



# Cost-effective Storage with Automated Durability and Future-proofed Data Management

Life sciences, government agencies and other high-compute industries all share the same data concerns: how to handle data that might be sitting in different domains, on different devices and being controlled by different data policies, especially when considering privacy requirements.

## Solution at a Glance:

- Single storage architecture for Performance, Archive and Cloud tiers

- Unlimited scalability

- Cost-effective

### Products:

- + SUSE Enterprise Storage
- + iRODS Data Management

This is where iRODS (integrated Rule-Oriented Data System) Data Management software excels. It manages descriptive metadata about each piece of data. It includes access controls, authorization and integrity checks, while enforcing management policies. Now, iRODS is providing SUSE Enterprise Storage as a supported option.

## A Flexible Framework for Your Data Management Needs

iRODS Data Management is a flexible framework that provides an abstraction of a user's infrastructure. It starts out by virtualizing storage, which makes it easier to corral all of the storage technology in the data center.

Users typically have a difficult time locating their data. To address that issue, iRODS gives users a single structure to access their data—regardless of where it is stored, what technology it is stored on or where it is located. By letting users attach metadata, their data can become actionable and discoverable.

Users can also apply data management policies used in the real world and capture that as code. This code can be used to implement and automate data management policies as data flows through the system. This gives users a way to direct the flow of data and keep track of what happens to it as it flows through the system. This enables users to discover the data and capture the providence around what has happened to it: where it has been and, possibly, why it has been used.

iRODS works with storage vendors to verify and validate that their technology works with iRODS. In the case of SUSE, iRODS users receive an enterprise-ready solution that comes with support that is based on their level of iRODS membership.

What you receive:

- **Data discovery**, using a metadata catalog that describes every file, every directory and every storage resource in the data grid.
- **Automated data workflows**, with a rule engine that permits any action to be initiated by any trigger, on any server or client in the grid.

## With iRODS and SUSE Enterprise Storage, you get an inexpensive and scalable data management solution.

Contact us at:  
[www.suse.com](http://www.suse.com)

- **Secure collaboration**, so users only need to log into their home grid to access data hosted on a remote grid.
- **Data virtualization**, allowing access to distributed storage assets under a unified namespace and freeing organizations from getting locked into single-vendor storage solutions.

### Truly Unified Storage

SUSE Enterprise Storage provides an intelligent software-defined storage solution, powered by Ceph technology, that enables you to transform your enterprise storage infrastructure.

Providing IT organizations with a simple-to-manage, agile infrastructure with increased speed of delivery, durability and reliability. Accelerate innovation, reduce costs and alleviate proprietary hardware lock-in by transforming your enterprise storage infrastructure with a truly open, and unified, intelligent software-defined storage solution.

What you receive:

- **Unlimited scalability**, with a distributed storage cluster designed to scale to thousands of nodes and multi-hundred petabyte environments and beyond to meet your growing data requirements.
- **A single, truly unified software-defined storage cluster** that provides applications with object, block and file system storage—providing ubiquitous and universal access to your legacy and modern applications, and automated

*durability of your data via high availability and disaster recovery options.*

- **Utilize commodity off-the-shelf hardware** that is at minimum 30 percent less expensive than average capacity-optimized solutions, to drive significant CAPEX savings.
- **A highly redundant storage infrastructure design** maximizes application availability, with no single points of failure.
- **Self-healing capabilities** minimize storage administration involvement and optimize data placement, enabling rapid reconstruction of redundancy and maximizing system resiliency and availability.
- **Automated re-balancing of optimized data placement** with an easy-to-manage intelligent solution that continuously monitors data utilization and infrastructure without any manual intervention, and easily moves data between your data center and the cloud—all without growing IT staff.

### High-performance Data Management at its Best

Storage and data management have become perhaps the most challenging computational bottlenecks in fields such as life sciences research. In the past, computational needs were adequately served by conventional cluster technology. However, high performance computing (HPC) is now becoming more and more important. In 2015, it was estimated that 25 percent of bench scientists would require HPC resources.

Other industries are also considering HPC for their computational needs. A top priority is data management that is flexible and future proof. iRODS, with its support for SUSE Enterprise Storage, is just that solution.

With iRODS and SUSE Enterprise Storage, you get a data management solution that is inexpensive and scalable with SES being the perfect archival tier archival tier. The combination of these two open source software solutions provides a single pane of glass into your data landscape, enabling you to manage your data automatically. And, it provides unlimited scalability, helping to reduce your Tier 1 storage costs.

To learn more about iRODS, go to [irods.org/](http://irods.org/)

To learn more about SUSE Enterprise Storage, go to [www.suse.com/products/suse-enterprise-storage/](http://www.suse.com/products/suse-enterprise-storage/)