FAQ: Commvault's SaaS line, Metallic® Backup for Microsoft365
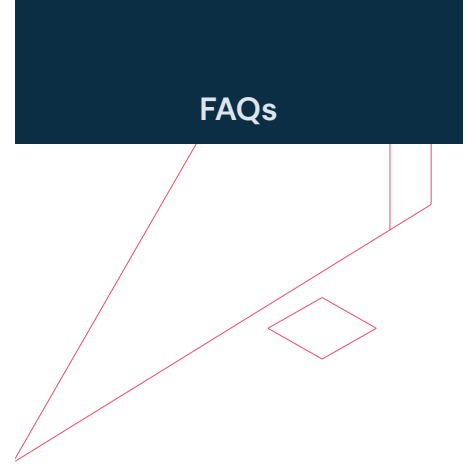
Overview

Two industry leaders – one integrated approach to backup, recovery, and data management. The power of NetApp AND Commvault removes point solution complexity while accelerating digital transformation with a single integrated solution from core to edge to multi–cloud. NetApp helps you optimize the performance of your data fabric and Commvault helps transform and modernize your data protection strategy. Together, Commvault and NetApp can deliver fast and reliable experiences to you and ensure successful digital transformation.

Like many cloud service providers, Microsoft follows a shared responsibility model for Microsoft 365, clearly stating that they are responsible for the availability of infrastructure and applications. However, enterprise customers are responsible for the security of their data. For this reason, many organizations use Commvault's SaaS line, Metallic for data management and protection of their assets. This FAQ is designed to help our enterprise customers understand the typical backup and restore the performance of Metallic for Office 365 Backup.

As you onboard to the Metallic SaaS offering from Commvault, it's important to be aware of the answers to commonly asked questions. Understanding the answers helps ensure that you have a smooth onboarding experience and can better gauge the expected frequency and performance of backups.

This SaaS offering backs up Microsoft 365 data continuously with the objective of completing an incremental backup once every 24 hours. Full backups take considerably longer depending on the size of the Exchange Online mailbox, OneDrive file share, SharePoint site, or Teams site requiring protection. If an incremental backup does not complete in three days, it may be unhealthy.

1. How long should it take to complete the first Microsoft365 backup?

The time required to complete the first backup varies considerably based on the amount of data in the target Microsoft 365 tenant environment. The average data transfer rate for the first full backup of Exchange Online and Teams should be 1.0 to 2.0TB per 24-hour period. For One Drive and SharePoint Online, the average data transfer rate should be approximately 2.0TB per 24-hour period. Factors such as Microsoft throttling, local network performance, and the presence of very large mailboxes may impact data transfer rates.

To improve initial backup performance, consider onboarding Exchange Online mailboxes, OneDrive shares, and SharePoint sites in batches with the most important assets being onboarded first. Finally, Microsoft provides a mechanism for customers to request temporary disabling Exchange Web Services (EWS) throttling.

For more information, please refer to https://kb.commvault.com/article/68619.

Note: Exchange Online, OneDrive, SharePoint, and Teams backups occur independently of each other. A large Exchange Online backup should not impact the performance of a SharePoint Online or Teams backup.

2. How frequently does Metallic perform incremental backups?

Metallic continuously backs up the customer's Microsoft 365 environment with the goal of completing at least one incremental backup per 24-hour period. It's important to note that certain factors such as daily change rate and the number of total users may cause incremental backups to take more or less time than the target 24-hour period.

3. All my users have been backed up at least once; why are incremental backups still taking longer than 24 hours?

It may take more than one incremental backup for backups to reach a steady state. After the initial full backup of all users is complete, the next incremental backup will likely be large and take additional time to complete. Following this, steady-state incremental backups should complete within the 24-hour period.

4. Should I expect restore performance to be similar to backup performance?

Performance of restores will vary based on whether you are restoring a small amount of data localized to a single user or a large amount of data crossing multiple users. Other factors such as out-of-place restores may also impact performance. Though we do not have precise measurements, our observation has been that writing data to Microsoft 365 occurs at a somewhat slower rate than reading data from Microsoft 365.

5. Can I access data for restore when my backups are still ongoing?

Yes. The backup process occurs in two parts. First, data is downloaded from your Microsoft 365 tenant. Next, data is indexed, deduplicated, and committed to the backup. Once data has been committed to the backup, administrators have the ability to perform restore operations against this data. Data will be committed to the backup in intervals no longer than 32 hours. So, if an initial backup takes 72 hours, administrators can perform restore operations on any data committed during the 32-hour commit interval.

6. What are the factors that can affect performance of Microsoft365 backups or restores?

There are several independent factors that can affect the performance of a Microsoft 365 backup. Some of the more frequently encountered factors are listed below.

- Microsoft throttling of EWS API calls. Microsoft ensures that tenants competing for Azure resources are properly prioritized by preventing a single tenant from consuming more than its fair share of resources. Please refer to question 10 for a discussion of the process for temporarily disabling Exchange Online throttling.

- Less than the recommended number of backup applications configured per Microsoft 365 application. Please refer to question 9 for a discussion of the recommended number of backup applications.

- Archive mailbox backups. Archive mailboxes may be large and impact backup performance. Administrators should consider backing up archive mailboxes after they have backed up active mailboxes.

- The presence of OneNote files in OneDrive. To backup OneNote items, Metallic must call OneNote APIs which are more heavily throttled by Microsoft.

- The presence of a large number of empty or low volume OneDrive shares. To backup OneDrive data, Metallic must discover and scan each OneDrive share. This discovery and scanning process will take the same amount of time whether data is present in the share or not. When there is a large percentage of empty or low volume OneDrive shares, the time required to back up the OneDrive environment will appear long relative to the total quantity of OneDrive data backed up.

- Large files in OneDrive accounts, such as database dmp files, VM images, and *.iso files. Administrators should consider excluding these files from backups – especially extremely large OneDrive accounts which house more than 300,000 files.

7. How can I monitor the health of my Microsoft365 backups?

Metallic provides Health Report to assist administrators in assessing the health of Microsoft 365 backups. This report will identify Exchange Online mailbox, OneDrive share, SharePoint site, or Teams backups that have not completed successfully in the last three days. This report is not intended to assess the health of individual backup jobs. Instead, it determines whether an asset of interest (mailbox, share, site) has been backed up successfully. Users can access this report from within the 'Reports' area within the Metallic interface.

8. What should I do if the backup health report indicates that an Exchange Online mailbox, OneDrive share, SharePoint site, or Team has not backup up successfully?

The backup health report will identify Exchange Online mailboxes, OneDrive shares, SharePoint sites, and Teams that have not backed up successfully within the last three days. In situations where one of these assets is designated unhealthy, we recommend monitoring the backup for a seven-day period. If backups are still not completing, please contact Metallic support https://metallic.io/support for additional assistance. Note: there may be instances in which the initial backup for an exceptionally large mailbox, site, or share may take longer than three days to complete. Prior to initiating a support call, administrators should determine whether an incremental backup has failed to complete or a very large asset in the initial full backup has failed to complete. The first may be indicative of a problem; the second likely represents normal operations.

9. What can Commvault do to help customers increase the performance of Exchange Online, OneDrive, SharePoint, or Teams initial full backups if throughput is consistently less than 1TB in a 24-hour period?

Customers who are experiencing throughput consistently less than 1TB in a 24-hour period for initial full backups should contact Metallic support.

10. What can Metallic do to help customers increase the performance of Exchange Online, OneDrive, SharePoint, or Teams incremental backups if those backups consistently fail to complete in 24 hours?

For incremental backups, the 1TB throughput metric is less relevant since incremental backups may or may not approach 1TB. The more relevant metric is whether incremental backups are completing in 24 hours. Customers whose incremental backups consistently fail to complete in 24 hours should contact Metallic support. Note that very large incremental backups may not complete within 24 hours.

11. What is the recommended number of backup applications to configure?

A backup application (also known as Azure App) connects Metallic to the customer's Microsoft 365 tenant. Having multiple backup applications may improve performance by parallelizing backup operations and by diminishing the impacts of throttling. If your environment is between 0 – 10,000 users/mailboxes, we recommend configuring up to 5 applications. For environments above 10,000 users/mailboxes, up to 10 applications are recommended. Note: use of applications in excess of the recommendations above will not yield appreciable performance enhancements and may result in additional throttling.

For Exchange Online, configure one Azure App per 1000 users up to a maximum of 10 Azure Apps. Configuring the recommended number of Azure Apps and disabling throttling for Exchange Online will deliver the best possible throughput when performing an initial full backup.

For SharePoint, OneDrive and Teams, Microsoft recommends a single Azure App per workload. Guidance for SharePoint, OneDrive, and Teams differs from Exchange Online because these workloads use shared storage resource pools. You may choose to consider adding more Azure Apps per workload to increase throughput, but this may result in tenant level throttling and impact performance for end users in your production Microsoft365 tenant. Under no circumstances should customers configure more than 5 Azure Apps per workloads.

12: When should I consider disabling Exchange Web Services (EWS) throttling to improve Microsoft 365 mailbox backup performance?

As is the case with most cloud vendors, Microsoft imposes per-account throttling of many of their services to ensure fair usage and guaranteed performance for their customers. EWS is no exception and can sometimes be the bottleneck when executing mailbox backups. You may be able to temporarily boost performance by requesting a suspension of EWS throttling in the Microsoft 365 admin center for 30, 60, or 90 days. This is useful when performing the initial backup of your mailboxes before the subsequent incremental protection phase.

For more information, refer https://kb.commvault.com/article/68619.

13: How should I approach a Metallic Office 365 Backup POC. Should I just use a single Exchange mailbox or OneDrive share to test functionality and performance?

Commvault recommends configuring 25 Exchange Online mailboxes or OneDrive shares with between 5 and 10 GB of data to get an accurate understanding of performance. This quantity of mailboxes will take advantage of parallel processing via multiple backup streams. Backing up a single Exchange Online mailbox or OneDrive share will not use multiple backup streams and may not provide an accurate understanding of performance. Conducting a POC with a larger environment will not provide a more accurate understanding of performance and will simply extend the duration of the POC.

About Commvault

Commvault is a global leader in data management. Our Intelligent Data Services help your organization do amazing things with your data by transforming how you protect, store, and use it. We offer a simple and unified Data Management Platform that spans all your data – regardless of where it lives (on-premises, hybrid, or multi-cloud) or how it's structured (legacy applications, databases, VMs, or containers). Commvault solutions are available through any combination of software subscriptions, integrated appliances, partner-managed, or Software-as-a-Service via our Metallic portfolio. Visit www.commvault.com.

About NetApp

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