

EOSC EU NODE DATA-CENTRIC CLOUD SERVICES

PSNC EXPERIENCES PARTICIPATING IN EC PROCUREMENTS

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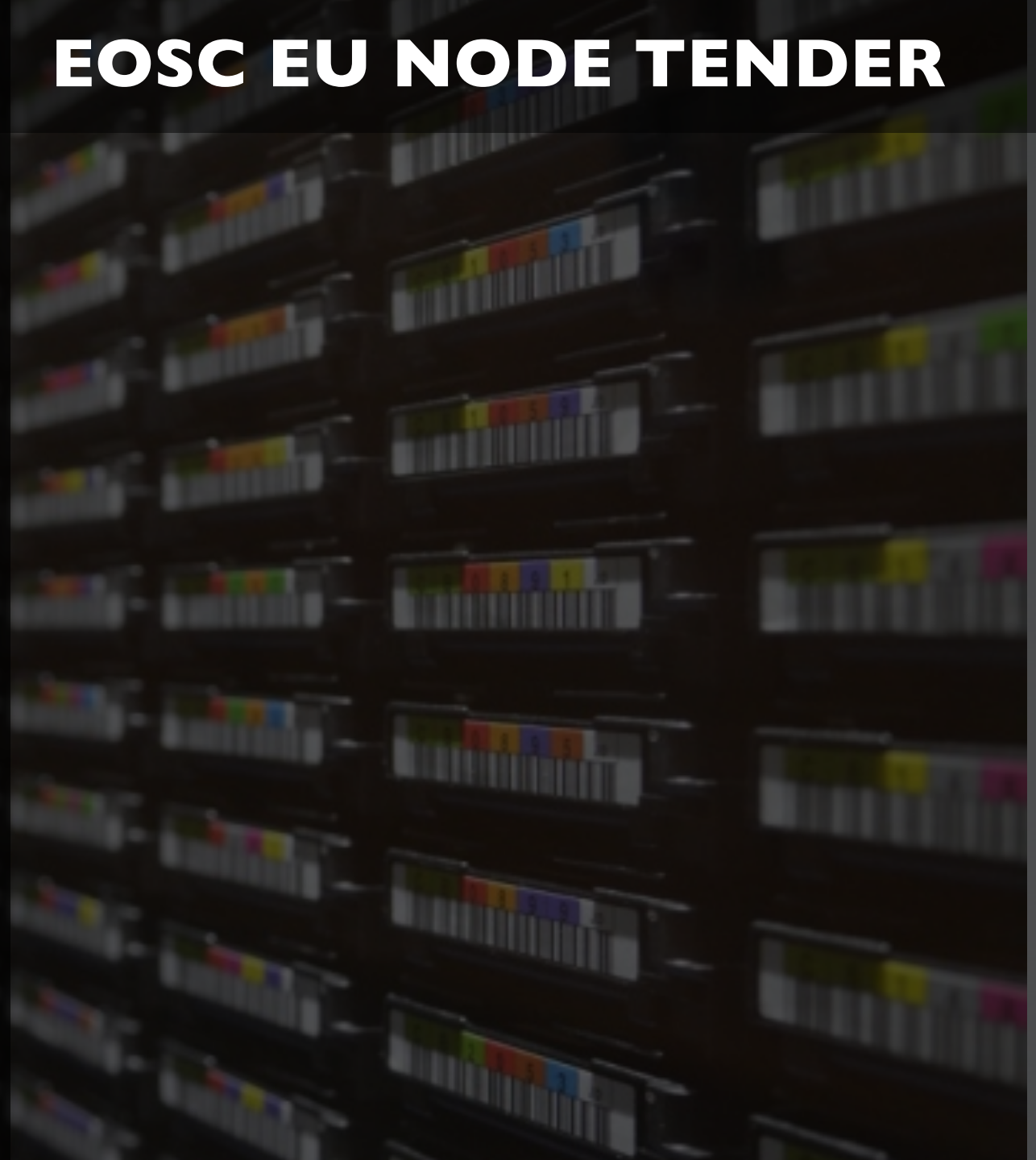
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CONTEXT:

EOSC EU NODE TENDER

- **CONTEXT :**
 - THE EU TENDER FOR ESTABLISHING AND OPERATING THE EOSC EU NODE
 - LOT#2/3 - EXCHANGE SERVICES AWARDED TO PSNC AND PARTNERS
- **OVERVIEW of EU NODE:**
 - SCOPE:
 - LOT#2 CLOUD COMPUTING SERVICES
 - LOT#3: DATA-CENTRIC APPLICATIONS
 - INTEGRATIONS
 - VERTICAL AND HORIZONTAL
 - AAI
- **SERVICES DELIVERY:**
 - PROCESSES, ORGANISATION
 - OPERATIONS, SLA, QA
- **EXPERIENCE FROM TENDERING**



CONTEXT:

- The EOSC Procurement aims to build and deploy an operational, secure, on-premise cloud-based EOSC EU Node offering high quality managed services and superior user experience for a large number of users, available 24/7.
- The tender was composed by 3 LOTS
- PSNC (with PARTNERS) was awarded the contract to deliver the EOSC EU NODE LOT#2 & LOT#3 (EOSC Exchange) services

EOSC EU NODE TENDER

Contract start on Feb 14 2024 and runs for 36M to cover operations, maintenance and support

EC is the owner of the EOSC EU NODE

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CONTEXT:

- **DATA-CENTRIC CLOUD SERVICES:**

- **EOSC-EXCHANGE: LOT3**

- **DATA-CENTRIC CLOUD APPLICATIONS:**

- EFSS: Sync & Share
- DATA SCIENCE: Notebooks
- LARGE DATA Transfer

- **EOSC-EXCHANGE: LOT2**

- **CLOUD INFRASTRUCTURE SERVICES**

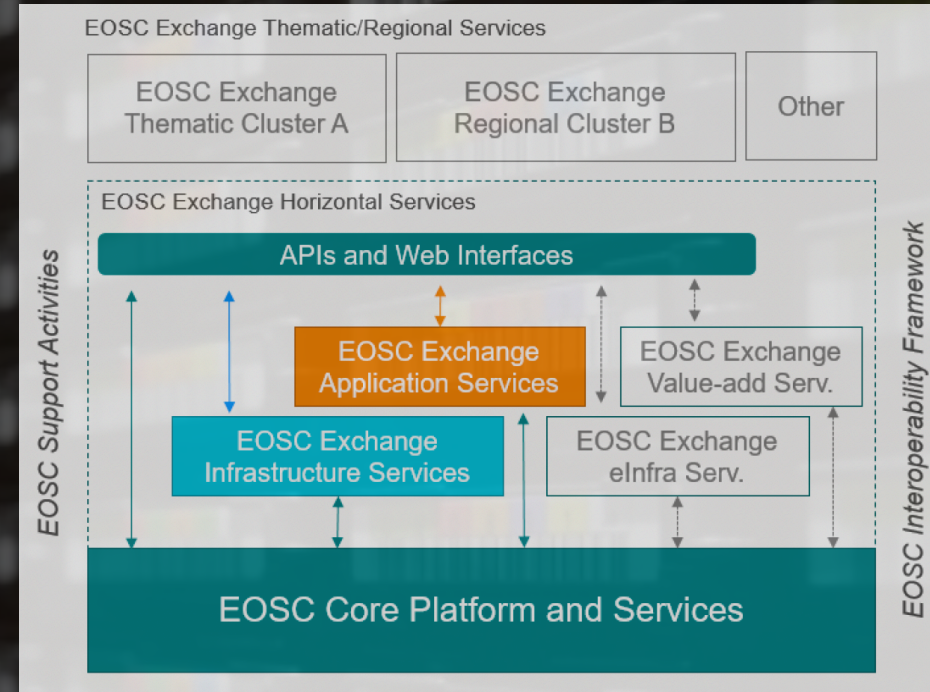
- CLOUD/VMs
- CONTAINER PLATFORM
- BULK DATA TRANSFER

- **OTHER SERVICES**

- **TO OTHER PARTIES:**

- EOSC-CORE: LOT1:
 - REDESIGNED USER PORTAL
 - USER ACCESS, SERVICE MGMT
 - SERVICES FOR FEDERATED EOSC CORE (INCLUDING AAI):

EOSC EU NODE TENDER



Procurement Lot Structure

- Lot 3** Managed Collaborative Data Platform, Interactive Data Analytics Platform and Visualization Services for the EOSC Exchange (Application Services)
- Lot 2** Managed Container Platform and Virtual Machine Services for the EOSC Exchange (Infrastructure Services)
- Lot 1** Managed Services for the Development, Integration, Deployment and Operations of the Federated EOSC Core

TENDER SPECIFICS

- **THE BAR WAS SET VERY HIGH - TENDER REQUIREMENTS:**
 - TECHNICAL EXCELENCE
 - ECONOMIC ACTIVITY
 - SERVICES MGMT PROCEDURES
 - CERTIFICATION
 - SECURITY
- **OPERATIONAL ASPECTS:**
 - **DELIVERY CONTRACTED ON COMMERCIAL TERMS**
 - **IMPLICATIONS:**
 - Q&A, MONITORING
 - SLA
 - LOTS OF PROCESSES AND PROCEDURES
 - DOCUMENTATION
 - REPORTING...

MODEL AND REQUIREMENTS



Source: <https://www.istockphoto.com/photos/challenges>

SCOPE

WHAT'S INSIDE (LOT #2)

LOT#2:

• SOLUTIONS:

• **INFRASTRUCTURE: IaaS:**

OpenStack-based cloud

• **PLATFORM: PaaS:**

Kubernetes / OKD

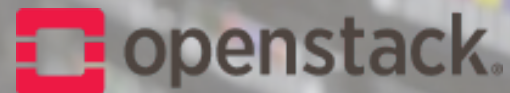
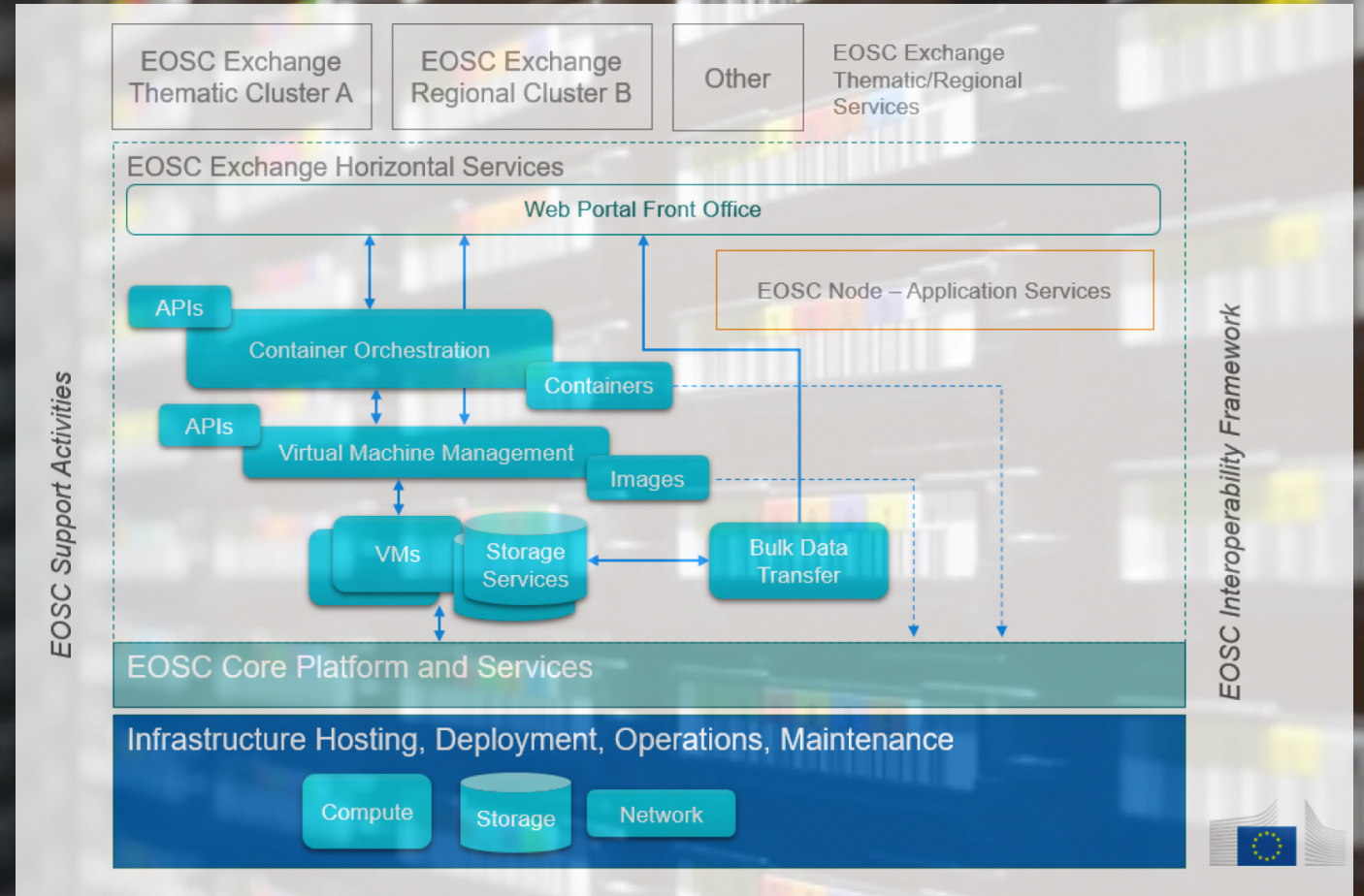
• **BULK DATA TRANSFER:**

FTS and others (S3...)

• OPEN SOURCE & INDUSTRY/COMMUNITY STANDARD COMPONENTS FOR CLOUD INFRASTRUCTURE ORCHESTRATION

• INTEGRATION:

- 'vanilla' versions - minimum modifications
- API-based integration of services/resources
- AAI integration - through Geant-provided AAI

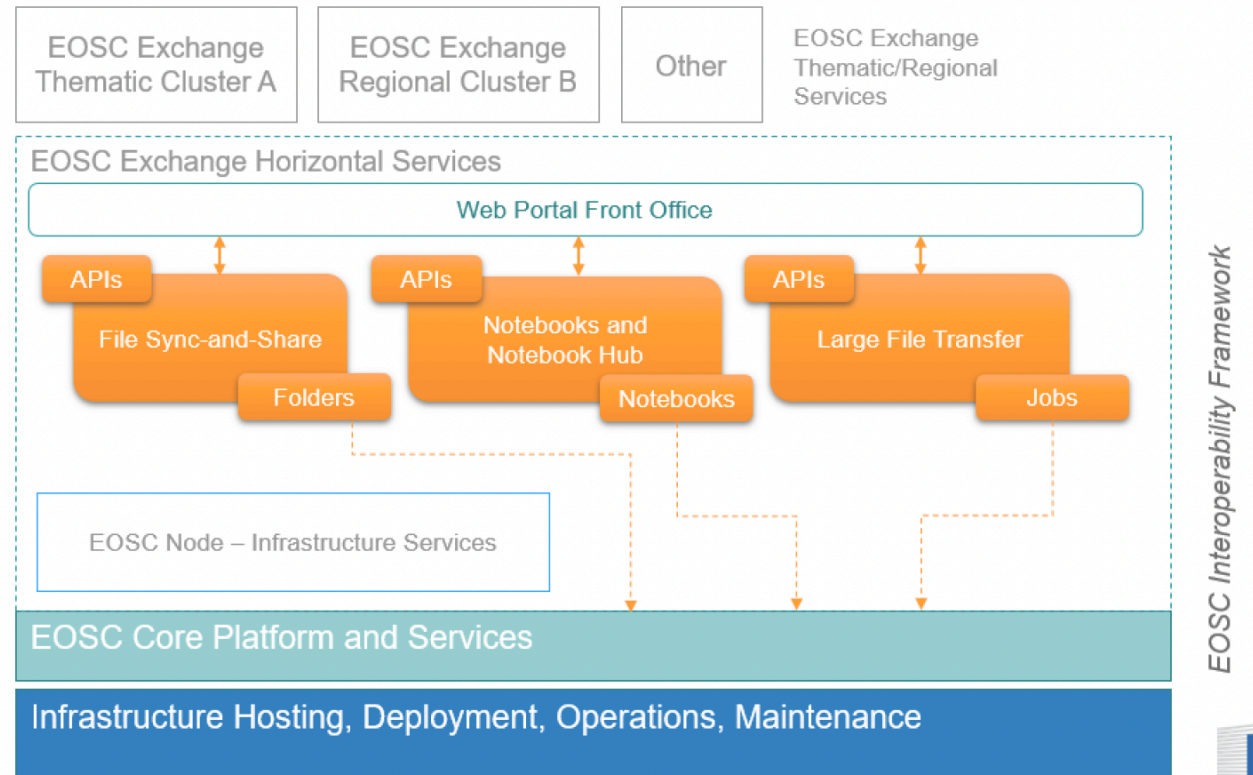


SCOPE

WHAT'S INSIDE (LOT #3)

LOT#3

- **DATA-CENTRIC SERVICES**
 - **EFSS/SYNC & SHARE: OWN CLOUD**
 - **DATA SCIENCE: JUPYTER**
 - **FILE TRANSFER: FILE SENDER**
- **OPEN SOURCE & INDUSTRY/COMMUNITY STANDARD COMPONENTS FOR DATA MANAGEMENT AND ANALYSIS**
- **INTEGRATION:**
 - 'vanilla' versions - minimum modifications
 - developers onboard - ownCloud, FileSender
 - API-based integration of services/resources
 - AAI integration - through Geant-provided AAI



INTEGRATIONS:

LOT#2 INTEGRATIONS:

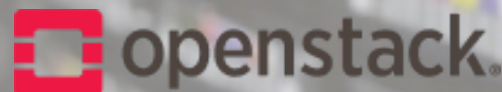
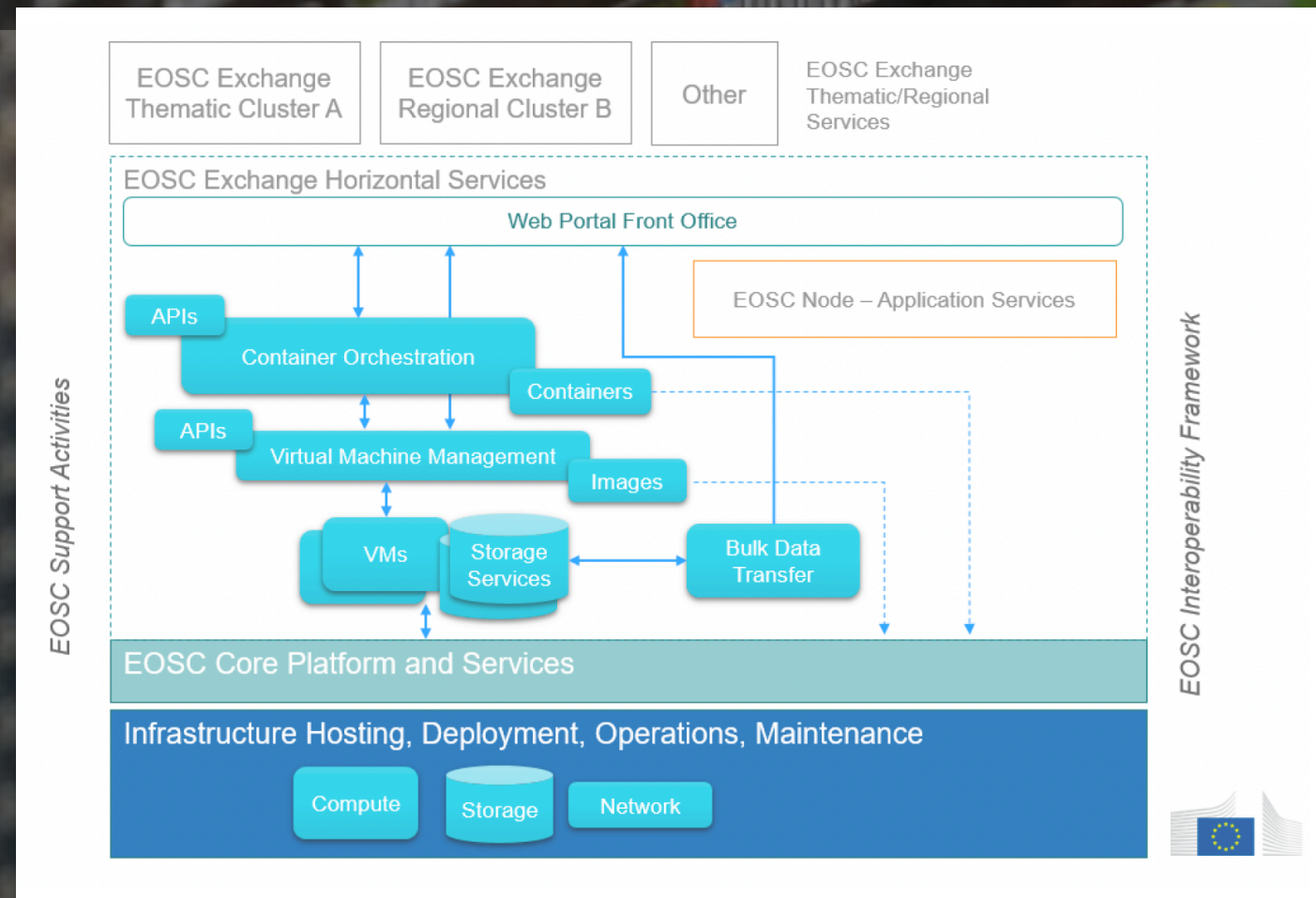
- **VERTICAL**

- CONTAINER PLATFORM USES VIRTUAL COMPUTE SERVICES BASED ON OPENSTACK
- APPLICATIONS (LOT#3, PROJECTS) USE CONTAINERS AND VMS

- **HORIZONTAL:**

- BULK DATA TRANSFER EXTENDS COMPUTE SERVICES - WITH SUPPORT FOR DATA STAGE-IN /STAGE-OUT TO/FROM INFRASTRUCTURE BACK-END

WHAT'S INSIDE (LOT #2)



INTEGRATIONS:

LOT#3 INTEGRATIONS:

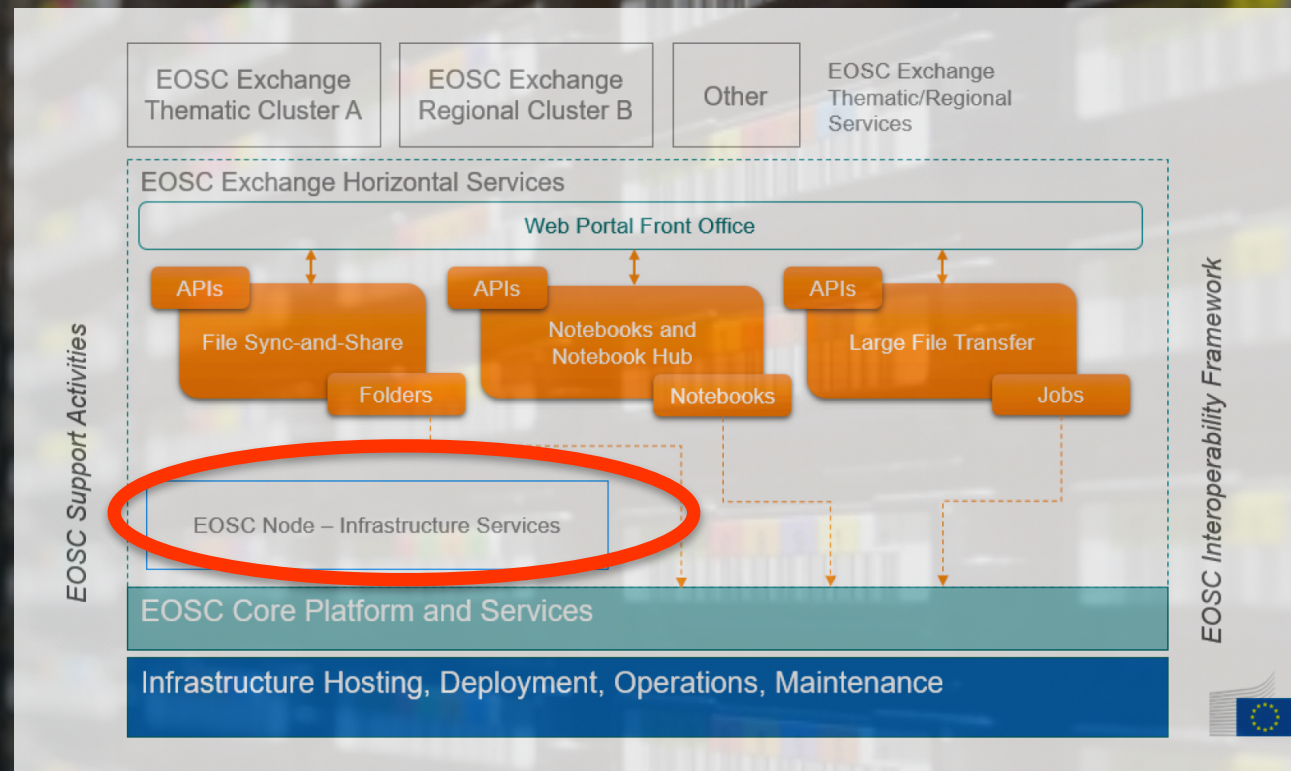
- **VERTICAL:**

- APPLICATION-LEVEL SERVICES USE COMPUTE RESOURCES FROM LOT#2 (VMS, CONTAINERS)

- **HORIZONTAL:**

- JUPYTER NOTEBOOK SERVICES STORE USERS' DATA IN EFSS (OWNCLOUD)

OTHER INTEGRATIONS

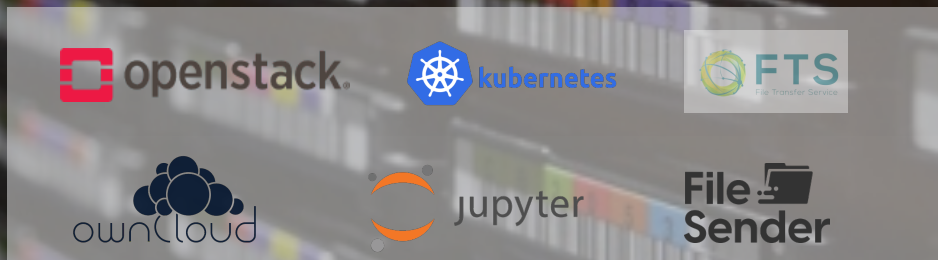
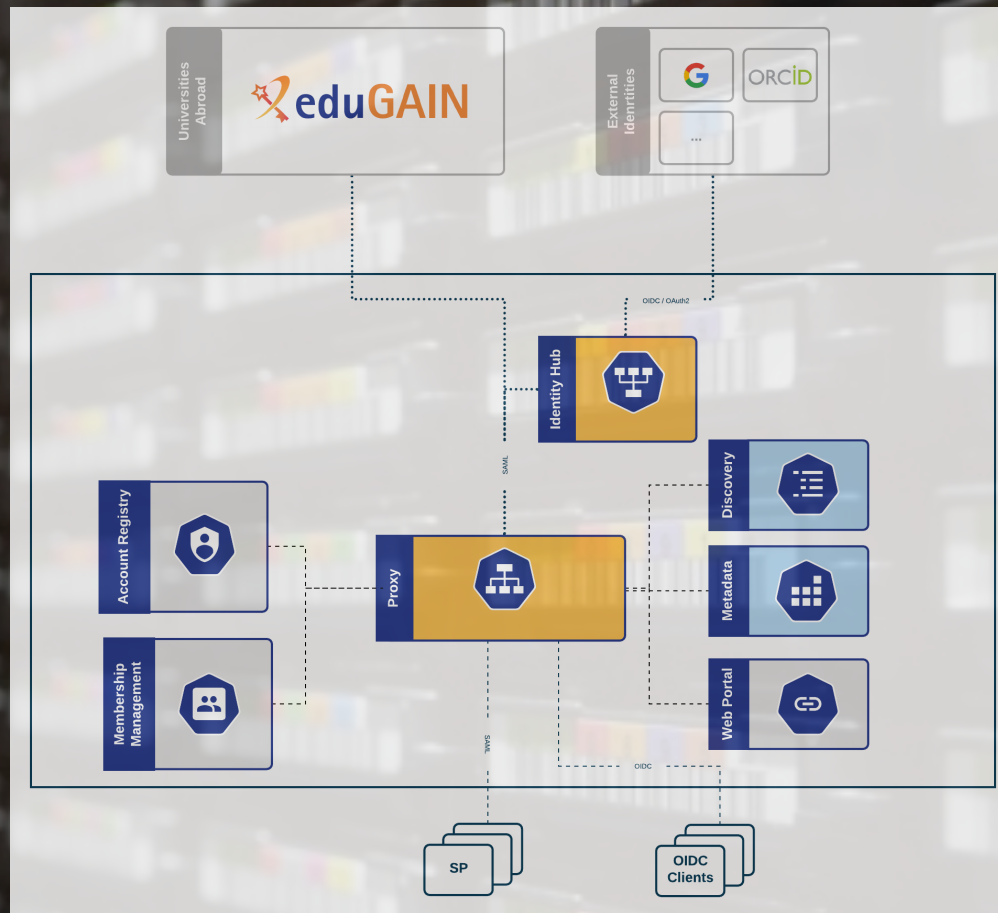


INTEGRATIONS:

AAI INTEGRATION:

- AAI DELIVERED BY GEANT IN LOT#1 ENABLES FEDERATED ACCESS TO SERVICES IN LOT#1,2,3
- ACCESS TO PROJECTS/RESOURCES 'STEERED' THROUGH ENTITLEMENTS
- SUPPORT FOR INDIVIDUAL ACCOUNTS AND GROUP/PROJECT ACCOUNTS
- WEB-INTERFACE INTEGRATION FOR ALL SERVICES IS THERE
- DESKTOP/MOBILE CLIENTS INTEGRATION ON THE WAY...

OTHER INTEGRATIONS



MANAGED SERVICES:

MANAGED SERVICES

MEANS SERVICES OFFERED WITH:

- INFRASTRUCTURE & SERVICES OPERATION PROCEDURES, PROCESSES & ORGANISATION
- SERVICE PROVISIONING, USAGE MONITORING, REPORTING...
- SERVICE MANAGEMENT FUNCTIONS:
 - CAPACITY MGMT
 - CHANGE MGT
- EXTENSIVE REPORTING TO EC:
 - DELIVERABLES/DOCUMENTATION
 - OPERATIONAL REPORTING INCLUDING SERVICES SLA INFORMATION
 - SLA IS CONNECTED TO CONTRACTUAL PENALTIES...

SERVICES OPERATIONS (I)

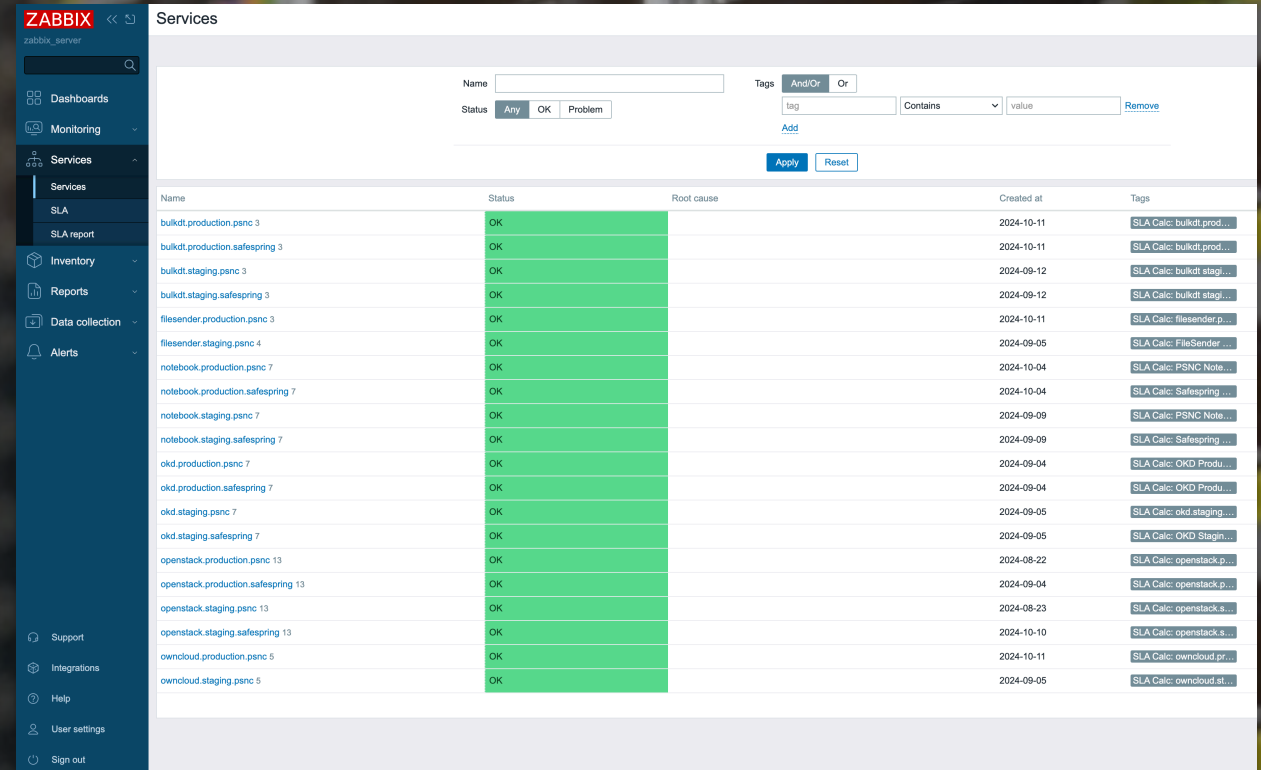


MANAGED SERVICES:

OPERATIONAL REGIMES:

- STRICT SLAs & PENALTIES
- SERVICE STATE MONITORING EXPOSED TO EC
- SLA REPORTING
- 3 STAGES OF SERVICES DELIVERY:
 - TESTING, STAGING, PRODUCTION
 - BASED ON SEPARATE ENVIRONMENTS
- QUALITY ASSURANCE, INCLUDING
 - BASIC / SLA TESTS
 - ACCEPTANCE TESTS: FUNCTIONAL, STRESS, SECURITY
- SECURITY OFFICE / SOC & TECHNICAL MEASURES FOR DATA PROTECTION

SERVICES OPERATIONS (2)



The screenshot shows the Zabbix Services page. The interface includes a search bar, filter options for Name, Status (Any, OK, Problem), and Tags. Below the filters is a table listing services with columns for Name, Status, Root cause, Created at, and Tags. All services listed have a status of 'OK'.

Name	Status	Root cause	Created at	Tags
bulkdt.production.pssc 3	OK		2024-10-11	SLA Calc: bulkdt.prod...
bulkdt.production.safespring 3	OK		2024-10-11	SLA Calc: bulkdt.prod...
bulkdt.staging.pssc 3	OK		2024-09-12	SLA Calc: bulkdt stag...
bulkdt.staging.safespring 3	OK		2024-09-12	SLA Calc: bulkdt stag...
filesender.production.pssc 3	OK		2024-10-11	SLA Calc: filesender.p...
filesender.staging.pssc 4	OK		2024-09-05	SLA Calc: FileSender ...
notebook.production.pssc 7	OK		2024-10-04	SLA Calc: PSNC Note...
notebook.production.safespring 7	OK		2024-10-04	SLA Calc: Safespring ...
notebook.staging.pssc 7	OK		2024-09-09	SLA Calc: PSNC Note...
notebook.staging.safespring 7	OK		2024-09-09	SLA Calc: Safespring ...
okd.production.pssc 7	OK		2024-09-04	SLA Calc: OKD Produ...
okd.production.safespring 7	OK		2024-09-04	SLA Calc: OKD Produ...
okd.staging.pssc 7	OK		2024-09-05	SLA Calc: okd staging...
okd.staging.safespring 7	OK		2024-09-05	SLA Calc: OKD Stagin...
openstack.production.pssc 13	OK		2024-08-22	SLA Calc: openstack.p...
openstack.production.safespring 13	OK		2024-09-04	SLA Calc: openstack.p...
openstack.staging.pssc 13	OK		2024-08-23	SLA Calc: openstack.s...
openstack.staging.safespring 13	OK		2024-10-10	SLA Calc: openstack.s...
owncloud.production.pssc 5	OK		2024-10-11	SLA Calc: owncloud.pr...
owncloud.staging.pssc 5	OK		2024-09-05	SLA Calc: owncloud.st...

Testing

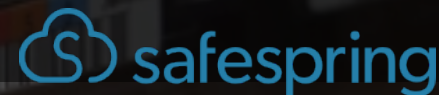
Staging

Production

WHERE WE ARE

- **THREE MAIN DELIVERY MILESTONES:**
 - M3 - APRIL 2024 - TESTING
 - M6 - AUGUST 2024 - STAGING
 - M9 - LAUNCH - PRODUCTION
- **OBSERVATIONS:**
 - SWITCHING FROM STAGING TO PRODUCTION IS AS COMPLEX AS ZERO-STAGING BUILD-UP
 - LOTS OF EXTRA WORK RELATED TO PROCEDURES AND QUALITY
- **CURRENT STATUS:**
 - EC / TECHNICAL LAUNCH LAST WEEK
 - OFFICIAL LAUNCH EARLY THIS WEEK
 - LOOKING FORWARD FOR FEEDBACK FROM THE FIRST USERS

TAKE AWAYS



SUMMARY

- **EOSC EU NODE - DATA-CENTRIC CLOUD SERVICES**
- **APPROACH:**
 - INTEGRATE OFF-THE-SHELF COMPONENTS WITH HIGH TRL
 - RECOGNITION AMONG USERS
 - INDUSTRY STANDARDS
 - ENSURE HIGH QUALITY EXPERIENCE (AAI INTEGRATION, WEB PORTAL)
- **ADDED VALUES:**
 - MANAGED (!) SERVICES
 - OFFERED AS READY-TO-USE
 - INTEGRATED EXPERIENCE
 - QUALITY, SECURITY, MONITORING

TAKE AWAYS



EOSC EU NODE DATA-CENTRIC CLOUD SERVICES

THANK YOU!

