

VISA deployment in the EGI Infrastructure

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EGI Federation & EGI Fedcloud



**201 Resource centres
delivering HTC and
cloud**



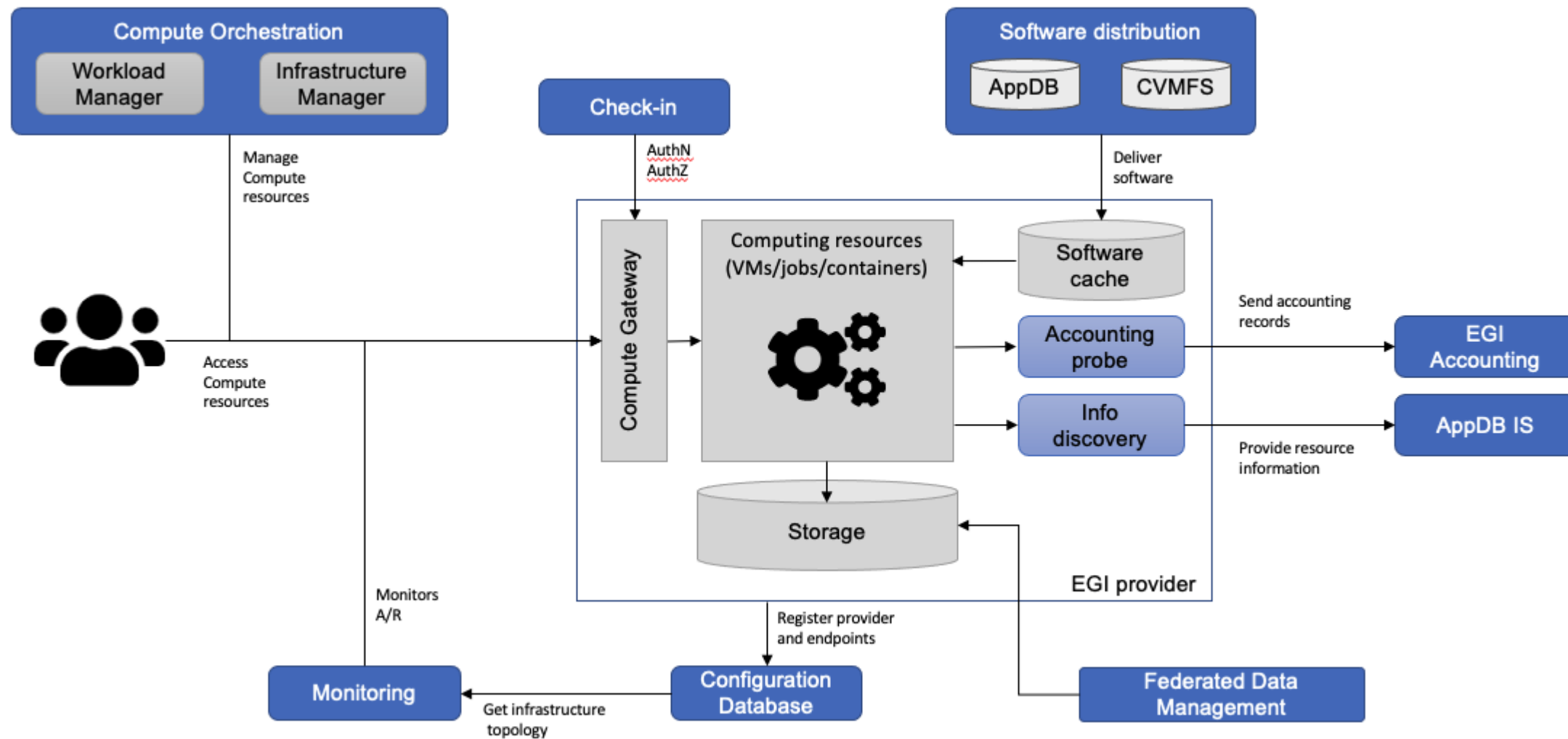
**27 Openstack Cloud providers
→ the EGI Fedcloud**



These projects have received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreements No 857641 and No 823852.



Fedcloud components



Check-in

Log in with your institutional account

- **Federated identity**
 - Log in with eduGAIN, social media and other
 - institutional or community-managed identity providers
- Harmonised **authorisation information**
 - Check-in is able to aggregate user-community membership from multiple sources
- Industry Standard **OpenID Connect** technology based on keycloak
 - Allowing web and non-web access to services

PaNOSC community AAI (UmbrellaID) integrated with the EOSC Federation AAI



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VISA Demo Deployment

- Activity started (in collaboration with PaNOSC) to demonstrate the deployment of VISA outside of the PaN Facilities
- EGI is also interested in the possible exploitation of the platform by other communities and Projects where EGI is involved
- Selected CESNET OpenStack Cloud to host the installation as already supporting the PaNOSC Project with a dedicated tenant
- <https://visa.fedcloud-tf.fedcloud.eu/>



VISA Demo Deployment: first steps

- Using the “demo deployment” via docker-compose made available by ILL
- Direct EGI Check-in integration attempted initially, then we moved to the deployment of KeyCloak and integration with EGI Check-in
- Small problem with Header cases when contacting the Openstack API quickly fixed by ILL team
- Users configured as STAFF manually in the DB to be able to create deployments - no experiments in our cases
 - We may investigate the new guest access feature in v2.3
- VISA Image build by modifying the template provided by ILL to use virtual-box
 - Could be polished and pushed upstream if someone else is interested



VISA Demo Deployment: Integrations

- Integration with EGI Check-in: **DONE**
 - EGI Check-in (first Dev, then Demo instance) configured as Identity provider in Keycloak
 - Users need to be then enabled on the DB
- Integration with AppDB: **IN PROGRESS**
 - <https://appdb.egi.eu/store/vappliance/visa.base.image/>
 - Enabled image for vo.panosc.eu tenant and configured in VISA
- Integration with EGI Content Management (CVMFS): **IN PROGRESS**
 - EGI CVMFS stratum 0 is at UKRI + stratum 1 network
 - Included the CVMFS clients in the VISA base image and link it to stratum -1 existing repos for testing
 - Need to configure the already available squid proxies at CESNET and create a dedicated repo for VISA software



VISA Demo Deployment: Next steps

- GPU Access

- Ubuntu image with NVIDIA drivers pre-installed to be used as based VISA image
- Ask CESNET to extend the current tenant with GPU enabled nodes

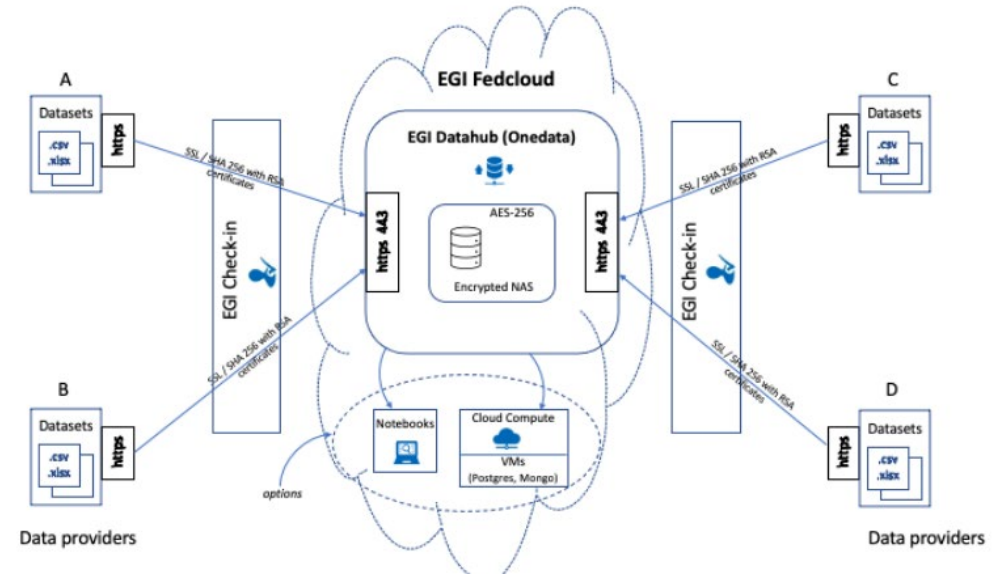
- Data Access

- Depending on the uses cases the different client tools will be installed
 - Access to S3 object storage at CESNET
 - Access to EGI DataHub (Onedata) provider locally at CESNET or other providers in the infra
 - Access to CESNET dCache installation has been discouraged as that is managed by different teams and dedicated to Grid workflows



Possible usage scenario

- Data Analysis for communities where access via Remote Desktop is a requirement
 - EGI Notebooks already covering Jupyter users
- Currently deploying dedicated VMs for users (e.g. LETHE project) with xrdp
 - Need for ssh tunneling
 - Need for public IP
- VMs are always up. Usually we are not cleaning unused VMs, so we could benefit from the VISA VMs lifecycle
- Need customization
 - E.g. VMs or users associated to Experiments not needed



Conclusions

- No major issues encountered with the “demo deployment”
 - We are aware of course that a production installation has different requirements
- Planning to complete this year the missing integrations and showcase the deployment to interested communities
- Planning to look again at deployment without Keycloak directly using EGI Check-in
- VISA on multiple clouds ? using Web-cloud-provider?

