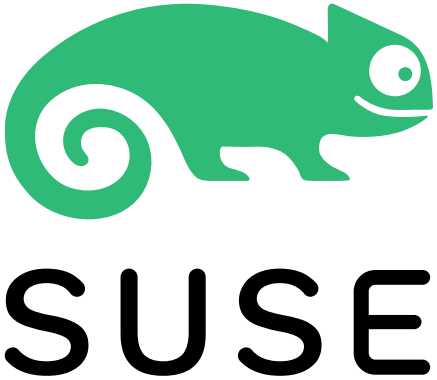

SUSE

SUSE

SUSEID

Open by design,
sovereign by choice



How did we get here?

A brief history of SUSE

Who is SUSE?

- Founded in 1992
- The first company to market Linux for enterprise
- SUSE was acquired by Novell in 2003
- Novell was acquired by the Attachmate Group in 2011
- Attachmate Group ~~merged with~~ was acquired by Microfocus in 2014
- In 2019 SUSE becomes an independent company.

Can you see the pattern?

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But... who are you?

– Audience member

José Gómez

Full-stack Engineer

6-7 Years @ SUSE

- 5 Years in SUSE Customer Center
- 1 year SUSE IT Platform Engineering

In a nutshell:

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Disclaimer

Disclaimer

We’re not here to sell you any product (whether SUSE or not).

We will speak about how the organization is working towards a better IAM landscape.

The products in this presentation are mentioned without any marketing sponsorship involved.

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How did we get here?

The authentication roller coaster

- Multiple password providers:
  - $SaaS$
  - LDAP'ses
  - YP/NIS
- Multiple addons and bridges:
  - 2FA Addons
  - ActiveDirectory bridges/connector
  - LDAP-to-OIDC bridges
  - RADIUS servers

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How did we get here?

The authentication roller coaster

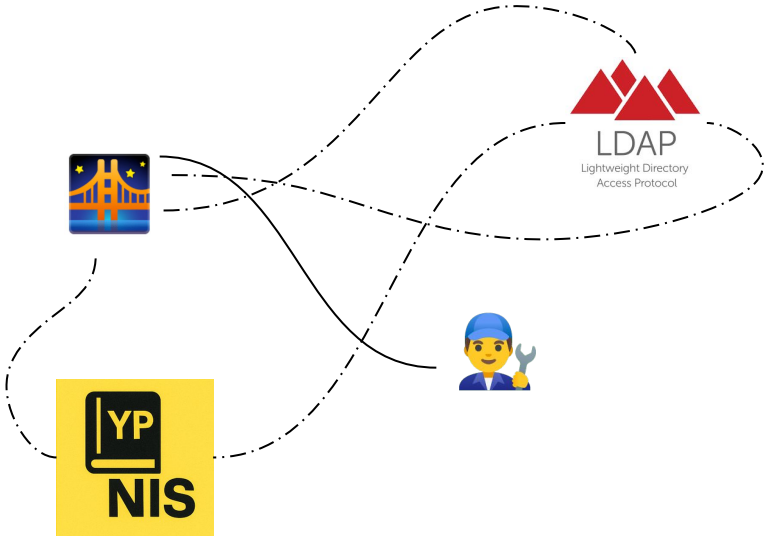
TL;DR:

How did we get here?

The authentication roller coaster

Why are we doing this?

- Authentication integrations across the company is not fully standardized.



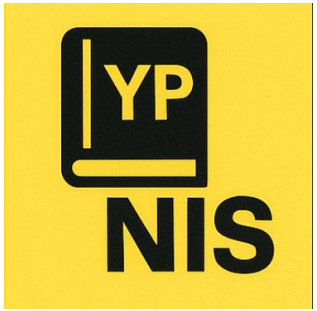
How did we get here?

Motivation

Why are we doing this?

- As of time of writing the vast majority of employees need at minimum two identities in order to work effectively.

$SaaS Product$



How did we get here?

Motivation

Security & Compliance Concerns

- Challenging Identity and Access Management (IAM) governance.
- Inconsistent MFA implementation.
- No standardized source of truth for identity and access.

How did we get here?

Motivation

Administration

- Multiple tools require manual changes for single requests

- Custom integrations increase the maintenance overhead.

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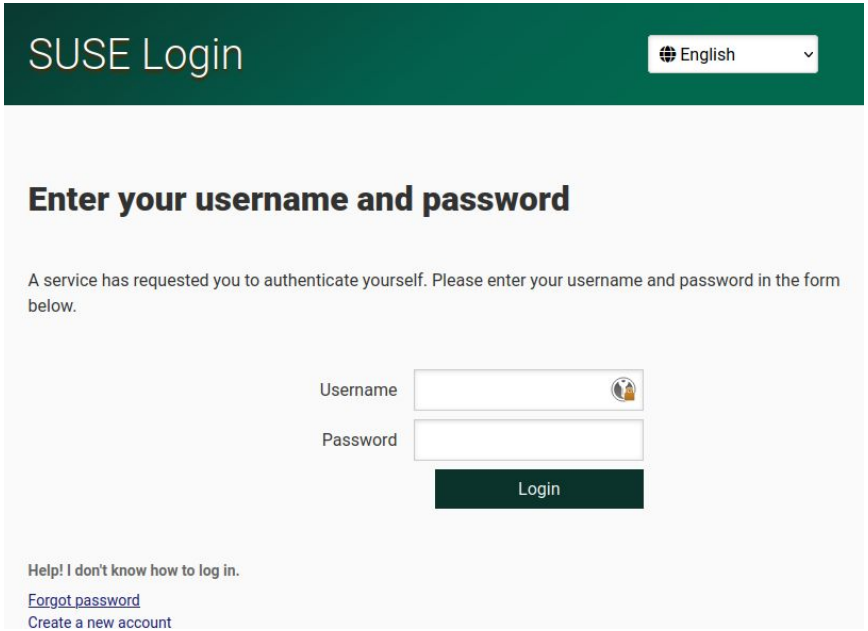
The ride for an average SUSE Employee/Partner

The ride for an average SUSE Employee/Partner

Open JIRA

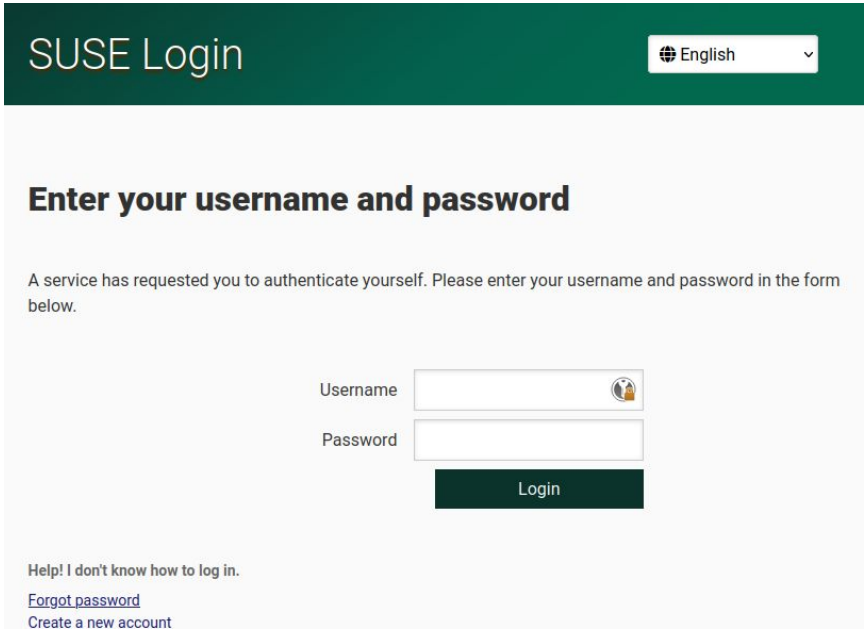
Authenticate...



The ride for an average SUSE Employee/Partner

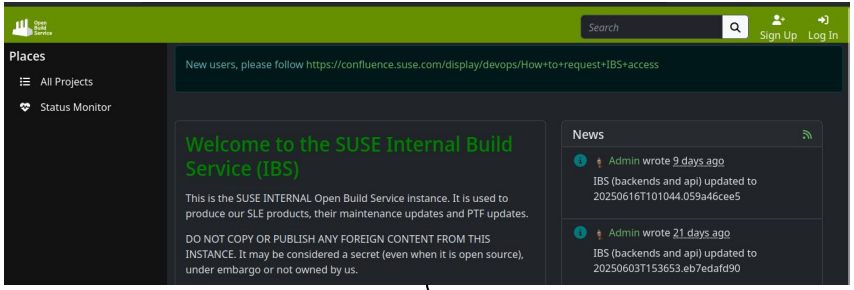
Open Confluence

Authenticate...



The ride for an average SUSE Employee/Partner

Open Internal Build Service



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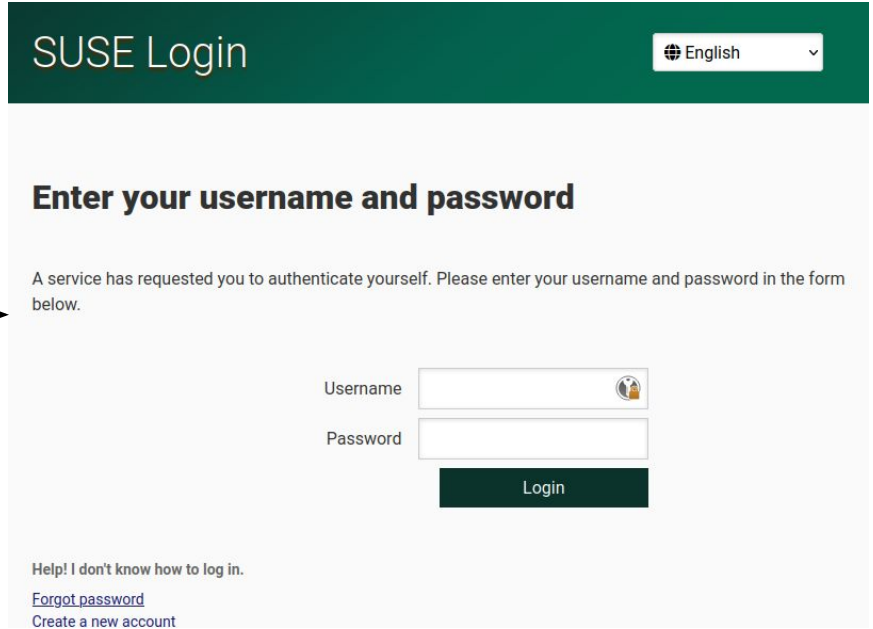
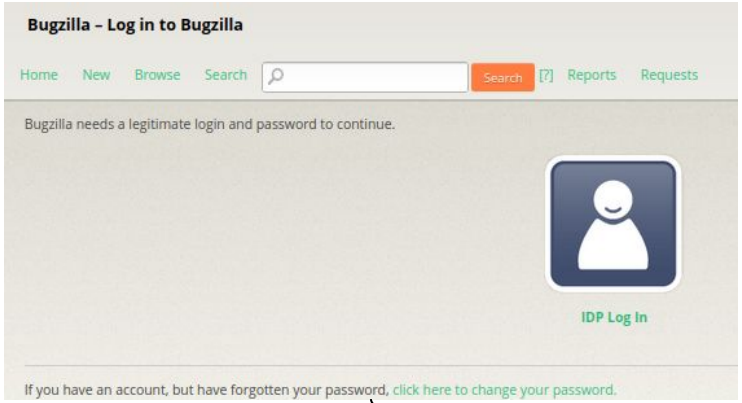


The ride for an average SUSE Employee/Partner

Bugzilla? Guess what?



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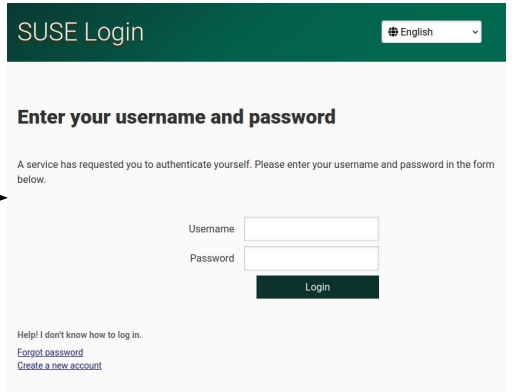
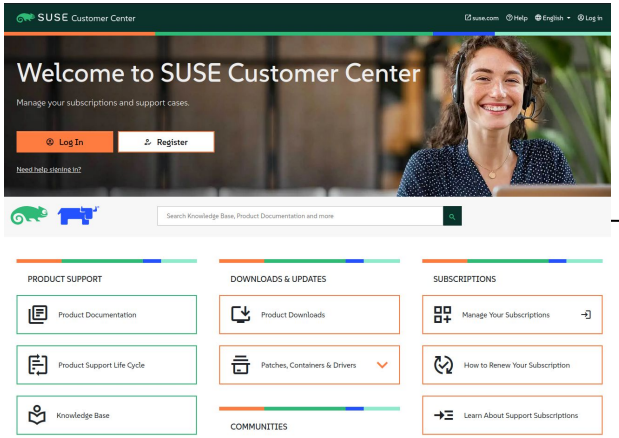


The ride for an average SUSE Employee/Partner

Wanna double check your subscriptions in SCC?



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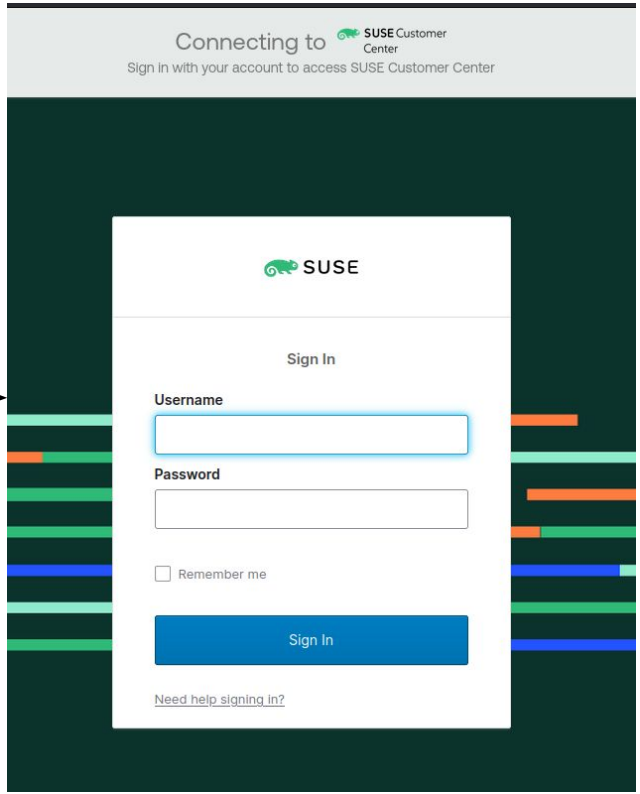
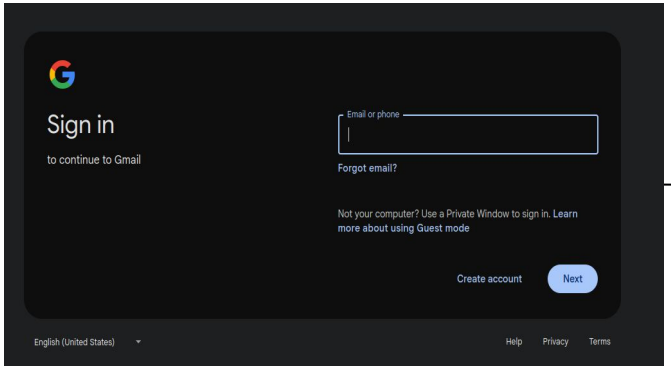


The ride for an average SUSE Employee/Partner

Corporate email?



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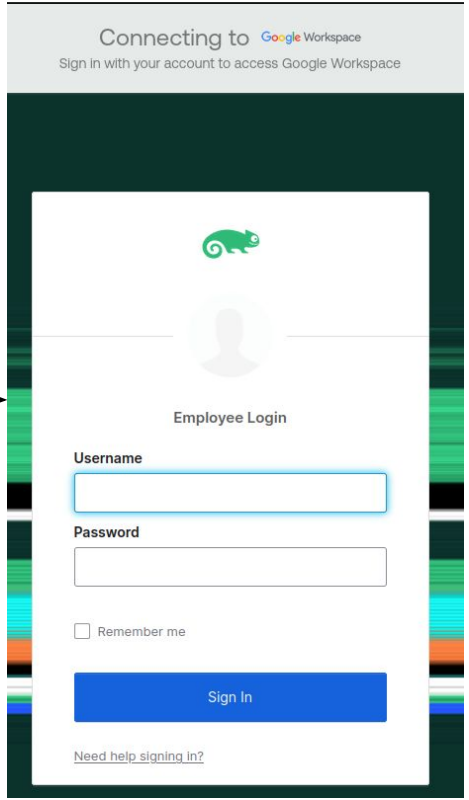

Our day-to-day summarized

Why not move it all to $yet another SaaS$ / $Cloud service$ / $Third Party Service Provider$?

– https://xkcd.com/927/

Why not move it all to $third party$?

Why not move it all to $third party$?

Security Compliance and Digital Sovereignty are our goals

Framework	Key Requirements
GDPR	✔ Data Protection by Design (Art. 25) ✔ Minimize 3rd-party processors (Art. 28) ✔ Data localization concerns
NIS2	✔ Risk-based access control and identity management (Art. 21) ✔ Supply chain security (Annex I)
DORA	✔ Secure and resilient Information and Communications Technology (ICT) Services ✔ In-house or contractually-bound IAM providers (Art. 5, 9, 10)

There’s always a catch

Security Compliance and Digital Sovereignty are our goals

- Self hosting will enable us to comply with more regulations, be in control of our data and be an exemplar of Digital Sovereignty.

- However *there ain't no such thing as a free lunch*. Every new solution comes with new problems.

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There's always a catch

Security Compliance and Digital Sovereignty are our goals

- At the expense of every benefit we'll get in the long term, we incur in new costs in the short term:
    - OPS
    - DC
    - Data handling
    - Security & Hardening
    - 24/7 SRE
    - Front-line support

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There’s always a catch

Security Compliance and Digital Sovereignty are our goals

- In our case:
  - ✅ We have multiple DCs and personnel for it
  - ✅ We have multiple departments with Support Crew
  - 🆕 Ops Staff (SRE)
  - 🆕 Data Handling
  - 🆕 Security & Hardening

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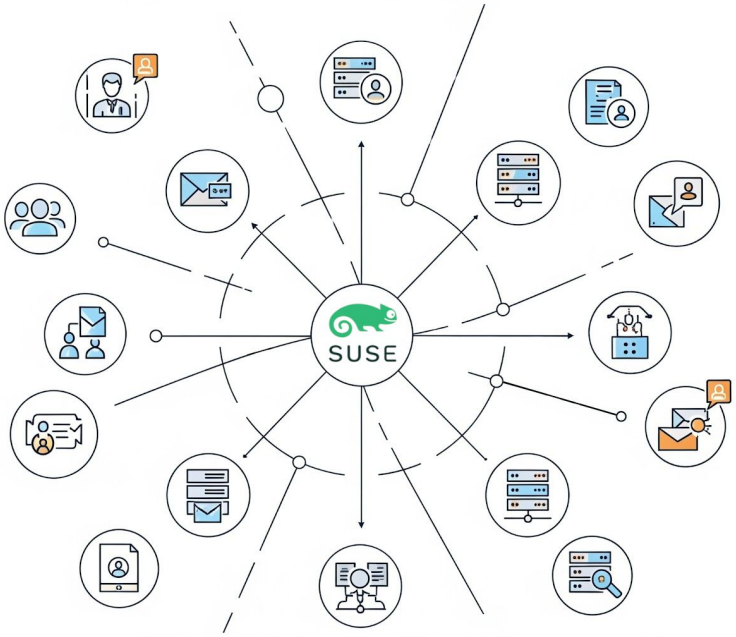
Enough!

Show me the real diagrams, again

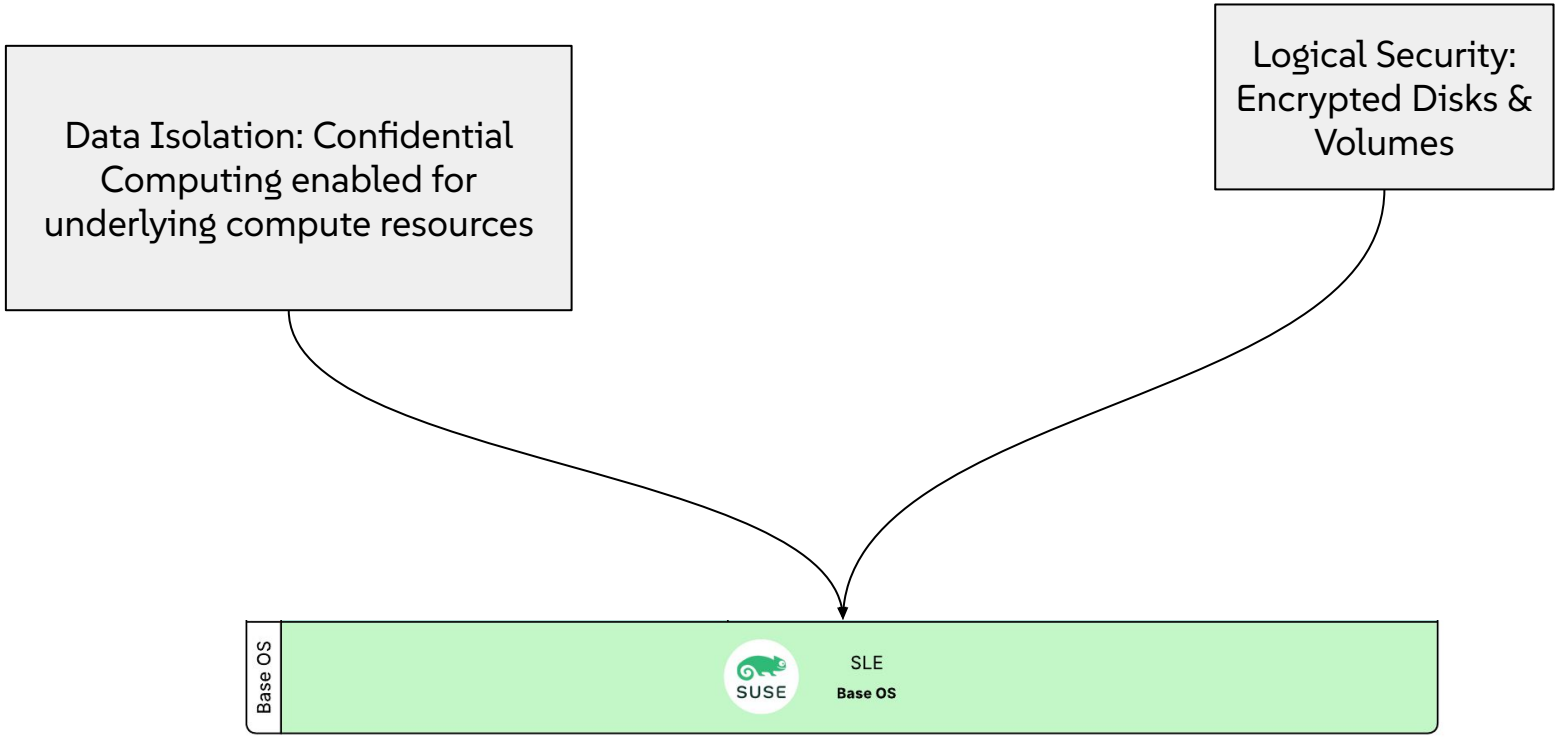
Architecture Overview

Our design goal



Architectural Overview

Software components



Architectural Overview

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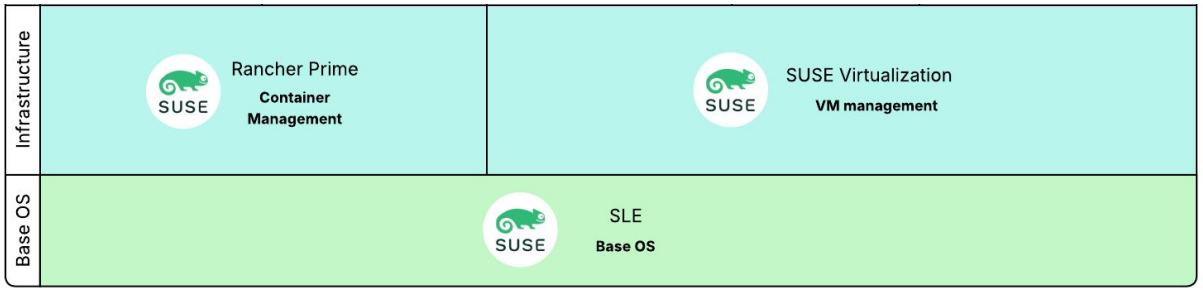
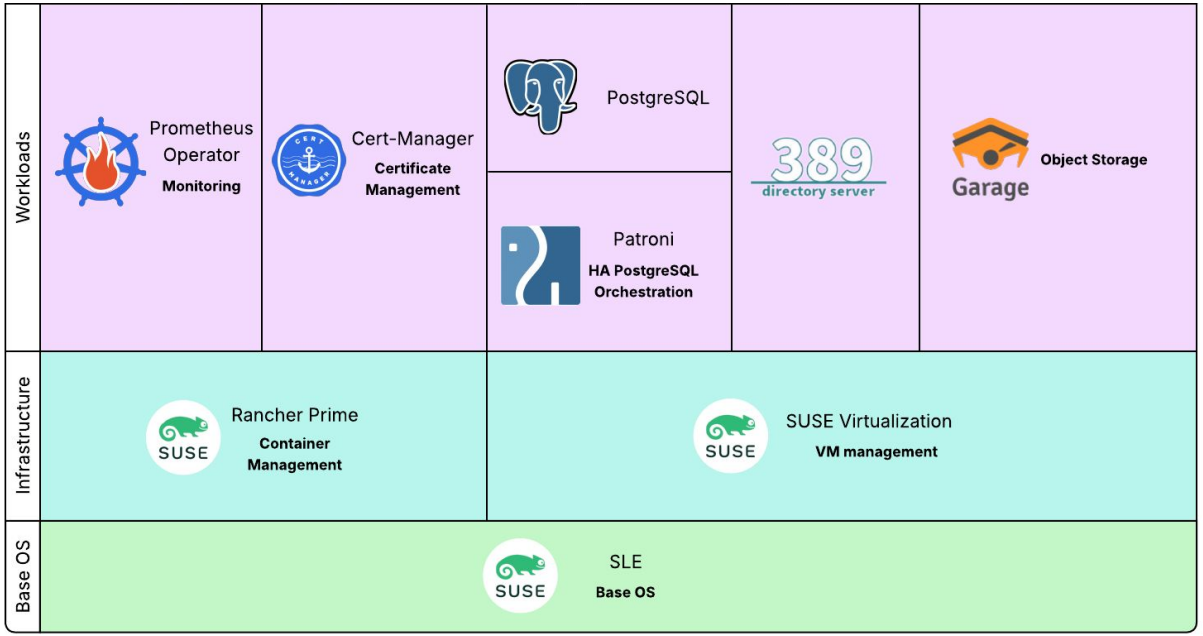


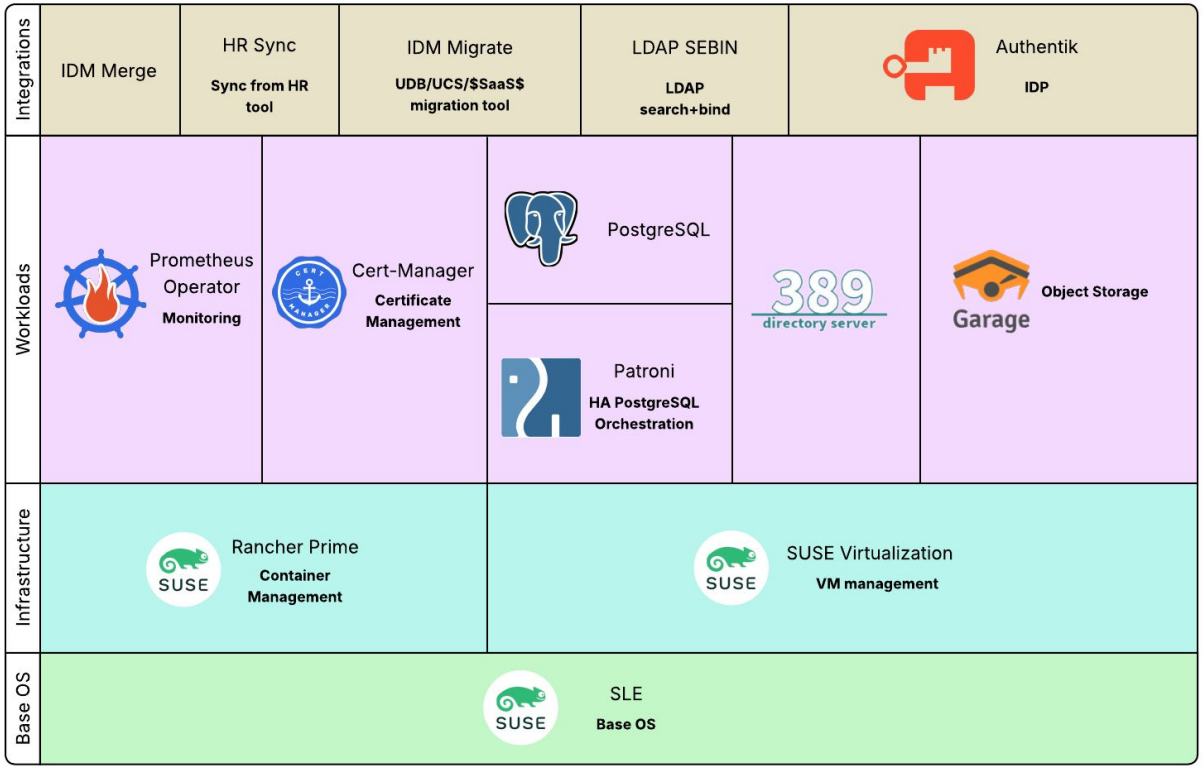
Architectural Overview

Software components



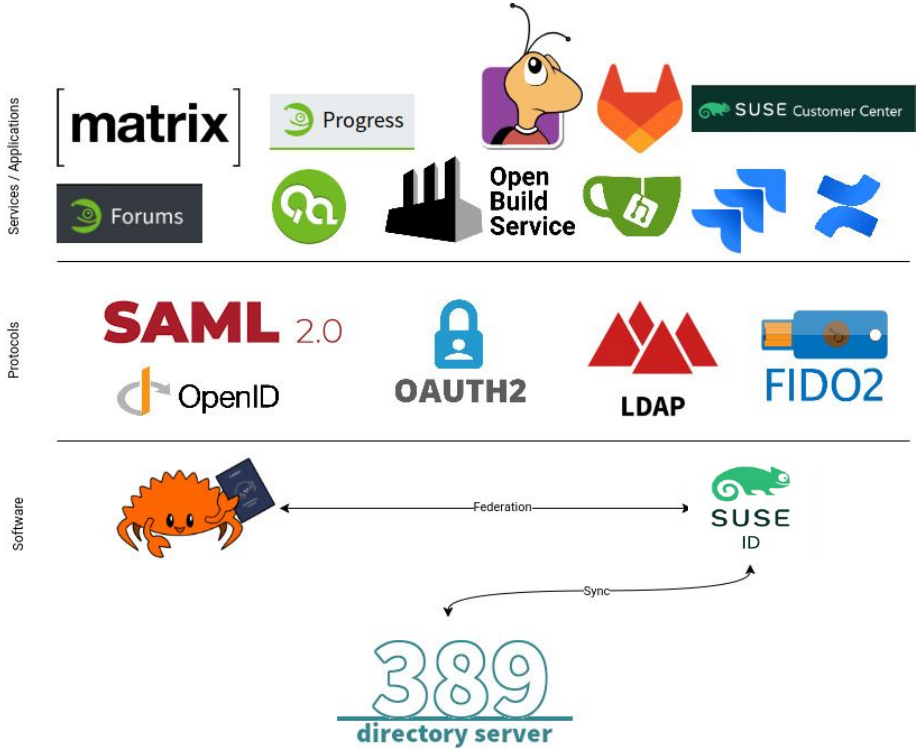
Architectural Overview

Software components



Architectural Overview

SUSEID + Community



OSS Contributions

Until today and still counting...

Existing projects:

- Authentik
- Saltstack
- smallstep/certificates
- Django-python-ldap
- KanIDM
- Podman-py
- go-ldap/ldif

New projects born during the project (to be public soon):

- Stepdance: Client Certificates made Easy
- LDAP SEBIN: LDAP **Se**arch+**Bin**d
- IDM Merge: Identity Aggregator & De-duplicator

Q&A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