Microsoft

Architecting an Elegant Data Management Strategy with Rubrik

BRK1057

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Works	Solutions Technologist @ Rubrik
Does	Advocate, Speaker, Mentor
Likes	Cool Cloudy Things

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Does	Blogger, Speaker, Tech Enthusiast
Likes	Cloud Automation & Security

MVP Microsoft® Most Valuable Professional

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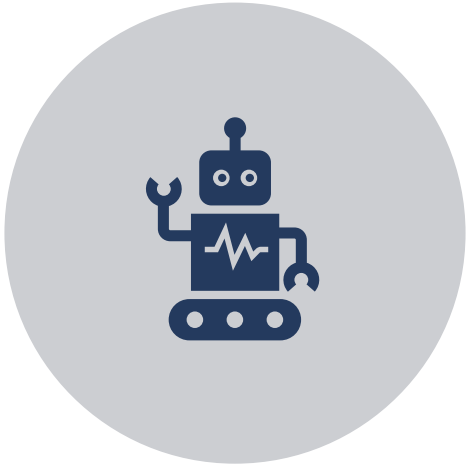
Agenda

Data Management and Protection



APIs and Automation

Data Management

RPO

SLA

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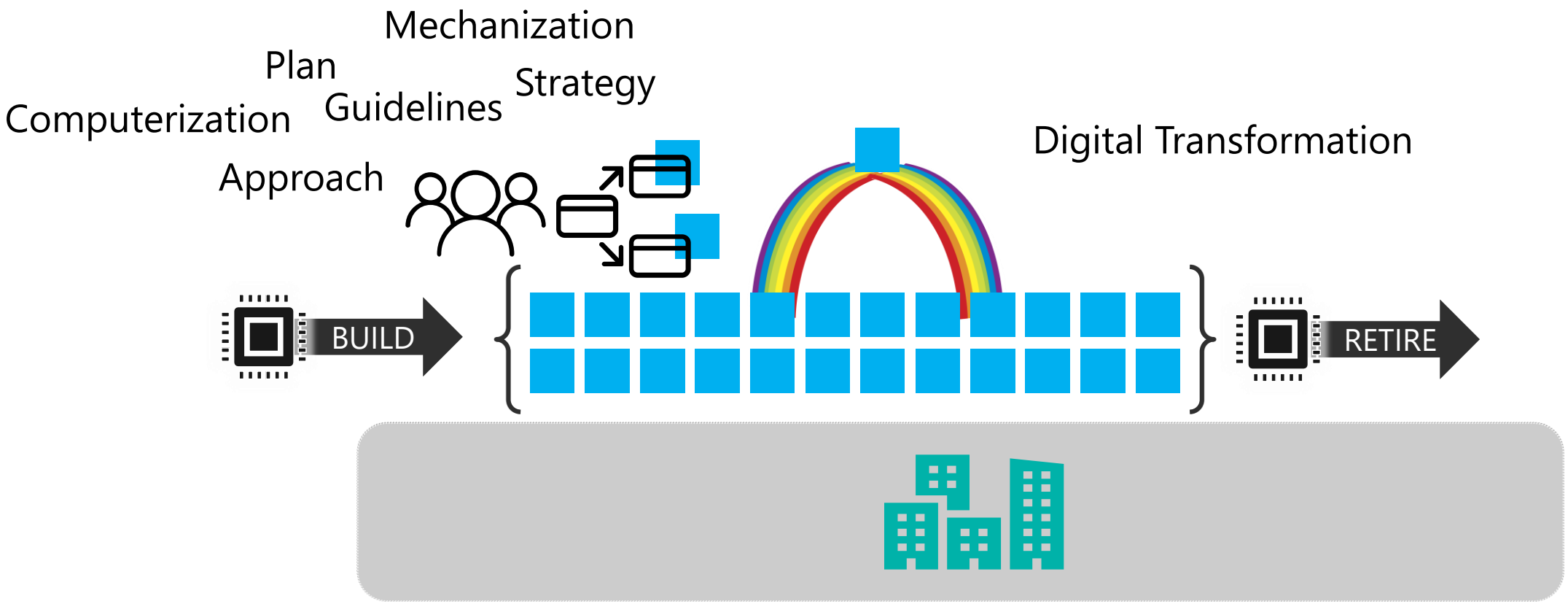
Current State Perception of Data Management



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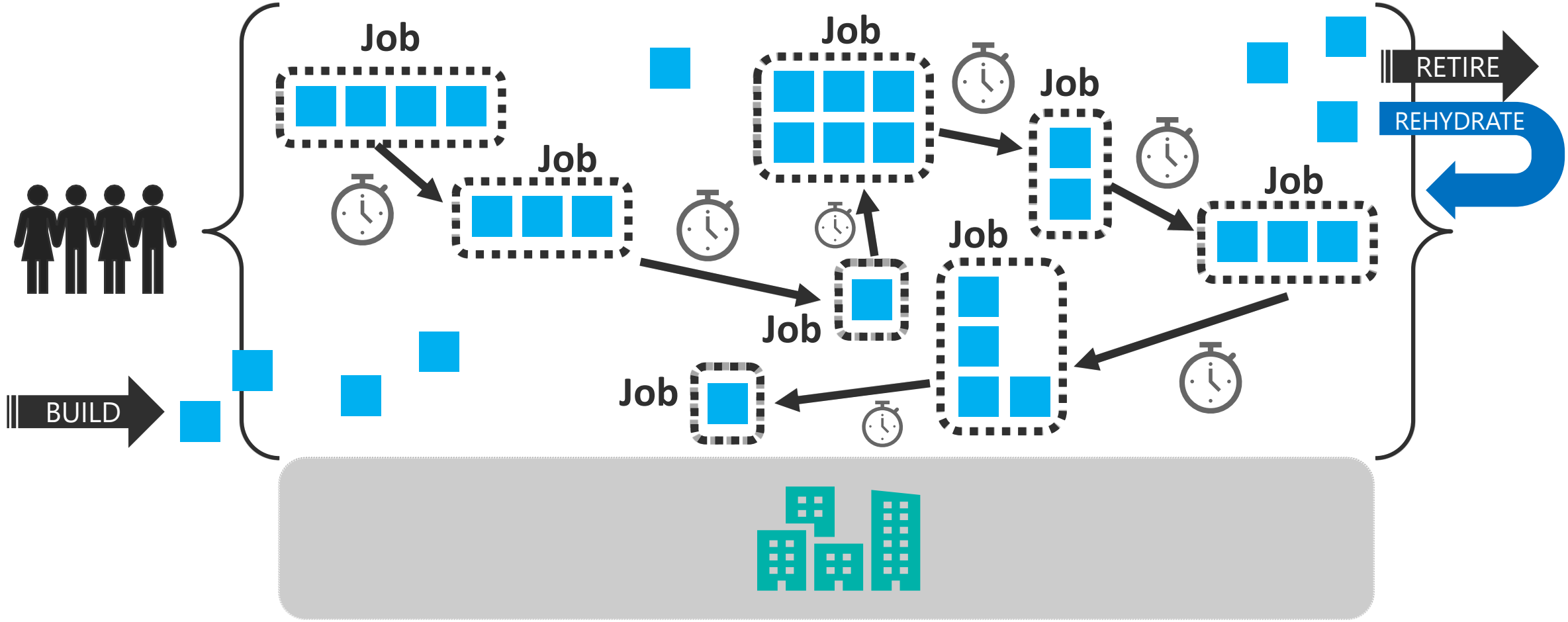
Current State Reality



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Design Considerations

- Remove data protection as a roadblock
- Simplify the lifecycle management process
- Have a Cloud Strategy
  - Create a control plane across localities and regions
  - Take advantage of efforts performed on-premises
- Integration with Infrastructure as Code methodologies

Operations that rely on the heroics of individuals alone cannot scale to meet the needs of the business

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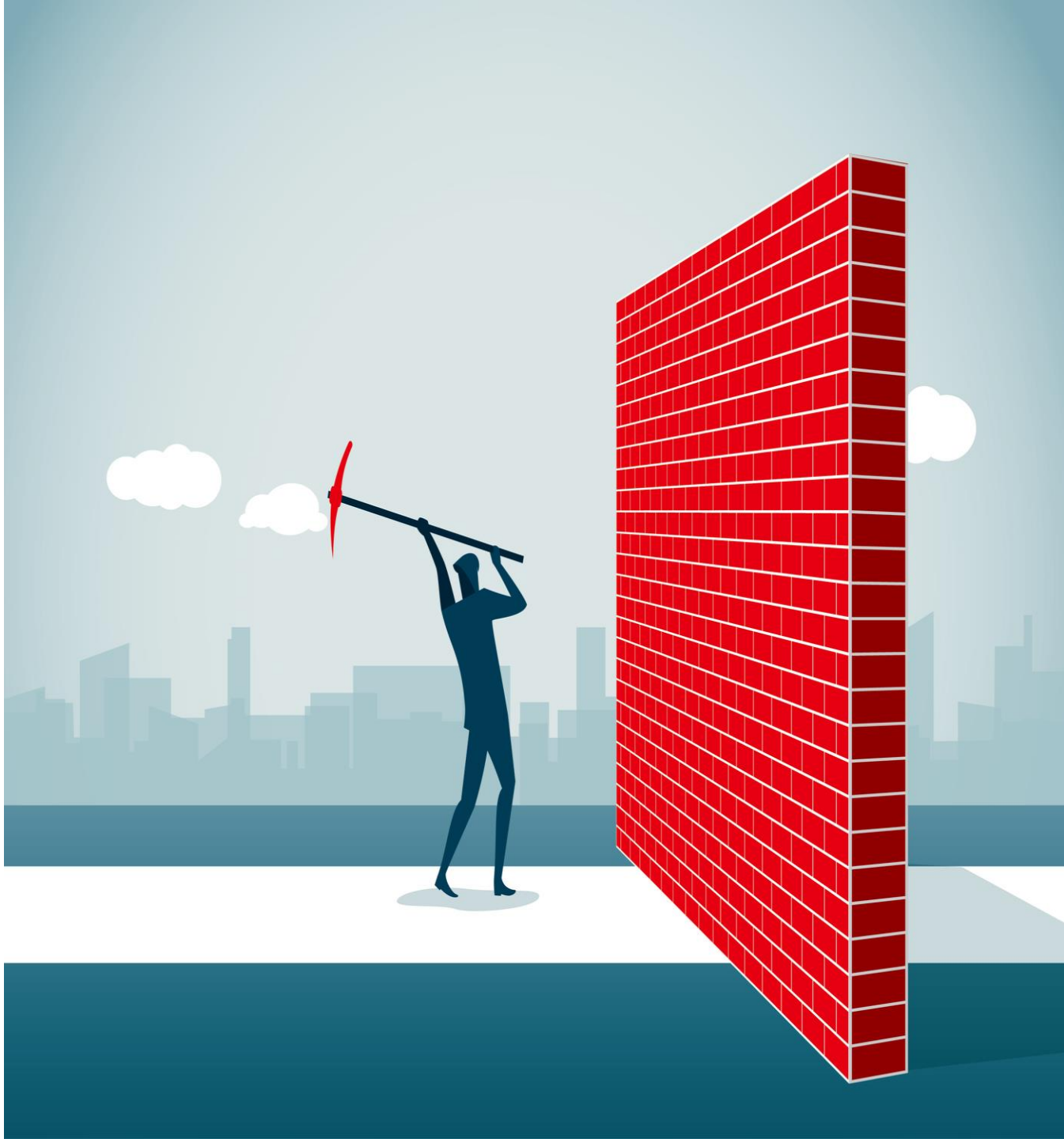
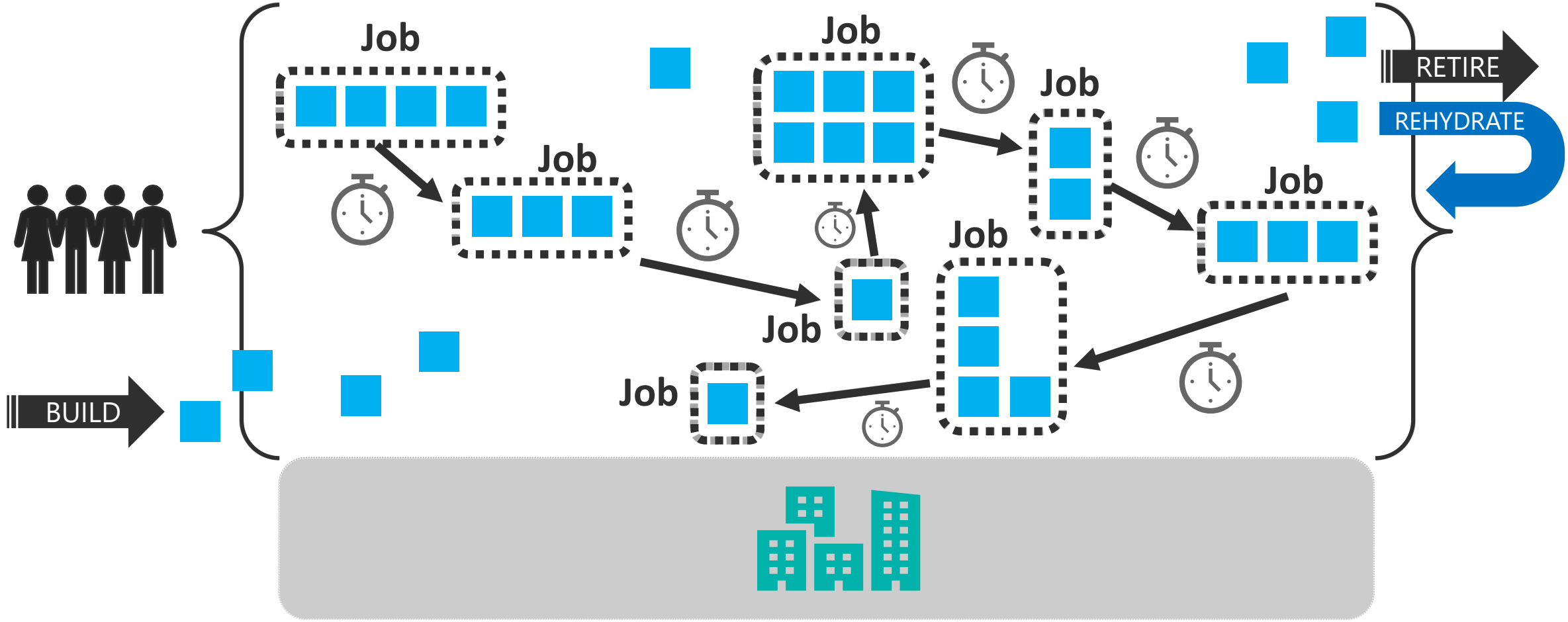
Step 1 – Remove the Roadblock



Step 1 – Remove the Roadblock



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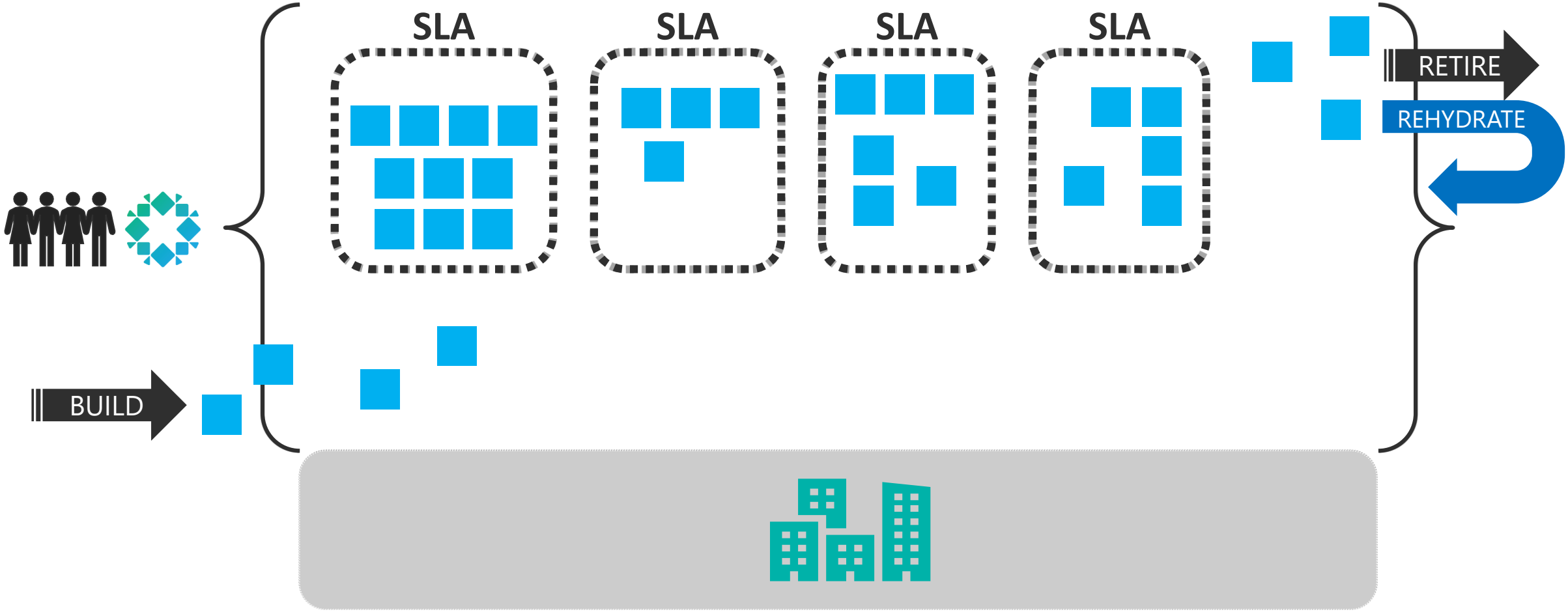
Step 1 – Remove the Roadblock



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Global SLA Domain Details – Protection

	Take snapshots every						Retain snapshots for	
Daily	1	Day(s)					32	Day(s)
Monthly	1	Month(s)	On	First day of the month			12	Month(s)
Yearly	1	Year(s)	On	First day of the year	Begin year in	Jan	2	Year(s)
Hourly	Number	Hour(s)					Number	Day(s)
Weekly	Number	Week(s)	On	Fri			Number	Week(s)
Quarterly	Number	Quarter(s)	On	Last day of the quarter	Begin quarter in	Jan	Number	Quarter(s)

Show less -

Snapshot window (optional)

Snapshot window hh : mm am to hh : mm am

First full snapshot
- (●) First opportunity
- ( ) Custom range

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Global SLA Domain Details – Archival & Replication

Archival location

Archival retention

Archival starts immediately and is retained on the archival location for **2 years**

Archival location

Select a storage setting

Enable instant archive

Long-term retention

Source

Source retention

1 | Year(s)

Maximum retention is **2 years**

RTO

Archival location | Replication target

Replication target

Replication retention

6 | Month(s)

Replication starts immediately and is retained for **6 months**

Replication type

Cluster

Replication target

Cluster_B

Disaster Recovery

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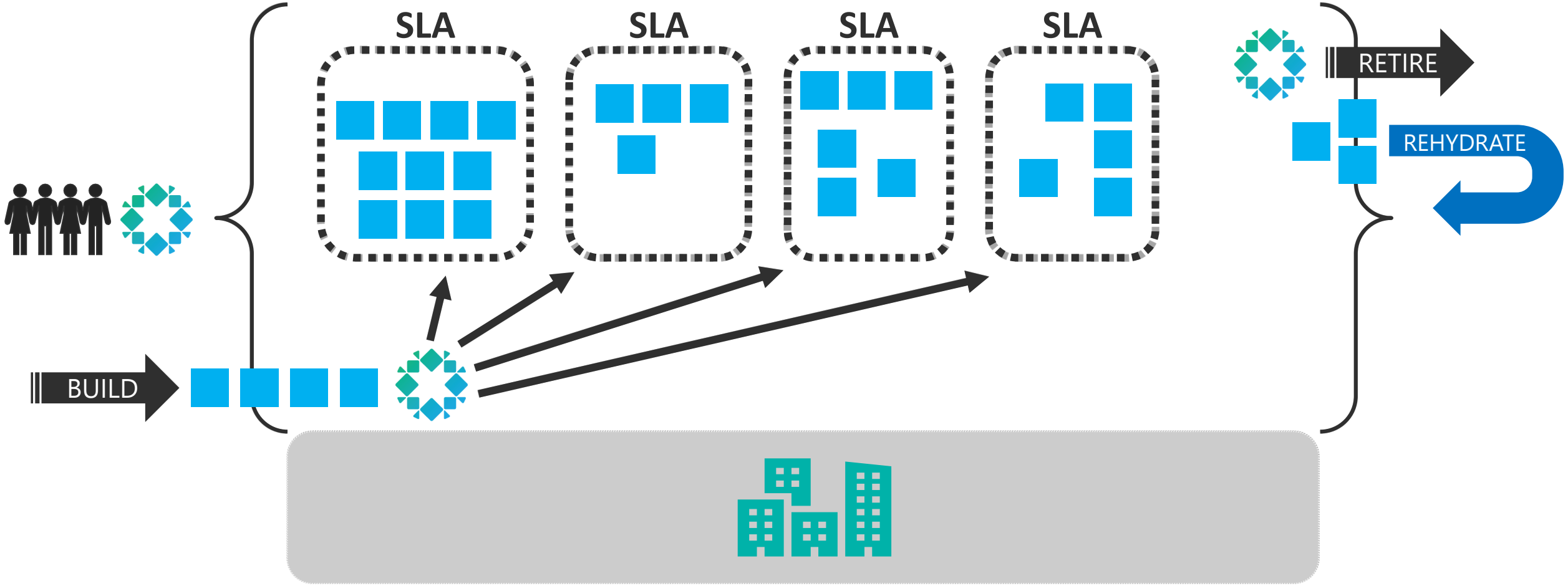
SLA Demo

Step 2 – Lifecycle Management

Step 2 – Lifecycle Management



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Lifecycle Management Details

- **Automated Protection**
  - Dynamic Rules: Hierarchical protection based on parent / child relationships.
  - Metadata Rules: Protection based on workload characteristics.

- **Automated Tiering and Retirement**
  - Workload data retains its SLA Domain association even after being retired (*relic*).
  - SLA Domain policies define data tiering to Hot, Cool, and Archive storage, minimizing storage consumption costs and adhering to compliance regulations.
  - **There is no concept of de-provisioning, eliminating half of the problem.**

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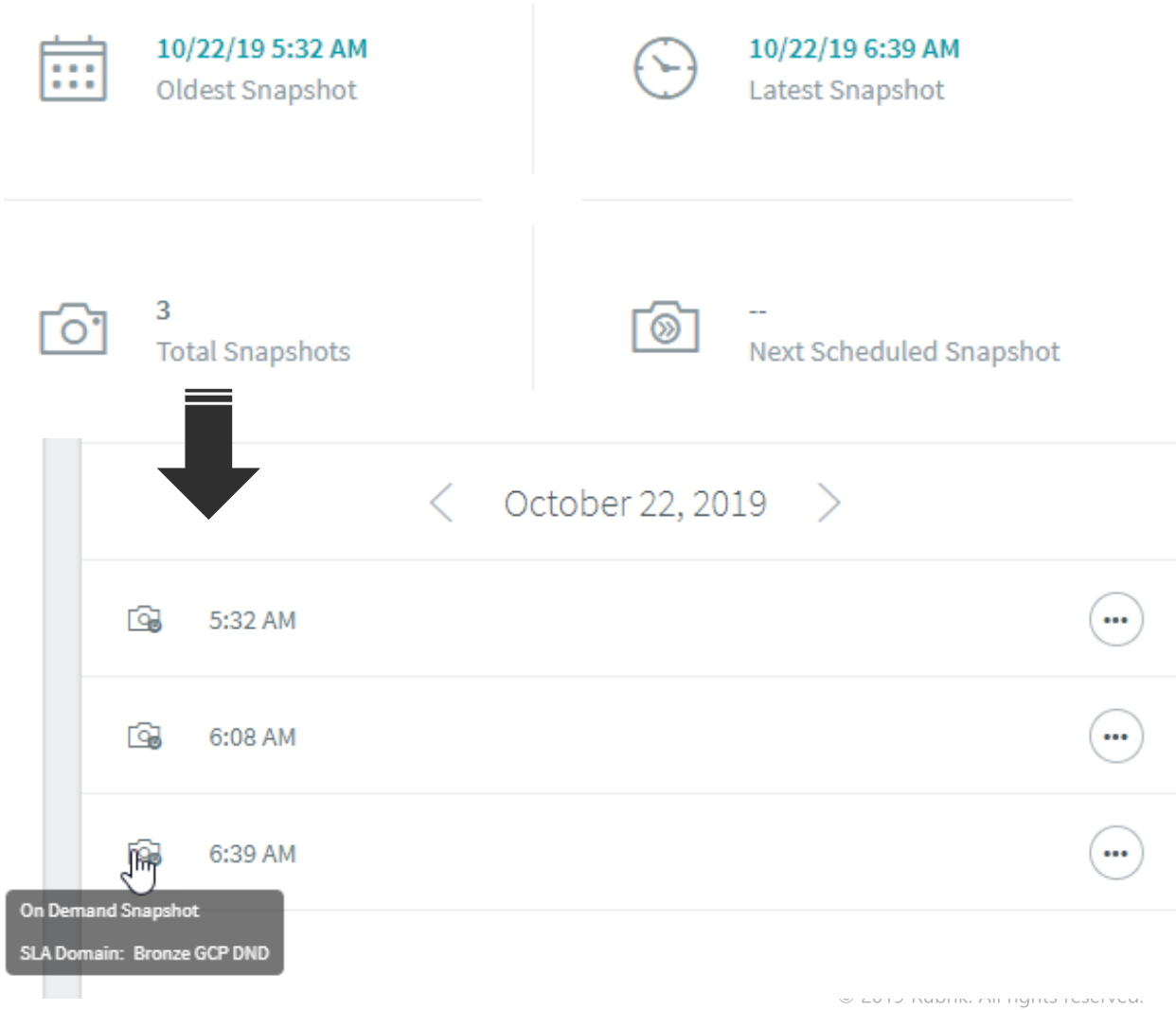
Lifecycle Management Details – Retirement

- User created a test server to triage an application issue.
- Three (3) **on-demand snapshots** were taken by the user using the Bronze SLA Domain.
- Data is **automatically retained** until the policy dictates otherwise.



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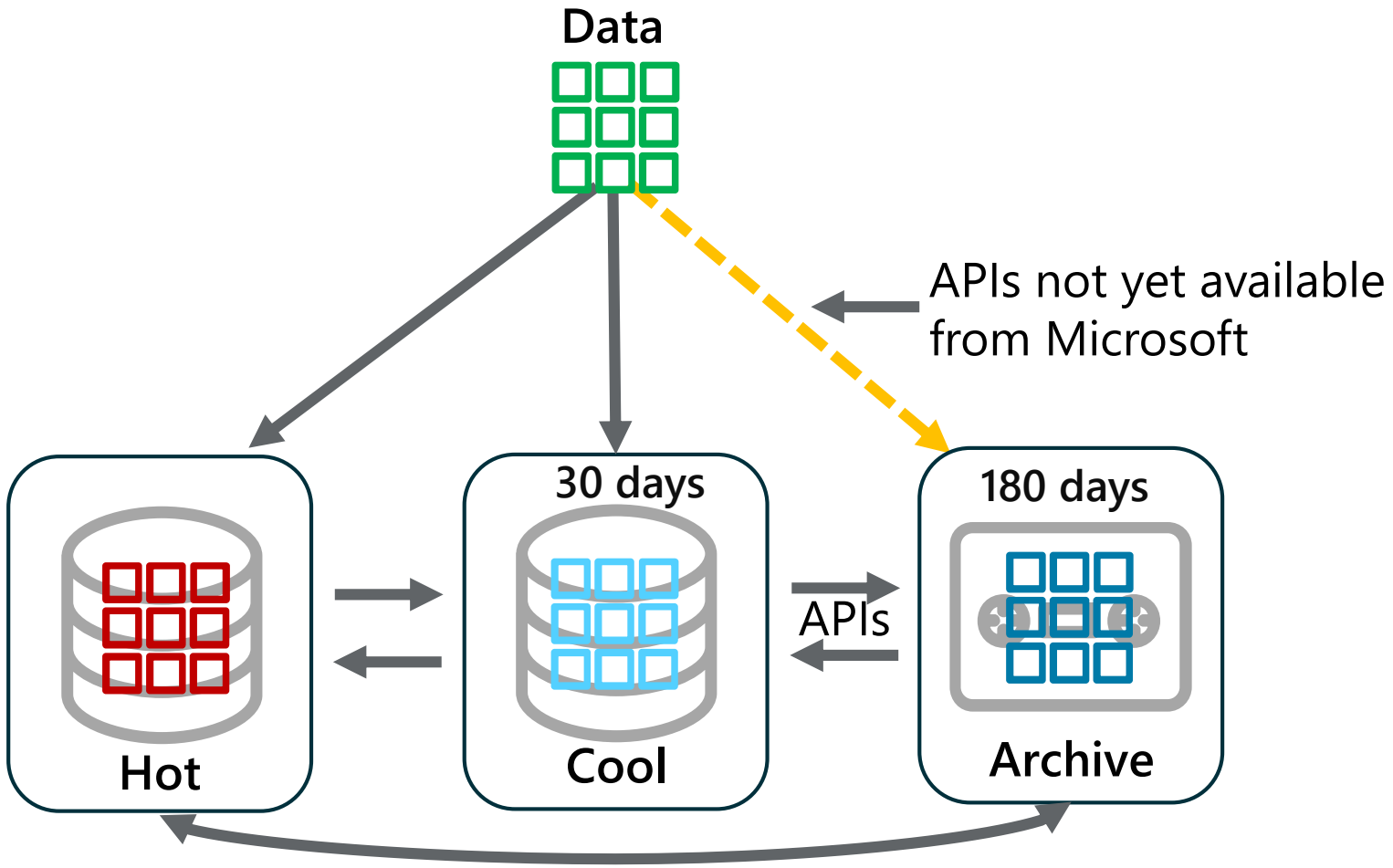
Lifecycle Management Details – Storage Tiering

Smart Tiering



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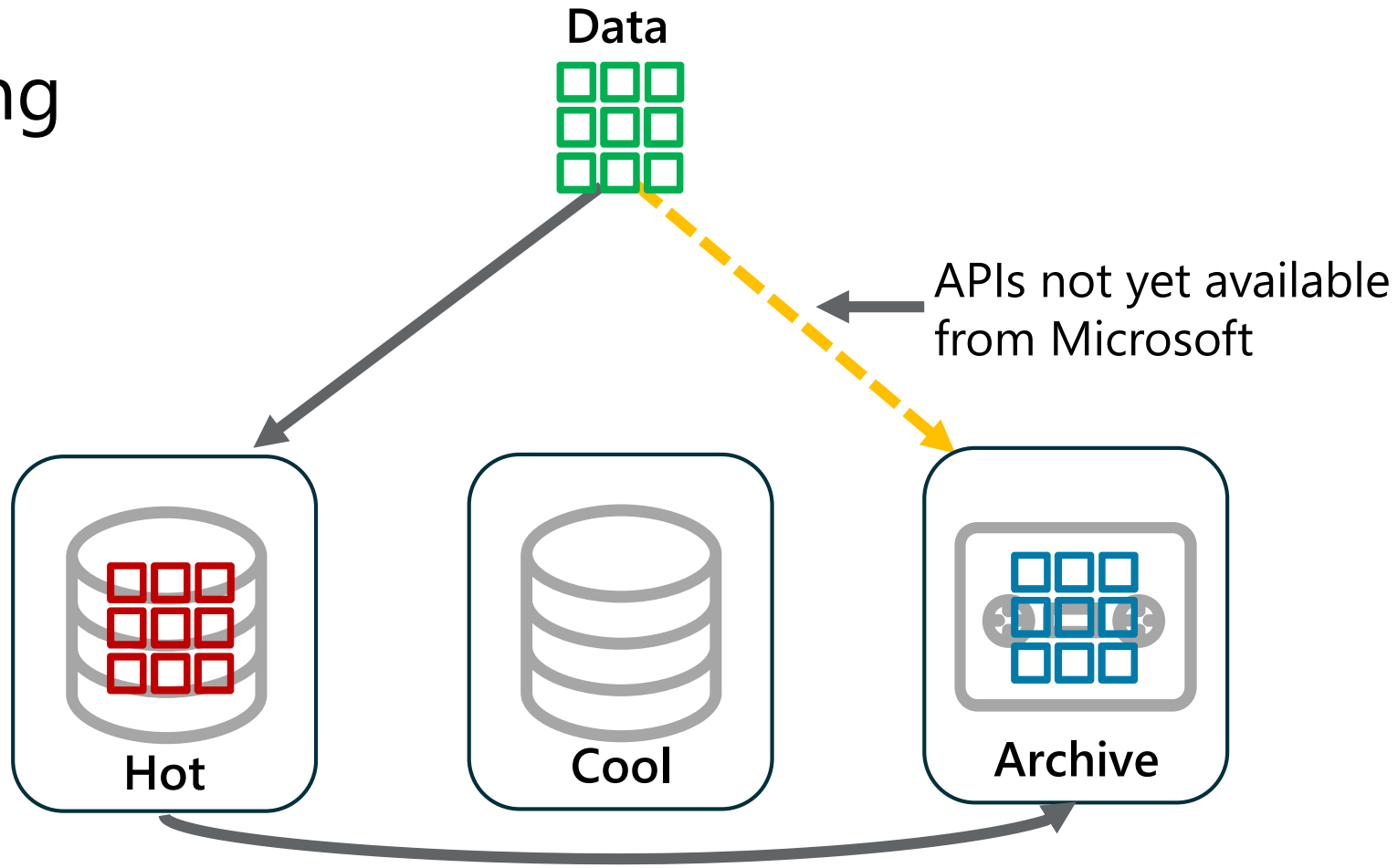
Lifecycle Management Details – Storage Tiering

Instant Tiering



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“Rubrik gives time back to our Operations team for more value-add projects like working with customers, modernizing our architecture, and setting up cloud”

John Iraci, Director of Infrastructure – UC San Diego

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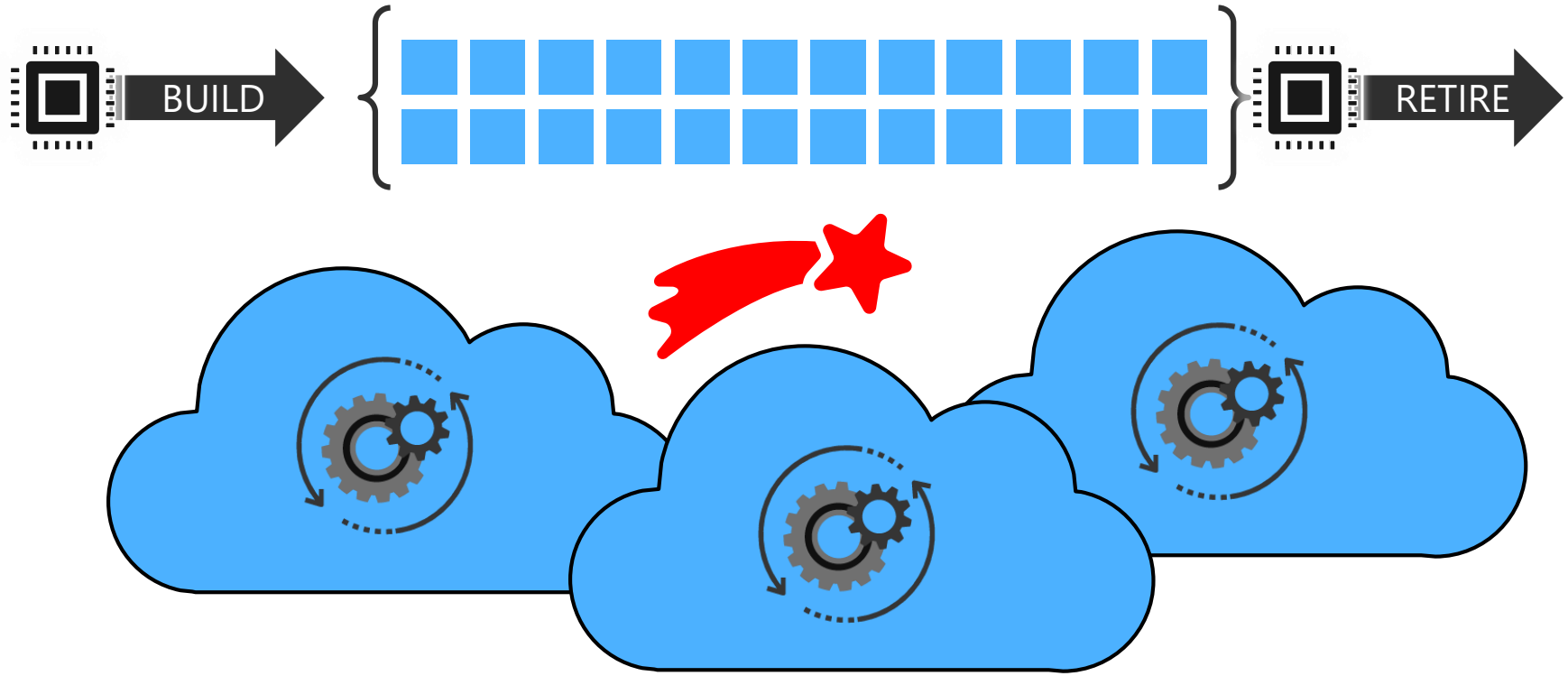
Step 3 – Have a Cloud Strategy

Current State Perception - Cloud



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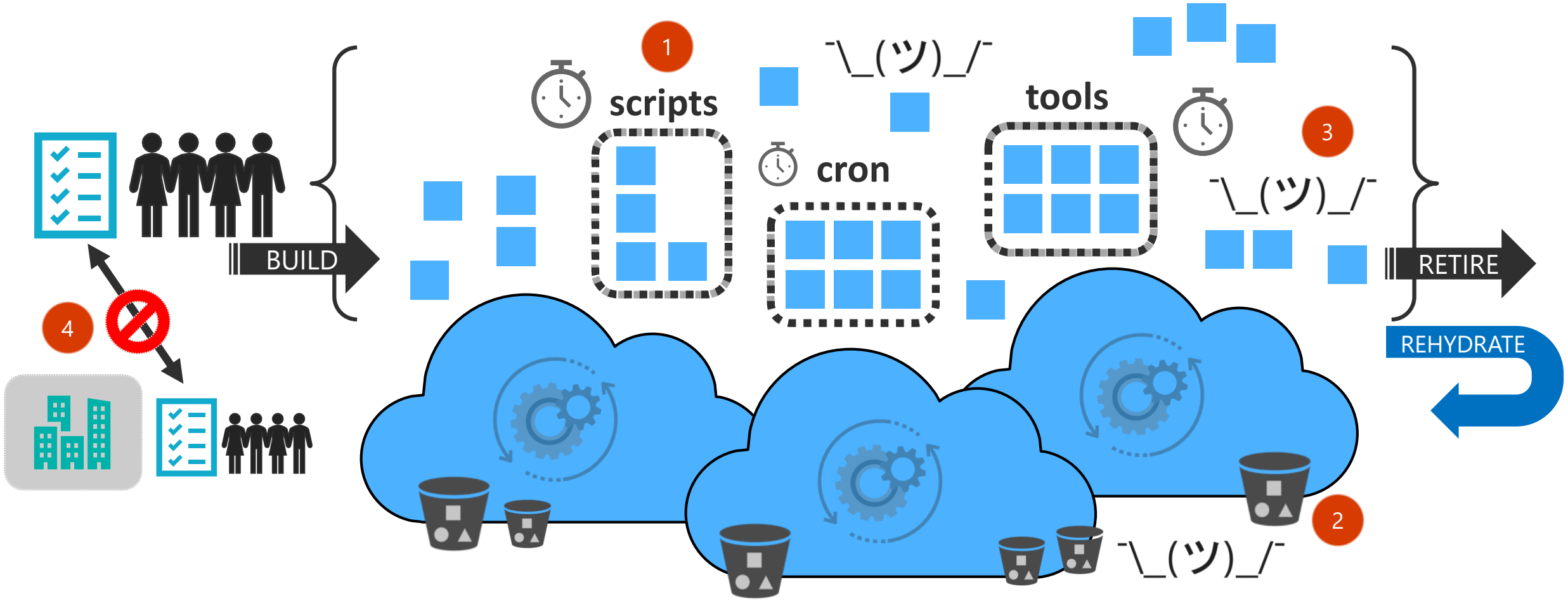
Current State Reality - Cloud



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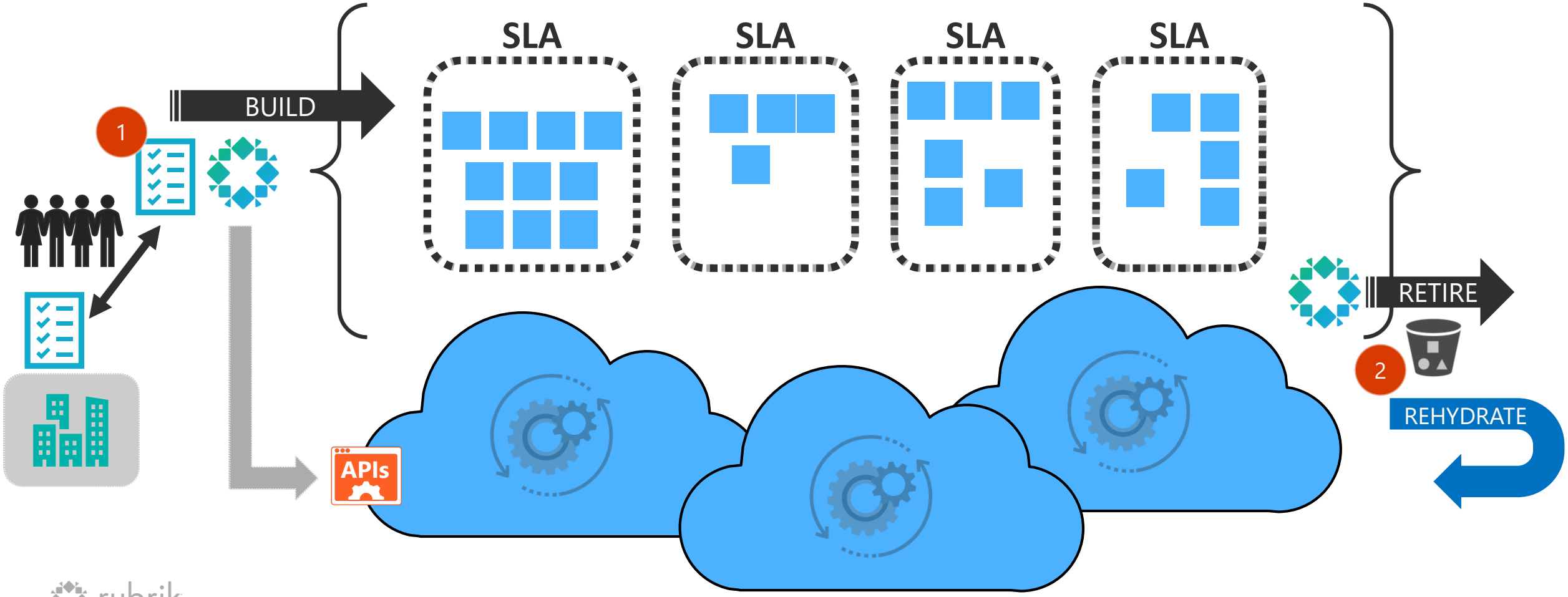
Desired State



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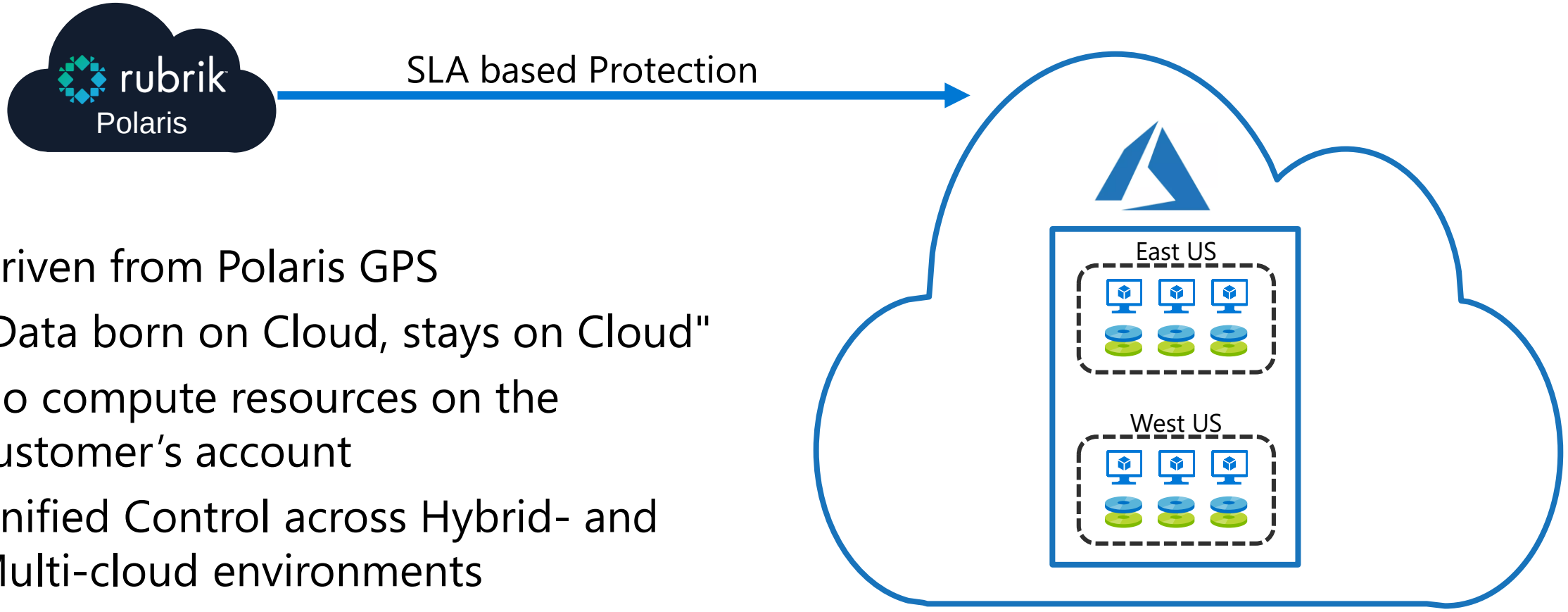
Cloud Native Protection with Polaris



- Driven from Polaris GPS
- "Data born on Cloud, stays on Cloud"
- No compute resources on the customer's account
- Unified Control across Hybrid- and Multi-cloud environments

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Cloud Native Protection – Azure Resource Groups

VIRTUAL MACHINES | **RESOURCE GROUPS** | SUBSCRIPTIONS

Se

SLA Domain

- Azure CloudOn Global ...
- Azure Native Protection
- Azure USWest

Show 7 more

Resource group	Subscription	VM protection	Region
tm-jaapjaap	Pay-As-You-Go	No SLA	East US
tm-usw2-vm-rg	Pay-As-You-Go	No SLA	West US 2
tm-vpn-usc-rg	Pay-As-You-Go	No SLA	Central US

Cloud Native Protection – Azure Instances

Protection Edit

SLA Domain

No SLA

Details

Directory name

rubrik.us

Virtual machines

14

Search by VM

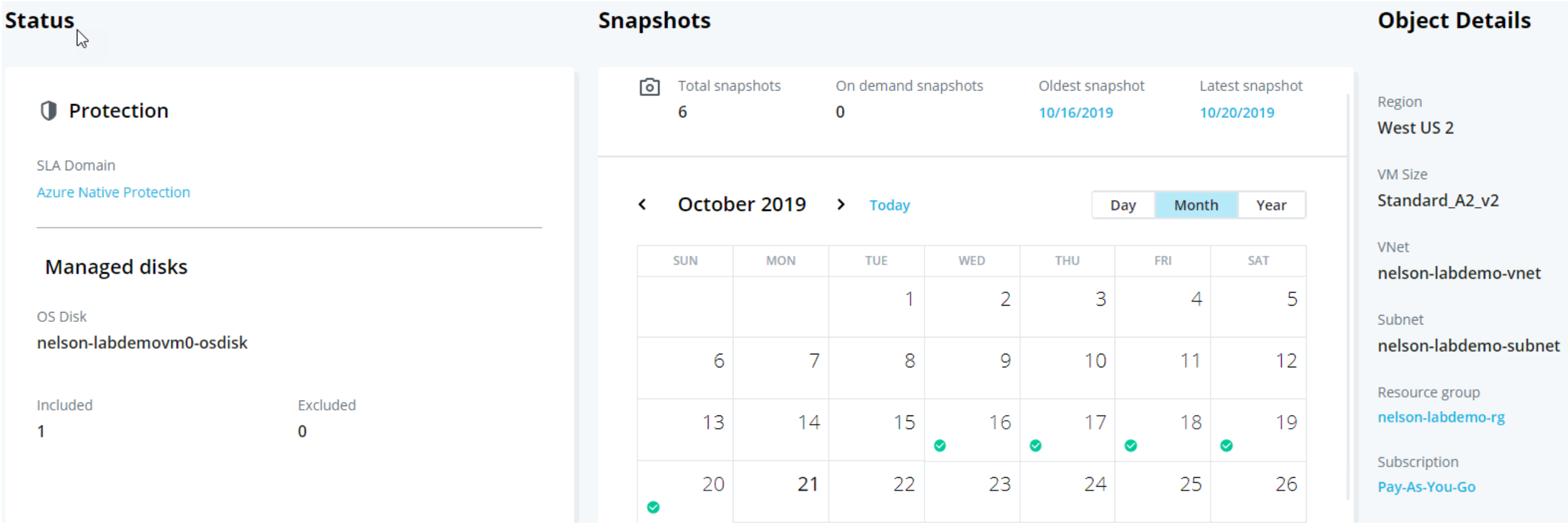
SLA Domain

- Azure CloudOn Global ...
- Azure Native Protection
- Azure USWest

Show 7 more

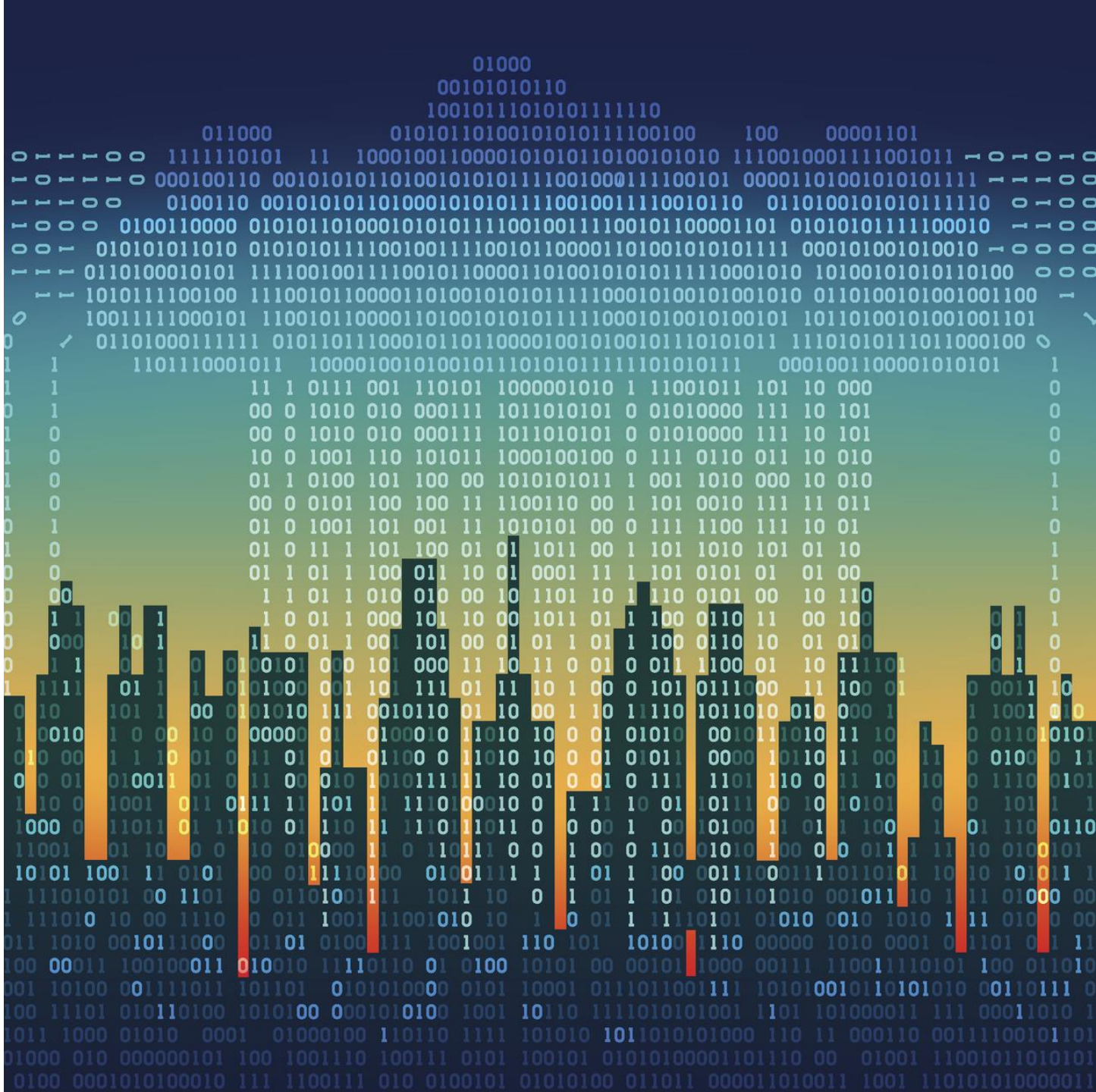
VM name	Resource group	VM Size	SLA Domain
nelson-labdemo-vm0	nelson-labdemo-rg	Standard_A2_v2	Azure Native Protection
noded	tm-usw2-cc-rg	Standard_DS3_V2	No SLA
tm-win-poshbot	tm-vpn-usw2-rg	Standard_B1ms	No SLA

Cloud Native Protection – Azure Instance Details

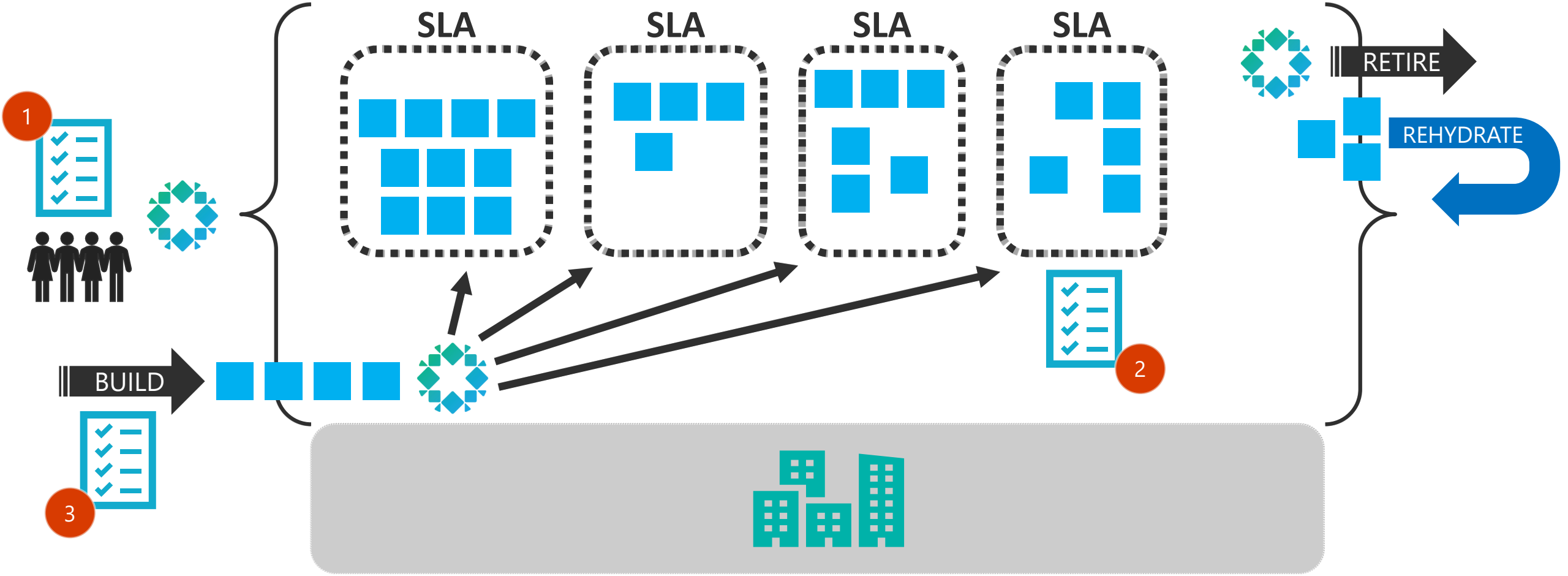


Polaris Azure Native Protection Demo

Step 4 – Infrastructure as Code



Step 4 - Infrastructure as Code



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“Rubrik is a set-it-and-forget-it solution. We’re able to automate our workflows, something that wasn’t possible with our previous solution. And I was blown away by how easy it is to use Rubrik’s REST APIs.”

Daniel Jenkins, IT Network Engineer - Omnitracs

build

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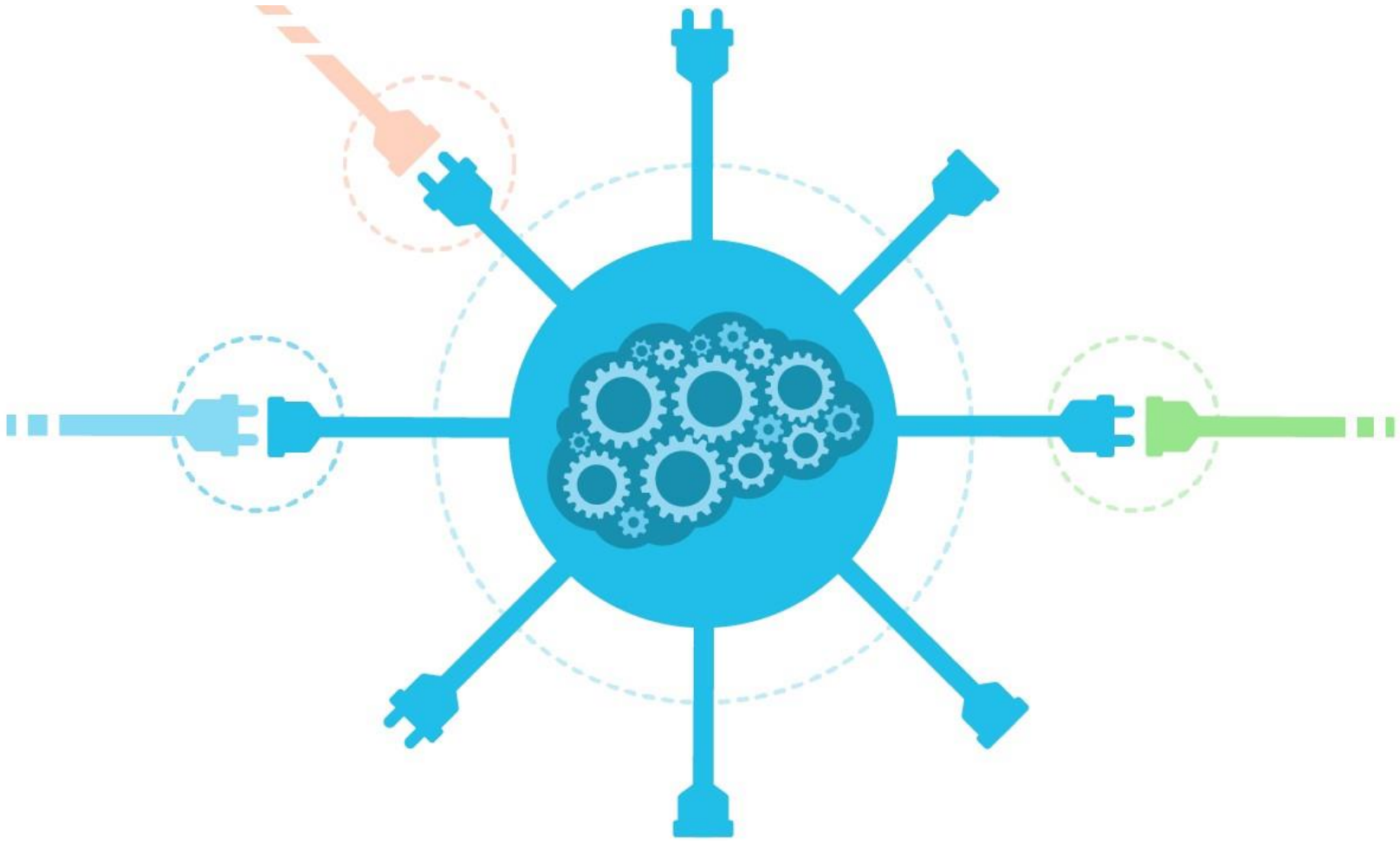
APIs and Automation



Taking a Different Approach with APIs

Full-featured APIs

Built API-first

All functionality is exposed.

User-friendly Resources

Get started immediately

Easy to access and learn.

Pre-built Integrations

Integrate with your existing tools

Easy to consume & integrate

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Build the Future of Cloud Data Management

Software Development Kits

- Go ›
- PowerShell ›
- Python ›

VIEW ALL SDKS

Tooling Integrations

- Ansible ›
- VMware vRealize ›
- Monitor Rubrik with Splunk ›

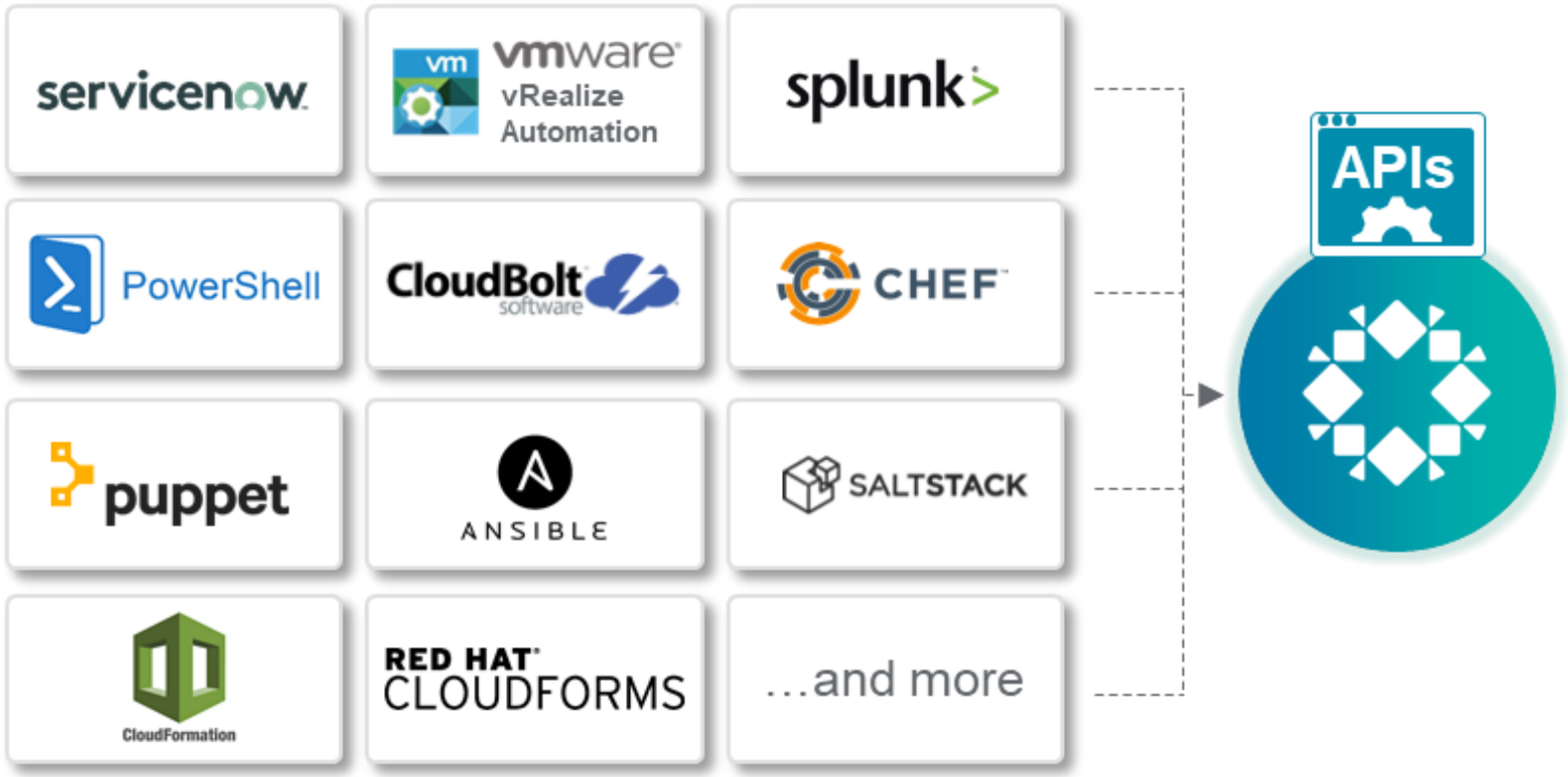
VIEW ALL INTEGRATIONS

Use Cases

- Roxie, Rubrik's Intelligent Personal As... ›
- Backup Validation with PowerShell ›
- Provision and Protect with vRealize ›

VIEW ALL USE CASES

Infrastructure as Code Details



- Entire platform built on RESTful APIs.
- No feature left behind.
- Rubrik uses the same API you use.

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Data Protection Integration Points

IT Service Catalogs

servicenow

vmware vRealize Automation

vmware vCloud Director

Configuration Management

puppet

CHEF

ANSIBLE

SALTSTACK

Automation Tools

Microsoft PowerShell

python

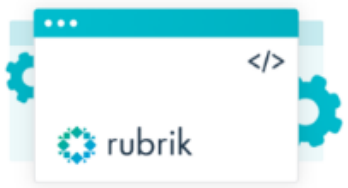
GO

Cloud Management

CloudFormation

CloudBolt

RED HAT CLOUDFORMS



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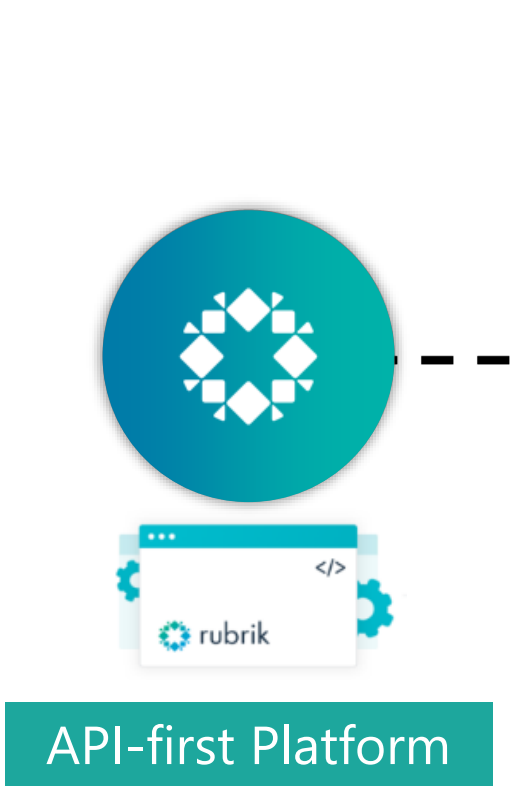
Pipeline Driven Use Cases



Integrate data protection with IT automation suites

Simplify large deployments via configuration management

Centralize monitoring and reporting from existing UI

Automate IT processes and operations at scale

Build new services on top of Rubrik using language of choice

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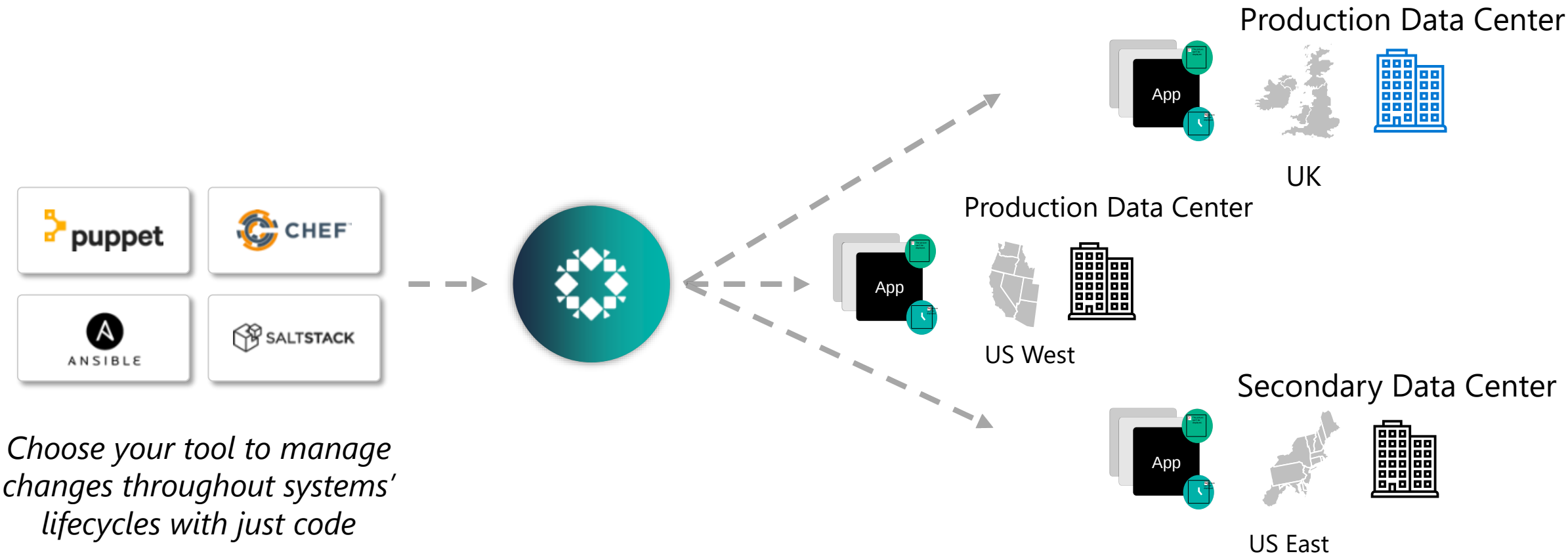
Easily manage large-scale environments using your tool of choice

Enable your DevOps team to automate mundane, repetitive tasks using their preferred tool – especially to help simplify management of large, distributed environments.



Choose your tool to manage changes throughout systems' lifecycles with just code

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Summary

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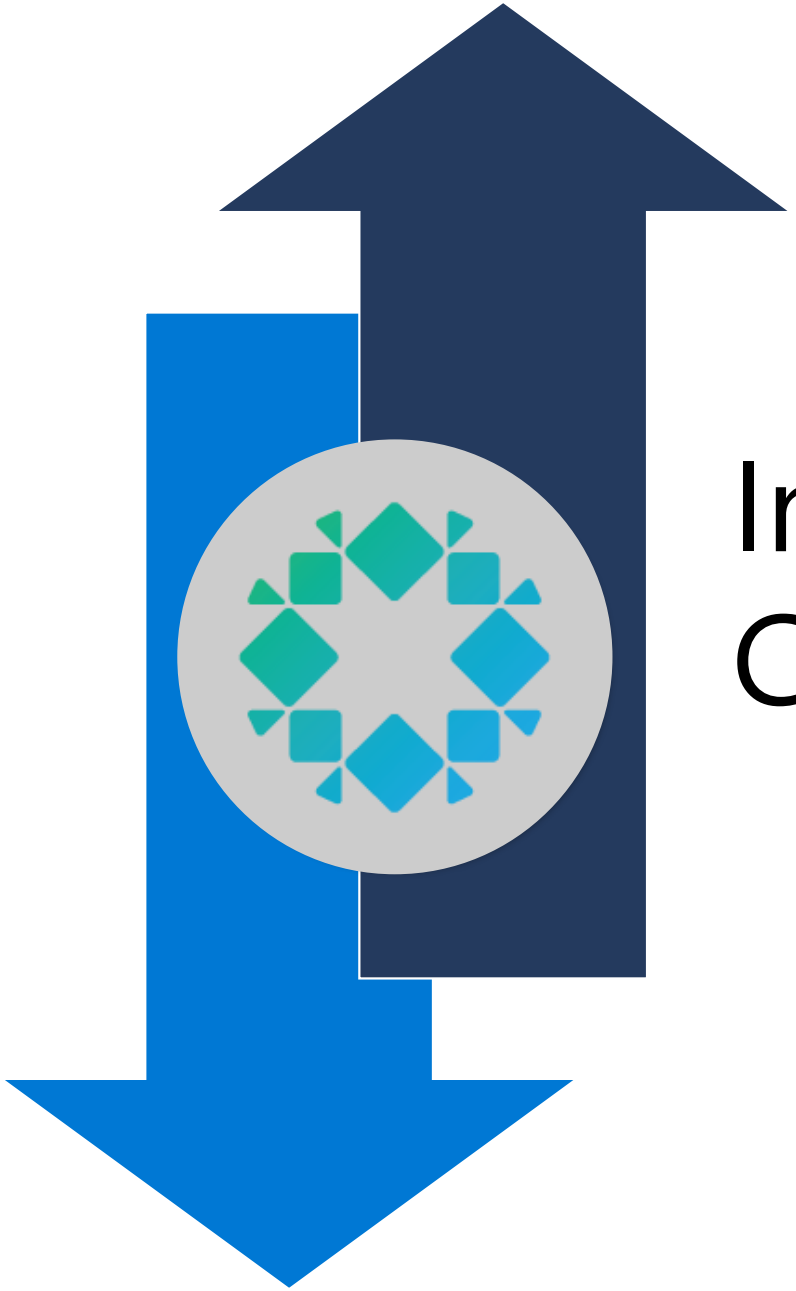
Microsoft

Rubrik's Focus

Reduce Complexity



Increase Capabilities

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Your Benefits

- Remove data protection as a roadblock
- Simplify the lifecycle management process
- Have a Cloud Strategy
  - Create a control plane across localities
  - Take advantage of efforts performed on-premises
- Integration with Infrastructure as Code methodologies
- More available FTE time to work on strategic projects and paying down technical debt.

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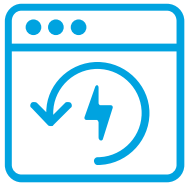
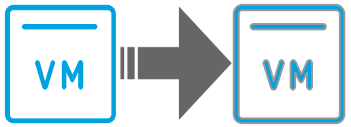
Take Action with Your Data

Recover Files



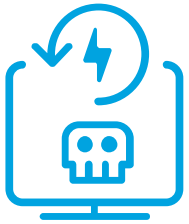
Instantly Recover

Live Mount VM's / Virtual Disks



Export

Live Mount Databases



Recover from Ransomware

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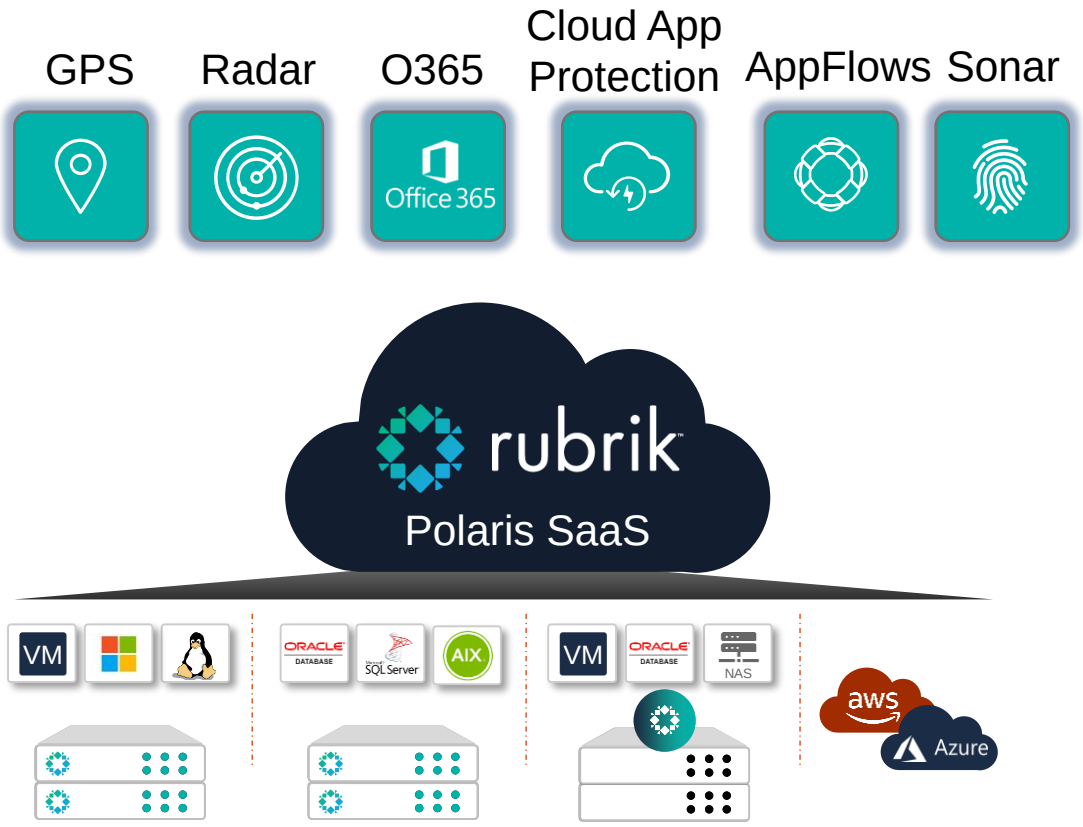
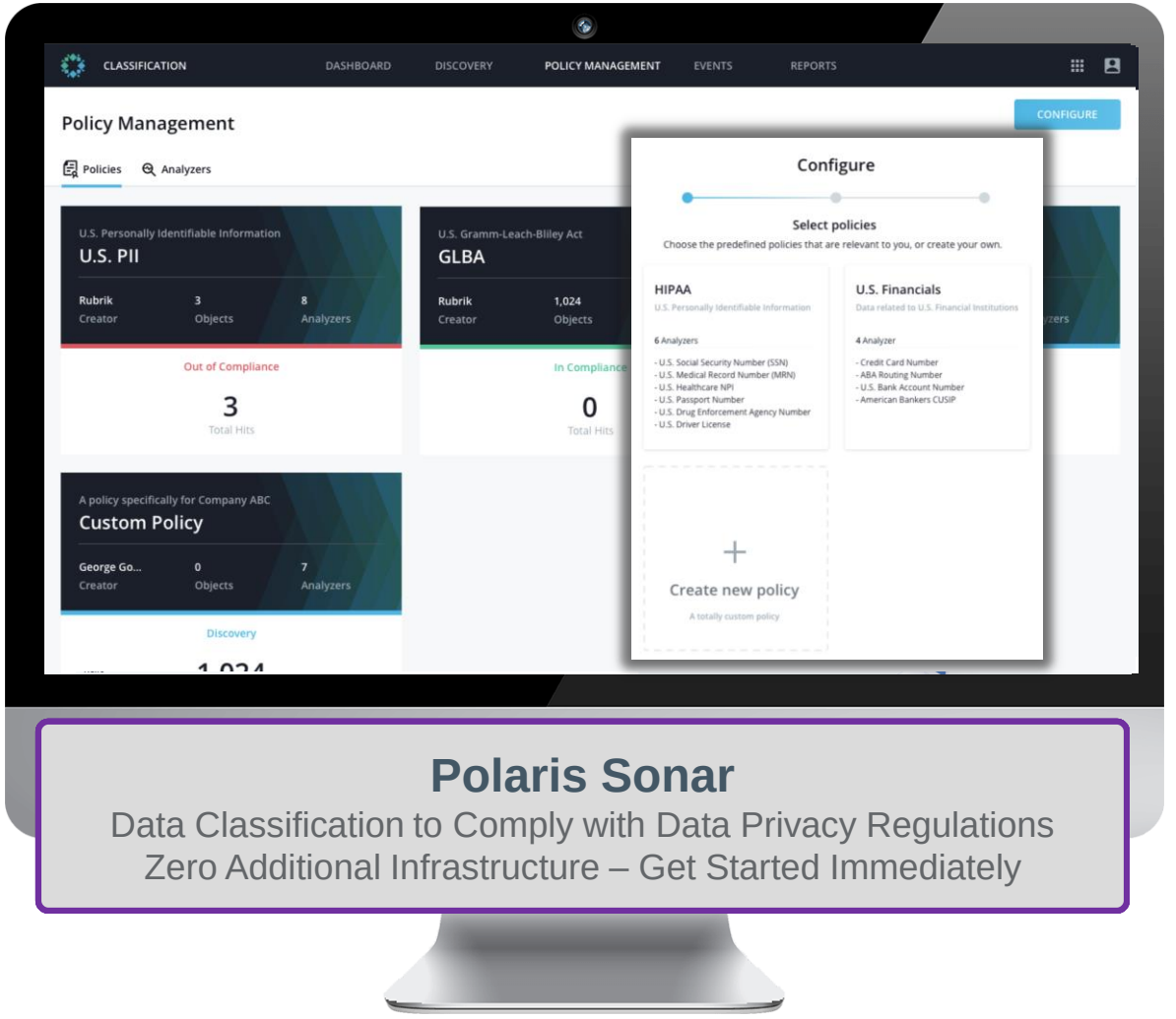
Data Protection Does More





Polaris Sonar

Data Classification to Comply with Data Privacy Regulations
Zero Additional Infrastructure – Get Started Immediately

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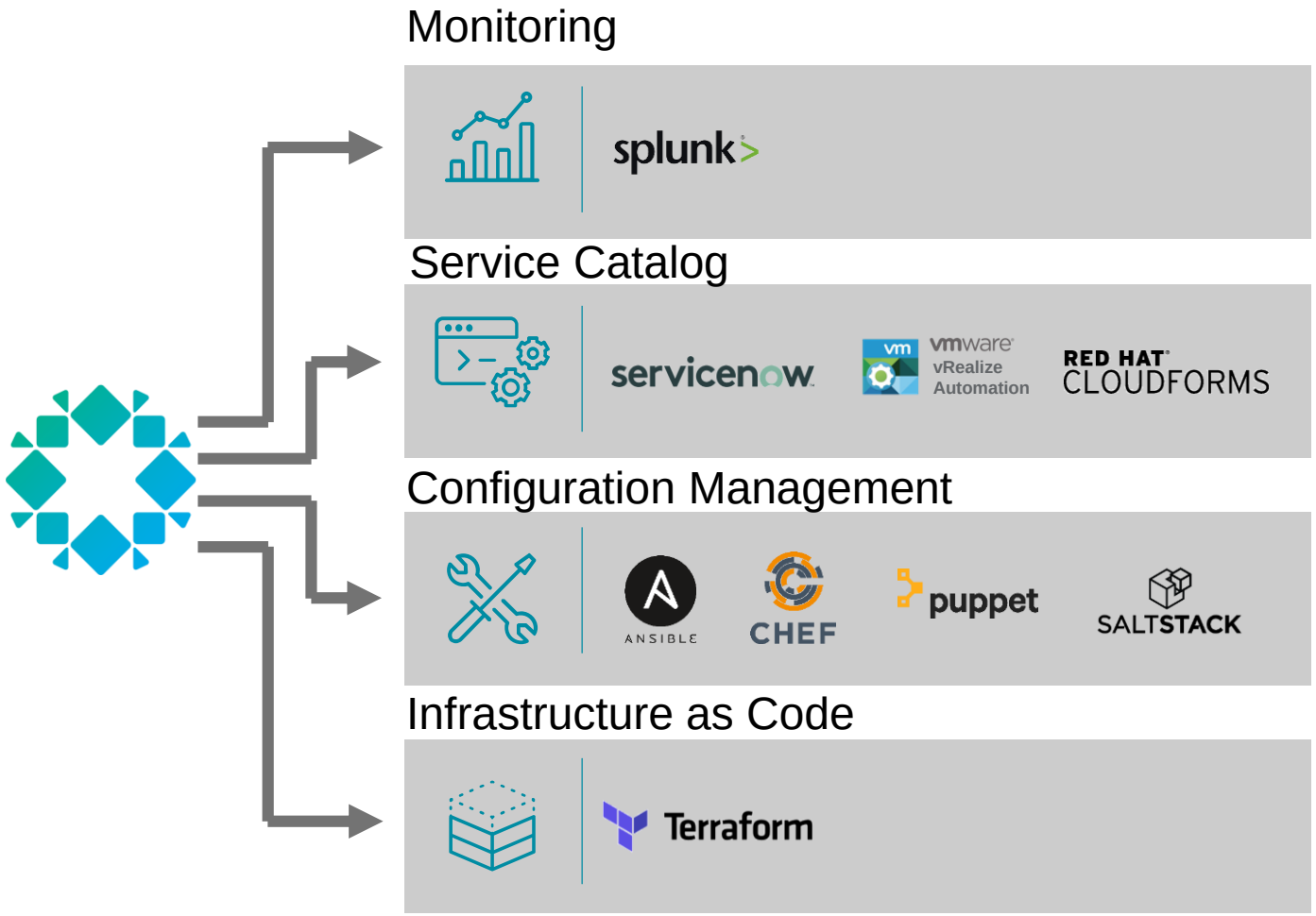
Automate Everything with API-First Platform



Achieve Operational Efficiencies

- Return 32 days of productivity back to business (daily mgmt time savings)
- 87% decrease in time spent on monthly recovery testing ($100K+ savings)
- Use Level 1 engineer vs. Level 2 engineer

accenture

Rubrik + ServiceNow integration

Full-featured Documentation | Open-source Development (Build)

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Don’t Backup. Go Forward.

Go to the Rubrik Booth #847

Thank you!