Outcome of the investigation on reducing duration of the rolling upgrade

TIPS CG

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Introduction

- TIPS was designed in line with the need to manage (i) regular maintenance, (ii) vulnerability and patch management, and (iii) software distribution activities without the need to interrupt service.
- The software distribution follows the rolling upgrade logic in which there is a coexistence of the two software versions that may last for a restricted number of days (depending on the environment).
- Following the written consultation on the options for the TIPS release implementation approach, 4CB was asked to assess the feasibility of reducing the duration of the rolling upgrade, mainly to reduce the exposure of two (namely, the previous and the newly installed) software versions.
- The objective of this set of slides is to present the results of the 4CB study on the approach to implementing the TIPS release.

Way forward (1/2)

- 4CB proposal aims to **differentiate the TIPS deployment approach** based on (i) the **specific component** and (i) the **type of modification** to be installed by means of two interventions:
  - Reducing the duration of rolling upgrade of the **Message Router** component (in a range of hours)
  - Maintaining the existing rolling upgrade lifetime of the **TIPS Core** (in a range of days)
- It is worth noting that the rolling upgrade release, by default, will take place during "working hours" (i.e. from 9:00-17:00)
- Furthermore, the TIPS ecosystem is rather complex and there are **other softwares** in addition to those mentioned in the presentation (e.g. TIPS GUI, Additional Services, CMA, EIDB, etc.). As regards the release of the remaining modules, it will proceed on a rolling basis, within the week of release, exactly as already happens today.

Way forward (2/2)

- This approach is founded on the following assumptions:
  - The side effects encountered during the rolling upgrade, e.g. due to lack of backward compatibility with XML messages, are concentrated in the Message Router component
  - Therefore, by significantly reducing the duration of the rolling upgrade (e.g. in a range of 1-2 hours), the A2A interface will quickly migrate to the new version avoiding the exposure of different software versions towards the TIPS Actors
  - Conversely, the TIPS Core will continue to leverage the regular rolling upgrade duration (3-5 days) to safeguard the existing update procedures of the most critical component

Deployment scenarios

Four types of deployment scenarios may materialise, depending primarily on the specific changes to be installed and the internal software dependencies:

- Sequence 1:
  - Reduce the rolling upgrade of the Message Routers and then start the regular rolling upgrade of the TIPS Core **(1-2hrs) + (3-5 days)**
- Sequence 2:
  - Start the regular rolling upgrade for the TIPS Core. Once it is terminated, a compressed rolling upgrade of the Message Routers is executed **(3-5 days) + (1-2hrs)**
- Sequence 3:
  - Reduce the rolling upgrade of the Message Routers, and contemporarily, start the regular rolling upgrade of the TIPS Core **(3-5 days, Message Routers will be updated already after 1-2 hrs)**
- Sequence 4 (current option):
  - Start the regular rolling upgrade of both Message Routers and TIPS Core **(3-5 days)**

A practical example

As a generic example, in case of lack of backward compatibility of the message schemas, scenario 1 can be chosen:

- Sequence 1:
  - Reduce the rolling upgrade of the Message Routers and then start the regular rolling upgrade of the TIPS Core **(1-2hrs) + (3-5 days)**

Therefore, in view of Production roll-out, the TIPS STP shall be drafted according to the following steps:

Start of deployment of TIPS Release R2026.JUN to Production (Message router)	**15/06/2026 09:00**	Shortened rolling
End of deployment of TIPS Release R2026.JUN to Production (Message router)	**15/06/2026 11:00**	
Start of deployment of TIPS Release R2026.JUN to Production (Other components)	**15/06/2026 11:00**	Regular rolling
End of deployment of TIPS Release R2026.JUN to Production (Other components)	**19/06/2026 17:00**	
TIPS Release R2026.JUN (including CoCos) is live in Production*	**19/06/2026 17:00**	

Conclusions

- The 4CB assessment demonstrated that it is possible to reduce the rolling upgrade duration down to an **interval of a few hours** for the Message Router component only
- The decision on the more appropriate scenario for the software deployment shall be selected on a case by case, for each release, and reflected clearly in the Service Transition Plan (STP)
- The driving factors to select one of the sequences presented in the previous slide are existing internal software dependencies and backward compatibility of XML messages

Thank you for the attention!