



OpSus|Backup

Implementation and Configuration Assumptions

Functionality.

The OpSus Backup Service provides peace of mind for your operational backups and data retention requirements. This self-managed, “plug and play” backup service transfers the technical burden from your site to ours. After you perform a simple self-install, OpSus Engineers remotely configure the service to meet your custom specifications. Within days, the OpSus Backup service enables you to perform, validate, restore and troubleshoot your backups within a single secure portal. After service delivery, CloudWave remains your operational partner by monitoring your service and offering technical support 24x7.

Onboarding and Implementation

Service Initiation and Customer Requirements.

CloudWave and Customer work together in the delivery of the managed service. Customer has minimal administrative, technical, and device configuration responsibilities to enable the environment. Data retention is determined by service level agreement, as described in the Proposal.

- Flexible Ownership- Customer has the option to buy or lease the Appliance device.
- Data Retention- Customer selects a data retention period (duration of consecutive months of storage), as listed in the Service Level Agreement.
- Professional Services- Professional assistance is provided to plan the details of Customer implementation and assist with telecommunications planning and optimization to ensure overall success of the project.
- Operations Coordinator- A primary and secondary Customer point of contact is needed to coordinate changes, participate in periodic service evaluations, and arrange any technical support.
- OpSus Project Management- OpSus Backup implementation is led by a dedicated CloudWave Project Manager, who oversees “project kickoff,” configuration and testing, and ensures transparency throughout the implementation.
- Customer Project Management- To ensure implementation is swift and efficient, the Customer will provide a dedicated Project Manager for single point of contact during implementation.
- Bandwidth – Customer bandwidth requirements to maintain source-sided deduplication will be listed in the Proposal.
- Customer Data- CloudWave will identify the Customer’s data needs by assessing:
 - EHR Application provider DB storage.
 - Non-EHR Application provider DB storage.
 - Non-DB storage.

- o Archive storage.

Environment Components and Configuration.

CloudWave will provide necessary hardware, software and firmware built into a single device (Appliance) and provide access to third-party applications required to self-manage backups, as listed in the Proposal.

- Appliance Installation- Self-contained device installed by Customer using easy to follow instructions.
 - o CloudWave builds and tests the Appliance prior to shipment to the Customer site.
 - o Customer powers and connects device through simple rack installation and port connections, as listed in the Proposal.
- Appliance Configuration- OpSus Engineers configure and test the Appliance through remote (VPN) access.
 - o OpSus Engineers perform system validation on the Appliance to ensure volume configuration is correct and backup jobs protect contracted systems.
 - o OpSus Engineers perform and observe a minimum of two days of consecutive backups.
 - o OpSus Engineers configure the self-service portal to ensure backups and restores are enabled.
 - o OpSus Engineers shadow the Customer during backup and restore testing.
- Customer Access to OpSus Services- Remote access to systems for all CloudWave OpSus services will be accomplished through VPN.

Operations and Support

Backup Process and Retention.

The following section describes how OpSus Backup operates and backup retention availability.

- Appliance Functionality- The Appliance is configured to be compatible with customer arrays and key applications. Functionality for local backups and restoration zones is described below:
 - o Local Backups: Encrypted local retention, performed daily.
 - Primary write is stored in the Appliance.
 - Local backup store holds the last 7 daily backups.
 - Older backups must be restored from the OpSus Cloud.
 - o Restoration Zone: Default location for data restoration.
 - Appliance will host a large pool of RAID protected storage.
 - Storage will be greater than or equal to the entire data set, enabling a restore of the entire set if needed.
 - o Replicated to an alternate Data Center: Encrypted remote retention.
 - Stored in an alternate site in the event of a disaster at the primary site.
- OpSus Backup Process- OpSus Backup includes enabling backup writes, replication to the OpSus Data Center and customer management of the backups.
 - o OpSus Backup takes nightly backups of the enterprise infrastructure.
 - o Each backup is written locally to the Appliance.
 - The backup is immediately viewable and restorable from the OpSus Backup Portal.

- The OpSus Backup appliance copies the latest backup save set to the OpSus Data Center.
- All backups are viewable and restorable from the Appliance, using the Restoration zone as the primary destination for restores.
 - This enables backups in the production environment to remain unstressed.
- OpSus Backup Retention- Data is stored in multiple locations for specified durations:
 - Appliance (last 7 daily backups, local storage).
 - OpSus Data Center (last 2 daily backups, for DR restoration).
 - Replicated public cloud object storage buckets – full retention (replicated in two regions for availability and resilience).

Backup Portal and Support Functions.

CloudWave will provide access to a secure portal for backup management as well as OpSus monitoring and support.

- OpSus Backup Portal- Secure, custom portal dedicated to the Customer for backup management, enables customer to:
 - Assess backup job status (In Progress, Successful, Failed).
 - Explode backups.
 - Restore backups (entire volume or specific files, tables, mailboxes, etc.).
 - OpSus Engineers configure the self-service portal to ensure backups and restores are enabled.
- Monitoring Services- CloudWave will provide 24x7 monitoring of critical OpSus Backup components, as listed in the Proposal.
- Service Desk and Portal- CloudWave will provide support and service desk access via telephone (855-28-OPSUS) and the MyOpSus Customer portal (<https://myopsus.opsuscloud.com>) for reporting and tracking incidents, service requests, as described in the Service Level Agreement.
- EHR Application Support- Customer provides EHR application support, monitoring, and management of the application environment including application upgrades.