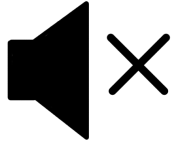Dec 7, 2021

Accelerate CDI Data Integration Projects with Advanced Serverless

Vivin Nath, Director

Atul Singh, Senior Product Manager

Informatica

Housekeeping Tips

➢ Today's Webinar is scheduled for 1 hour

➢ The session will include a webcast and then your questions will be answered live at the end of the presentation

➢ All dial-in participants will be muted to enable the speakers to present without interruption

➢ Questions can be submitted to "All Panelists" via the Q&A option and we will respond at the end of the presentation

➢ The webinar is being recorded and will be available on our INFASupport YouTube channel and Success Portal - where you can download the slide deck for the presentation. The link to the recording will be emailed as well.

➢ Please take time to complete the post-webinar survey and provide your feedback and suggestions for upcoming topics.

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Feature Rich Success Portal
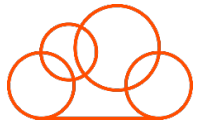
Bootstrap trial and POC Customers

Enriched Customer Onboarding experience

Product Learning Paths and Weekly Expert Sessions

Informatica Concierge

Tailored training and content recommendations

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More Information

Success Portal

https://success.informatica.com

Communities & Support

https://network.informatica.com

Documentation

https://docs.informatica.com

University

https://www.informatica.com/in/servic es-and-training/informatica- university.html

Safe Harbor

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Informatica™

7th December 2021

Tech Tuesday's

Advanced Serverless
CDI and CDI-Elastic

*Atul Singh - Senior Product Manager*

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Agenda

Advanced Serverless

1. Informatica Reference Architecture

2. Introduction to Advanced Serverless

3. When to Use Advanced Serverless

4. Execution Model

5. Architecture

6. Runtime Deployments Comparison

7. Security

8. Demo

9. Q&A

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Informatica Reference Architecture for Data Management
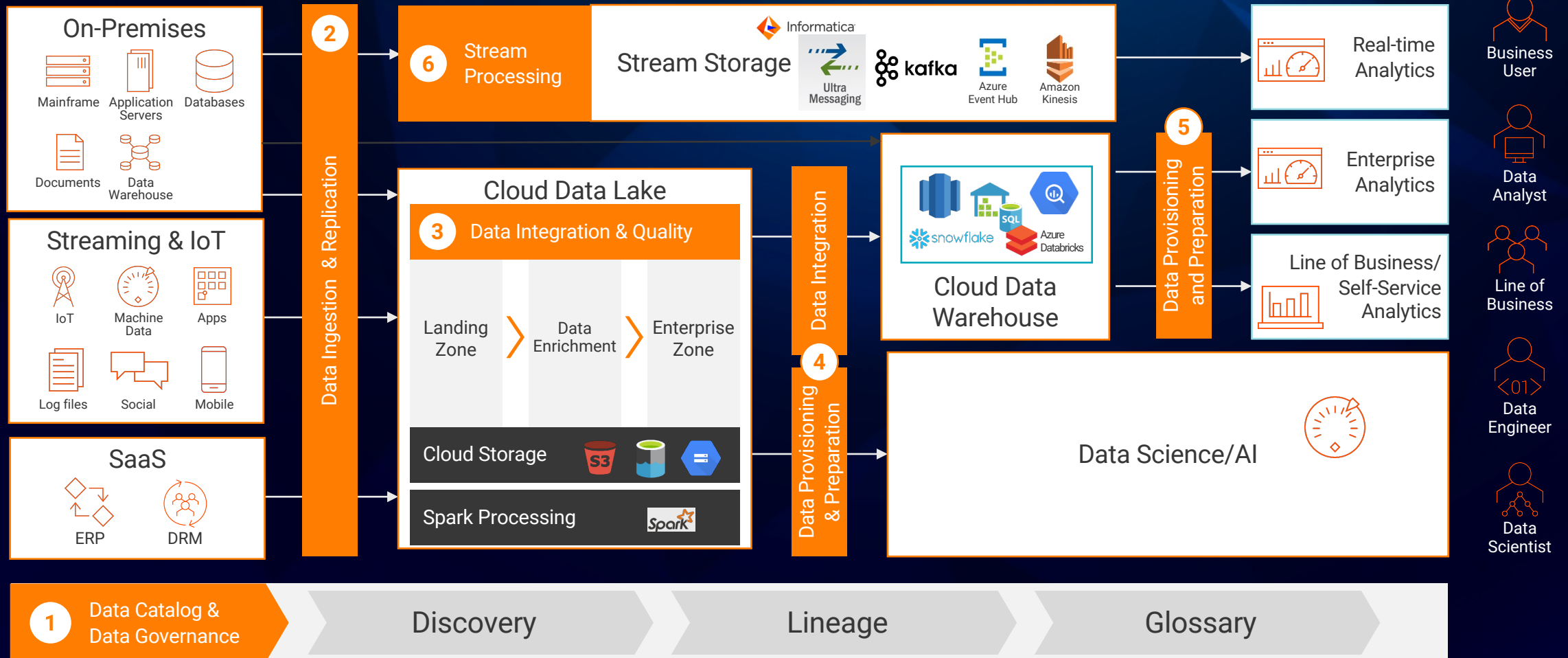
Cloud Data Integration Processing Anywhere

Cloud Data Integration

Cloud-native and codeless data integration with intelligence and automation

Cloud Data Integration Elastic

Adds Spark processing with auto tuning and auto scaling capabilities

Advanced Serverless Deployment

Fully managed scale-out environment with no clusters or software to manage and high-performance data integration with built-in elasticity
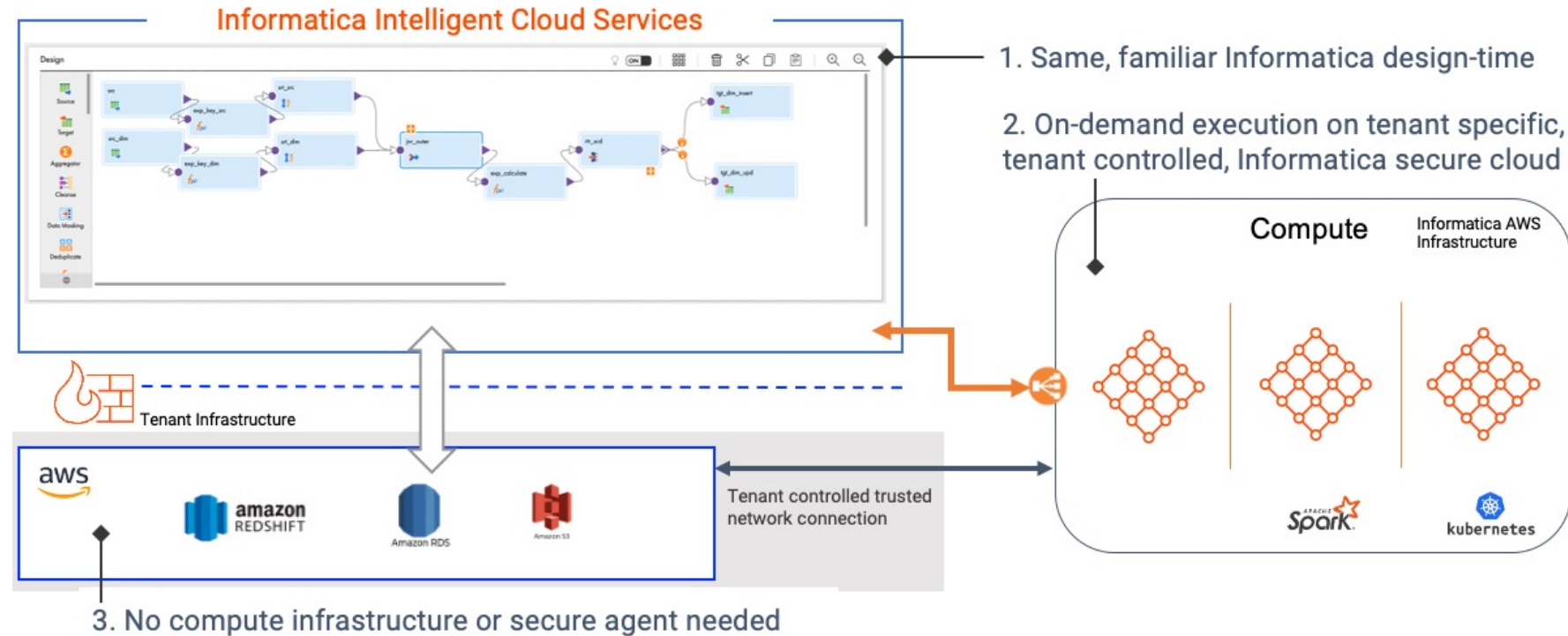
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Advanced Serverless

Advanced Serverless Deployment
Fully managed scale-out environment with no clusters or software to manage and high-performance data integration with built-in elasticity

Serverless Features

- ❑ Available for CDI/CDI-E
- ❑ No servers or software to Manage
- ❑ Switch existing tasks from SA to Advanced Serverless Runtime
- ❑ Inbuilt Autoscaling and concurrency
- ❑ Easy setup in 2 mins with cloud formation template
- ❑ Consumption-based pricing
- ❑ Currently available on AWS only (Azure, GCP on Roadmap)

Informatica Intelligent Cloud Services

1. Same, familiar Informatica design-time

2. On-demand execution on tenant specific, tenant controlled, Informatica secure cloud

Compute — Informatica AWS Infrastructure

Spark   kubernetes

Tenant Infrastructure

aws

amazon REDSHIFT   Amazon RDS   Amazon S3

Tenant controlled trusted network connection

3. No compute infrastructure or secure agent needed

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When to use Advanced Serverless?

When users have a need to ...

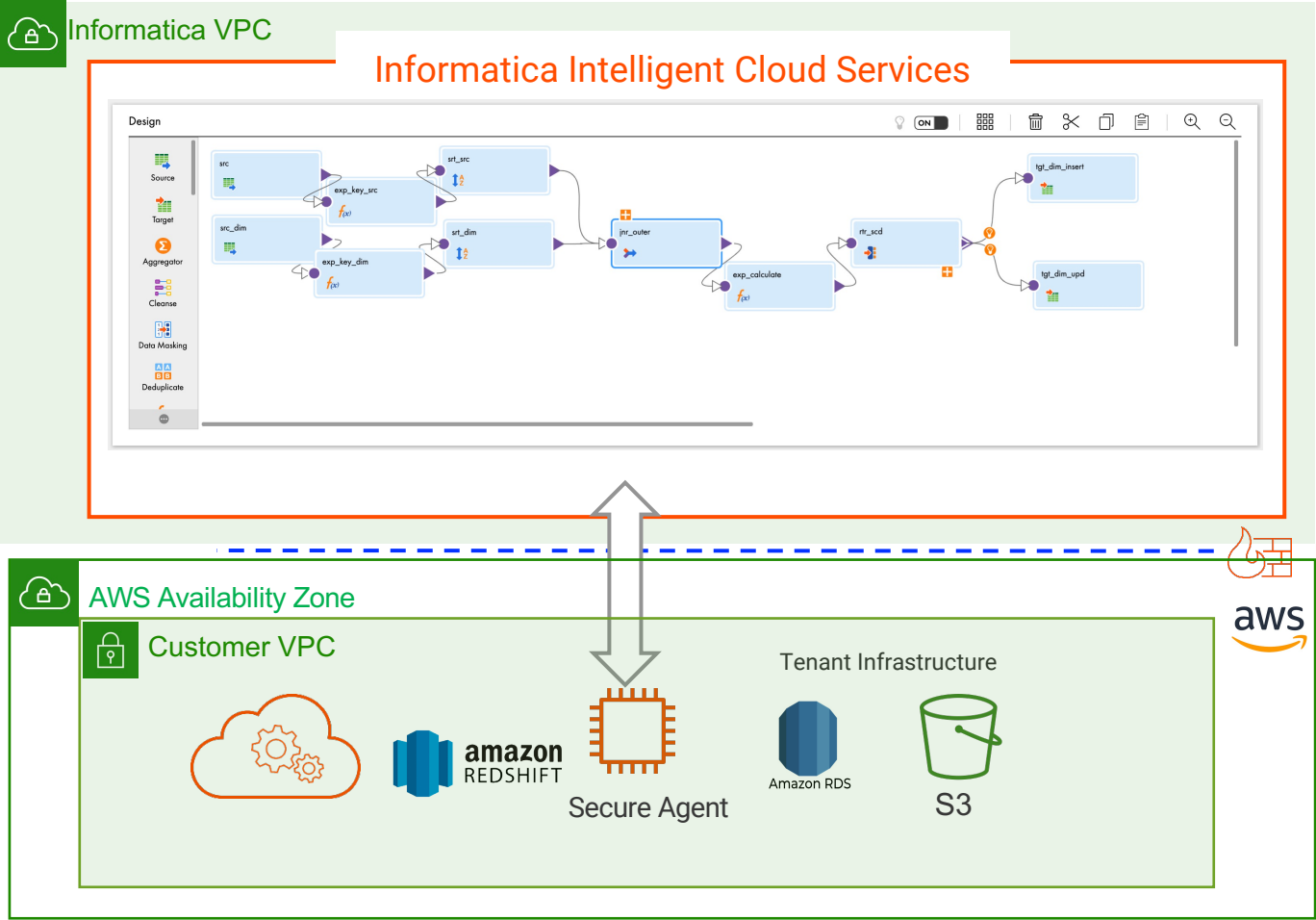|				
Reduce infrastructure maintenance and secure agent administration overhead	**Dynamically or seasonally changing infrastructure needs**	**Jump start projects or do quick POCs**	**Process lots of concurrent workloads**	**Be more productive and/or are short staffed on resources**
No more procuring, provisioning, patching	Flexibility to meet changing workloads	Start building data pipelines on Day 1 instead of waiting to secure, provision infrastructure	Serverless scales to process infinite concurrent workloads whereas with SA you are limited to processing capacity of the host	Deploy your staff on building for business needs than for operationalizing infrastructure

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Advanced Serverless
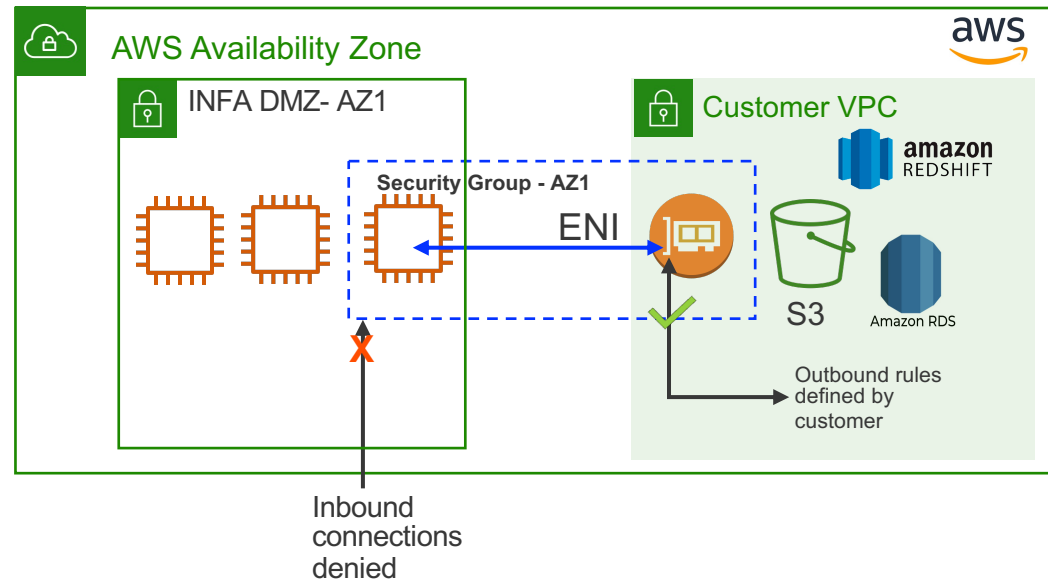
Execution Model And Architecture

Secure Agent Execution Model
CDI

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Advanced Serverless Execution Model

CDI / CDI-Elastic

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Advanced Serverless architecture is Modern, Secure and cost-efficient than VPC peering

Advanced Serverless

AWS Availability Zone

INFA DMZ- AZ1

Security Group - AZ1

ENI

Customer VPC

amazon REDSHIFT

S3

Amazon RDS

Outbound rules defined by customer

Inbound connections denied

VPC Peering Solution

VPC

Vendor VPC

Internet GW

VPC Peering

VPC

Private subnet

amazon REDSHIFT

S3

Amazon RDS

Internet GW

☑ Zero Data transfer costs/additional costs

☑ Simple Setup (Cloud Formation Template)

☑ Advanced network sharing

☑ Enables transitive routing if desired

☑ Tighter security and isolation
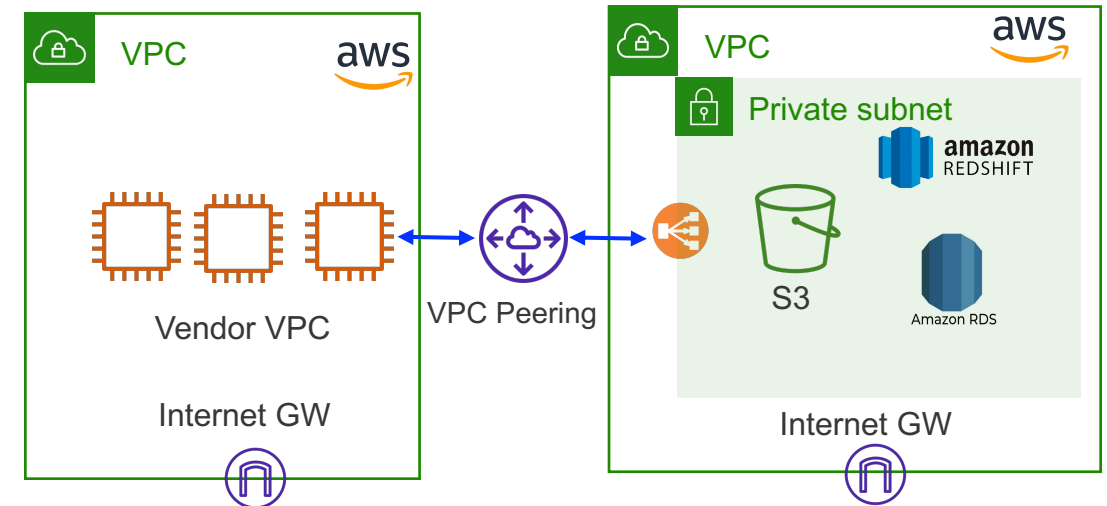
☒ Data transfer costs + GW ELB cost + VPC endpoint cost

☒ Setup overhead

☒ No transitive routing – only able to communicate with directly peered VPCs

☒ Not useful for complex network sharing scenarios
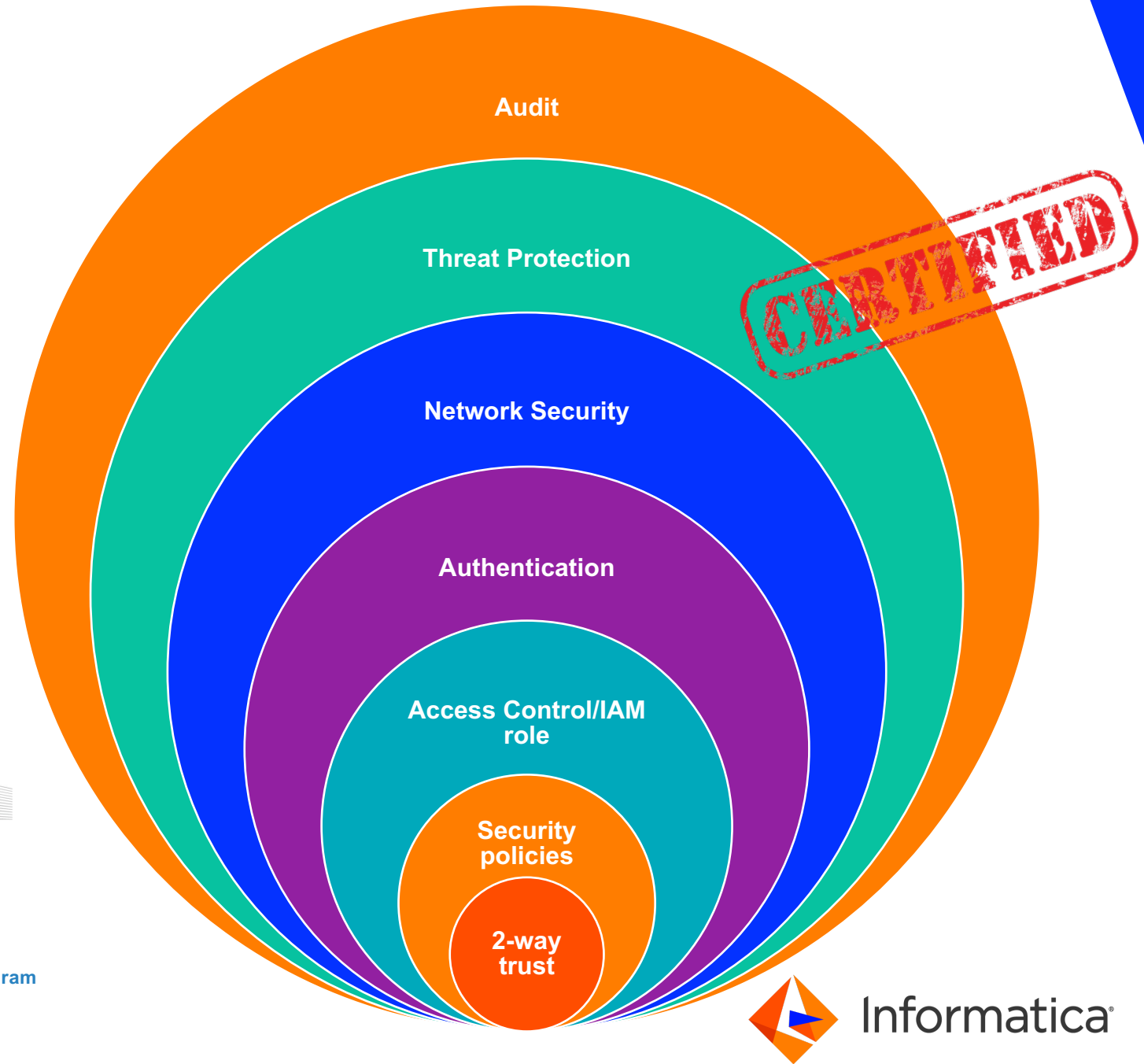
☒ Non-starter from enterprise security standpoint

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Advanced Serverless

Security

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Secure by Design
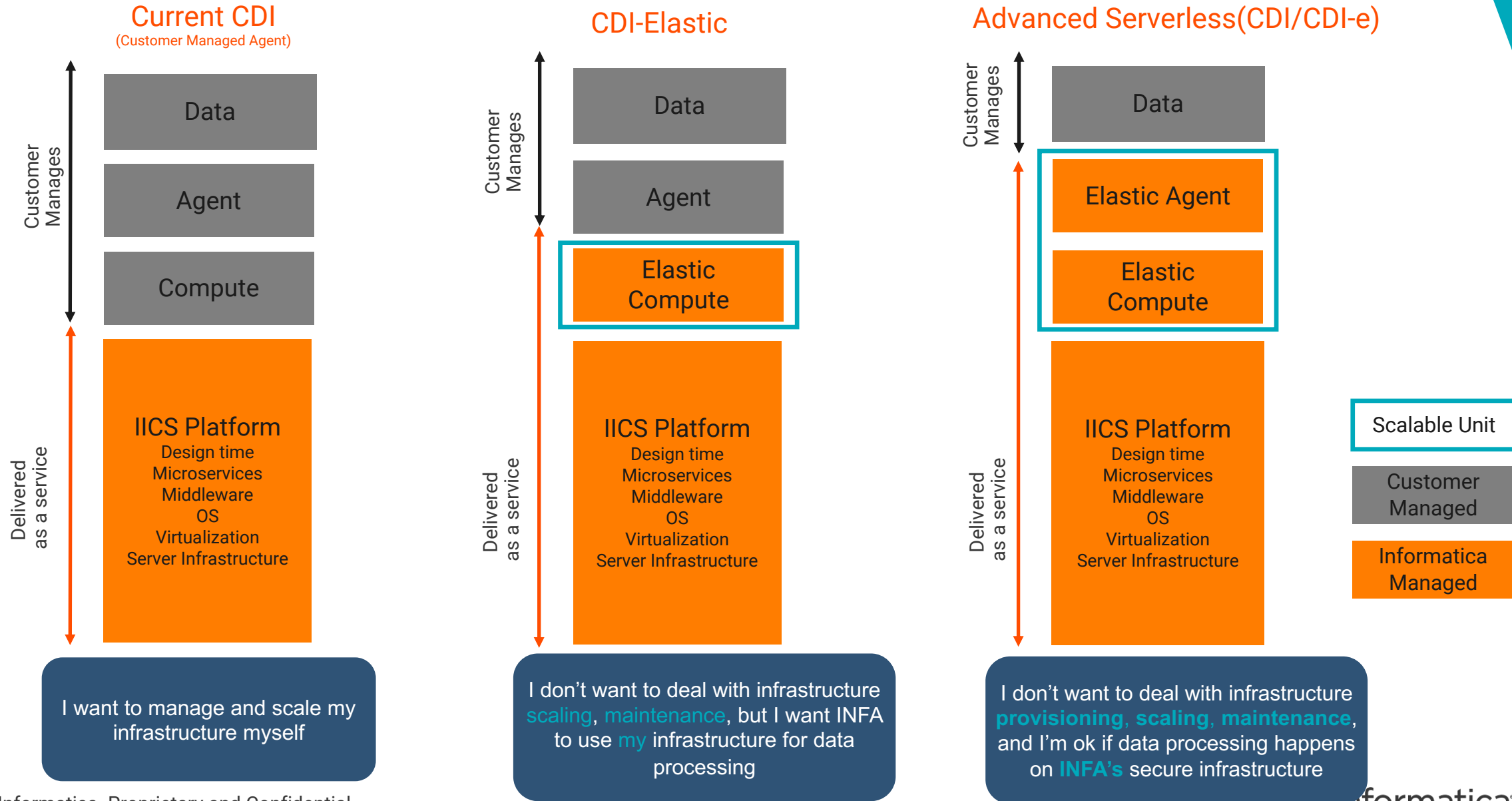
Defense in Depth Architecture

- 7 layers of Enterprise Grade Security protection to get to tenant data

- Tenant Data flows within the trusted networks they control

- Serverless compute in DMZ is part of our SOC2 certification boundary

- Trusted secure link used to link to tenant's network and controlled using tenant's security group and policies

- Serverless Security Whitepaper

AICPA Service Organization Control Reports
AICPA
SOC 2
Formerly SAS 70 Reports

SOC³
SysTrust for Service Organizations

HIPAA / HITECH

cloud security alliance®

CSA

Privacy Shield Framework

ISO
ISO/IEC 27001:2013
Aligned Program

Audit

Threat Protection

CERTIFIED

Network Security

Authentication

Access Control/IAM role

Security policies

2-way trust

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Advanced Serverless

Runtime Deployment Options

Runtime Options – SA vs. Elastic vs. Adv Serverless

Current CDI
(Customer Managed Agent)

Customer Manages:

| Data |
| Agent |
| Compute |

Delivered as a service:

| IICS Platform |
| Design time |
| Microservices |
| Middleware |
| OS |
| Virtualization |
| Server Infrastructure |

I want to manage and scale my infrastructure myself

CDI-Elastic

Customer Manages:

| Data |
| Agent |

Delivered as a service:

| Elastic Compute |

| IICS Platform |
| Design time |
| Microservices |
| Middleware |
| OS |
| Virtualization |
| Server Infrastructure |

I don't want to deal with infrastructure scaling, maintenance, but I want INFA to use my infrastructure for data processing

Advanced Serverless(CDI/CDI-e)

Customer Manages:

| Data |

| Elastic Agent |
| Elastic Compute |

Delivered as a service:

| IICS Platform |
| Design time |
| Microservices |
| Middleware |
| OS |
| Virtualization |
| Server Infrastructure |

I don't want to deal with infrastructure provisioning, scaling, maintenance, and I'm ok if data processing happens on INFA's secure infrastructure

Legend:
- Scalable Unit
- Customer Managed
- Informatica Managed

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Runtime Deployment Options

	Secure Agent	CDI-Elastic	Advanced Serverless (CDI/CDI-Elastic)
Cloud Provider	Any (or On-Prem)	AWS, Azure, GCP	AWS, Azure, GCP(On Roadmap)
Elastic Scaling	Manual	Automatic	Automatic
Infrastructure management	Customer	Informatica (agent by customer)	Informatica
Maintenance Overhead	Customer	Informatica	Informatica
Infrastructure Cost Incurred by	Customer	Customer	Informatica
Runtimes supported	CDI, DQ, CAI, MI, Profiling and many more..	CDI-e, CDQ-e, Profiling	CDI, CDI-e, Profiling, CDQ-e (H1'22)
Workload Data Volume	Low-Med	Low-Med + Med-High	Low-Med + Med-High
Recommended Use case	Cloud -> Cloud On-prem->Cloud Cloud->On-prem On-prem->On-prem	Cloud -> Cloud On-prem->Cloud Cloud->On-prem	Cloud -> Cloud On-prem->Cloud Cloud->On-prem
Pricing model	Usage based – separate bills from Informatica and infrastructure provider	Usage based – separate bills from Informatica and infrastructure provider	Usage based – single bill from Informatica

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Advanced Serverless

Setup

Pre-Requisites

1. Create a NAT Gateway (Optional)

   o To allow the subnet configured in serverless env to connect to external services through the internet, if needed

2. Create S3 folders (optional)

   o To store supplementary files (Parameter files, Jar files, external libraries, drivers, etc.)

3. Setup IAM role and policies

   o To establish 2-way trust between your (customer) AWS account and Informatica AWS account

4. Create Security groups

   o Used for attaching to the ENI

AWS Availability Zone

INFA DMZ- AZ1

Security Group - AZ1

ENI

Inbound connections denied

Customer VPC

amazon REDSHIFT

Amazon S3

Amazon RDS

Outbound rules defined by customer

IICS UI

- ### User guide:

https://docs.informatica.com/integration-cloud/cloud-platform/current-version/runtime-environments/serverless-runtime-environments/serverless-runtime-environment-properties.html
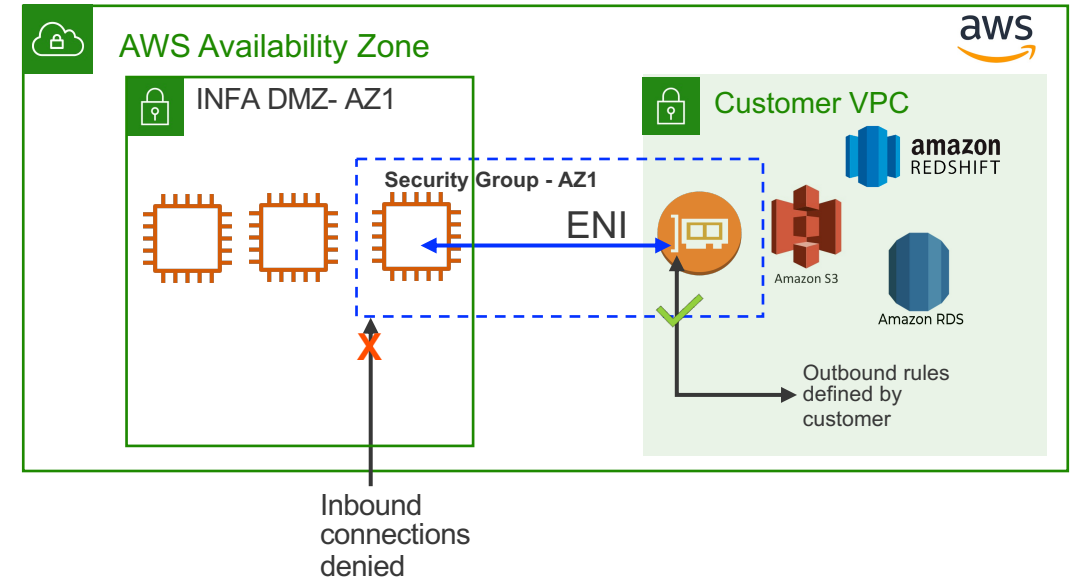
- ### Navigation

➢ Login to IICS Administrator
➢ Go to Serverless Runtime
➢ Click on New Serverless Environment

Cloud Formation Template for simple Adv. Serverless setup

Setup Option 2: Unified Cloud Formation Templates

- ● User guide:

  - ● https://infa-ace-utils.s3-us-west-2.amazonaws.com/iics/aws-serverless/user-guide/IICS-SRE-Setup-Utility-User-Guide.pdf

- ● Video Setup tutorial:
  https://www.youtube.com/watch?v=5KXCLmO2Xlk

- ● New VPC Scenario :

  - ● https://infa-ace-utils.s3.us-west-2.amazonaws.com/iics/aws-serverless/cfn-templates/new-vpc/main-new-vpc.template

- ● Existing VPC Scenario :

  - ● https://infa-ace-utils.s3.us-west-2.amazonaws.com/iics/aws-serverless/cfn-templates/existing-vpc/main-existing-vpc.template
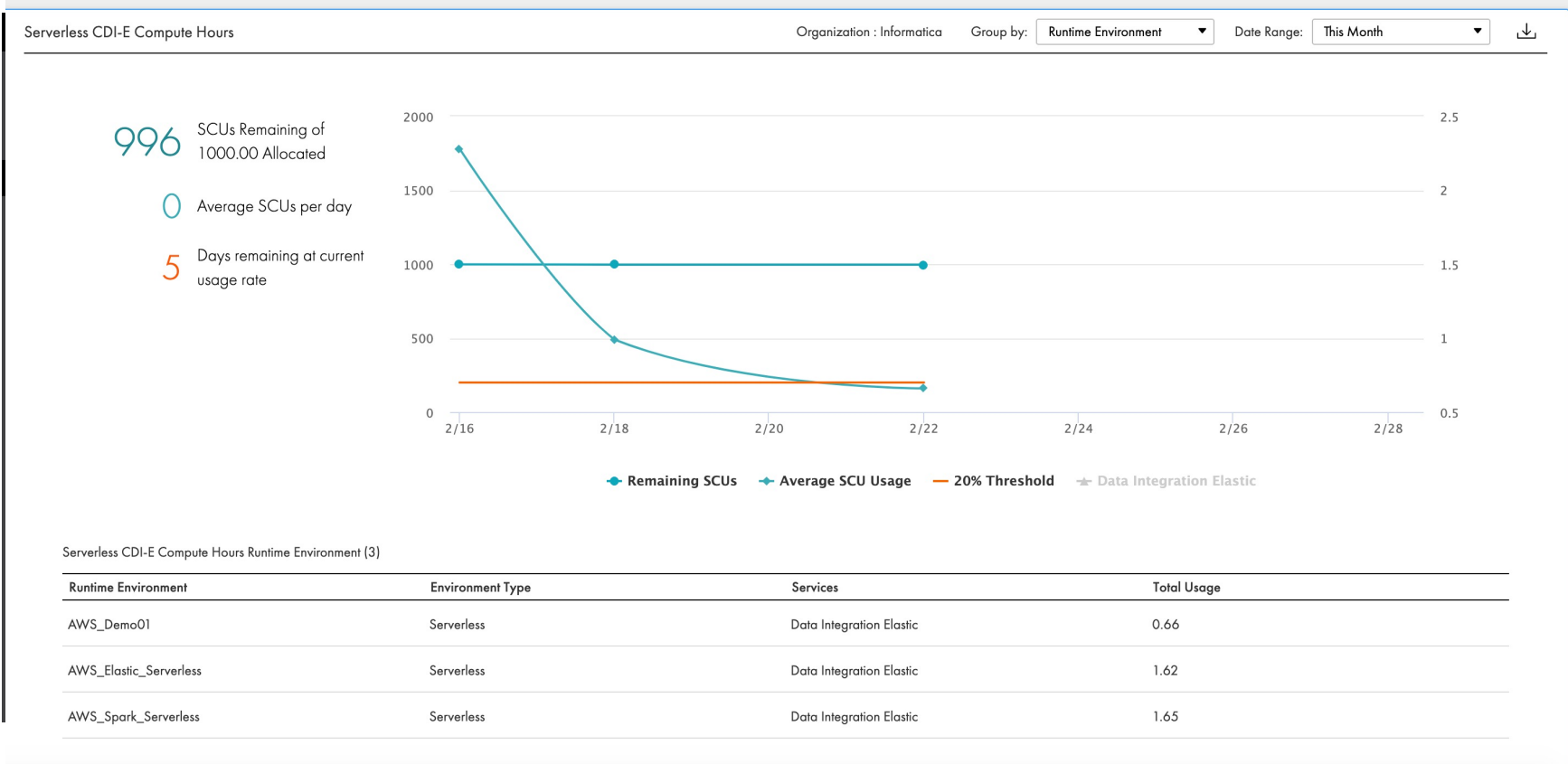
Demo

Key Highlights

Highlights

- Same Design time experience

- Broad Connectivity

- Metering & Integrated IPU Dashboard

- Global availability on AWS Pods – US, EMEA, AP-Sydney, Canada

- Cloud Formation Templates

Q&A

Thank You

For more Information- Feel free to reach us out

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