Egnyte Technical Overview

Winter 2022 Edition

Table of Contents

Introduction

An organization's unstructured content, including product plans, customer data, and other IP, contains not only the most valuable form of data for most companies, but also represents the most difficult to secure and govern. It accounts for the vast majority of corporate data created (>80%), accessed and shared by end-users, and therefore poses a more significant risk, because the systems where it is stored (public email folders, collaboration systems, cloud storage services) are not easily integrated.

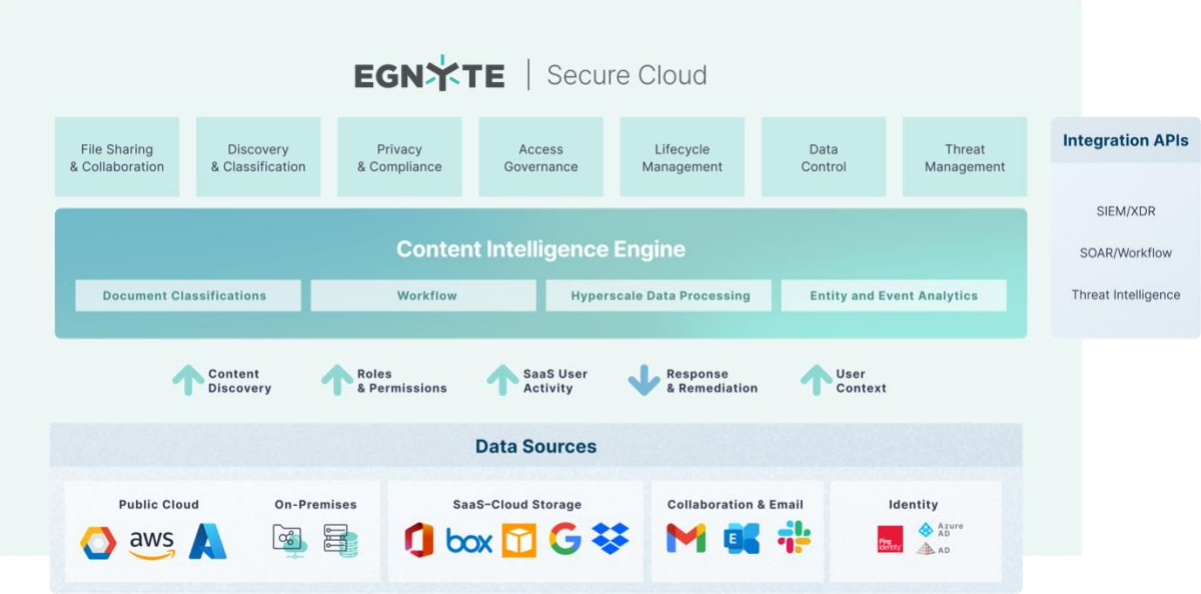
There are many solutions on the market today, ranging from free-to-use consumer tools to expensive and complex enterprise offerings. The former often lack centralized controls and adequate reporting, while the latter can overwhelm overcommitted IT organizations and understaffed security and risk teams. For thousands of companies, Egnyte's platform provides an ideal middle ground – protecting content from multiple vectors without compromising employee productivity.

As a unified solution, Egnyte provides the power of many tools in one: intelligent data discovery and classification, lifecycle management, access governance, threat management and secure file sharing and collaboration – to name a few. Simple to deploy and manage, Egnyte enables organizations of all sizes and industries to work faster, smarter, and safer.

Architecture

Egnyte provides organizations with a platform for identifying, classifying, managing, sharing, and securing sensitive data. Data can be stored in Egnyte applications for full control, in existing 3rd-party applications like Box, OneDrive, SharePoint, and Gmail, or in a combination of Egnyte and 3rd-party applications. Users can access data through existing 3rd-party apps and cloud services and Egnyte's web, desktop, mobile, and tablet apps.

Egnyte's integrations with over 170 popular applications allow users to use the business solutions they are accustomed to while organizations can manage, track, and protect data that flows through those applications.



Egnyte Object Store

Egnyte Object Store (EOS) is a patented storage management system that supports enterprise-class security and scalability, enabling higher performance and flexibility with dynamic unstructured data. This distributed model stores data within independent silos, based on client domains, so data from one client domain is never cross-contaminated with another. Independent silos also enable clients to efficiently encrypt data on private storage and manage encryption keys. Egnyte also supports object stores from all major third-party cloud storage providers, such as Amazon AWS, Google Cloud, Microsoft Azure, or any other S3-compatible cloud storage solutions.

Application Security

Egnyte has a multi-pronged strategy to detect and remove vulnerabilities to keep customer data safe. Egnyte's in-house security team continuously monitors applications and infrastructure, conducting regular penetration testing, security audits, and code reviews, both automatically and manually, in line with the highest Static Application Security Testing (SAST) and Dynamic Application Security Testing (DAST) standards. Egnyte also provides security training to all product and engineering teams to ensure that security is built into the Software Development Life Cycle (SDLC), from design to implementation, testing, and solution deployment. Egnyte embraces DevSecOps principles for all software deployments.

Vulnerability Management

Egnyte uses a third-party enterprise application security platform to continuously monitor its live production site and identify any vulnerabilities in the web application. This platform assesses all the critical classes of technical vulnerabilities, including the Open Web Application Security Project's (OWASP) Top 10 list. The assessment also includes a review of security controls and requirements listed in the OWASP Application Security Verification Standard (ASVS). In addition, all clients undergo a manual security audit, which is conducted on a periodic basis.

File Sharing & Collaboration

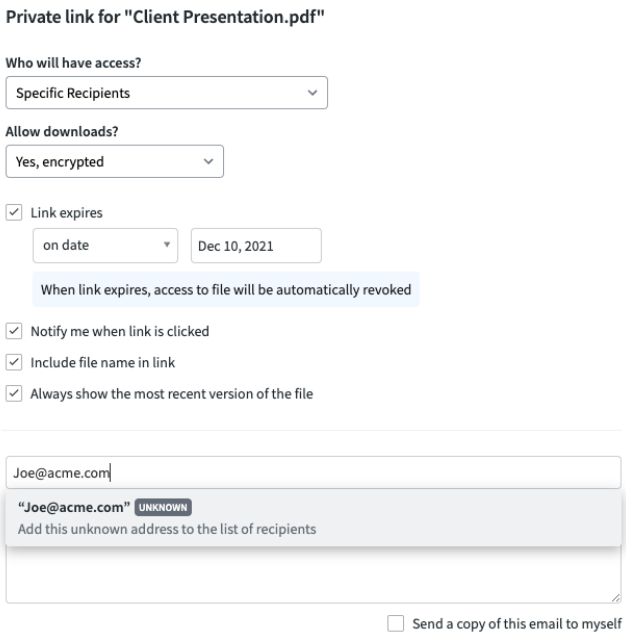
The Egnyte platform provides a simple, secure, and efficient means for sharing files and collaborating between employees, partners, and vendors. It allows users to manage file access and share sensitive information securely while maintaining control of future downstream data use or resharing.

File Links

While users and administrators can allow access to folders through permissions, Egnyte also provides the ability to share files through links. This is useful when sharing large files that might trigger a size limit, such as an email attachment, or when sharing sensitive data requiring more stringent security controls.

Secure Delivery

Egnyte allows sensitive files to be shared in an encrypted form, accepting decryption only by recipients who have installed the Egnyte FileGuard client (available for PC and Mac) and confirmed their identity by responding to an email to the email address with which the file was shared. Once the link expires or is revoked, PC recipients will no longer have access to the shared file, even if they downloaded it.



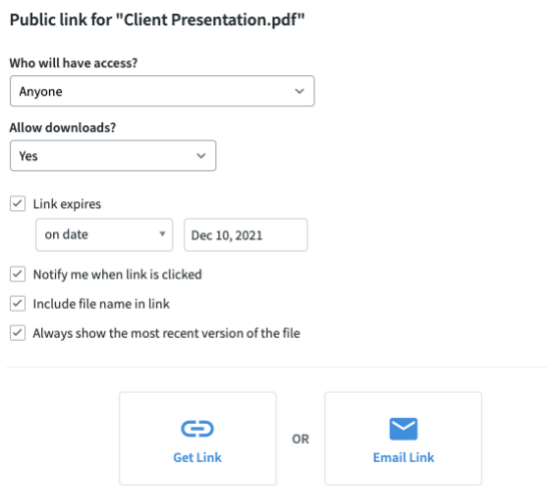
Preview-only Links

Preview-only links allow users to control a recipient's use of a file. The preview-only option prevents recipients from downloading or printing a shared file, as well as copy/pasting a file's contents.

Email-validated Sharing

When sharing sensitive content via email, it is critical that those receiving the data are the *intended* recipients and not someone with a similar email address, even more critical when using public email domains like Gmail. Egnyte supports this by validating email recipients when creating recipient-specific links.

When creating a Shared link, the recipients will be authenticated via email when they first access the link. If they access the link again in the future, they will be emailed an authorization code to unlock the shared content. With recipient-specific links, only the recipients indicated will be able to view the content, even if the link is forwarded to others.



Upload Links

Users can provide a link to allow non-authenticated recipients to upload files to a folder. The non-authenticated recipient is not allowed to see anything else in the folder.

Folder Links

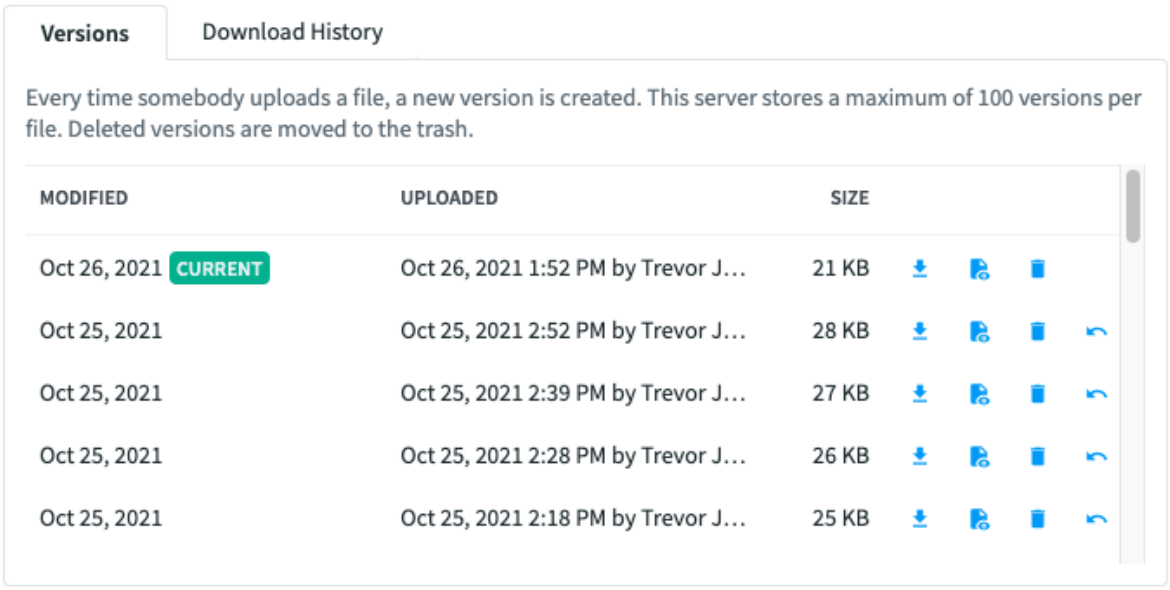
In addition to links to share individual files, Egnyte also provides the ability to share folder links to recipients. This allows the sharing of large numbers of files with a single link.

Co-editing

Users can edit documents simultaneously using online tools from Google Workspace or Microsoft 365 Online. This is helpful for live editing sessions in conjunction with video conference software. In addition, users can edit online documents using a desktop application while the desktop client manages file synchronization behind the scenes. In this case, the file can be automatically locked during editing to avoid conflicting edits from different users.

File Versioning

As documents are often shared among a group of users, to ensure a record of changes and prevent unauthorized changes, Egnyte provides automatic file versioning. Users can revert to a previous version if a file is accidentally or erroneously overwritten. This feature can also be used to recover individual files in the event of malicious behavior or ransomware.



Workflows

Users can add workflows to accompany documents stored in Egnyte. "To Do, Approval, and Review and Approval" workflows will automatically generate emails and track the next step in the process. Due dates can be assigned for individual steps, and signatures completed for approval. Documents are automatically locked while waiting for approval.

Commenting

In addition to traditional document commenting in Office 365 and Google Workspace, Egnyte supports native commenting which is visible to authorized users on the preview page for each document. This is helpful for discussions during the development of a document and to clarify steps in a review and approval workflow.

Custom Metadata

Administrators can allow users to add and edit metadata for files and folders within the Web UI. Metadata properties are displayed in the sidebar folder details pane to make finding related folders and files even easier. In addition, Egnyte preserves and can support external metadata such as Microsoft sensitivity labels through integrations with Microsoft Information Protection.

Search and Recent Files

Egnyte provides AI-driven search tools to help users find specific information across large folder structures in either files or folders. Recently accessed files are highlighted to help users find the latest information.

File Preview

Egnyte provides a preview capability to display the contents of a file in a browser window without having to open an editor. Many different types of files formats are supported including the most common word processing, spreadsheets, presentations, images, audio, and video formats. In addition, Egnyte supports "Preview-Only" links which only allow the recipient to preview, but not download or edit a file.

Project Folders

Egnyte supports project folders for those companies that organize work around projects. Project folders can be used as templates to start a new project, and equally importantly, are recognized by the system so that retention policies can be set up to automatically clean-up and archive associated documents after a project is closed.

Connected Folders

Connected folders sync folders stored on an end-user computer with specified folders in the cloud. Particularly useful for linking library folders such as Desktop, Documents, Pictures, and Downloads, this feature provides increased performance when working with large files. Any changes between the folder on the hard drive or the corresponding folders in the cloud are kept in sync in real-time and allow access to files when offline.

Video Transcoding

The video preview function converts flv, mp3, mp4, m4a, ogv, webm, wav, mov, avi, wmv, m4v, and mpeg type files and displays them appropriately. Viewing video in preview mode allows the user to watch a video immediately without having to wait for the entire file to download. It can also be used to protect the contents of the file.

Audit Reporting

Egnyte provides a series of audit reports that summarize important insights for administrators. These include reports on: Files, Permissions, Logins, User Provisioning, Group Provisioning, Configuration Settings, Workflow Audits, and Saved/Scheduled queries.

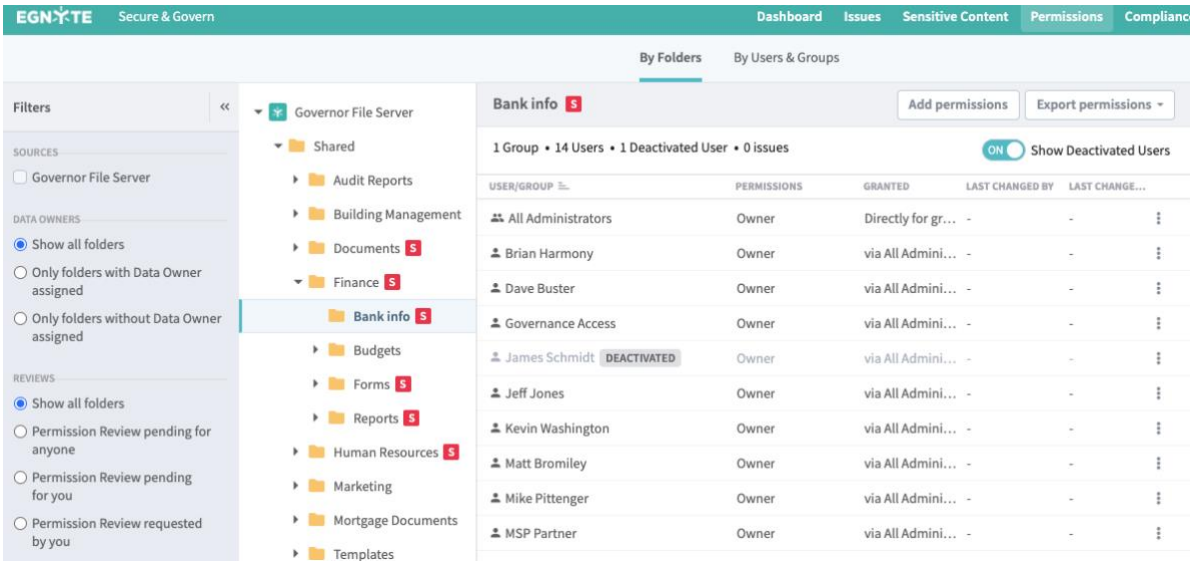
Single Source of Truth

Because Egnyte creates a layer of abstraction between users and their data, significant flexibility is provided. A user can use the desktop app for simple "drive letter" access, browser access to the Egnyte domain, and a mobile app for remote access. Therefore, files can reside

in multiple places, but the single source of truth is the Egnyte domain while the others are kept in sync.

Permissions Browser

Egnyte's Permissions Browser gives visibility to the permissions structure for each folder across connected repositories, allowing administrators to audit permissions and enforce access controls. The Permissions Browser displays permissions for individuals or groups, including how each user derives their permission to view specific content (e.g., as a member of an entitled group or through direct permission from the owner), as well as whether they have view, edit, full, or owner access.



If permissions appear incorrect, the administrator can request a review by the data owner.

Non-inherited Permissions

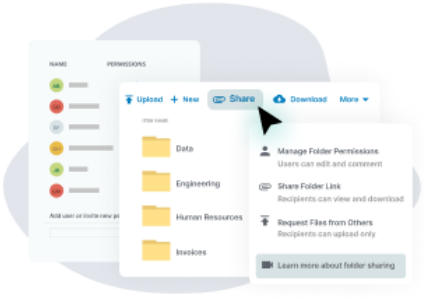
Permissions for folders in competing systems are inherited from the folder above. However, this is not always preferred and can often lead to inadvertent exposure of sensitive information. Egnyte allows the data owner to over-ride inheritance and change the permissions on sub-folders to match business needs. This can often reduce the need to create separate folders inside and outside a folder structure.

User Access

Egnyte allows users in distributed workforce settings to access content through a desktop application, web browser, native applications, and via a mobile app. It also provides users and administrators a variety of options for storing and accessing data:

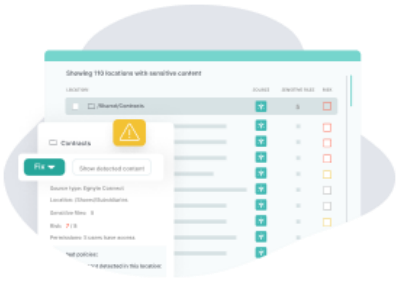
01 | Local caching of large files

When permissions allow, files can be stored on-premises to eliminate internet bandwidth and latency concerns.



02 | Desktop and mobile device

When local access is required (no, slow, or untrusted internet, travel, etc.) Egnyte enables users to synchronize data from Egnyte with desktop folders.



03 | Differential synchronization

Egnyte provides differential synchronization to update only the parts of a file that have changes to improve performance.

04 | File compression

Many file types can be compressed prior to upload or download when bandwidth is an issue.

Smart Cache

Smart Cache is Egnyte's next generation hybrid technology. It works with the Egnyte Desktop App so that files are available from a single drive letter on a user's device. When users are at home, Egnyte Desktop App automatically connects to the cloud. When users are present in an office, Egnyte Desktop App connects to the device if there is one deployed in their Local Area Network. Smart Cache supports Global File Locking, so that when a file is opened for editing, the file is locked and is not editable by any other user. With Smart Cache, users who travel between different offices can continue to use the Desktop App to access files stored in Smart Cache devices at each location (if they are authorized to access the Smart Cache device). The Desktop App discovers the nearest device based on certain network tests (bandwidth and latency checks) and connects to the appropriate device or the cloud. This way, users can easily move between offices and still access their files in the most optimal manner.

File Protocol Support

Egnyte supports Server Message Block (SMB) protocol for organizations using back-end capabilities like scanners, machinery, and custom programs as well as FTP, SFTP, WebDAV and other common protocols. This provides the flexibility to connect to on-premises file systems in addition to cloud repositories.

User Authentication

Egnyte enables strict user authentication and permission enforcement at every access point, ensuring only users with appropriate credentials can access company data. Organizations can use existing corporate identity management systems, such as Active Directory, LDAP and the Google Identity Platform (using SAML IdP), to authenticate users and ensure consistent policy enforcement. Egnyte supports Single Sign On (SSO) through SAML 2.0, and partner integrations with leading identity management solutions such as Okta. Egnyte also offers its own access system which includes multifactor authentication.

Egnyte also implements multiple measures to prevent unauthorized access after a user has logged in, issuing session timeouts and alerting administrators when Egnyte is accessed from unexpected geo-locations that may indicate a potential threat.

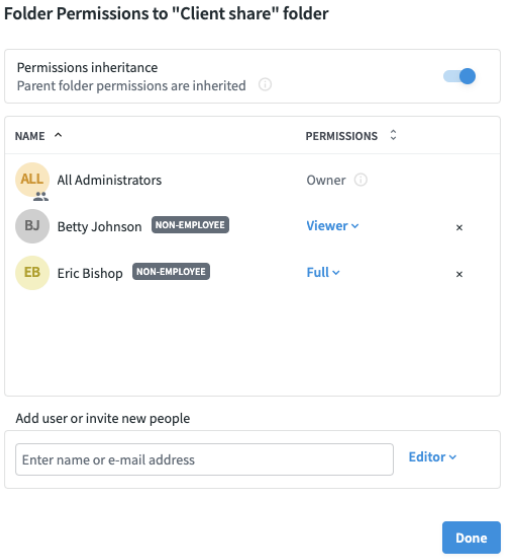
Access Governance

Egnyte allows folder access permissions to be easily set for an individual or groups of users. Groups can include both employees and external users, as required by the business. For example, groups can be created for the entire finance department, procurement and specific suppliers, marketing and external contractors, or executive team only. Permissions can be set for each folder and sub-folder or across a repository to prevent over-sharing and unnecessary access to sensitive information.

Permissions

Access permissions are always uniformly enforced, irrespective of location and access method (web browser, desktop app, secure FTP, mobile app). Users and groups can be granted different access levels:

- Viewer
- Editor
- Full
- Owner



And administrators can set granular folder and sub-folder permissions for each individual user (e.g., none, read-only, read/write, read/write/delete).

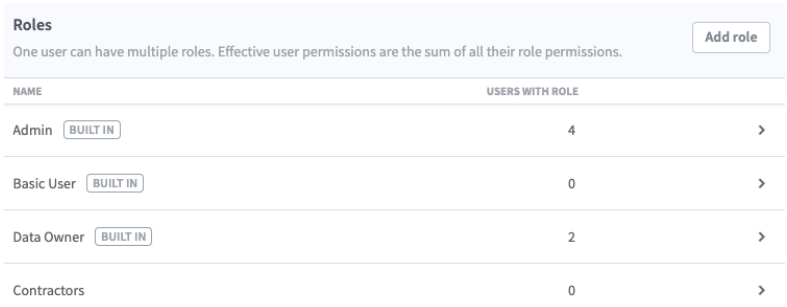
Permissions for each folder and sub-folder are flexible. For example, folders can be set to preview-only links, which prevent users from downloading, printing, and copying files. Customers can also leverage recipient-specific distribution (described below) and detailed tracking for complete visibility into the activity surrounding their users' activity and files. These advanced access controls are critical to the implementation of data structure and hierarchy.

Documents are typically shared among a group of users. To ensure a record of changes and to prevent unauthorized changes, Egnyte provides *automatic file versioning* – allowing users to revert to a previous version if a file is accidentally or erroneously overwritten – and *automatic global file locking* to avoid version conflicts or prevent simultaneous editing by multiple users.

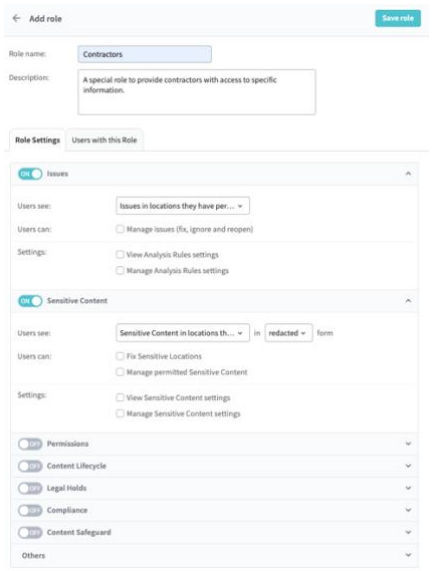
User Roles

Egnyte supports granular access policies based on a user's role in the organization, giving administrators full control over the applications that users can access. Administration can be delegated for business unit leaders or departments. Typical users include:

- Administrators - assigned to manage and perform administrative functions.
- Power Users – typically employees – given rights to override or remove permissions at lower levels.



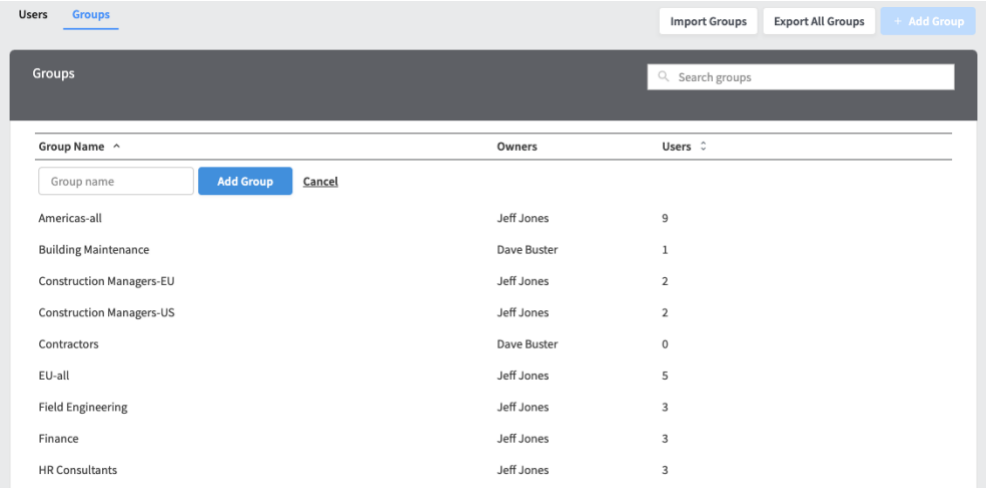
- Standard Users - include non-employees, such as consultants and contractors, who are extensions of the company and need secure access to internal files to conduct their business. A standard user has authenticated and managed access to company content.
- Anonymous External Users - often business partners and others who need to exchange documents with the company but do not need authenticated access to files.



These roles are sufficient for many organizations. For those needing the flexibility to create new roles to meet business requirements, Egnyte provides that capability as well. New roles can be created and defined as required, with full control over the capabilities for that role.

In addition to roles and users, Egnyte supports the concept of groups, which provides tools to manage thousands of user permissions. Groups can be created which can be assigned access permissions, and then users added to the group in bulk. The concept of groups provides a powerful tool to manage permissions across large numbers of users. To prevent misuse,

Egnyte provides alerts to inform administrators of empty groups (groups with no members) and unused groups (which have not been given access).



Login Credentials

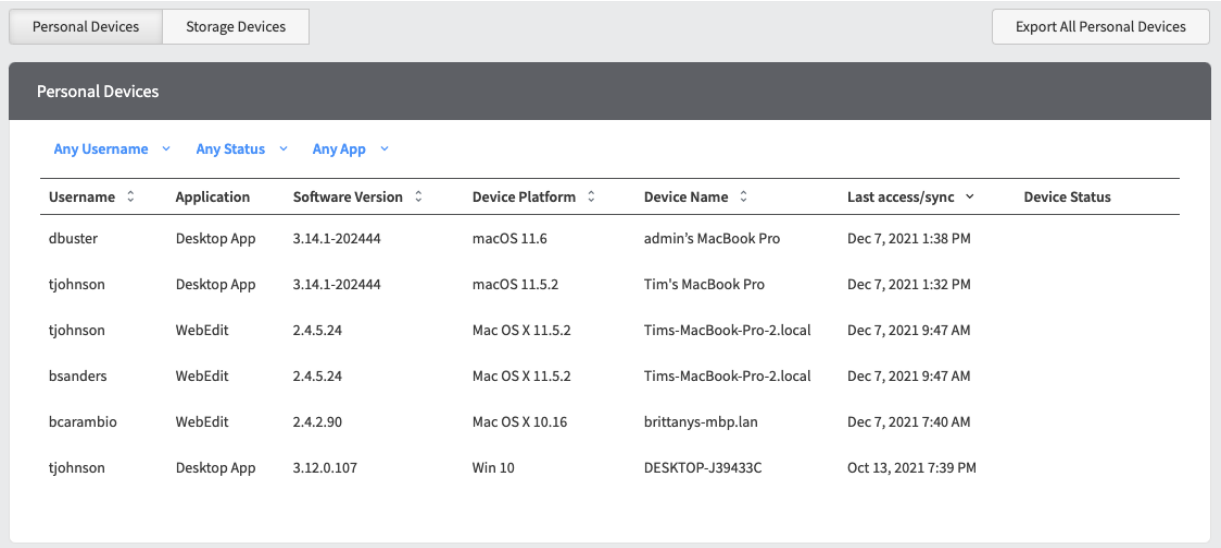
Egnyte administrators set password length and complexity requirements, as well as mandatory password rotations, and enable account lockouts after failed logins. Egnyte monitors and logs all access attempts and generates alerts for suspicious activity. Login credentials are protected via one-way hashing.

Multi-Factor Authentication

Egnyte's Two-Step Login Verification enables administrators to require users to verify their identity through a phone call, SMS message, or authenticator app. Egnyte also supports two-factor authentication through FIDO2/WebAuthn.

Device Controls

Egnyte provides a centralized dashboard to control and monitor all employee devices. Within the device control panel, administrators can enforce additional security settings to manage Egnyte content on desktops, laptops, mobile phones, and tablets. This includes the ability to allow or prevent data synchronization under specific conditions, prevent specific file types from synching, and requiring passcode locks on mobile devices.



Enterprise Mobility Management and Mobile Device Management

Egnyte can integrate with enterprise mobile management (EMM) and mobile device management (MDM) containers to allow customers to install and manage Egnyte's applications with a broader set of mobile policies to deliver consistent controls.

Egnyte can also use mass deployment capabilities to securely download the Desktop App client, for those customers who want local, high-speed access, or offline access to files. Egnyte's mobile apps can be deployed from an enterprise app store, managed with the EMM platform, and remotely wiped in the case of a lost device.

For customers who do not have an EMM or MDM solution, Egnyte provides a host of native device control capabilities outlined below. As with the mobile application, the Egnyte desktop application also provides a remote wipe capability.

Mobile Passcode Lock

Egnyte allows organizations to minimize security risks if employees' mobile devices are lost or stolen. Administrators can set mandatory passcode locks, requiring users to enter a PIN after login or an extended idle time. As an additional safety precaution, locally stored mobile files can be automatically wiped after a set number of incorrect passcode attempts.

Administrators can control whether employees can download files locally on their mobile devices and how often local files are periodically deleted. By turning off local downloads, documents can only be viewed online, preventing offline access to sensitive data.

Remote Wipe

Administrators or device owners can quickly initiate remote wipes of Egnyte files on mobile apps and Desktop Sync clients from a web interface that provides a centralized view of all end-user devices.

Device Entitlement

Administrators can manage which mobile devices are allowed to use the Egnyte mobile app. Likewise, similar capability is provided with the desktop application. This prevents the application from being installed on unmanaged endpoints.

Mobile File Encryption

When using Egnyte, files are protected during transmission and at rest through government-grade 256-bit AES encryption. For customers looking for additional mobile security, file encryption is available for offline files stored on a device. This provides complete endpoint encryption, so even in the event of data leaks or device theft, customers' files are always encrypted.

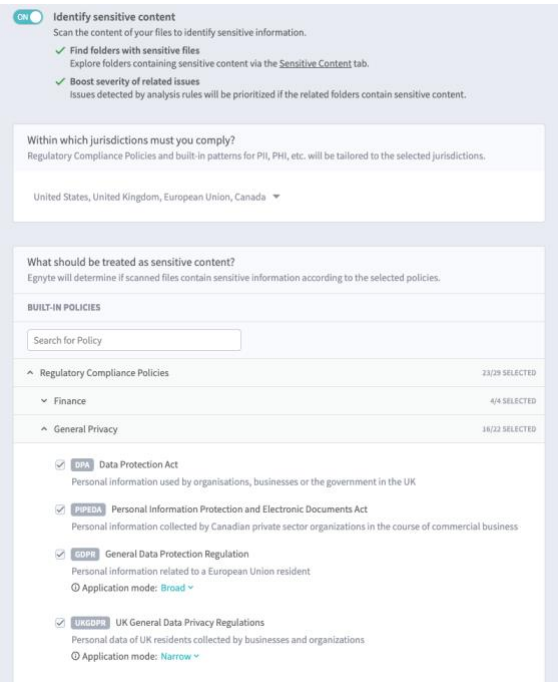
Discovery & Classification

Egnyte continuously scans all governed repositories to discover and classify sensitive data. This includes unstructured data from email and messaging applications, commercial and custom applications, corporate and personal devices, SaaS applications, and public and private clouds.

Data Classification

Since not every piece of data is subject to the same security and regulatory policies, the millions of files and terabytes of information that are identified must be categorized or *classified* for sensitivity. Manual classification by end-users is inconsistent and does not scale to millions of documents. Instead, Egnyte automatically classifies data to flag sensitive information as each repository is scanned. This includes unstructured data from office documents and files, local and remote file servers, corporate email, messaging applications, and other business applications.

The complex process of data classification requires artificial intelligence and machine learning, provided by Egnyte's Content Intelligence Engine. For instance, in a random document, a string of digits may be a sensitive Social Security number, or a part number. The Egnyte system scans the surrounding information for context before deciding whether data is sensitive. Occasionally, an administrator will receive a message asking if the data detected is indeed sensitive, and the system then uses these human confirmations to learn.



A typical Egnyte deployment scans and classifies 7 million files, and 3 terabytes of data in less than a week using content-based and contextual classification rules. Egnyte then continuously scans each repository for data that is added or changed and classifies it in real-time.

Content-based Classification

Egnyte automatically identifies and classifies sensitive information like credit card numbers, addresses, dates of birth, social security numbers, and health-related information (such as patient ID numbers and diagnostic codes). Classification parameters are pre-configured for

major regulatory standards and geographies, as outlined in the Regulatory Compliance section of this document.

Administrators can also add custom classifications for parameters unique to their organizations, including keywords, patterns, file properties, document templates, file types, and metadata. In the case of graphics files (.png, etc.), the Egnyte system automatically uses Optical Character Recognition (OCR) to derive text from the image that it can then use to classify sensitive data. This helps Egnyte classify photos of sensitive records such as driver's licenses and social security cards.

For many text documents, Egnyte also detects document types based on the format and structure of the document itself. Documents such as resumes, invoices, and contracts can be detected (and subsequently protected) this way.

File type	Extension
Microsoft Office files since Office 2007	.docx .docm .dotx .dotm .xlsx .xlsm .xltx .xltm .xlsb .pptx .pptm .potx .potm .ppam .ppsm .ppsx .sldx .sldm
Legacy Microsoft Office formats	.doc .docb .doct .dot .xls .xlt .xlm .ppt .pot .pps
Postscript and PDF formats	.ps .pdf
Other spreadsheet formats	.csv .tsv
Email storage formats	.msg .mbox
OpenDocument formats	.odt .ods .odp
Rich text and simple text formats	.rtf .txt
Compressed archives (non-encrypted)	.zip .7z .bz2 .cpio .jar .rar .tar .gz .xz .tgz
Image files	.jpg .jpeg .png .tif .tiff .bmp
Google Suite files	.gsheet .gdoc .gslides
Other file types	.epub .html .xml .xhtml .ooxml .odf

Contextual Classification

Certain data, including video, audio, images, and drawings, cannot be "read" for sensitive information. In those cases, Egnyte can classify data based on configurable settings such as data store, author, file type, or file folder.

Lifecycle Management

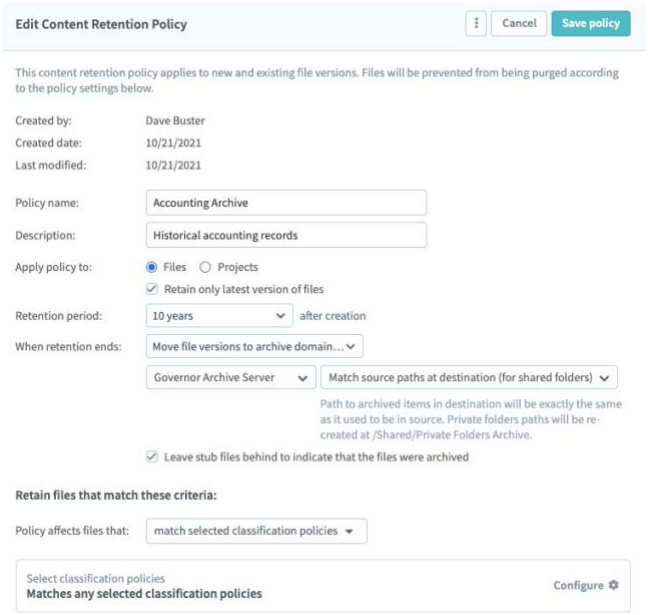
In most organizations, content expands exponentially. Not only is new content created, but old content gets copied and replicated across multiple repositories. As old content accumulates, it creates potential problems for the organization, including:

- Legal liabilities when retention policies are not documented and followed
- Expanded target surface for attackers to mine for sensitive information
- Difficulty for employees to find the information they need to do their job
- Additional costs for active storage of unneeded data

Egnyte helps address these problems with tools for Lifecycle Management.

Lifecycle Policy Creation Engine

Administrators can write their own policies to automatically retain, archive, or even delete old data based on when it was created, folder locations, or classification. These policies can be as simple or as complex as necessary to fit business needs. Overlapping policies are managed according to the following rules:



Retention

Files covered by multiple retention policies are retained according to the policy with the most extended retention period. This provides the best protection for critical information.

Archiving

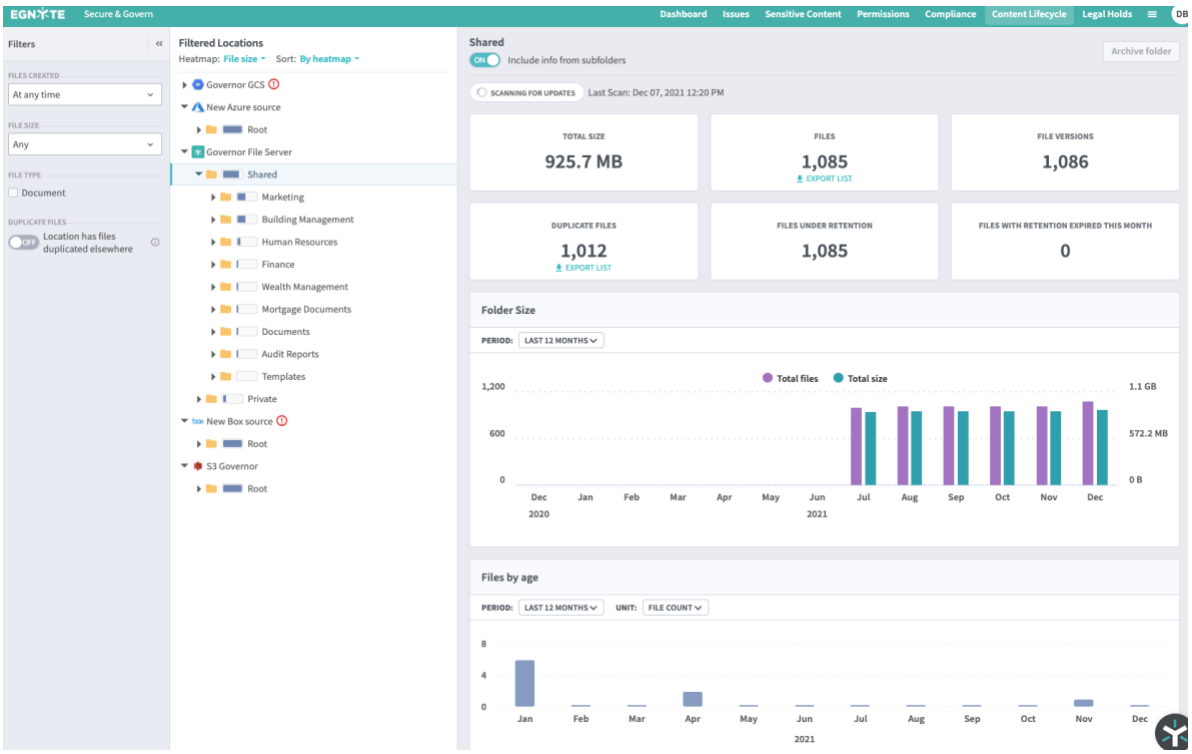
Files covered by multiple archiving policies are archived according to the policy with the shortest archiving period. This saves money by archiving files sooner.

Deletion

Files covered by multiple deletion policies are deleted according to the policy with the shortest deletion period. This saves money by deleting files sooner.

ROTS (Redundant, Obsolete, Trivial, Stale) Data Management

The risk of sensitive data being exposed increases each time a new version of a document is created or shared. At the same time, many organizations are subject to regulatory standards with strict data retention policies. Egnyte's policy templates allow organizations to classify files across repositories and identify redundant, obsolete, trivial, and stale data (ROTS) that can be securely deleted to minimize risk.



Unified Analytics and Reporting

As Egnyte continuously scans, classifies, and monitors content, it surfaces a Lifecycle Management dashboard for admins. An administrator can select any folder structure and review detailed statistics including:

- number of files
- number of versions
- number of duplicate files
- files under retention
- file ages and activity
- file types
- folder sizes

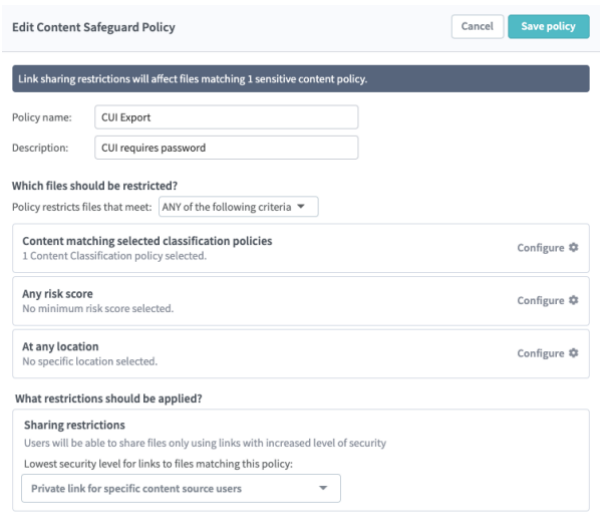
Data Controls

Once sensitive information is identified, Egnyte allows administrators to manage access to content while allowing employees to access relevant data freely and collaborate with each other, customers, and business partners.

Egnyte's Access Control features continuously monitor content sources, in the cloud and on-premises, to automatically:

- Identify issues with permissions and sharing to ensure only authorized individuals have access to sensitive information.
- Eliminate non-secure links and comprehensively review sharing with outside parties.
- Audit and streamline permissions across content repositories for greater control and security.
- Spot unusual user activity to prevent insider data theft and other malicious actions.

Content Safeguards



Egnyte protects governed repositories from data leaks by restricting public links to sensitive files. Content Safeguards use machine learning-based policies to determine if a file contains sensitive content. Egnyte applies sharing restrictions when it detects sensitive content in a file, Restrictions can include requiring password file access or limiting external file sharing, or simply warning the user that external sharing is not recommended. In the user warning example, the user is provided an opportunity to override the file sharing restriction with an explanation. Administrators can create Content Safeguard policies to apply a minimum-security level to links, based on sensitive content matching, risk score, and/or location.

Encryption in Transit

Egnyte uses HTTPS and secure FTP protocols to create a protected, encrypted channel and encrypts data in transit using 256-bit AES, including sensitive files shared externally.

Encryption at Rest

All the data stored on Egnyte's servers is automatically encrypted using AES 256-bit encryption and hashed encryption keys that are unique to each account and stored in a secure key vault accessible only by the Egnyte Object store software.

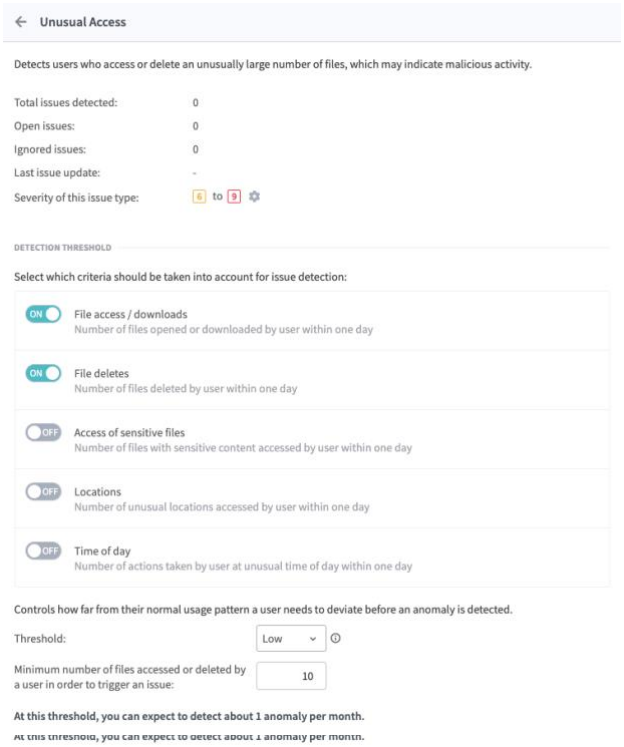
File Encryption and Key Management

Enterprise Key Management (EKM) allows organizations to manage their keys using a third-party cloud service or their own on-premises infrastructure. Egnyte supports Microsoft Azure Key Vault and Amazon AWS CloudHSM.

Threat Management

Issue Detection

Egnyte uses machine learning to detect issues that might result in data loss or non-compliance with privacy regulations. From a centrally located Issues tab, users can identify problems including:



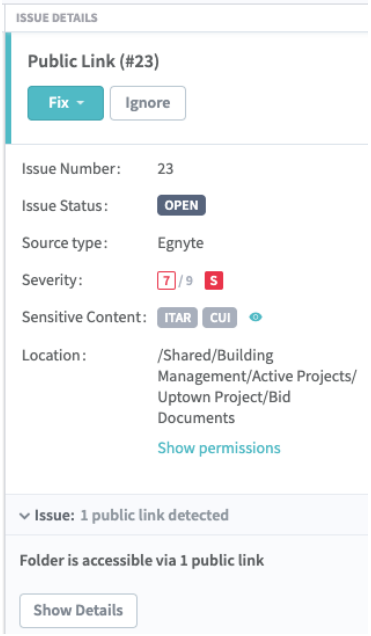
- Empty and unused groups: Detects groups that contain no users and groups with users that lack any folder permissions.
- External sharing: Detects files and folders that have been made accessible to people outside your organization.
- Individual permissions: Detects folders that are directly permitted to individual users rather than to groups.
- Open access: Detects folders that are accessible to Open groups (with very large numbers of users)
- Probable ransomware: Detects user accounts suspected of being compromised by ransomware, either through artifacts or behavior.
- Public link: Detects files and folders accessible by a public link.
- Suspicious login: Detects anomalous login activity that may indicate a compromised account. This includes impossible travel and location.
- Unusual access: Flags users downloading or deleting unusually large amounts of data to help prevent data loss.

Issue Alerting

Administrators or other designated alert recipients receive notifications when issues arise, such as when publicly available links to sensitive information are shared, content that's marked sensitive is shared outside of predetermined boundaries, or a compromised account is detected. Customizable alerts can be created in minutes to help avoid "alert fatigue", common among traditional security solutions. An administrator can select the severity of the alert and then choose to receive emails above the selected threshold. By using (free) third party email/SMS gateways, these emails can also be forwarded as text messages to mobile devices.

Issue Prioritization and Resolution

The Issues tab provides quick remediation and allows administrators to filter issues by severity and set alert thresholds for unusual or anomalous behavior. To simplify issue prioritization, all issues are scored by severity (1–9) based on the type and amount of sensitive content present. This approach also transforms a list of potential issues into actionable tasks, which permit administrators to:



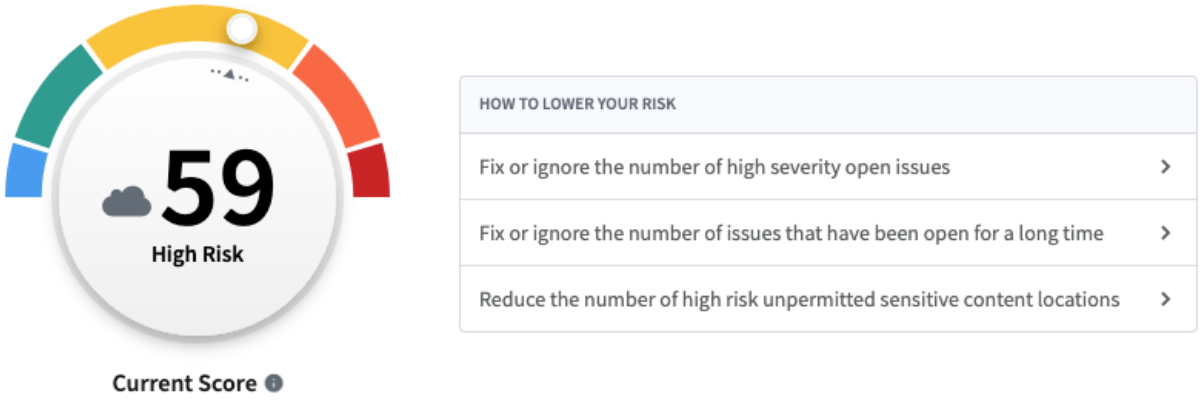
- Disable a compromised user account
- Force password resets or add user exceptions
- Expire public links
- Delete empty or unused groups
- Move, delete, or "whitelist" sensitive content
- Modify permissions

Typically, the system recommends a fix to the issue which is available with one click.

Risk Score

A risk score is calculated when an issue or sensitive content location is detected based on analysis rules and classification policies. The risk score is calculated by analyzing the age and severity of open issues in the repositories, where sensitive content is located, and who has access to it.

An overall risk summary is also displayed in a unified admin dashboard, to allow tracking of risk over time. Organizations can quickly reduce risk scores by remediating high severity open issues, limiting the number of unpermitted high risk sensitive content locations, and limiting the number of users who have access to high-risk content.



Ransomware Detection & Remediation

Egnyte provides ransomware detection capabilities and facilitates recovery from potential attacks. It also reduces the risk of attacks by locking down file access with least-privilege, granular permissions, and applies signature-based protection to block known malware. In the event of an unknown variant, Egnyte's machine learning-based behavioral analytics can recognize file activity that could be indicative of ransomware—such as renaming, deletions, and changes in file entropy—and disable compromised accounts to block attack progression. Egnyte speeds recovery through an audit trail of compromised users, files, and data subjects/sensitive data and the ability to roll back specific files to a pre-attack state.

File Recovery

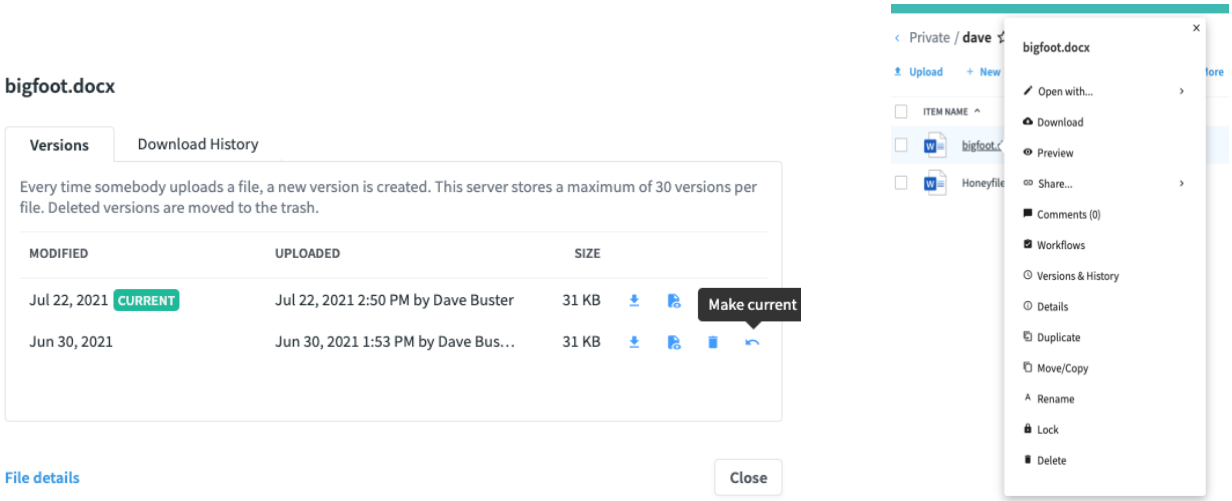
Egnyte offers three different ways to recover files encrypted by ransomware. These are:

- Individual recovery
- Bulk Recovery with Egnyte Professional Services
- Snapshot recovery

Individual File Recovery

For small ransomware events affecting few files, users can recover files directly without IT support, the same way they would recover files that were inadvertently over-written. The user simply selects the file and chooses “Versions & History” from the pop-up menu.

Then, the user simply chooses a previous version of the file and selects “Make current”. Because Egnyte keeps previous file versions online, the file is instantly reverted to a good version with virtually no delay.



If a ransomware attack is confined to a single user, then it’s a simple matter to revert affected files back to a previous version. The date and time stamps make it easy to determine which files might have been affected.

Bulk Recovery with Egnyte Professional Services

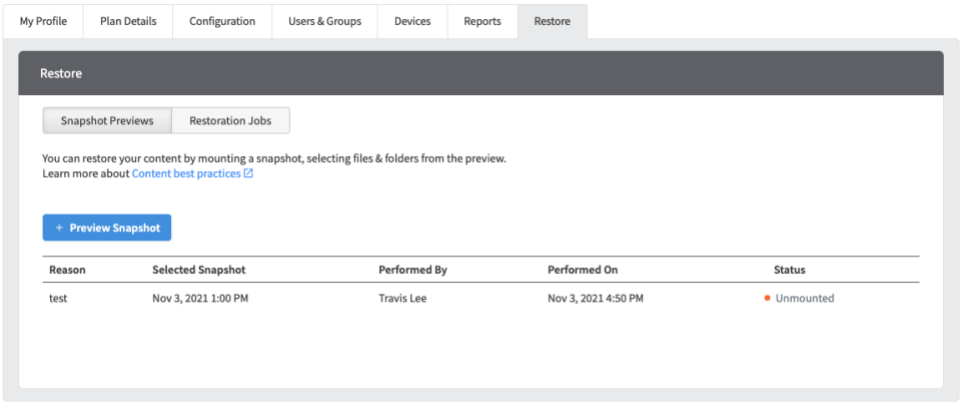
For larger scale attacks that affect large numbers of files and folders, individual file recovery is not practical. In that case, Egnyte offers bulk file recovery through the Egnyte Professional Services organization.

Snapshot Recovery

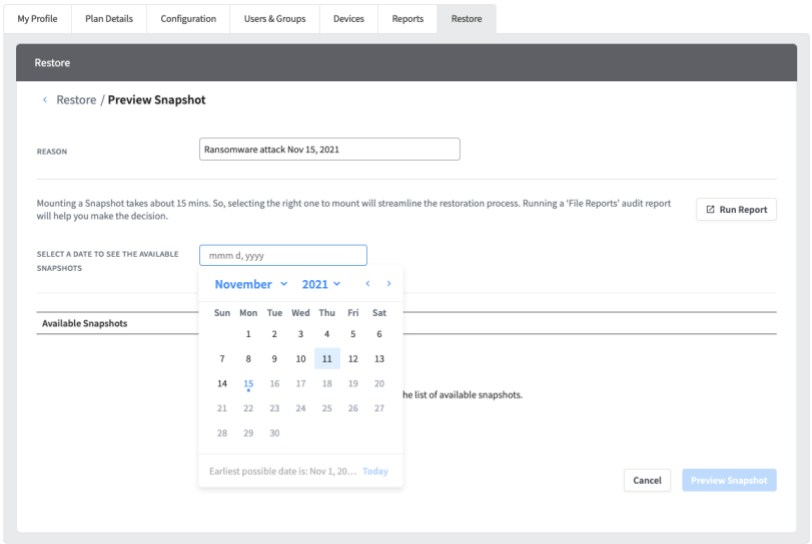
For customers on select platforms, a snapshot bulk recovery tool can be used to recover entire folder structures. Administrators can view a report of snapshots of their folder structure. By scrolling back through time, they can detect when the ransomware attack started and then choose a recovery point just prior to the attack. Full restoration usually takes minutes to a few hours (depending on the scope of the attack). However, in all cases, restoration is much faster than manually copying drives. These steps are outlined in more detail below.

Selecting a Snapshot

An administrator opens the “Restore” tab on the “Settings” page to begin the process.

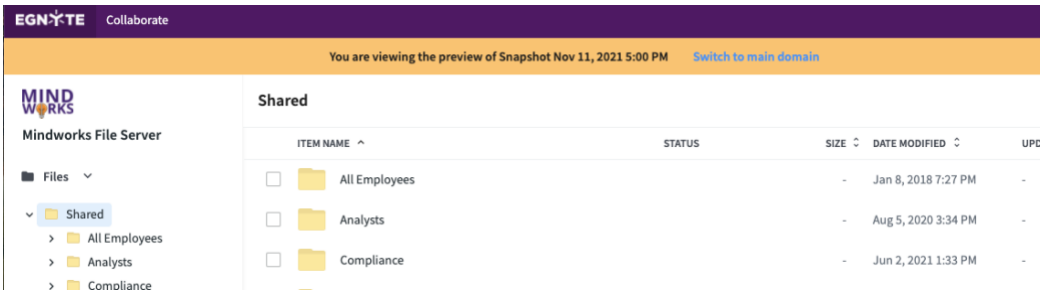


Next, the administrator chooses a date and time and selects a snapshot estimated to be just prior to the ransomware attack. This does not have to be precise, additional snapshots can be added later.

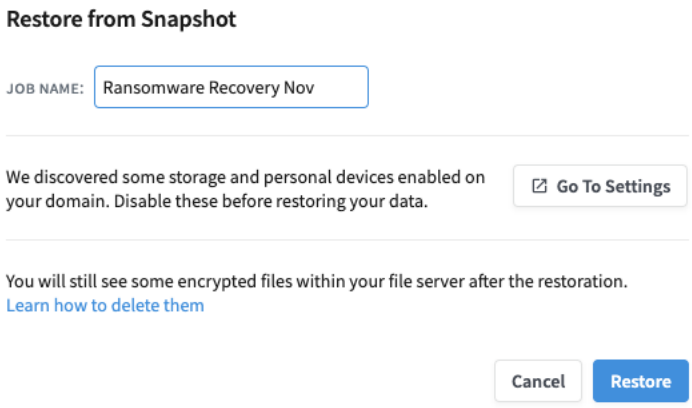


Once a snapshot is selected, it is mounted to be reviewed on a preview screen. Mounting a snapshot can take a few minutes, but status is provided on the page.

After the Snapshot is mounted, the administrator can go into the snapshot preview and verify that the files are intact.



Any individual files or entire folder structures can be selected at this point for restoral by checking the box. Then the restoration process begins.



Once the folders have been restored, the user will see the newly restored folders beside the ransomware encrypted folders. Using this process, administrators can restore large folder structures to recover quickly and easily from large ransomware attacks.

Compromised Accounts

Egnyte uses location-based rules to flag suspicious access that indicate a potential compromise. By default, the system restricts access from countries that appear on the US State Department's export control list, including China, Russia, and North Korea. Administrators can easily add or remove individual countries from the restricted list to match their regulatory and business needs. Egnyte also detects near-simultaneous logins from distant locations. For cases where simultaneous access is expected, per-user exceptions and IP whitelisting allow for shared accounts or access from a VPN.

User Behavior Analytics

Egnyte uses behavioral analytics to baseline and continuously refine patterns of employee behavior and data usage. This improves confidence in the detection of anomalous behavior, such as users downloading or deleting unusually large amounts of data or downloading content that user typically does not access like customer lists or financial reports that might be brought to a competitor.

Issue Reporting

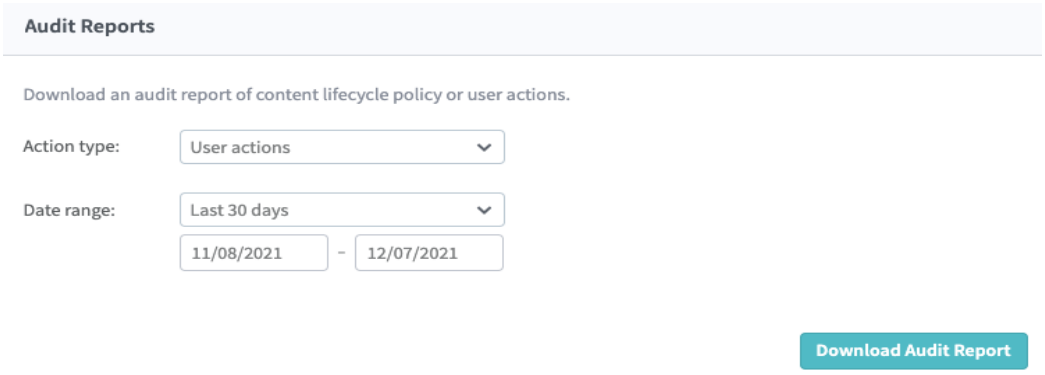
Egnyte's reporting function uncovers risks to data that can support quick mitigation. Administrators receive reports on data, user, and device activity, and overall storage utilization that can help optimize the enterprise's security. Administrators can monitor and analyze overall application and data usage, highlighting any changes that could indicate a breach or potential issue that warrants investigation.

Audit Reporting

Egnyte provides an audit report of all key actions taken within the system, including:

- Logins
- Viewing sensitive content matches
- Permitting and un-permitting sensitive content in folders
- Moving or deleting files with unpermitted sensitive content
- Ignoring, re-opening, or fixing issues

For each action, the system logs the date and time the action occurred, the user performing the action, the associated content repository, and details such as the file path or a link to the associated issue in Egnyte. All details are stored indefinitely in Egnyte, and administrators can run reports for any period, including from system inception.



Through integrations with third party SIEM products like Sumo Logic and Splunk, this information can also be integrated into enterprise-wide analytic tools to help correlate Egnyte events and actions with those across other systems in the enterprise.

Privacy & Compliance

Most organizations are obligated to comply with an ever-growing set of regulatory standards. These include privacy regulations like GDPR and CCPA, financial reporting requirements like GLBA and SOX, and regulations covering Protected Health Information like HIPAA and PIPEDA. Egnyte simplifies compliance with regulatory requirements through a variety of capabilities.

Supported Regulatory Standards

The Egnyte Platform includes classification patterns the ability to create data retention policies easily for more than 30 global privacy laws, and workflows to support Subject Access Requests (SAR) and Breach Reporting, including:

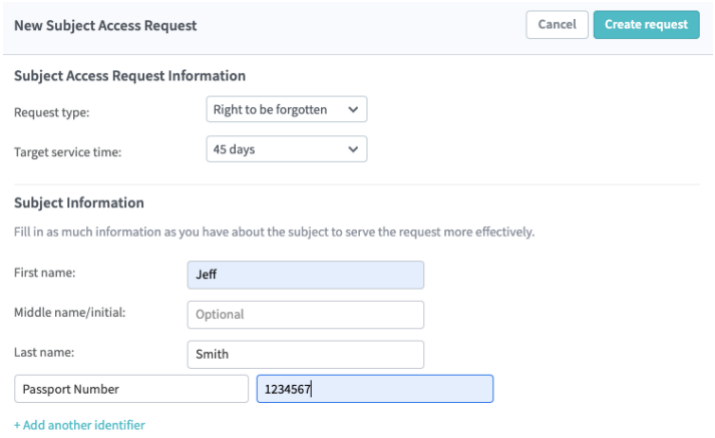
Data Privacy Regulations & Compliance Mandates	
• **APA** - Australian Privacy Act	• **ITAR** - International Traffic in Arms Regulations
• **CCPA** - California Consumer Privacy Act	• **LFPD** - Mexico Federal Law on the Protection of Personal Data
• **DPA** - Data Protection Act	• **LGPD** – Brazilian General Personal Data Protection Law
• **FCRA** - Fair Credit Reporting Act	• **NOOL** - Nevada Opt-Out Law
• **GDPR** - General Data Protection Regulation	• **NZPA** - New Zealand Privacy Act
• **GLBA** - Gramm-Leach- Bliley Financial Modernization Act	• **PCI-DSS** - Payment Card Industry Data Security Standard
• **HIPAA** - Health Insurance Portability and Accountability Act	• **PIPEDA** - Personal Information Protection and Electronic Documents Act
• **IPDP** - India Personal Data Protection Bill	• **SOX** - Sarbanes-Oxley Act

Data Retention

Some regulatory standards dictate a retention period for specific data types. Egnyte's classification engine automatically applies data retention policies. When a user deletes files that are no longer relevant to them – but are subject to retention policies – Egnyte's retention system continues to store the content behind-the-scenes to maintain regulatory compliance. Likewise, Egnyte's trash management helps avoid critical files being accidentally or maliciously deleted.

Subject Access Requests (SAR)

Some regulatory standards allow users to request personal data that businesses have collected about them by submitting a Subject Access Request (SAR). These can include:

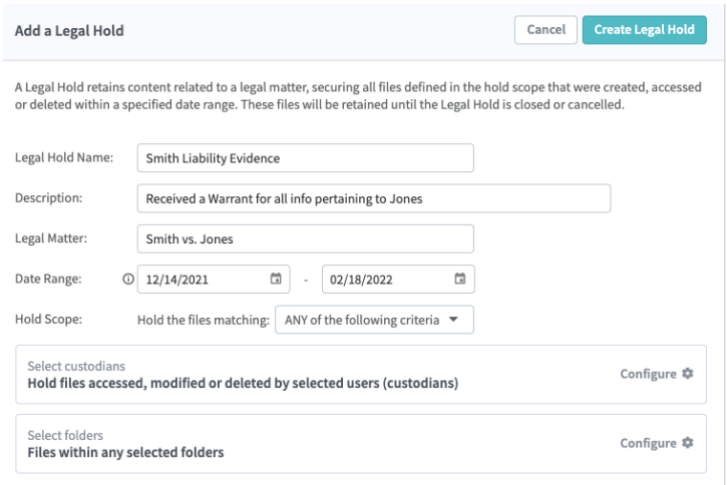


- Notification: Provides the user with the amount and type of personal data collected.
- Right to data portability: Allows organizations to export and provide a user with the amount and type of personal data collected in a portable machine-readable format.
- Right to be forgotten: Identifies and securely deletes all information collected on that user.

Egnyte's SAR search and reporting feature quickly identifies and collects all personal data for the requestor across Egnyte, governed repositories, and archives, verifies the data to the correct individual, (optionally) securely deletes the data, and documents all necessary steps. Through an integration with Truyo, the SAR search and reporting can also be extended across structured data in databases, helping organizations comply with privacy requirements across both structured and unstructured data found in files.

Legal Hold

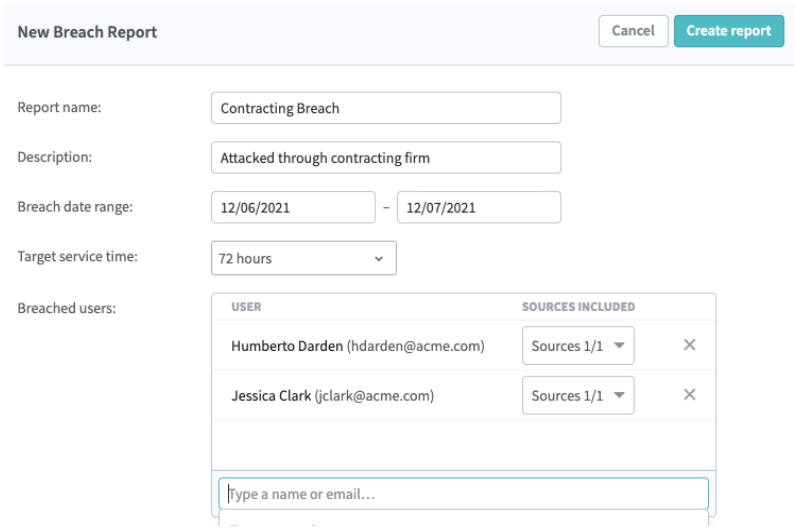
Egnyte supports Legal Holds to retain content related to a legal matter, securing all files created by selected users (referred to as a



custodians) within the specified date range. Administrators can also place holds on specific folders related to a given project or client. Typically, legal holds occur when litigation is pending or anticipated, when a company is subject to a government investigation or internal audits, or when another business matter forces a company to hold on to their records.

Breach Response

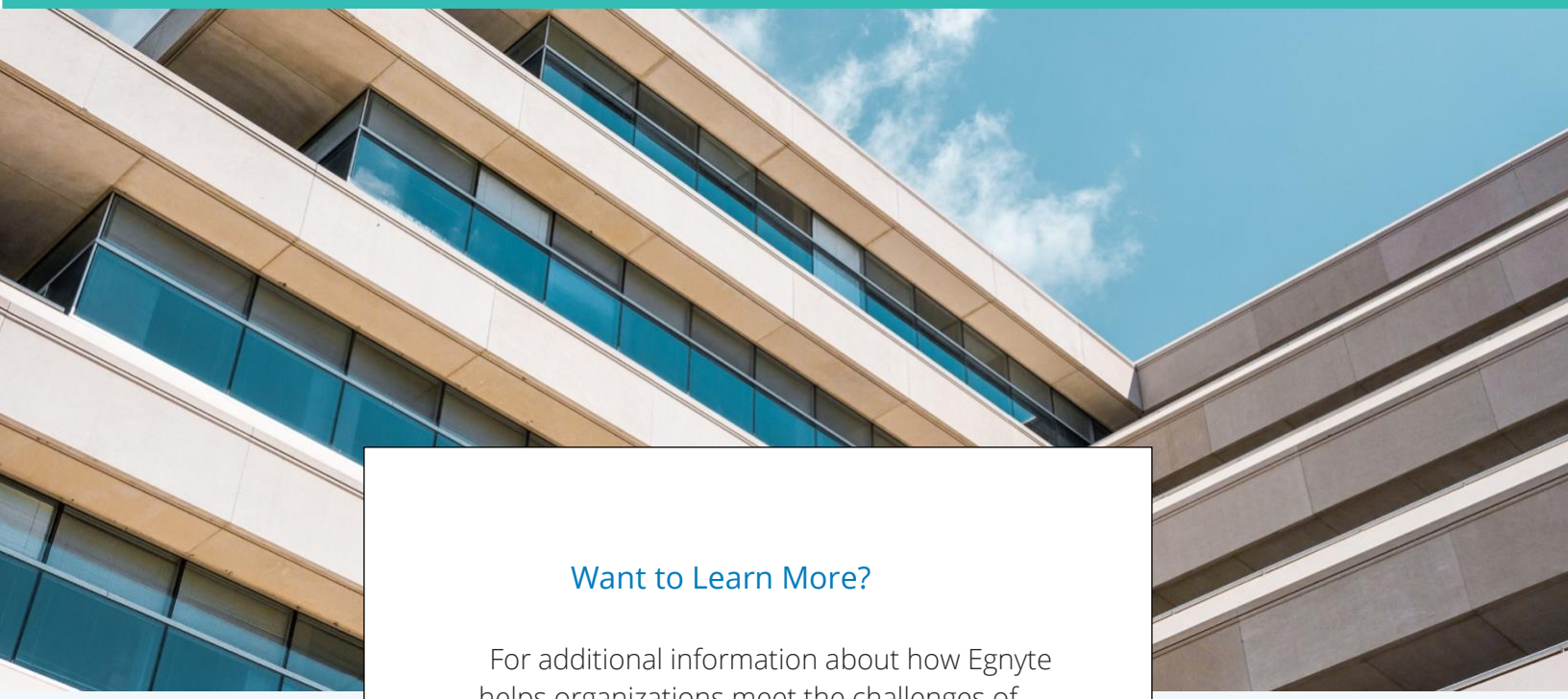
Breaches occur in even the most diligent organizations, often the result of compromised credentials. Breach reporting in Egnyte automatically prepares breach impact statements in accordance with supported regulations, including a summary report of impacted individuals and counts of sensitive information exposed.



Certifications and Audit Reports

The Egnyte platform is compliant with the following standards:

- SOC 2 SSAE 18 Type 2
- ISO 27001:2013
- FINRA
- DFARS
- HIPAA/HITECH
- FDA 21 CFR Part 11
- GDPR



Want to Learn More?

For additional information about how Egnyte helps organizations meet the challenges of secure collaboration and simple configuration, administration, and data management, visit www.egnyte.com to schedule a demonstration of the Egnyte platform.

EGNYTE

Egnyte provides the only unified cloud content governance solution for collaboration, data security, compliance, and threat prevention for multicloud businesses. More than 17,000 organizations trust Egnyte to reduce risks and IT complexity, prevent ransomware and IP theft, and boost employee productivity on any app, any cloud, anywhere. Investors include GV (formerly Google Ventures), Kleiner Perkins, Caufield & Byers and Goldman Sachs. For more information, visit www.egnyte.com.

Contact Us

+1-650-968-4018
1350 W. Middlefield Rd.
Mountain View, CA 94043, USA
www.egnyte.com