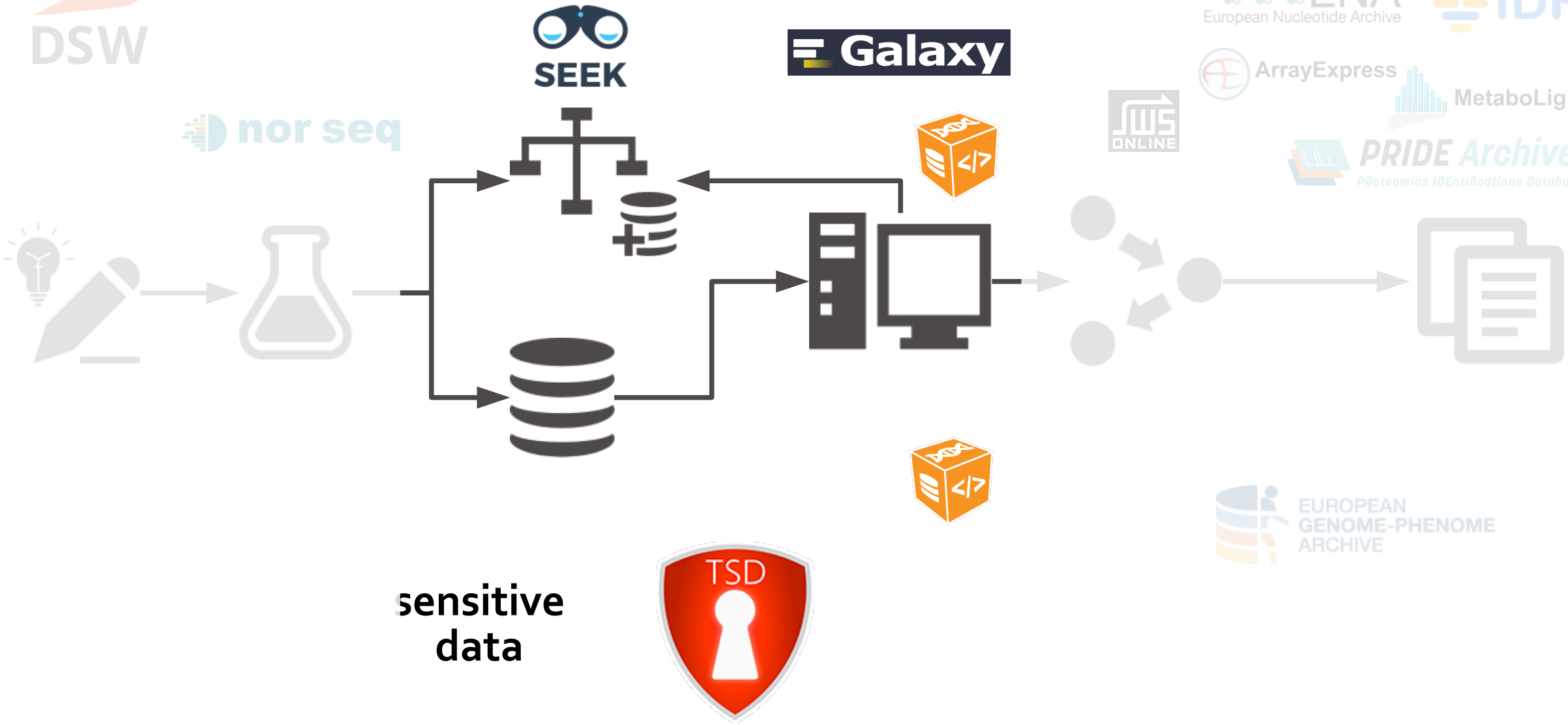
Data Storage Platforms

Korbinian Bösl
Data manager ELIXIR Norway
21 February 2020

NeLS

Norwegian e-Infrastructure for Life Sciences



National HPC infrastructure

UNINETT Sigma2

- Advanced Storage Needs
- Advanced Computing Resources
- Free Analysis Toolkit (Rstudio, Jupyternotebook)

https://www.sigma2.no/

National HPC infrastructure

UNINETT Sigma2

NeLS
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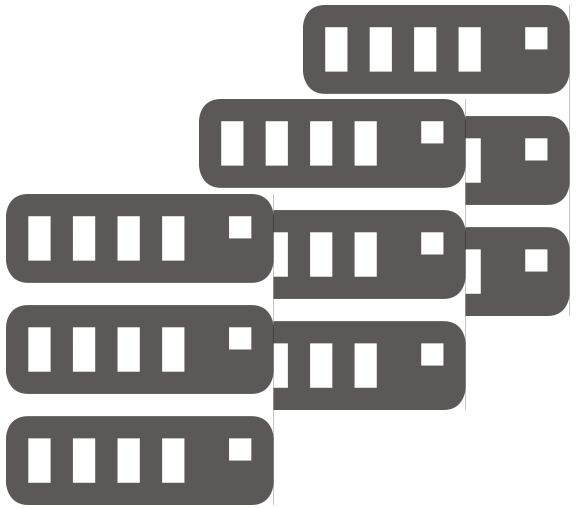
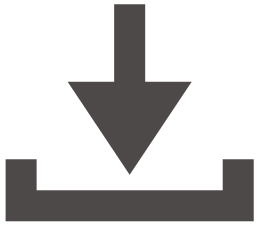


jupyter RStudio

NIRD toolkit



NIRD archive

Saga

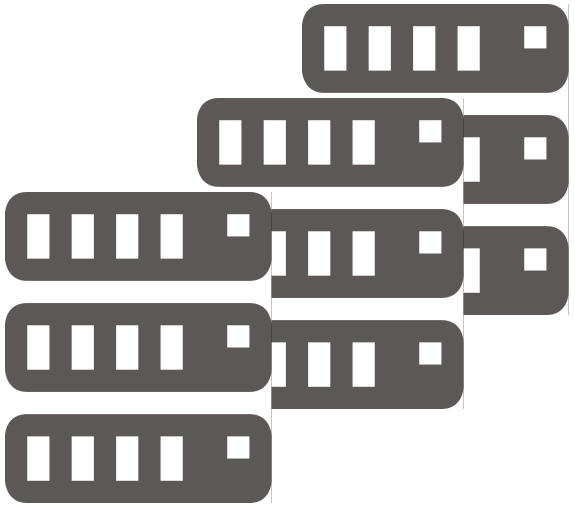
NIRD

https://www.sigma2.no/

HPC infrastructure

UNINETT Sigma2 Saga

244 nodes – 9824 cores – 32 GPUs



Total 75TB RAM – 186-3066GB/node

89TB + 60 TB NVMe+SSD

1PB file system

https://documentation.sigma2.no/quick/saga.html

Storage infrastructure - NIRD

UNINETT Sigma2

Geo replicated

Nightly snapshots

12 PB (→ 36 PB next 4 yrs)

https://documentation.sigma2.no/storage/nird.html

Sigma2 - Getting Access

UNINETT Sigma2

Bi-annual calls (January & July) – Reapplication (!)

User contribution model (projects > 15 mill. NOK)

Application for small grants continually

https://www.sigma2.no/how-apply-user-account
https://www.sigma2.no/data-storage#get-access

TSD – National sensitive data service

Maximum classification

2-factor authentication

Attached HPC resources

https://www.uio.no/english/services/it/research/sensitive-data/index.html

TSD – National sensitive data service

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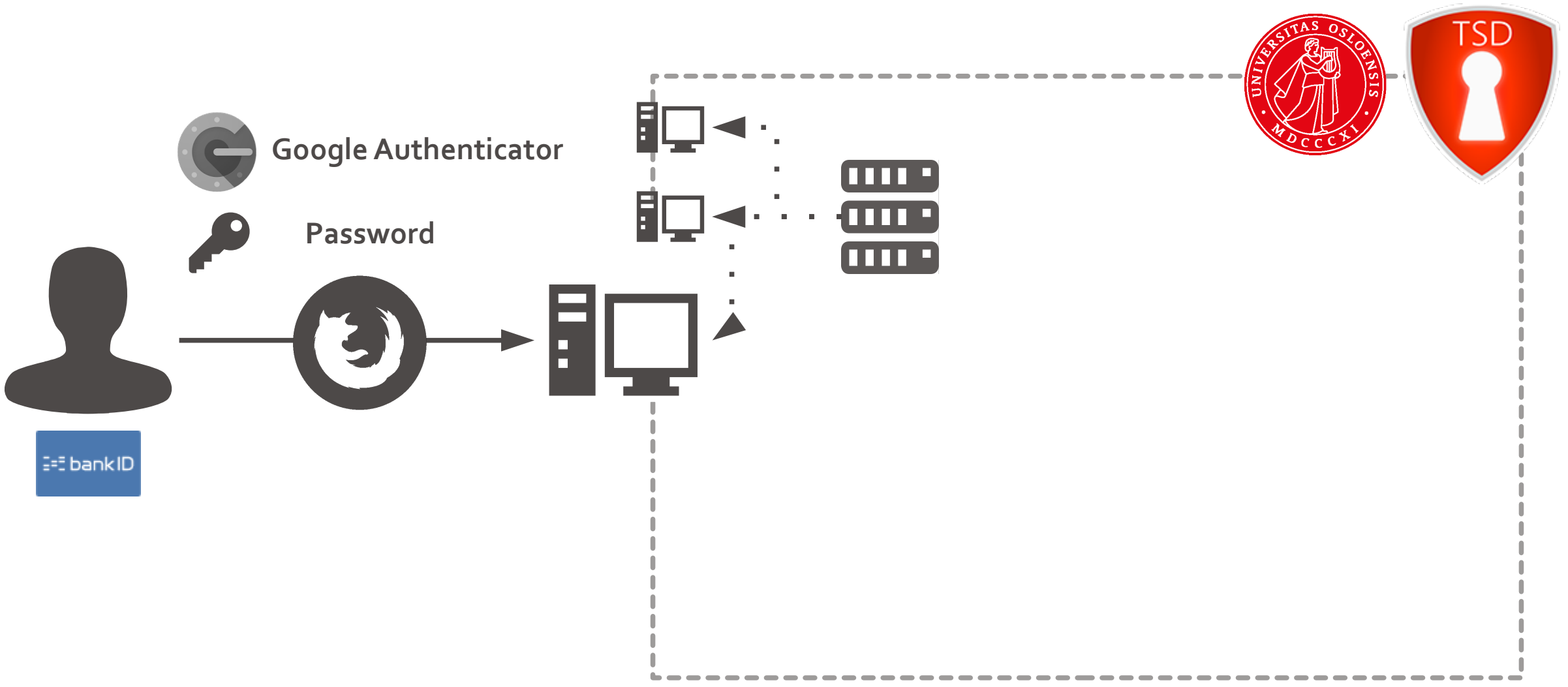
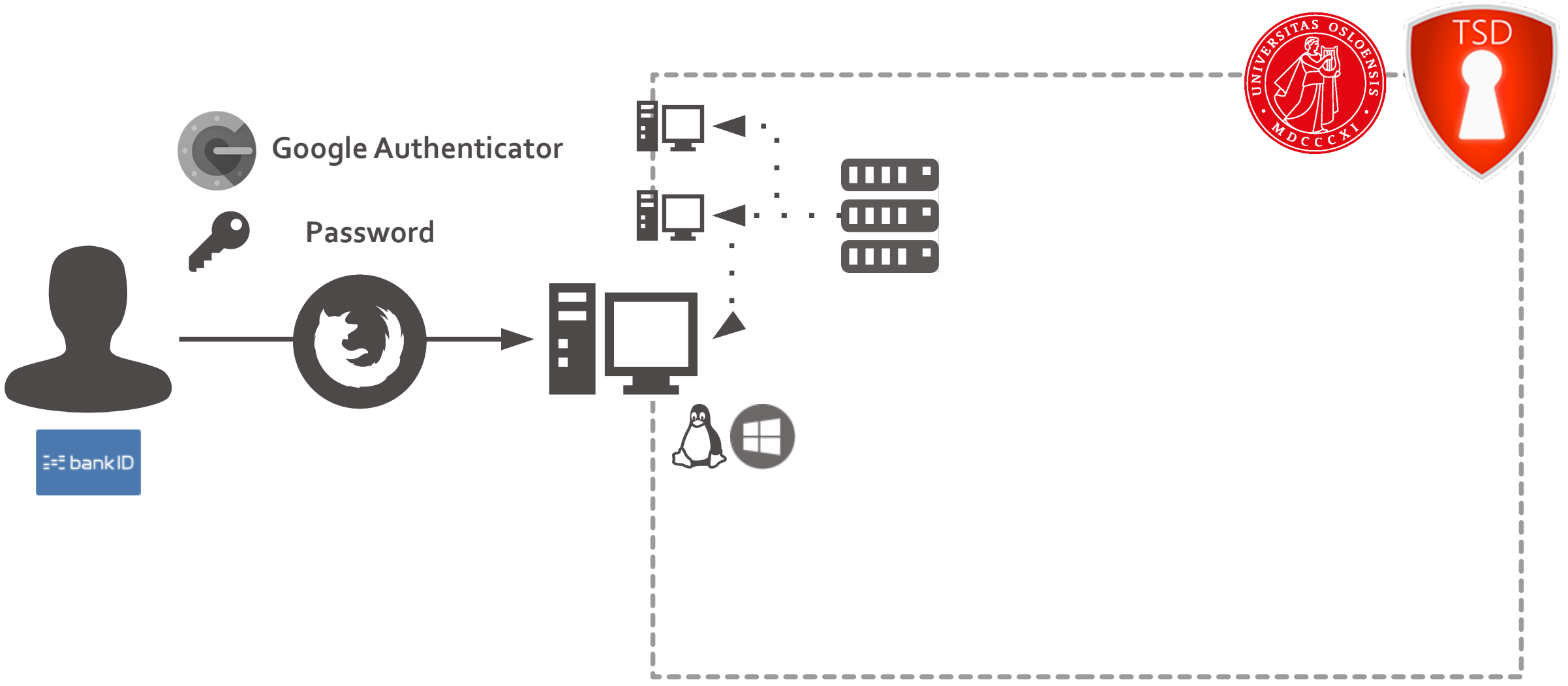


TSD – National sensitive data service



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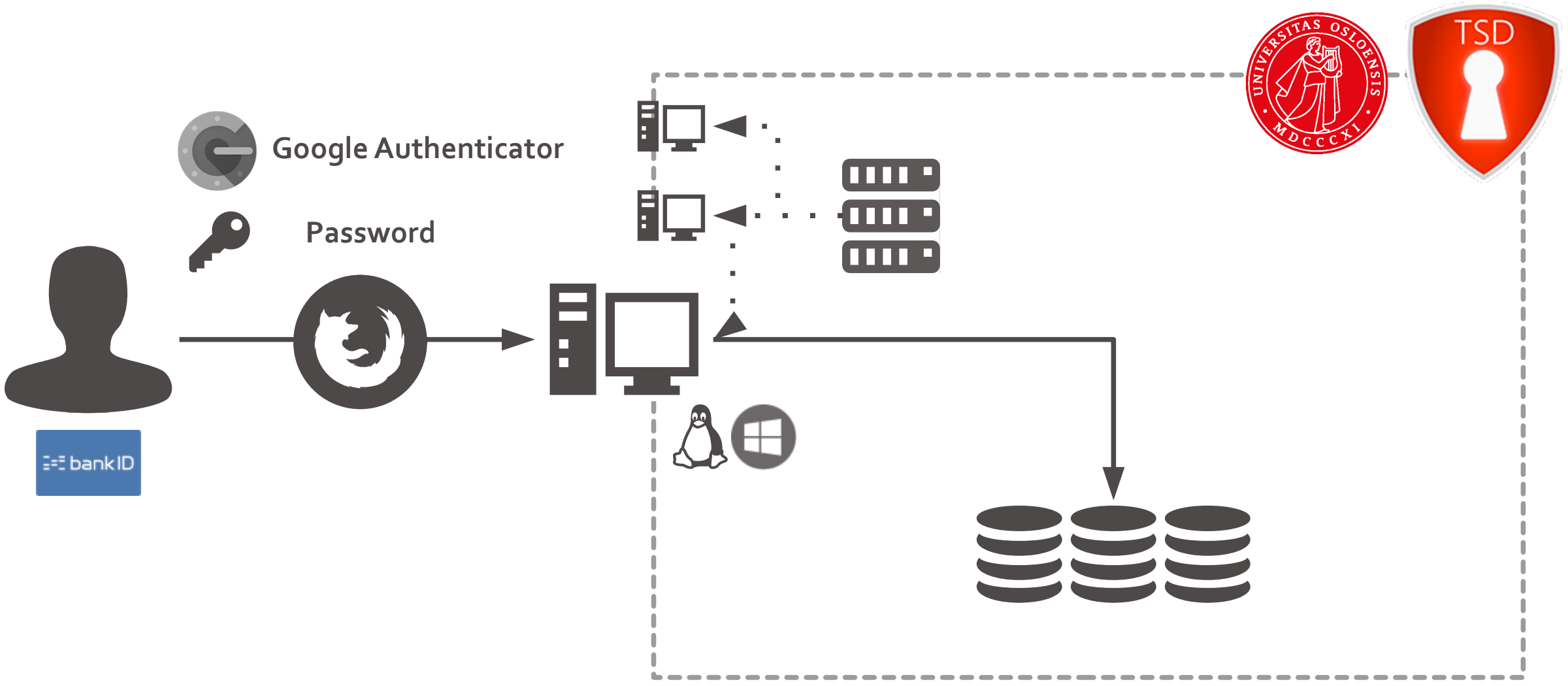

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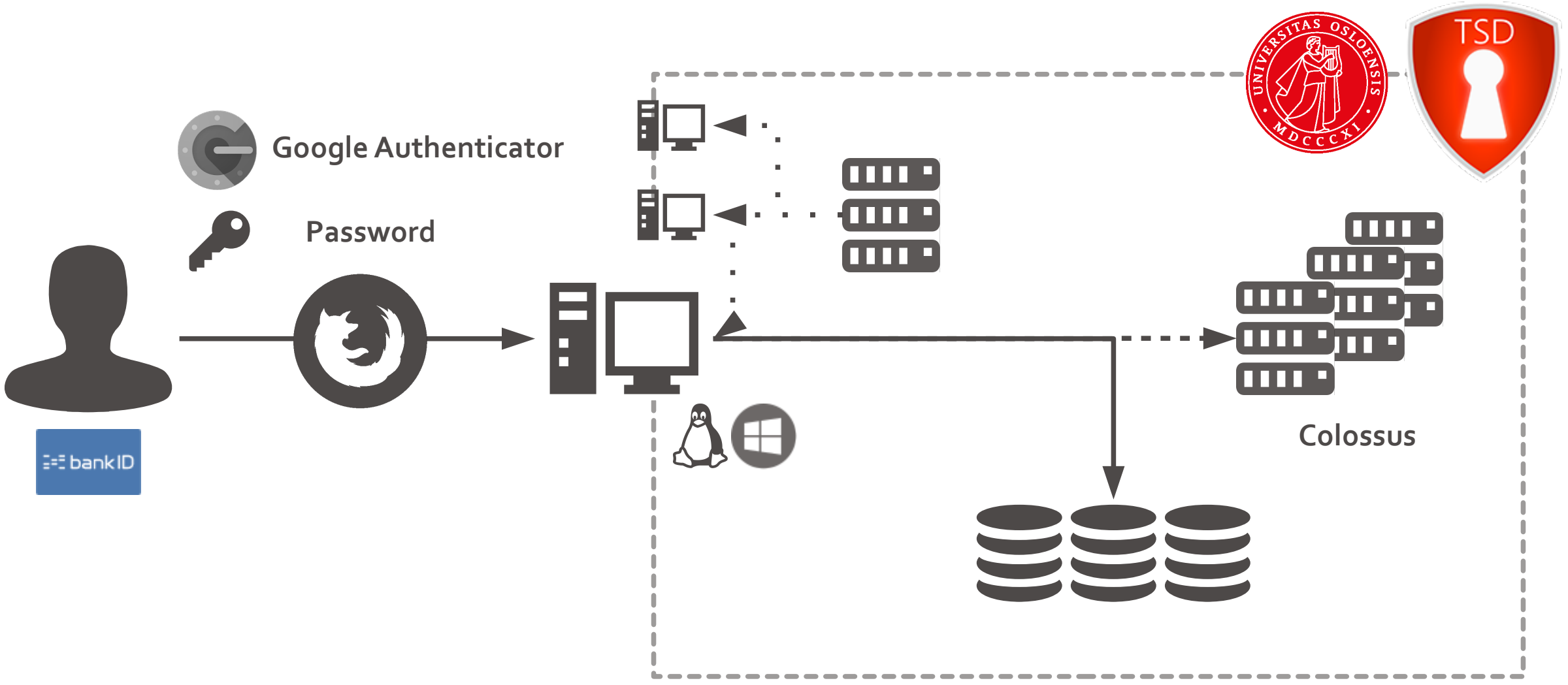

TSD – Getting Access

Subsidized access through Sigma2 calls

User contribution model (non UiO: min 15kNOK/a)

Free storage quotas through NeLS

https://www.uio.no/english/services/it/research/sensitive-data/access/prices/