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ESG Lab Test Drive

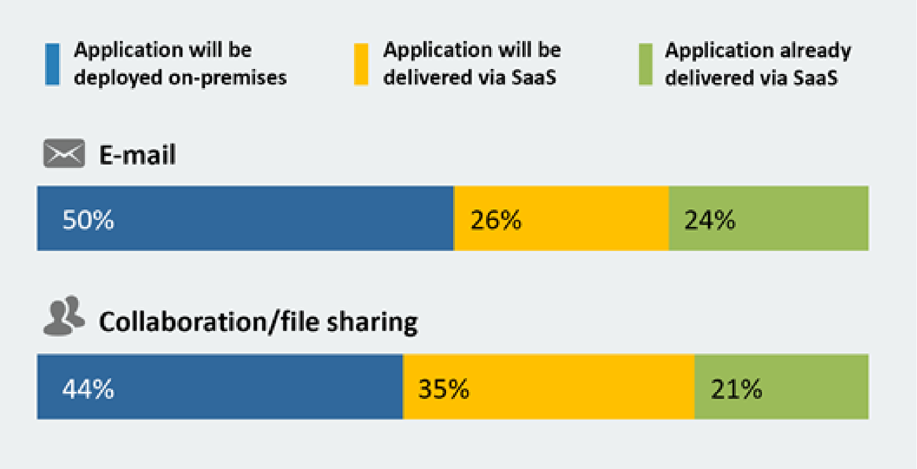
Spanning Backup for Google Apps

Date: April 2015 **Author:** Vinny Choinski, Sr. Lab Analyst

Abstract: *This report documents the results of an ESG Lab Test Drive of Spanning Backup for Google Apps, a cloud-to-cloud SaaS data protection solution.*

Challenges

ESG's IT spending trends research report for 2014 shows that cloud adoption continues to become more mainstream, with many traditional workloads such as collaboration/file sharing and e-mail well on their way to being delivered via software-as-a-service (SaaS) instead of traditional on-premises servers.[1] In fact, comparing ESG's 2013 and 2014 IT spending reports shows that **collaboration/file sharing** via SaaS grew from 22% usage to 33%, while **e-mail** via SaaS grew from 32% to 38%, in one year.[2] The challenge is that as those workloads move to the cloud, traditional data protection vendors have not been quick to ensure their protection. Instead, as the industry has shown time and again, it is often startups and market disruptors who first "crack the code" for protecting the latest business-critical platforms. Two of the most pervasive destinations for modern productivity SaaS are Microsoft Office 365 and Google Apps, each of which offers file sharing (individual and team), as well as e-mail, calendars, and other productivity tools that were historically delivered via traditional on-premises servers. In both cases, the traditional data protection vendors are not yet on the innovative forefront of protecting those platforms.



To help IT professionals and business decision makers understand the data protection capabilities that are feasible for SaaS platforms, ESG Lab will be conducting multiple predefined data protection and recovery technical validation exercises on an ESG pre-configured Google Apps implementation and an Office 365 implementation, looking at both file-centric and e-mail-/calendar-centric usage scenarios, including:

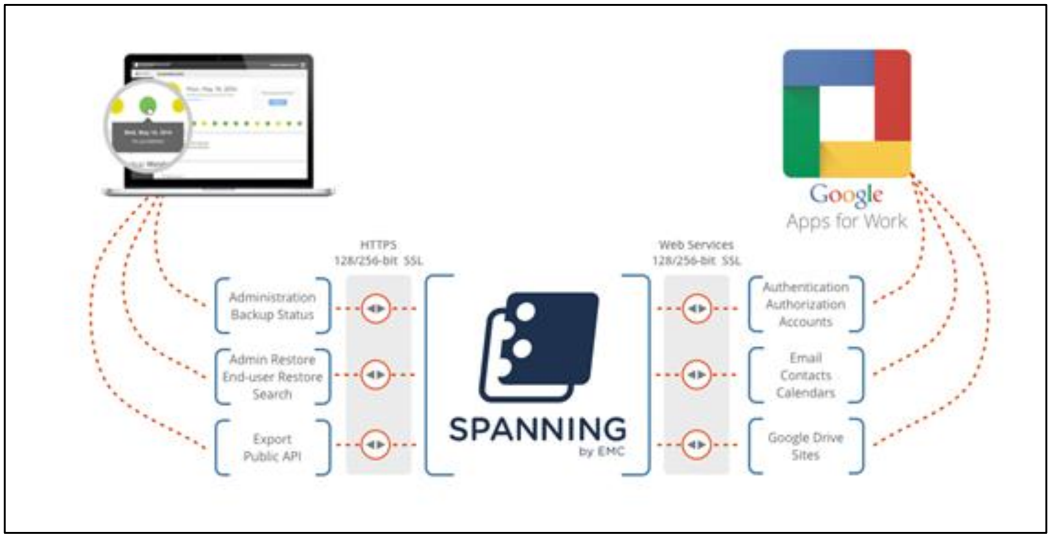
- Acquisition and implementation.
- Management and administration.
- Recovery granularity and flexibility.

The goal of the SaaS Backup ESG Lab Test Drive is to obtain a real-world point of view of data protection and recovery offerings for businesses relying on or considering productivity SaaS solutions from Microsoft or Google. In addition, ESG will evaluate and highlight a unique differentiator of the SaaS backup solution being tested.

[1] ESG Research Report, *2014 IT Spending Intentions Survey*, January 2014.
[2] ESG Research Report, *2013 IT Spending Intentions Survey*, January 2013.

Spanning Backup for Google Apps

Spanning Backup for Google Apps is a SaaS data protection solution. It is designed to protect an organization’s complete Google Apps environment, including Gmail, Google Calendar, Google Contacts, Google Sites and Google Drive data, from data loss. Spanning backs up Google Apps data to a highly secure Spanning environment in the Amazon cloud. It leverages Amazon EC2 elastic cloud compute technology to automatically scale Spanning compute resources up and down to match customer backup and restore requirements. For backup efficiency, Spanning uses an “incremental forever” paradigm in its backup schema. This means that after the first full backup is complete, only changed data blocks need to be transferred for all future backups. Each Spanning backup includes both user data and metadata, enabling granular search and restore capabilities as well as point-in-time recoveries from every backup set. The intuitive interface gives administrators the control they need to protect their entire Google Apps domain with customizable backup settings and easy license management. The status screen provides a historical, at-a-glance view of backup success rates while providing detailed, actionable drill-down functionality, complete with error correction instructions for missed or incomplete backups. Administrators can configure settings to align with their organizational needs, including specifying an e-mail retention policy, configuring backup services, enabling or preventing users from self service operations, and identifying which users are allowed to perform administrative tasks, such as cross-user restores. Key features Include:



- **Safe and secure data:** Spanning Backup runs on a secure virtual network in an isolated section of the Amazon Web Services cloud. It protects data in transit with 128-bit SSL encryption and data at rest with 256-bit AES encryption. Spanning has successfully completed the SSAE 16 Type II audit process making it SSAE 16 compliant.
- **Automated and on-demand backups**: Spanning Backup for Google Apps enables automated daily and on-demand administrator- or user-initiated backups for application data in a customer’s domain. Backups can be easily configured to protect specific data (e.g., mail, folders, and contacts) or all application data. For efficiency, Spanning uses a perpetual incremental backup schema, so after the first backup, only incremental data, changes, and updates need to be transferred during the backup process.
- **Searchable and granular restores**: Because both user data and metadata are included in the backup process the Spanning environment can be quickly and easily searched to locate and recover lost data. An administrator or user can search for and recover e-mails based on date, label, sender, or subject line, and can restore files from Google Drive folders based on any point-in-time version. Point-in-time restores are also supported for calendars, contacts, and sites.
- **Solution monitoring**: With Spanning for Google Apps, administrators can monitor the status of their backup environments directly from the Spanning management interface as well as with built-in e-mail notifications. The status tab in the management interface provides an intuitive, color-coded historical view for each backup. Backup status e-mail summaries can also be sent on daily, weekly, or monthly intervals. A full audit trail of all administrator and user activity is available from the audit log tab in the Spanning management interface.

ESG Lab Test Drive

ESG Lab performed hands-on testing of Spanning Backup for Google Apps by installing and running the solution in a pre-configured, ESG Lab Google Apps test environment. Testing was focused on acquisition, implementation, administration, and flexible recovery. Also of interest was how Spanning extends its cloud-to-cloud data protection capabilities to Salesforce and Microsoft Office 365.

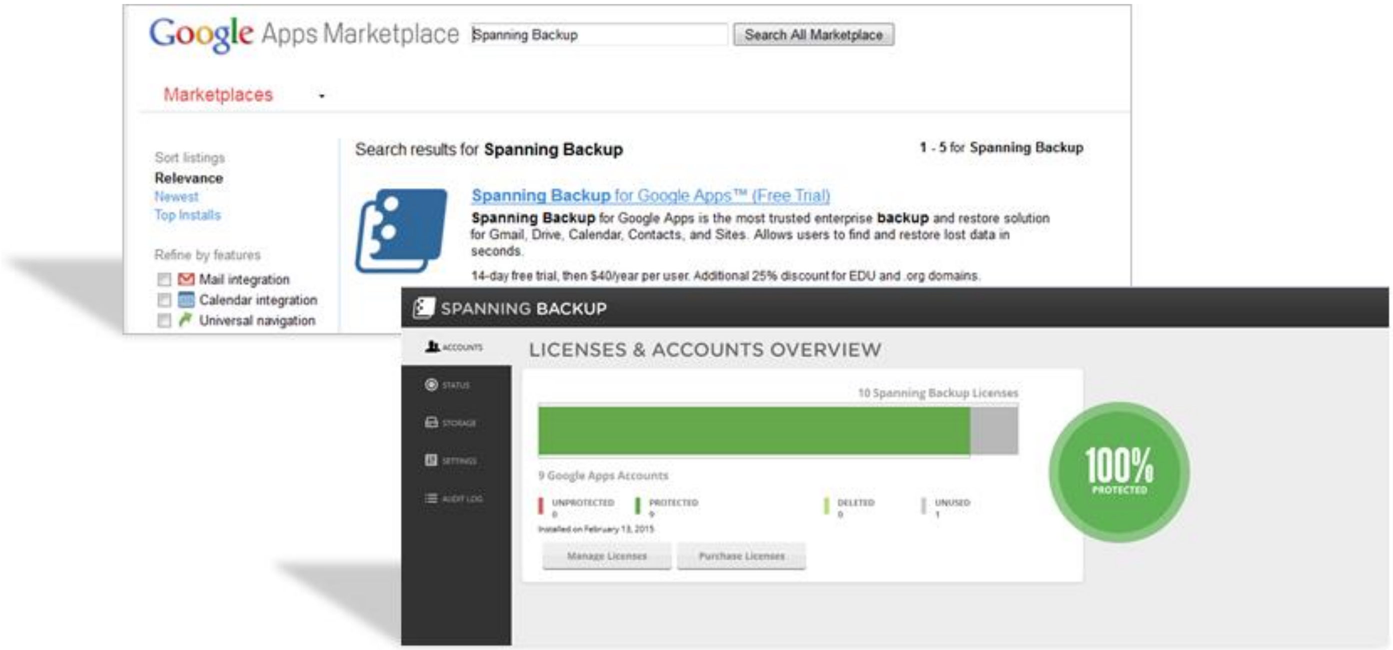
Acquisition and Implementation

ESG Lab started testing the Spanning solution by browsing to the Google Apps Marketplace site and searching for backup applications. The Lab selected the free trial version of Spanning Backup for Google Apps and clicked on the install tab. The installer simply asked for our Google Apps domain name and the installation started and completed in a matter of minutes.

Next, using administrator credentials, the Lab logged into our Google Apps test environment and clicked on the administration icon. From there we navigated through the menus to the Marketplace Applications tab to find the newly installed Spanning Backup application. The Lab then launched the Spanning management interface and selected the accounts tab. Initially all the account information was displayed in yellow to indicate that we were running on the 14-day, free trial version.

ESG Lab contacted our Spanning test drive support resource to allocate and install ten active user licenses for our nine-user test environment. As shown in the bottom right side of Figure 1, this process non-disruptively transitioned our environment from a trial version to a fully licensed version, keeping one unused license for expansion, and changed the color-code view on the accounts page from yellow to green. The accounts page in the management interface can be used to easily verify license compliances, manage existing licenses (including export of account details to CSV), and add new users via the “Purchase Licenses” tab.

Figure 1. Acquisition and Implementation



Search results for **Spanning Backup** 1 - 5 for Spanning Backup

Spanning Backup for Google Apps™ (Free Trial)

Spanning Backup for Google Apps is the most trusted enterprise **backup** and restore solution for Gmail, Drive, Calendar, Contacts, and Sites. Allows users to find and restore lost data in seconds.

14-day free trial, then $40/year per user. Additional 25% discount for EDU and .org domains.

10 Spanning Backup Licenses

9 Google Apps Accounts

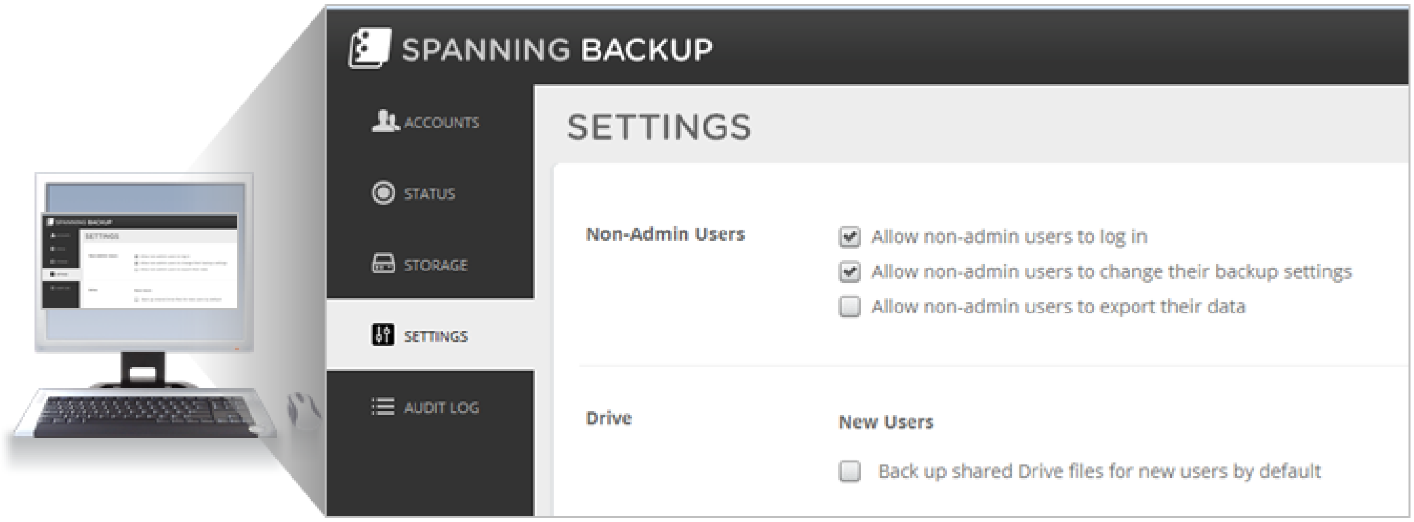
UNPROTECTED 0 | PROTECTED 9 | DELETED 0 | UNUSED 1

Installed on February 13, 2015

Setup and Configuration

With Spanning for Google Apps, initial setup and configuration are quite simple. Once the application is installed and a user account is enabled, an automatic daily backup will be scheduled for all users' account data. This backup will be repeated as long as the account is enabled. Manual backups can be initiated between automatic backups as required. As shown in Figure 2, the administrator can also control the level of access that non-administrators have to the application.

Figure 2. Administrative Settings



SETTINGS

Non-Admin Users

☑ Allow non-admin users to log in
☑ Allow non-admin users to change their backup settings
☐ Allow non-admin users to export their data

Drive

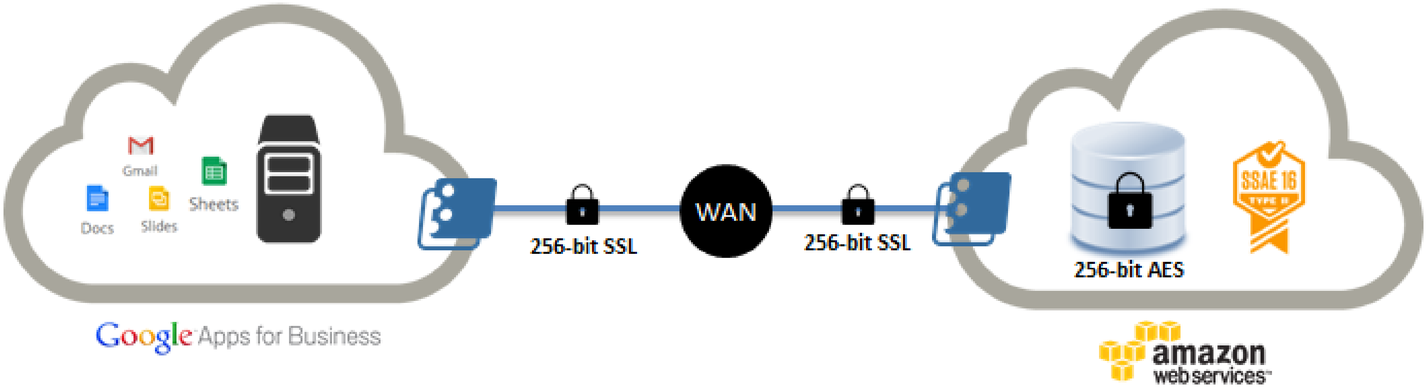
New Users

☐ Back up shared Drive files for new users by default

Security Considerations

Spanning Backup is deployed on an isolated and dedicated segment of the Amazon EC2 cloud where it employs multiple layers of operational and physical security as described in their SSAE 16 Type II audit report. As shown in Figure 3, Spanning encrypts data in transit and data at rest to help create this highly secure environment. For data in transit, Spanning uses 128-bit SSL encryption, and for data at rest it uses 256-bit AES encryption. Physical access is only granted to specified Spanning employees for operational purposes and the solution is continually monitored with real-time alerting to prevent intrusion and ensure data integrity.

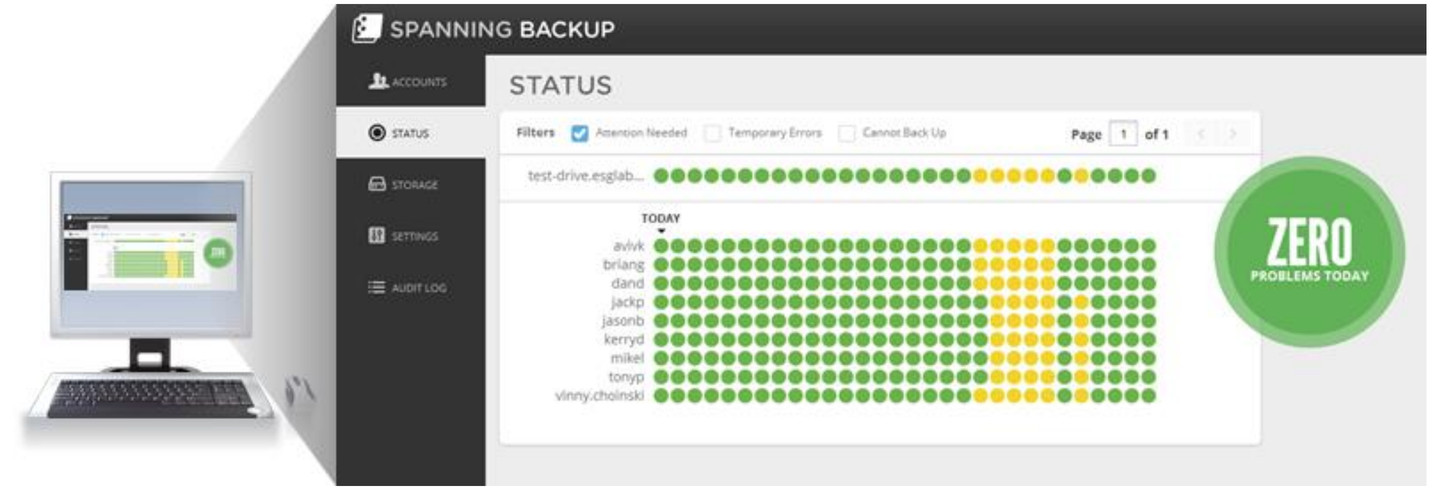
Figure 3. Security Overview



Administration and Management

ESG Lab explored the administration and management experience by navigating the Spanning user interface. As shown in Figure 4, the Lab used the status screen to review backup jobs for each account in the Google Apps test domain. The green circles represent successful backups, with the most recent backup closest to the account name on the left and the oldest backup displayed on the far right. The yellow circles represent backups that encountered an issue. The high-level status screen is interactive; the administrator can hover over a circle for more information. A green circle will present a date stamp with a success message, while a yellow circle will display a date stamp and the number of problems encountered. Clicking on the yellow circle will display a detailed table view of the issues encountered and steps for remediation.

Figure 4. Administrator Interface



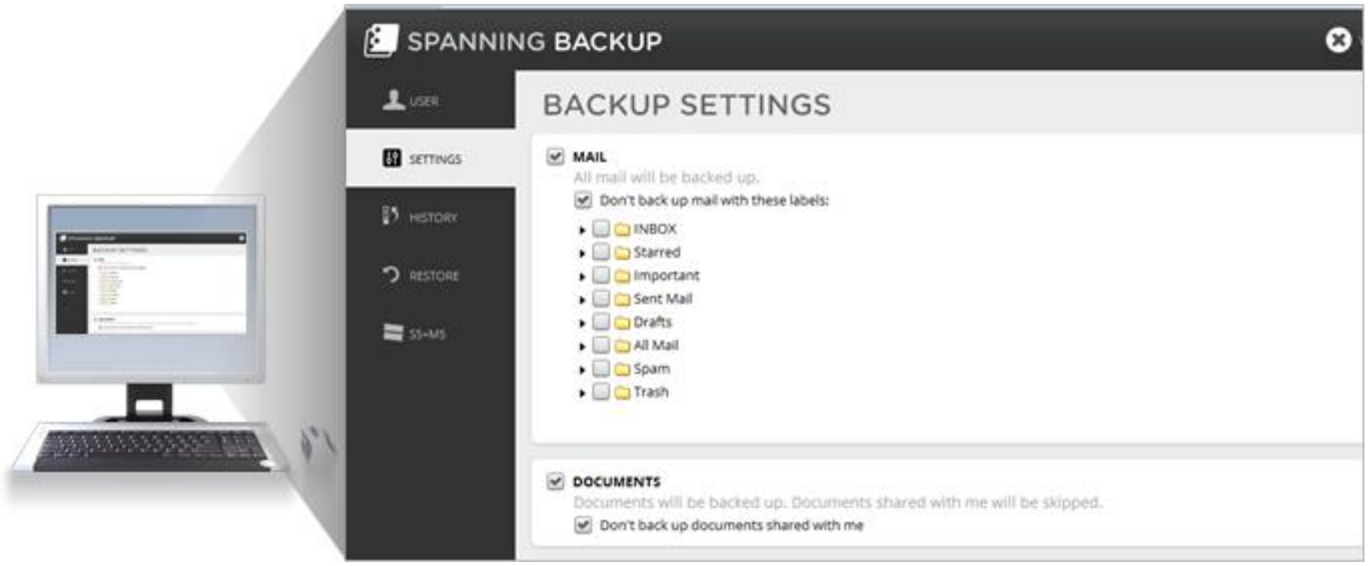
Filters ☑ Attention Needed □ Temporary Errors □ Cannot Back Up   Page 1 of 1

test-drive.esglab...

avivk
briang
dand
jackp
jasonb
kerryd
mikel
tonyp
vinny.cholnski

Next, as shown in Figure 5, the Lab reviewed backup settings available via the user view. These settings provide more granularity in selecting the Google Apps that will be protected during each backup. The Lab used this feature to exclude the spam and trash folders from the backup process for each user in the test environment.

Figure 5. User Settings



☑ MAIL

All mail will be backed up.

☑ Don't back up mail with these labels:

- □ INBOX
- □ Starred
- □ Important
- □ Sent Mail
- □ Drafts
- □ All Mail
- □ Spam
- □ Trash

☑ DOCUMENTS

Documents will be backed up. Documents shared with me will be skipped.

☑ Don't back up documents shared with me

Roles and Administrator Delegation

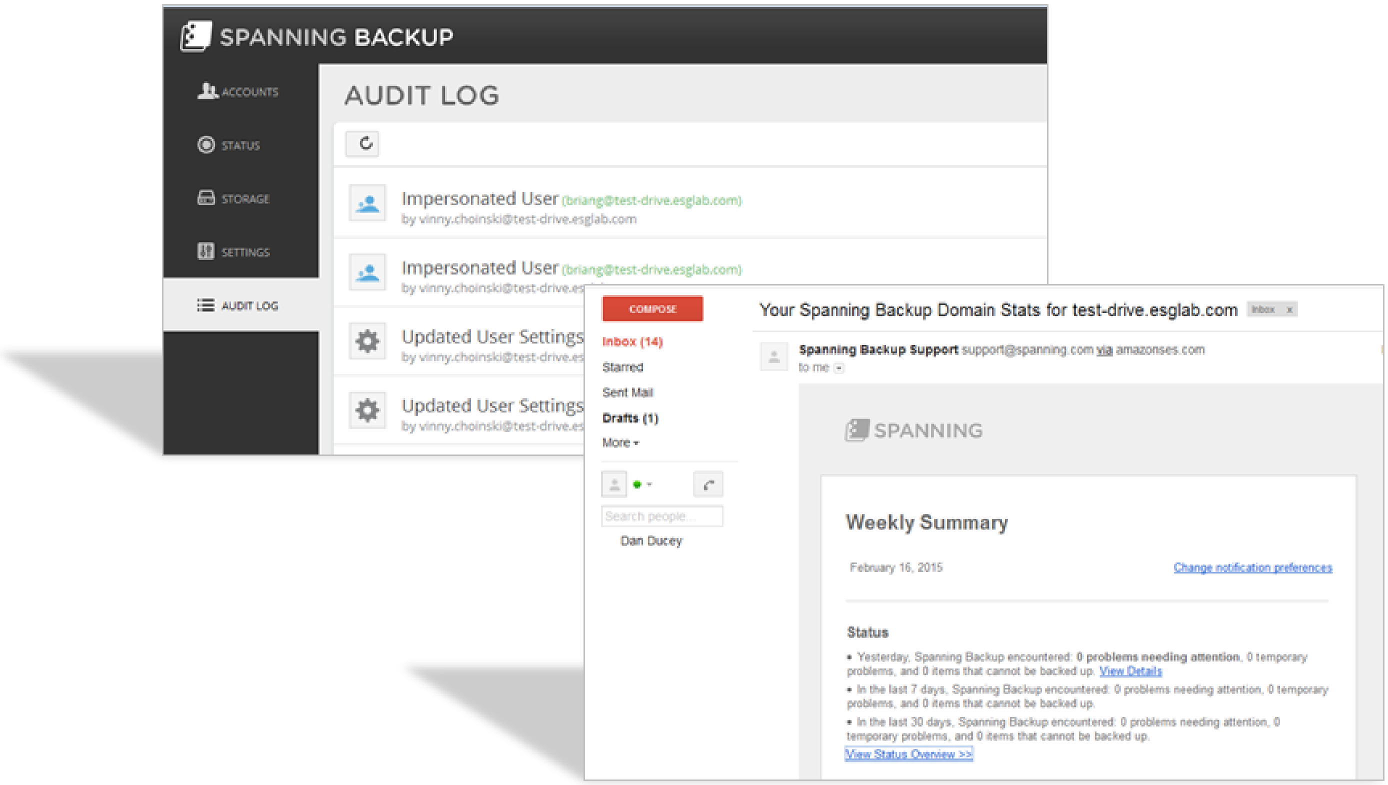
Managing who can make changes to and recover data in your backup environment is critical to protection consistency. Spanning provides a number of options to address application access. It comes with a built-in administrator credentialed account. The administrator can then grant credentials to other domain users as required via a simple drop-down list in the settings view. The list is intuitive to use, making it easy to manage administrator access. End-user access can also be granularly controlled. The Spanning administrator can enable end-user level access to the interface to facilitate self-service recoveries, allow changes to backup settings, and grant permission to export their own Google Apps data.

Notification and Monitoring

Next, ESG Lab explored the Spanning for Google Apps monitoring and notifications capabilities. As shown in the upper left of Figure 6, the Lab logged into the administrator view of the management interface and navigated to the Audit Log tab. The Audit Log view displays all the administrator and user activity associated with the Spanning environment. A few examples of log entries are changes in domain notification settings, changes in user backup settings, user/admin restore activity, and all user "impersonation" which is when an administrator accesses a user's data to assist with export or restore. Both the audit log and the granular details of specific operations, like restores, can be easily exported to a CSV file.

The bottom right side of Figure 6 shows an example of the status summary e-mail report. This report includes a summary of backup job status for the defined period, license and account information, restores and exports, and backup settings. It includes links back to the management interface if more detail is needed to address a backup issue. The frequency of the report can be configured in the administration settings tab, with options of daily, weekly, monthly, or never.

Figure 6. Monitoring and Notifications



Impersonated User (briang@test-drive.esglab.com)
by vinny.choinski@test-drive.esglab.com

Impersonated User (briang@test-drive.esglab.com)
by vinny.choinski@test-drive.es

Updated User Settings
by vinny.choinski@test-drive.es

Updated User Settings
by vinny.choinski@test-drive.es

Your Spanning Backup Domain Stats for test-drive.esglab.com

Spanning Backup Support support@spanning.com via amazonses.com
to me

Weekly Summary

February 16, 2015 Change notification preferences

Status

- Yesterday, Spanning Backup encountered: **0 problems needing attention**, 0 temporary problems, and 0 items that cannot be backed up. View Details
- In the last 7 days, Spanning Backup encountered: 0 problems needing attention, 0 temporary problems, and 0 items that cannot be backed up.
- In the last 30 days, Spanning Backup encountered: 0 problems needing attention, 0 temporary problems, and 0 items that cannot be backed up.

View Status Overview >>

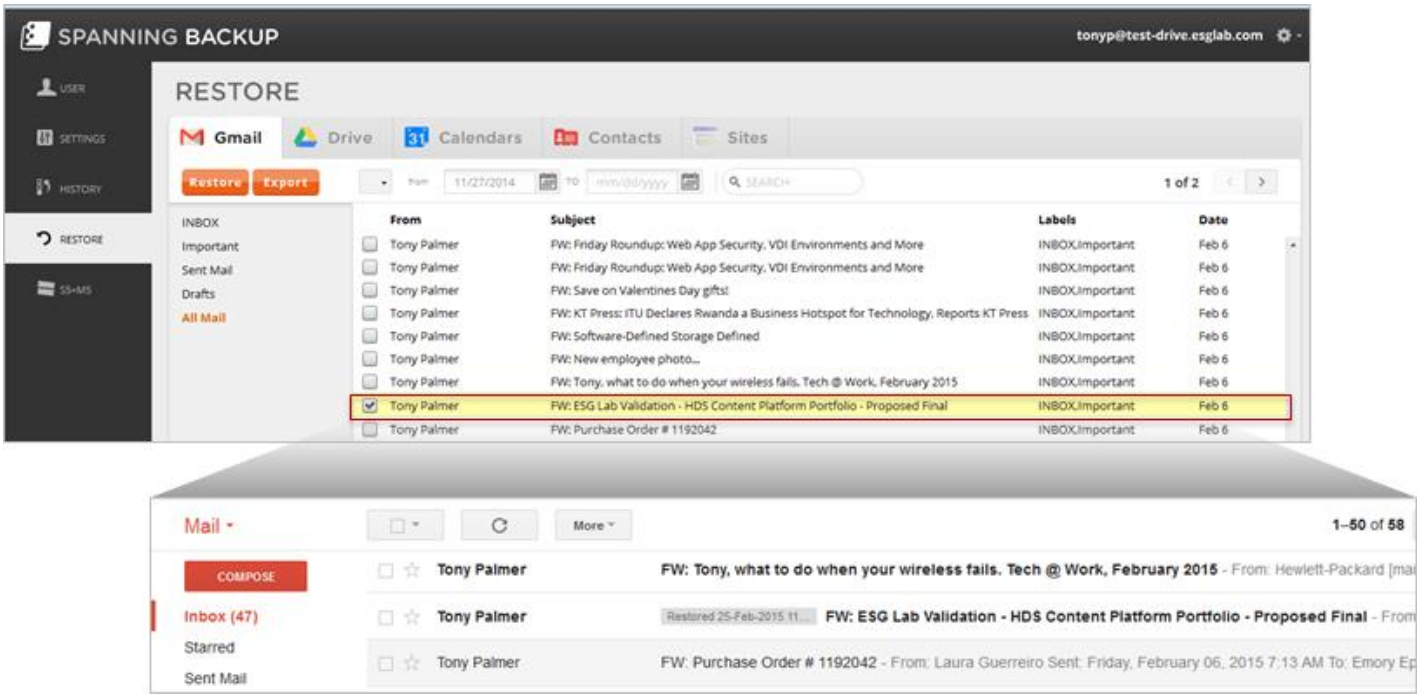
Data Recovery

The ultimate goal of data protection is the timely recovery of critical data. As part of this Test Drive Report, ESG Lab conducted a number of recovery tasks for our Google Apps test environment with the Spanning Backup application. The recovery tasks included granular restore of files, e-mails, calendars, sites, and large directories. The subsequent sections provide more detail of our experience with granular file, e-mail, and directory-level recovery.

Message Level Recovery

ESG Lab started its granular recovery testing by logging into several user accounts and reviewing the latest inbox mail messages. The Lab then randomly deleted mail messages from each account, having first recorded the subject line of the deleted messages. To simulate the natural pruning of the trash folder, the Lab used the “delete forever” feature. As shown in Figure 7, after deleting a set of messages in the test environment, the Lab logged into Spanning Backup and navigated to the Gmail restore tab. We then selected the deleted e-mails by their subject lines and conducted a restore. We repeated this process for each user account in the test environment. The restore operations completed successfully and they were in line with our performance expectations. Restored e-mails were tagged with a label, making them easy for the user to identify in the Gmail user interface.

Figure 7. Granular Message Restores



	From	Subject	Labels	Date
☐	Tony Palmer	FW: Friday Roundup: Web App Security, VDI Environments and More	INBOX,Important	Feb 6
☐	Tony Palmer	FW: Friday Roundup: Web App Security, VDI Environments and More	INBOX,Important	Feb 6
☐	Tony Palmer	FW: Save on Valentines Day gifts!	INBOX,Important	Feb 6
☐	Tony Palmer	FW: KT Press: ITU Declares Rwanda a Business Hotspot for Technology, Reports KT Press	INBOX,Important	Feb 6
☐	Tony Palmer	FW: Software-Defined Storage Defined	INBOX,Important	Feb 6
☐	Tony Palmer	FW: New employee photo...	INBOX,Important	Feb 6
☐	Tony Palmer	FW: Tony, what to do when your wireless fails, Tech @ Work, February 2015	INBOX,Important	Feb 6
☑	Tony Palmer	FW: ESG Lab Validation - HDS Content Platform Portfolio - Proposed Final	INBOX,Important	Feb 6
☐	Tony Palmer	FW: Purchase Order # 1192042	INBOX,Important	Feb 6

☐ ☆ Tony Palmer FW: Tony, what to do when your wireless fails. Tech @ Work, February 2015 - From: Hewlett-Packard [ma

☐ ☆ Tony Palmer Restored 25-Feb-2015 11... FW: ESG Lab Validation - HDS Content Platform Portfolio - Proposed Final - From

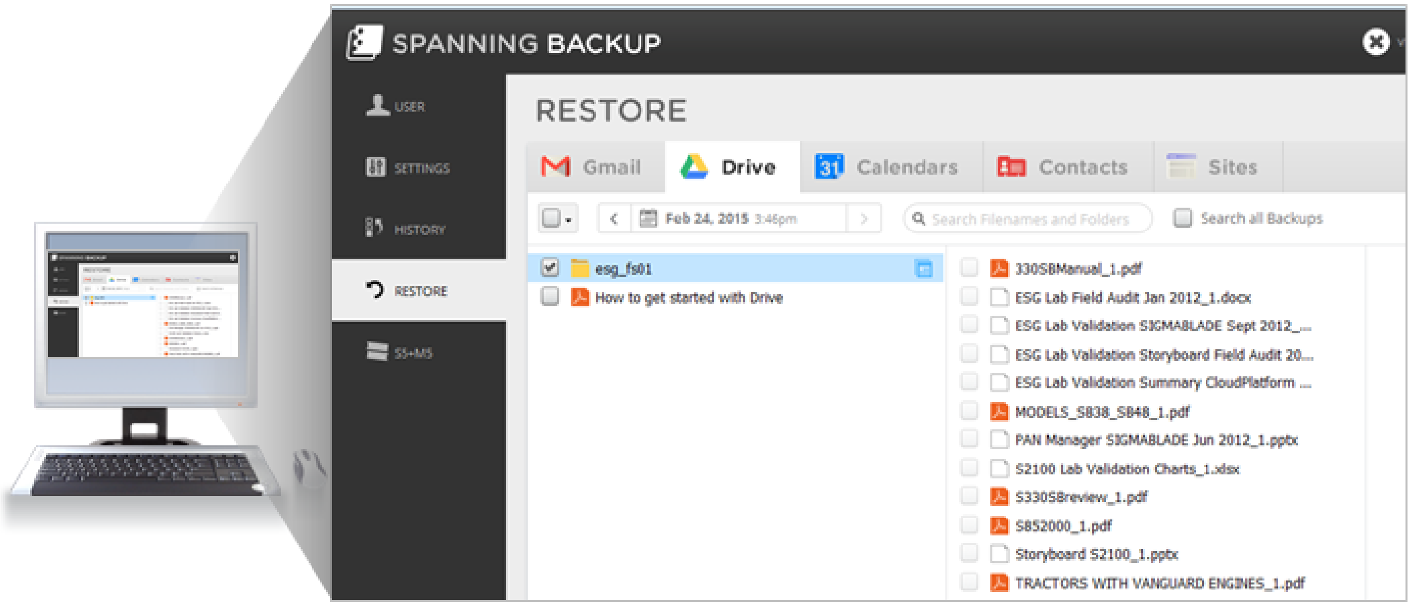
☐ ☆ Tony Palmer FW: Purchase Order # 1192042 - From: Laura Guerreiro Sent: Friday, February 06, 2015 7:13 AM To: Emory Ep

File and Directory Recovery

Next, ESG Lab conducted a file-level recovery and a full-directory restore. The Lab started the process by deleting a single file stored in Google Dive and synchronizing to the local desktop. The file was deleted from the local desktop and the Google Drive folders. For each location (desktop and Google Drive), the trash folder was also emptied. Then, the Lab navigated to the Google Drive recovery tab in the Spanning Backup management interface, searched for the deleted file, and checked the box to initiate the recovery. The restore operation completed successfully with the correct metadata including folder structure and sharing settings. The non-destructive restore operation places the data into a new folder that is easily identified by the end user.

Next, as shown in Figure 8, the Lab used the same restore interface, and a similar process, to recover a full Google Drive directory. This time the entire 40 MB directory, ***esg_fs01*** was deleted from all locations. Then the Lab selected the top-level folder box to initiate the recovery. To monitor the progress of the restore, the Lab logged into the Google Drive folder and then the local desktop directory. Before we were able to navigate from Google Drive to the desktop folder the 40 MB recovery had been completed in full.

Figure 8. Directory Restore



☑ esg_fs01
□ How to get started with Drive

□ 330SBManual_1.pdf
□ ESG Lab Field Audit Jan 2012_1.docx
□ ESG Lab Validation SIGMABLADE Sept 2012_...
□ ESG Lab Validation Storyboard Field Audit 20...
□ ESG Lab Validation Summary CloudPlatform ...
□ MODELS_S838_S848_1.pdf
□ PAN Manager SIGMABLADE Jun 2012_1.pptx
□ S2100 Lab Validation Charts_1.xlsx
□ S330SBreview_1.pdf
□ S852000_1.pdf
□ Storyboard S2100_1.pptx
□ TRACTORS WITH VANGUARD ENGINES_1.pdf

In addition to direct restore, organizations can also export and download their data. Similar to restore, exports can be very granular, down to a specific file version, or broad, including all data in a user account. End-users can be prevented from exporting data and there is an API available for automation of the export process.

Why This Matters

When an organization moves a workload to the public cloud, it can be easy to overlook all the IT safeguards that would be automatically added to an internal application, like data protection. The cloud, by definition, may satisfy offsite or multi-site requirements, but don't assume you have the same recovery, visibility, and corporate governance capabilities you had when the application was in-house.

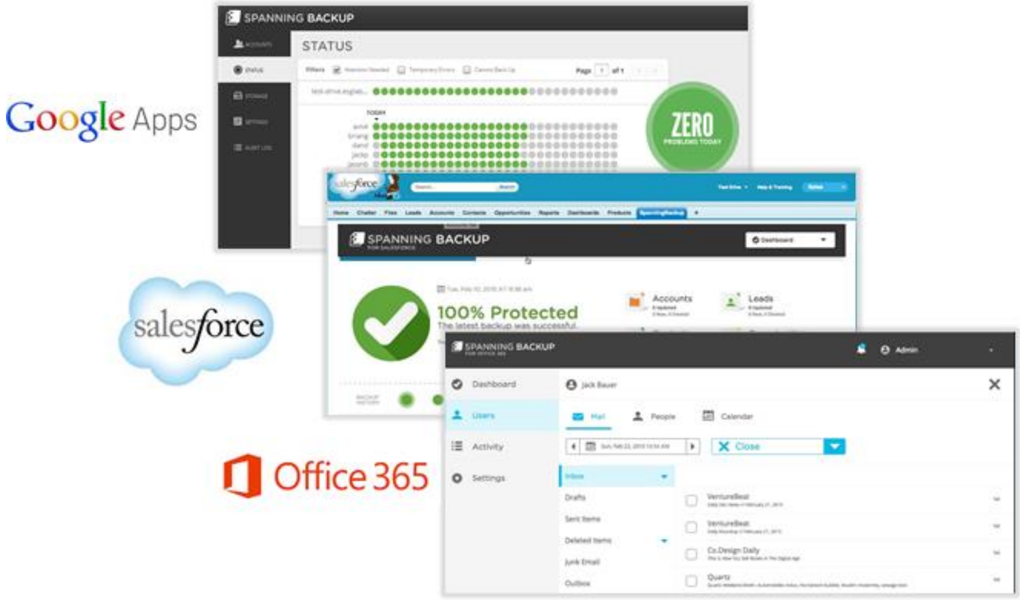
The ESG Lab Test Drive validated the ability of Spanning Backup to deliver granular recovery capabilities to Google Apps environments. The Lab also confirmed Spanning brings data protection to each Google App component in a way that is familiar to current cloud users and easy for those making the transition. These features demonstrate the business-class focus of Spanning, for both users and administrators.

Differentiating Feature: Expanded Portfolio

ESG research shows that cloud adoption continues to become more mainstream. This means that more workloads will be considered for cloud deployments. Organizations that compete in the space will need to expand their data protection portfolios beyond just e-mail and file sharing to stay relevant.

As shown in Figure 9, the Lab captured a Spanning Backup management interface screenshot for three SaaS applications: Google Apps, Salesforce, and Office 365. It should be noted that each solution was designed to seamlessly plug into the application it is designed to protect while still maintaining familiar Spanning attributes. This helps address ease of management issues for organizations that leverage Spanning Backup to multiple applications. ESG Lab leveraged an online Spanning demo environment to validate improved backup automation and RPO with Spanning Backup for Salesforce over the built-in export functionality offered by Salesforce. For Microsoft Office 365, we navigated the beta version management interface of Spanning Backup for Office 365, explored its mobile device integration, and conducted a simple mail message recovery.

Figure 9. Application Support



Why This Matters

As companies look to transform their IT environments, processes, and organizations, they are shifting more of their IT resources and spending from on-premises, IT-owned and -managed assets to public cloud infrastructure and applications managed by cloud service providers. What are these companies purchasing? Senior IT or line-of-business managers are most likely purchasing SaaS services such as CRM or ERP. Developers are often purchasing either raw infrastructure-as-a service or leveraging platform-as-a-service from various cloud providers, and traditional IT managers may be purchasing backup- or DR-as-a-Service.[3]

The ESG Lab Test Drive validated that Spanning has transitioned beyond a "Google Apps only" solution. They have expanded application support to include CRM with their Salesforce solution and are in the process of adding Office 356. ESG Lab believes Spanning is targeting the right applications and the right pain points within those applications.

[3] Source: ESG Research Report, 2014 Public Cloud Computing Trends, March 2014

The Bigger Truth

ESG research clearly indicates that cloud-based solutions are on the rise, very often with cost control as a motivating force. Our 2015 IT spending intentions research reveals that 68% of respondent organizations are currently using SaaS in some way, with another 14% planning to. In addition, over the past six years, the use of cloud computing has risen dramatically as a cost mitigation strategy: from ninth most-cited out of nine options in 2009, to second (of nine) in 2015.[4] Clearly, customers know that SaaS applications enable better productivity and collaboration without the expense and complication of building and managing silos of infrastructure.

However, the diversity of cloud service offerings, consumption options, and service delivery models adds complexity and management challenges for even the most savvy IT shop. Cloud services can be implemented on-premises and off-premises (or both) and yet need to be managed and governed just like traditional IT resources. This phenomenon is increasingly creating challenges for IT in terms of managing, monitoring, and protecting corporate workloads, leading to potential security, performance, and economic exposure. When you move your applications and data to cloud services, your compliance and audit responsibilities do not change. The same controls need to be in place and provable, including backup and recovery.

ESG Lab validated that Spanning Backup for Google Apps delivers the assurance that data is fully protected and secure, as well as easy to recover. The application was easy to acquire and implement via a free trial download on the Google Apps Marketplace. It includes monitoring and notifications and even supports end-user self-service restores. Their scalable elastic cloud architecture made our larger test restores quick and painless.

Finally, Spanning's recent acquisition by storage and data protection market leader (EMC) lends an additional aura of confidence to the solution. EMC has a pretty good track record when it comes to acquisitions, and Spanning may just add to that reputation. If Spanning continues to maintain the look and feel of the management interfaces and moves in the direction of a single interface as they add more application support, they may become a "go-to" backup provider when organizations deploy new cloud applications.

[4] Source: ESG Research Report, *2015 IT Spending Intentions Survey*, February 2015