

UDPC licensing on ASR5500

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Introduction

This document describes that on the Cisco ASR5500 series platform, a chassis software license is required when UDPC/UDPC2s are installed.

This license also specifies the maximum number of UDPC/UDPC2s that can run on the chassis at the same time. Both active and standby UDPC/UDPC2s are counted against the maximum UDPC/UDPC2 limit.

This new licensing scheme is enforced since StarOS Release 18.

Different License Types

Three license types for UDPC/UDPC2 exist:

Obsolete License

ASR55-00-SWUDPCK9 - ASR 5500 Initial System SW, Per UDPC

For backward compatibility for the already existing orders, this is available for one more year (after license expiry)

and upgrade will be allowed if this is already in the license key, but it shouldn't be used in new licenses. Instead the initial license for a specific release should be used:

Initial License

Example: 4 x ASR55-00-SW-UDPC17

This means the system has a license to boot 4 UDPC cards in R17.

Upgrade to a higher release (18 or 19) requires an additional upgrade license

Upgrade License

Example: 4 x ASR55-00-SWUDPC18

A system correctly licensed for R17 will need above R18 upgrade license to allow an upgrade to R18.

Limitations

- The count for each license (initial and upgrade) needs to be the same, or license validation might fail.
- Intermediate upgrade licenses have to be present even if skipping a major SW release during upgrade.

Working Example

With these 2 license options:

- 4 x ASR55-00-SW-UDPC17
- 4 x ASR55-00-SWUDPC18

the system will operate on R17 and on R18.

But if you want to upgrade to R19, you additionally need:

4 x ASR55-00-SWUDPC19=

With the above licenses in place, a R19 system displays this in **show license info**:

```
[local]SPGW# show license info
Thursday August 25 15:54:45 AST 2016
License Upgrade Validation: Success,   Version [19], total_udpc [4], init [0], upgrade[4]
...
ASR5500 Initial System SW, Per UMIO [ ASR55-00-SWUMIOK9 ]
ASR5500 Initial System SW, Release 17, Per UDPC [ ASR55-00-SW-UDPC17 ]
ASR5500 StarOS Release 18 System SW, Per UDPC/UDPC [ ASR55-00-SWUDPC18= / ASR55-00-SWUDP218 ]
ASR5500 StarOS Release 19 System SW, Per UDPC/UDPC [ ASR55-00-SWUDPC19= / ASR55-00-SWUDP219 ]
... CARD License Counts: Cards License Type -----
2 ASR5500 Initial System SW, Per UMIO
4 ASR5500 Initial System SW, Release 17, Per UDPC
4 ASR5500 StarOS Release 18 System SW, Per UDPC/UDPC2
4 ASR5500 StarOS Release 19 System SW, Per UDPC/UDPC2
```

Failing Example

with these 3 license options:

- 4 x ASR55-00-SWUDPCK9
- 3 x ASR55-00-SWUDPC17
- 3 x ASR55-00-SWUDPC18

the system does not recognize a valid license on a R18 system, and **Upgrade validation failed** error might be seen.

```
[local]SPGW# show license information
License install check: Version [18], total_udpc [4]
Version: 16, Init PID: 4, Upgrade PID: 0
```

Version: 17, Init PID: 0, Upgrade PID: 3

Version: 18, Init PID: 0, Upgrade PID: 3

License install check: **Upgrade Validation failed**, Version [18], total_udpc [4] Version: 16, Init PID: 4, Upgrade PID: 0 Version: 17, Init PID: 0, Upgrade PID: 3 Version: 18, Init PID: 0, Upgrade PID: 3 Enabled Features: Feature Applicable Part Numbers -----
----- ASR5500 Initial System SW, Per UDPC [ASR55-00-SWUDPCK9] ASR5500 Initial System SW, Per UMIO [ASR55-00-SWUMIOK9] ASR5500 StarOS Release 17 System SW, Per UDPC [ASR55-00-SWUDPC17=] ASR5500 StarOS Release 18 System SW, Per UDPC [ASR55-00-SWUDPC18=] CARD License Counts: Cards License Type ----- 4
ASR5500 Initial System SW, Per UDPC 2 ASR5500 Initial System SW, Per UMIO 3 ASR5500 StarOS Release 17 System SW, Per UDPC 3 ASR5500 StarOS Release 18 System SW, Per UDPC NOTICE: The above features and limits have been reduced because this license includes capabilities beyond what the ASR5500 supports. NOTICE: The Expiry for the license has been changed due to the cutoff date of software (Wednesday March 02 14:51:10 CET 2016) Status: Chassis MEC SN Matches License Status Expired Grace Period Ended Friday January 29 11:13:55 CET 2016

The problem with this license is

- License counts are not equal for initial/upgade license.
- The obsoleted license ASR55-00-SWUDPCK9 is used.

Assuming the system has only 3 UDPC cards, this license needs to be regenerated by Cisco with these 2 license options:

- 3 x ASR55-00-SW-UDPC17 (R17 initial license)
- 3 x ASR55-00-SWUDPC18 (R18 upgrade license)