



WLCG workshop AAI summary - Data management aspects

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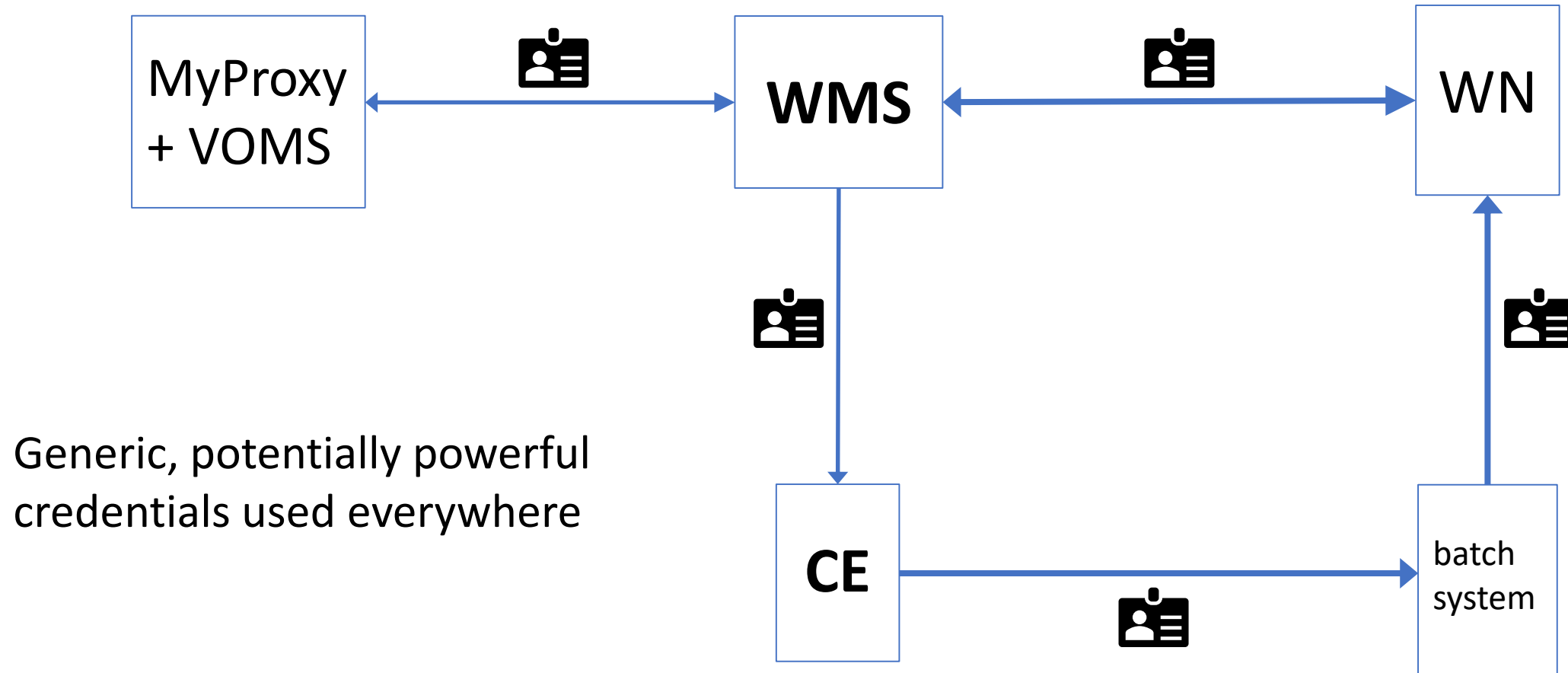
Rucio Community Workshop, Lancaster, Nov 10, 2022

v1.0

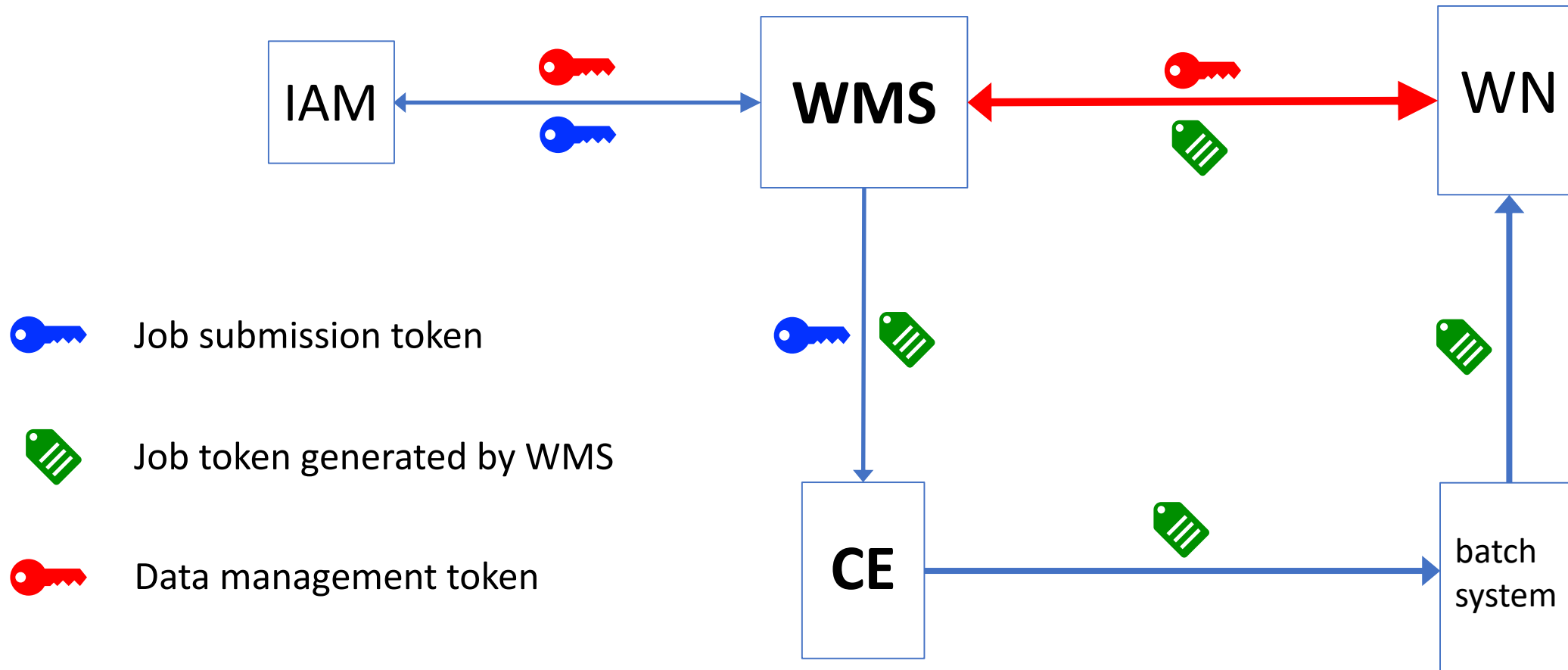
Introduction

- Presentations concerned with *tokens for data management*
 - Nov 7 → Storage & transfers with tokens
 - Nov 8 → Token transition state of affairs
 - Nov 9 → Token summary
- Agenda
 - Before and after diagrams
 - Smoothing the transition
 - Data management aspects
 - Timelines & milestones

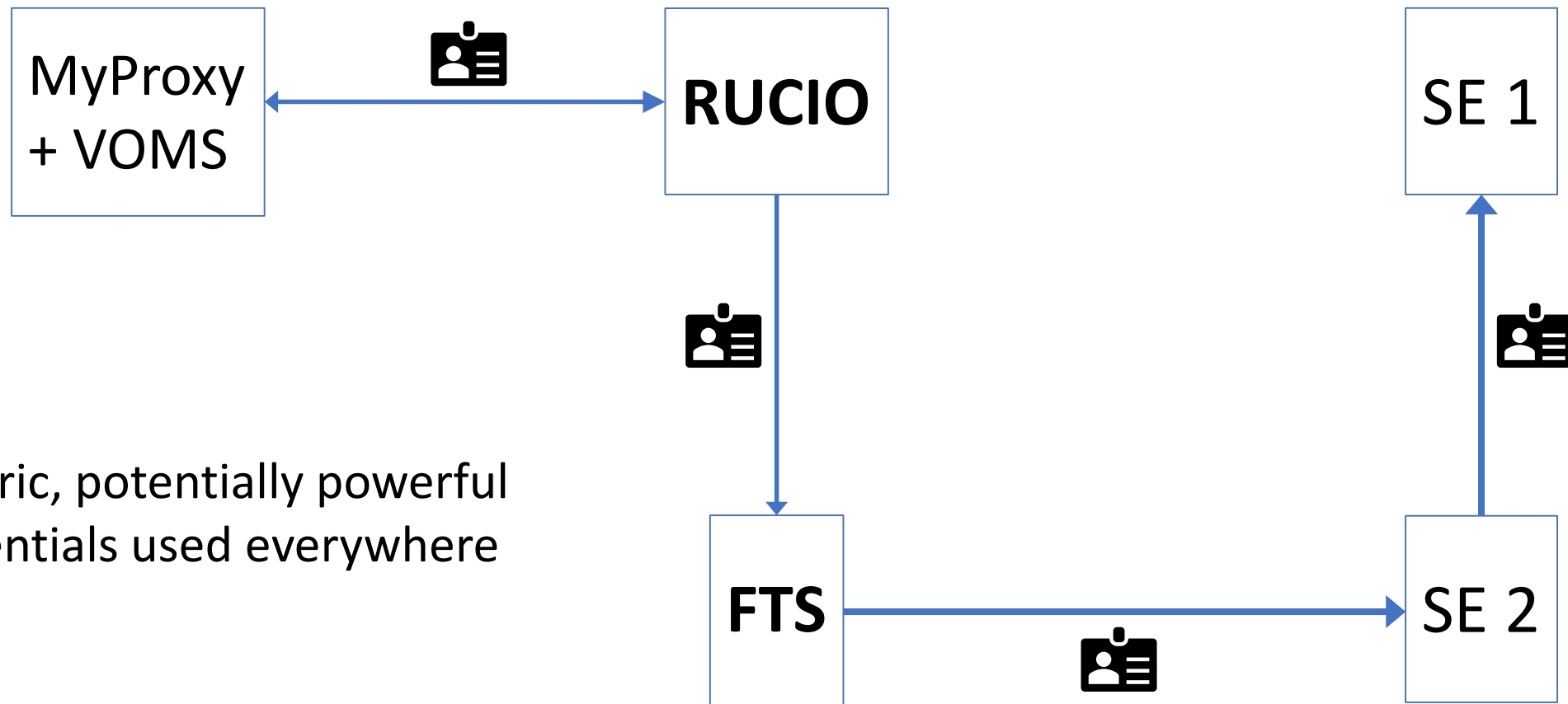
Workload management with X509 + VOMS



Workload management with tokens

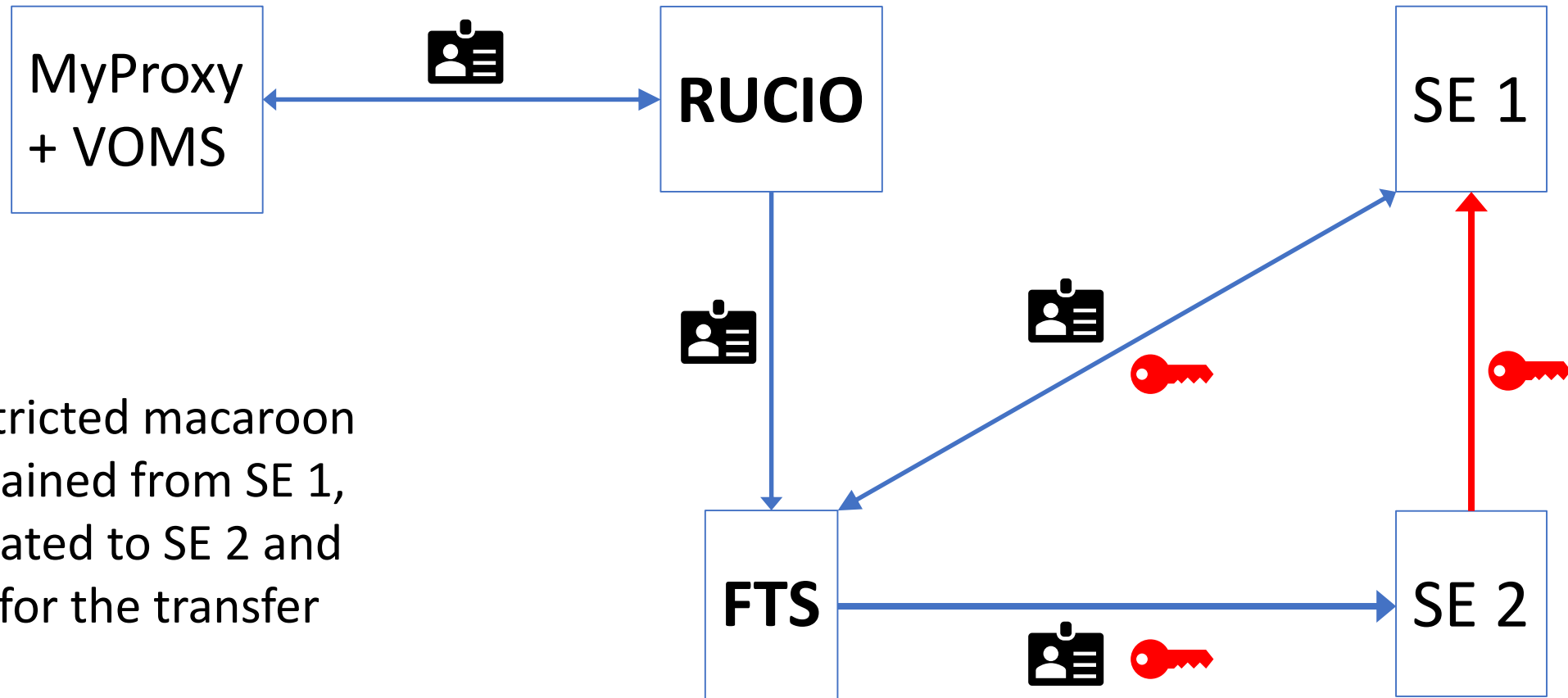


Data transfers with X509 + VOMS



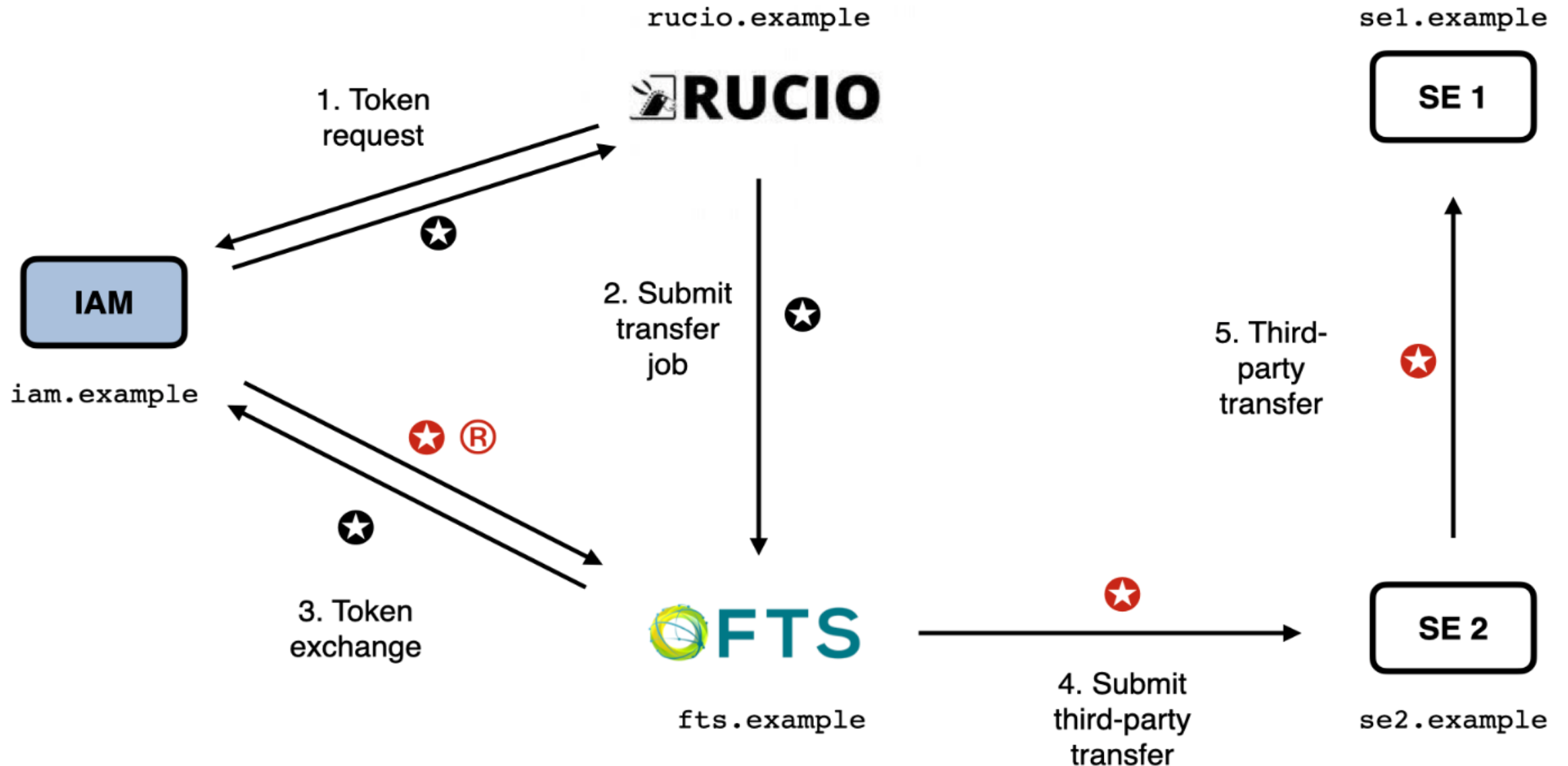
Generic, potentially powerful
credentials used everywhere

Data transfers with macaroons



A restricted macaroon is obtained from SE 1, delegated to SE 2 and used for the transfer

Data transfers with WLCG tokens



Data management aspects

- Mostly covered in the DOMA session on Nov 7
 - [Storage & transfers with tokens](#)
- Workflow details involving Rucio/DIRAC and/or FTS vs. SEs have mostly been identified and implemented to various extents
 - May need to be re-discussed if major implementation or operational hurdles are encountered
- The token testbed covers *basic* functionality and interoperability
 - Most endpoints pass most tests
- Rucio and DIRAC should drive this → implications for the FTS
 - But the FTS must also be able to serve use cases *outside* of Rucio / DIRAC
- SEs typically need to support concurrent use of X509 and tokens
 - Details documented [here](#)

Smoothing the transition

- Today, tokens used for submitting *jobs* have lifetimes of a few days to allow much more time for incidents with the IAM services to be resolved transparently
- In the future, *data management* tokens will require much shorter lifetimes for the desired level of security
 - But shorter lifetimes imply higher load on IAM services
 - Similar concerns surround the *granularity* of tokens
 - Sustainable compromises will need to be worked towards
- The IAM deployment will be made as HA as feasible
- The CERN IAM and FTS teams will each have an extra FTE starting early next year

Timelines & milestones

- WLCG Token Transition Timeline v1.0 was published on Aug 22
 - Summarizes the progress of the last 2.5 years and presents a set of optimistic milestones to work towards during the course of Run 3
 - Subsequent versions will be added whenever there are significant updates of the timeline
 - Already put to use to get those extra FTEs!
- Selected milestones (tentative dates)
 - M.8 (Mar 2024) – **DC24 can be done with tokens**
 - M.10 (Mar 2026) – users no longer need X509 certificates
- Focusing on centrally organized workflows for the time being
 - Users will come last, but their use cases must already be *considered* now!