
AWS
re:Invent
NOV. 28 – DEC. 2, 2022 | LAS VEGAS, NV

PRT066

SPONSORED BY DOMINO DATA LAB

ML anywhere: Single pane of glass for cross-Region and on-premises AI/ML

Yuval Zukerman (he/him/his)

Director, Technical Alliances
Domino Data Lab

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Agenda

Domino in 60 seconds

Motivation

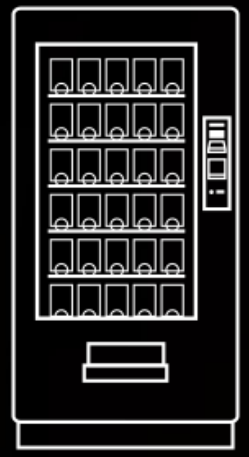
Scaling MLOps with hybrid infrastructure

Domino Nexus approach

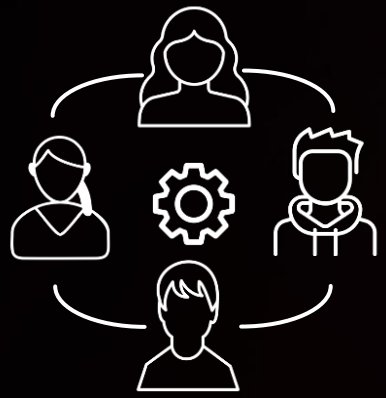
How AWS empowers Domino Nexus hybrid MLOps

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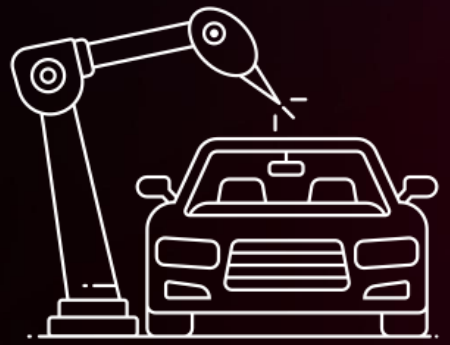
Domino Data Lab in 60 seconds



Self-service access to compute and secure data



Collaboration across teams and technologies



Rapid model deployment to production



Model monitoring and remediation

aws PARTNER Financial Software Competency

aws PARTNER ML Software Competency

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Why hybrid cross-Region

MOTIVATION



Data locality

Avoid data transfer and comply with data sovereignty laws

39% are investing in their AI platform to increase security and compliance

– Forrester

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Cost

Mitigate rising infrastructure costs and optimize utilization

US dedicated data center cost runs approx. $650/sq. ft. and up, while EU data center costs can run up to $1,200/sq. ft.

– Dgtl Infra

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Availability

Infrastructure and tools on demand across Regions, clouds, and on premises

45% of cloud AI development-focused firms find it challenging to access the appropriate AI methods/tools

– Forrester & Rev

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Modernization

Speed cloud migration, future-proof investments, and avoid lock-in

92% of enterprises have a multi-cloud strategy

– Flexera

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Meet Natalya*



*(and introducing Domino Nexus)

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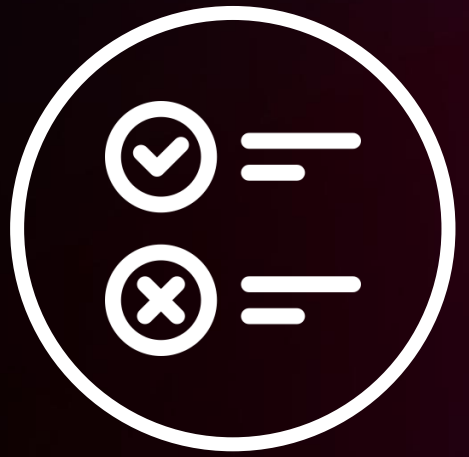
What Natalya needs to do



Worldwide collaboration



Data privacy laws



Data governance



High ROI + low TCO

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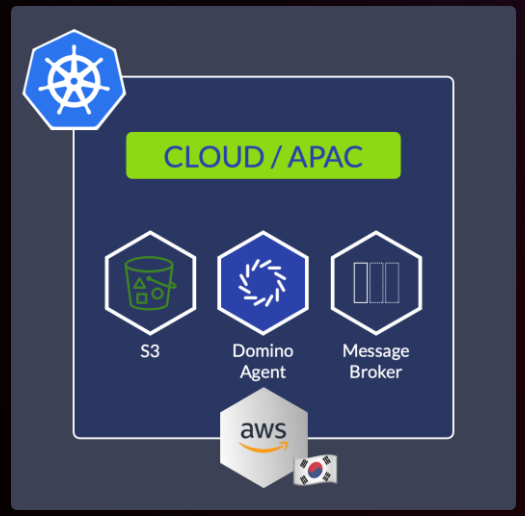
Worldwide collaboration with Domino Nexus



Control plane

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Worldwide collaboration with Domino Nexus



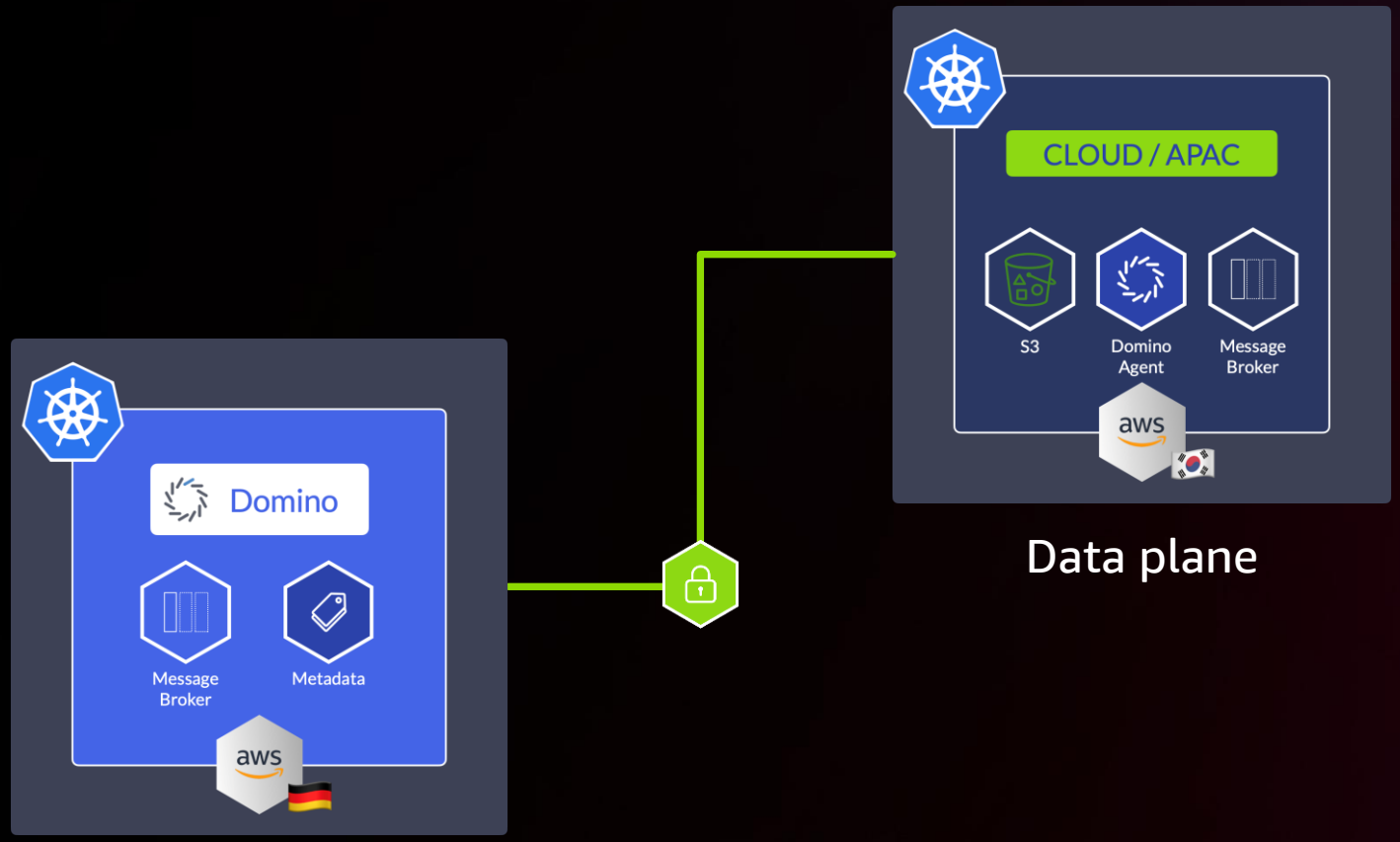
Data plane



Control plane

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Worldwide collaboration with Domino Nexus

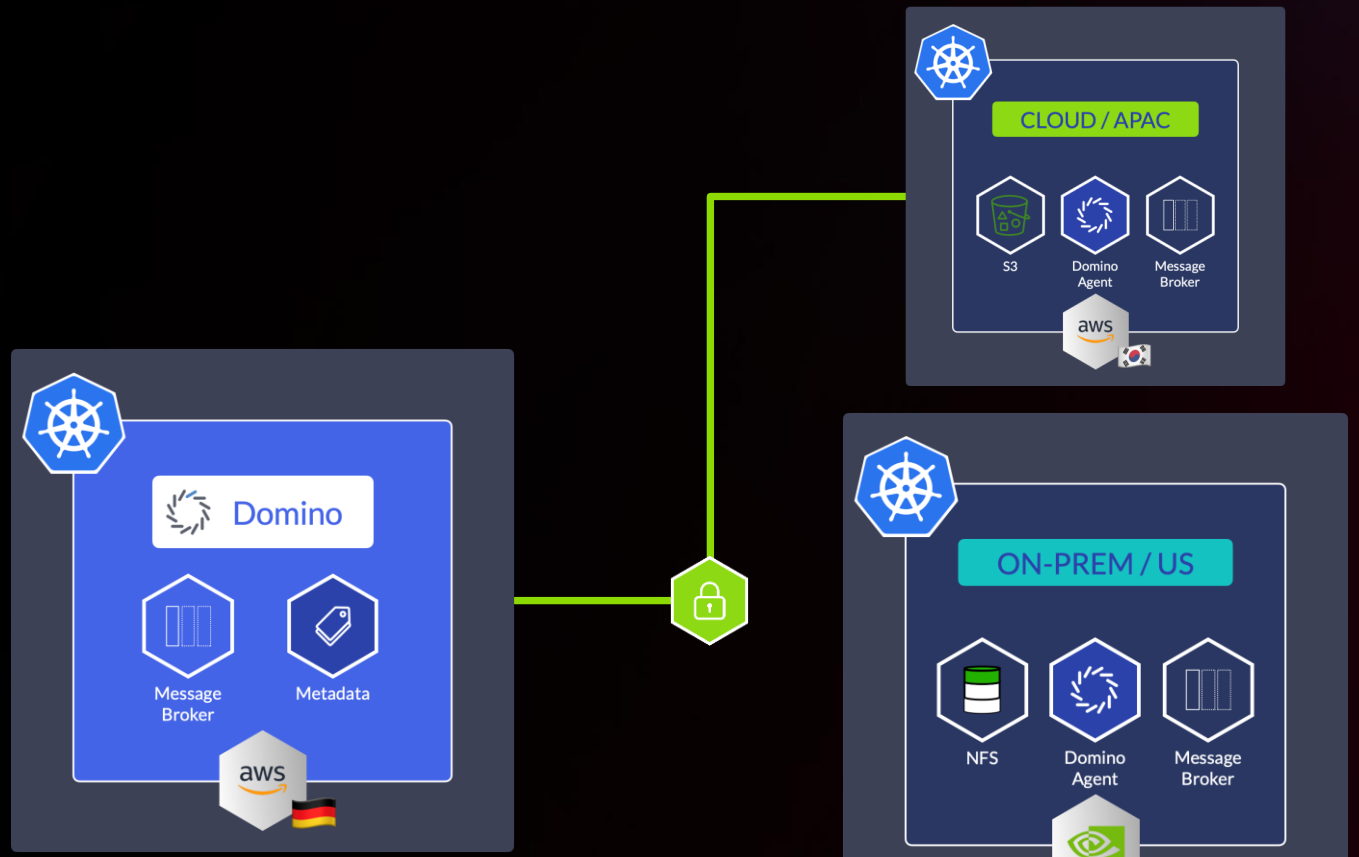


Data plane

Control plane

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Worldwide collaboration with Domino Nexus

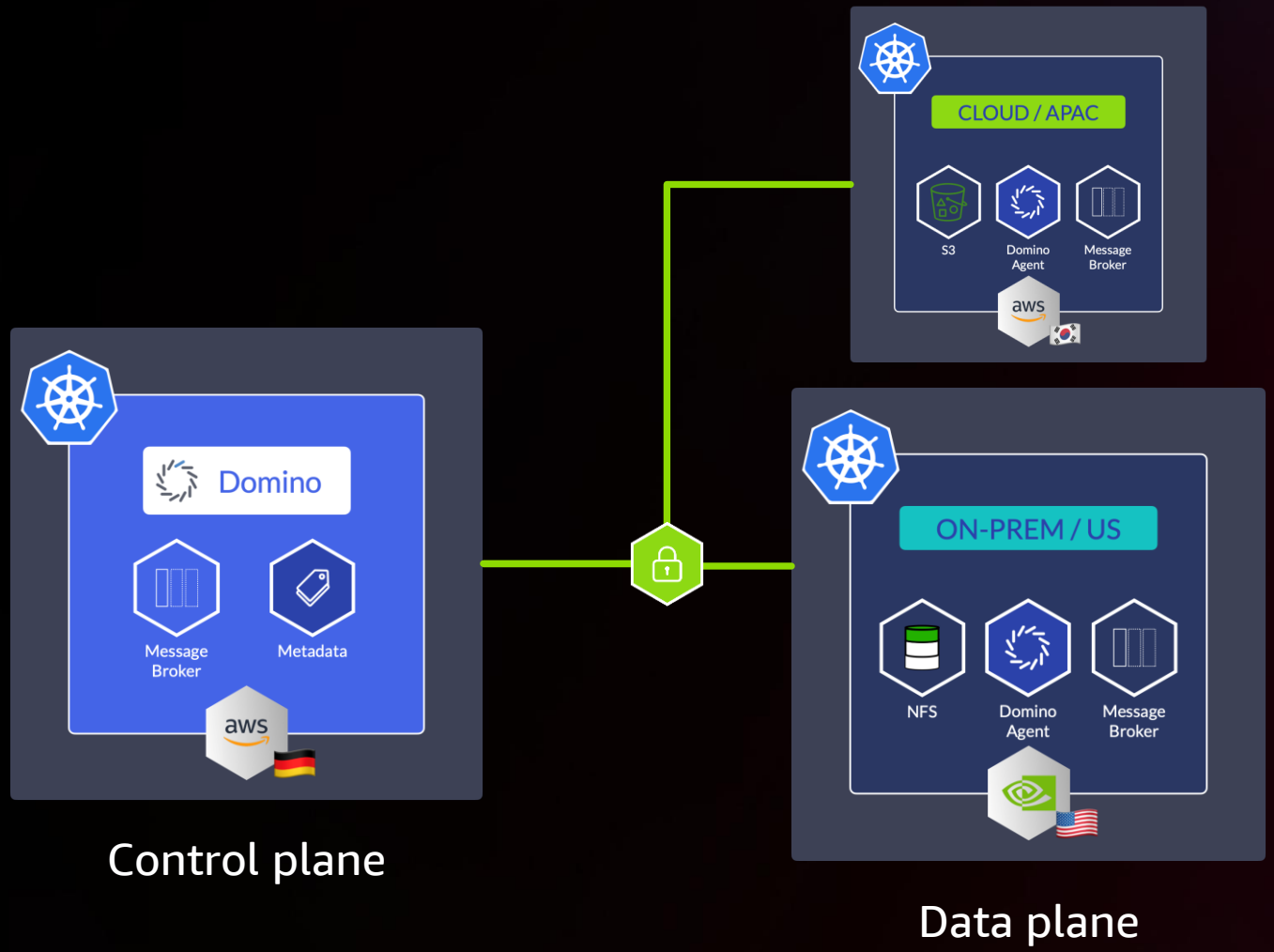


Control plane

Data plane

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Worldwide collaboration with Domino Nexus

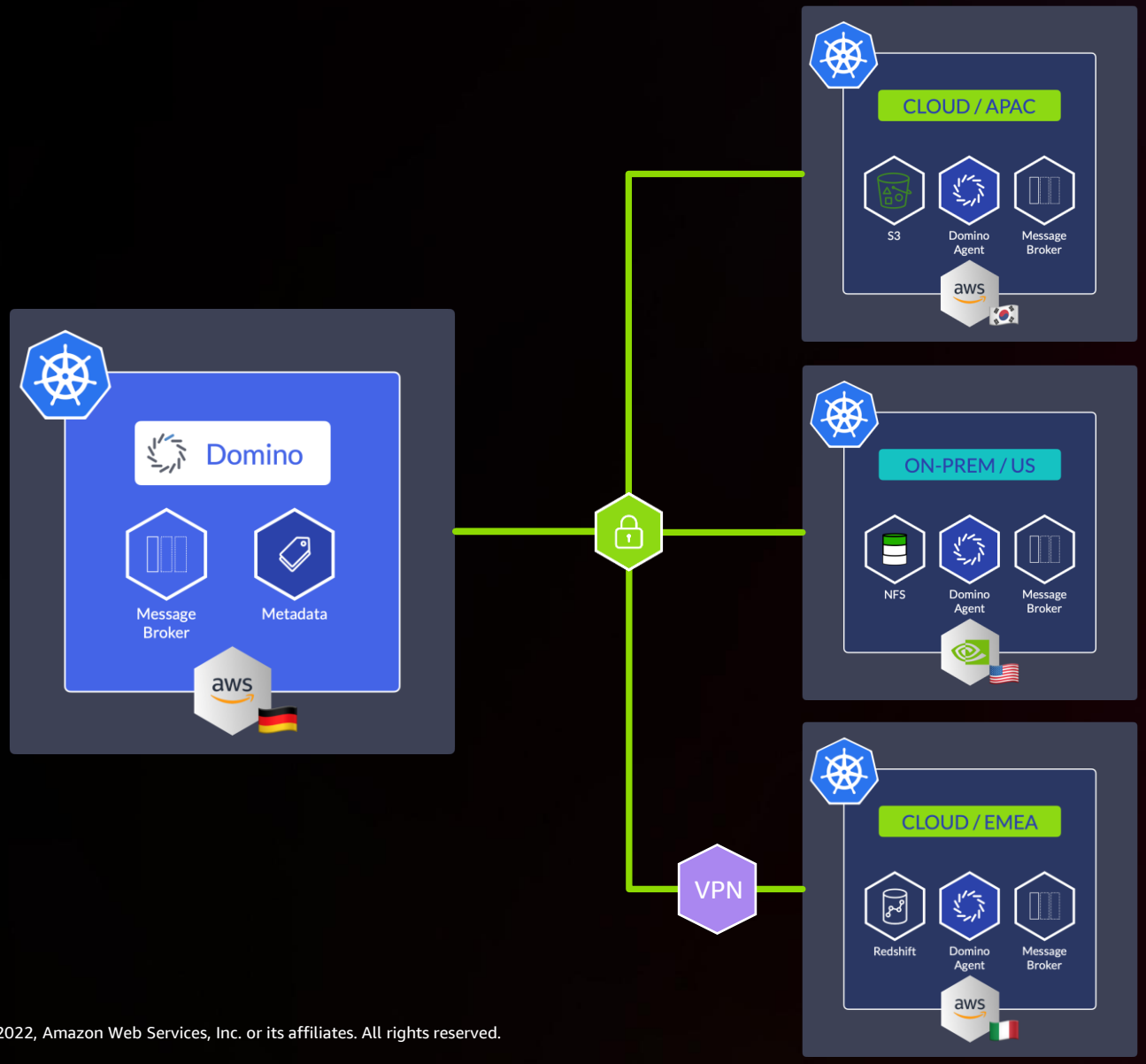


Control plane

Data plane

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Worldwide collaboration with Domino Nexus

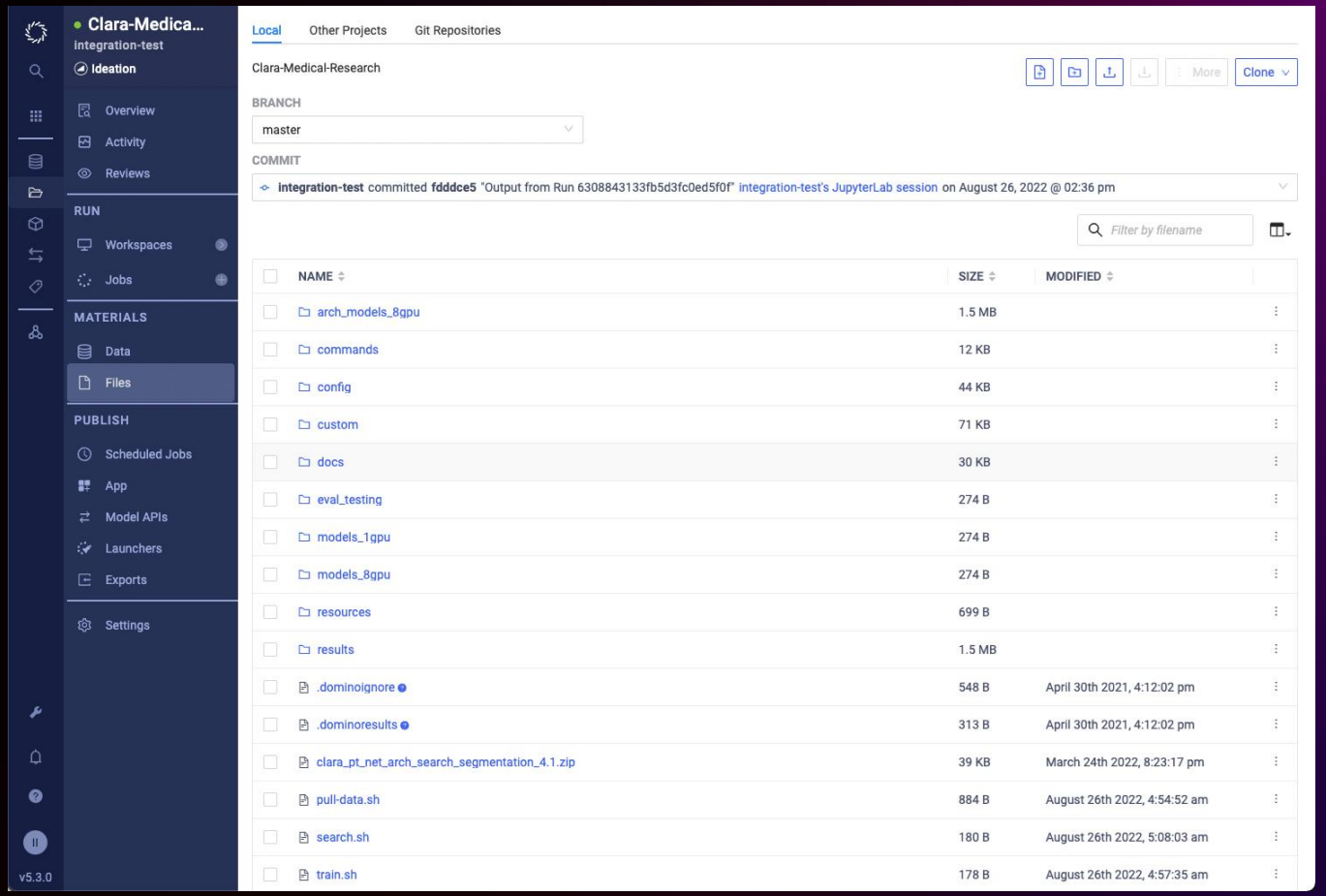


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Share the code without sharing the data

RUN THE ALGORITHM WHERE THE DATA IS

Single global code repository, regardless of user location

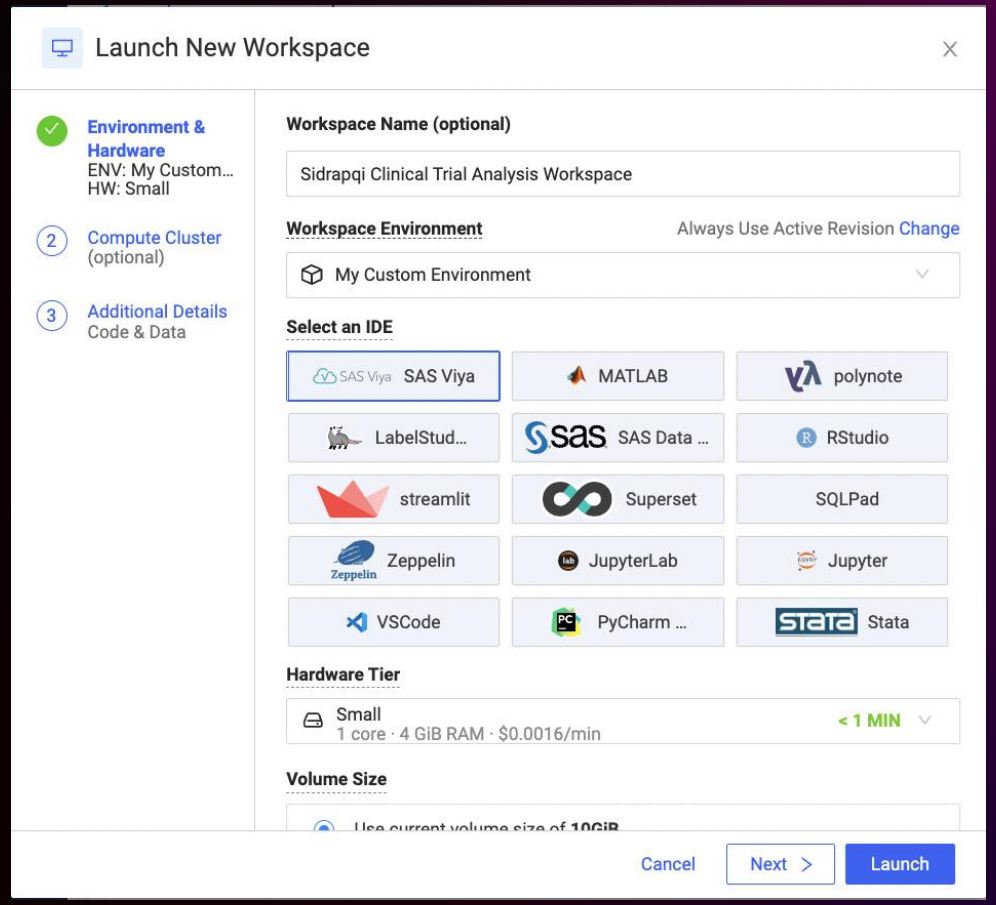


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Share the code without sharing the data

RUN THE ALGORITHM WHERE THE DATA IS

Develop using the best tool for the job

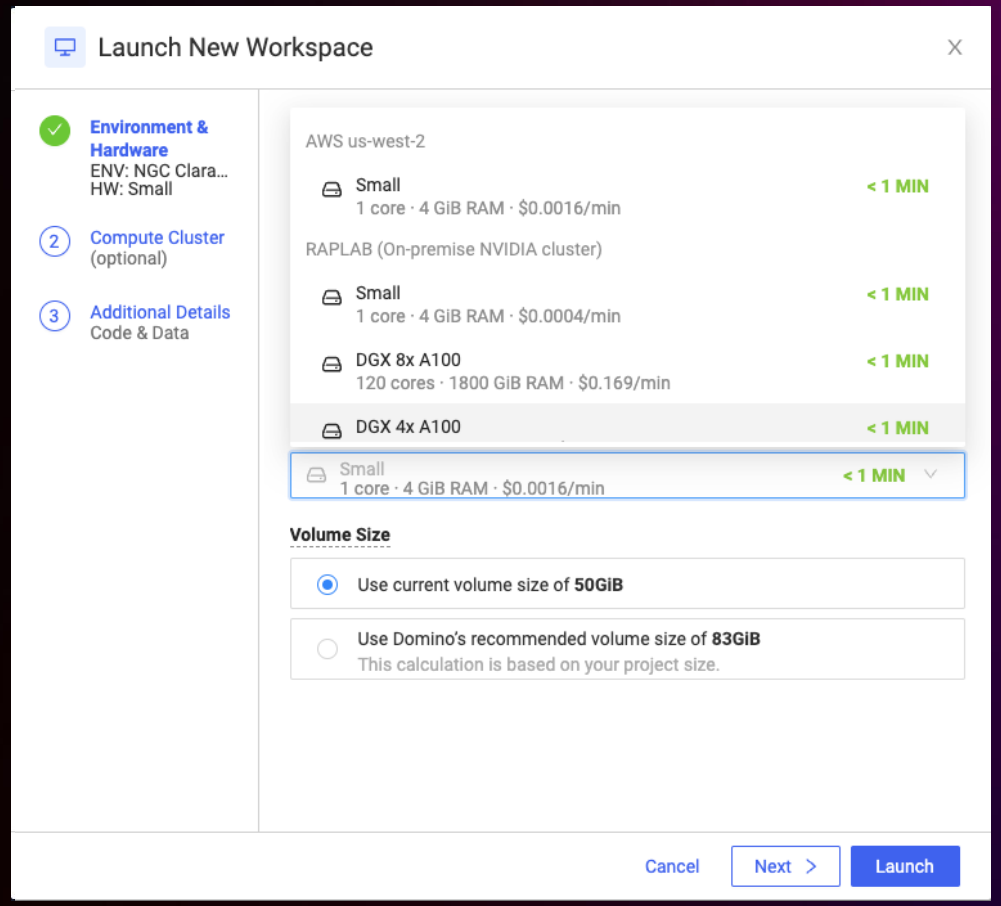


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Share the code without sharing the data

RUN THE ALGORITHM WHERE THE DATA IS

Compute environments linked to the data based on location

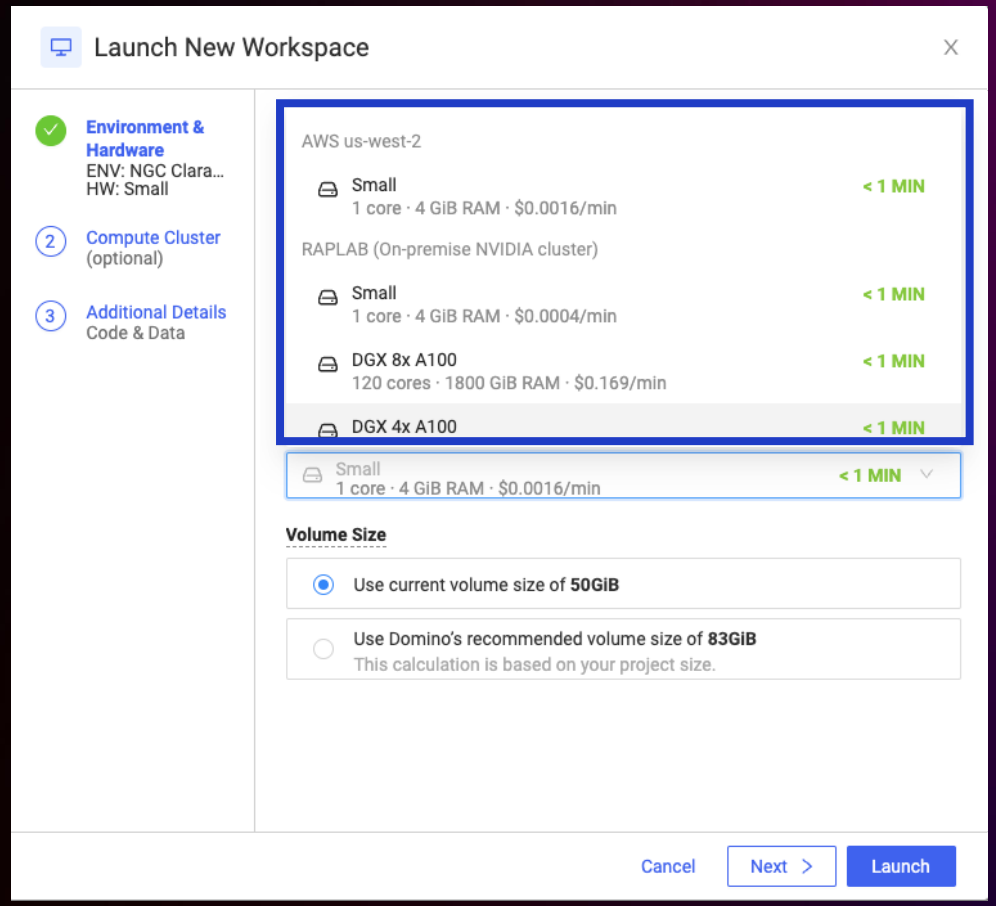


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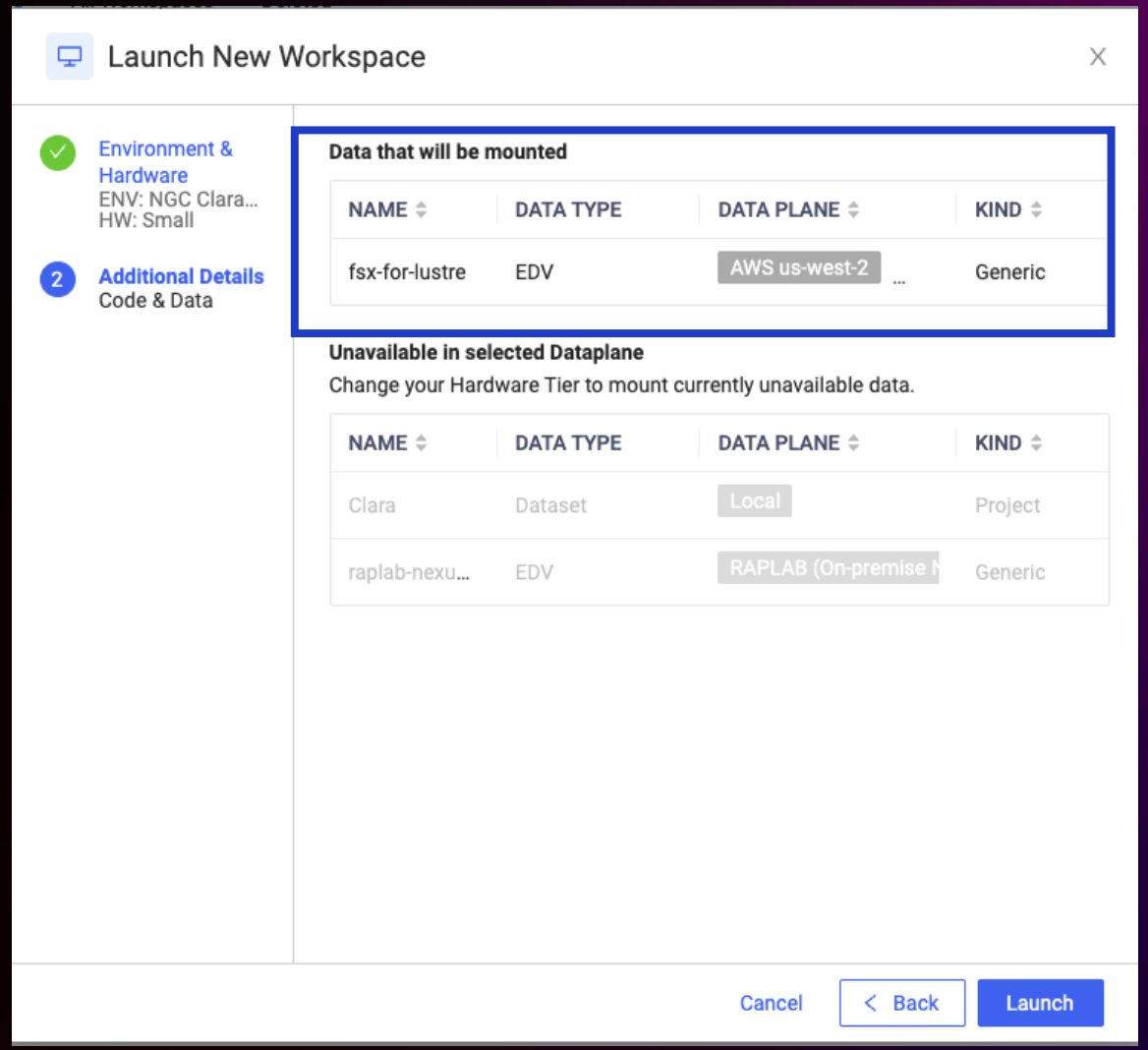


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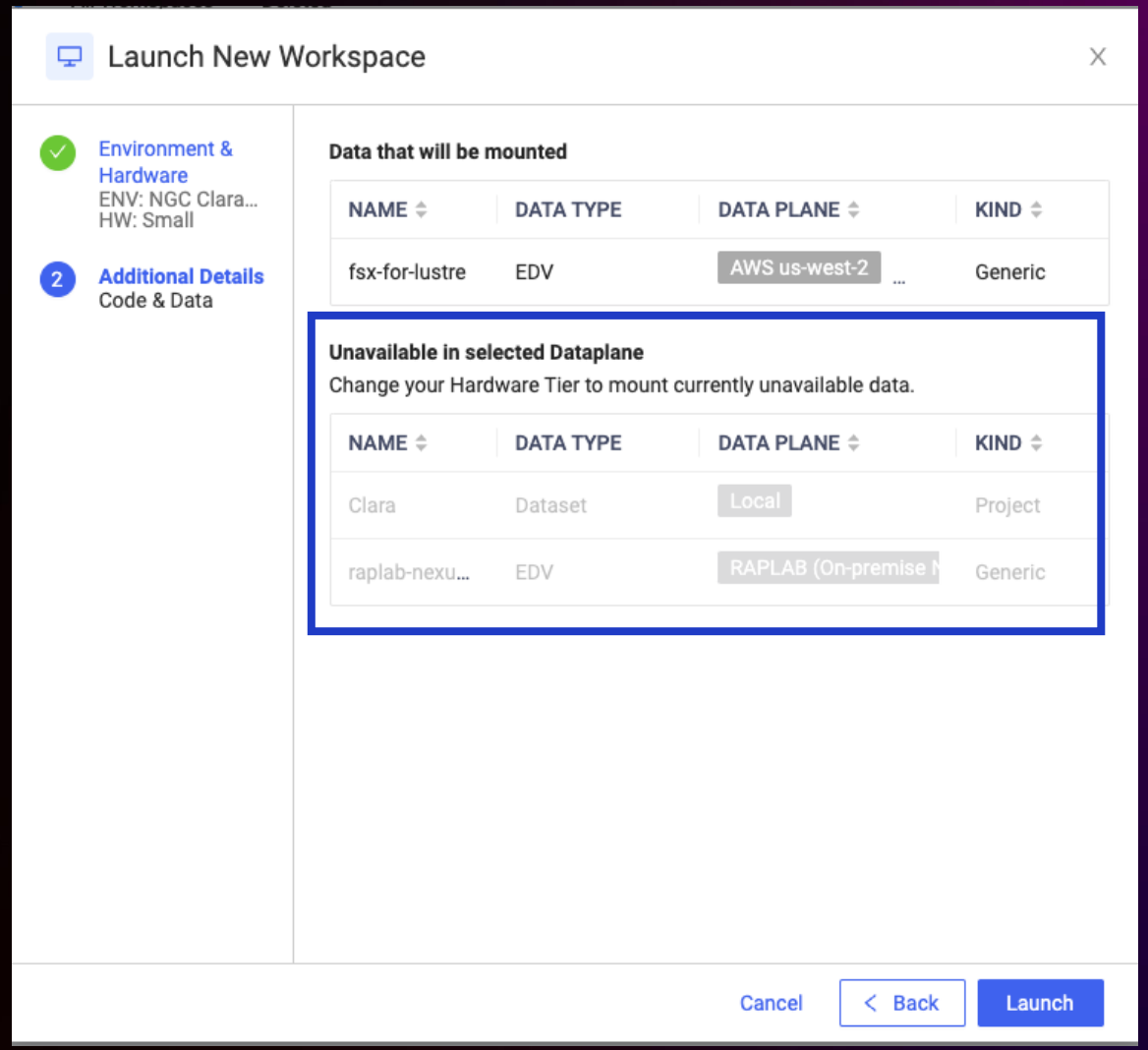


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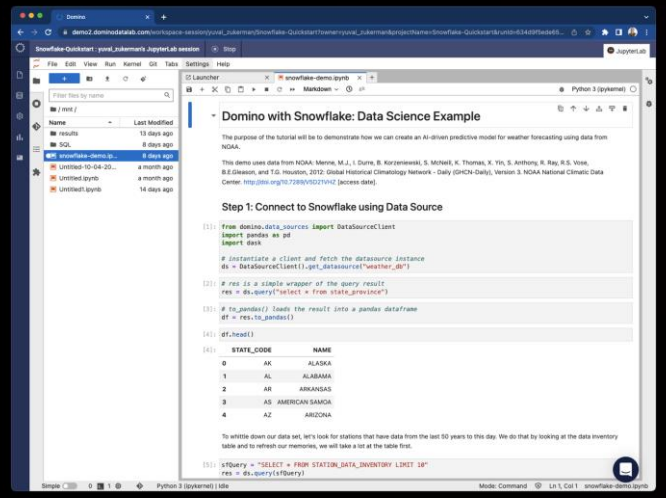
Compute environments linked to the data based on location



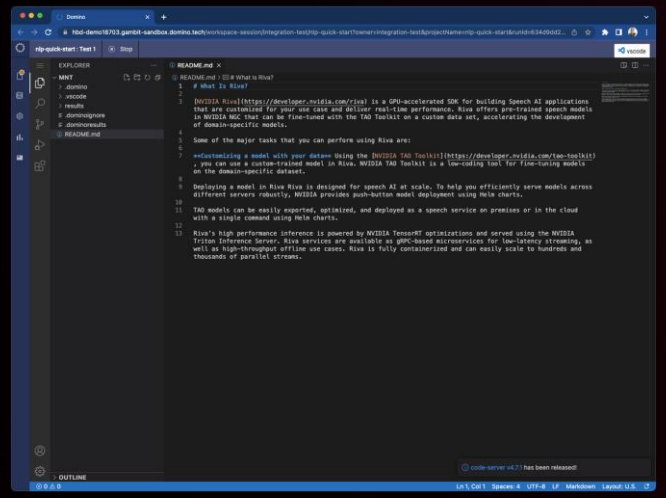
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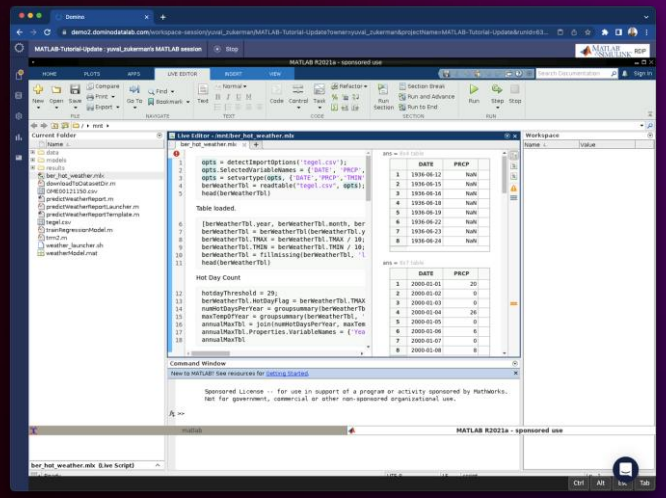
RUN THE ALGORITHM WHERE THE DATA IS



AWS/Frankfurt
Amazon RDS (Oracle)
6 cores, 27 GB RAM



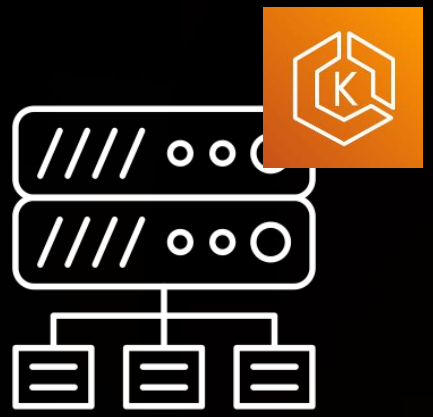
AWS/Seoul
Amazon S3
120 cores;
1,800 GB RAM; 8 GPU
6-node MPI cluster
(4 cores, 64 GB, GPU)



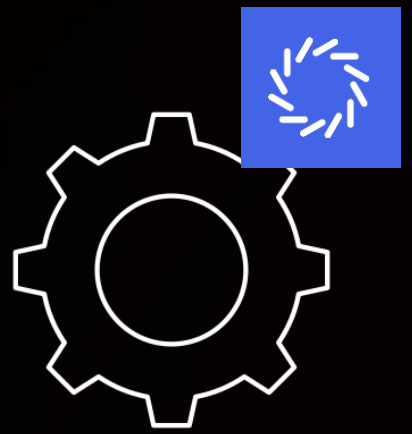
AWS/Milan
NFS
16 cores, 64 GB RAM
1 GPU

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Adding new data planes



Create an Amazon EKS cluster



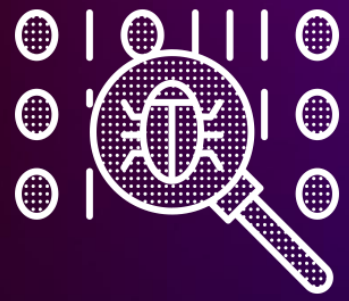
Configure Domino Nexus data plane



Connect cluster to Domino control plane



Specify Nexus data plane hardware and storage



Commence research

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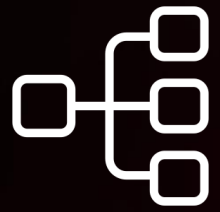
Scaling up innovation with AWS, responsibly



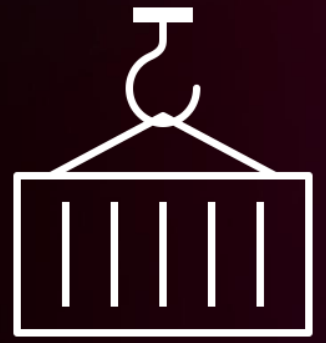
Built-in data source connectivity



Native Amazon EKS support



Easily scale AI training to clusters



Deploy models to Amazon SageMaker from Domino



Buy Domino using the AWS Marketplace

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Summary

1

Global MLOps platform



Seamless multi-Region code execution



Simpler compliance with global data security and privacy laws



Native support for AWS infrastructure and data storage



Rapid model production rollout

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Thank you!

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@yuvalz



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