

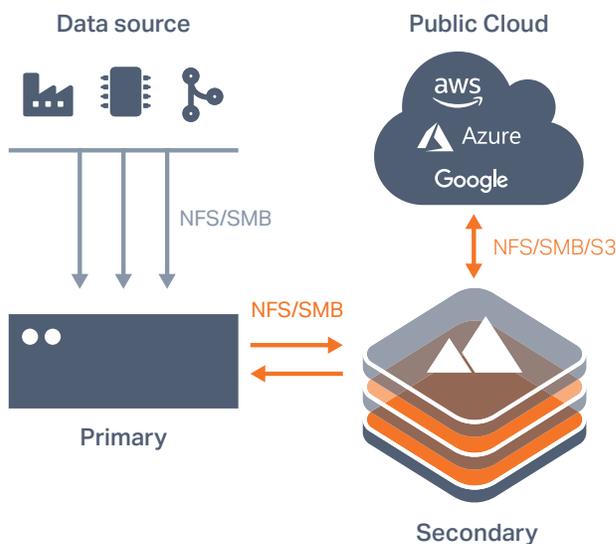


# Modern Backup, Archive, and Cloud-Tiering for Electronic Design Automation

Backing up data in any enterprise can be a challenge. Backing up Electronic Design Automation (EDA) data, however, can be even more difficult, due to the massive quantity of files that are generated as part of the design and simulation processes. EDA enterprises that still use legacy backup solutions have found that their unstructured data growth is greatly outpacing the rate at which their backup solution can protect it.

The nature of EDA data in general—a very large number of very small files—makes data discovery, analysis, and understanding even more difficult, particularly for EDA enterprises that rely on legacy data backup and management tools. To address the challenges that naturally come with EDA workflows, Igneous offers Unstructured Data Management (UDM) for massive-scale operations. Engineered for high-performance, even at massive scale, Igneous UDM enables EDA enterprises to reliably discover, analyze, and protect billions of new and changed files per day.

## Igneous DataProtect Electronic Design Automation Workflow



*Simplified infrastructure, simplified backup, and simplified cloud integration with Igneous UDM*

## Requirements of Unstructured Data Management for EDA

- EDA software generates large amounts of unstructured file data, which stresses legacy backup solutions that aren't engineered for the scale of data changes that EDA workflows require. EDA enterprises need an unstructured data management solution built to handle petabyte-scale data and file-dense workloads to protect their valuable digital assets.
- To minimize the amount of high-performance storage capacity required, regular data archival to move older and less-active data to a secondary tier is essential for any EDA enterprise.
- Since EDA data often moves between the primary and archive storage tiers as needed for different workflows, EDA enterprises must be able to move large amounts of data quickly and efficiently without impacting other workloads.
- With the 24x7 availability demands of most EDA enterprises, production workloads and services must not be impacted by backup or data-movement actions.

## Business Benefits

Business benefits for EDA enterprises of using Igneous DataProtect include:

- **Modernized storage portfolio**, leveraging powerful software architectures to improve supportability, visibility, analytics, and protection across the primary, secondary, and cloud tiers.
- **Scale-out architectures** across both performance and capacity tiers for maximum scalability of large datasets.
- **Compelling economics**, with hard dollar cost savings over traditional vendors.

## Igneous DataProtect Overview

Igneous offers the first comprehensive UDM as-a-Service solution for IT teams and Data Owners managing unstructured data at scale. Purpose-built to handle billions of files, hundreds of file systems, and petabytes of data, Igneous helps EDA enterprises manage their unstructured data at scale, anywhere data lives.

Igneous DataProtect simplifies and automates data protection and archive for EDA workflows—giving IT teams the ability offer self-serve data protection services across the enterprise. With support for any file and object protocol, any NAS platform, and for any public cloud platform, Igneous DataProtect enables IT and end users to consolidate their EDA workflows without vendor lock-in.

Igneous DataProtect is protocol agnostic, centralizing backup and archive data from every NAS instance in the enterprise. EDA enterprises that deploy a mix of NAS architectures can use Igneous to consolidate data from all systems, either onsite, offsite or in the public cloud.

Igneous UDM offers latency-sensitive data-movement and data-discovery operations, automatically throttling back on resource consumption as necessary to protect service availability on production systems.

## Key Features of Igneous DataProtect for EDA Enterprises:

- **As-a-Service delivery.** Igneous remotely monitors, troubleshoots, and even performs software updates on its appliances installed in customer datacenters.
- **High performance.** Igneous performs highly parallel data movement, optimized for scale-out primary NAS systems.
- **Search.** Igneous' scale-out index store provides integrated search and discovery of all file data on primary, secondary, and cloud tiers.
- **Cloud integration.** Igneous automates tiering or replication to other Igneous appliances and to leading public cloud providers like AWS, Microsoft Azure, and Google Cloud.

## About Igneous

We deliver the only UDM as-a-Service solution enabling data-centric organizations with visibility, protection and data mobility at scale, wherever datasets and workflows live. Our customers see, organize and understand all of their unstructured data—anywhere. Our customers protect petabytes of data on a single cloud-native platform—at scale. Our customers automate movement of datasets—for everyone needing them. We combine all UDM functions into a single, API-enabled, cloud native solution.

The right data, in the right place at the right time.

Find out more at [igneous.io](https://igneous.io)

## Contact Igneous

To learn more about the Igneous and your EDA workflows, contact us:

1-844-IGNEOUS or 206-504-3685 or [info@igneous.io](mailto:info@igneous.io)

\*Igneous performance benchmarks are based on documented testing. Performance results will vary based on data profile, file system, protocol and jobs run.

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## The Igneous Difference



Time to value in days vs weeks



Scan up to 1.6 Billion files per hour\*



File movement up to 100TB per day\*



API-enabled for integration and automation



Resource efficient via fully-managed service

We're built to handle files systems that are deep and wide with uneven file distributions per directory. Large or small files, Igneous keeps networks busy. A single job can move over 100TB/day worth of data on a minimal system to seed the initial level 0 and then scan at a rate of 436,000 files/sec to find change in a given export. This job performance scales—and continues to scale as more Igneous ASR's are added.

### Before Igneous

- Legacy Backup Infrastructure and Processes
- Disk-to-Disk (D2D) Replication Silos
- Offsite Tape Rotation

### With Igneous

- High-Performance, Latency Aware Data Protection
- Consolidated Hardware Agnostic Data Movement
- Replication to-and-from Cloud Storage

*"Igneous is cost-effective, and integrated seamlessly with our environment."*

Fortune 500 Semiconductor and Infrastructure Software Manufacturer

*"Igneous protects our critical file data by performing latency-aware data replication, movement, and cloud tiering."*

Global Technology Provider

