



Storage Array Copy Management

Application-aware automation for storage array snapshot, replication and cloning

ECX Highlights

- Automate the creation and use of copy data—snapshots, clones, and replicas—on existing enterprise storage infrastructure.
- Dramatically reduce time spent on infrastructure management while improving reliability.
- Modernize existing IT resources by providing automation, user self-service and API-based operations without the need for any additional hardware.
- Simplify management of critical IT functions such as data protection and disaster recovery.
- Automate test and development infrastructure provisioning, reducing management time as much as 99%.
- Drive new, high-value use cases such as leveraging hybrid cloud compute and rapid DevOps development.
- Catalog and track IT objects: volumes, snapshots, virtual machines, datastores, etc.
- Deliver advanced insights into copy data environments across the enterprise, including protection RPO/RTO compliance reporting.
- Supports a multi-vendor selection of storage arrays, including systems from NetApp, IBM and Pure Storage.

ECX Introduction

Organizations of all sizes need to modernize their IT processes in order to enable critical new use cases such as operational automation, DevOps and integration of system-of-record data with Cloud compute. They are equally challenged with improving management efficiencies for long established IT processes such as data protection, disaster recovery, test and development, reporting and business analytics.

Copy Data Management (CDM) is an IT modernization technology that focuses on making use of existing storage resources in a manner that is efficient, automated, scalable and easy to use, delivering the data access that is urgently needed to transform IT. Catalogic ECX, in conjunction with multiple enterprise storage arrays, provides in-place copy data management that modernizes IT processes, enables key use cases, and does it all with existing infrastructure.

How Copy Data Management Works

The common factor across multiple IT use cases is gaining access to copies of data. How to best get this done can be considered the “copy data management challenge.” Typically, access to data (such as on an enterprise storage array) or systems that connect to data (such as a virtual machine) requires a lengthy request and provisioning process passed through gatekeepers in the IT organization. Data consumers can wait days or even weeks to get the data they request, which can limit their effectiveness.

Copy Data Management technology addresses this challenge by bringing modern IT approaches – selfservice, automation, APIs – to legacy systems, which is where the vast bulk of organizational data resides.

ECX is purpose-built to leverage the data copy services of existing IT infrastructure (storage array snapshot,

replication and clone engines). ECX is delivered as a virtual appliance and runs without agents to catalog the existing copy data environment (storage, VMs, applications). Once deployed, ECX allows the IT team to significantly improve its ability to deliver key functions, while dramatically reducing the cost of infrastructure and ongoing operations.

ECX delivers the orchestration and automation of tasks that are typically done today with complex and error-prone scripting, and/or rely on a hodgepodge of existing tools. With ECX, formerly complex workflows in the virtualization, application and storage environments can now be easily configured and run through a simple, template-based “point-and-click” interface or through API calls.

Copy Data Management Use Cases

By fundamentally modernizing many common IT processes, ECX dramatically simplifies copy data management, enabling the automation and orchestration of data copies that can be leveraged across the enterprise and cloud for a variety of value-creating use cases.

Automated Copy Management



IT teams can leverage the core policy engine, catalog, and reporting of ECX to dramatically improve IT operations that rely on copies of data, including DR, testing and development, business analytics, local recovery and others. ECX improves operations by using automated service level-based copy policies that are consistent, reliable and easily repeatable. This provides huge OPEX savings. Without ECX, functions that rely heavily on copies are typically managed using a complex mix of scripts, tools, or other products not optimized for copy management. With ECX you have a holistic, simplified approach that greatly reduces cycle time and frees staff to manage more productive projects.

Databases



More than any other IT workload, databases drive copy creation. Catalogic ECX offers application-aware functionality to work with critical enterprise databases such as Oracle, SQL Server, Epic Cache and SAP HANA. Automated log management provides the means for point-in-time restores to any transaction point in-between storage snapshots. Data masking integration offers secure access to data sets that don't violate compliance regulations. ECX provides a mechanism to create masked snapshot copies ahead of time which can then be provisioned out to as many test or development workstations as needed, dramatically simplifying management. Integrated pre- and post-snapshot scripting allows customization to control the detailed settings and parameters that are unique to every database instance.

Next Generation Data Protection and Disaster Recovery



Through its template-based management and orchestration of application-aware copies, ECX becomes a powerful solution for next generation data protection and recovery. You can skip traditional backup completely and move to a snap-and-replicate model that provides near instant protection and rapid recovery. Compared to the slow restores of traditional backup, ECX allows IT to mount and instantly access copies that are already in the production storage environment. ECX catalogs all snapshots and replicas and alerts you if a snap or replication job was missed or failed. Disaster recovery can be fully automated and tested non-disruptively. In addition, ECX can coordinate sending data to Amazon Web Services (AWS) S3. This provides an easy to use, low-cost option for longer term or archival storage of protection copies.



Automated Test and Development

The speed and effectiveness of test and development processes are most often limited by the time it takes to provision IT infrastructure. Typical organizations take weeks to deploy infrastructure; even the most efficient can take several days. With Catalogic ECX, test/dev infrastructure can be spun-up in minutes, either on an automated, scheduled basis, or with push-button ease on demand. ECX users have reduced test/dev infrastructure deployment time by as much as 99%.



Leverage Hybrid Cloud Compute

ECX is a powerful enabler of the hybrid cloud, allowing IT to take advantage of cloud compute resources. ECX not only helps you move data to the cloud, it lets you bring up live application environments that can leverage the less expensive, elastic compute infrastructure in the cloud. You can spin up workloads and then spin them back down reliably. This maximizes the economic benefit of the cloud – only using, and paying for, the infrastructure as needed. With ECX, users are seeing a 3-to-1 cost benefit when leveraging the cloud for certain use cases; or said another way, an ROI of over 300%.



DevOps

Organizations are increasingly moving toward DevOps for faster delivery of new applications to market. What ECX allows the IT team to do – for the first time – is use their existing storage infrastructure to enable DevOps and meet the needs of the development teams for rapid deployment of infrastructure. ECX templates define the policies for infrastructure deployment and the whole system is accessible via the ECX REST API, which is a fundamental requirement for DevOps. With ECX, DevOps teams get “infrastructure as code.” Rather than following legacy processes to requisition IT resources, developers include the infrastructure deployment commands directly within their development systems, such as Chef, Puppet or Ansible. Pre-defined scripts and plug-ins for popular DevOps tools simplify implementation.

Secure Multi-Tenancy

ECX offers secure multi-tenancy functionality to meet the needs of both managed service providers and larger enterprises that need to delegate resources internally. Individual “tenants” can be created within a single ECX instance, allowing each tenant its own set of resources and the ability to deliver administrative functionality within the tenancy (create users, define jobs, etc.).

Policy Templates for Automation and Self-Service IT

IT departments spend too much time in mundane, repetitive tasks, such as continually allocating storage resources to internal data consumers. With ECX template-based provisioning and copy management, internal customers can get easy self-service access to request the resources they need, when they need them. ECX templates are pre-defined by the IT team to allow access to specific resources. Users can then access these templates via a self-service portal interface or through API calls.

Compatibility

ECX is a simple to deploy software platform that is designed to leverage the existing infrastructure in the IT environment. ECX works directly with hypervisor, application and enterprise storage APIs to provide the overall orchestration layer that leverages the copy services of the underlying infrastructure resources. ECX also integrates with Amazon Web Services S3 for cloud-based data retention, as well as popular DevOps tools such as Puppet, Ansible and others. Catalogic continually qualifies new hypervisor, application and storage systems to ensure a smooth deployment experience for our customers. For a current list of supported products, please see the [ECX User Guide](#).

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