VERITAS

Veritas Alta SaaS Protection

Security overview.

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VERITAS ALTA

Contents

Introduction to Veritas Alta SaaS Protection

Veritas Alta™ SaaS Protection (formerly known as Netbackup SaaS Protection) is a cloud-based secondary storage platform for enterprise organizations to centrally protect, analyze, search, and manage all types of SaaS application data at any scale.

Veritas Alta SaaS Protection customers successfully protect their Software-as-a-Service (SaaS) application data. This is essential now that most SaaS providers have adopted a "shared responsibility model" which makes it clear that the providers will not take any action to protect customers' data and the responsibility for doing so is completely the sole responsibility of the customer. The need is real. Customers who adopt Veritas Alta SaaS Protection are seeing the following results: complete backup and archiving of all of their SaaS application data, fast and flexible data recovery, decoupling of data from the storage layer as well as from the SaaS provider's platform, and a data management engine that supports legal discovery, compliance, and data privacy.

The Veritas solution consists of a cloud-native backbone that runs in Microsoft Azure data centers as a fully-managed software-as-aservice (SaaS) deployment. Veritas Alta SaaS Protection uses the SaaS providers' native APIs to seamlessly work to enable backup, archive, migration, tiering, and recovery of data stored on the providers' platform.

Veritas Alta SaaS Protection Security Fundamentals

A primer on the security fundamentals of Veritas Alta SaaS Protection follows.

- **SOC compliance** – Veritas maintains SOC 2 Type II compliance with security and availability trust service principles for Veritas Alta SaaS Protection.
- **Single-instance deployment architecture** – By default, the SaaS backbone of your Veritas Alta SaaS Protection tenant is provisioned as a single tenant, providing the best possible foundation for a secure environment since your tenant is isolated and running on dedicated resources (no commingling of your data as in multi-tenant SaaS or competition for resources with other customers)
- **Flexible account hosting** – As a single-tenant architecture, Veritas Alta SaaS Protection offers the flexibility of hosting in your account or Veritas', and your tenant can reside in any Azure region around the globe (with the exception of China regions when Veritas is hosting)
- **SaaS model** – Veritas always has full responsibility to deploy, manage, monitor, and upgrade your Veritas Alta SaaS Protection tenant, regardless of whose account is hosting
- **Azure AD identity provider** – Veritas relies on Azure Active Directory (AD) as its identity provider for authentication. For greater clarity, Veritas does not manage passwords of the users signing into the service. With Azure AD handling all sign-in to your Veritas Alta SaaS Protection tenant, features such as multi-factor authentication (MFA) and single sign-on (SSO) can be enabled to work for your instance
- **Directory synchronization option** – For a completely integrated identity and access experience, Veritas offers the option of directory synchronization with your own Azure AD (see Directory synchronization)
- **Limited attack surface** – While your Veritas Alta SaaS Protection tenant can consist of multiple cloud resources, there is only one entry point to the tenant for any user or application requests to the Veritas Alta SaaS Protection App Service (also referred to as the Web App). We'll explore closely how the Web App security is configured. For now, the key takeaway is that all virtual machines, Azure SQL instances, and other resources within the Veritas Alta SaaS Protection tenant configuration are not externally accessible, except for blob storage accounts in certain circumstances where security is restricted via time-limited SAS tokens issued after authentication and authorization to specific items for a specific operation

- **Installable components** – Depending on the location of data sources, any necessary Veritas Alta SaaS Protection installable services can run on-premises, at the edge, or in the cloud. For example, any required installable components might run on customer-owned infrastructure (and are operated by the customer). Requirements such as drive shipping (i.e., Azure Data Box), message journaling, and backup of SaaS applications (e.g., Microsoft 365) typically have Veritas-managed instances of the installable components in the cloud. Your Veritas Alta SaaS Protection subscription includes usage rights to run any needed Veritas installable components on any number of machines.

Architectural elements

These are terms used to describe core aspects of the Veritas Alta SaaS Protection topology:

Hub – Each Veritas Alta SaaS Protection tenant has a top-level configurable element referred to as a Hub which has an associated Hub database (the "HubDB").

StorSite – Within each Hub is one or multiple StorSites which represent an Azure region consisting of at least an App Service instance and at least one blob storage account (a "Stor"). A Hub will have multiple StorSites when the customer organization is geographically distributed and requires localization of compute and storage for network efficiency or data residency.

Stor – Within each StorSite is one or multiple Stors which represent an Azure Blob Storage account and its associated Azure SQL database instance (a "StorDB"). A StorSite will have multiple Stors when there are different workload types, or if capacity requirements exceed the limits of a single storage account (i.e., 2 PB for the US and Europe, 500 TB for all other regions, including the UK).

> *Deploying Veritas Alta SaaS Protection on Azure afforded us the agility needed to respond to our engineers with a speed only surpassed by our own hyperloop pod."*
>
> Dawn Armstrong, VP of IT
> Virgin Hyperloop

The following list of elements are in the Veritas Alta SaaS Protection's backbone:

Azure App Service – The App Service handles all user and application requests, supports all ingress and egress data flow, and runs Web Jobs to manage data in cloud storage.

Azure SQL Database – Veritas Alta SaaS Protection has an Azure SQL instance for its HubDB which stores configuration and directory synchronization data. Veritas also has an Azure SQL instance for its StorDB(s) which pair with each production Azure Blob Storage account (i.e., a "Stor") to store certain metadata relating to statistics, auditing, permissions, folders, and items for dashboards, reports, policies, and query optimization.

Azure Blob Storage – Azure Blob Storage is where Veritas stores the original data along with metadata manifests and, if content indexing is present, the rendered text of items. A single Veritas Alta SaaS Protection instance can have multiple Stors – typically one for each SaaS workload being protected.

Azure Active Directory – Veritas leverages Azure Active Directory for authentication and, optionally, an identity awareness of all users and groups so that data ownership and access rights fully illuminate for any data in Veritas Alta SaaS Protection.

Azure Windows Virtual Machine – In some deployments, a NSP Connector Service (NSPCS) instance will run on Windows virtual machines (VMs) to capture information from target data sources and submit it to Veritas Alta SaaS Protection for ingestion.

Azure Ubuntu Linux Virtual Machine – In most deployments, Veritas runs Elasticsearch on Linux. The Veritas Alta SaaS Protection search cluster performs content indexing, personal identifiable information (PII) detection, and search. For environments that include message journaling, Linux VMs are also used to host Simple Mail Transfer Protocol (SMTP) servers that receive and deliver mail for Veritas.

Any Veritas Alta SaaS Protection subscription includes access to Veritas' suite of installable app services which consist of the following elements:

Veritas Alta SaaS Protection Connector Services (CS) – The CS is lightweight software that runs as a service on a Windows physical or virtual host. It includes a suite of native connectors to various data source targets (e.g., file directories, OneDrive for Business, Exchange Online mailboxes), which enable simple capture, backup, tiering, synchronization, and migration of data, folders, and access rights to a Veritas tenant. The CS can run on- premises, at the edge, or in any cloud, and you can install any number of CS instances that connect to your Veritas Alta SaaS Protection tenant.

Veritas Alta SaaS Protection Retrieval Service – The Retrieval Service is a Windows filter driver component that runs as a service on a Windows physical or virtual host. It supports cloud tiering with a seamless recall of data within Windows shares, as well as linked-based stubbing for any SMB or NFS-based presentation.

Veritas Alta SaaS Protection Export Utility – The Export Utility is lightweight software that runs on Windows to support on-demand, bulk export, and recovery scenarios.

Veritas Alta SaaS Protection Export Service – The Export Service is lightweight software that runs as a service on a Windows physical or virtual host to support background bulk egress requests that are initiated by a user in either the Web-based Admin Portal or User Portal.

Veritas Alta SaaS Protection File Copy Utility – The File Copy Utility is a standalone utility for migrating file data.

Other elements of the Veritas Alta SaaS Protection architecture are as follows:

Veritas Alta SaaS Protection Admin Portal – Veritas includes a Web-based user interface for IT administrators and other privileged users, supported by the App Service.

Veritas Alta SaaS Protection User Portal – Veritas includes a Web-based user interface for knowledge workers, supported by the App Service.

Veritas Alta SaaS Protection Software Development Kit (SDK) – The Veritas Alta SaaS Protection SDK offers a .Net client code library that wraps the Veritas Alta SaaS Protection application programming interface (API).. It includes code samples and documentation. All Veritas Alta SaaS Protection installable software uses the same API that is available in the SDK. The SDK requires a separate Veritas Alta SaaS Protection SDK Agreement and is available in the Enterprise or Enterprise Plus packages.

Azure Data Box – To expedite data ingestion to your Veritas Alta SaaS Protection tenant, Microsoft offers various form factors to facilitate drive-shipping your data to the cloud. Azure Data Box is a standard Azure service operated by Microsoft that is compatible with Veritas.

Application Security

Authentication

Veritas relies on your organization's Azure Active Directory (AD) as its trusted identity provider for all authentication to your Veritas Alta SaaS Protection. Veritas' claims-based authentication with Azure AD uses OpenID, an industry-standard authentication interface built on OAuth 2 for authenticating via one or more trusted identity providers.

Your Veritas Alta SaaS Protection tenant can work with multiple Azure AD domains, which is beneficial in merger and acquisition scenarios. Azure AD enforces password policies and provides rich auditing of authentication-related events. Azure AD's Multi-Factor Authentication (MFA) and Single-Sign-On (SSO) options work with your Veritas Alta SaaS Protection tenant. If you do not have an Azure AD domain provider, one will be installed and configured as part of your Veritas Alta SaaS Protection tenant.

By default, Veritas does not enable non-work accounts to authenticate (e.g., outlook. com, msn.com, and other such accounts), but this can be enabled if desired.

Authorization

Role-based access control (RBAC).

Veritas Alta SaaS Protection includes an RBAC layer that offers the flexibility to manage permissions by AD users and groups, along with the concept of customizable roles.

Access to Veritas Alta SaaS Protection is account-based and must pass Veritas' authorization layer, including all requests from users and applications, including any of the Veritas Alta SaaS Protection installable software components that may connect to your tenant, and any application that leverages Veritas Alta SaaS Protection APIs.

Four permission types exist in Veritas' RBAC layer:

1. **Feature permissions** – Determine the capabilities that are available with feature- level permissions. For example, you can authorize access to the Veritas Alta SaaS Protection Admin Portal but restrict access to the Discovery and Content apps only. Likewise, you can authorize access to the Veritas Alta SaaS Protection User Portal but disable link-based sharing to external users.

2. **Stor administration permissions** – Define the storage accounts (Stors) that an administration user of Veritas Alta SaaS Protection can manage with Stor permissions. For example, an administrator with access to the Veritas Alta SaaS Protection Admin Portal can be allowed to manage retention and deletion policies, but on a particular Stor only.

3. **Case permissions** – Set which cases a Discovery user can access, including unique case-level permissions. For example, a user with access to the Discovery app in the Veritas Alta SaaS Protection Admin Portal can participate in several cases but be authorized to export data from a select one only.

4. **Location permissions** – Restrict all other authorizations to certain folders (locations) within the storage. For instance, a user may be authorized to perform Discovery, view data in the Content app, and perform admin-level exports; however, these capabilities can be restricted to a subset of the organization's data.

Users can belong to one or multiple roles, be granted additional permissions explicitly, and be removed from roles individually or in bulk.

AD groups can be leveraged in Veritas Alta SaaS Protection's RBAC permissions, directly or in roles, with the advantage of authorizations updating automatically as Veritas Alta SaaS Protection synchronizes group memberships daily.

Veritas Alta SaaS Protection's RBAC model includes the concept of a 'default role' which all users belong to automatically. The default role offers a simple way to administer the base level of access globally because it is a single role that can be configured and managed to establish default access for a large end-user community with little effort. The default role can provide any configuration of Veritas Alta SaaS Protection permissions that you desire. Generally, the default role is configured to allow access to core features in the Veritas Alta SaaS Protection User Portal only, which, after authenticating, provides users with the ability to view and retrieve their own content.

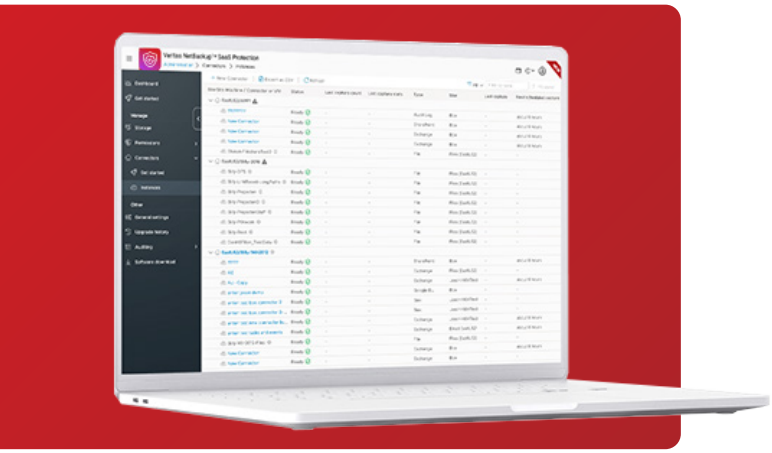
Directory synchronization

Your Veritas Alta SaaS Protection tenant may synchronize user information from your organization's Azure Active Directory. Access is read-only and optional, but necessary for certain features in Veritas Alta SaaS Protection to work fully.

Veritas Alta SaaS Protection can synchronize with multiple domains/directory providers. Directory synchronization provides Veritas Alta SaaS Protection awareness of the users and groups that exist in your domain, along with an understanding of the following details:

- ✔ Group memberships (at any level)
- ✔ Account status (enabled/disabled)
- ✔ Extended directory attributes (i.e., Department, Job Title, PreferredDataLocation, etc.)

To allow directory synchronization, you will need to configure an Azure AD application within the target AD instance and provide its Application ID and key to Veritas. Instructions to configure directory synchronization are available in the Veritas knowledge base: https://www.veritas.com/content/support/en_US/article.100051554.



The following Veritas Alta SaaS Protection features require directory synchronization:

- End-user portal
- Link-based storage tiering
- Location mapping policies
- Exchange connectors that use extended AD attributes to filter in-scope mailboxes
- SharePoint connectors that use extended AD attributes to filter in-scope OneDrive for Business site collections

When directory synchronization is not enabled, the features listed above will not be available, and the following Veritas Alta SaaS Protection features will have the following limitations:

1. Custodian-scoped searches in the Admin Portal's Discovery app will yield the result of explicit user permissions only. In other words, access rights via group memberships will not be in the result. Likewise, targeting a Group object will not yield results since, without directory synchronization, Veritas Alta SaaS Protection is unaware of group memberships.
2. Policies in the Admin Portal that use Custodian inclusion/exclusion clauses will yield the result of explicit user permissions only (no access via group memberships).

Policies in the Admin Portal that use Custodian Attribute inclusion/exclusion clauses will not yield a result.

If you opt-out of directory synchronization, Veritas will provision an Azure AD instance within your Veritas Alta SaaS Protection tenant configuration to act as the dedicated identity provider for your deployment.

Identity Awareness

Access rights inheritance

Typically, Veritas Alta SaaS Protection will inherit the security access control lists (ACLs) of the target data source from which it is capturing data.

In the case of file systems, ACL inheritance is configurable per connector in the CS. Folder-level and item-level ACL options exist. Each time a file connector runs, it synchronizes the latest ACLs, including allow, deny, and inheritance for both user and group objects.

In the case of SharePoint Online, Teams, and OneDrive for Business, Veritas Alta SaaS Protection inherits the unique SharePoint permissions model similar to how it works for file systems.

For email, there are several scenarios by which email capture can occur. In general, there are two primary ways that access control inheritance works:

1. The mailbox owner is used to create a security ACL in Veritas Alta SaaS Protection for all folders and items within the mailbox,

   or

2. For each message, the sender and recipients list are used to create an item-level security ACL. Item-level ACLs are more expensive on system resources, especially with large object counts, so the preference is to avoid creating ACLs from email sender/recipients wherever possible. However, in certain cases such as email journaling, there is no mailbox context, so sender/recipient-based ACL creation is required.

Likewise, other connectors generally try to inherit data-level permissions from their target source, and any integrated applications using the Veritas Alta SaaS Protection SDK have methods available to set permissions on items and folders.

In the Veritas Alta SaaS Protection Admin Portal, there are multiple custodian-related features. (Custodian being synonymous with a user or group object and the data they can access.) When you create a policy or perform a search that uses custodian clauses/filters, you target one or multiple users or groups.

Veritas Alta SaaS Protection can have multiple security identifiers per custodian. For example, permissions to file system data within a domain will have a unique security identifier (SID) per user/group. If you have multiple domains connecting file shares to your Veritas Alta SaaS Protection tenant, users can have multiple SIDs across the global dataset. If the different security identifiers of a user are mapped, Veritas Alta SaaS Protection will return a federated result set.

An SMTP address is another type of security identifier used by Veritas Alta SaaS Protection for authorization to Microsoft 365 and other email-related data sources. Users can have multiple SMTP addresses within an organization.

Veritas Alta SaaS Protection provides a federated result when a user or group has multiple security identifiers.

Veritas Alta SaaS Protection obtains security identifiers from Azure AD for each user and group object during directory synchronization and can also accept load files that provide security identifier mappings.

Entitlements and Data Ownership Mapping

Veritas Alta SaaS Protection maintains a query-optimized mapping of access rights and data ownership and the ACL information is persisted into the search cluster.

When any user accesses Veritas Alta SaaS Protection, its authorization layer performs a union of their direct and role permissions at both the user and group level.

Similarly, when a custodian-based policy or search runs, Veritas Alta SaaS Protection performs a union of the direct and group-based access rights to trim the results.

Shadow Users

When security identifiers are present in the data that do not resolve to any user or group found in the directory provider, Veritas Alta SaaS Protection creates a shadow user profile automatically. A shadow user is a placeholder account that illuminates an identity present in the data but not in the directory. Shadow users will display in Veritas Alta SaaS Protection as an external user that is not enabled in the directory provider. However, using any of the custodian-based policies or search capabilities in Veritas Alta SaaS Protection will allow you to specify shadow users.

If a shadow user is later discovered in the directory provider, Veritas Alta SaaS Protection automatically resolves its pre-existing access rights mapping for the identity.

Veritas Alta SaaS Protection Sharing

In addition to the inheritance of source ACLs, Veritas Alta SaaS Protection has the concept of sharing ACLs. Likewise, items and folders in Veritas Alta SaaS Protection can be shared internally and externally. The capabilities are controllable in Veritas Alta SaaS Protection's RBAC model.

Sharing from Veritas Alta SaaS Protection can be initiated in both the User Portal and Admin Portal.

Auditing of all sharing activity records the grantor, grantee(s), Date/Time, and the specific item or folder that was shared.

In the User Portal, shares can be reviewed and revoked.

In the Admin Portal, settings allow control over the following:

- ✔ Who can share
- ✔ Whether they can share internally and/or externally
- ✔ Whether to allow external users to authenticate
- ✔ Whether to expire shares by default
- ✔ The default share length (in days)
- ✔ Whether to send sharing invitation emails by default

Encryption

In-transit encryption

Veritas Alta SaaS Protection uses transport layer security (HTTPS / TLS) on all communications between users and apps, and within your Veritas Alta SaaS Protection tenant running in Azure, with one minor exception relating to a configuration within the search VM (see Search cluster security levels).

At-rest encryption

Veritas Alta SaaS Protection provides two approaches for encrypting data-at-rest:

1. The first method is the built-in encryption of Microsoft Azure in the cloud known as Azure Storage Service Encryption (SSE) for Data at Rest which is enabled by default on each Stor. Encrypting data at rest in this manner has the advantage of ensuring all data in the Stor has protection. Since data is AES 256-bit encrypted in storage by Microsoft after it arrives in the cloud, functionality such as full-text search and Web-based retrieval work as expected because the keys to decrypt the data are contained within the Azure blob storage security framework of the isolated tenant.

2. The second method is the option to encrypt data before sending it to the cloud, which ensures only you can read your data. Veritas Alta SaaS Protection's pre-ingest encryption option requires both that the target Stor has the Supports Pre-ingest Encryption option enabled, and that the specific connector in the CS has the Pre-Ingest Encrypt option enabled. Thus, it is possible to pre-ingest encrypt a subset of the data that you manage in Veritas Alta SaaS Protection since multiple connectors can write data to the Stor and connectors may or may not have the pre-ingest encryption option enabled. All data captured by a connector equipped with pre-ingest encryption will be encrypted before going through the ingestion process into your Veritas Alta SaaS Protection tenant.

When using the pre-ingest encryption capabilities, please note the following:

- The cipher is 256-bit AES encryption
- The key you provide in the CS will be stored on the CS host machine using Microsoft Data Protection API encryption (it will not be stored anywhere else)
- Veritas Alta SaaS Protection cloud-based features such as full-text indexing for search and any browser-based retrieval from the User Portal and Admin Portal will not be supported since these functions are not able to open the encrypted items
- Other Veritas Alta SaaS Protection's installable software such as the Retrieval Service and Export Service can hold the pre-ingest encryption key(s) so that data accessed through these services can be seamlessly decrypted within your domain

Storage Account Security and Data Integrity

A chief concern with any cloud storage technology should be the security surrounding the cloud storage accounts. In particular, standard practice for applications writing to cloud storage involves the application having the authentication key and password information for the target cloud storage account. Of course, the application will cache these credentials and the API security information locally, which it should store with encryption. However, regardless of local security measures by the calling application, this model has the sensitive storage account keys distributed to multiple machines outside of the tenant private network, creating a security governance challenge and risk exposure. For example, any compromise of this information would mean exposure of raw access to all the data in the storage account(s).

Veritas Alta SaaS Protection's unique design ensures the API key and credentials for your storage accounts are never known outside of the secure tenant configuration in the cloud. The CS instances, along with all other Veritas Alta SaaS Protection installable components and any applications that use the Veritas Alta SaaS Protection SDK have no knowledge of the destination storage accounts, nor do they have any means of accessing them directly.

For data with a file size of less than one terabyte, Veritas sends data to a staging storage account. After authentication and authorization checks, the CS or writing application are giving time- limited Secure Attention Sequence (SAS) tokens to the staging account. The data is then verified and deduplicated, copied into the final storage account, and then cleaned up from staging.

For large files, Veritas Alta SaaS Protection optimizes for performance by allowing direct writes and reads into the final storage account. When writing, the CS is given a time-limited write- only SAS token. For any reads of such large files, the requestor is given a time-limited read-only SAS token. Veritas Alta SaaS Protection supports huge files sizes, much larger than Azure's 4.75 TB limit, which involves chunking files. In the case of chunked files, SAS tokens are issued for each chunk.

Veritas' ingestion methodology always performs inline deduplication, compression, and data integrity checking, and regardless of the ingestion approach (staging or direct), the credentials and API key for your storage accounts are never known or externalized.

Auditing

All user activity is audited in Veritas Alta SaaS Protection to maintain a detailed history of all actions taken by users. This includes:

- Activities by end-users such as retrieval and sharing
- System activities that involve data manipulation (e.g., deletion)
- Administrative actions, such as modifying the configuration settings or creating or removing a policy
- Actions taken by privileged users in Veritas Alta SaaS Protection's data governance applications, such as removing a legal hold in a discovery case

Activity intelligence data can be filtered by date ranges, locations, and/or users and groups. At any time, activity data can be exported from Veritas Alta SaaS Protection for further analysis.

Storage Tiering Security

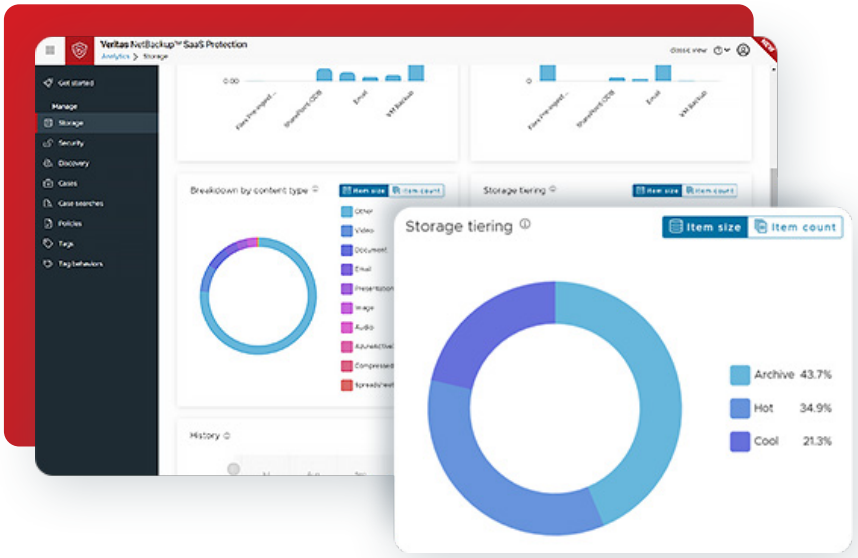
Veritas Alta SaaS Protection offers multiple methods for storage tiering from target data sources, as follows:

For Windows-based or Windows front-ended file storage:

- Seamless shortcuts
- Link-based shortcuts
- HTML shortcuts

For Windows and any non-Windows (i.e., SMB and NFS) file storage:

- Link-based shortcuts
- HTML shortcuts



For NetApp filers, symbolic link-based tiering is coming soon. For SharePoint, OneDrive for Business, and Teams document libraries:

- URL shortcuts

The following is an overview of how authorization security works for each method of storage tiering:

- **Seamless shortcuts** – The default security for seamless shortcuts employs a unique Veritas Alta SaaS Protection tenant key along with an encoded key that is embedded within each seamless shortcut file. Upon retrieval, the key pairs are evaluated to determine authorization. In this model, the effective ACLs on the source file system remain authoritative. Alternatively, the Veritas Alta SaaS Protection Retrieval Service has an advanced setting, Require Authorization for Stub Retrieval, which will use the inherited ACL in Veritas Alta SaaS Protection to perform authorization. Using the advanced setting is viewed as more secure.

However, it has several usability drawbacks since the inherited ACL in Veritas Alta SaaS Protection consists of domain accounts only. Thus, a user performing the retrieval request from an account logged in as a local user will not pass authorization. Likewise, neither will a user granted access through a local or special built-in group such as domain admins.

- **Link-based shortcuts** – Links point back to a central instance of the Retrieval Service which maintains a corresponding seamless shortcut to recall the file from the Retrieval Service's local cache or the Veritas Alta SaaS Protection tenant. Link-based shortcuts require authorization checks against the ACLs in Veritas Alta SaaS Protection, so directory synchronization is a prerequisite. Users are not able to obtain any directory listing of the Retrieval Service's local cache or its cohort of seamless shortcuts, and the names of seamless shortcuts in the Retrieval Service directory are impossible to guess.

- HTML and URL shortcuts – Shortcuts that are a URL to the item, when clicked, open the User Portal in the default browser, requiring the user to authenticate and pass authorization before the item opens. As the authorization checks evaluate the ACLs in Veritas Alta SaaS Protection , directory synchronization is a prerequisite.
- Symbolic links – Security of symbolic link-based tiering will be the same as it is for Veritas Alta SaaS Protection's current link-based shortcuts when support is available.

Penetration testing

Veritas contracts with a third-party to perform regular application penetration testing.

Deployment Security

While some multi-tenant scenarios exist, Veritas Alta SaaS Protection's standard deployment model and architecture is a single tenant.

A single-tenant architecture of the cloud-based resources and software provides the following advantages:

- Isolation for security and performance assurances
- Flexibility for tuning to meet budget, performance, and scalability requirements
- Flexibility to select the hosting cloud data center(s)
- Flexibility to select the account host

Logical organization of deployed cloud resources

In the cloud, resources dedicated to Veritas Alta SaaS Protection are deployed and managed within a logical boundary which is typically a dedicated subscription. There are two or three resource groups that serve as logical groupings of the different resource types used by Veritas Alta SaaS Protection. While deploying into an existing subscription is possible, a new and dedicated subscription is superior because it is better for maintaining a least-privileged authorization posture.

Hosting configuration

Veritas-hosted

If your Veritas Alta SaaS Protection tenant is hosted under Veritas' account, your dedicated Veritas Alta SaaS Protection resources will be configured in dedicated resource groups.

It is important to note that Veritas Alta SaaS Protection prefers a dedicated subscription because this offers better access control. However, we understand that you may prefer to deploy inside an existing subscription, in which case Veritas Alta SaaS Protection requires the creation of dedicated resource groups (RG) with a specific naming convention. Such details are coordinated during the kickoff call for your deployment. Either way, it's crucial that you adhere to the following principles when hosting Veritas Alta SaaS Protection in your account:

1. The Veritas Alta SaaS Protection-dedicated subscription (or RGs) will be for Veritas Alta SaaS Protection resources only. If you provision other resources here, it will inflate your Veritas Alta SaaS Protection costs because Veritas Alta SaaS Protection uses the metered Azure consumption within the boundary to determine your monthly pricing.
2. Veritas will be solely responsible for any configuration changes to resources in the Veritas Alta SaaS Protection-dedicated subscription (or RGs).
3. You will maintain least-privileged access to the Veritas Alta SaaS Protection-dedicated subscription (or RGs) because any accidental or malicious tampering of the resources therein may cause irreversible damage to your Veritas Alta SaaS Protection tenant. Due to this risk when in your account, Veritas recommends additional safeguards such as:
    a. Resource locks, and
    b. Veritas Alta SaaS Protection backup for Azure Blob Storage accounts

Vunerability scanning

To monitor the security posture of your Veritas Alta SaaS Protection tenant, vulnerability scanning is an option via Azure Security Center.

Given that the App Service is the only external-facing component of a Veritas Alta SaaS Protection tenant, customers do not typically opt for enablement of Azure Security Center monitoring within their Veritas Alta SaaS Protection tenant. However, it is available if you want additional assurances. Veritas Alta SaaS Protection supports Azure Security Center enablement on the App Service(s), Azure SQL instances, and any Windows or Linux virtual machines in your tenant configuration. While Azure Security Center does support monitoring of Azure Blob Storage, Veritas does not support monitoring of this resource type because of false positives resulting from normal batch operations within Veritas Alta SaaS Protection (i.e., ingesting new data, bulk exports, indexing jobs, etc.).

When enabled, Azure Security Center introduces an additional cost per node enrolled in monitoring. Given the Veritas Alta SaaS Protection cloud architecture, a valid approach that is cost- efficient is to enroll the App Service instance(s) only.

App Service security options

The App Service is the only external-facing component of your Veritas Alta SaaS Protection tenant. By default, the following App Service security characteristics are true:

- All communications and data transfers are encrypted in motion with TLS 1.2
- Any connection is forced to authenticate with your Azure AD directory provider, which can support MFA and SSO options
- Each Veritas Alta SaaS Protection tenant has dedicated App Service instances

Enhanced security options are available for your App Service instance(s), as follows:

- For additional isolation within Azure, the App Service Environment (ASE) feature can be enabled
- IP allow and deny lists are supported
- Azure VPN Gateway and Express Route is an option for dedicated network connectivity

Search cluster security levels

Each search cluster configuration is deployed in what we call a High-Security Model by default.

During indexing of data, the Veritas Alta SaaS Protection action executor passes Blobs through a Tika filter engine for text rendering, a step involving potentially large internal data transfers. The rendered text is returned as much smaller data size and submitted to the Elasticsearch engine for indexing and search. The Tika engine runs on the same Linux VM(s) as Elasticsearch which reside(s) in the private VNET. However, to avoid networking performance bottlenecks in the indexing process, communication to the Tika engine does not travel through the private VNet (optional).

This configuration is regarded as highly secure because the Linux VMs and their indexing elements are not externally accessible.

Billing data

Veritas Alta SaaS Protection's pricing is based on the number of users whose data is being protected. If your organization grows to have more users than the number covered by your initial licenses, the pricing will be changed to a new level once you have exceeded the initial number in your contract.

If you host your Veritas Alta SaaS Protection tenant, then Veritas requires access to billing data from your Azure account. An Azure billing API key must be created and shared with Veritas. The key expires every 90 days. Veritas will notify you when the key needs refreshing. The billing API key is an all-or-nothing authorization at the account level. When Veritas queries for billing data, the query result is pruned in memory so that Veritas Alta SaaS Protection fetches billing data from the specific subscription(s) or resource groups relevant to your Veritas Alta SaaS Protection tenant exclusively. Veritas does not store, process, or view billing data that is outside of your Veritas Alta SaaS Protection tenant.

Operational Security

SOC compliance

Veritas maintains SOC 2 Type II compliance with security and availability trust service principles. A redacted version of Veritas' SOC 2 audit report is available upon request under a signed non-disclosure agreement.

The Veritas Customer Operations System (COPS)

Veritas Alta SaaS Protection uses a custom-built SaaS operations security framework known as the Customer Operations System (COPS) for tenant automation and security. COPS also serves as an abstraction and governance layer so that any and all SaaS administration activity by Veritas does not require direct access to the Microsoft Azure portal. Instead, COPS forces multi-factor authentication, obfuscation, auditing, strict role- based access, and privileged identity management approval workflows.

With COPS, Veritas can attest that personnel in Veritas' DevOps and Customer Success teams do not have the ability to directly access any of the underlying cloud resources, nor can they maliciously or accidentally delete or access your data or resources.

COPS is used by Veritas in the following areas of Software-as-a-Service (SaaS) operation:

- Provisioning and de-provisioning of a Veritas Alta SaaS Protection tenant or the tenant's resources
- Manual and automatic upgrades
- Health monitoring, maintenance, and diagnostics
- Veritas Alta SaaS Protection administration activity auditing
- Manage authorizations, including privileged identity management security workflows
- Billing

At all times, COPS is working to obfuscate credentials, API keys, and identifiers associated with your Veritas Alta SaaS Protection tenant and its underlying cloud resources.

Privileged administrators of COPS

As with any system, there are administrators that have privileged access to COPS and customer resources. This group is known as the Veritas Alta SaaS Protection Privileged Admin Group. Technically, these users have super-user access to bypass the COPS framework. However, given their roles within the company, they have a vested interest in the success and security of this solution. It is an extremely low risk that these individuals would violate trust or accidentally breach security and risk protocols. Any access by these individuals is audited.

Privileged identity authorization workflows

Veritas operates authorization workflows facilitated by COPS for privileged users. A Veritas Alta SaaS Protection tenant can operate in one of two modes for approvals: standard or enhanced. For standard security, all authorization grant levels requiring approval have one or more of the members of the Veritas Alta SaaS Protection Privileged Admin Group at Veritas as the approver.

For enhanced security, a contact designated by the customer organization is the final approver of any authorization grants.

In both models, the following features are true:

- ✔ There are no shared accounts – Veritas personnel must authenticate to COPS through their veritas.com Azure AD account
- ✔ The grantee of the access approval initiates the workflow by logging a request which includes the authorization level type, purpose, and duration
- ✔ All approval workflow requests and grants are audited wherein the audit log is immutable and stored with indefinite retention
- ✔ Authorization grants are time-limited (usually in days)
- ✔ All Admin Portal access is audited (including page views if the relevant setting is enabled)

A self-grant authorization level exists by default to provide Veritas personnel with view-only access to the Admin Portal of your Veritas Alta SaaS Protection tenant. View-only access never exposes the information stored within your Veritas Alta SaaS Protection tenant in any way because the user cannot access the Discovery and Content applications (i.e., the individual does not see file and folder names). The view-only authorization still requires the logging of an access request, auditing of user activity, and does not expose your tenant to any risk of data access or tampering by a Veritas employee.

Executive-privilege tenants

Veritas understands that some organizations require the utmost privacy. To accommodate customers wishing to keep their organization's name a secret, Veritas offers an executive privilege option that ensures that members of the Veritas Alta SaaS Protection Privileged Admin Group are the only users that can see and manage your tenant. With executive-privilege status, your company's name is hidden within COPS from the DevOps and Customer Success teams at Veritas.

COPS as a protection mechanism against potential rogue behavior. COPS uniquely protects clients and Veritas from accidental or malicious insiders. With the exception of the members of the Veritas Alta SaaS Protection Privileged Admin Group, the COPS security framework ensures that all personnel at Veritas have no ability to accidentally or maliciously access, read, or delete your data or tenant resources.

The COPS framework ensures that the following are true for all Veritas personnel (other than the privileged admins) without a time-limited authorization approval:

- They (Veritas personnel) do not need to know, and cannot access, the subscription ID, API keys, or any credentials to any subscription or underlying resource
- They are not able to access Azure resources directly (no view through Azure Portal)
- They cannot accidentally or maliciously:

- Delete the subscription or any resources therein
- Delete the Veritas Alta SaaS Protection tenant configuration
- Access or delete BLOBs, either as operations directly against a storage account or through any of the Veritas Alta SaaS Protection interfaces
- Read metadata of customer data (i.e., file names, folder names)

Veritas Alta SaaS Protection upgrades

Veritas offers automatic and manual upgrade options for your Veritas Alta SaaS Protection tenant to stay current on the latest version of the Veritas Alta SaaS Protection software. When an upgrade occurs, it typically involves no more than three to five minutes of downtime and upgrades generally occur in the off-hours.

With the Veritas Alta SaaS Protection tenant upgrade complete, the latest version of the installable Veritas software components are downloaded from the Admin Portal. Veritas ensures that new versions of the Veritas Alta SaaS Protection tenant software are compatible with prior versions of the installable software.

However, it is a recommended best practice to update the installable software versions whenever the tenant software upgrades. In the future, Veritas plans to have the Veritas Alta SaaS Protection installable components upgrade automatically.

For manual upgrades of the tenant software, Veritas coordinates with you before any upgrade. If you prefer, you can have a dev/test Veritas Alta SaaS Protection tenant that upgrades first, allowing you to perform any quality control and user acceptance testing before the upgrade of your production tenant.

For most customers, upgrades of their Veritas Alta SaaS Protection tenant execute automatically. Veritas' auto-upgrade provides you with email notification in advance, and email notification upon completion. The emails include a release notes summary of what is new, and the Admin Portal includes an audit trail of all upgrade activity with a link to the release notes for each version.

The auto-upgrade is flexible in the following ways:

- Each customer enjoys a unique auto-upgrade configuration that suits their preference
- Notification emails can be sent to as many recipients as you desire, and the number of days in advance is also configurable. You can have multiple notification emails (up to five) sent at different configurable times before the actual upgrade.
- The default day and time of the upgrade event is configurable (e.g., Saturday at 6 AM)
- By default, the upgrade interval is every 90 days at an off-hours time. However, the upgrade interval can be more aggressive or more relaxed (e.g., weekly)

Regarding the default auto-upgrade interval, please note the following:

- In the Admin Portal, you will see the date of the next upgrade which you can change if you like. You can always advance or delay the next upgrade
- Veritas publishes a new version about every two weeks. When your tenant upgrades, it will always upgrade to the latest version at the time of your upgrade, and this will be a roll-up of everything new since the last version of your Veritas Alta SaaS Protection tenant
- When set to run on automatic upgrade, if there is ever an urgent update you wish to receive, Veritas can coordinate a manual upgrade at any time

Software development and release process security

Veritas maintains strict points of control within its development team and software release process.

Veritas uses BitBucket for source control, and Veritas' methodology for managing code changes involves a strict set of principles that are pushed down and managed by Veritas senior leadership.

For all check-ins, Veritas maintains a central point of control. Code changes go through one or multiple review and approval cycles before ultimately being reviewed by the central point of control, which is the Head of Veritas Alta SaaS Protection DevOps. Thus, this individual has the responsibility of performing a final approval on any code change before it goes into a release stream. For greater clarity, no one in Veritas can check in any code to master anywhere in Veritas' source control without passing the approval workflows which always include the final approval of the Head of Veritas Alta SaaS Protection DevOps as the central control point. For business continuity, the senior leadership will assume the role of central control point in the event the Head of Veritas Alta SaaS Protection DevOps is unable to for any reason.

Regarding Veritas' overall release process, for code changes that will go into the mainline code and eventually out to all customers, there is first a prioritization that happens within product strategy. All development items are tracked and prioritized in Jira. Features and fixes are targeted to a sprint per developer. Each developer branches off to make their specific changes. The changes will be staged and enter the approval workflow, which generally has two approvers on any given change. When the change has approval and passes through unit testing, it will go into a release candidate build. The release candidate build will deploy into multiple test tenants automatically where preliminary testing and then other, more rigorous types of testing occur. When Veritas is satisfied that the changes pass quality control measures, the change goes out with the next release.

Identity verification for technical assistance

Veritas maintains strict security in its customer success group which is part of the Veritas Alta SaaS Protection team. Security starts with the concept of named support users – individuals that you have identified to Veritas as being approved to contact us for technical assistance with your Veritas Alta SaaS Protection tenant.

Veritas will not provide information or assistance to individuals without identity verification. For email inquiries, we require that the sender's email address match what we have on record. For phone inquiries, we require the individual calling to demonstrate their ability to successfully sign-in to the Veritas Alta SaaS Protection tenant, which requires successful authentication with your Azure AD.

As an additional security measure, you can arrange a security question and answer with Veritas so that any individual requesting support for your organization will have to answer a security question in addition to signing in.

De-provisioning

Before de-provisioning a Veritas Alta SaaS Protection tenant, or any component therein, notification of the request will go to the Veritas Alta SaaS Protection Privileged Admin Group through access grant approval workflows in COPS. Approval is required from two Veritas Alta SaaS ProtectionPrivileged Admins as well as a written authorization from a verified customer admin before a resource or tenant can be deprovisioned.

Veritas Alta SaaS Protection software includes bulk data extraction capabilities. If your organization decides to cancel, you can export your data from Veritas Alta SaaS Protection on a self-service basis. Once you are satisfied with the data extraction, simply provide written notification to Veritas of your need to cancel. Veritas will ask for double confirmation. If at any time you require assistance with data extraction, please contact our Help Desk: https://www.veritas.com/content/support/contact-us.

Additional Security and Compliance Matters

Confidentiality

Veritas maintains strict confidentiality requirements internally and observes all confidentiality obligations defined between our organizations.

Government / law enforcement data requests

Veritas will not disclose your data to government or law enforcement agencies except as you direct or where we must by law. Veritas will not entertain unlawful requests. Unless Veritas is legally prohibited from doing so, we will promptly notify you of any such demand with a copy of the court order or subpoena.

GDPR and other data privacy compliance

Veritas' Master Subscription Agreement (MSA) includes a schedule dealing with Veritas' obligations as the data processor under the GDPR.

GDPR

Neither Veritas nor Microsoft use your data or derive information from it for advertising or data mining. This policy is backed by Veritas' MSA. (Microsoft supports a similar policy in their enterprise cloud service agreements). Veritas generates anonymized pattern data but never accesses your data without your written permission. There is generally no need for Veritas to access your data. However, the authorization process does exist for scenarios where a customer requests us to do so for testing, or for regulatory compliance reasons (e g , a designated third party under the SEA Rules).

In addition to day-to-day operations, Veritas support and services personnel may access diagnostic or pattern data of your Veritas Alta SaaS Protection tenant to provide customer support or optimize the service.

Microsoft security and compliance

Veritas Alta SaaS Protection runs exclusively on Microsoft Azure. Azure is a leading cloud platform that meets a broad set of international and industry-specific compliance standards, such as ISO 27001, FedRAMP, SOC 1 and SOC 2. Information about Microsoft Azure security, privacy, and compliance can be reviewed on the Microsoft website: https://www microsoft com/en-us/trustcenter/.

Veritas Alta SaaS Protection data management features

The following describes the advanced data management capabilities that are found in the Veritas Alta SaaS Protection Admin Portal.

All data that you manage in Veritas Alta SaaS Protection can be understood through file analysis capabilities. By default, attributes such as file size, file type, last accessed date, and last modified date will have statistical aggregation computed automatically on a near-real-time basis. Veritas Alta SaaS Protection provides visualization of the data in each storage account. Policies and searches can be used to isolate specific data sets, producing a dashboard visualization and a content browser view of the query results. Queries into the storage footprint can leverage combinations of the following clause types:

- Include Locations
- Exclude Locations
- Include Location Tags
- Exclude Location Tags
- Include Custodians
- Exclude Custodians

- Include Custodians by Extended AD Attribute
- Exclude Custodians by Extended AD Attribute
- Include Tags
- Exclude Tags
- Include Tag Behaviors
- Exclude Tag Behaviors
- Include Item Names
- Exclude Item Names
- Removed From Source
- Removed From Source At
- Item-level WORM Retention
- TotalBlobSizeKB
- LastModified
- LastAccessed
- ItemType
- DataOwner
- StorageTier
- CapturedAt
- And any list of item-level attributes that are specified in the metadata definition of the Stor configuration

> *Veritas Alta SaaS Protection has been a reliable solution, delivering protection of our Office 365 data and supporting our litigation and GDPR requirements.*
>
> **Steven Menmuir, Solutions Architect**
> Repsol Sinopec Resources UK

Data classification

Veritas Alta SaaS Protection includes detection of personally identifiable information (PII) and other sensitive data, and also has tagging capabilities. Standing queries and regular expressions can be configured and will evaluate against all data that is in the scope of full-text indexing.

Customizable tags can apply to data containing PII or other things of interest, and can be used for tracking, reporting, and to apply litigation holds or retrieval blocking.

Discovery

Veritas Alta SaaS Protection is equipped with discovery features that can assist you in an audit, investigation, legal claim, or GDPR response.

You can create and manage cases, perform federated searches across storage accounts, save queries, report on search results, save results to a case, and export a case's saved search results.

All discovery search and export activity are audited. Search audit records include query parameters, users, and Date/Time.

More details on the discovery capabilities in Veritas Alta SaaS Protection can be found in the knowledge base article: https://www.veritas.com/content/support/en_US/article.100050111

Litigation hold

Veritas Alta SaaS Protection provides multiple methods of applying litigation holds to your data, as follows:

1. By search added to a case
2. By user holds within a case
3. By tagging policy where the applied tag has the associated legal hold tag behavior

Items on hold are exempt from deletion by any Veritas Alta SaaS Protection deletion policies. Veritas Alta SaaS Protection provides insight into data that is on hold with dashboards and the content browser found in the Admin Portal.

More details on litigation holds in Veritas Alta SaaS Protection can be found in the knowledge base article: https://www.veritas.com/content/support/en_US/article.100050115.

Immutability

Veritas Alta SaaS Protection is built upon read-only object storage technology. By using this storage service, there is one way to perform deletion: deletion policies found in the Admin Portal. For this reason, Veritas Alta SaaS Protection includes legal hold and Write-Once-Read-Many (WORM) retention periods to prevent data from destruction.

When data is on legal hold or has a WORM retention period, it will not fall in the scope of any deletion policies. The deletion action executor performs item-level checks to verify that each item in scope of a deletion policy is eligible for deletion before executing any such deletion.

Veritas Alta SaaS Protection also integrates with the Azure Immutable Blob Storage capabilities to enforce immutability at the cloud provider level.

Veritas Alta SaaS Protection backup and disaster recovery

Many customers preserve data in their Veritas Alta SaaS Protection tenant, and that data becomes the master copy of the information. As such, a backup and disaster recovery strategy for your data in Veritas Alta SaaS Protection is paramount.

While data in your Veritas Alta SaaS Protection tenant is stored with synchronous replication within an Azure region by default, such redundancy is not a true backup of your information. Enabling Azure's geo-redundant storage options provides replication to a secondary Azure region. However, the secondary account is not a true backup. For this reason, Veritas Alta SaaS Protection provides a fully-managed cloud backup option that makes a true secondary copy of your Veritas Alta SaaS Protection Azure Blob Storage account(s) through an add-on service called Extra Data Backup.

Veritas Alta SaaS Protection's Extra Data Backup option typically negates the value provided by Azure geo-redundant storage (GRS) or Azure read access geo-redundant storage (RA-GRS) since it can accomplish the same result. However, Veritas Alta SaaS Protection's Extra Data Backup option offers distinct advantages over Azure's GRS storage. For example, Veritas Alta SaaS Protection's Extra Data Backup is decoupled from the primary storage account (it is purely additive). With GRS, a malicious or accidental deletion of data in the primary would synchronize to the secondary copies of the data. Whereas, with Extra Data Backup, the data in the secondary copy would not be deleted.

Veritas Alta SaaS Protection's Extra Data Backup also provides greater flexibility regarding the Azure data center that hosts the secondary storage account. The storage of the Extra Data Backup copy of the data does not need to match that of the primary copy in Veritas Alta SaaS Protection.

Security Contacts

Report a security incident

If you believe there's a security incident related to Veritas Alta SaaS Protection, or that may have any relation to Veritas, please report it to the Customer Success Help Desk. There are two ways to report an incident:

- Submit a ticket online via the Help Desk (you may need to register as a user if you are new to using the Help Desk). https://www.veritas.com/support/
- Call us toll-free at +1 (866) 837 4827

Other Reading

How to Enable Directory Synchronization: https://www.veritas.com/content/support/en_US/article.100050221

Prepare Microsoft Office 365 for Veritas Alta SaaS Protection: https://www.veritas.com/support/en_US/article.100050145

Veritas Alta SaaS Protection Pre-deployment Requirements - Veritas Hosted: https://www.veritas.com/content/support/en_US/article.100050144.html

Frequently Asked Questions

Q: Does Veritas Alta SaaS Protection support deployment into Azure Government regions?

A: Yes.

Q: Does Veritas Alta SaaS Protection support deployment into Azure China regions?

A: Veritas Alta SaaS Protection does not support deployment into Azure regions in China when hosting under Veritas.

Q: Is Veritas Alta SaaS Protection SOC 2 compliant?

A: Yes. Veritas maintains SOC 2 Type II compliance with Security and Availability TSPs.

Q: Does Veritas perform background checks on its employees?

A: Yes, as part of the hiring process, new employees must pass an international background check prior to their start date.

Q: Does Veritas have an insurance policy covering cyber threats liability?

A: Yes.

Q: Does Veritas use multi-factor authentication and single sign-on for all employees?

A: Yes. Both MFA and SSO are enabled for all employees.

About Veritas

Veritas Technologies is a leader in multi-cloud data management. Over 80,000 customers—including 95 percent of the Fortune 100—rely on Veritas to help ensure the protection, recoverability, and compliance of their data. Veritas has a reputation for reliability at scale, which delivers the resilience its customers need against the disruptions threatened by cyberattacks, like ransomware. No other vendor is able to match the ability of Veritas to execute, with support for 800+ data sources, 100+ operating systems, 1,400+ storage targets, and 60+ clouds through a single, unified approach. Powered by Cloud Scale Technology, Veritas is delivering today on its strategy for Autonomous Data Management that reduces operational overhead while delivering greater value. Learn more at www.veritas.com. Follow us on Twitter at @veritastechllc.

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