



How to simplify your global data protection and management strategy

About DevOps Institute

DevOps Institute's mission is to advance the human elements of DevOps by creating a safe and interactive environment where our members can network, gain knowledge, grow their careers, support enterprise transformation and celebrate professional achievements.

We connect and enable the global DevOps community to drive change in the digital age.



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Agenda

This session will cover the basics of disaster recovery and business continuity through highlighting what might happen, how you can prepare, and the various tools making recovery practices easier.

- When Disaster Strikes
- Planning the Journey
- Easing the Path



Dr. Mark Peters

DevOps Institute Ambassador, US Chapter Chair
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Dr. Mark Peters works for Technica Corporation as Lead Information Assurance/Security Engineer on a US Air Force cyber weapon system. A cybersecurity expert, he holds multiple industry certifications including a CISSP and PMP. A DevOps Institute ambassador and USA chapter chair, he enjoys working with individuals on their unique DevSecOps approaches.

Does this feel like your disaster recover plan?



Are all your chickens always running different directions?

Identify some ways to drive Continuity of Operations Plans (COOP) and Disaster Recovery Plans (DRP)

Data Risks

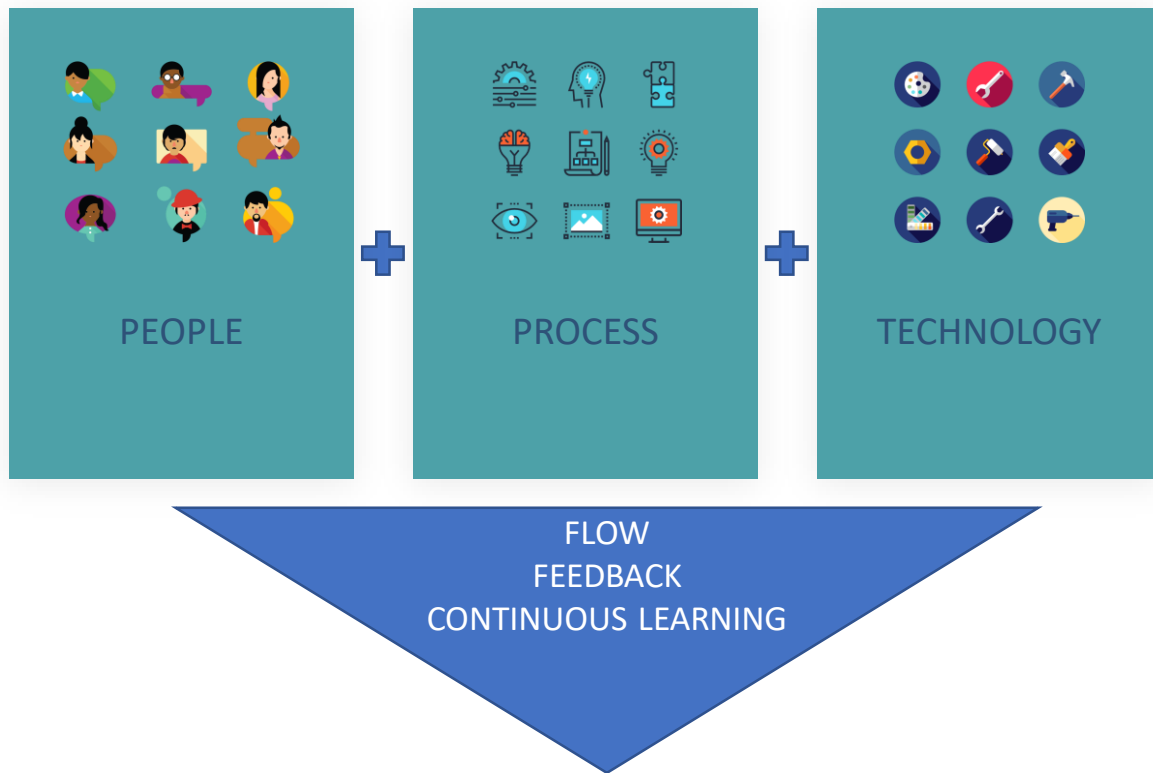
- Today's global business creates global exposure
- Natural Disasters
 - Global economic losses from natural disaster in 2019 – \$232B
 - 2010 – 2019, a decade of disasters? \$2.98T Globally
- Evolving Human Risks
 - Ransomware - 27% of 2020 databreach
 - Insider threat - 37% attacks used real credentials



Either can leave you with no time to prepare data or business for survivability

...
If you wait to respond

What do disasters have to do with DevOps?



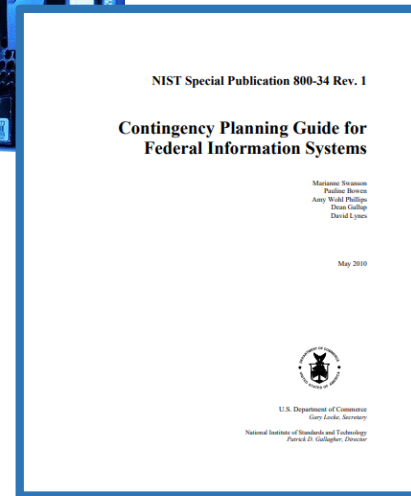
Conducting an Initial DR Assessment

- How much downtime can we afford before an unrecoverable business loss?
- Do we have a Disaster Recovery Plan? Do we have a Continuity of Operations Plan (COOP)
 - When was it updated?
 - What has changed since the last update?
- Identifying training requirements
 - When was the last time we exercised: Table Top, walkthrough, partial ops, full ops
- Building the right people and skill sets
 - Is the DRP/COOP person still with the company



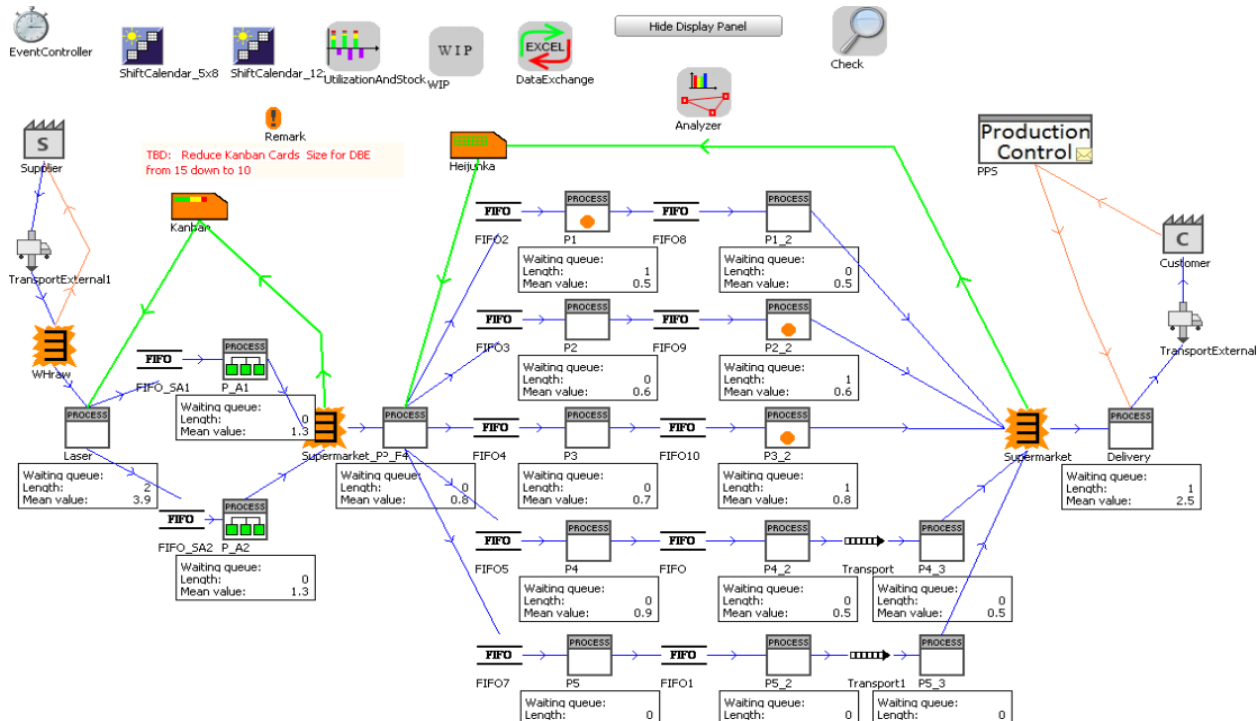
Starting from Scratch

- People over processes: Business Impact Assessments
- Reasonable risk evaluations
 - Site Reliability Engineers
 - Risk = Threat * Vulnerability
 - Accept, Avoid, Mitigate, Transfer
- Finding risk techniques
 - FAIR, PMI, ISC2, ITIL...
 - Lots of DRP templates available online



Value Stream

- What matters to you?
- Prioritization
- Use the same Value Map for DevOps as for Recovery



How to assess preparedness

- Start where you are
 - Hot Site – Immediate Rollover
 - Warm Site – 12 – 24 Hours
 - Cold Site - More than 2 days
- Plan for today
 - Database access (Customer, Payroll, Accounts)
 - Web-facing controls (API, VPN-WFH)
 - Development Data



The Corporate Go – bag

- What do you need to continue operations?
- What did you lose?

How to assess shortfalls

If you deliver...

1. Retail
2. Insurance sales
3. Software development

Then...



How much backup?

1. Up to near real time
2. 2-3 days should be fine
3. A week may be acceptable

How much flow?

1. Routinely measure network activity
2. Moving docs/images or 3rd party
3. On-prem or off-prem solutions?

How much feedback?

1. Near real-time customer
2. Moving docs/images or 3rd party
3. On-prem or off-prem solutions?

Assess value based on customer expectations

How much diversity?

1. City-wide spacing
2. Across the country
3. Logical divided across the room

Maximizing Automated Recovery



- Discovering useful processes
 - Emphasize needed data
- Community standards
 - Data formats
 - Recovering Software, Firmware, Hardware
- Available tools
 - Trying before buying
 - Are the tools resilient?

Bringing it all together

- Don't have to do it all on your own, shared work is light work
 - Practice makes perfect
 - Review and adapt as values change
- DevOps Institute Courses and Certifications
- Amazon Marketplace



Thank you!

Dr. Mark Peters

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How to simplify your global data protection and management strategy on AWS

Chris Chapman

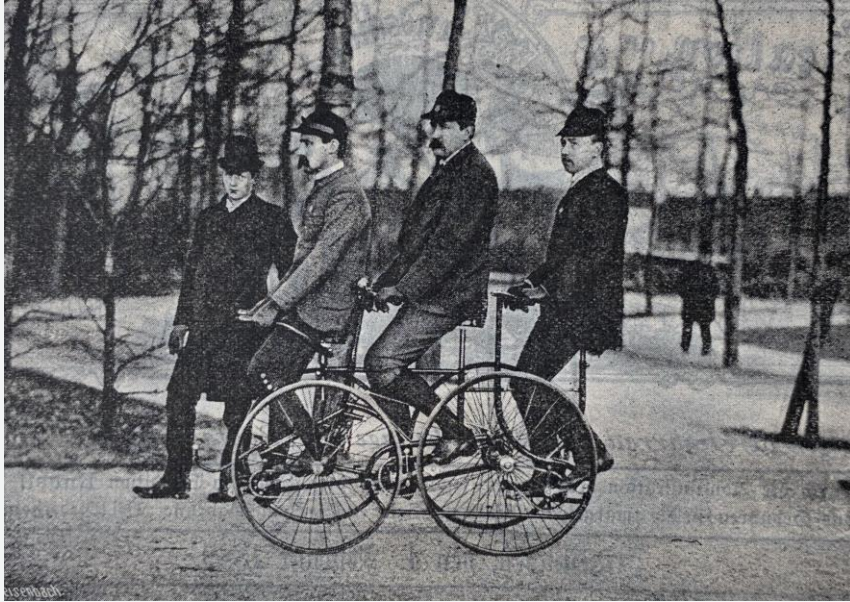
Partner Solutions Architect, AWS



The corporate go-bag



Technology is a partial solution



Research cloud-related regulatory requirements in AWS Compliance Center

- Identify regulatory requirements
- Browse country-specific resources
- Discover AWS compliance programs

The screenshot displays the AWS Compliance Center interface for researching regulatory requirements. At the top, there is a search bar labeled "Search Country / Region" and a "Sort by: Name" dropdown menu. Below the search bar, the "Filter by" section is visible, with "Location" expanded to show four options: "Asia Pacific", "Europe, Middle East, & Africa", "Latin America", and "North America". The main content area shows a grid of six country-specific regulatory requirement cards, each titled "CLOUD USE PERMITTED".

Country	Regulatory Authority	Last Updated
Argentina	The Banco Central de la República Argentina, or "BCRA" (Central Bank of Argentina), is the primary financial supervisory authority in Argentina responsible for the regulation, inspection and supervision of financial institutions, including banking and credit institutions and payments processors.	July 2020
Australia	The Australian Prudential Regulation Authority (APRA) regulates banks, credit unions, building societies, general insurance and reinsurance companies, life insurance, private health insurance, friendly societies, and most members of the superannuation industry.	September 2018
Austria	The Financial Market Authority (FMA) is Austria's financial supervisory authority and supervises, inter alia, credit institutions, securities markets and brokers, fund managers, pension funds, payment services providers, investment firms, and insurance companies.	September 2020
Bahrain	The Central Bank of Bahrain (CBB) is responsible for maintaining monetary and financial stability in the Kingdom	
Belgium	The Financial Services and Markets Authority (FSMA) and the National Bank of Belgium are Belgium's financial	
Brazil	The Banco Central do Brasil or "BCB" (Brazil Central Bank) is the principal monetary authority and banking	

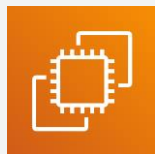
Storage is a platform: AWS Storage Maturity



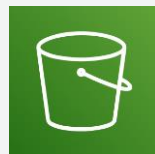
Amazon Elastic File System (EFS)



Amazon Elastic Block Store (EBS)



Amazon EC2



Amazon Simple Storage Service (S3)



Amazon S3 Glacier

File

Block

Object

Data Transfer



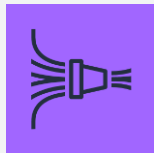
AWS Direct Connect



AWS Snowball



ISV Connectors



Amazon Kinesis Data Firehose

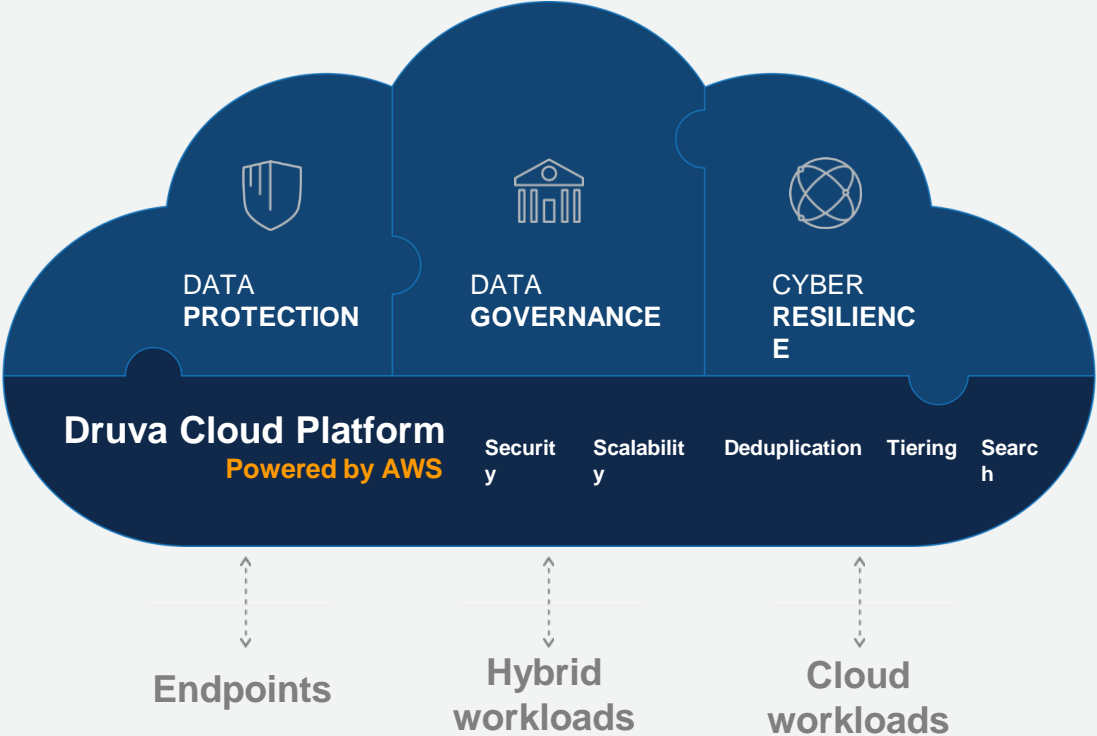


S3 Transfer Acceleration



AWS Storage Gateway

Druva SaaS platform for data protection



Securely scale and simplify your data protection



- Endpoints, data center, K8, cloud workloads (SaaS & AWS)
- Built-in workflow templates
- Patented source deduplication
- Disaster recovery-as-a-service (DRaaS)
- Zero-trust architecture

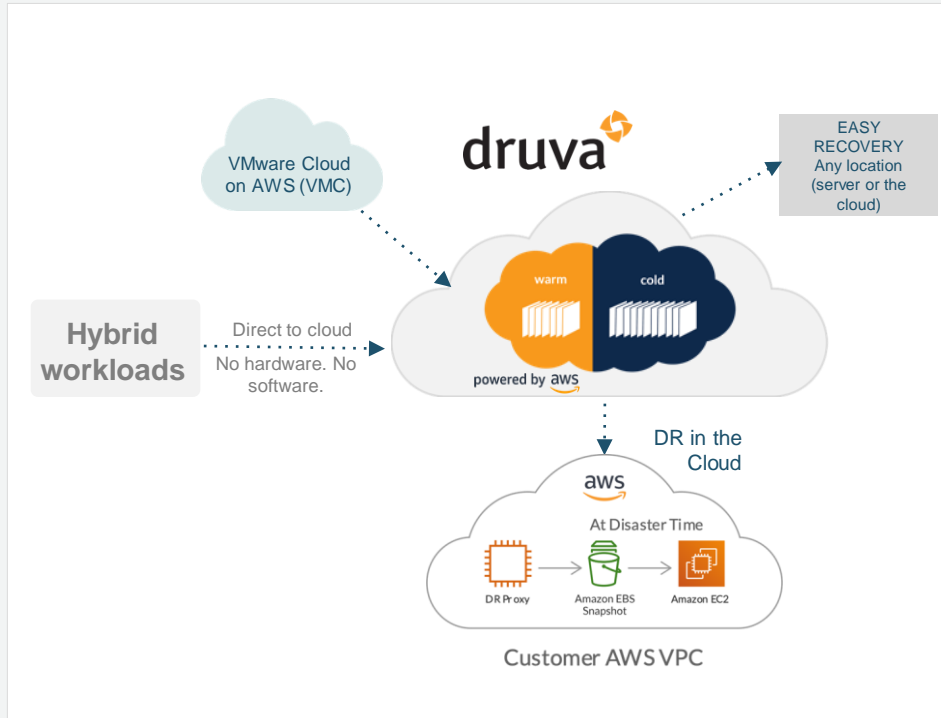
Migrating to backup and DR-as-a-service



Katz Media replaces legacy backup & gets globally available cloud-based DR

Results

- 52 workloads migrated to AWS in three months
- 5X faster workload and application migration
- 125 VMs protected by one solution
- 50% reduction in time used to manage backups



“What we accomplished with Druva in just three months probably would have taken us a year and a half to do before. COVID-19 motivated everybody to have a singular focus on our cloud strategy and Druva has been a catalyst of Katz achieving that 5X faster.”

Robert Lyons, CTO, Katz Media Group

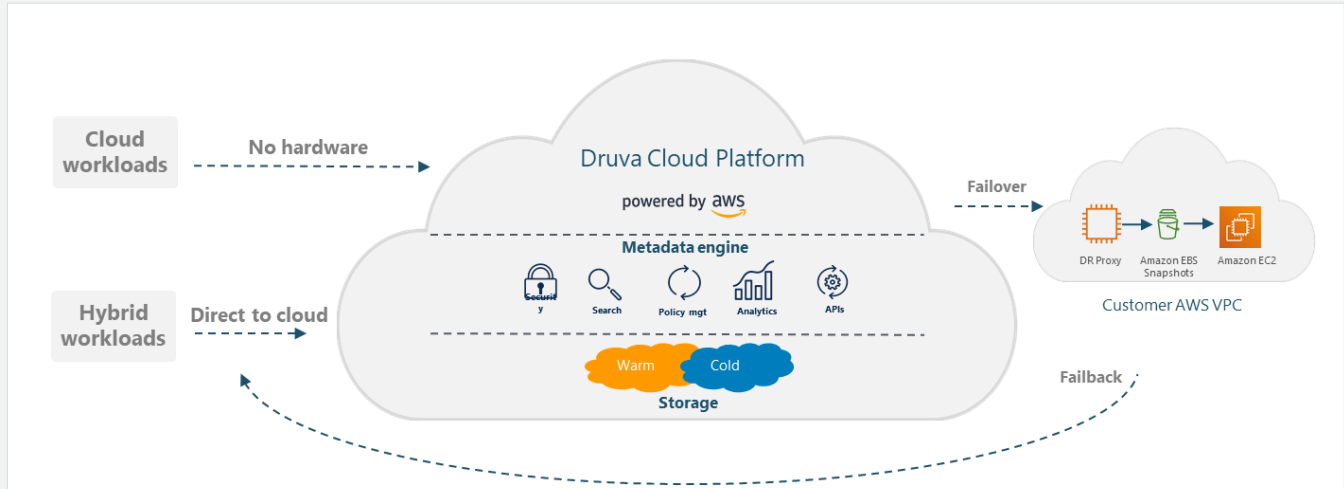


Transitioning from legacy hardware

MFXchange cuts time for data center backup by half after switching to Druva

Results

- Eliminated on-premises infrastructure
- Faster backup and restore
- Lower TCO
- 22X global deduplication savings
- Up and running in 60 days



“One of the greatest successes we’ve had with Druva is its simplicity. Within 60 days of deployment, we converted 1,500 VMs and physical servers to Druva and have dramatically reduced our data center footprint, and now use Druva to backup some of our clients’ remote servers.”

William Shepard, Vice President of Infrastructure Services, MFXChange US

Converged data management



- Instant recovery with near-zero RTO's

- Deployment in less than an hour

- Policy-driven automation

- Native protection for virtual workloads and SaaS

- Application mobility for long term retention

Critical database protection

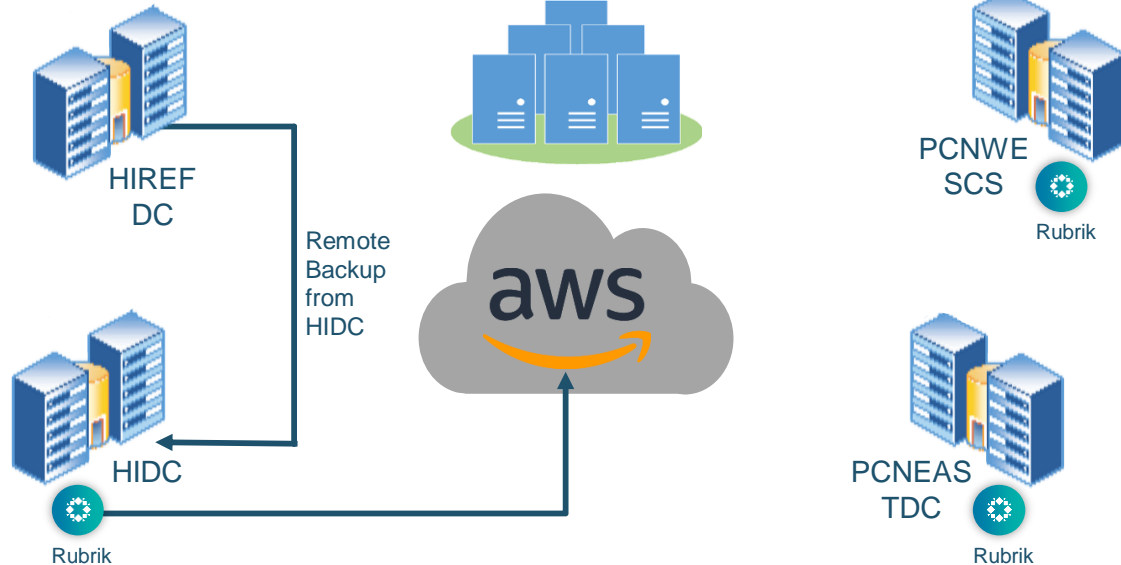
Par Pacific Holdings simplifies its DR strategy and gains efficiency

SQL DB recovery
in minutes
instead of days

Self-service
recovery
increased team
efficiency

Reduced
management
costs

Par Pacific Hawaii's Architecture



Control costs with an industry-first

VEEAM



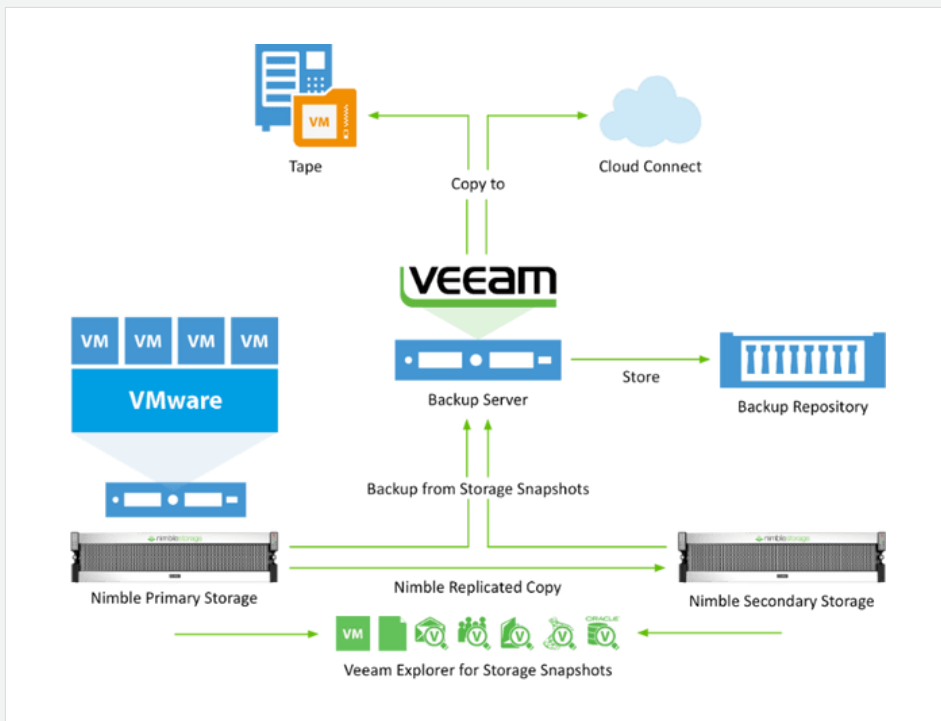
- Comprehensive AWS-native backup and recovery
- AWS Marketplace Metering Service integration
- Fully-automated EC2 backup and DR
- Native Amazon EBS snapshots
- Industry-first backup cost calculation

Eliminating stun to boost performance

Modernizing data protection to support clients' sales, productivity, and CSAT

Results

- Backup across more than 1,000 VMware vSphere VMs with zero impact on client services
- Client-specific regulatory compliance
- Recovery time reduced from hours to minutes



“Veeam’s built-in encryption helps us protect data before backup, in transit and at rest and [the] detailed reports help us demonstrate compliance.”

Michael Masters,
Infrastructure
Specialist, Maritz

Get started on AWS Marketplace

8,000+
listings



1,600+
ISVs



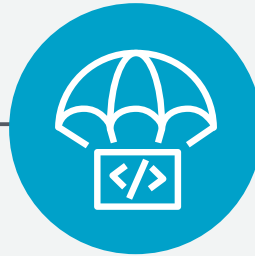
24
regions



290,000
customers



**Flexible consumption
and contract models**



**Quick and
easy deployment**



**Helpful humans
to support you**

Points to consider



Preparing for disaster can be key to mitigating business risk



Successful risk mitigation starts with tailored value planning



Understanding AWS Storage maturity is an essential first step



Leverage expertise of others – focus on what you do best – and easily experiment with different software tools

Resources

AWS Marketplace: aws.amazon.com/marketplace

AWS Well-Architected: aws.amazon.com/architecture/well-architected

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Questions: aws-sa-marketplace@amazon.com

Q&A



Use GoToWebinar's Questions tool to submit questions to our panel.



Please specify whether your question is for Mark (DevOps Institute) or for Chris (AWS).

