AWS re:Invent

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STG339-S

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Cyber resilience for AWS deployments

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Agenda

A new market dynamic

Data management and increasing complexity

Multi-layered defense for cyber resilience

Cyber resiliency for AWS deployments

Customer use cases

Key takeaways

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Enterprises are rethinking data strategy in the cloud

Over 90%

of new apps developed by enterprises will be cloud-native by **2025.**

IDC

90%

of enterprises will rethink data strategy by **2022** for competitive advantage.

Gartner

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Source: survey of 350 IT decision makers at top US companies done in September 2020

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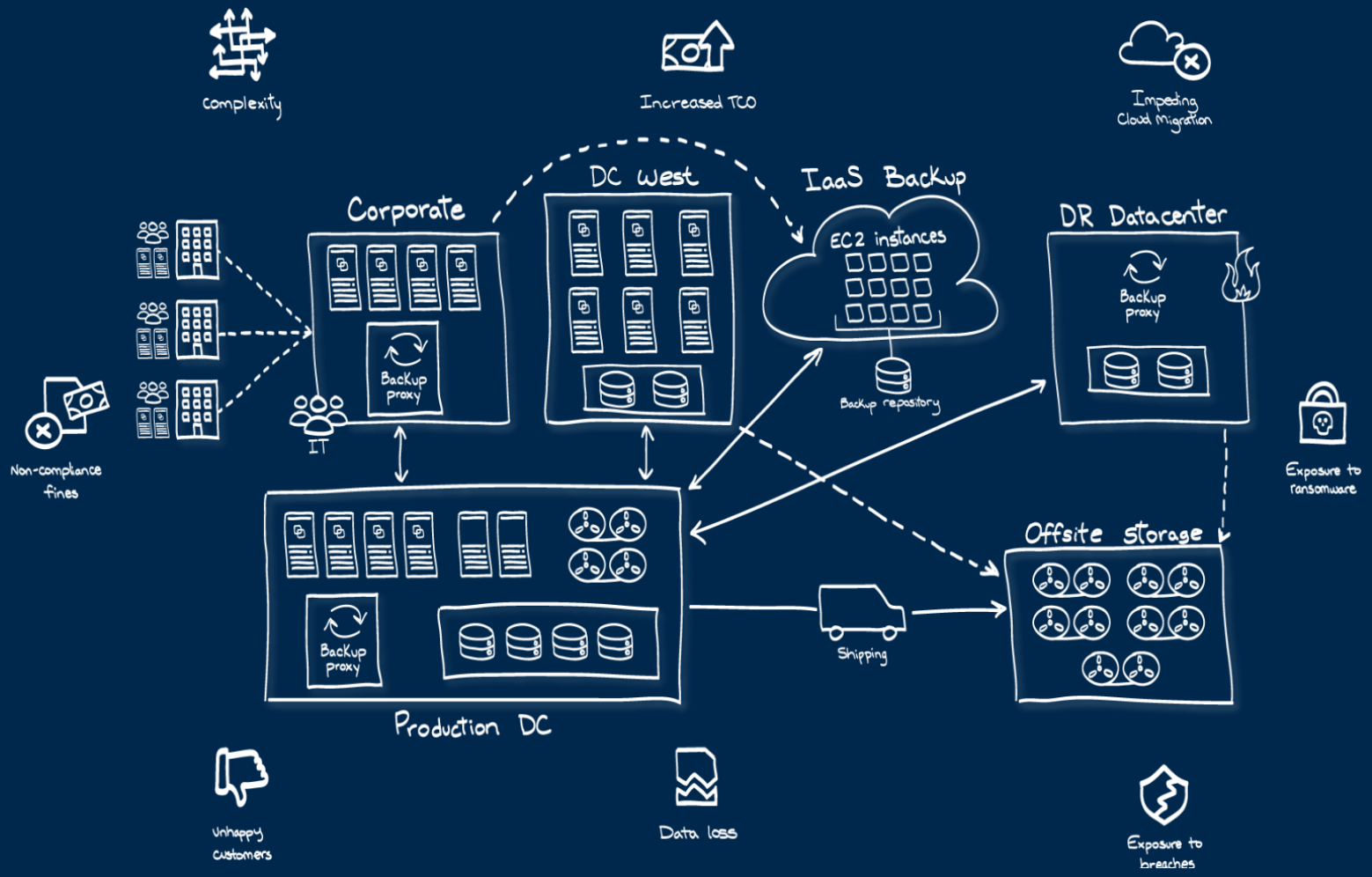
How can you stay resilient under increasing pressure?



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Data silos: Why they're a problem



7-vendor problem

Software, hardware, services, tapes, cloud ...

Appliance dependent

Cloud is an afterthought

Siloed data architecture

Different for locations, clouds, workloads

Cyber exposed

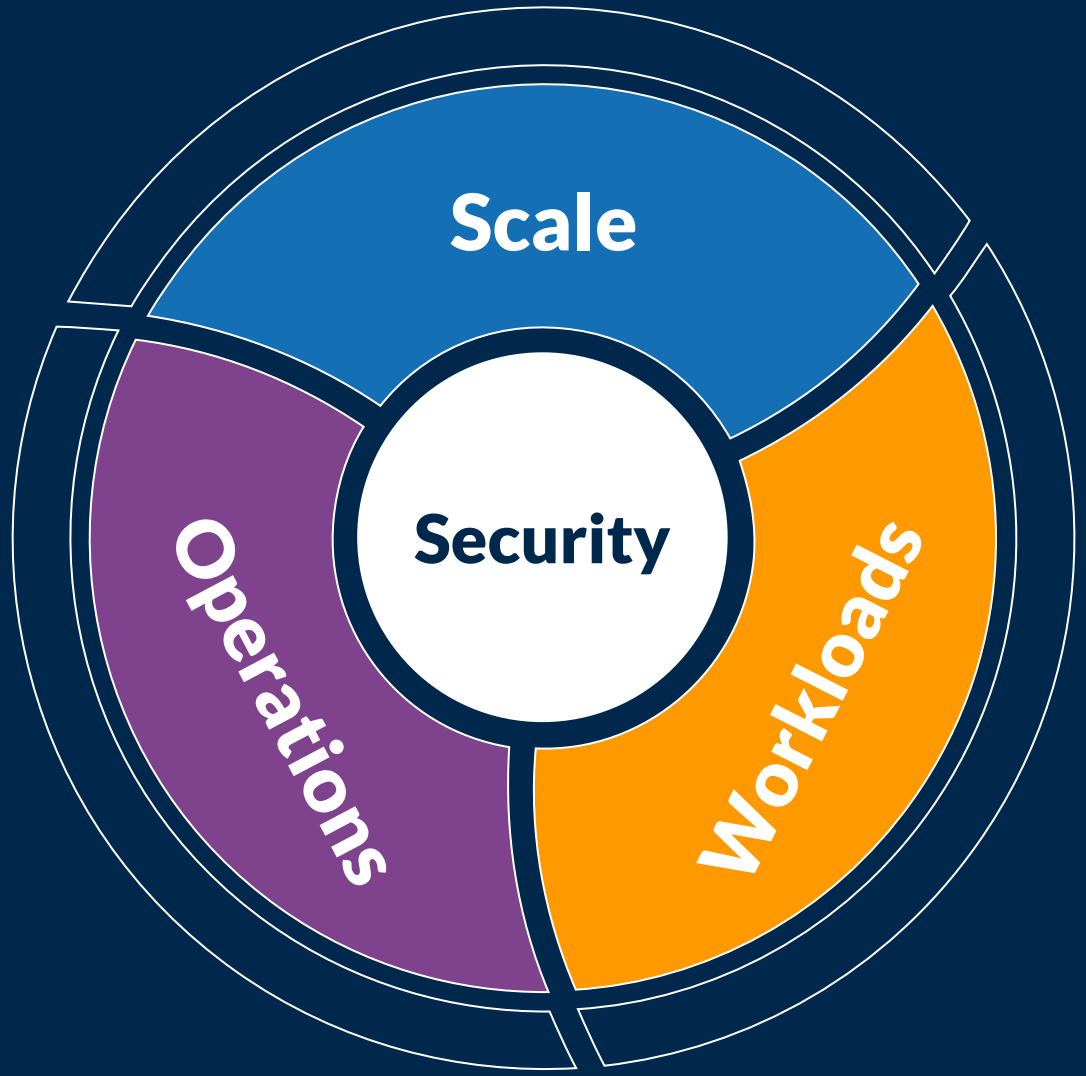
Too many moving parts, lack of SecOps

Complex and expensive

Just not worth it ...

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AWS customers are growing vertically



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Protecting your data is more important than ever

Organizations facing ransomware and other security events are increasingly in the news



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Unauthorized users are changing their game — so should you

What's changed?

- Now it's 2-pronged, and backup data is compromised first
- Focused on backup operating environment and unpatched systems

Organizations need a foolproof backup strategy with end-to-end protection

Among companies that refuse to pay a ransom ...



27%

of them still don't recover their data, even if they had backups.

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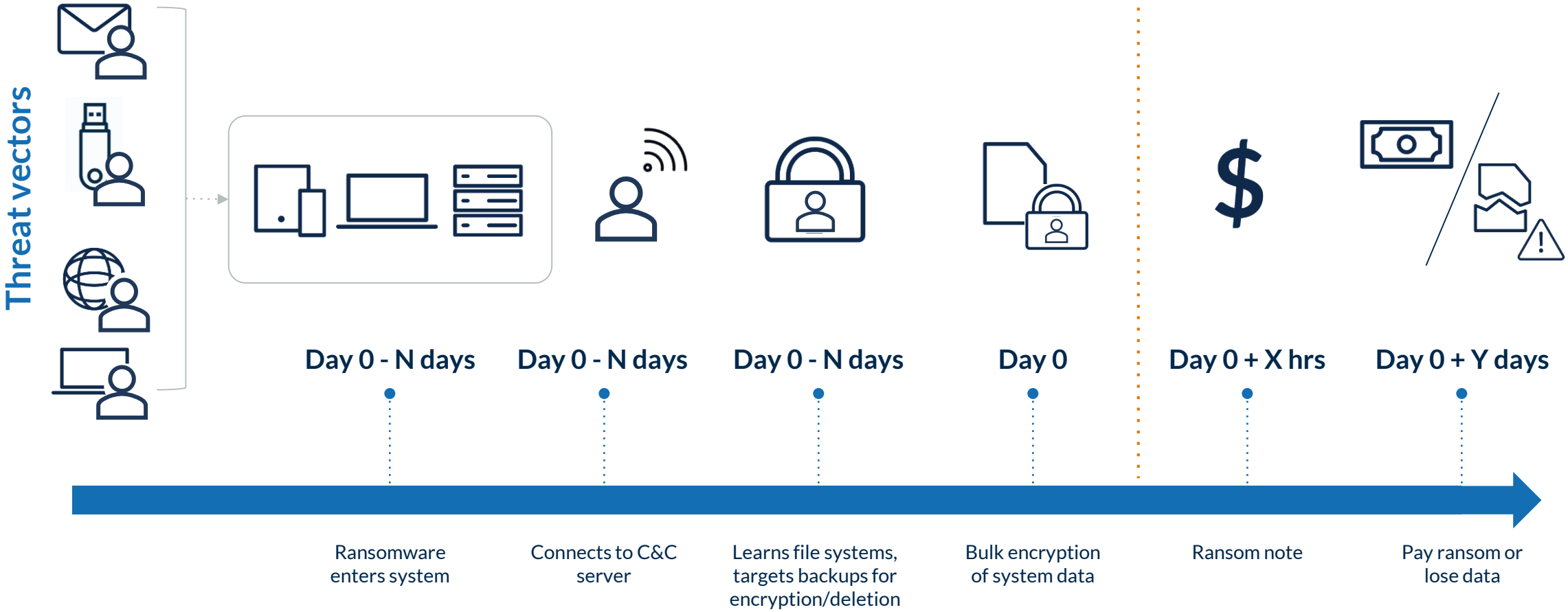
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How does ransomware work?

Days to detection of ransomware

Year	2017	2018	2019
Days	86	85	95

Source: CrowdStrike



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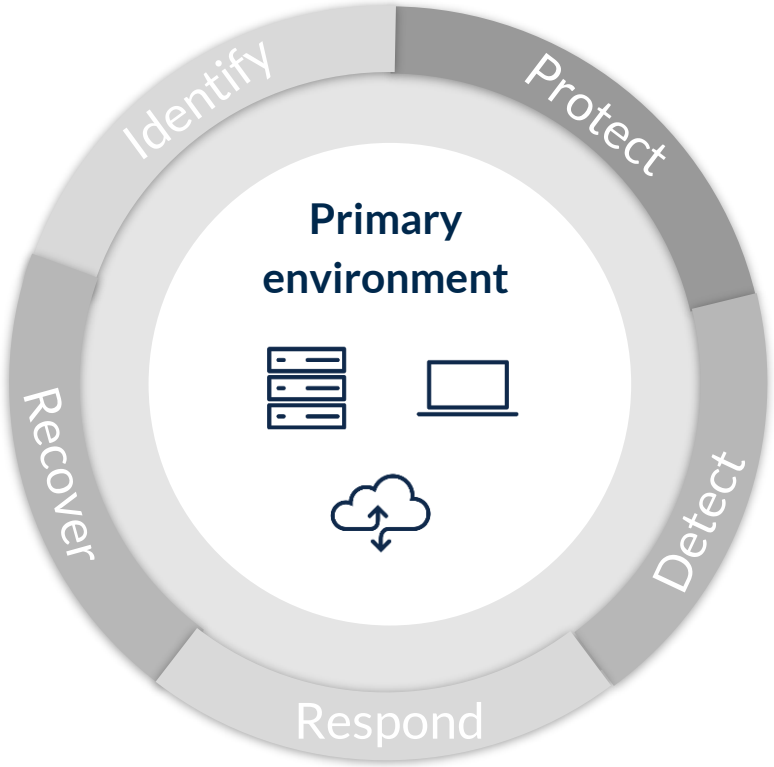
A revolutionary approach
Data Resiliency Cloud



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Data security and protection responsibilities

Primary environment

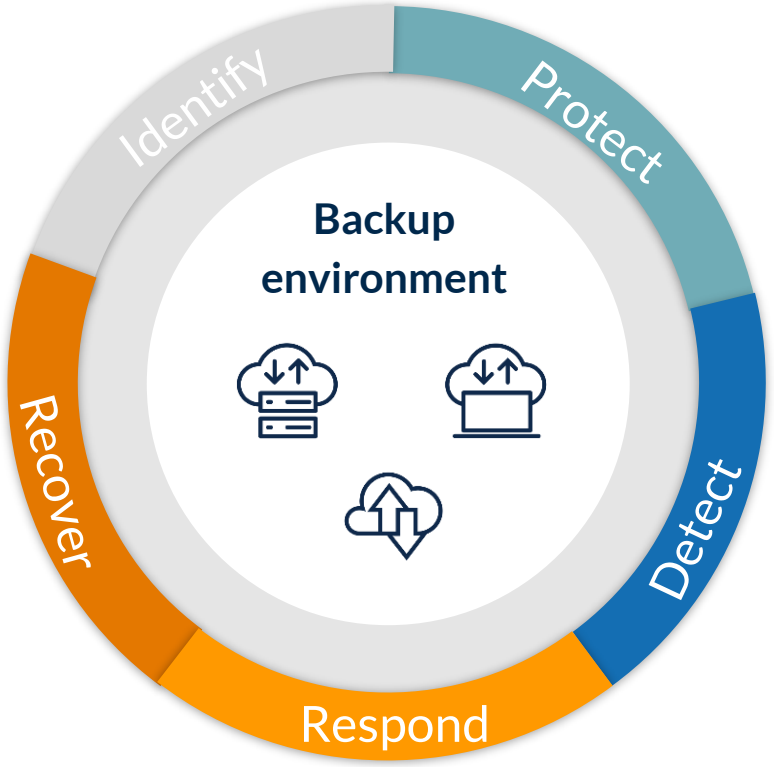


Cybersecurity vendors for firewalls, email gateways, network security

FIREEYE CROWDSTRIKE paloalto NETWORKS

Orchestration

Backup environment



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Multi-layered defense for cyber resilience

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Data integrity & availability

- Air-gapped backups
- Amazon S3 multi-AZ durability Cloud DR
- Multifactor auth (MFA)
- Rollback actions

Operational security

- Vulnerability scans
- CVE patching & upgrades
- Pen testing
- Continuous monitoring
- No root access to backup environment

Accelerated recovery

- Quarantine
- Curated recovery
- Unusual data activity
- Malicious file scans

FedRAMP · FIPS 140-2 Cryptography · AICPA SOC 2 · SKYHIGH Enterprise-Ready · TRUSTe

API integrations with security solutions

paloalto NETWORKS · FIREEYE · splunk>

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Maintain data integrity and availability



Isolated backups

Air-gapped backup copies
Object-based storage
Highly available architecture



Zero trust, MFA

Secure privileged credentials
RBAC and SSO
Mandatory MFA



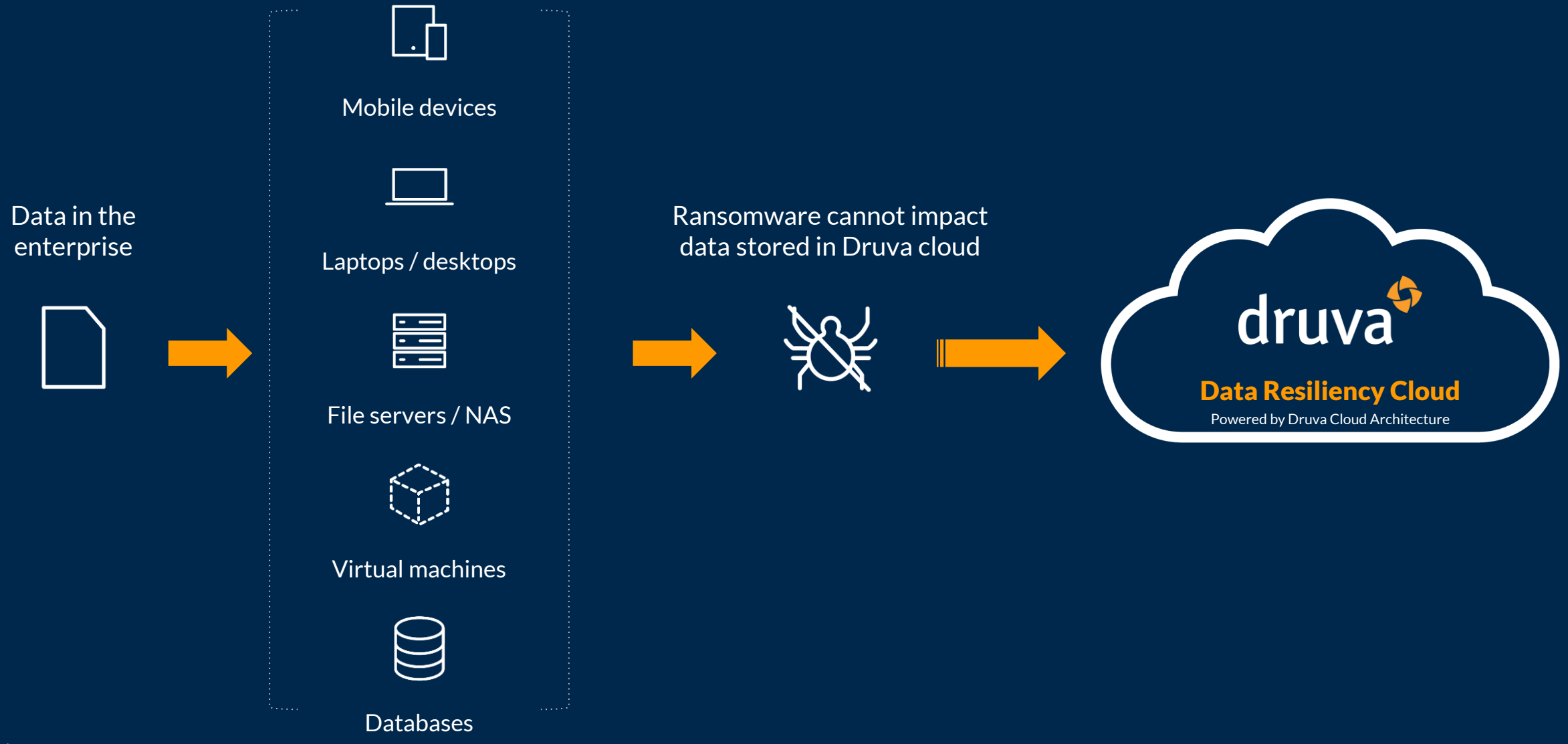
Cloud DR

Multi-account/region DR
Clone VPC & network settings
AWS PrivateLink

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Maintain data integrity and availability — How Druva can help



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Operational security controls



Vulnerability scans

Penetration testing

Anomaly detection



CVE patching and upgrades

Regular patching and upgrades

Seamless updates

No hardware or software



24x7x365 monitoring

Dedicated SecOps personnel

Feed data to SIEM tools

Entropy-based ML



Controlled access

Monitor API access

Monitor Admin access

Limited Dev access

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How continuous monitoring actions work



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Accelerate recovery from ransomware



Contain



Identify



Recover

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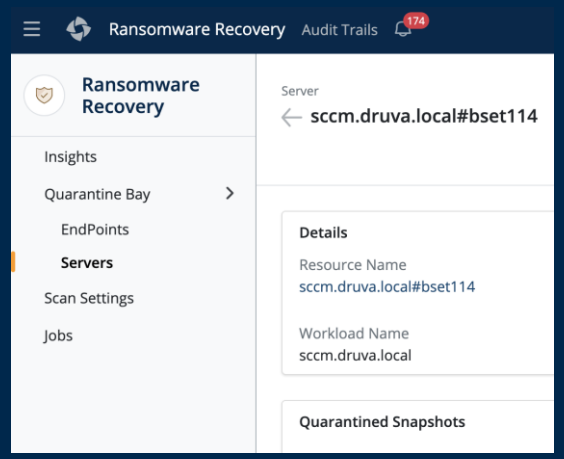
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Accelerate recovery from ransomware

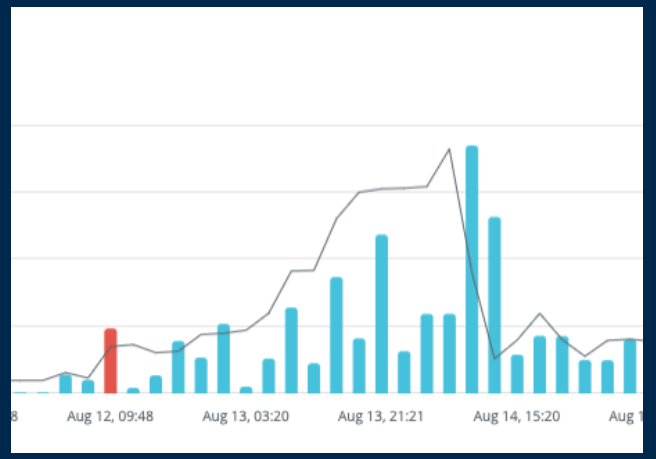
Contain

Identify

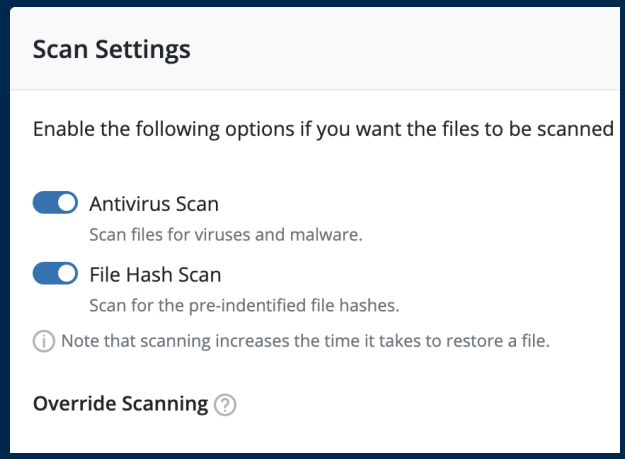
Recover



Quarantine
Prevent malware spread



Unusual data activity
Identify anomalous datasets

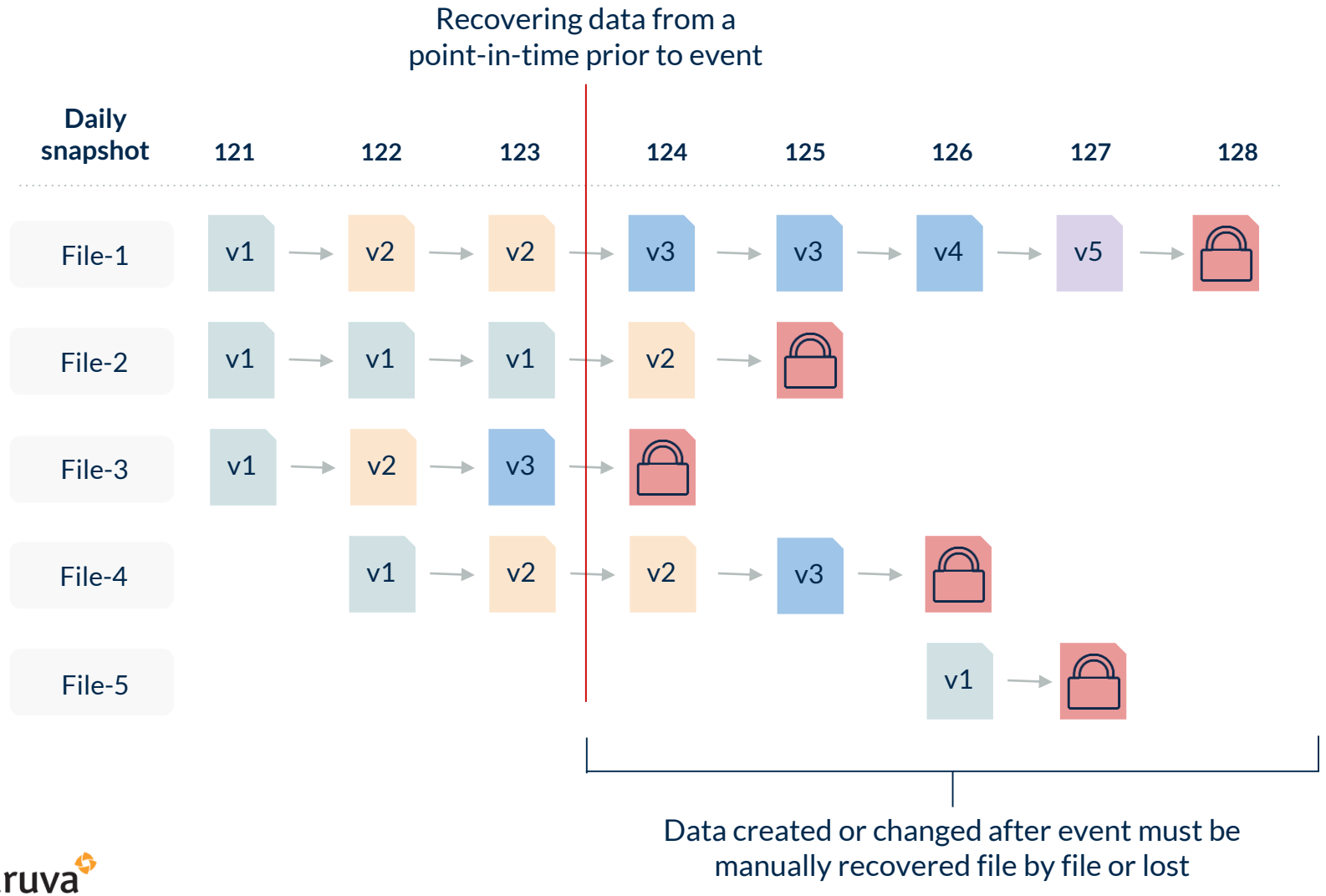


Recovery scans and curated recovery
Automatically recover clean, uninfected data

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Data loss and manual processes



Ransomware enters the system and quietly spreads for weeks or months

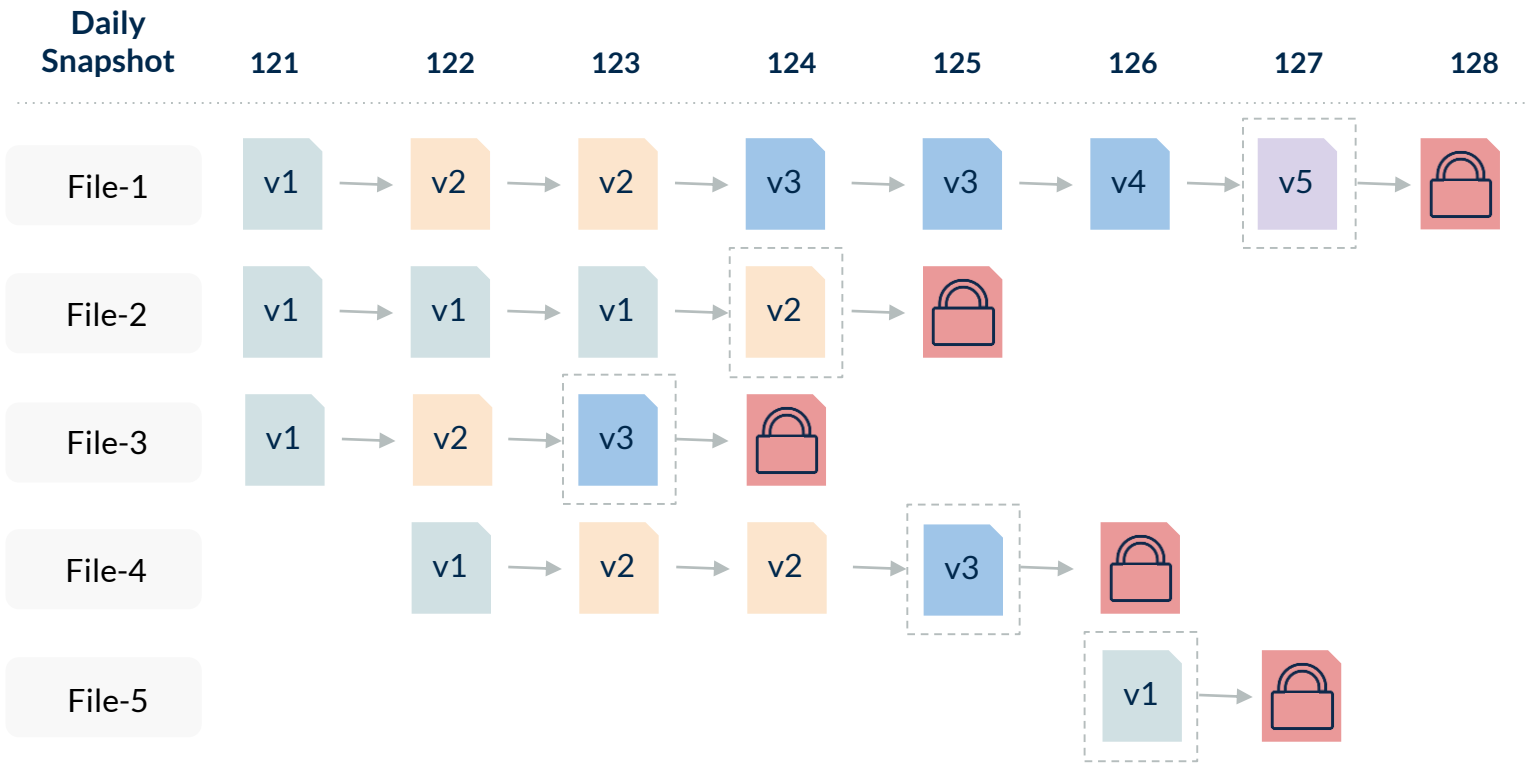
Data is lost if we simply restore from a point in time prior to the event

Finding and restoring the most recent clean version of each file is a manual process

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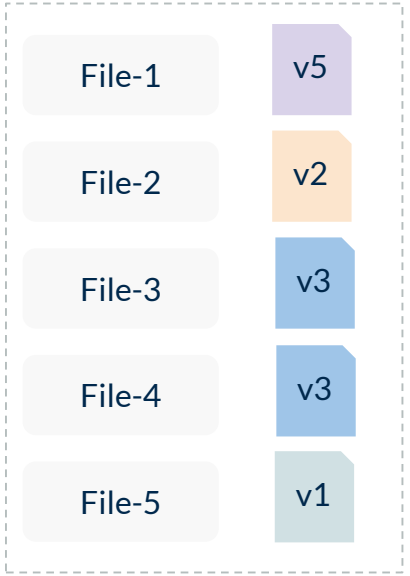
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Data loss and manual processes



Curated recovery

Saves time and data



Automatically finds the most recent clean version of each file and adds it to a single “curated snapshot”

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Vertrax use case: Ransomware protection

Customer challenges

- Data loss due to ransomware
- Complex management across different consoles
- Restore files took too long — over 30 minutes

Value of data resiliency

- 10x faster data restoration
- 4x reduction in management time
- 50% lower TCO

Key factors

- Zero-trust platform
- Centralized management and oversight
- No hardware to simplify administration and scalability



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Backup of AWS environments

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Data Resiliency Cloud

Powered by Druva Cloud Architecture

Native workloads ⟷ Lift and shift



Compute

Amazon EC2

AWS Outposts



Containers

Amazon EKS

Kubernetes on Amazon EC2



Storage

Amazon EBS

Amazon EFS

Amazon FSx



Database

Amazon RDS

Amazon DynamoDB

Amazon Aurora

Amazon Neptune

Amazon DocumentDB (with MongoDB compatibility)

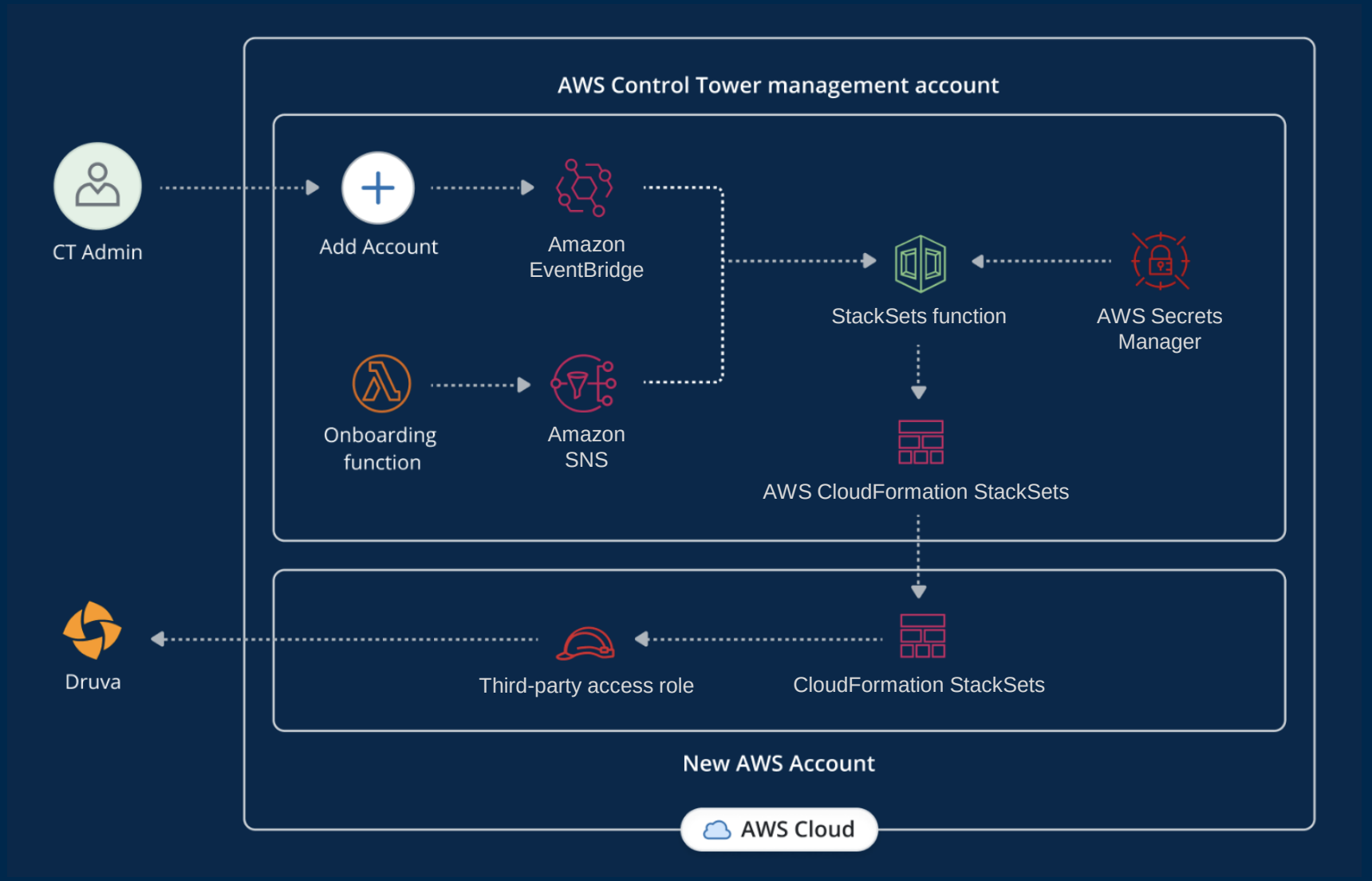
vmware

ORACLE

Microsoft SQL Server

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Securing your environment: AWS Control Tower



Benefits include

Simplified management at scale

Enhanced multi-account security

Implement AWS best practices

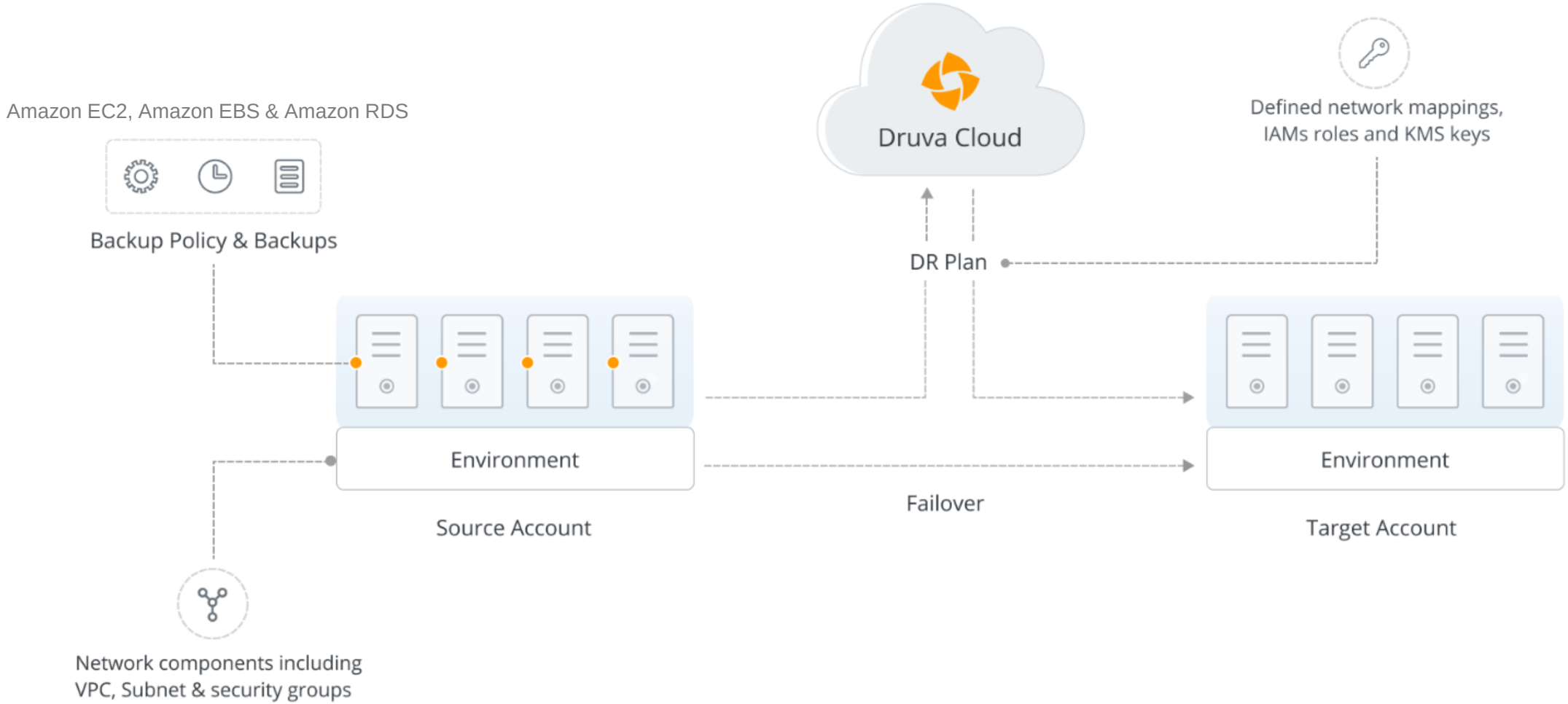
Define custom workflows

Improve productivity

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Enable business continuity with one-click DR



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Katz Media use case: Cloud DR

Customer challenges

- Complexity & lack of scale using multiple backup vendors
- Performance issues — mission-critical workloads at risk
- Escalating costs — overprovisioning, support and maintenance

Value of data resiliency

- Globally available DR for on-premises and cloud workloads
- Improved IT productivity — 50% less time managing backups
- 52 workloads migrated to AWS in 3 months (5X faster)

Key factors

- Unified experience for on-premises and cloud workloads
- SaaS platform with on-demand scale
- Transparent business model to predict & control costs

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KATZ MEDIA GROUP

"Druva's DR-as-a-Service (DRaaS) enabled us to rapidly migrate about 52 production workloads into AWS during the COVID-19 pandemic. It drastically simplified the process of making the jump from on-premises to cloud."

– Marc Almodovar, manager of network & systems engineering





suez

Timothy Loranger, Jr.

Cloud Infrastructure Services Leader

Druva: The Data Resiliency Cloud



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Key takeaways



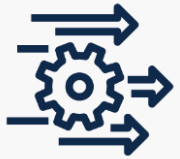
Data integrity and availability

You will always have safe backup data you can use for recovery



Operational security

SaaS solution delivers 24x7x365 fully managed security operations



Accelerated recovery

Stop the spread and quickly recover clean, comprehensive datasets

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Breakout session

Join our other session on infrastructure as code and modern data resilience



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Thank you!

Anjan Srinivas

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