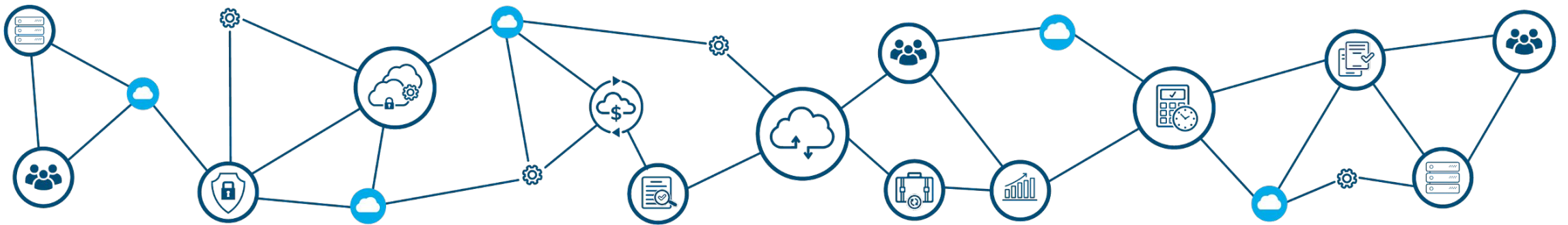# Live cloud migration, cross-cloud disaster recovery, cloud backup

Hystax makes clouds affordable and reliable

hystax

Hystax

Founded in 2016,
10+ years of cloud expertise

Cloud migration, backup and disaster recovery software, **180K+** machines migrated, **45K+** protected

Some of **our customers -** Airbus, Nutanix, Orange, Nokia, Burger King

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Products

Hystax Acura

Live cloud migration,
disaster recovery
& cloud backup

Hystax OptScale

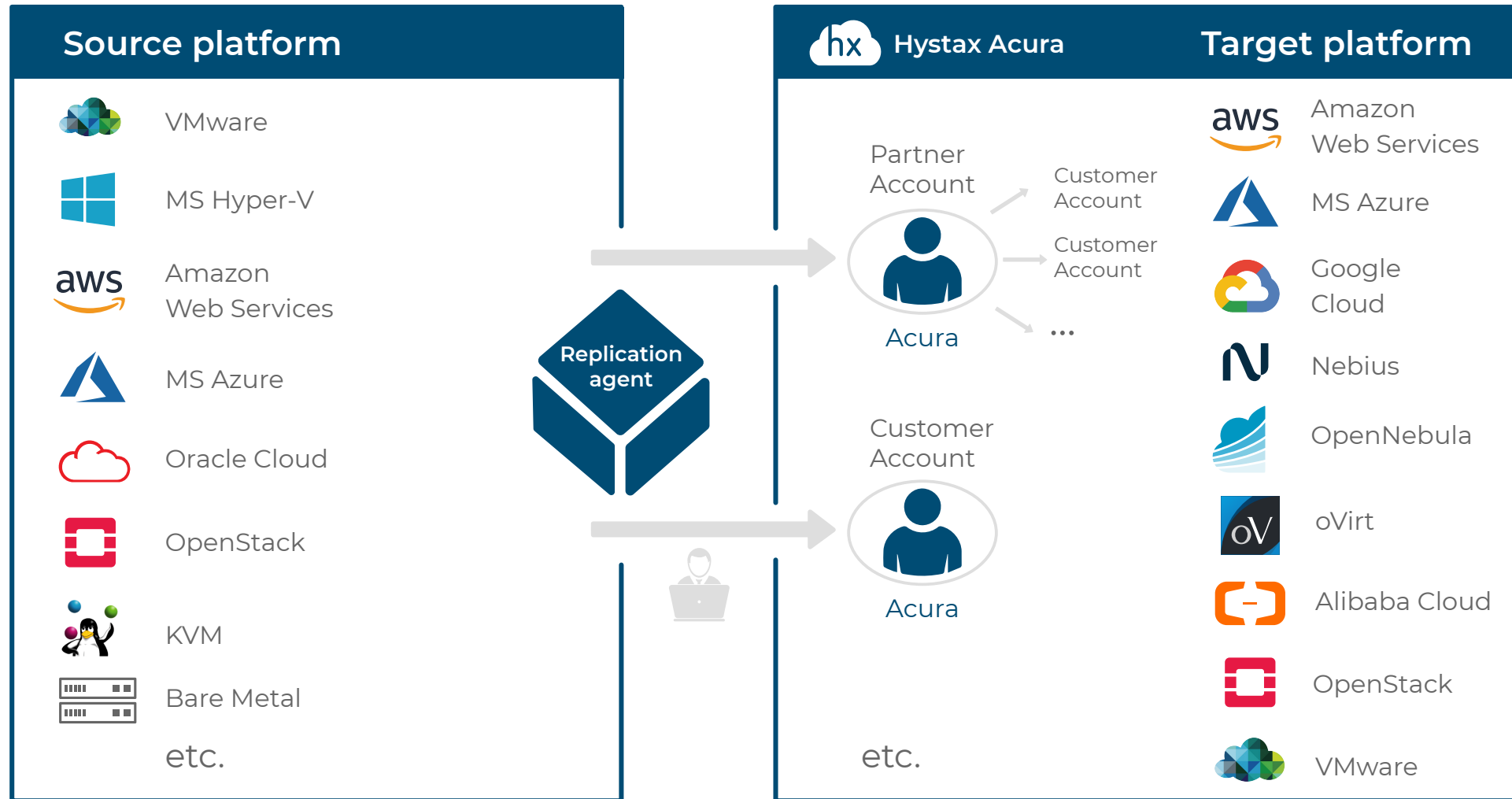FinOps and MLOps
open source platform

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Hystax Acura

Live cloud migration, disaster recovery and cloud backup

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Hystax Acura: main benefits

- Partner-oriented solution: partner dashboard, multi-tenancy, custom roles and sophisticated reports, white-labeling

- Any-to-any cloud backup, disaster recovery and cloud migration

- Integrated with OptScale - a single product to get to a cloud and stay compliant and in budget

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Migration, backup and DR: source and target platforms

Source platform

- VMware
- MS Hyper-V
- Amazon Web Services
- MS Azure
- Oracle Cloud
- OpenStack
- KVM
- Bare Metal

etc.

Replication agent

hx Hystax Acura

Partner Account

Acura
→ Customer Account
→ Customer Account
→ ...

Customer Account

Acura

etc.

Target platform

- Amazon Web Services
- MS Azure
- Google Cloud
- Nebius
- OpenNebula
- oVirt
- Alibaba Cloud
- OpenStack
- VMware

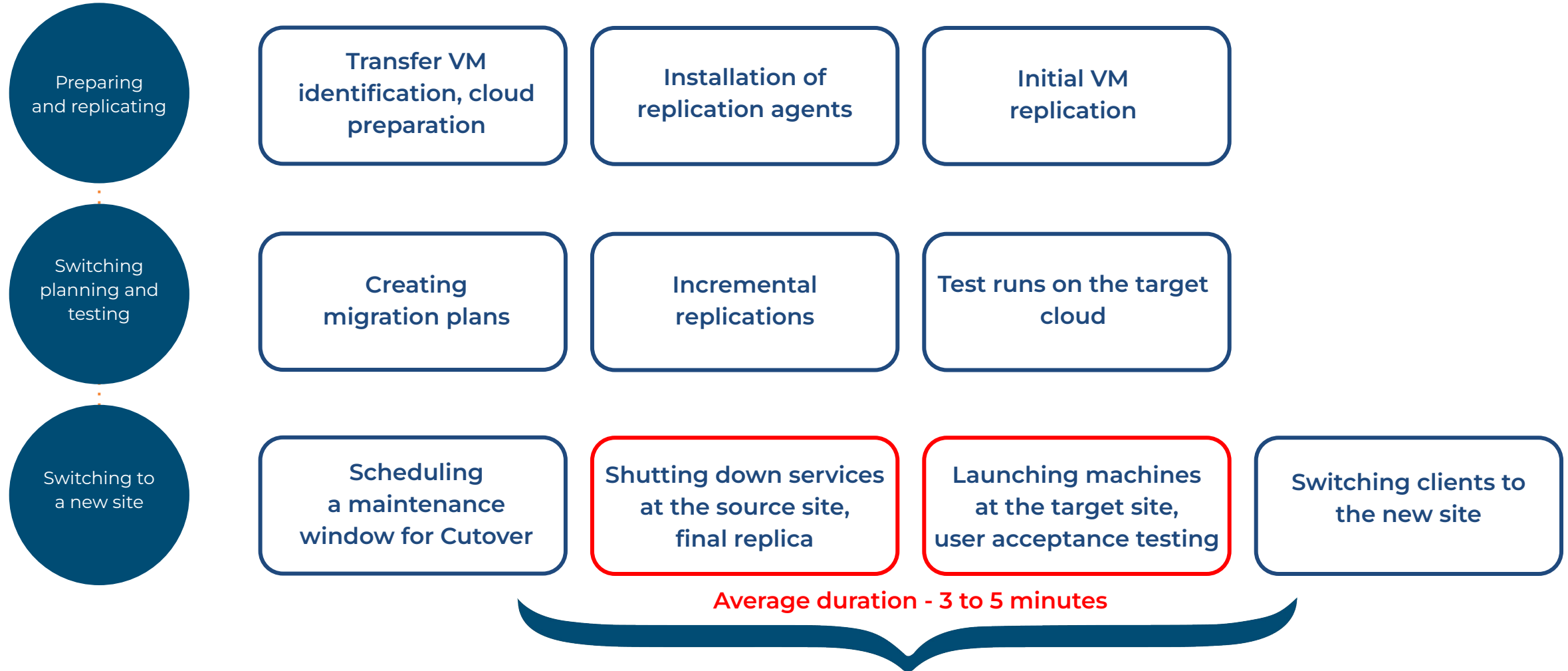hx hystax

Hystax live cloud migration

Hystax Acura: live cloud migration

- Live background replication to a target site

- Agentless migration with external agents, no data loss

- No downtime while replicating and testing migration

- Unlimited number of test migrations, no disruptions
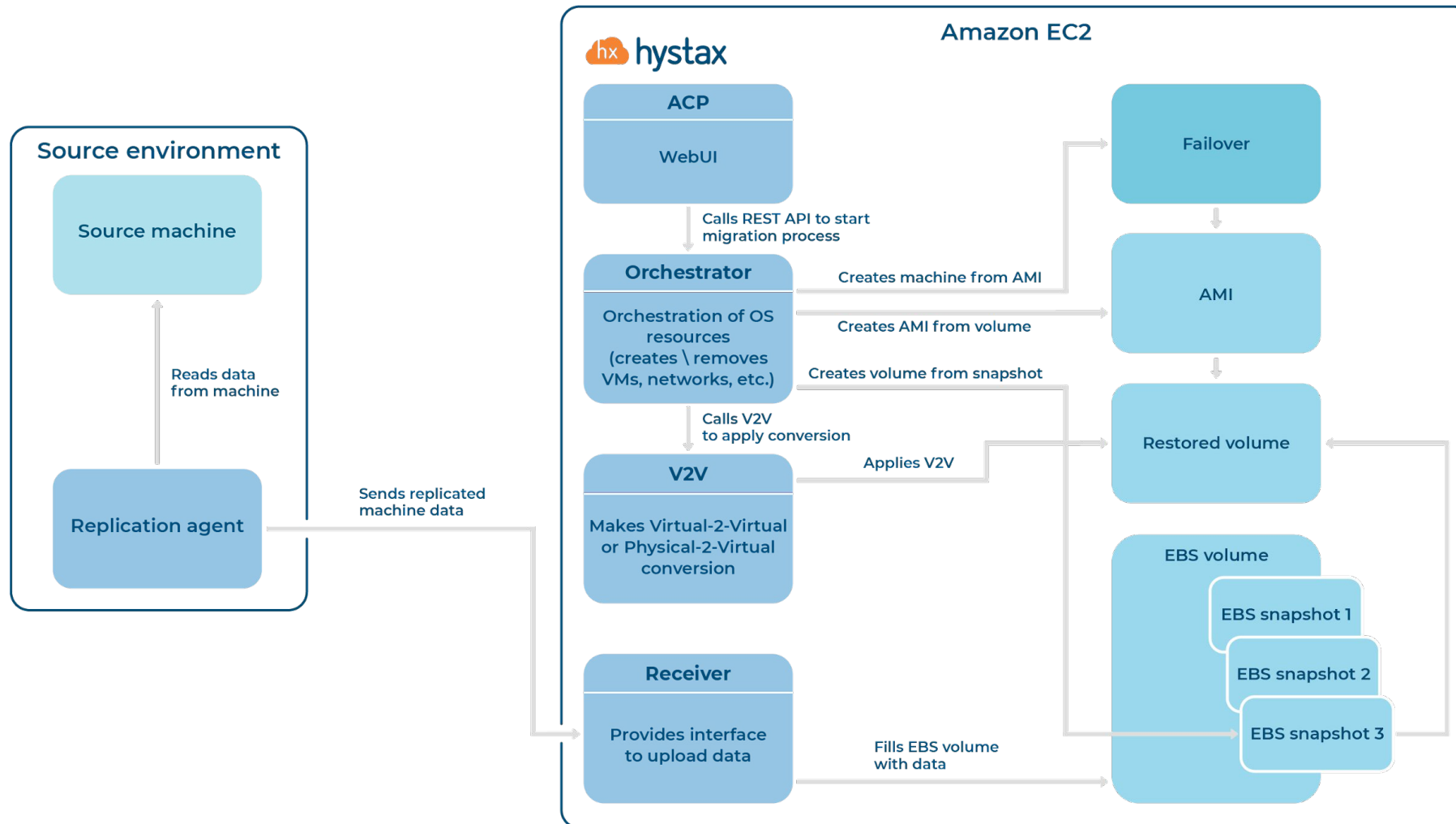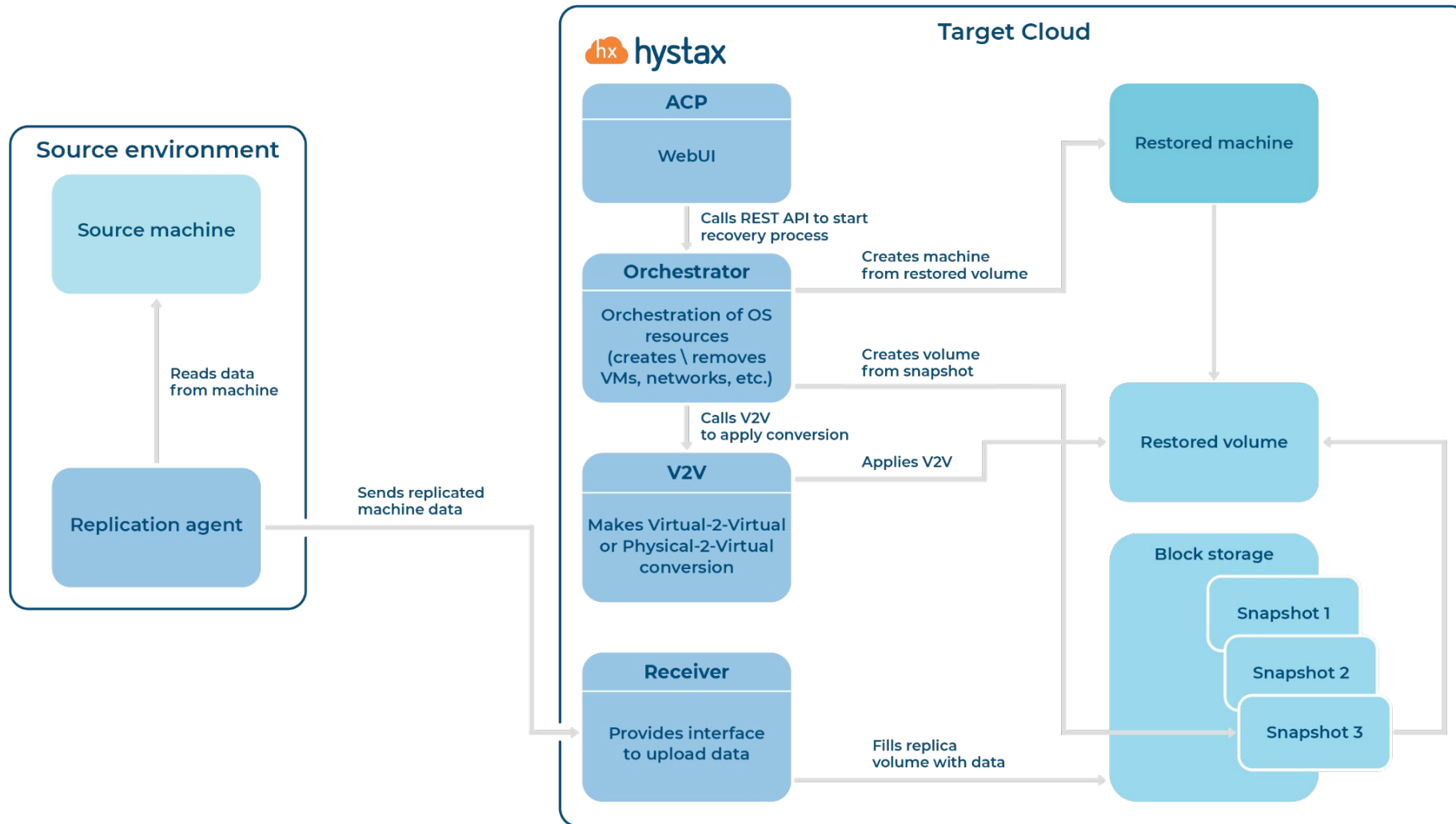
- Bare metal and orchestration support

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Migration stages

Preparing and replicating

-1-

Switching planning and testing

-2-

Switching to a new site

-3-

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Migration stages

Preparing and replicating

- Transfer VM identification, cloud preparation
- Installation of replication agents
- Initial VM replication

Switching planning and testing

- Creating migration plans
- Incremental replications
- Test runs on the target cloud

Switching to a new site

- Scheduling a maintenance window for Cutover
- Shutting down services at the source site, final replica
- Launching machines at the target site, user acceptance testing
- Switching clients to the new site

Average duration - 3 to 5 minutes

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AWS: replication data flow

KVM-based clouds: replication data flow

Source environment

Source machine

↑ Reads data from machine

Replication agent

→ Sends replicated machine data

Target Cloud

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ACP

WebUI

↓ Calls REST API to start recovery process

Orchestrator

Orchestration of OS resources (creates \ removes VMs, networks, etc.)

Creates machine from restored volume →

Creates volume from snapshot

↓ Calls V2V to apply conversion

V2V

Makes Virtual-2-Virtual or Physical-2-Virtual conversion

Applies V2V

Receiver

Provides interface to upload data

Fills replica volume with data →

Restored machine

Restored volume

Block storage

Snapshot 1

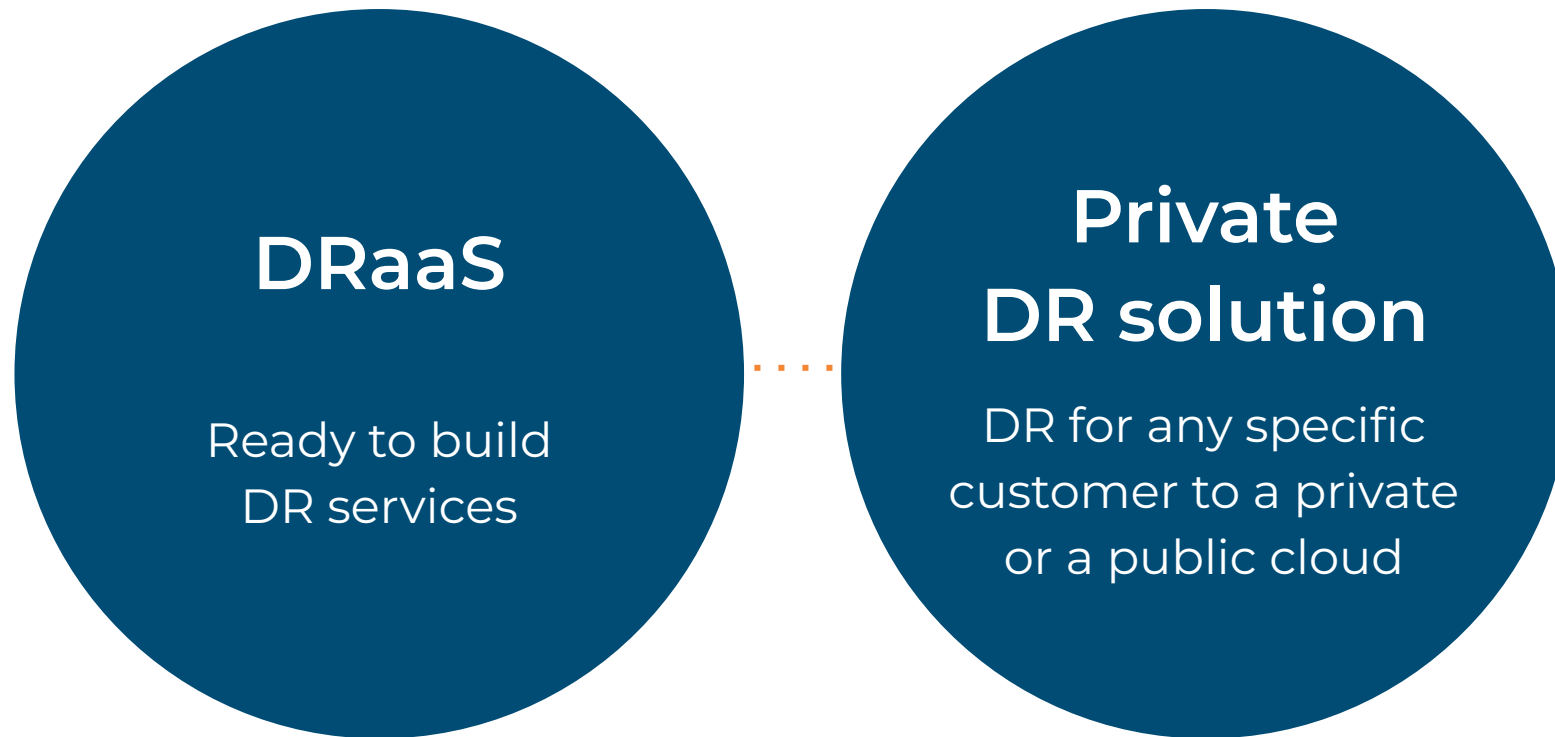Snapshot 2

Snapshot 3

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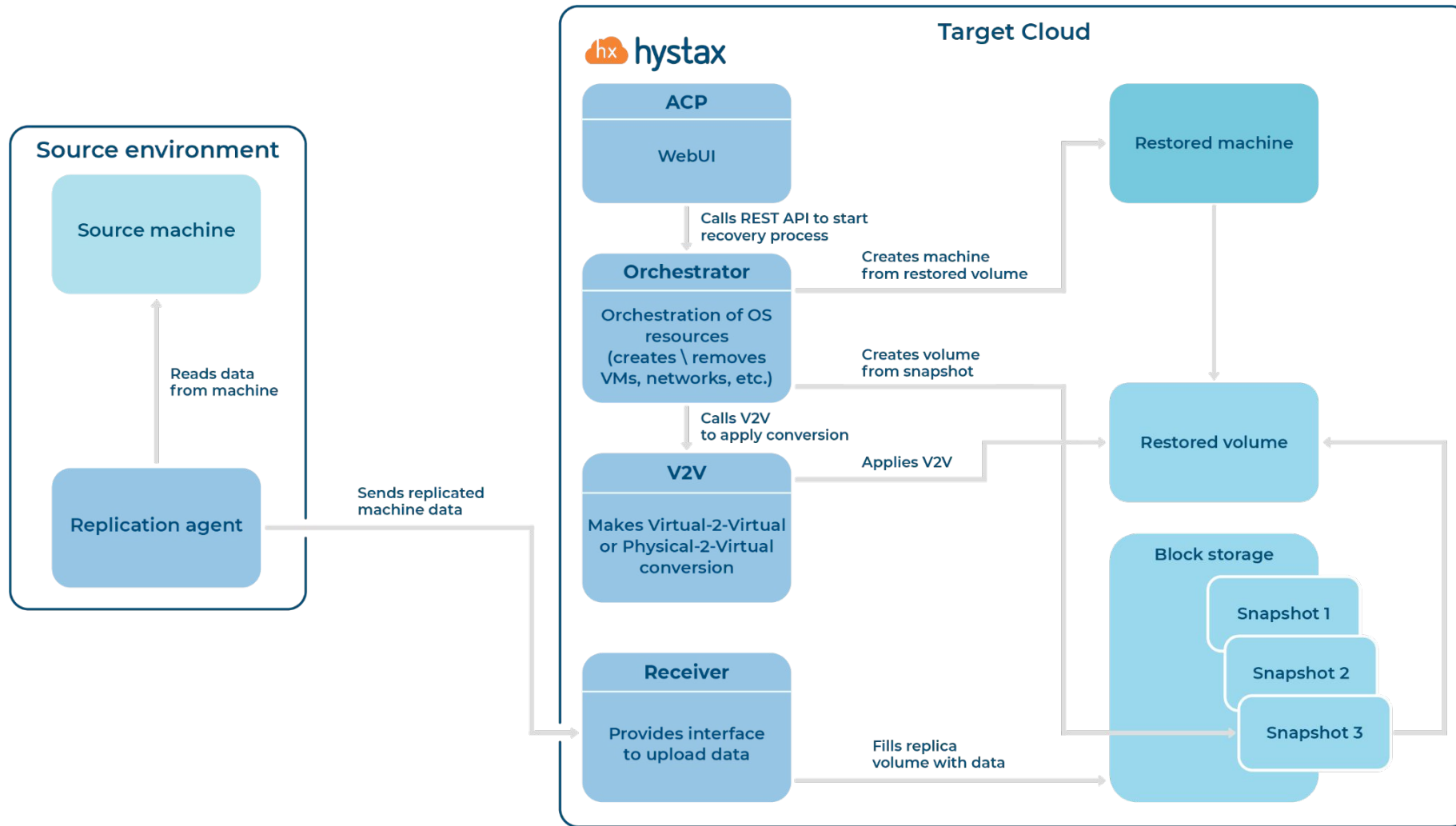
Hystax disaster recovery

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Hystax Acura: disaster recovery

- Best-in-class RPO and RTO values

- Full disaster recovery automation

- Restore points: protected data retention in block devices (block storage)

- Agentless replication

- Cross-cloud replication and disaster recovery scenario diversity

- No vendor lock-in

- Partner-oriented multi-tenant solution

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Hystax Acura: disaster recovery options

DRaaS

Ready to build
DR services

**Private
DR solution**

DR for any specific
customer to a private
or a public cloud

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Disaster recovery: replication data flow

Source environment

Source machine

Reads data from machine

Replication agent

Sends replicated machine data

Target Cloud

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ACP

WebUI

Calls REST API to start recovery process

Orchestrator

Orchestration of OS resources (creates \ removes VMs, networks, etc.)

Creates machine from restored volume

Restored machine

Creates volume from snapshot

Calls V2V to apply conversion

V2V

Makes Virtual-2-Virtual or Physical-2-Virtual conversion

Applies V2V

Restored volume

Receiver

Provides interface to upload data

Fills replica volume with data

Block storage

Snapshot 1

Snapshot 2

Snapshot 3

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Disaster recovery capabilities

- **Low RPO and RTO** – best-in-class RPO values and instant RTO

- **Instant business replication recovery** – device booting directly from cloud-native snapshots, thereby enabling companies to minimize downtime

- **Block storage** – restore points stored in quick block storage

- **MSP-focused multi-tenant partner portal** – sophisticated options for partners to manage all their customers and DR projects via one console

- **Full coverage with RESTful API** – 100% covered with RESTful API. Easy automation and integration with current management systems

- **Flexible reports and events notification** – obtaining full resource utilization report, configuring all level event notifications

- **Role-based access management and audit** – managing user access and assigning granular roles to various resources
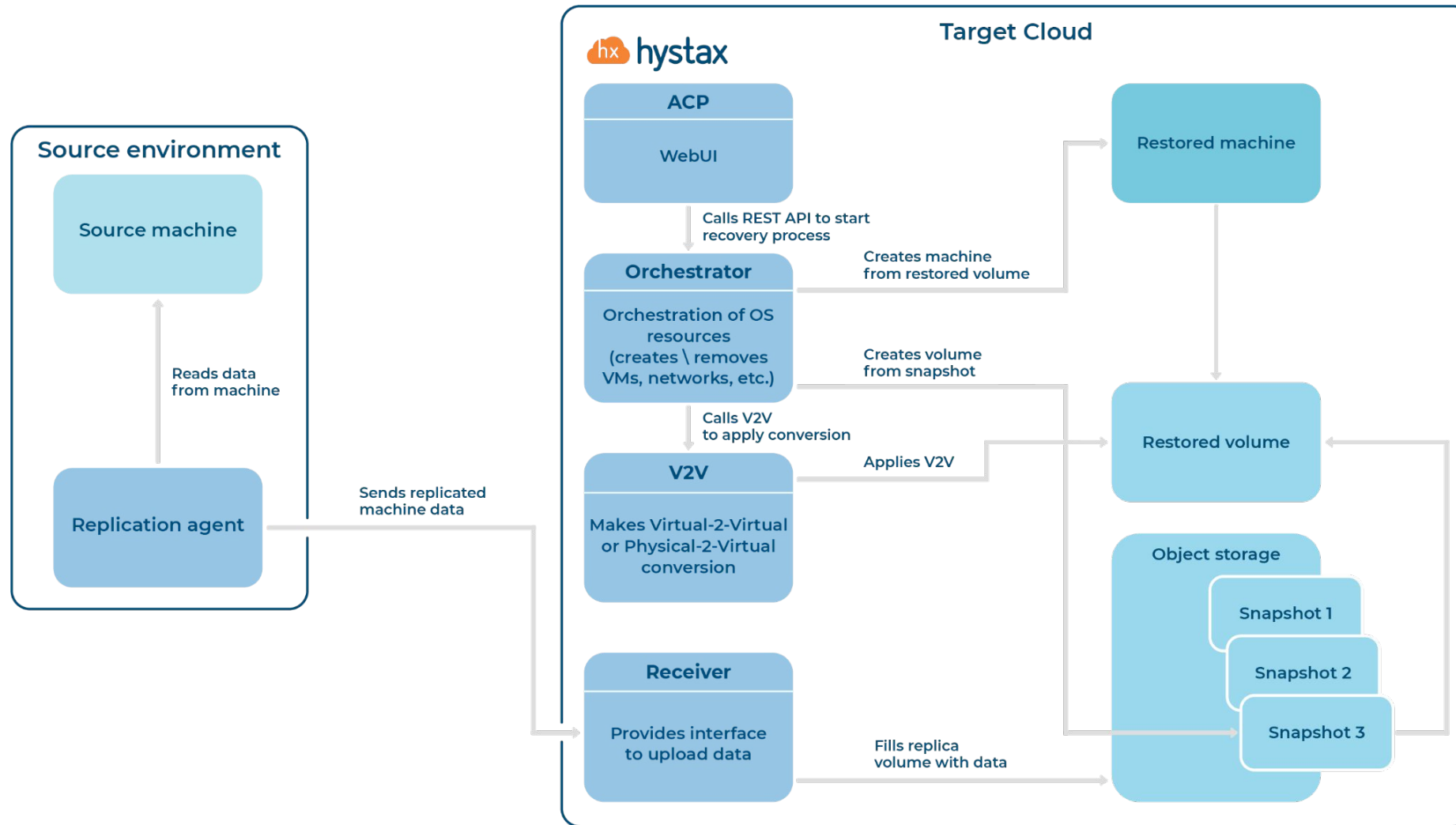
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Hystax cloud backup

Hystax Acura: cloud backup

- Storing data in S3-like, Samba or NFS storage

- Fully scalable backup automation

- Restore points: reliable data retention in cost-effective object storage

- Flexible snapshot retention policies and replication schedules

- Diverse options for data recovery from snapshots

- Partner-oriented multi-tenant solution

- WAN optimization and flexible deduplication

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Enterprise backup strategy capabilities

- **Object storage** – restore points stored in cost-effective hot and cold object storage (S3, Samba, NFS)

- **Deduplicated storage and long-term configurable retention policies** – optimized resource utilization by unique deduplication technologies. Flexible snapshot retention policies

- **Multi-tenant control plane for partners** – managing simultaneously all the customers and projects in a single pane of glass

- **Flexible reports and event notifications** – obtaining full resource utilization report, configuring all level event notifications

- **Role-based access management and audit** – managing user access and assigning granular roles to various resources

- **Full coverage with RESTful API** – 100% covered with RESTful API. Easy automation and integration with current management systems

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Cloud backup: replication data flow

Customers and partners

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Current customers and partners

Telecoms	Integrators	Cloud service providers	Cloud vendors	End customers

Telecoms: Telefonica, Orange Business Services, NOS, Deutsche Telekom, STC

Integrators: Atos, VAD, Rackspace, Silver Lining Systems, Fairbanks, OUTSCOPE, KCTi Korea Cyber Tech Inc. 한국사이버테크

Cloud service providers: syrex Client Inspired Solutions, CloudIL, RIXS Technology, city network, DETASAD

Cloud vendors: Red Hat, CANONICAL, PLATFORM9, vorbi, Virtuozzo

End customers: Drake & Scull, MALAKOFF, drax, AIRBUS

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Case study room

If you want to achieve your goals, help others achieve theirs

hx hystax · **CloudAk**

How Hystax helps CloudAk build out cross-cloud Disaster Recovery as a Service in the Middle East

hx hystax · **SYMMETRY CORPORATION**

How Hystax provides support Symmetry Corporation to successfully improve their customers' disaster recovery strategy

hx hystax · **brontobyte cloud** · **EDH**

How Hystax has helped to perform a seamless cloud migration between different OpenStack distributions

hx hystax · **Drake & Scull**

How Hystax benefited Drake & Scull to successfully and efficiently migrate workloads from VMware to a modern CloudAk platform

hx hystax · **Xertica**

How Hystax assisted Xertica to migrate crucial workloads to Google Cloud Platform in just two weeks

Case Study

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Hystax Acura advantages

Partners

- Any-to-any cloud migration, disaster recovery, and cloud backup

- Ready to build service for end customers

- Multi-tenant rebrandable customer portal

- Easy-to-deploy and onboard customers

- Best-in-class partner pricing

Customers

- Fully-automated cloud migration, simple agent deployment on thousands of VMs

- Support of any platforms, including public clouds, KVM and physical machines

- Cross-cloud disaster recovery with best-in-class RPO and RTO values

- Unlimited number of test migrations and failovers

- Object and block storage - cheap and quick storage options

- Best IT security standard compliance

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Appendix

Disaster recovery

- Replication of client IT infrastructure (physical and virtual machines, networks) and willingness to re-create the infrastructure for continuous functioning of client's business with minimal delay according to a previously prepared scenario

- **Recovery point objective (RPO)** – time between replication periods or maximum data size, that a client is ready to sacrifice in case of disaster (seconds, not hours or days)

- **Recovery time objective (RTO)** – time between reaction to the disaster and infrastructure recovery. Usually, this parameter is analyzed for the case of one-machine recovery (near-zero, not hours)

Minimal RPO and RTO are critical for business

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