970.logtrace              | Run       |              | Ready         | Active
5  SN00A0BA06E970.toolpack_engine       | Run       |              | Ready         | Active
6  SN00A0BA06E970.stream_server         | Run       |              | Ready         | Active
7  SN00A0BA06E970.tbuctwriter           | Run       |              | Ready         | Active
8  SN00A0BA06E970.tbsnmpagent           | Run       |              | Ready         | Active
9  SN00A0BA06E970.tbstatus_monitor      | Fault     |              | Not running   | Not present

   SerialNb                             | OAM State | Update State | Current state | Build number
1  TB009981                             | Enabled   |              | Ready/Active  | V2.8.63 rc6
```

# SmartMedia Minor upgrade

**Service affective**

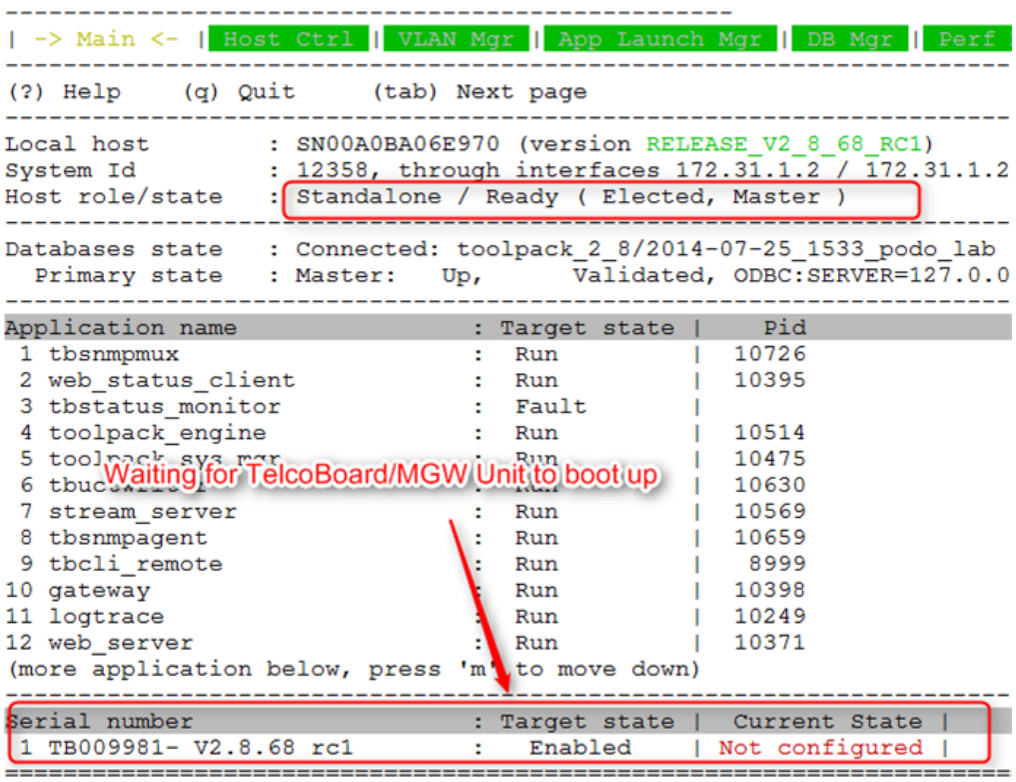
- ‘Switching new package’ – performing application upgrade (switching binaries)
- TelcoBoard update – reconfiguring the flash storage to boot up with appropriate firmware



# SmartMedia Minor upgrade

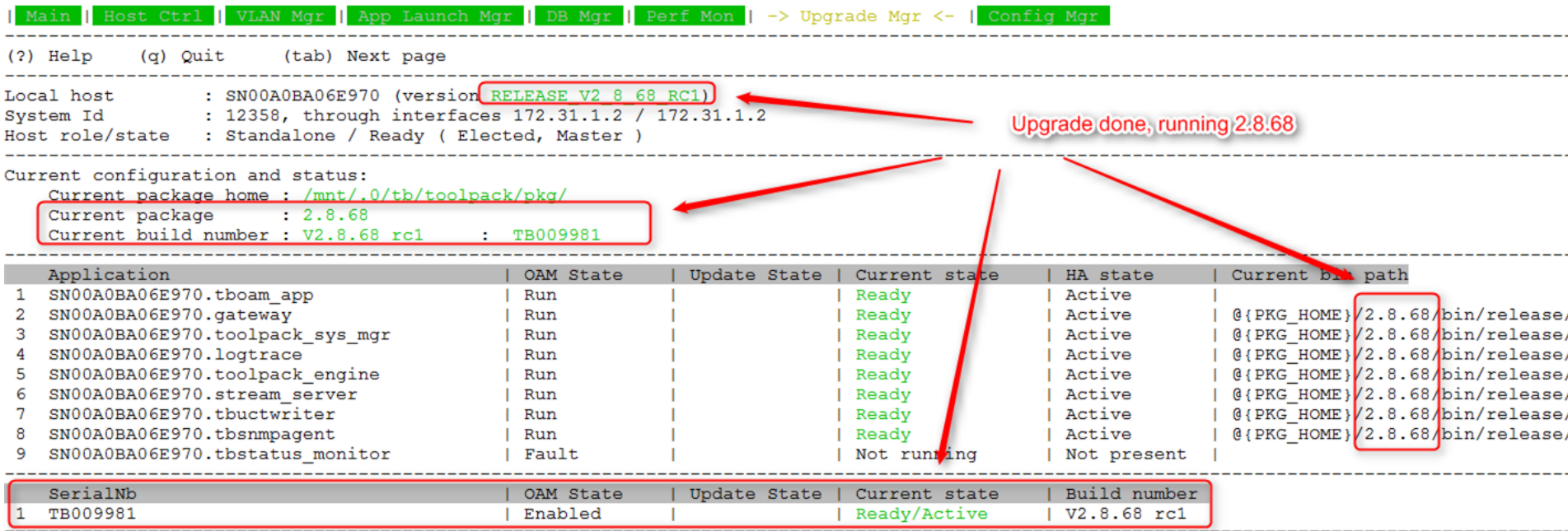
**Service affective**

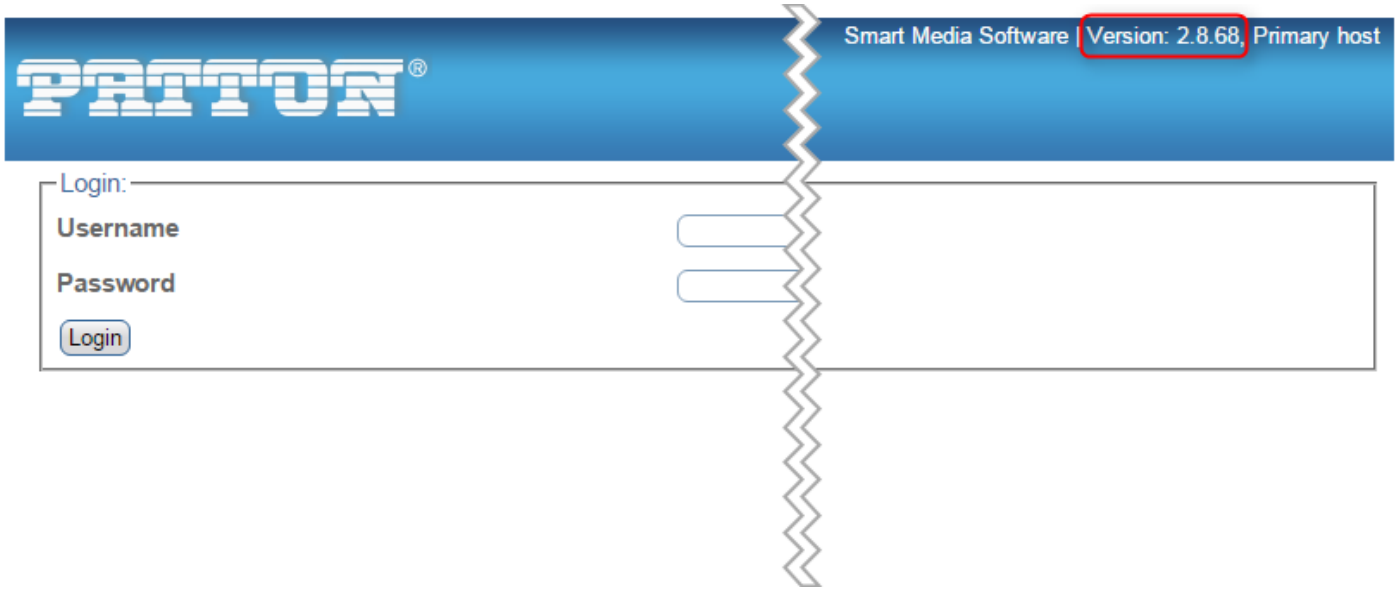
- Waiting for TelcoBoard to bootup with the new firmware
- in SN10300 with N+1 failover TelcoBoard/MGW Unit upgrade process will run a following loop:
  - Unit upgrade is triggered
  - N+1 Backup Unit takes over
  - Unit upgrade is finished
  - Unit is rebooted
  - Unit is reported as ‘Ready’
  - N+1 performs fallback to Unit
  - Unit becomes ‘Active’
  - Backup Unit is restarted (config reset)
  - N+1 Group reaches ‘Protected’ state
  - next Unit is upgraded



**Service affective**

- after the TelcoBoards are back to ‘Ready/Active’ state the **<u>upgrade procedure is over</u>**



**End of procedure**

- you can proceed to the WebPortal which will be running a new software release
- **please note that the new version of WebPortal will be available for login just after switching the SmartMedia package**