Igneous △△

PURESTORAGE®

Igneous Data Protection and Replication for Pure FlashBlade

Protect Your Most Critical Data

As new workflows demand lower latency and higher performance, Pure FlashBlade excels in fulfilling the largest demands of enterprise HPC applications. A critical requirement for this data is a protection strategy that can match the speed and performance of Pure FlashBlade.

Igneous Unstructured Data Management as-a-Service solution is designed to handle the dense and fast file workloads on Pure Storage FlashBlade, providing search as a means to find data quickly, and extending data retention into the public cloud where needed.

How It Works

With API integration, Igneous will import all the shares, exports, and buckets from the Pure FlashBlade and protect them using a customer-created policy. Igneous handles all the necessary permissions to protect data, create and release snapshots, and manage data movement. Igneous DataProtect uses a baseline-and-incremental-forever approach, where each replica is presented as a "virtual full" view of the file system to simplify the recovery process. Igneous even matches Pure FlashBlade compression efficiency for protected data.

Data source | Public Cloud | Primary | Secondary

For longer-term data retention needs, or for data that requires an offsite copy, Igneous can seamlessly extend the data to any of the public cloud providers or replicate to another Igneous system.
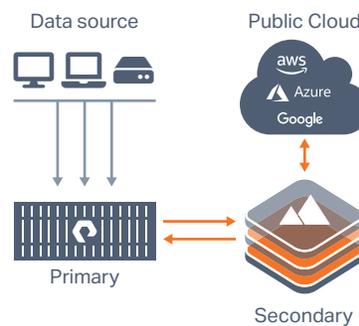
High Performance Replication

Igneous seamlessly integrates with Pure Storage at an API level to deliver cost-effective, high-performance data protection at any scale, even up to petabyte-size data footprints with billions of files. With a data-mover engine designed to scale to hundreds of concurrent jobs and optimized for data movement and indexing without impacting production workloads, Igneous can work seamlessly with high-performance computing and artificial intelligence/machine learning platforms.

Recent testing with an Igneous DataProtect platform and a Pure FlashBlade array yielded the following results:

Use Case	Scan Speed*	Compare Speed	Move Speed**
EDA File Distribution	209,376 files/sec	87,182 files/sec	338 MB/sec
10M files < 1MB	209,376 files/sec	19,379 files/sec	3,792 files/sec
1M files 1-5MB	209,376 files/sec	15,856 files/sec	436 MB/sec

*Scan speed: fastest measured by Igneous during testing
**Measured latency on FlashBlade array never exceeded 5ms

KEY BENEFITS

As-a-Service delivery
Customers don't buy or manage hardware; instead, Igneous remotely monitors, troubleshoots, and even performs software updates on its appliances installed in customer datacenters. Igneous' remote management and fail-in-place architecture dramatically reduce management overhead for enterprise IT.

Scale-out
On-premises appliances integrate highly scalable backup and archive software with scale-out index and object stores to manage billions of files.

High performance
Igneous performs highly parallel data movement, optimized for scale-out primary NAS systems from NetApp, Dell EMC Isilon, Pure Storage FlashBlade, Qumulo, and others. Dynamic throttling eliminates impact to users and applications accessing the primary storage. As such, backups can run continuously, eliminating the concept of a "backup window" where users and applications can't otherwise access data.

Search
A key problem with enterprise network attached storage (NAS) is not knowing what's there. The Igneous scale-out index store provides integrated search and discovery of all file data on primary, secondary, and cloud storage tiers.

Cloud integration
To constrain datacenter footprint and provide long-term archive storage, Igneous automates tiering or replication to other Igneous appliances and to leading public cloud providers like AWS, Microsoft Azure, and Google Cloud.

Sizing Guidelines

We offer simple sizing guidance for most environments: to store 90 days' worth of data with 7-10% data churn, you'll need 3TB of Igneous capacity for every 1TB of Pure storage in use.

This table shows the Igneous platform you'll need to support the FlashBlade configuration you're using in your environment.

Pure FlashBlade Config	Pure Capacity (TB)	Igneous Config	Igneous Capacity (TB)	Igneous Size (Rack Units)
7 x 17	119	1 x 426TB Databox + 1 ASR*	426	6
15 x 17	255	2 x 426TB Databox + 1 ASR	852	10
7 x 56	392	3 x 426TB Databox + 1 ASR	1,278	14

*ASR = Application Service Router

Backup Features:

- API integration with Pure Storage FlashBlade to provide:
  - Read-consistency via snapshots
  - Automated permissions provisioning
  - Automatic discovery of exports
- Multi-protocol permission recognition in mixed-mode storage environments
- Dynamic resource throttling via latency aware data movement to protect production system performance
- Highly parallel data movement and scan operations
- Point-and-click policy-driven backups
- Baseline and then Incremental Forever backups run more quickly and efficiently
- "Virtual Full" restore interface presents complete view of data at any point in time
- Search to recover backup data via direct download, or restore to primary NAS
- Restore back to NAS with all metadata and file permissions intact
- Write-Once Read-Many (WORM)
- End-to-end compression for throughput and storage efficiency
- Immutable objects with versioning
- Comprehensive activity logging and audit trails
- Replication to other Igneous systems and cloud storage for off-site redundancy

Archive Features:

- Automated archiving job management
- Archive data at the system, export, or directory level
- Automated notification upon job completion
- Archive to Igneous and cloud storage locations
- Search to restore archived data via direct download, or restore to primary NAS
- Index archived data on ingest

Cloud Tiering Features:

- Lifecycle management across Igneous and cloud locations allows for expiration by date or number of versions
- Cloud storage integration with Amazon Web Services, Microsoft Azure Blob Storage, and Google Cloud Platform
- Efficient data movement to cloud storage
- Replication between Igneous and cloud storage locations for off-site redundancy
- Search the Igneous InfiniteINDEX to restore with enforced file permissions to restore with enforced file permissions

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.

To learn more about the Igneous backup and archive workflow, contact us:

1-844-IGNEOUS   /   206-504-3685   /   sales@igneous.io

Igneous