Dataverse and OpenDP

Tools for Privacy-Protective Analysis in the Cloud

Red Hat Research Day, September 22

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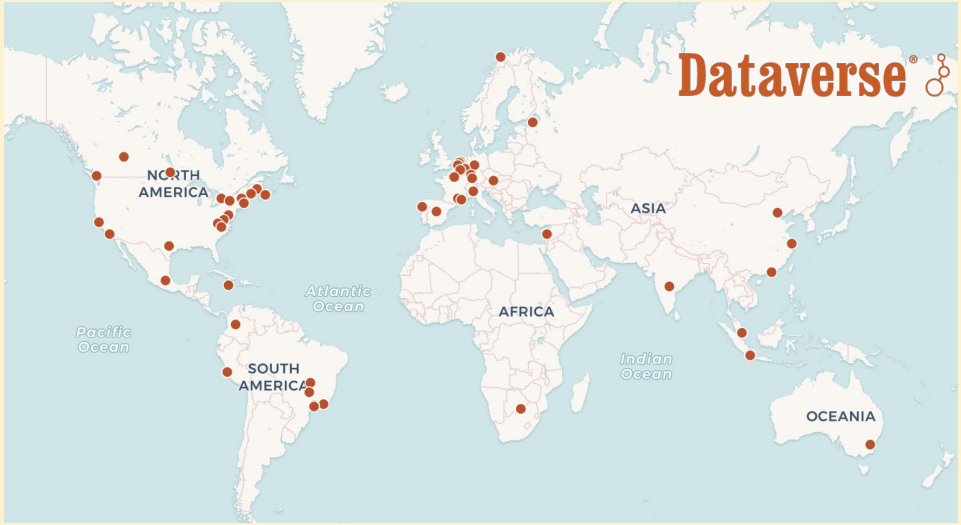
OpenDP plans to support sensitive data from academia, government, and companies

- Data repositories to offer academic researchers privacy-preserving access to sensitive data.
- Government agencies to safely share sensitive data with researchers, data-driven policy makers, and the broader public.
- Companies to share data on their users and customers with academic researchers or with institutions that bring together several such datasets.

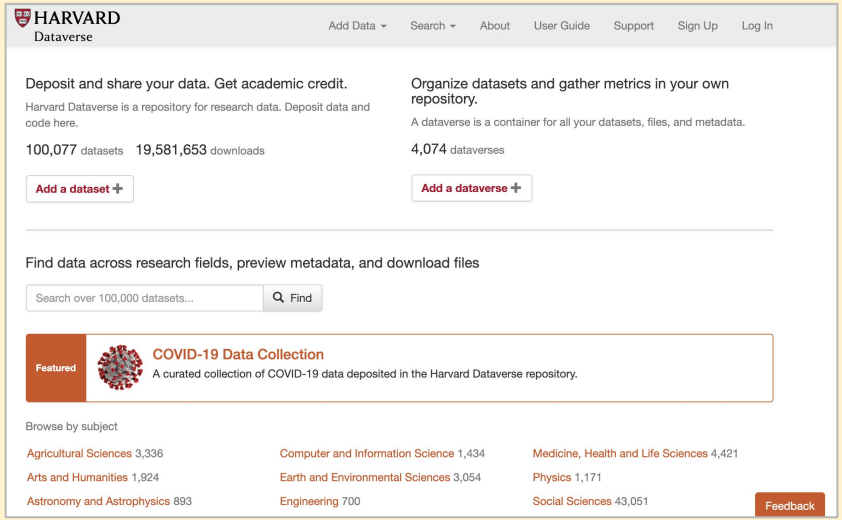
Dataverse powers Data Repositories

Dataverse Software



- Open-source software for data repositories
- 61 Dataverse repositories world-wide
- A community of users and contributors

Example: Harvard Dataverse



- 100K searchable datasets
- 19M file downloads
- Open to all research fields

Dataverse and OpenDP together will be able to:

- Enable search and exploration of sensitive datasets in the repository without accessing the original data
- Produce rich statistical summaries of sensitive datasets to be shared widely without risk of revealing individual-level information
- Generate differentially private “synthetic data” that reflects many statistical properties of the original dataset
- Allow approved researchers to use the OpenDP query interface to run differentially private analysis of interest
- Facilitate reproducibility of research with sensitive datasets

Non-Sensitive vs. Sensitive data in Dataverse

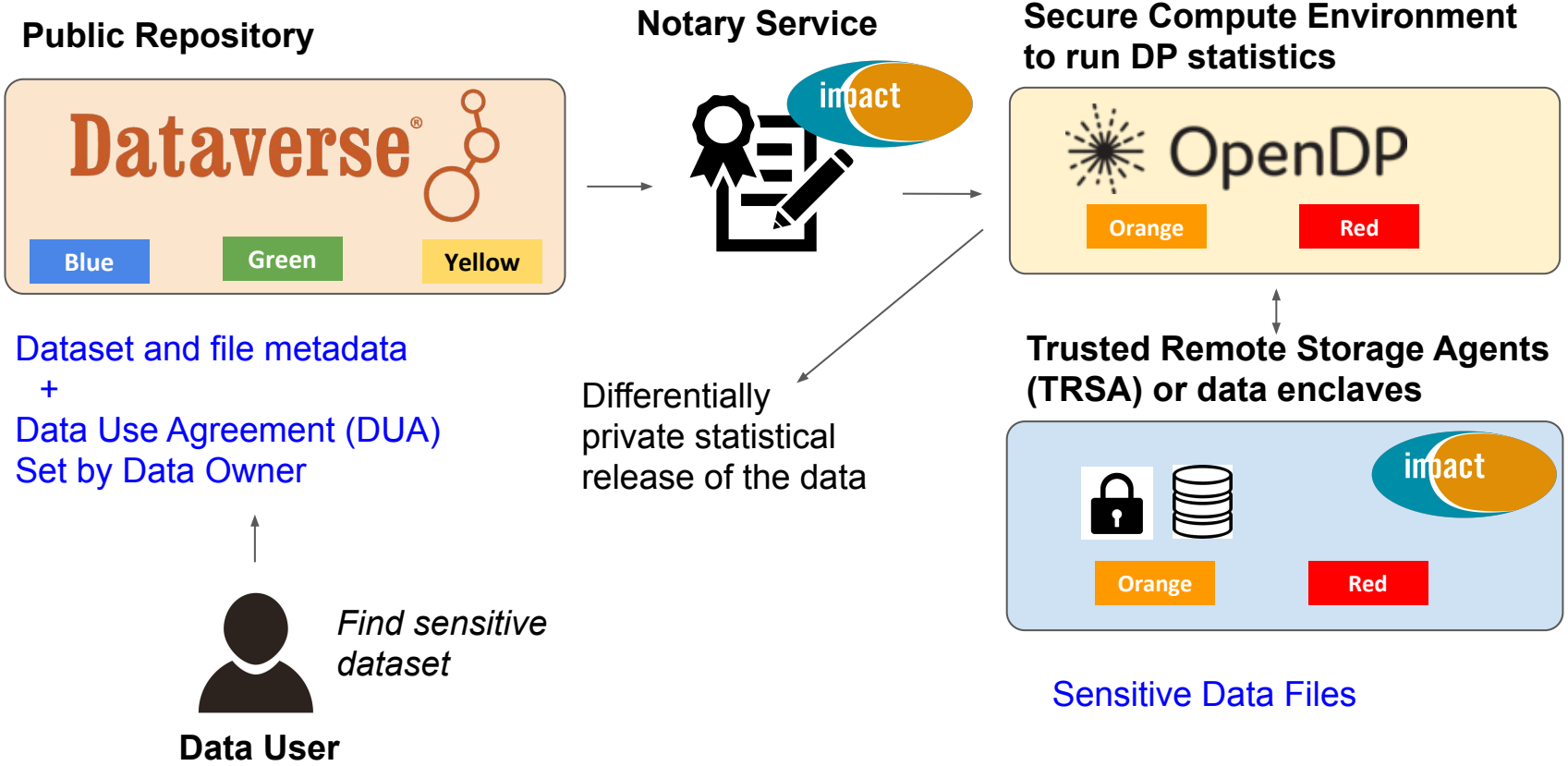
Non-Sensitive DataTags (DATAVERSE TODAY)

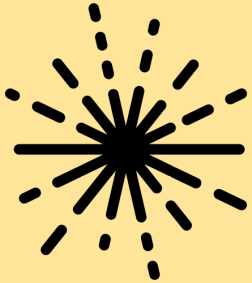
Blue	Publicly open, no barriers
Green	Publicly open, but need to register to access
Yellow	Restricted, need to be granted permissions, but non-sensitive

Sensitive DataTags (FUTURE RELEASE)

Orange	Requires Data Use Agreement (DUA); requires data enclave ***(moderate sensitive)***
Red	Requires DUA; stricter security requirements and audits ***(high sensitive)***
Crimson	Only metadata and no link to data; data stored outside network ***(maximum sensitive)***

Dataverse + OpenDP + Data Enclave





Thanks

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