



PERVASIVE DATACENTER ARCHITECTURE (PDX™) BLUEPRINT

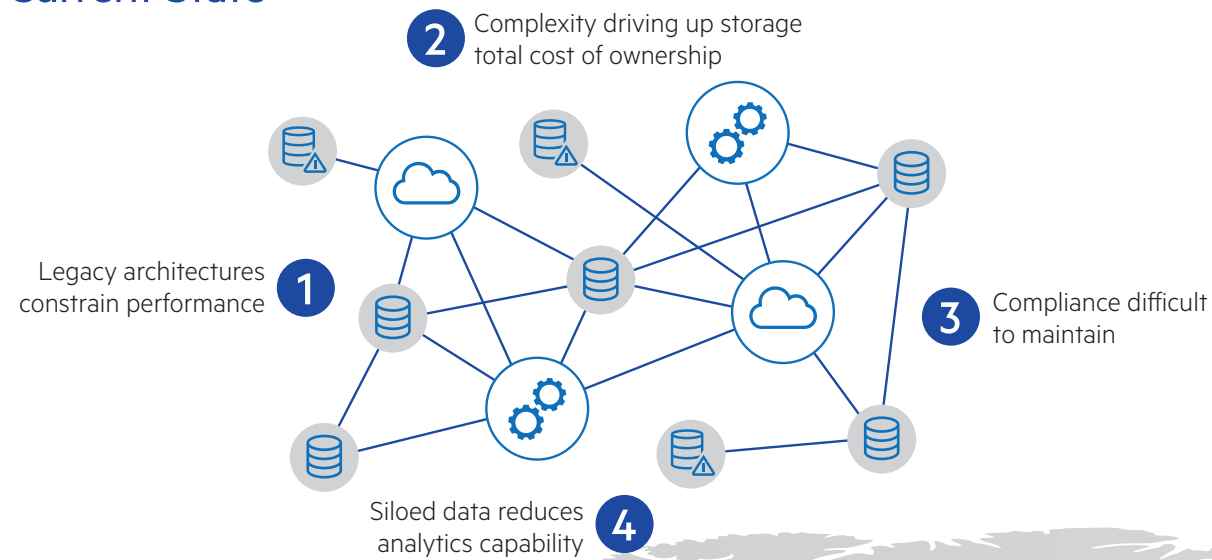
**OPTIMIZE DATA EXCHANGE
WITH AWS OUTPOSTS**



PDX™ BLUEPRINT: OPTIMIZE DATA EXCHANGE WITH AWS OUTPOSTS

INTRODUCTION: Data is at the center of the digital economy. Companies that are able to monetize data or harvest intelligence from data are capturing more market share than their peers. Traditional IT architectures are performance-constrained, exhibit higher total cost of ownership, struggle to maintain compliance and cannot easily integrate data analytics into workflows. For many organizations, modernization begins with the journey to the cloud. Challenges like unlocking access to data and maintaining compliance can still exist. To address those challenges, AWS has introduced Outposts™ to allow for on-premise deployments of AWS cloud capabilities. This solution, when coupled with a Data Hub can reduce complexity, accelerate Hybrid-IT adoption, and integrate new data-driven business capabilities in centers of data exchange.

Current State

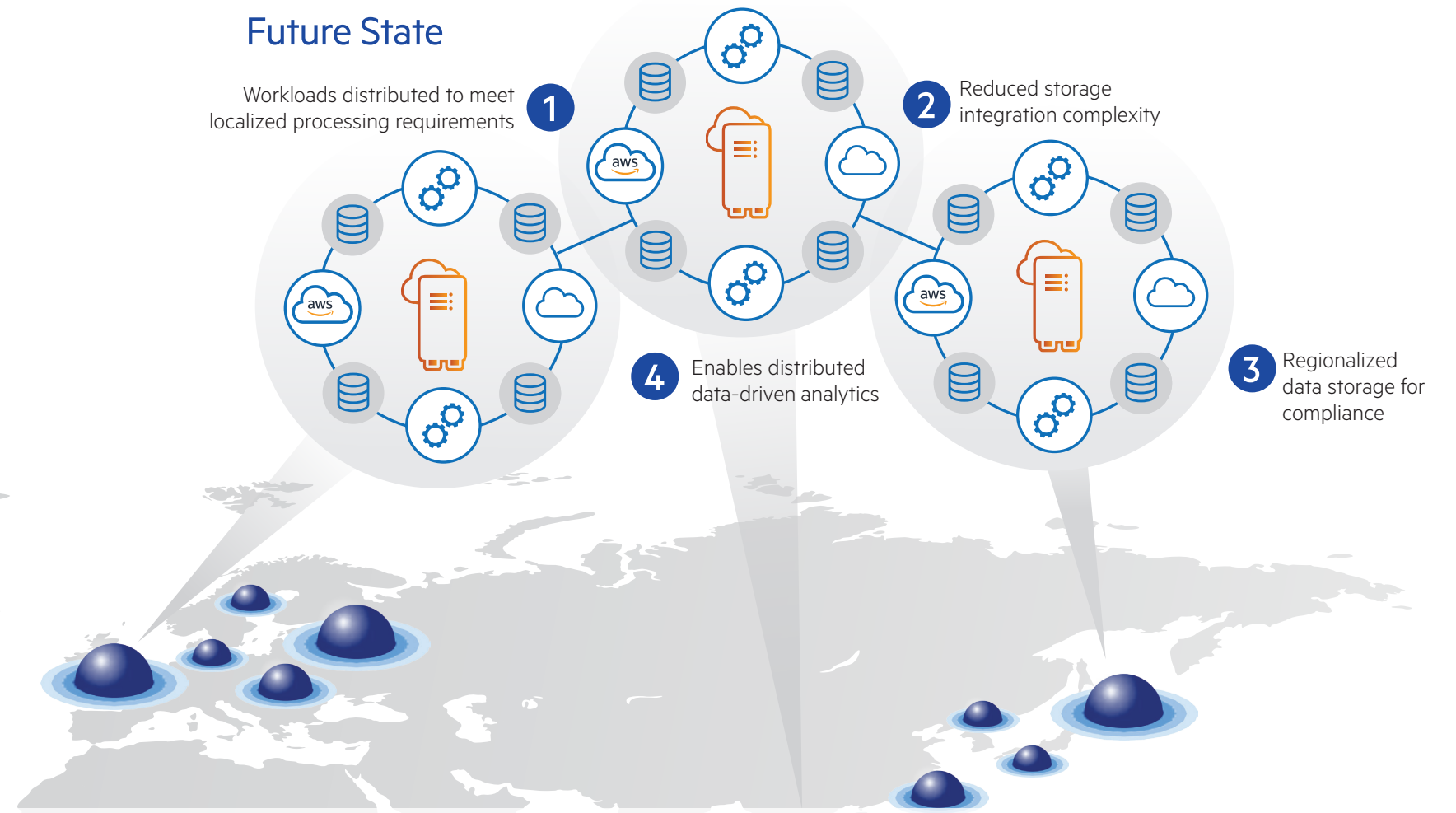


Optimize Data Exchange with AWS Outposts Legend

- Siloed Data
- Data
- Cloud Service Provider
- Data Processing
- Data Gravity Metro
- AWS Cloud
- AWS Outposts

- 1** Inconsistent global implementations based-on legacy architectures result in performance challenges and increased risk
- 2** Complex and non-performant cloud access methods limit effectiveness of cloud storage models and drives up storage total cost of ownership
- 3** Data architecture and governance not designed for multi-region workflows, increasing risk of compliance issues
- 4** Siloed Data prevents the enablement of analytics and new business models centered around data

Future State



- 1** Accelerate hybrid-IT capabilities with a consistent global implementation, which reduces execution risk
- 2** Reduce complexity of cloud storage integration while optimizing data storage price/performance
- 3** Securely operationalize regional data provider ecosystems while maintaining data compliance and reducing multi-vendor integration risk
- 4** Deploy data services faster to enable new data-driven business capabilities, including analytics and AI in global workflows

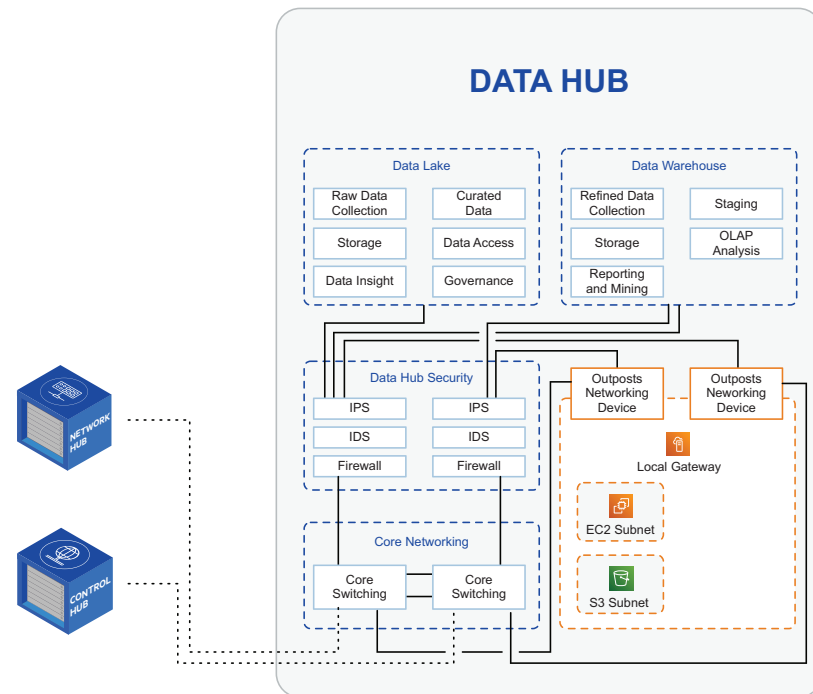
SOLUTION

STEP 1 IMPLEMENT DATA STAGING/AGGREGATION

1 Distributed Localized Hybrid-IT Capabilities

ACTION

Implement AWS Outposts on Data Hub in centers of data exchange



- + Select Outposts based on workload profile
- + Deploy Outposts at centers of data exchange
- + Solve global coverage and capacity needs

OUTCOME

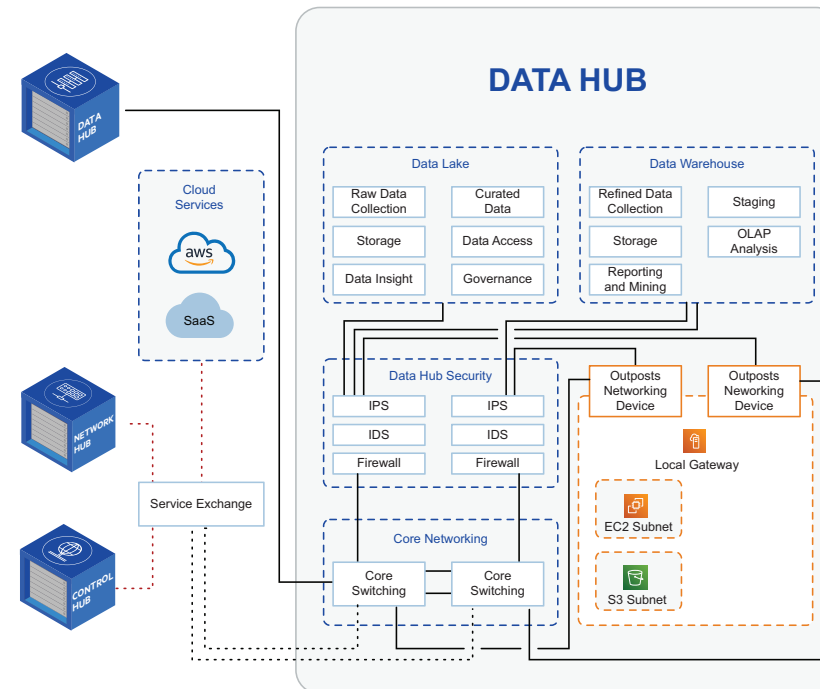
- + Consistent global implementation
- + Accelerate Hybrid IT capabilities
- + Reduce execution risk

STEP 2 INTEGRATE PUBLIC/PRIVATE DATA SOURCES

2 Reduced Storage Integration Complexity 3 Regionalized Data Storage for Compliance

ACTION

Directly interconnect Data Hub to AWS and to local or third-party infrastructure



- + Implement data exchange between users, things, networks and clouds
- + Operate deployments as a seamless extension of global infrastructure with consistent experience, security and resiliency
- + Validate interconnection capacity, performance and destinations

OUTCOME

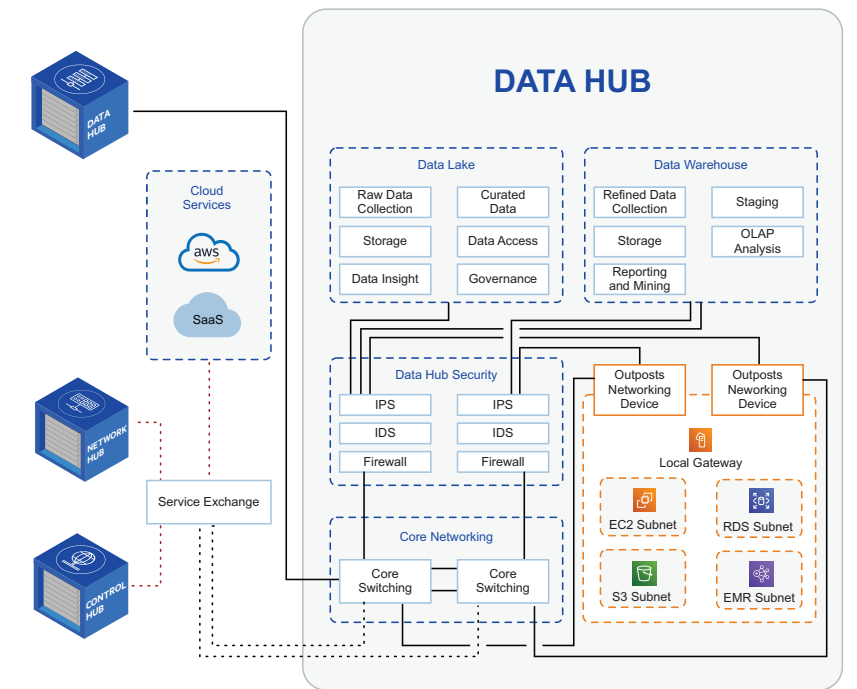
- + Achieve optimal data storage price/performance
- + Reduce complexity of integrating traditional storage with cloud
- + Securely integrate data provider ecosystems and minimize data compliance risk

STEP 3 HOST DATA AND ANALYTICS ADJACENT TO NETWORK INGRESS/EGRESS

4 Distributed Data Analytics

ACTION

Distribute business intelligence and connect global data ecosystems with locally-hosted AWS analytics tools



- + Enable data processing, analytics, and streaming capability at global points of business presence
- + Accelerate development of new business capabilities by leveraging the AWS Outposts roadmap to rapidly introduce new analytics tools at centers of data exchange

OUTCOME

- + Reduce IT vulnerability points and improve security posture
- + Deploy telemetry and apply policy at points of ingress/egress
- + Reduce operational complexity and simplify infrastructure management

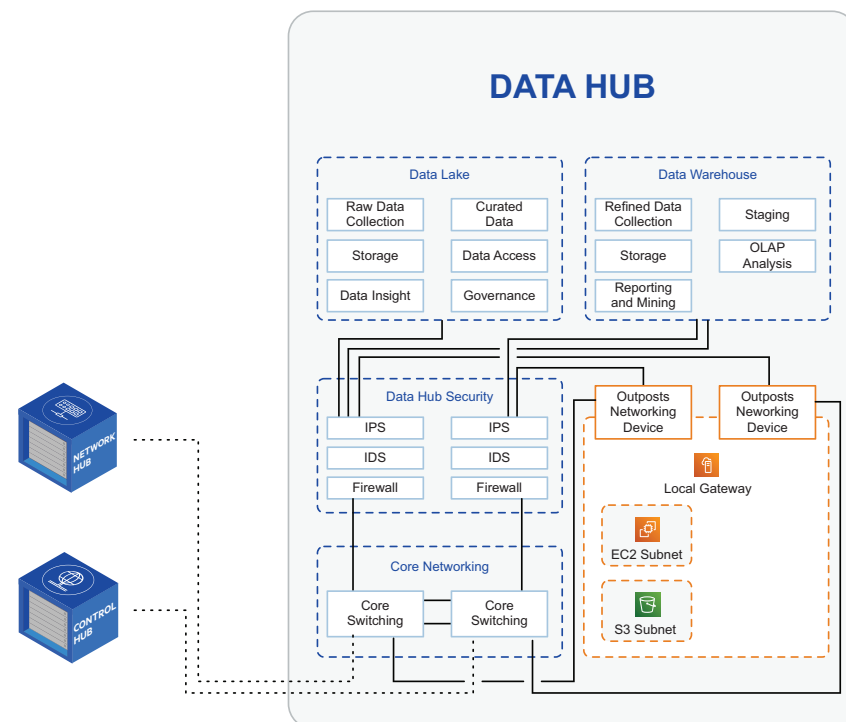
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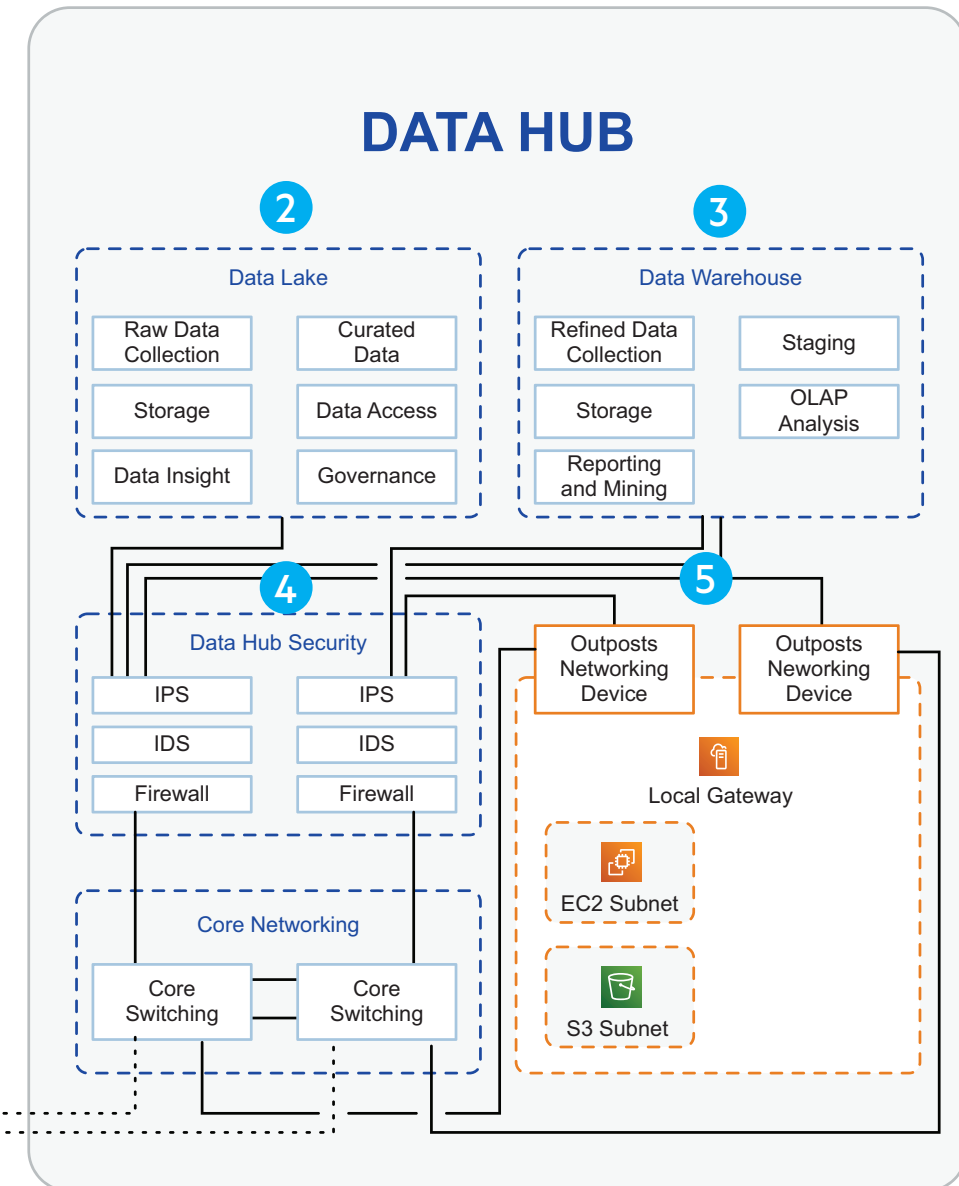
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1. Deploy centers of data staging in key locations, selecting for both current and future capacity needs and global business coverage
2. Prepare legacy Data Lakes to store raw data for analysis and curation by data scientists
3. Enable Data Warehouse for business professionals to use refined data
4. Strictly control access to high value and sensitive enterprise data; monitor and log activity
5. Integrate AWS Outpost with foundational data services

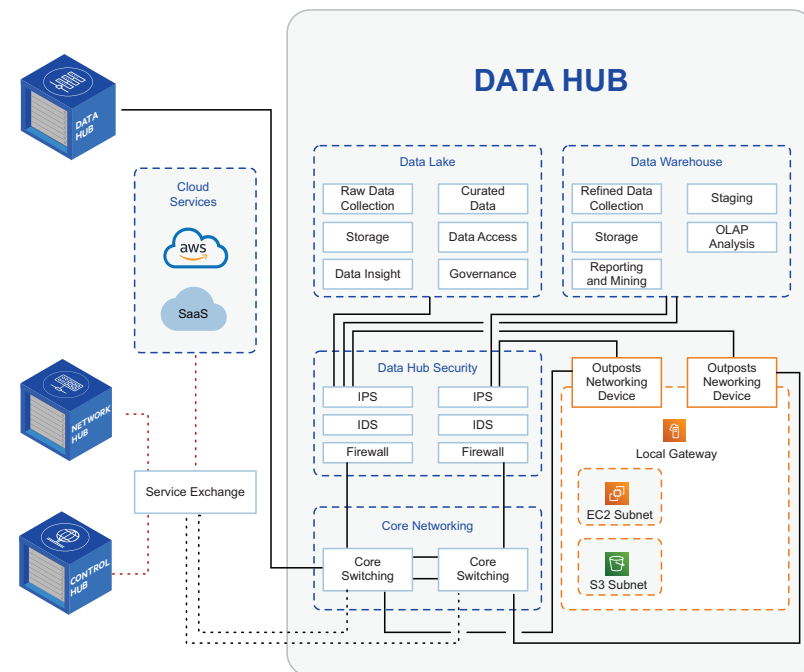
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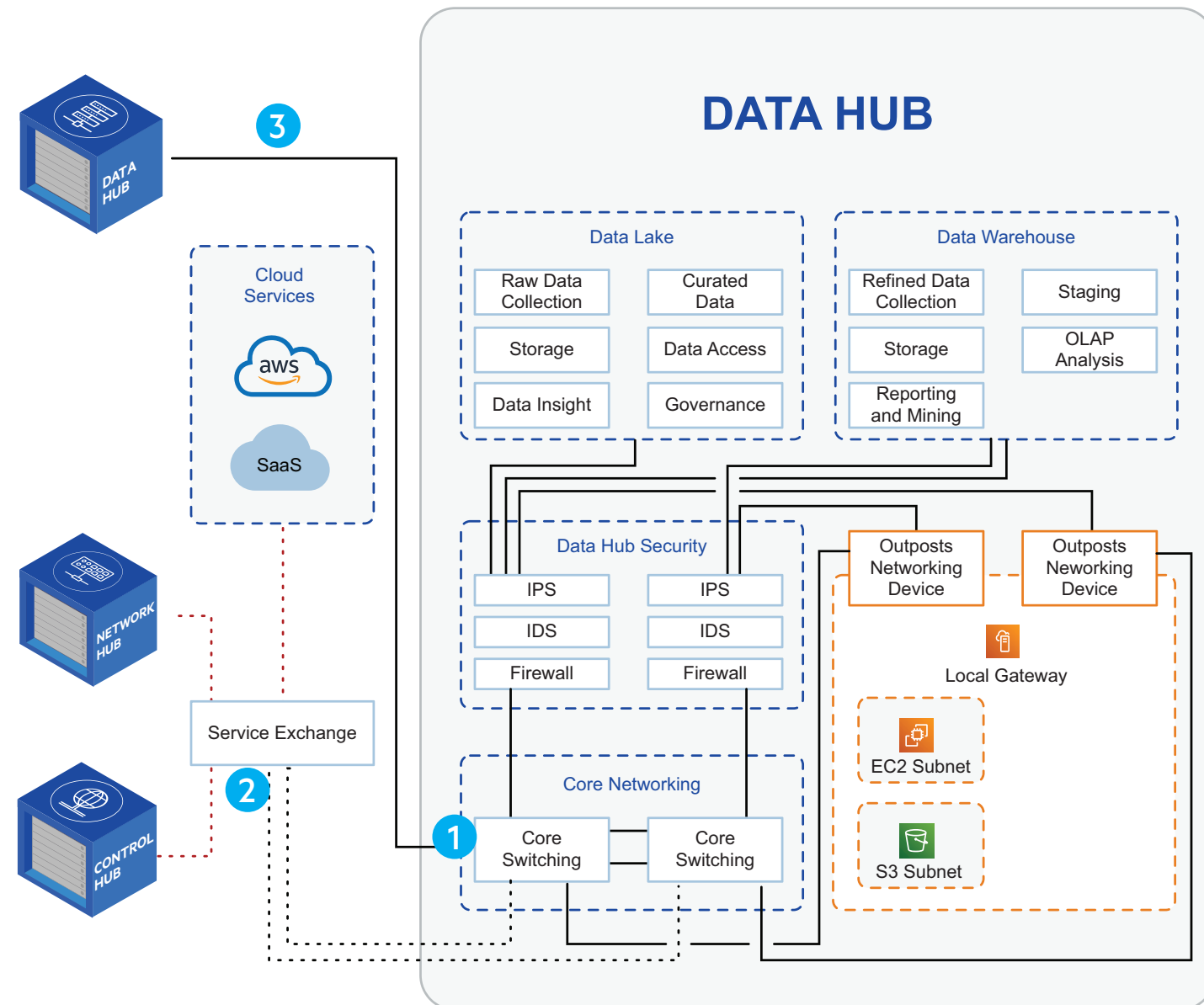
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1. The Core Switching infrastructure terminates connectivity into the Data Hub and enables access to the cloud and other data sources by direct high-performance interconnection
2. Additional connectivity is provided by use of software-defined on-ramps such as Service Exchange™
3. Other data sources can be cloud storage, IaaS environments, SaaS environments, or other remote Data Hubs

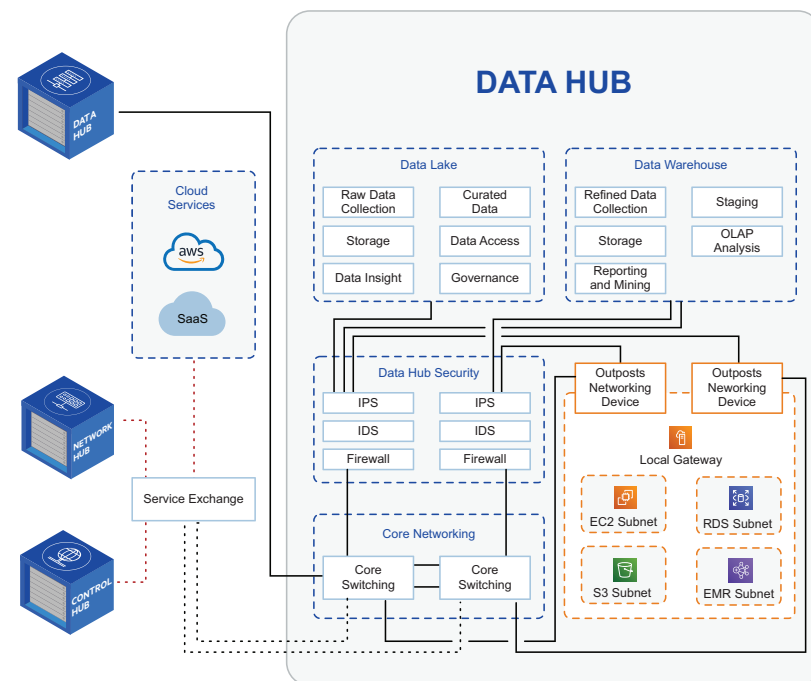
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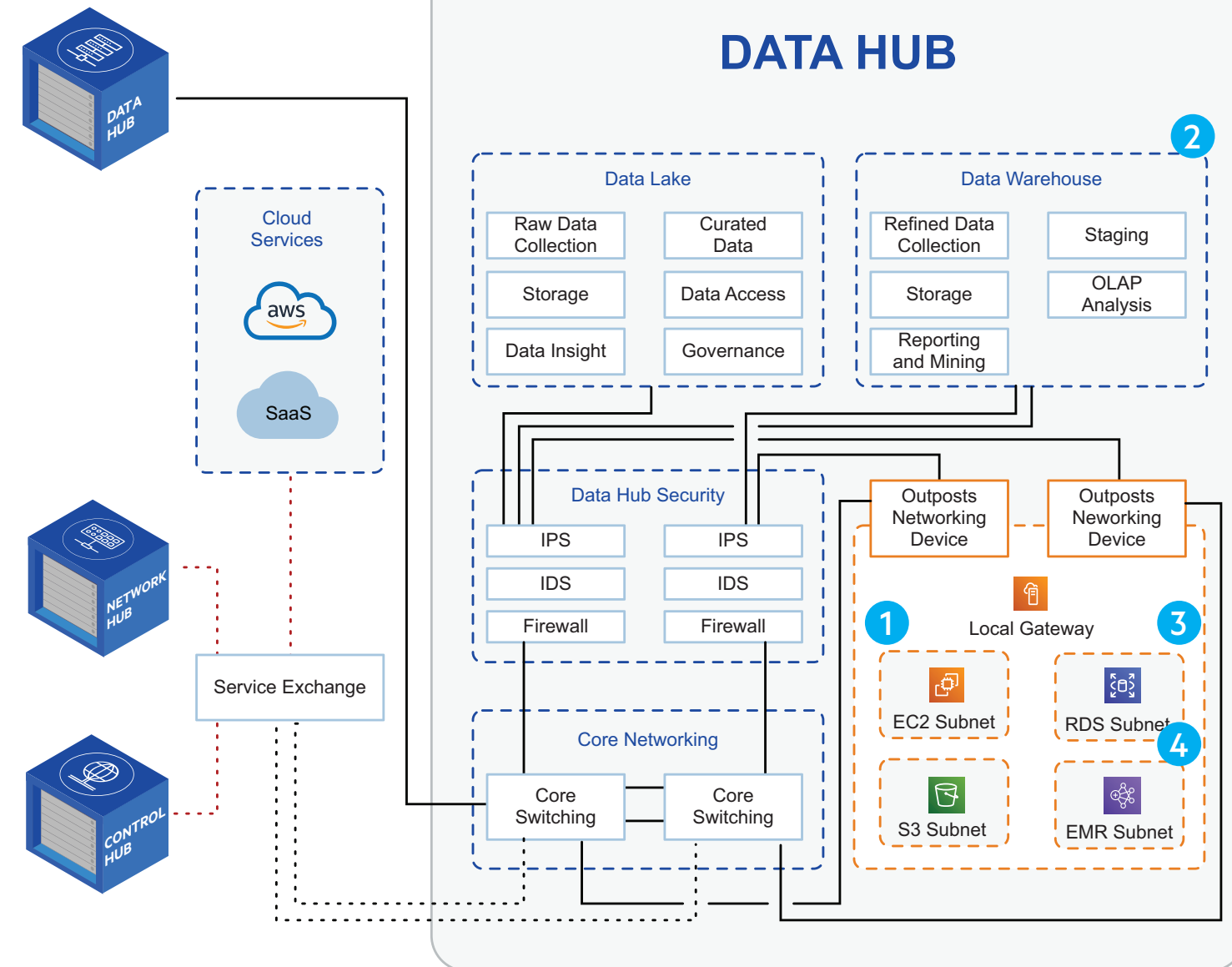
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1. Deploy cloud-native applications locally in centers of data exchange
2. Deploy proprietary business applications adjacent to foundational data services
3. Enable high-performance databases and other services for real-time analytics
4. Accelerate development of machine learning, graphics intensive, and other compute-bound workloads

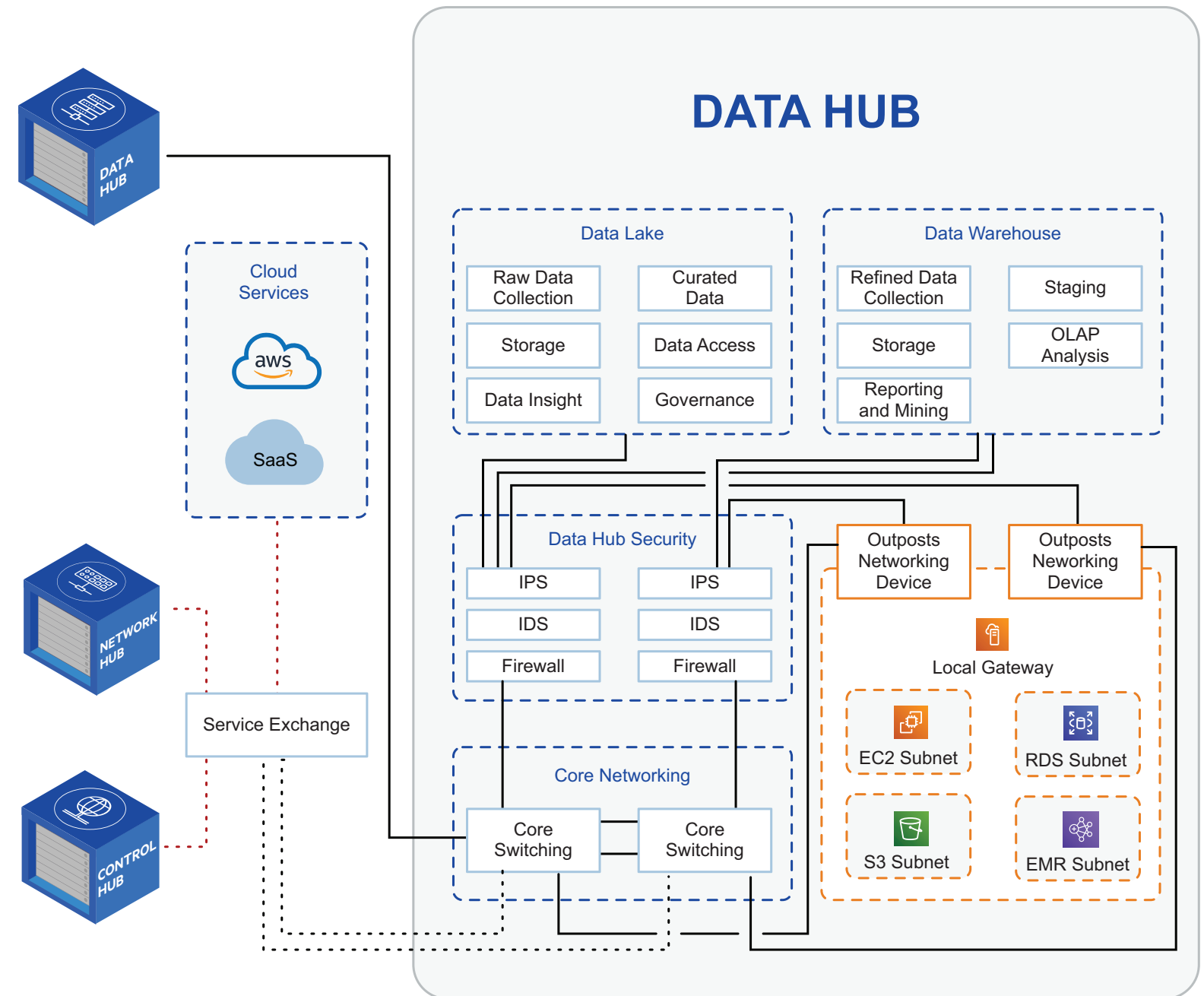


TARGET STATE ARCHITECTURE

Summary

Digital Transformation is forcing Enterprise IT to re-architect towards a decentralized global infrastructure delivery model. The combination of PlatformDIGITAL® and AWS Outposts capabilities enable enterprise customers to implement AWS hybrid environments, solve hybrid data integration, optimize data exchange and implement unified analytics at centers of data exchange globally. The strategy brings the users, networks, systems and controls to the data, which removes barriers of data gravity to scale digital business.

The Optimize Data Exchange with AWS Outposts Blueprint is a companion to the Optimize Data Exchange Blueprint. They are part of a library of blueprints and repeatable implementation patterns that make up the Pervasive Datacenter Architecture (PDx™) library. By practitioners, for practitioners, PDx™ was created by codifying hundreds of production deployment combinations to enable companies to accelerate deployment and improve precision of their infrastructure to scale digital business globally. PDx™ provides a step-by-step strategy to enable firms as they architect a decentralized IT infrastructure to remove data gravity barriers and accommodate distributed workflows at centers of data exchange in support of digital business.





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