Veritas Alta™ Archiving EV Collector Agent 2.0 Administration Guide

VERITAS™

Veritas Alta Archiving: EV Collector Agent 2.0.10 Administration Guide

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Legal Notice

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Contents

Chapter 1

About EV Collector Agent

This chapter includes the following topics:

About this guide

This guide describes the EV Collector Agent 2.0 application, which collects data from on-premise Enterprise Vault and securely transfers the archived content directly to Veritas Alta™ Archiving (previously known as Enterprise Vault.cloud™).

This guide describes how to:

- Install and configure EV Collection Agents
- Plan large Data Collection
- Create new Data Collection requests
- Manage Data Collection
- Use Reports
- Troubleshoot common issues

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About EV Collector Agent

EV Collector Agent 2.0 provides an add-on service for Veritas Alta Archiving that collects archived data from on-premise Enterprise Vault and securely transfers the archived data directly to Veritas Alta Archiving.

EV Collector can be used for 2 main use cases:

- Targeted Collection – This allows specific EV content to be collected into Veritas Advanced eDiscovery for discovery purposes.
- Data Migration – This allows some or all archives to be migrated from EV to EV.cloud for customers who are transitioning their Archiving / Supervision & Discovery workloads to EV.cloud. This capability has been developed to provide customers with a high speed, low cost & seamless migration experience to EV.cloud.

EV Collector Agent support data collection of archived emails from Enterprise Vault which were archived from the following sources:

- Exchange Mailbox Archiving
- Exchange Journal Archiving
- Domino Mailbox Archiving
- Domino Journal Archiving
- PST or NSF file content Archiving
- SMTP Archiving
- Microsoft Teams Archiving
- Slack Archiving

EV Collector Agent support all version from Enterprise Vault 11.0 onwards.

EV Collector Agent is FIPS 140-2-compliant. EV Collector Agent uses FIPS 140-2-validated instances of algorithms and hashing functions in all instances where data is encrypted or hashed.

Licensing, Support & Services

- The EV Collector capability is provided free of charge.
- The EV Collector is supported by Veritas services like any other product features or capabilities.
- Data Migration customers are encouraged to engage Veritas or partner professional services to assist with the planning, installation, configuration, and commissioning of EV Collector. Some customers may assist with the ongoing migration activities and others may prefer to also have Veritas or partner professional services perform the remainder of the migration activities.

System Requirements

To run the EV Collector Agent application, below you will find the list of recommended hardware components. A typical installation uses a single SQL Server and multiple Agent servers with EV Collector Agent services installed.

Hardware requirements for Collector Agent computer

Component	Minimum Requirements
Quantity	2 or more. For a collection of 10TB or less, 1 agent node is sufficient. Count of Collector Agents required for migration will be determined during migration planning phase.
Cores	Quad-core minimum
Architecture	64-bit
RAM	16GB minimum
Operating System	Windows 2012/2012 R2 or newer (Standard or Enterprise, 64 bit)
Application	- Microsoft .NET Framework 4.6 - Enterprise Vault API Runtime (same version as that of on-prem Enterprise Vault installed in the environment)

Storage	- C Drive with 250 GB free - D Drive with 500 GB free
Network	Added in the same Active Directory domain of Enterprise Vault.
Internet	- High-speed internet connectivity for the outbound connection to Veritas Alta Archiving server. - Minimum 500 Mbps upload speed. - Secure Internet/web gateway solutions should be bypassed and/or optimized for high volume data throughput

Note: Do not install EV Collector Agent on the Enterprise Vault server.

Hardware requirements for SQL Server computer

Component	Minimum Requirements
Quantity	1
Cores	16+
Architecture	64-bit
RAM	64 GB minimum
Operating System	Windows 2012/2012 R2 or newer (Standard or Enterprise, 64 bit)
Application	- SQL Server 2012 SP4 x64 edition (or newer). Enterprise, Business Intelligence, or Standard. - Microsoft SQL Server Management Studio - Microsoft Power BI Desktop x64 (optional)
Storage	- C Drive with 500 GB free - D Drive for Database Data file (MDF file). - E Drive for Database Log file (LDF file) Size Guide: D Drive: 2 GB disk space per Million items to migrate. E Drive: 0.5 GB disk space per Million items to migrate. Example for 500 Million items to migrate: D drive: 1000 GB (500 million x 2 GB) E drive: 250 GB (500 million x 0.5 GB)
Network	Added in the same Active Directory domain of Enterprise Vault.
Internet	Not required

Note: For performance reasons, it is recommended that the EV Collector databases are ‘not’ installed on the EV SQL Server. However, sharing the same SQL server is supported.

Inbound and Outbound Firewall rules

Component	Firewall Rules
SQL Server	Inbound Rules: - Allow inbound connection from Collector Agents, over TCP ports: 1433, 4022, 135 and 1434. Outbound Rules: - No outbound connection is required.
Enterprise Vault Servers	Inbound Rules: - Allow inbound connection from Collector Agents, over TCP ports: 135 (RPC), 80 (HTTP) and 443 (HTTPS). RPC discovery is port 135 (DCOM). The returned port numbers to use will be above 1024 through 65535 for DCOM. For more information about DCOM dynamic port range, see the article: https://www.veritas.com/support/en_US/article.100020731 Outbound Rules: - No outbound connection is required.
Collector Agents	Inbound Rules: - No inbound connection is required. Outbound Rules: - Allow outbound connection to SQL Server, over TCP ports: 1433, 4022, 135, 1434. - Allow outbound connection to Enterprise Vault Servers, over TCP ports: 135 (RPC), 80 (HTTP) and 443 (HTTPS) - Allow outbound connection to Veritas Alta Archiving data center servers, over port 443. For more information about the IP addresses requiring allowed listing for outbound connection for Direct Migrator (same as Collector Agent), see the article: https://www.veritas.com/content/support/en_US/article.100039052 Note: From Agent browser, ATAPI and EVAPI nodes of Veritas Alta Archiving data center should be accessible. For example, if your data center is USW03, following URL should be accessible: https://atapi.us3.archivecloud.net/ https://evapi.us3.archivecloud.net/api/evcollection/Info

Technical Requirements

Veritas Alta Archiving related requirements:

1. An active subscription of Veritas Alta Archiving
2. Archive accounts must be created and enabled for all users (both current and former users), whose data you intend to migrate. Once the data migration is complete, the account of former users can be disabled for archiving purposes. For detailed instructions, see the Account Management section of the Veritas Alta™ Archiving Archive Administration Help.
3. Configure classification policies in Veritas Alta Archiving based on the organization policies. The migrated data will get re-classified based on these classification polcies.
4. Configure retention policies in Veritas Alta Archiving based on the organization's policies. Disable the auto expiry of item during data migration to prevent item deletion due to the retention policy. After completion of data migration and placement of the required items on legal hold, you can enable the auto expiry of item.
5. Veritas Alta Archiving tenant must be enabled for EV Collection. By default, EV collection is not enabled. Contact the customer support team to enable this feature.
6. A separate Service Account must be created in Veritas Alta Archiving. This account must have "API Access Manager – Allow Migration of Data" role assigned. This service account does not support MFA / SAML authentication.

On-premises Enterprise Vault related requirements:

1. Enterprise Vault 11.0 or newer
2. A Service Account for Data collection is required. This account must have read permission to Archived content. (Vault Service Account by default has read permission on archived data. This account can be used as a service account for Data collection)
3. Enterprise Vault Servers must be accessible from EV Collector Agent, which connects using EV API Runtime. EV API calls use DCOM over RPC. The default behavior is using port 135 to handshake, and then a dynamic port range. By default, DCOM assigns ports dynamically from the TCP port range of 1024 through 65535. To limit the ports in use, see this article:

https://www.veritas.com/support/en_US/article.100020731

4. (Optional but recommended) Download and install the most recent Maintenance Release available for the Enterprise Vault from Veritas Download Center at https://www.veritas.com/support/en_US/downloads

5. Perform recommended maintenance for Enterprise Vault SQL databases. For more information, see this article: https://www.veritas.com/support/en_US/article.100022023

EV Collector Agent related requirements:

1. One dedicated SQL server is recommended with backup and maintenance routines set up.
2. Make the EV Service account a local administrator on the EV Collector Agent nodes & SQL server.
3. Make the EV Service account a DBA admin on the SQL server.
4. Either disable the Virus scanner on the EV Collector Agent node servers, or include “EVCAgent.exe” in the Anti-Virus applications exclusion list. Also, add the “C:\FetchedFromEV” folder to the Anti-Virus folder exclusion list.
5. On every EV Collector Agent node server, the version of EV Runtime API, must be the same as the version of Enterprise Vault installed in the environment.
6. SQL Server, hosting the EVCAgentGroup database, must be accessible from EV Collector Agent node servers. Required ports for SQL server connectivity must be open on the SQL server (for example, port 1433).

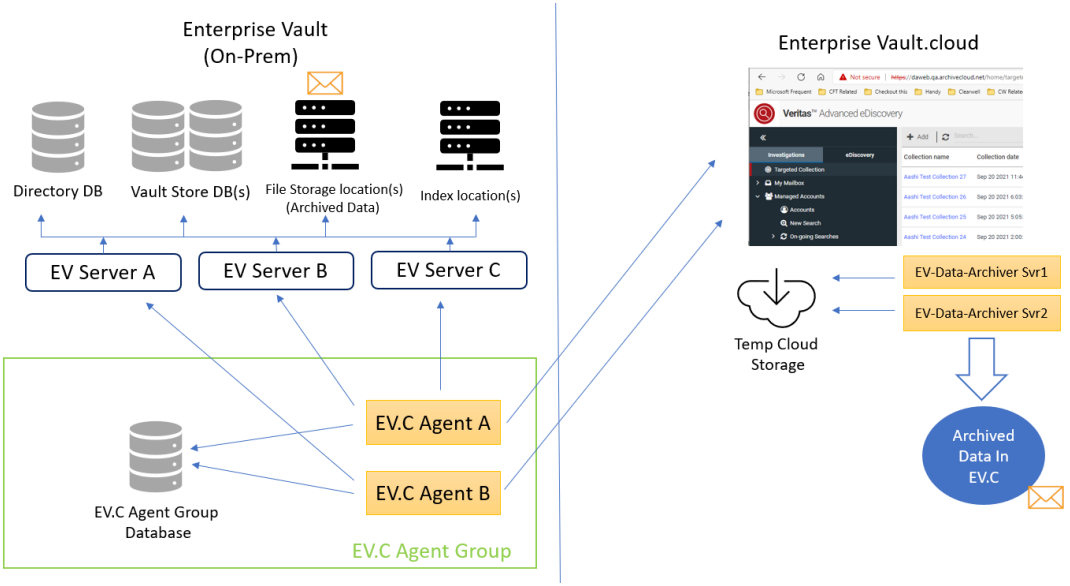
Chapter 2

Planning Data Migration

This chapter includes the following topics:

How Data Migration works

This section introduces the EV Collector Agent components and gives an overview of the basic data migration / collection process. This overview will help you understand and manage data migration at various stages.



1. The user will create a Targeted Collection request on Veritas Alta Archiving Discovery portal. In this collection request, the user will specify the source and criteria for the collection, which include the selected Archives from which the user wants to collect data from.

2. The next available agent from the EV Collector Agent group will download the Collection request.

3. All the agents from the EV Collector Agent group together will start working on data collection. Even if some of the Agents are shut down during this process, the other available agents will keep working on the data collection.

4. To do the data collection, Agent does the following:

    - Communicates with Enterprise Vault to find the Index Volumes, associated with selected archives. *(This stage of the collection is called **Expanding**)*.

- Once archive associated Index Volumes are identified, Agent communicates with Enterprise Vault indexes, to identify the items which match the given criteria in the collection request. *(This stage of the collection is called **Searching**)*.

  Note: Depending upon the collection criteria complexity, Collector Agents determine whether to use the Enterprise Vault Indexs to identify the items (known as the Index method) or to directly connect to the Vault Store database to identify the items (known as the Enum method).

5. The list of items identified by the Enterprise Vault indexes or Vault Store database is saved in the EV.C Agent Group database, named "EVCAgentGroup".

6. All available agents then start fetching the archived items from Enterprise Vault and start uploading the items to Veritas Alta Archiving, over a secure communication channel. *(This stage of the collection is called "**Fetching and Uploading**")*

7. The copied data is received by the Veritas Alta Archiving servers, saved in temporary storage, and it is then queued for archiving. Multiple servers in the Veritas Alta Archiving keep processing and archiving the data from this queue. (Hence once the data is uploaded, it can take a while for the content to get archived in Veritas Alta Archiving. This is normal expected behavior.)

8. Once the data is uploaded, the EV Collector Agent starts doing verification of the items which it has uploaded. To verify if the item uploaded by the EV Collector application is securely archived in Veritas Alta Archiving, the EV Collector Agent communicates periodically to Veritas Alta Archiving server to verify each induvial item. If the item is still in queue for archiving, it then waits for a while and rechecks. This goes on until the item is verified as "Archived" in Veritas Alta Archiving. *(This stage of the collection is called "**Verification**")*

9. Once all the items are fetched, uploaded, and verified – the collection comes to an end.

Multiple Agent Groups for parallel migration

This section describes configuring the EV Collector Agents to support independent parallel data migration from multiple vault stores. This overview helps you understand and manage large data migration optimally.

Parallel Migration: For High Speed and Large Scale

1. The user will create a Targeted Collection request on the Veritas Alta Archiving Discovery portal. In the collection request, the user will name the collection request in following format:
   Format: <Agent Group Name>::<User friendly name of collection>
   Example: EVCAgentGroup02::Data Collection of JournalArchive005

2. The collection request will be downloaded by the respective EVC Agent group only. And then the rest of the Data Migration process is the same.

Overview of data in Enterprise Vault

This section highlights few methods, which can help you get an overview about the scale of Archived Data in Enterprise Vault. Using this you can identify how many Vault stores and archives exist. What is the total size of the data, the number of items in each Archive, etc. Which Enterprise Vault server host which Vault Store and the volume of data in it. All this information can help you plan, estimate, and break down the large Migration task into more manageable data collection batches.

Using EV Collector Agent's Scan EV Data feature:

EV Collector Agent's Scan EV data feature does not require EV Collector Agent to be configured. Just after the installation, this feature can be used. And it can also be used after the EV Collector Agent is installed and configured.

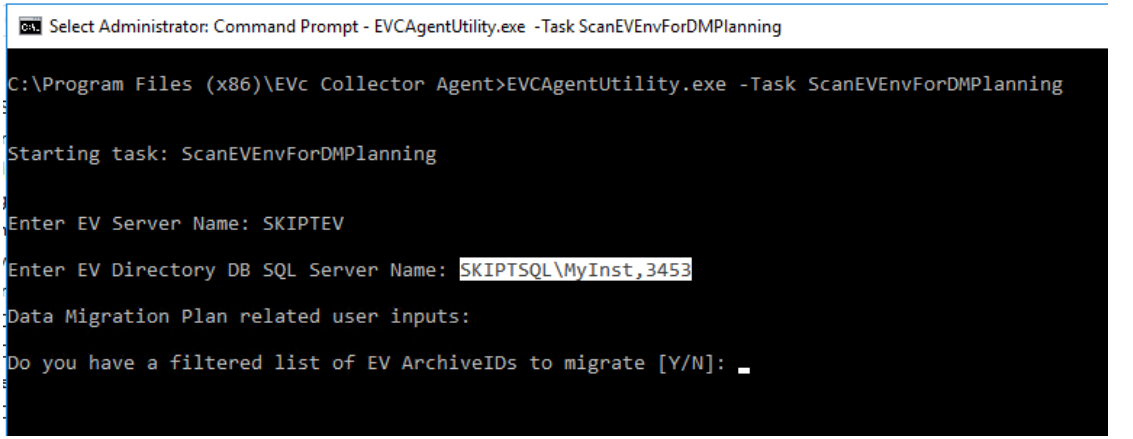
Using Scan EV data feature after configuring Collector Agent:

A. Log in as EV's Vault Service account on EV Collector Agent node, and run the following command:

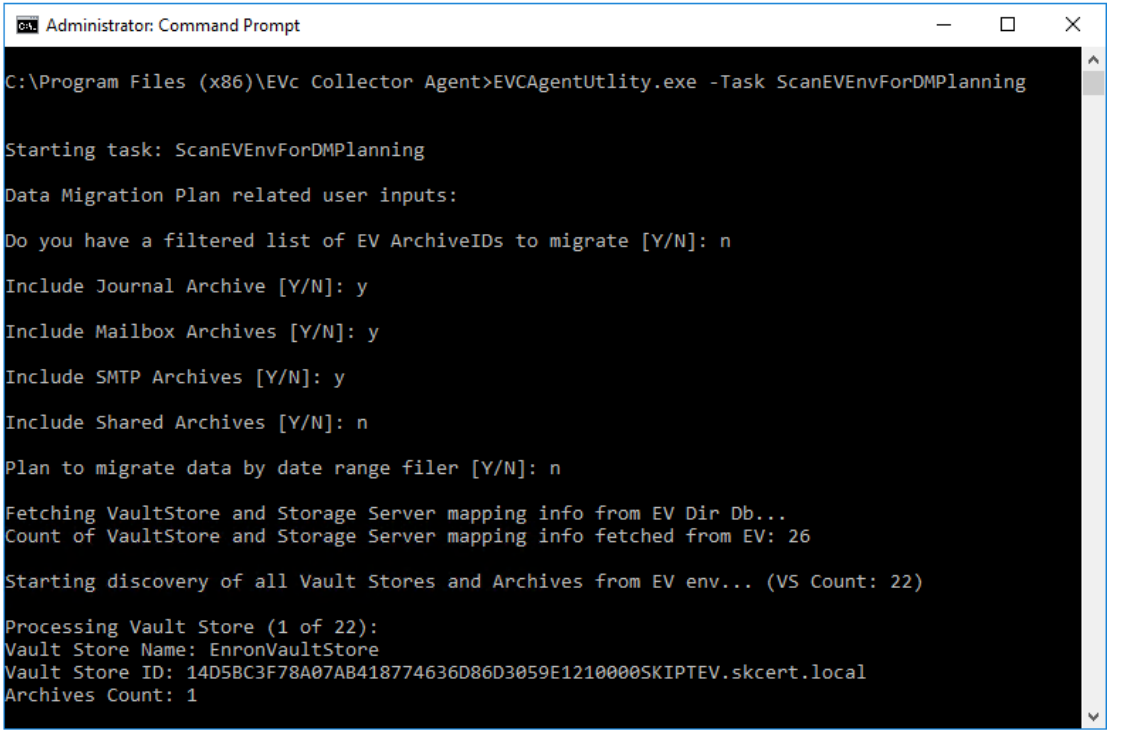
```
EVCAgentUtility.exe -Task ScanEVEnvForDMPlanning
```

This command asks for few inputs about data which you plan to migrate, such as types of archives and optional date range filter.

Note: If the EV Collector Agent is not configured, this command will ask for additional input such as EV Server name, and SQL Server hosting EV Directory Database. Along with SQL Server name, do specific the instance name (if applicable) and port number if custom port is being used, as shown below:

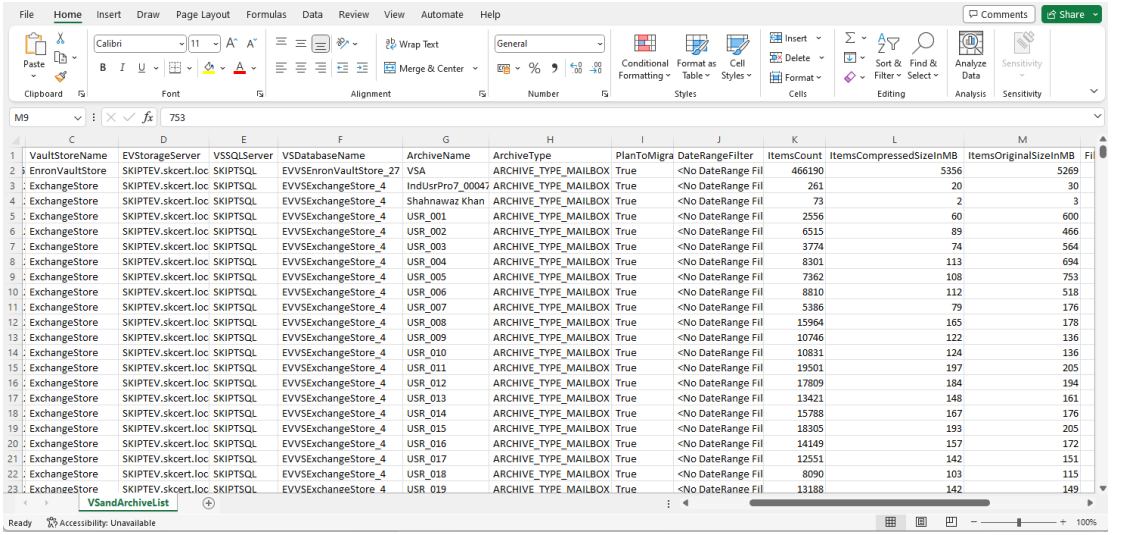


If the EV Collector Agent is already configured, then details about the EV sever will not be asked, as shown below:



Scan EV Data feature scans all the Vault Store and Archives to determine the volume of data it contains and other related information which is required for Data Migration planning. In the end, it will generate “D:\Program Files (x86)\EVc Collector Agent\Logs**VSandArchiveList.csv**”.

VSandArchiveList.csv contains following information for each Archive:
ArchiveEvID, VaultStoreEvID, VaultStoreName, EVStorageServer, VSSQLServer, VSDatabaseName, ArchiveName, ArchiveType, PlanToMigrate, DateRangeFilter, ItemsCount, ItemsCompressedSizeInMB, ItemsOriginalSizeInMB, FilteredItemsCount, FilteredItemsCompressedSizeInMB, FilteredItemsOriginalSizeInMB



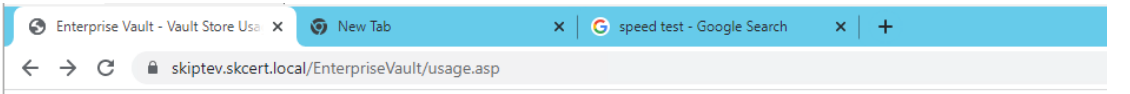
	C	D	E	F	G	H	I	J	K	L	M
1	VaultStoreName	EVStorageServer	VSSQLServer	VSDatabaseName	ArchiveName	ArchiveType	PlanToMigra	DateRangeFilter	ItemsCount	ItemsCompressedSizeInMB	ItemsOriginalSizeInMB
2	EnronVaultStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSEnronVaultStore_27	VSA	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	466190	5356	5269
3	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	IndUsrPro7_00047	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	261	20	30
4	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	Shahnawaz Khan	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	73	2	3
5	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_001	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	2556	60	600
6	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_002	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	6515	89	466
7	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_003	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	3774	74	564
8	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_004	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	8301	113	694
9	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_005	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	7362	108	753
10	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_006	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	8810	112	518
11	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_007	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	5386	79	176
12	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_008	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	15964	165	178
13	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_009	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	10746	122	136
14	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_010	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	10831	124	136
15	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_011	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	19501	197	205
16	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_012	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	17809	184	194
17	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_013	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	13421	148	161
18	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_014	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	15788	167	176
19	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_015	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	18305	193	205
20	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_016	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	14149	157	172
21	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_017	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	12551	142	151
22	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_018	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	8090	103	115
23	ExchangeStore	SKIPTEV.skcert.loc	SKIPTSQL	EVVSExchangeStore_4	USR_019	ARCHIVE_TYPE_MAILBOX	True	<No DateRange Fil	13188	142	149

Using Excel filter, the data of the “VSandArchiveList.csv” can be utilized for data volume analysis for Data Migration planning.

Using Enterprise Vault’s Vault Store usage report:

To view this information in Enterprise Vault, navigate to:

https://your-ev-server/EnterpriseVault/usage.asp



Vault Store Usage Reporter

Click a Vault Store name to view a report of usage by Billing Account.

You can also save the report as a tab-separated-value file in one of two formats:

1. Save usage report by Archive Name
2. Save usage report by Billing Account

Note: Large reports may take some time to generate.

Vault Store	Save Report By		Active Archives	Total Items	Index Pending Items	Total Size (MB)	Awaiting Backup	SQL Server
EnronVaultStore	Archive	Account	1	466,110	0	5,351	466,110	SKIPTSQL
ExchangeStore	Archive	Account	2,002	607,398	0	49,165	607,398	SKIPTSQL
ExchJournalingVaultStore	Archive	Account	1	12,164	0	1,054	12,164	SKIPTSQL
FSAVaultStore	Archive	Account	2	53,833	0	6,283	53,833	SKIPTSQL
FSAVaultStore2	Archive	Account	1	53,829	0	6,294	53,829	SKIPTSQL
Ind	Archive	Account	300	80,137	0	6,702	80,137	SKIPTSQL
Ind Usr	Archive	Account	300	80,987	0	6,757	80,987	SKIPTSQL
Ind Usr Pro10	Archive	Account	300	72,412	0	5,671	72,412	SKIPTSQL
IndUsrPro3	Archive	Account	300	69,619	0	5,343	69,619	SKIPTSQL
IndUsrPro4	Archive	Account	300	70,445	0	5,475	70,445	SKIPTSQL
IndUsrPro5	Archive	Account	300	70,642	0	5,603	70,642	SKIPTSQL
IndUsrPro6	Archive	Account	300	71,075	0	5,619	71,075	SKIPTSQL
IndUsrPro7	Archive	Account	299	70,782	0	5,495	70,782	SKIPTSQL
IndUsrPro8	Archive	Account	300	71,595	0	5,532	71,595	SKIPTSQL
IndUsrPro9	Archive	Account	300	71,996	0	5,613	71,996	SKIPTSQL
IPTEV1VSStore	Archive	Account	2	2,006,006	0	214,301	2,006,006	SKIPTSQL
IPTEV1VSStore2	Archive	Account	1	1,000,962	0	64,966	1,000,962	SKIPTSQL
IPTVaultStore	Archive	Account	3	1,931,671	0	131,314	1,931,493	SKIPTSQL
SKIPTEV1 Store	Archive	Account	1	10,500	0	31	10,500	SKIPTSQL
SKIPTEV2ExchangeJournal	Archive	Account	1	1,308,602	0	91,661	1,308,602	SKIPTSQL
SMTPonWEX	Archive	Account	1	1,000,751	0	142,119	1,000,751	SKIPTSQL
VaultStoreforEnronData	Archive	Account	1	0	0	0	0	SKIPTSQL

Total number of Vault Stores : 22
Total number of Active Archives : 5,016
Total number of items : 9,181,516
Total size of items : 770,349 MB
Average size of items : 86 KB
Total number of index pending items in Vault Stores: 0
Total number of items awaiting backup : 9,181,338

Important information and limitations

This section describes the important information, current limitations and expected behavior of EV Collector Agent based solution, before planning the large data migration:

1. This data migration solution using EV Collector Agent does not make any modification, at any stage, in the on-premise Enterprise Vault records or data.

2. The data migration speed depends on the Enterprise Vault environment. Data Migration speed is expected to be same as the data export rate observed by Discovery Accelerator in that Enterprise Vault environment.

3. EV Collector Agent 2.0 support data collection of archived emails from Enterprise Vault which was archived from following sources only:

    a. Exchange Mailbox Archiving
    b. Exchange Journal Archiving
    c. Domino Mailbox Archiving
    d. Domino Journal Archiving
    e. PST or NSF file content Archiving
    f. SMTP Archiving
    g. Microsoft Teams Archiving
    h. Slack Archiving

4. When the data is migrated, and archived in Veritas Alta Archiving, the retention policy on the item is applied based of the policy settings in Veritas Alta Archiving. In Veritas Alta Archiving, the retention is based on the date of the email and not on the archived/migrated date.
   Note: The retention information set on the item in Enterprise Vault, is not carried forward during this data migration.

5. EV Collector Agent 2.0 currently does not support legal hold flags to be carried forward to Veritas Alta Archiving.

6. When migrating to Veritas Alta Archiving, calendar items without a mail date that are archived in Enterprise Vault are saved with the date of archival as the mail date in Veritas Alta Archiving.

7. Before migrating data from the Exchange Mailbox Archive or Domino Mailbox Archive of Enterprise Vault, the mailbox archive ownership information must be updated in the Collector Agent database.

   WARNING: If the mailbox archive ownership information is not reviewed or updated, the emails migrated from such archives to Veritas Alta Archiving loses the folder structure information related to such emails. In such a scenario, only the emails will be migrated and be discoverable, but the end user will not see such email in the original folder structure in Enterprise Vault Personal.cloud.

   Refer to the Appendix section of this document for more information about reviewing and updating the archive ownership information.

Chapter 3

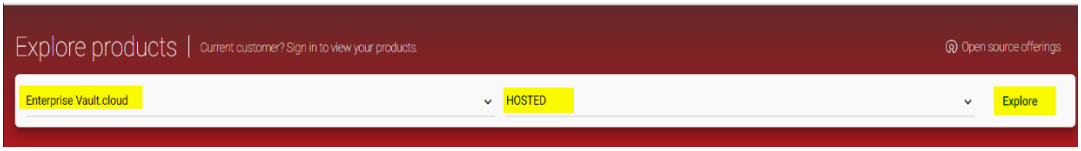
Installation and configuration

This chapter includes the following topics:

Installation of EV Collector Agent

You can download the latest version of EV Collector Agent from the Veritas Download Center at https://www.veritas.com/support/en_US/downloads

At the Veritas Download Center, the customer should select Veritas Alta Archiving and HOSTED, then click Explore:



Then click on **Base and upgrade Installers**.

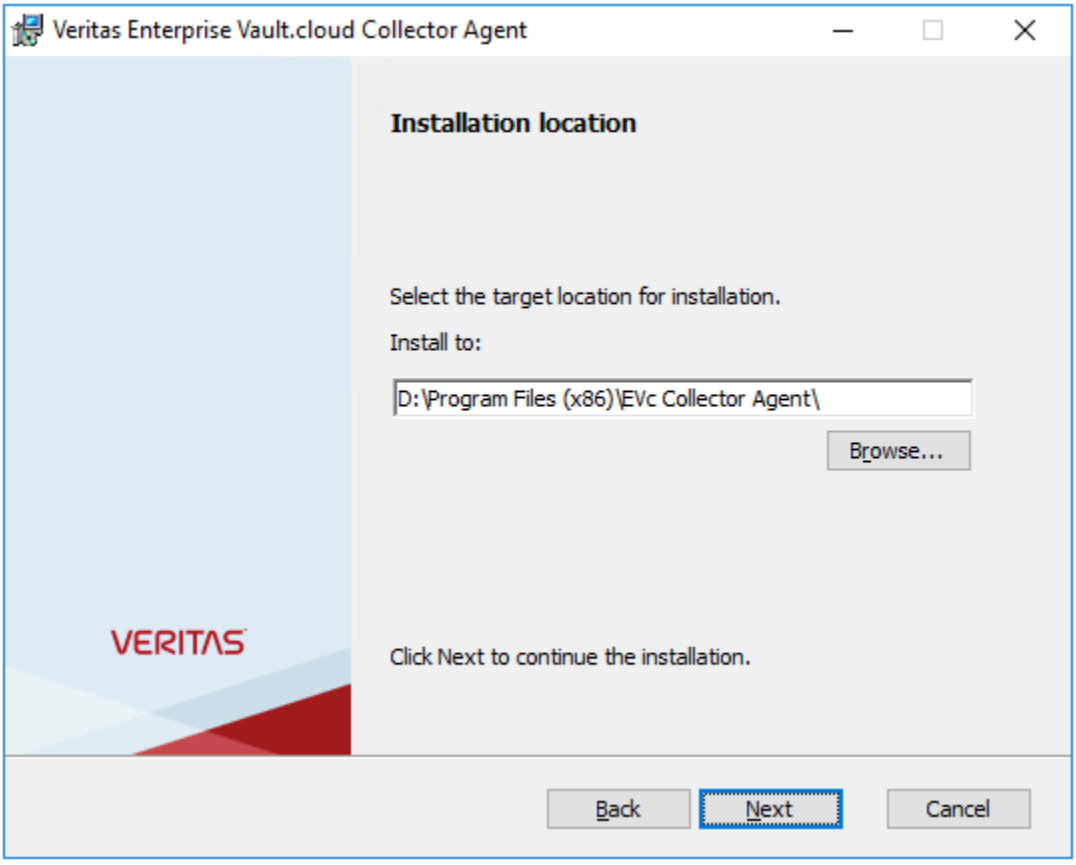
Scroll down to find **EVcCollectorAgent.2.0.xx.zip** and click the link to download the file.
Note: The user may need to create an account on the Veritas Download Center if they don't have one already.

Once you have downloaded the EV Collector Agent installation file, extract the zip file, and you should find the “EvcCollectorAgent.msi” file in it.

Copy the “EvcCollectorAgent.msi” file on the Agent node server, and double-click on the MSI file to begin the installation.

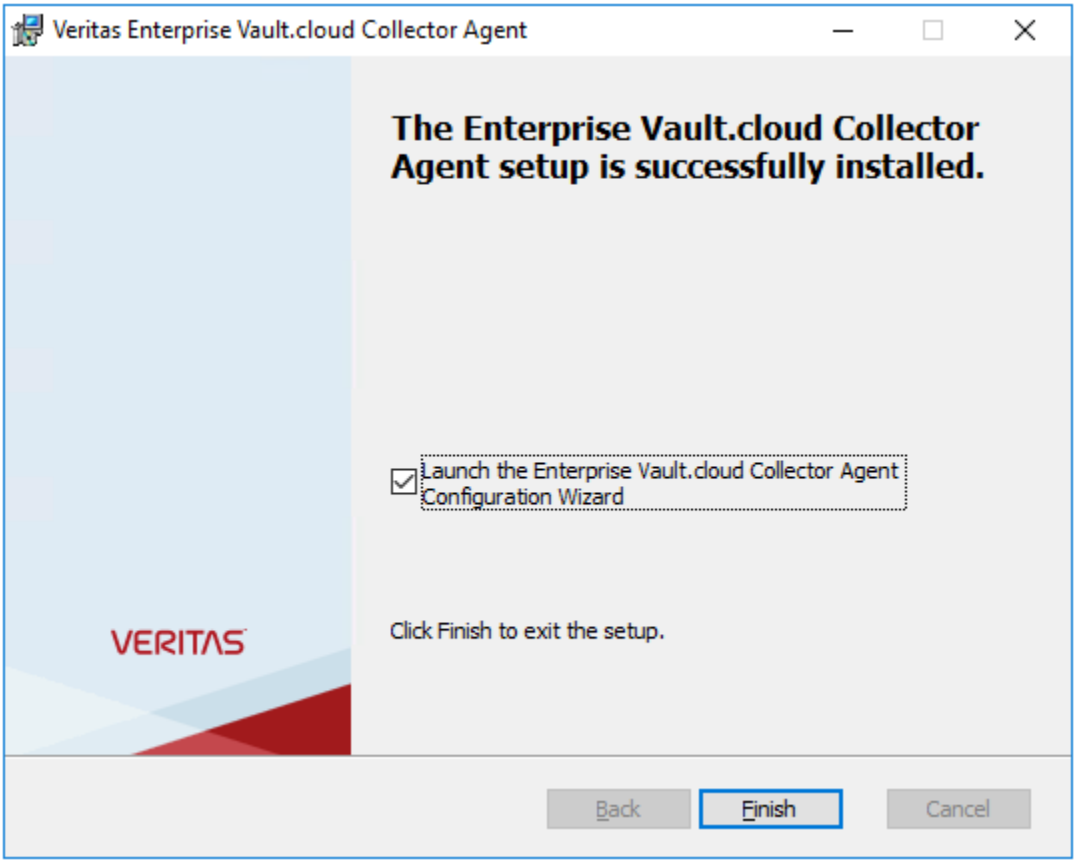
Note: If an earlier version of this software is already installed, it must be removed. It was named “Veritas Veritas Alta Archiving Reactive Collector Agent”.

Click on **Next** to continue.



Note: It is recommended to install it in D: drive (or some other drive, other than C: drive), if available.

Specify the location for installation and click on **Next** to continue the installation.



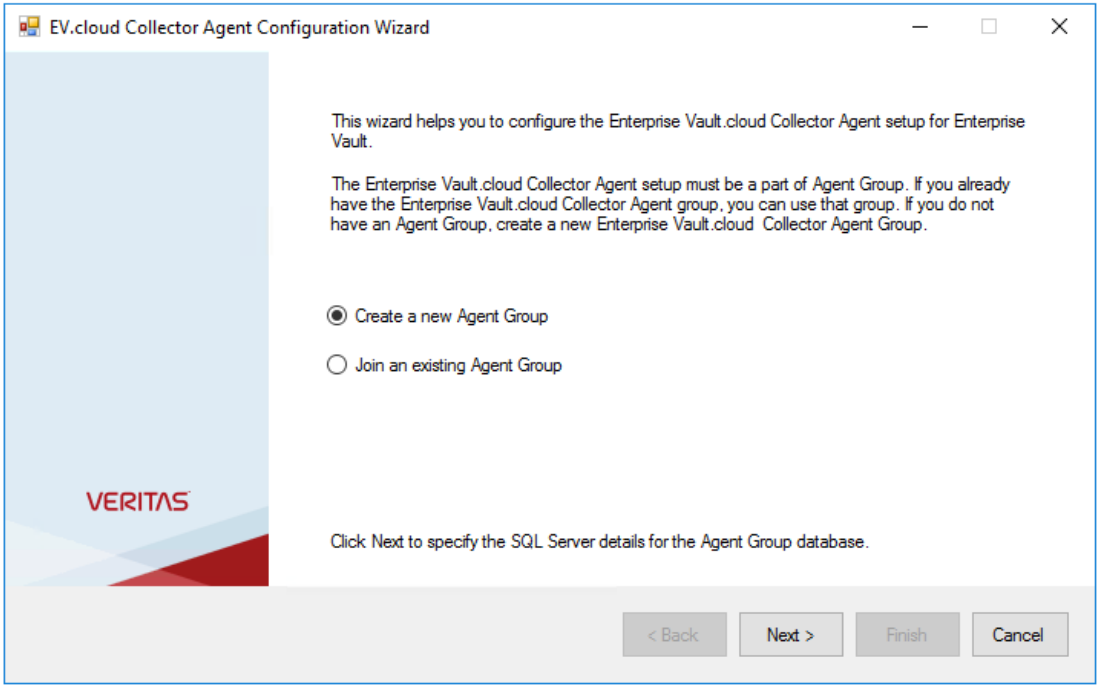
Once the installation is over, the installer will provide an option to launch the configuration wizard. Keep the option box **selected/ticked** and click on **Finish** to launch the configuration wizard.

Note: You can launch the configuration wizard later also by manually starting following Exe file: "**C:\Program Files (x86)\EVc Collector Agent\Config.exe**"

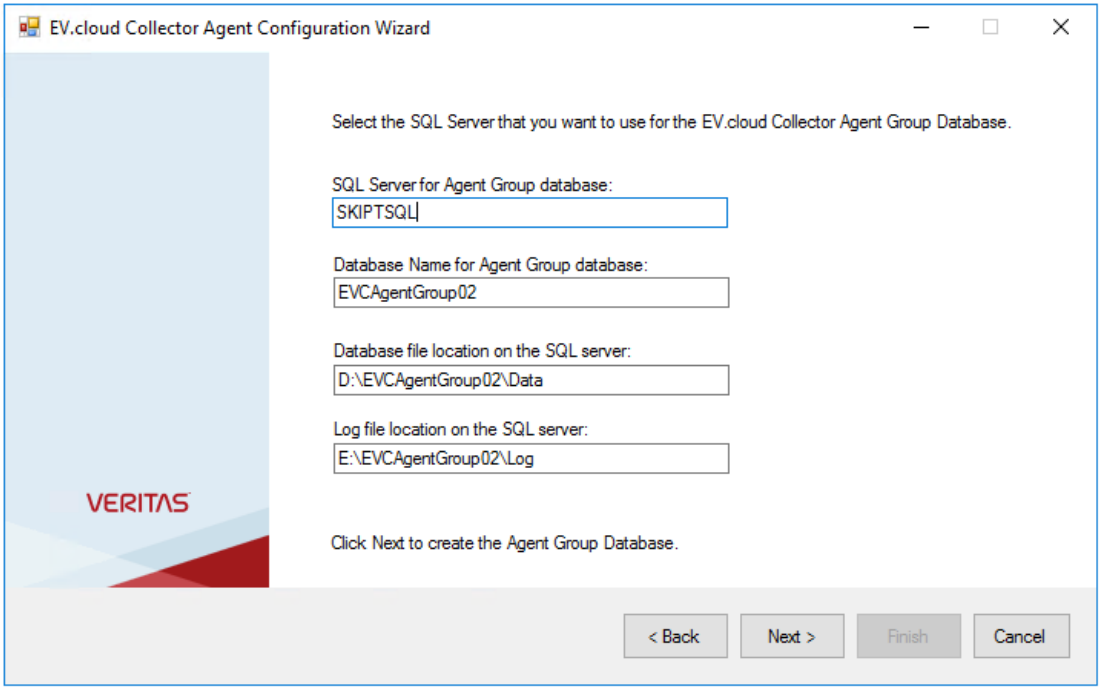
Configuration of first EV Collector Agent

During the configuration of the **first** EV Collector Agent, we need to "**Create a new EV Agent Group**". And while configuring subsequent agents on different nodes, we need to simply "**Join an existing Agent Group**".

For the first EV Collector Agent configuration, follow the instructions prompted by the wizard.



Select "**Create a new Agent Group**", and click on **Next** to specify SQL Server details for the Agent Group database, in the next screen.



Notes about the input on the above page of the wizard:

1. A dedicated SQL server is recommended for performance reasons. Specify the name of the SQL server (along with the instance name if required).

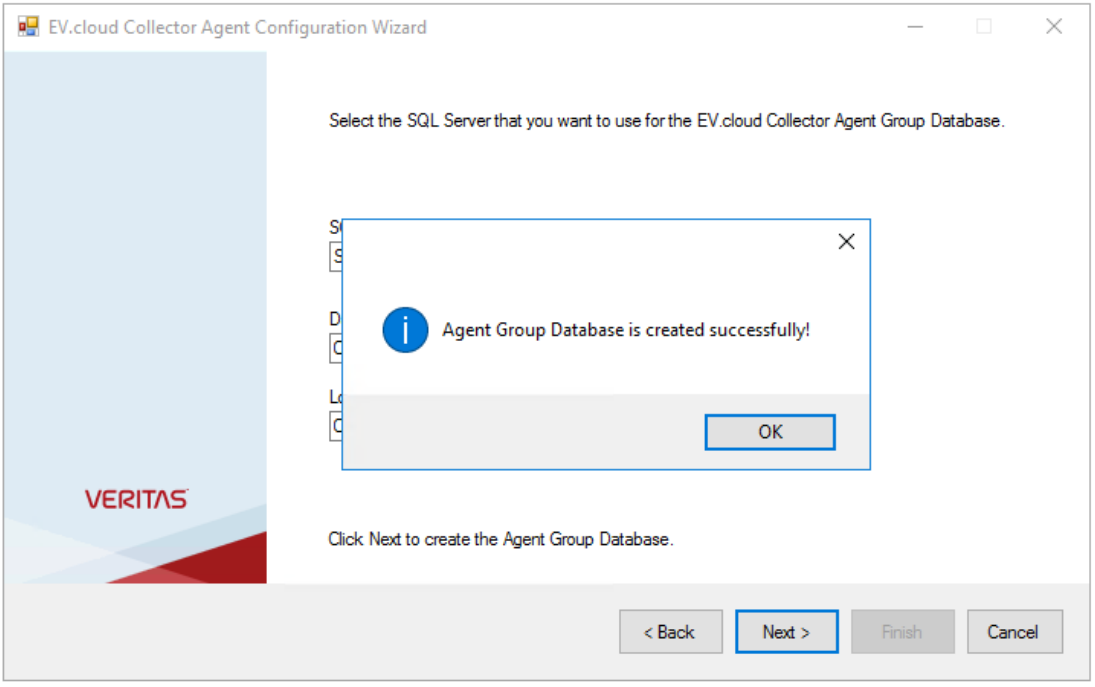
2. Specify the name of the database for your EVC Agent Group. This name is also used as EVC Agent Group name, where multiple Agent Groups are configured for parallel migration.

3. On the SQL Server, you need to create two folders, one for Data and one for log. It is highly recommended to have the data file and log file of the database on two separate drives. And avoid using the OS drive. For example, create an empty folder "**D:**\EVCAgentGroupDB\Data" for the database file, and create an empty folder "**E:**\EVCAgentGroupDB\Log" for the database log file.

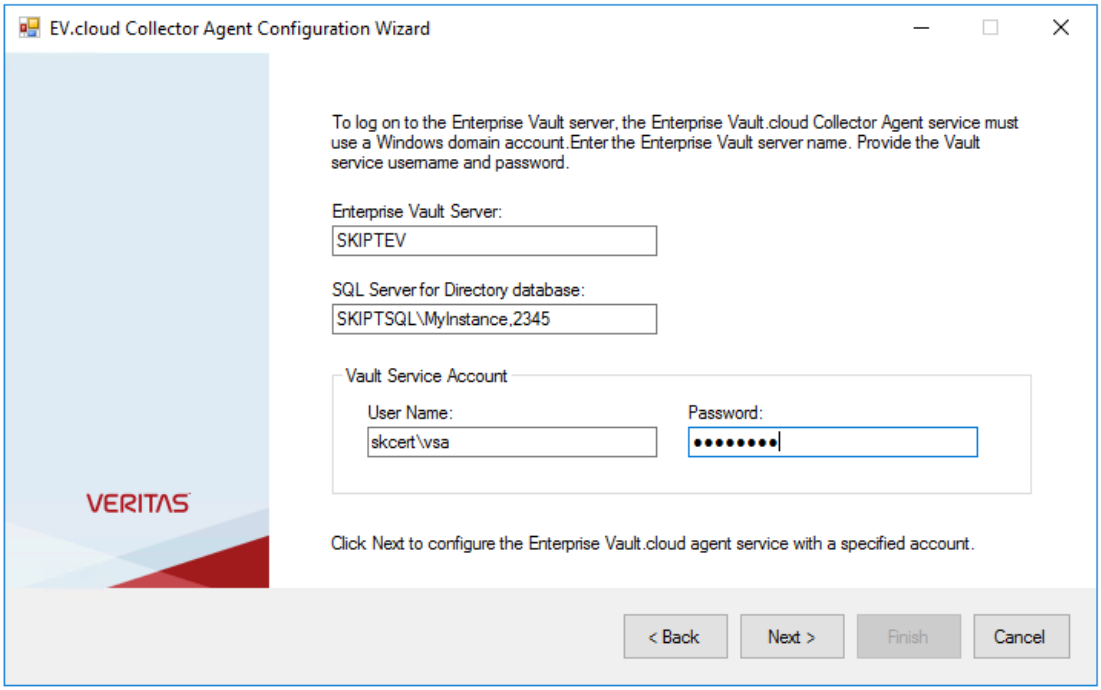
4. Once those folders are manually created on the SQL server, specify those paths in this UI.

Once you click on Next, the configuration wizard will **create the database** named “EVCAgentGroup” on the specified SQL server.

Note: If the database already exists, it will prompt the UI to re-create the Agent Group database. Click **Yes**.



Once the Agent Group database is created, a confirmation screen same as above will be displayed. Click on **OK** to proceed.



Notes about the input on the above page of the wizard:

1. Specify the name of Enterprise Vault Server, as the directory server of Enterprise Vault. This value must be same as displayed in Enterprise Vault Administration Console.

   Note: If you have a multi-site-based Enterprise Vault environment, then specify one of the Enterprise Vault servers, which is part of the site from which you want to migrate data from. For each Enterprise Vault site, an independent EV Collector Agent Group should be installed and configured. Data collection from multiple Enterprise Vault sites happens in parallel. Please refer to Enterprise Vault documentation for more information about “Multi-Site based EV environment”.

2. Specify the name of the SQL server hosting the Enterprise Vault Directory database (along with the instance name and non-default custom port number, if used).

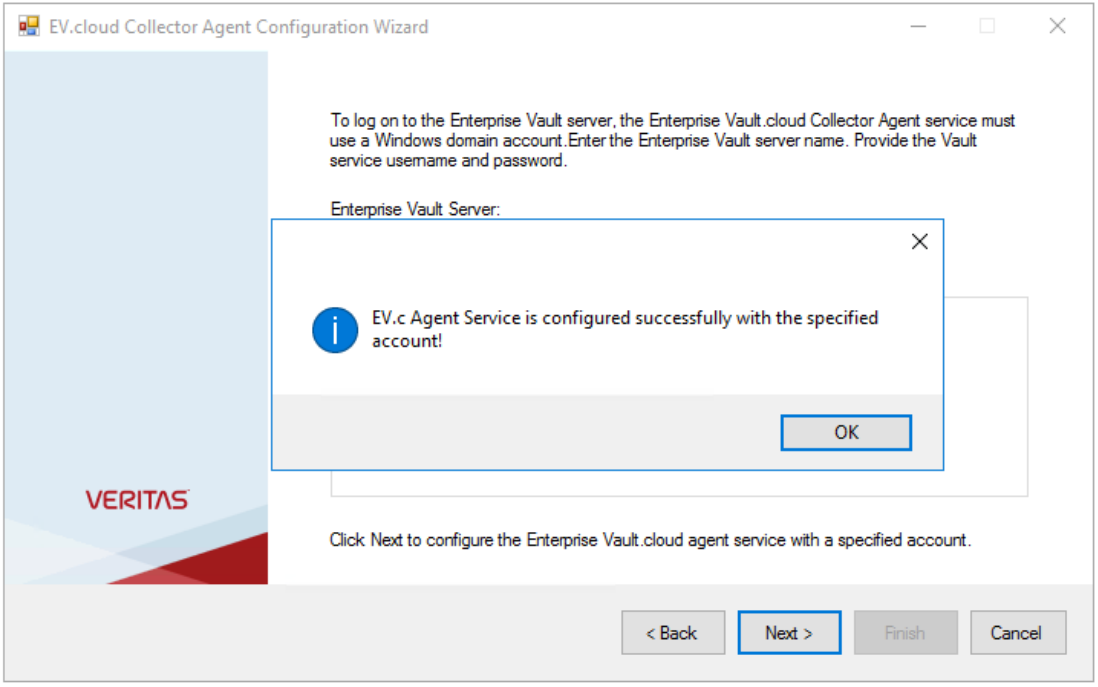
3. The service account specified here will be used for two purposes:

   a. Running the EV Collector Agent service on this Agent node. This account must have “**Log on as Service permission**” permission on this node.

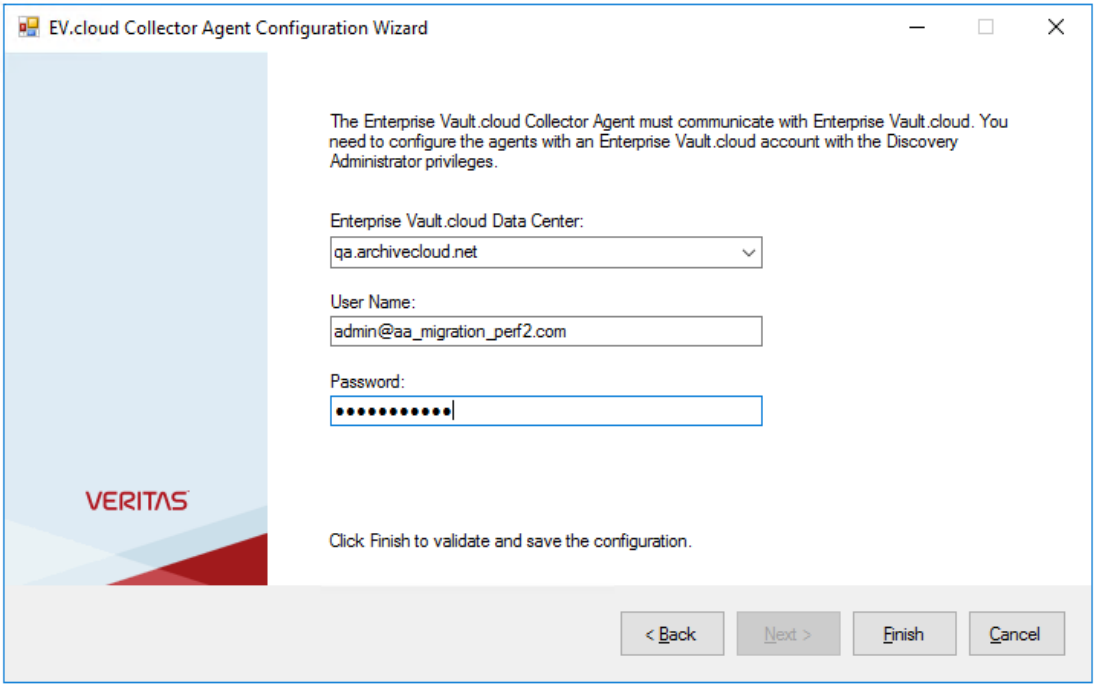
b. This service account will be used to communicate with Enterprise Vault, as well as to fetch the data. This account must have the privilege to read the archived data from all the archives from which you wish to collect data from. By default, the Vault Service Account has all those privileges and can be used here.

Note: For security reasons, the EV Collector Agent does not save these credentials anywhere in its record.

Once you click on **Next**, the “EV.cloud Agent for EV” service will be created on the agent and configured to run under the service account specified.



Once the agent service is created, a confirmation screen same as above will be displayed. Click on **OK** to proceed.



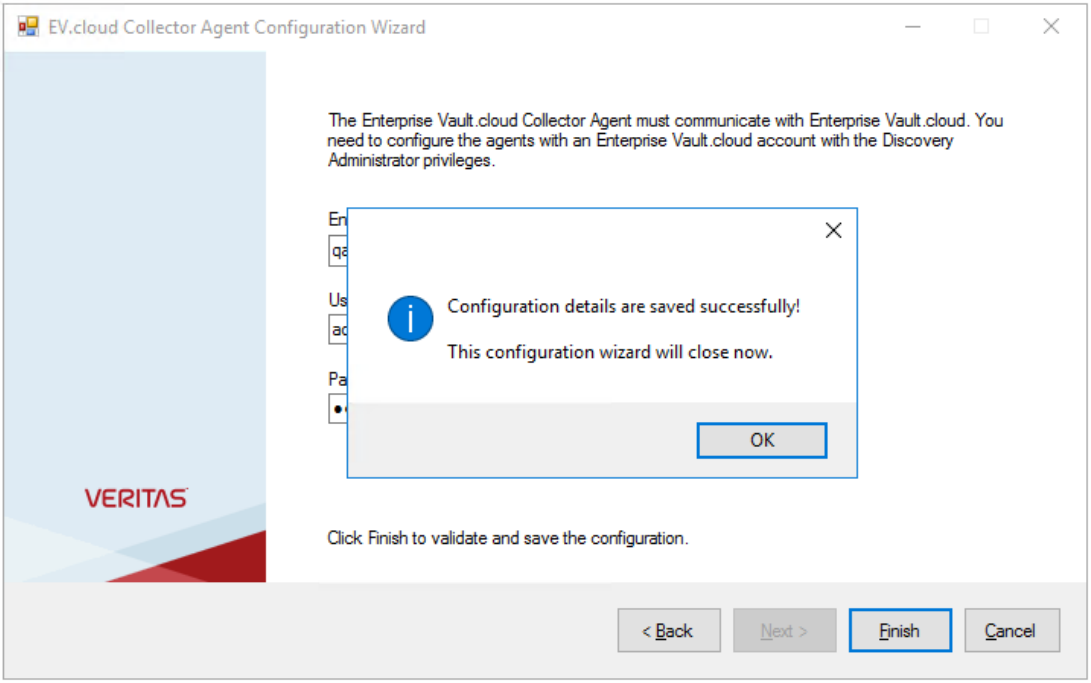
Notes about the input on the above page of the wizard:

1. From the dropdown menu, specify the Veritas Alta Archiving datacenter where the customer is provisioned.

2. Specify the service account created in Veritas Alta Archiving, for the purpose of Data Migration/collection from Enterprise Vault.
   Note: This account must have the "**Discovery Administrator**" privilege.

3. Please make sure this customer/tenant of Veritas Alta Archiving is enabled for "**EV Collection**".
   Note: By default, EV collection is not enabled. Contact the customer support team to enable this feature.

This is the last screen of the configuration wizard. Click on **Finish** to validate and save the configuration.

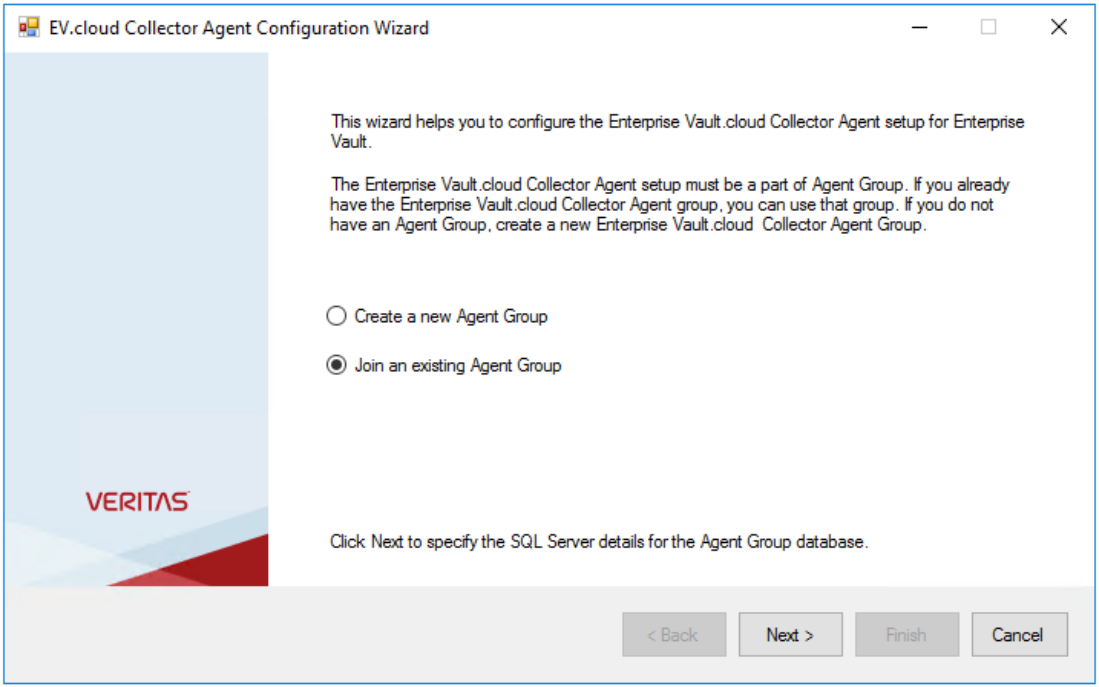


Once the detailed are validated and configured, a confirmation screen same as above will be displayed. Click on **OK**. As this is the last screen, the **wizard will close** once you click on OK button.

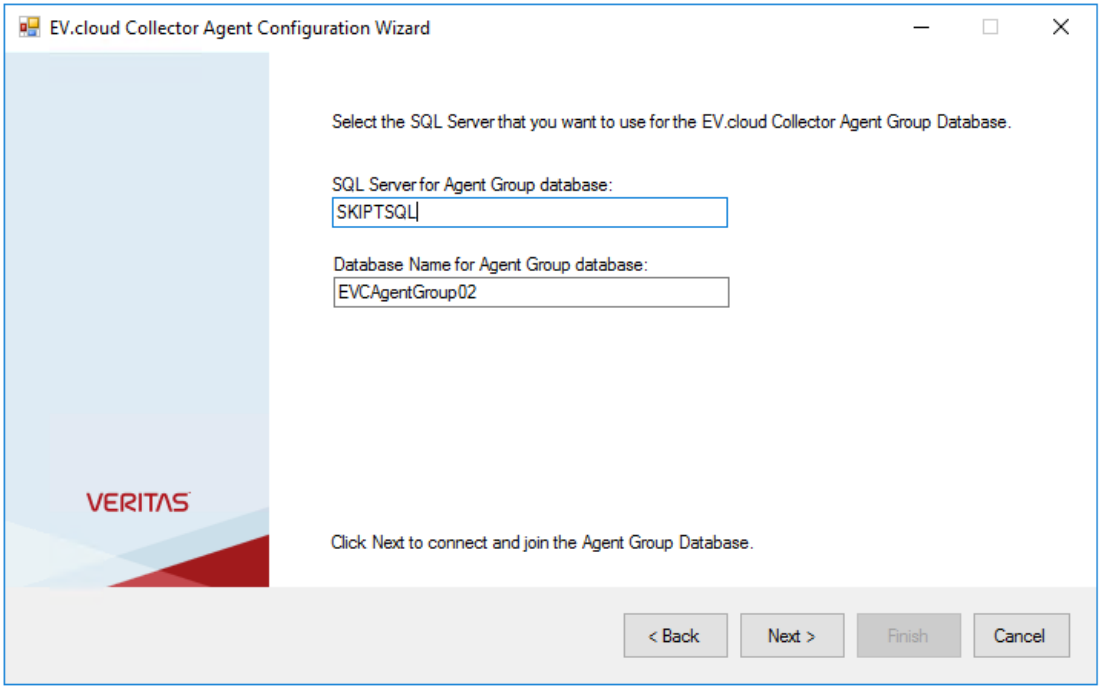
Configuration of additional EV Collector Agents

During the configuration of the first EV Collector Agent, we have already created an “EV Agent group”. So now, for the additional/subsequent EV Collector Agents on different nodes, we need to select the option to “**Join an existing Agent Group**”, during the configuration wizard.

For the additional/subsequent EV Collector Agent configuration, follow the instructions prompted by the wizard.

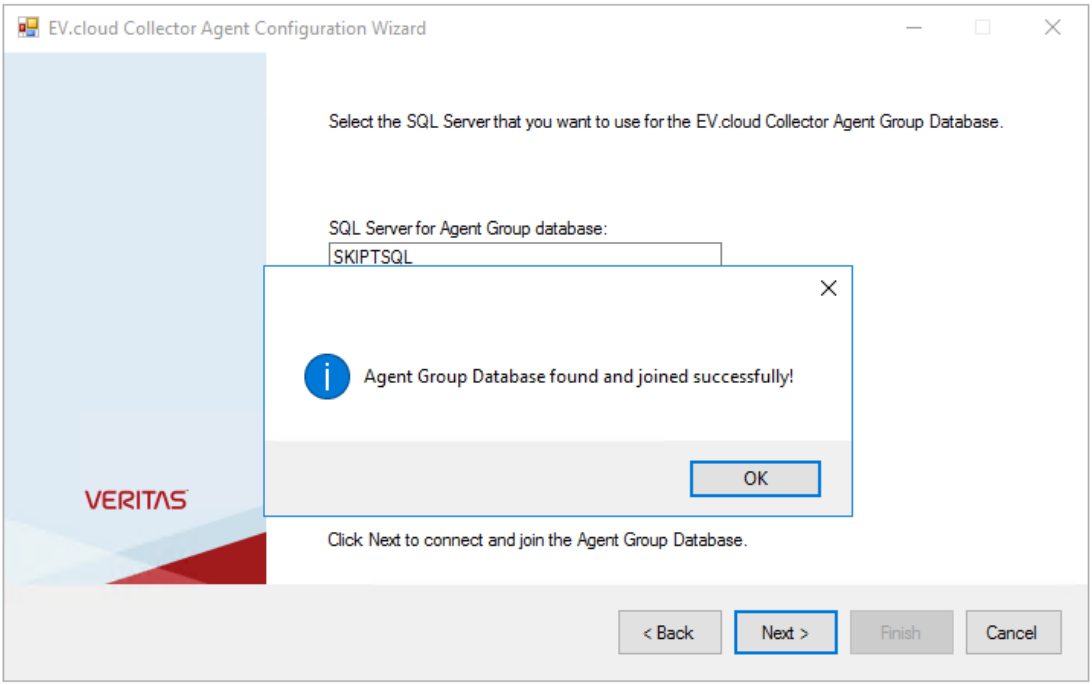


Select “**Join an existing Agent Group**” and click on **Next**.

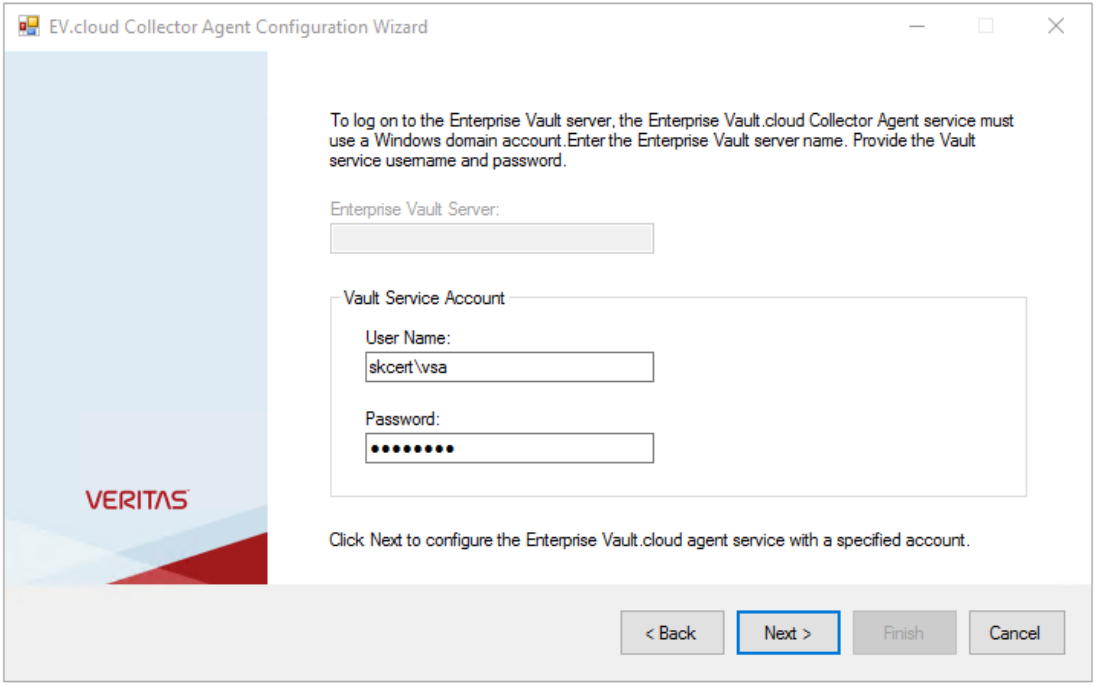


Specify the name of the SQL server and database name of the existing Agent Group database. Click **Next** to continue.

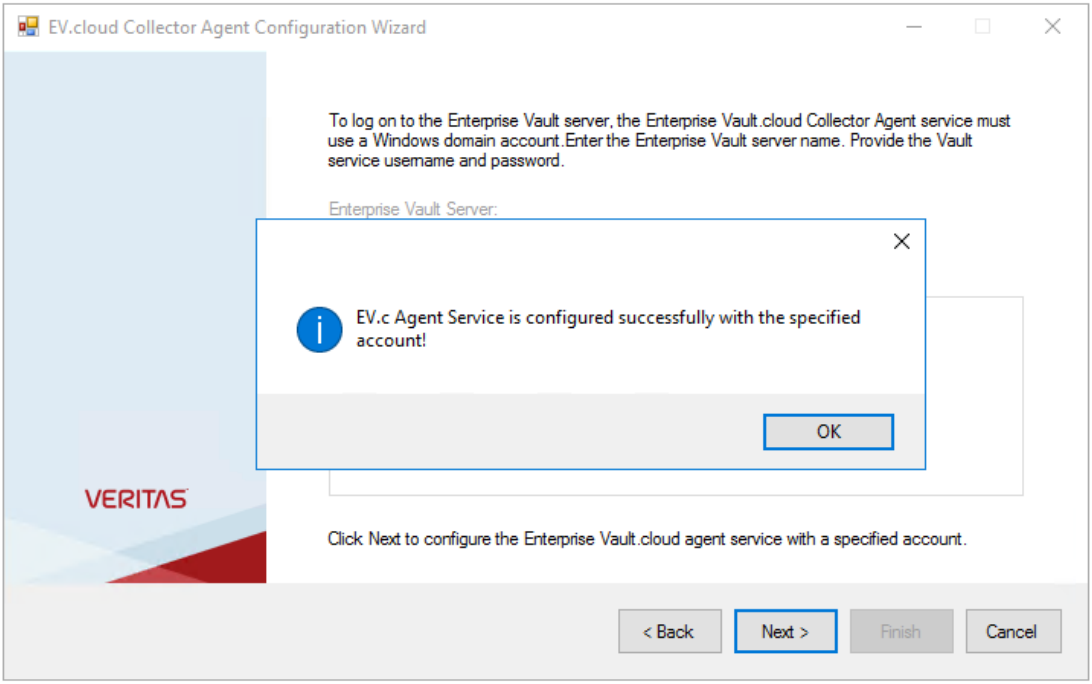
Note: If the default instance of the SQL server is not used, then specify the instance name as well, for example, “SQLServerName\InstanceName”.



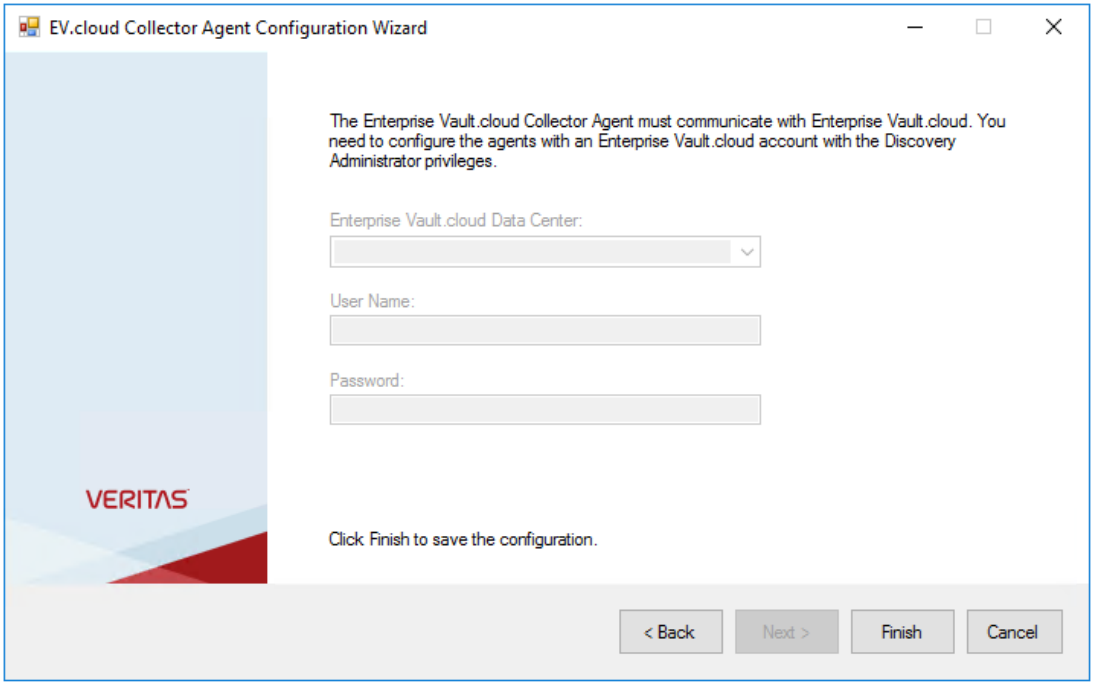
Once the Agent Group database is found and joined by the agent, a confirmation screen same as above will be displayed. Click on **OK** to proceed.



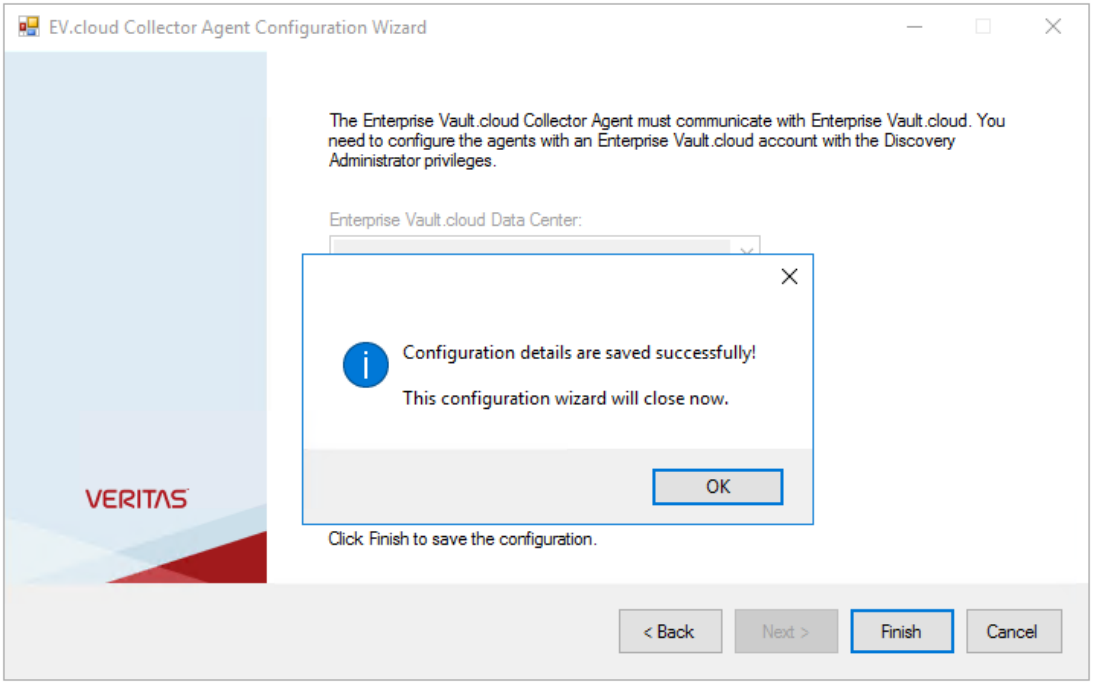
Specify the same Enterprise Vault Service account, as specified earlier for the first agent.



Once the Agent service is created and configured with the EV service account, a confirmation screen same as above will be displayed. Click on **OK** to proceed.



Click on the “**Finish**” button.



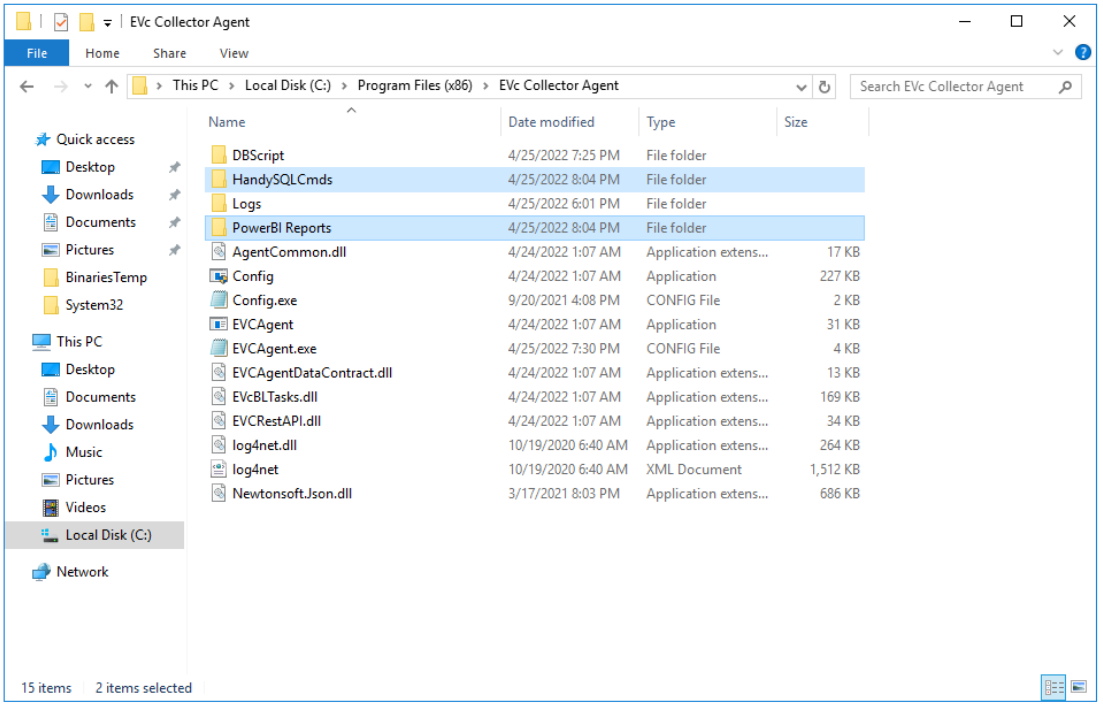
Once the details are validated and configured, a confirmation screen same as above will be displayed. Click on **OK**. As this is the last screen, the **wizard will close** once you click on **OK**.

Handy SQL Commands

To monitor and manage large data migration, it will be required to execute some SQL commands. It will be helpful to have such SQL commands handy.

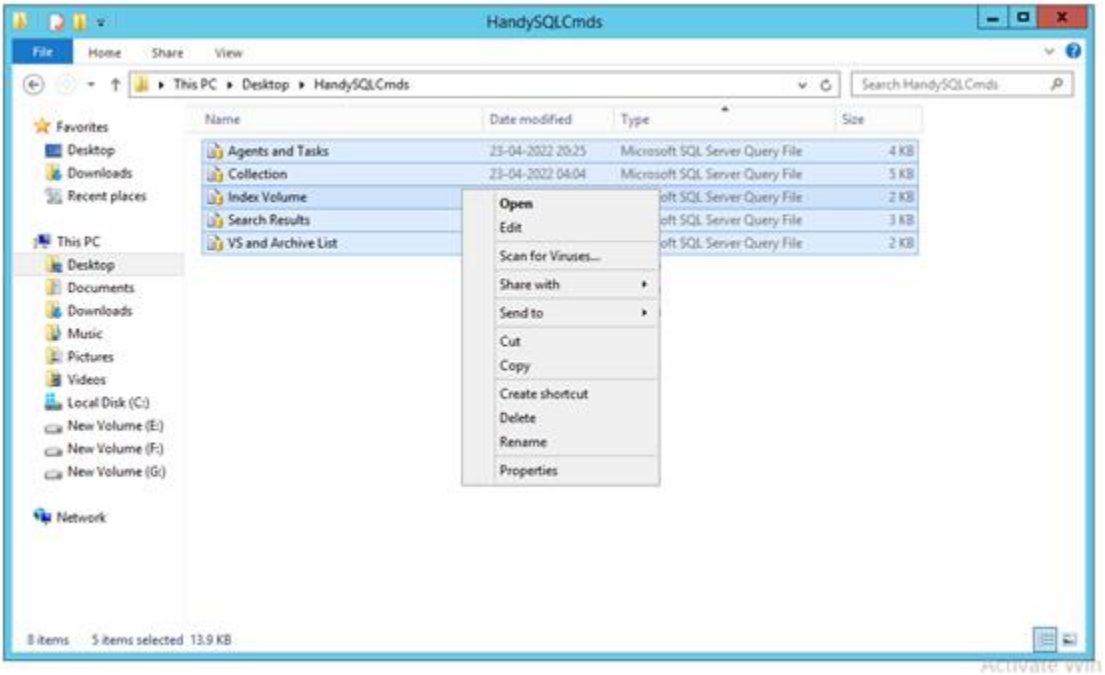
Locate the installation directory (example "**C:\Program Files (x86)\EVc Collector Agent**") of any one of the EV Collector Agents, and copy the following two folders:

1. "**HandySQLCmds**"
2. "**PowerBI Reports**"

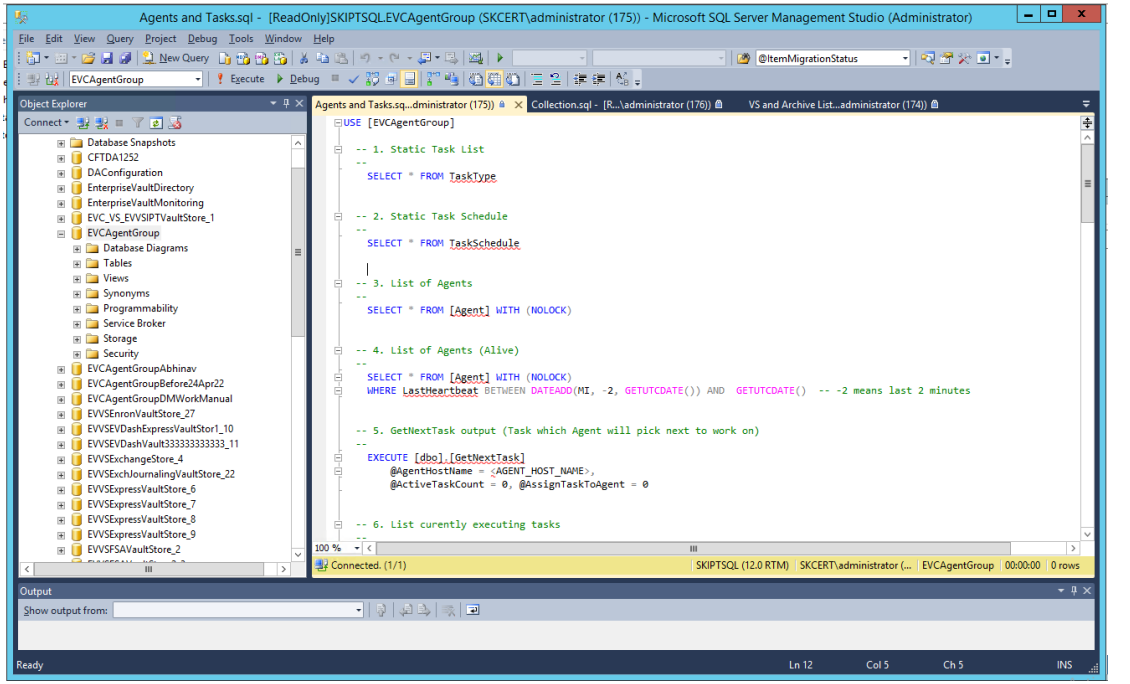


Copy those two folders on the SQL Server (or any other machine from where you will run Microsoft SQL Server Management Studio).

Connect to the SQL Server and locate the “**HandySQLCmds**” folder.



Select all the SQL script files and click on **Open**. This should open all the SQL files in Microsoft SQL Server Management Studio:



Keep the “Microsoft SQL Server Management Studio” open with SQL scripts. During migration, you will need to access these SQL commands frequently.

Controlling “EV.cloud Agent for EV” service on multiple Agents nodes

During migration, there will be times when you may want to Stop or Start the Agent service on all the agents. Doing this task on multiple agents manually can be troublesome.

To help the Agent services run on multiple nodes, 3 batch files are shipped inside the “**Others**” folder. As a one time activity, manually update the following batch files with your Agent Hostname:

1. Start_All_Agents.bat
2. Stop_All_Agents.bat
3. Check_All_Agents.bat

Power BI Reports Configuration

EV Collector Agent provides reports using Power BI. To be able to use these reports, you must download and Install Microsoft Power BI Desktop x64. Power BI can be installed on any machine.

Once installed, you must configure the reports template once, which is shipped along with EV Collector Agent, in “**Power BI Reports**” folder.

Copy the “**PowerBI Reports**” folder from any of the EV Collector Agent installation directories, to the machine where you have installed Microsoft Power BI Desktop x64. “**PowerBI Reports**” folder will have the following two files:

1. PowerBI Setup Guide.pdf
2. MigrationReportTemplate.pbit

As the next step, follow the instructions given inside “**PowerBI Setup Guide.pdf**” to do the one-time configuration of the report.

Chapter 4

Managing Data Migration

This chapter includes the following topics:

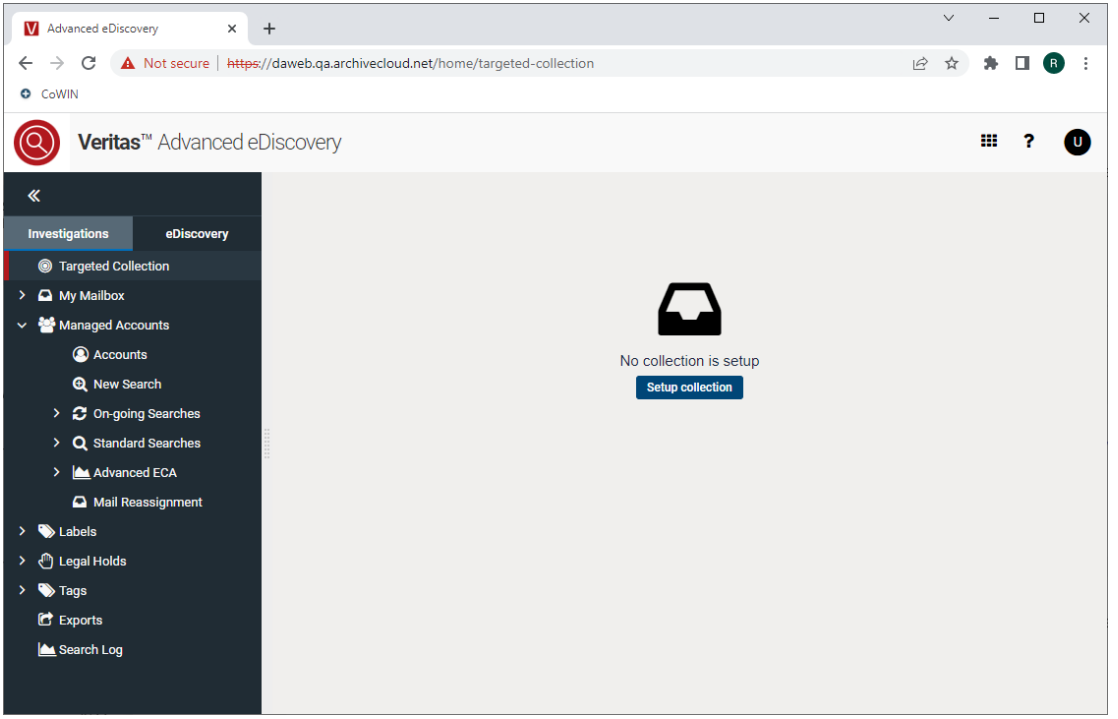
Creating new Data Migration request

To create a new Data Migration / Collection request, you need to do the following:

1. Navigate to Veritas Advanced eDiscovery portal of Veritas Alta Archiving. The **URL depends upon the data center** of Veritas Alta Archiving.

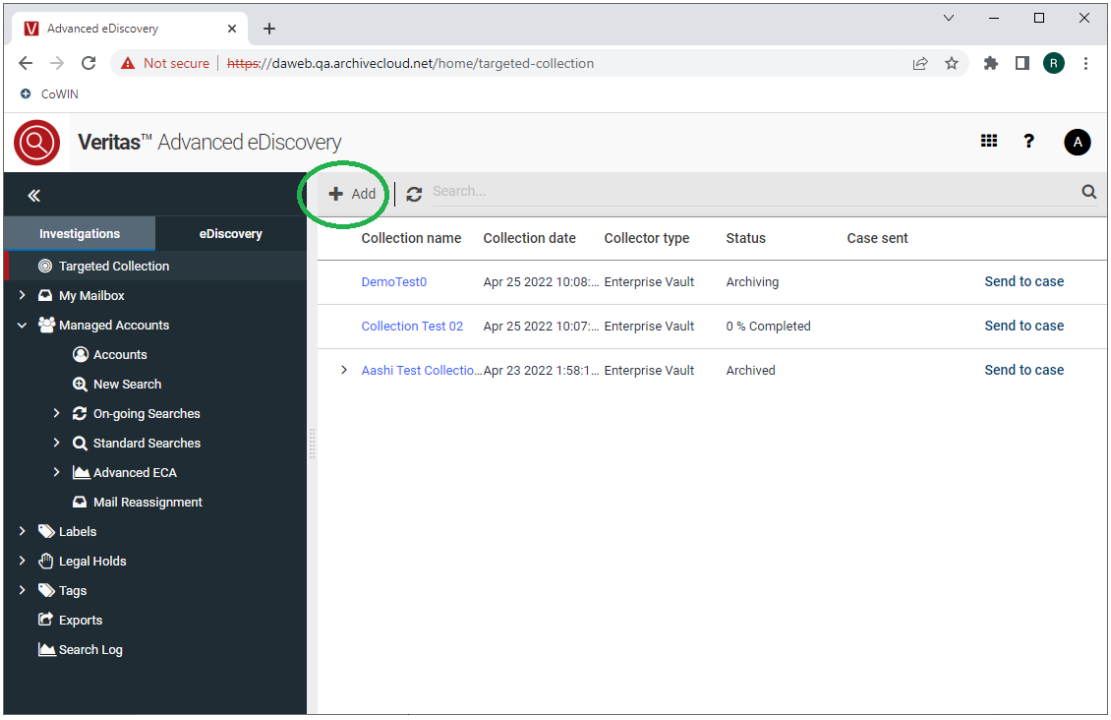
   For example, the URL for **US West data center** is:
   http://discovery.us3.archive.veritas.com/
2. Log in with the service account having Discovery Administrator privilege.

3. Navigate to the **Investigations** tab and click on **Targeted Collection**.

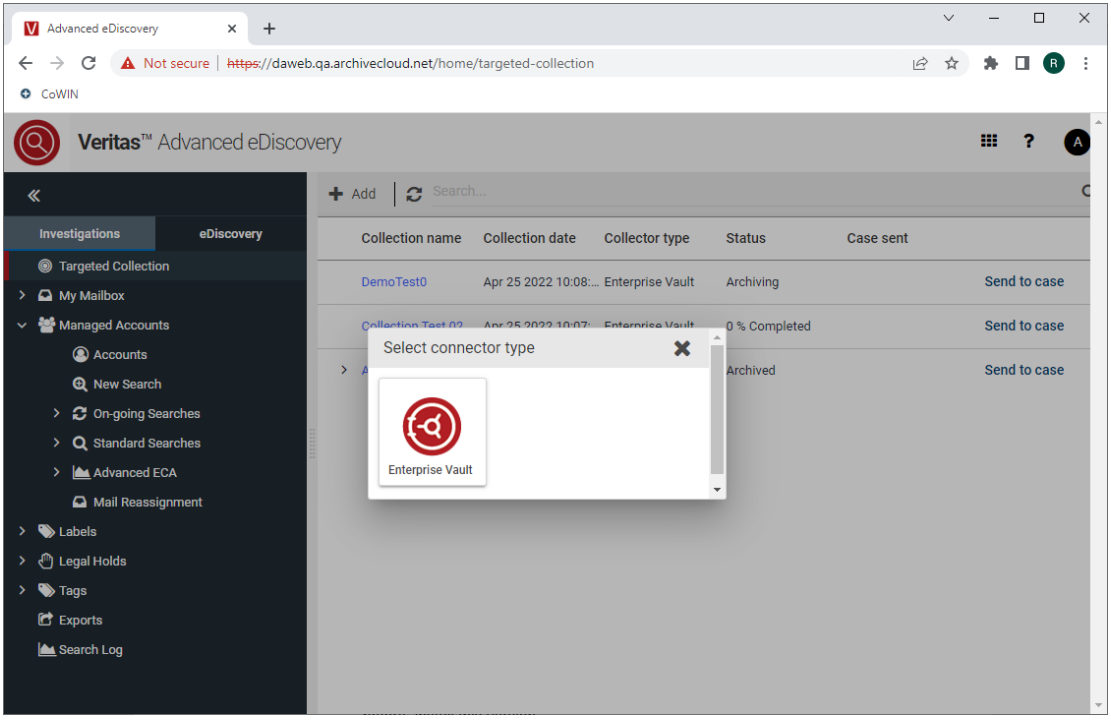


4. If a collection is never done before, you will see a screen the same as above. Click on **Setup collection**. It will display the list of “Connector Types” available for this customer. Select **Enterprise Vault** connector to proceed further.

5. To create a **New Collection** request (which is also described as a “Data Collection” or “Data Migration” request), click on the **Add** button, as shown in the screenshot below:

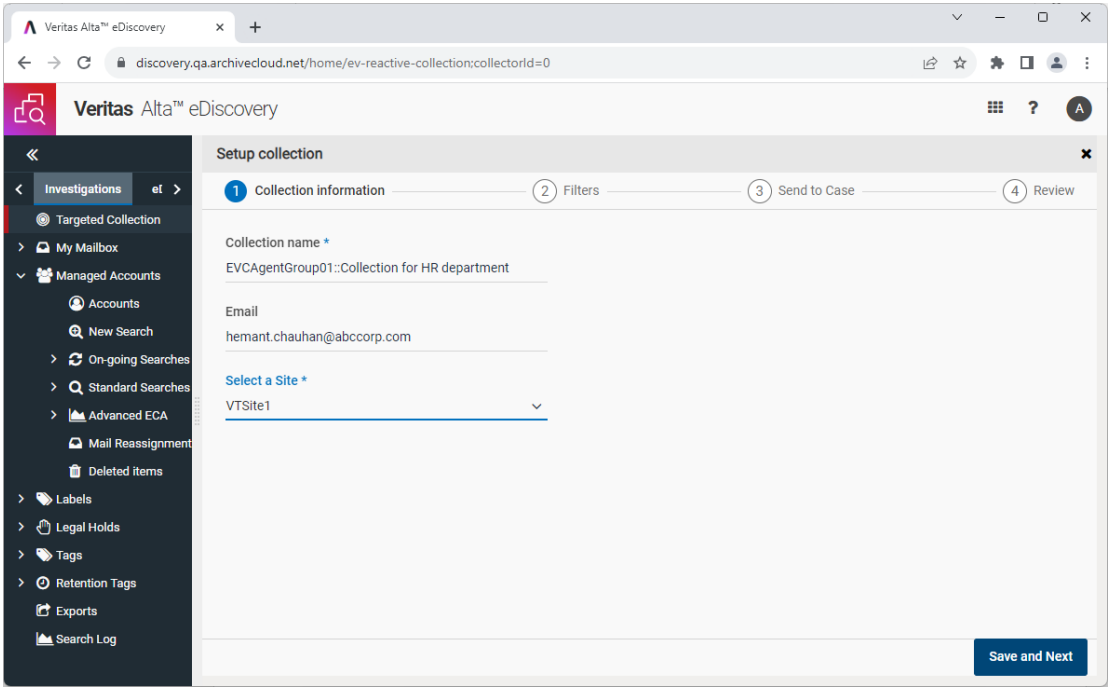


Select **Enterprise Vault** connector to proceed further.



Note: If the "**Enterprise Vault**" Collector is not displayed, contact support. This may happen if "EV Collection" is not enabled for this customer.

6. New collection request: "**Collect Information**" page:



- Assign a name for this collection, to help you identify this collection later at various stages.

  If **Multiple Agent Groups are configured for parallel collection**, then assign the name of the collection in the following format:

  Format: <Agent Group Name>::<User friendly name of collection>

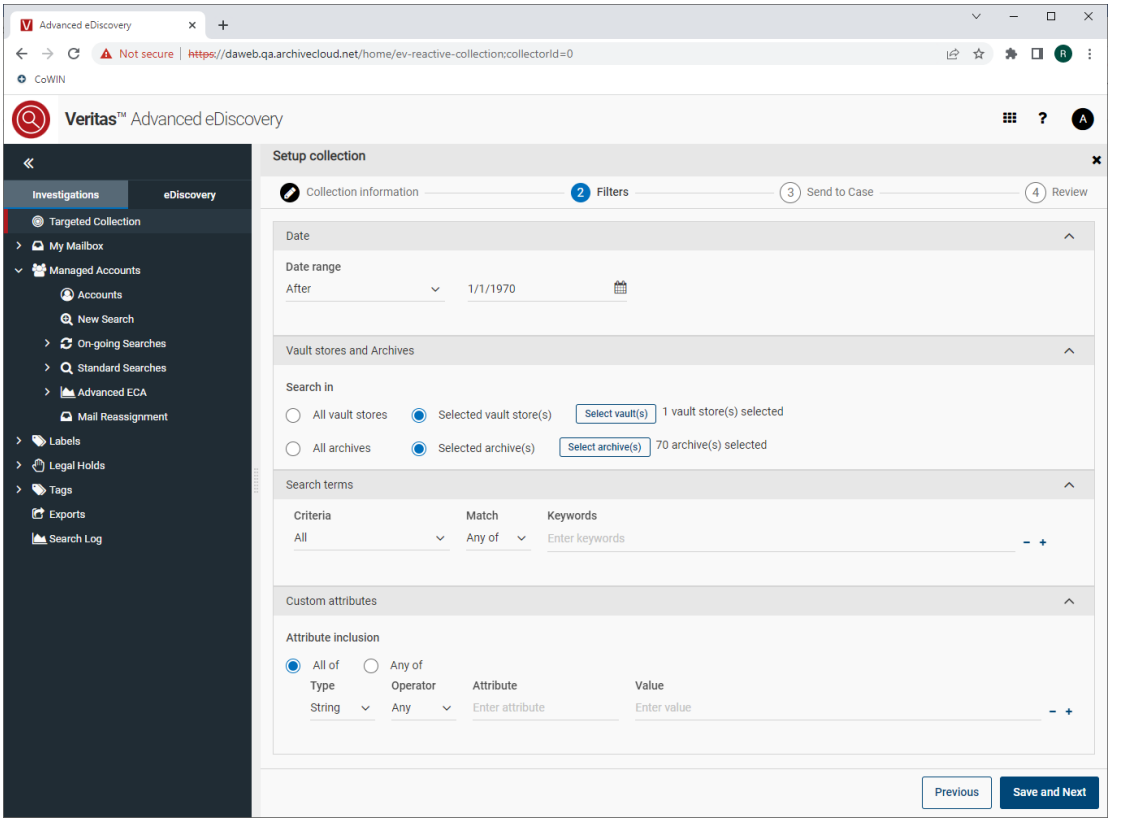
  Example:
  EVCAgentGroup02::Data Collection of JournalArchive005
  EVCAgentGroup01::User data Part 01

- Give the email address of the user who is managing this data collection. Once the collection is over, the user will receive a notification about completion on this email address.

- Select the Enterprise Vault Site from the dropdown menu, from which the data must be targeted for this collection.

  Click on **Save and Next** button to proceed further

7. New collection request: “**Filters**” page:



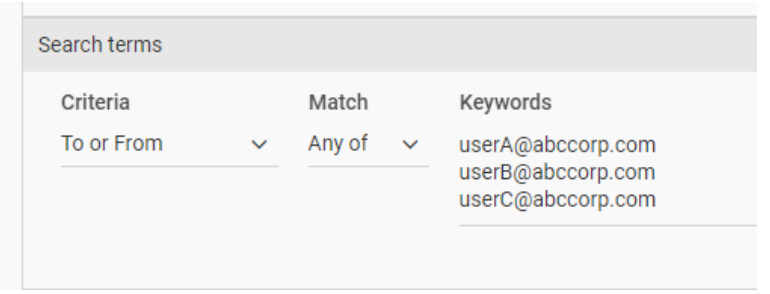
- Use **date range** filer to selectively identify data for collection. If you wish to collect all the data from the archive, then specify “After 1/1/1970” in the date filter.

- Select the **specific Vault Stores and Archives** from the UI, from which you want to collect data. (It is recommended to select not more the 500 mailbox archive, or 50 Journal/SMTP archives, in a single collect request. This will help you manage collections better.)

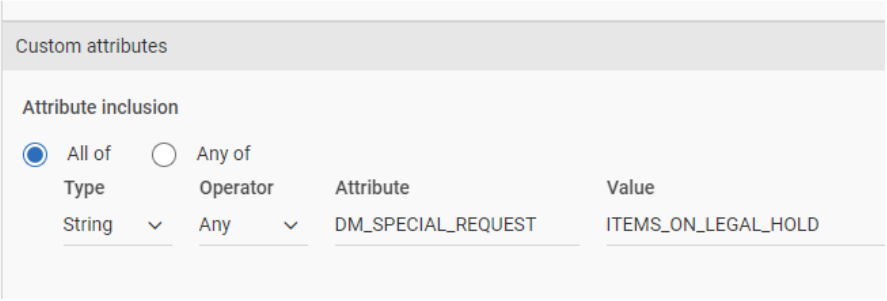
  Note: The UI should present the list of all the Vault Stores and Archive present in the on-premise Enterprise Vault. The EV Collector Agent will synchronize the list periodically. If you do not see the Vault Store or Archive in this list, contact support.)

- You can use other filter criteria for your collection if desired.

  Note: To collect data of specific users from Journal or SMTP archive, use search create in following way:

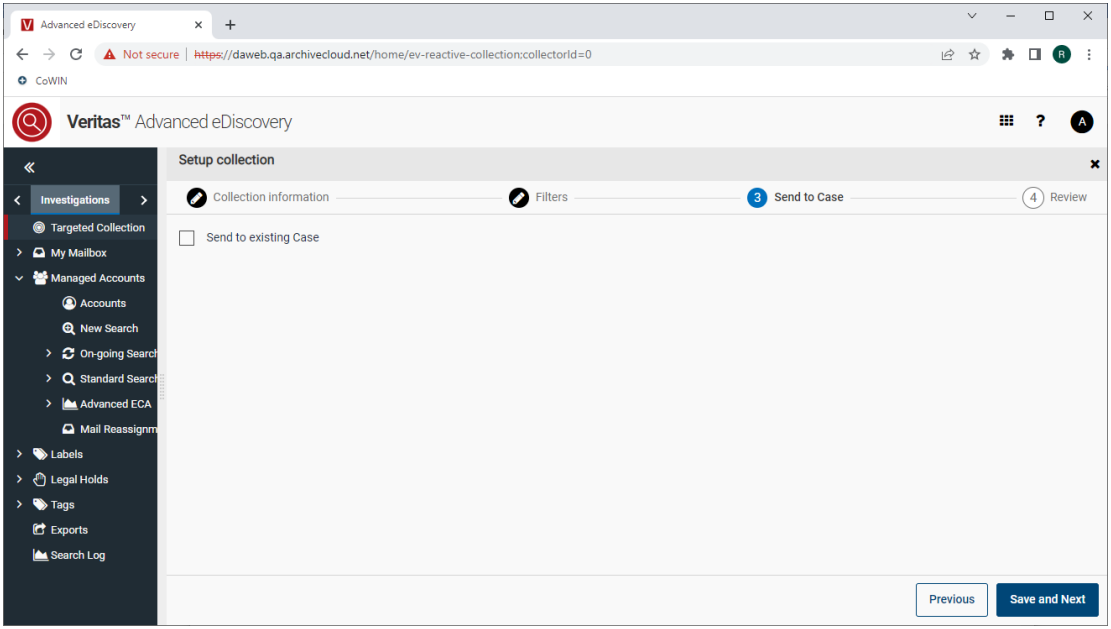


  Note: To collect data on Legal Hold in Enterprise Vault, specify the special flag under “Custom attributes” section in following way:
  Attribute: DM_SPECIAL_REQUEST
  Value: ITEMS_ON_LEGAL_HOLD



Click on **Save and Next** button to proceed further

8. New collection request: "**Send to case**" page:

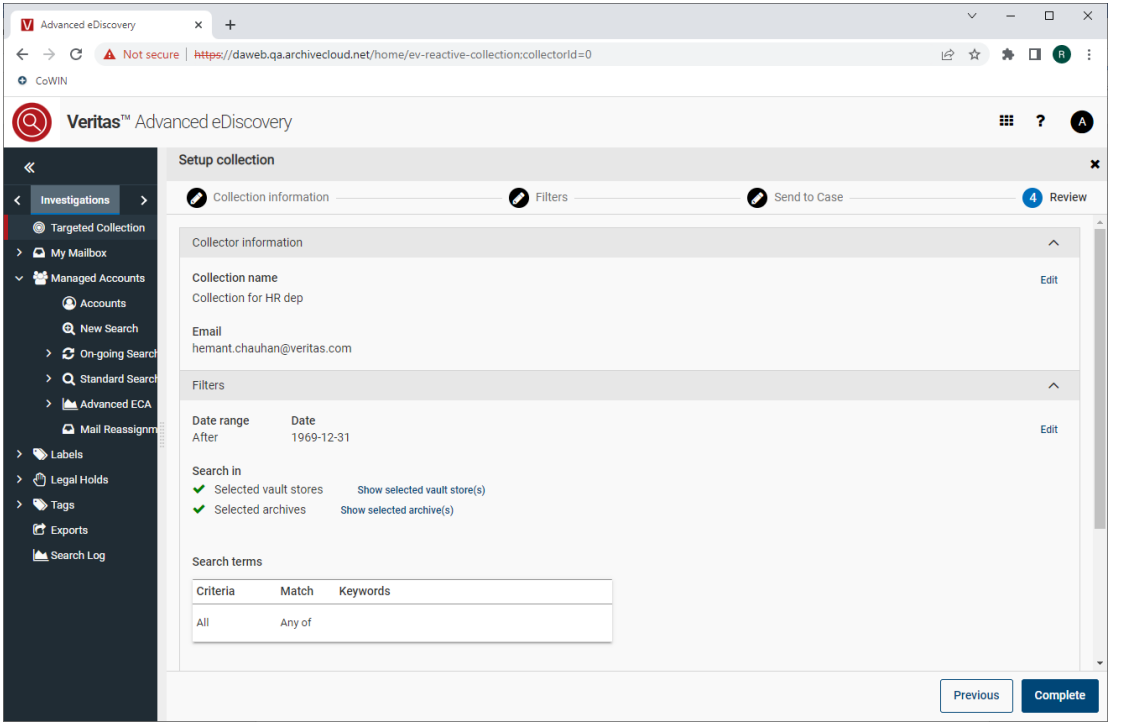


- If the collection is being done for Data Migration, then do not check/ select the **"Send to existing case"** option.

- If the collection is for discovery/investigation purposes, you can select the "**Send to existing case**" option and then select the desired case in which you want collected data from this collection to reflect.

  Click on the **Save and Next** button to proceed further

9. New collection request: "**Review**" page:



- Review the information about the new collection request.

Click on the **Complete** button to save the collection request.

At this stage, the new Data Migration/Collection request is created. Within the next ~2 minutes, the EV Collector Agent will automatically download this data collection request and start working on this data collection.

Once the collection is complete, the user will receive an email notification about the completion of this data collection.

Note: The user can submit multiple data collection requests, while the existing collection requests are in-progress. EV Collector Agents can work on multiple collections in parallel depending on the resource availability. If the agents are too busy with existing data collection requests, the other data collection requests are queued and picked up later automatically for processing.

Monitoring Data Migration progress

Data Migration/Collection request progress can be monitored using the following two methods:

1. From SQL Server Management Studio, using the handy SQL queries.
2. From Power BI Reports for Data Migration.

Using Handy SQL queries:

1. Navigate to **Collections.sql** in SQL Server Management studio. This can help you easily select and run the desired SQL command, instead of typing or copy-pasting the SQL command from the Help.

2. To view the list of Data Migration/Collection request, along with the latest status, run the following SQL query:

```
-- 1. List of Collection
SELECT * FROM Collection_View WITH (NOLOCK)
```

You will get the list of Collection.

- “**Collection Name**” column reflects the friendly name given to the collection request.

- “**Status**” column reflects the status of this collection request. *Refer to the Appendix section of this document for more information about various Search statuses*.

- “**Collection Id**” is the unique internal Id, assigned to the collection. This is the same id by which this collection request is referred in Veritas Alta Archiving as well.

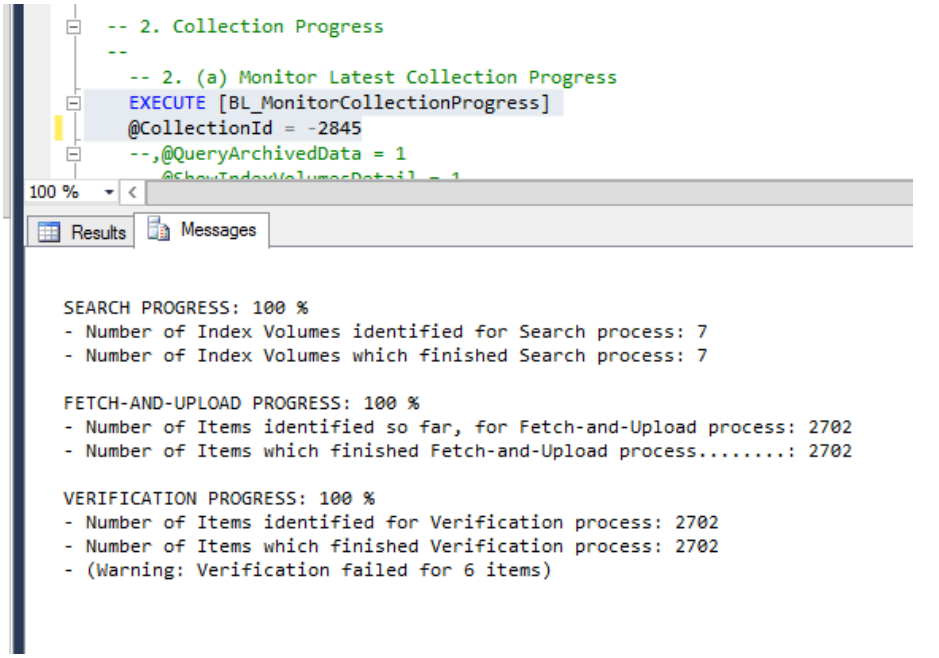
- **Note down the Collection ID** associated with the collection, from this list here which you wish to monitor later.

3. To monitor the progress of a particular Data Migration/Collection request, run the following SQL query:

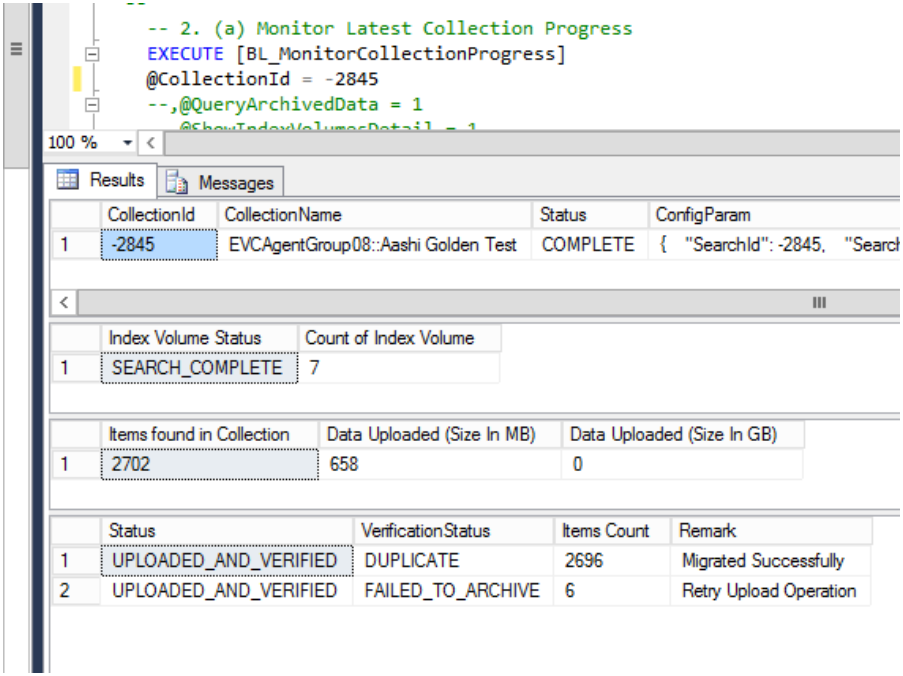
```
-- 2. Monitor Collection Progress
EXECUTE [BL_MonitorCollectionProgress]
@SearchID = <Collection_ID>
```

- Specify the CollectionId of the data collection request, before executing.

Sample Output (from Messages tab):


-- 2. Collection Progress
--
-- 2. (a) Monitor Latest Collection Progress
EXECUTE [BL_MonitorCollectionProgress]
@CollectionId = -2845
--,@QueryArchivedData = 1
100 %
Results
Messages
SEARCH PROGRESS: 100 %
- Number of Index Volumes identified for Search process: 7
- Number of Index Volumes which finished Search process: 7
FETCH-AND-UPLOAD PROGRESS: 100 %
- Number of Items identified so far, for Fetch-and-Upload process: 2702
- Number of Items which finished Fetch-and-Upload process.....: 2702
VERIFICATION PROGRESS: 100 %
- Number of Items identified for Verification process: 2702
- Number of Items which finished Verification process: 2702
- (Warning: Verification failed for 6 items)

Sample Output (from Results tab):



```
-- 2. (a) Monitor Latest Collection Progress
EXECUTE [BL_MonitorCollectionProgress]
@CollectionId = -2845
--,@QueryArchivedData = 1
```

100 %

Results | Messages

	CollectionId	CollectionName	Status	ConfigParam
1	-2845	EVCAgentGroup08::Aashi Golden Test	COMPLETE	{ "SearchId": -2845, "Search

	Index Volume Status	Count of Index Volume
1	SEARCH_COMPLETE	7

	Items found in Collection	Data Uploaded (Size In MB)	Data Uploaded (Size In GB)
1	2702	658	0

	Status	VerificationStatus	Items Count	Remark
1	UPLOADED_AND_VERIFIED	DUPLICATE	2696	Migrated Successfully
2	UPLOADED_AND_VERIFIED	FAILED_TO_ARCHIVE	6	Retry Upload Operation

- Regarding various possible values of Search status, Index Volume Status, Item Migration Status, and Item Verification Status refer to the Appendix section of this document.

- **If any error occurs** while searching Index Volumes, migrating the content, or even during verification, it will be reported in the above output.

- Once the collection is complete, the Search Status will be "**COMPLETE**"

4. To see the progress history of a particular Data Migration/Collection request, run the following SQL query:

```
-- 2.(b) Collection Progress Audit History
SELECT * FROM [dbo].[AuditCollectionProgress]
WHERE CollectionId = <COLLECTION_ID>
```

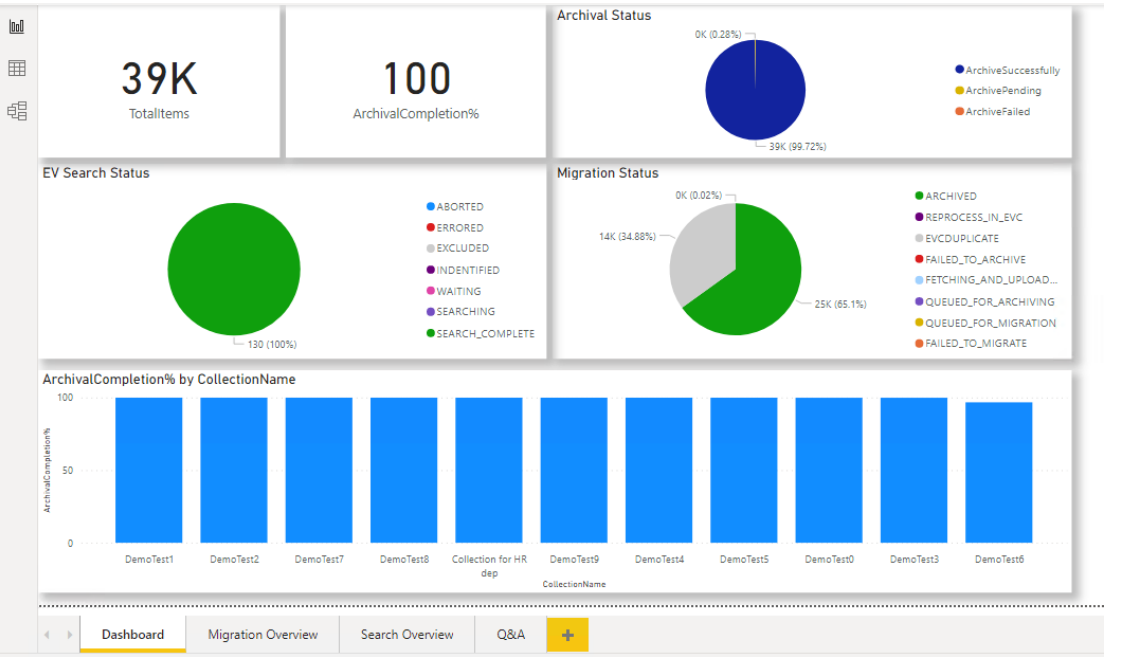
- Specify the CollectionId of the data collection request, before executing.

Using power BI Reports:

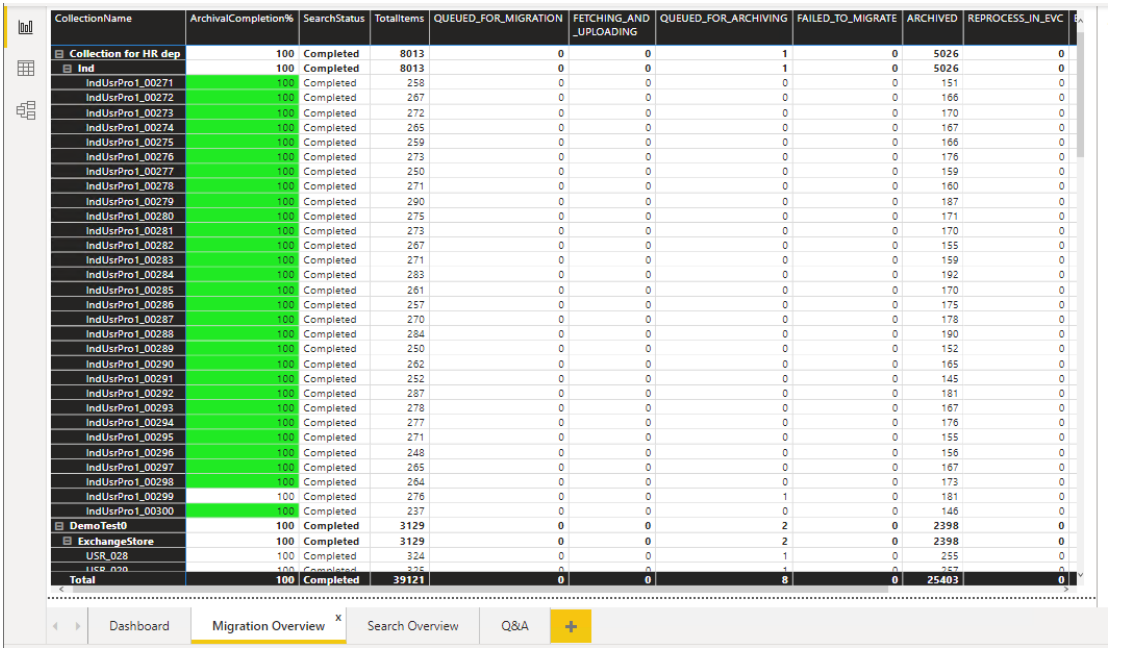
Power BI Report of EV Collector Agent displays the following three reports. These reports will be helpful to monitor the overall Data Migration progress:

- Dashboard
- Migration Overview
- Search Overview

Dashboard tab:



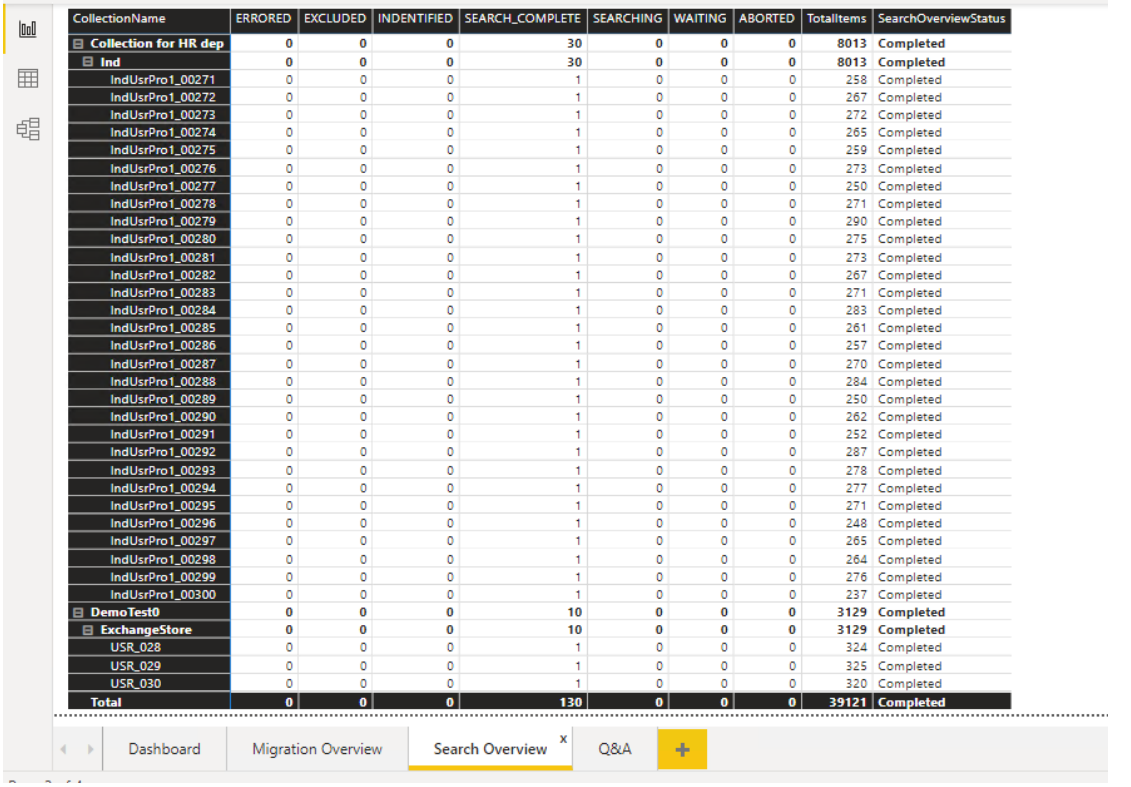
Migration Overview tab:



CollectionName	ArchivalCompletion%	SearchStatus	TotalItems	QUEUED_FOR_MIGRATION	FETCHING_AND_UPLOADING	QUEUED_FOR_ARCHIVING	FAILED_TO_MIGRATE	ARCHIVED	REPROCESS_IN_EVC
Collection for HR dep	**100**	**Completed**	**8013**	**0**	**0**	**1**	**0**	**5026**	**0**
Ind	**100**	**Completed**	**8013**	**0**	**0**	**1**	**0**	**5026**	**0**
IndUsrPro1_00271	100	Completed	258	0	0	0	0	151	0
IndUsrPro1_00272	100	Completed	267	0	0	0	0	166	0
IndUsrPro1_00273	100	Completed	272	0	0	0	0	170	0
IndUsrPro1_00274	100	Completed	265	0	0	0	0	167	0
IndUsrPro1_00275	100	Completed	259	0	0	0	0	166	0
IndUsrPro1_00276	100	Completed	273	0	0	0	0	176	0
IndUsrPro1_00277	100	Completed	250	0	0	0	0	159	0
IndUsrPro1_00278	100	Completed	271	0	0	0	0	160	0
IndUsrPro1_00279	100	Completed	290	0	0	0	0	187	0
IndUsrPro1_00280	100	Completed	275	0	0	0	0	171	0
IndUsrPro1_00281	100	Completed	273	0	0	0	0	170	0
IndUsrPro1_00282	100	Completed	267	0	0	0	0	155	0
IndUsrPro1_00283	100	Completed	271	0	0	0	0	159	0
IndUsrPro1_00284	100	Completed	283	0	0	0	0	192	0
IndUsrPro1_00285	100	Completed	261	0	0	0	0	170	0
IndUsrPro1_00286	100	Completed	257	0	0	0	0	175	0
IndUsrPro1_00287	100	Completed	270	0	0	0	0	178	0
IndUsrPro1_00288	100	Completed	284	0	0	0	0	190	0
IndUsrPro1_00289	100	Completed	250	0	0	0	0	152	0
IndUsrPro1_00290	100	Completed	262	0	0	0	0	165	0
IndUsrPro1_00291	100	Completed	252	0	0	0	0	145	0
IndUsrPro1_00292	100	Completed	287	0	0	0	0	181	0
IndUsrPro1_00293	100	Completed	278	0	0	0	0	167	0
IndUsrPro1_00294	100	Completed	277	0	0	0	0	176	0
IndUsrPro1_00295	100	Completed	271	0	0	0	0	155	0
IndUsrPro1_00296	100	Completed	248	0	0	0	0	156	0
IndUsrPro1_00297	100	Completed	265	0	0	0	0	167	0
IndUsrPro1_00298	100	Completed	264	0	0	0	0	173	0
IndUsrPro1_00299	100	Completed	276	0	0	1	0	181	0
IndUsrPro1_00300	100	Completed	237	0	0	0	0	146	0
DemoTest0	**100**	**Completed**	**3129**	**0**	**0**	**2**	**0**	**2398**	**0**
ExchangeStore	**100**	**Completed**	**3129**	**0**	**0**	**2**	**0**	**2398**	**0**
USR_028	100	Completed	324	0	0	1	0	255	0
USR_029	100	Completed	325	0	0	1	0	257	0
Total	**100**	**Completed**	**39121**	**0**	**0**	**8**	**0**	**25403**	**0**

Dashboard | Migration Overview | Search Overview | Q&A | +

Search Overview tab:



CollectionName	ERRORED	EXCLUDED	INDENTIFIED	SEARCH_COMPLETE	SEARCHING	WAITING	ABORTED	TotalItems	SearchOverviewStatus
Collection for HR dep	**0**	**0**	**0**	**30**	**0**	**0**	**0**	**8013**	**Completed**
Ind	**0**	**0**	**0**	**30**	**0**	**0**	**0**	**8013**	**Completed**
IndUsrPro1_00271	0	0	0	1	0	0	0	258	Completed
IndUsrPro1_00272	0	0	0	1	0	0	0	267	Completed
IndUsrPro1_00273	0	0	0	1	0	0	0	272	Completed
IndUsrPro1_00274	0	0	0	1	0	0	0	265	Completed
IndUsrPro1_00275	0	0	0	1	0	0	0	259	Completed
IndUsrPro1_00276	0	0	0	1	0	0	0	273	Completed
IndUsrPro1_00277	0	0	0	1	0	0	0	250	Completed
IndUsrPro1_00278	0	0	0	1	0	0	0	271	Completed
IndUsrPro1_00279	0	0	0	1	0	0	0	290	Completed
IndUsrPro1_00280	0	0	0	1	0	0	0	275	Completed
IndUsrPro1_00281	0	0	0	1	0	0	0	273	Completed
IndUsrPro1_00282	0	0	0	1	0	0	0	267	Completed
IndUsrPro1_00283	0	0	0	1	0	0	0	271	Completed
IndUsrPro1_00284	0	0	0	1	0	0	0	283	Completed
IndUsrPro1_00285	0	0	0	1	0	0	0	261	Completed
IndUsrPro1_00286	0	0	0	1	0	0	0	257	Completed
IndUsrPro1_00287	0	0	0	1	0	0	0	270	Completed
IndUsrPro1_00288	0	0	0	1	0	0	0	284	Completed
IndUsrPro1_00289	0	0	0	1	0	0	0	250	Completed
IndUsrPro1_00290	0	0	0	1	0	0	0	262	Completed
IndUsrPro1_00291	0	0	0	1	0	0	0	252	Completed
IndUsrPro1_00292	0	0	0	1	0	0	0	287	Completed
IndUsrPro1_00293	0	0	0	1	0	0	0	278	Completed
IndUsrPro1_00294	0	0	0	1	0	0	0	277	Completed
IndUsrPro1_00295	0	0	0	1	0	0	0	271	Completed
IndUsrPro1_00296	0	0	0	1	0	0	0	248	Completed
IndUsrPro1_00297	0	0	0	1	0	0	0	265	Completed
IndUsrPro1_00298	0	0	0	1	0	0	0	264	Completed
IndUsrPro1_00299	0	0	0	1	0	0	0	276	Completed
IndUsrPro1_00300	0	0	0	1	0	0	0	237	Completed
DemoTest0	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**3129**	**Completed**
ExchangeStore	**0**	**0**	**0**	**10**	**0**	**0**	**0**	**3129**	**Completed**
USR_028	0	0	0	1	0	0	0	324	Completed
USR_029	0	0	0	1	0	0	0	325	Completed
USR_030	0	0	0	1	0	0	0	320	Completed
Total	**0**	**0**	**0**	**130**	**0**	**0**	**0**	**39121**	**Completed**

Data Migration Performance

This section will help you identify the following aspect of Data Migration performance:

1. The rate/speed at which overall data migration is going on, including:
    a. Items per second

b. Fetch rate in MB/s
c. Upload rate in MB/s
d. Combined Fetch and Upload rate in MB/s

2. Query about performance rate observed between a given time range.
3. Determine how much data is migrated between a given time range.

Using Handy SQL queries:

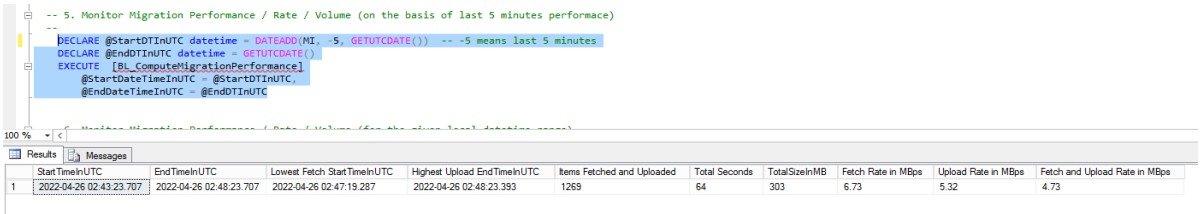
1. Navigate to **Collections.sql** in SQL Server Management studio. This can help you easily select and run the desired SQL command, instead of typing or copy-pasting the SQL command from the Help.

2. To view the current/ongoing rate of Data Migration, based on observation in the last 5 minutes, run the following SQL query:

```
-- 5. Monitor Migration Performance / Rate / Volume
-- (based on last 5 minutes performance)

DECLARE @StartDTInUTC datetime = DATEADD(MI, -5, GETUTCDATE())
DECLARE @EndDTInUTC datetime = GETUTCDATE()
EXECUTE [BL_ComputeMigrationPerformance]
       @StartDateTimeInUTC = @StartDTInUTC,
       @EndDateTimeInUTC = @EndDTInUTC
```

Sample output of above command:



	StartTimeInUTC	EndTimeInUTC	Lowest Fetch StartTimeInUTC	Highest Upload EndTimeInUTC	Items Fetched and Uploaded	Total Seconds	TotalSizeInMB	Fetch Rate in MBps	Upload Rate in MBps	Fetch and Upload Rate in MBps
1	2022-04-26 02:43:23.707	2022-04-26 02:48:23.707	2022-04-26 02:47:19.287	2022-04-26 02:48:23.393	1269	64	303	6.73	5.32	4.73

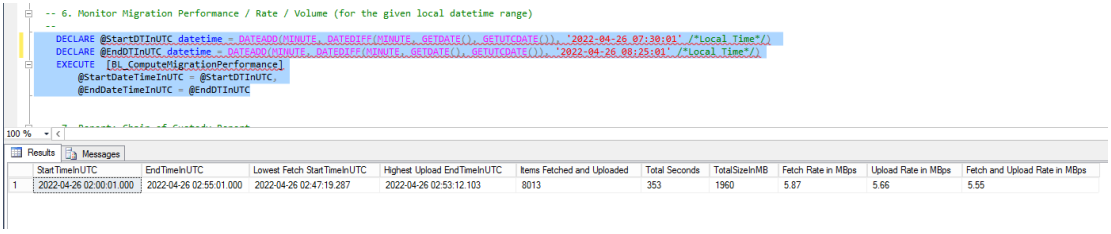
Lowest Fetch StartTimeInUTC	Highest Upload EndTimeInUTC	Items Fetched and Uploaded	Total Seconds	TotalSizeInMB	F
2022-04-26 02:47:19.287	2022-04-26 02:48:23.393	1269	64	303	(

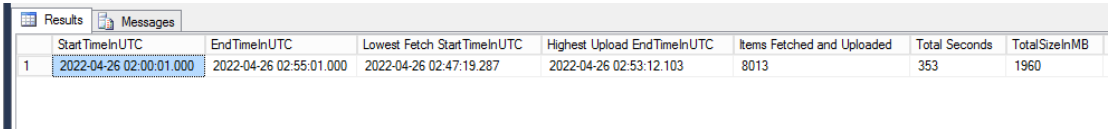
Total Seconds	TotalSizeInMB	Fetch Rate in MBps	Upload Rate in MBps	Fetch and Upload Rate in MBps
64	303	6.73	5.32	4.73

3. To view the **data migration performance rate observed between a given time range**, run the following SQL query:

```
-- 6. Monitor Migration Performance / Rate / Volume (for the given local
datetime range)
DECLARE @StartDTInUTC datetime = DATEADD(MINUTE, DATEDIFF(MINUTE, GETDATE(),
GETUTCDATE()), '2022-04-26 07:30:01' /*Local Time*/)
DECLARE @EndDTInUTC datetime = DATEADD(MINUTE, DATEDIFF(MINUTE, GETDATE(),
GETUTCDATE()), '2022-04-26 08:25:01' /*Local Time*/)
EXECUTE [BL_ComputeMigrationPerformance]
       @StartDateTimeInUTC = @StartDTInUTC,
       @EndDateTimeInUTC = @EndDTInUTC
```

Sample output of the above command:





	StartTimeInUTC	EndTimeInUTC	Lowest Fetch StartTimeInUTC	Highest Upload EndTimeInUTC	Items Fetched and Uploaded	Total Seconds	TotalSizeInMB
1	2022-04-26 02:00:01.000	2022-04-26 02:55:01.000	2022-04-26 02:47:19.287	2022-04-26 02:53:12.103	8013	353	1960

Total Seconds	TotalSizeInMB	Fetch Rate in MBps	Upload Rate in MBps	Fetch and Upload Rate in MBps
353	1960	5.87	5.66	5.55

4. To view the **data migration performance throughput history**, which is automatically captured every 3 hours, run the following SQL query:

```
-- 4.(b) Migration Performance throughput history
SELECT * FROM [dbo].[AuditMigThroughput]
```

Determine the Data Migration failure reason

It is possible that during a large migration, certain items may fail to migrate. This section will help you identify the error reason why a particular part of migration failed.

Note: Depending upon the error, correction can be done in the environment and then re-try those selective items migration again using simple SQL commands.

Scenario A: Search/Collection may "Fail to Expand"*:*

- The Search Status will be displayed as "FAILED_TO_EXPAND"
- SQL Command to identify the reason:

```
-- 14. Situation: Collection end with Status "FAILED_TO_EXPAND" / How to know
the reason
--
SELECT TaskParam, TaskCompletionStatus, CompletionRemarks
FROM TaskRun
WHERE [TaskTypeId] = 3 --Type 3: ExpandSearch
AND TaskParam = <SEARCH_ID>
```

- In the output, the TaskCompletionStatus will be “Failed”.
- In the output, the **CompletionRemarks** will describe the **failure reason**.

- Next step after resolving the problem: You can Re-Run the Search again, using handy SQL commands.

Scenario B: Failed to search in one or more Index Volumes:

- The Index Volume status will be displayed as “**ERRORED"**
- SQL Command to identify the reason:

```
-- 2. Monitor Collection Progress
--
      EXECUTE [BL_MonitorCollectionProgress]
      @SearchID = <COLLECTION_ID>
      ,@ShowIndexVolumesInErroedState = 1
```

- In the output, the Index Volume Status will be “**ERRORED**”.
- In the output, the **ErrorReason** column will describe the **failure reason**.

- Next step after resolving the problem: You can Re-run the Part-Of-Search again, using which it will only re-try the search and migration from such index volumes, using handy SQL commands.

Scenario C: Failed to migrate one or more items:

- The item status will be displayed as “**ERRORED"**
- SQL Command to identify the reason:

```
-- 2. Monitor Collection Progress
--
      EXECUTE [BL_MonitorCollectionProgress]
      @SearchID = <COLLECTION_ID>
      ,@ShowItemsInErroedState = 1
```

- In the output, the item Status will be “**ERRORED**”.
- In the output, the **ErrorReason** column will describe the **failure reason**.

- Next step after resolving the problem: You can Re-run the Part-Of-Search again, using which it will only re-try the migration of selective items, using handy SQL commands.

Re-run part of Data Migration

It is possible that during a large migration, certain items may fail to migrate. Once you know the reason behind the failure, you can perform the required action to retry those selective items again (instead of re-running the whole Data Migration / Collection request again).

This section guides you on how to re-run part of data migration:

Scenario A: Want to re-try search on some Index Volumes:

- SQL Command to re-run the search on selected Index Volumes:

```
-- 11. Re-Try part of Collection: SEARCH_INDEX_VOL (i.e., Retry search on
"some" Index volume again)
 --
EXECUTE [BL_RetryPartOfCollection]
       @SearchID = <COLLECTION_ID>
       ,@TakeAction = 1, @ShowMatchingRows = 1
       ,@OpType = 'SEARCH_INDEX_VOL'
       ,@IndexVolStatus = 'ERRORED'

       --,@IndexEngineComputerName = 'SKIPTEV2'
       --,@IndexVolumeEvIds = '78578, 76341, 79173, 79174'
```

- The above command will re-run all the Index Volume found in "**ERRORED**" state, for the given Search ID-based collection.

- Without taking any action, if you want to know which all Index Volume will be re-tired from the above command, run the above command with "@TakeAction = 0".

- If you want to re-run some on Index volume based on some more filters, you can uncomment the filters above and use them to be more specific.

- Once you run the above SQL command, the migration of the selected item will start automatically (assuming the agents are running). Items found from these index volumes will be fetched and uploaded. And will also go through the verification stage.

Scenario B: Want to re-try migration of some items:

- SQL Command to re-run the migration on selected items:

```
-- 12. Re-Try part of Collection: FETCH_AND_UPLOAD (i.e., Retry Fetch-and-
Upload operation again "some" items)
--
EXECUTE [BL_RetryPartOfCollection]
       @SearchID = <COLLECTION_ID>
       ,@TakeAction = 1, @ShowMatchingRows = 1
       ,@OpType = 'FETCH_AND_UPLOAD'
       ,@ItemMigrationStatus = 'ERRORED'

       --,@ItemDBIds = '356724, 356725, 356743, 356744'
       --,@ItemSSIds =
'202101191076522~20210119171134000~Z~B0B58E32F66540FB8B538CB95A9393C1,
202101261659910~20210126103256000~Z~70C21D114F0E6CE252F14F7446A65BC1,
202101261659910~20210126103320000~Z~70C211D6401706EB5583C50878A5BC01'
       --,@ItemAssoEVArchiveIDs =
'1D51B749D63385E47905E2C9A6E9751C41110000SKIPTEV.skcert.local,
1E6B4971DE834254BABA2A6E0056E5E771110000SKIPTEV.skcert.local2'
       --,@ItemVerificationStatus = 'NOT_YET_VERIFIED'
       --,@ItemBatchCodes = '6614d378-f7e0-4aec-aee0-948d79c4ebe0, 4f820c45-
7ca8-431a-90c3-eecadd3a5caf'
       --,@ItemAssoIndexVolumeEvIds = '80033, 79842'
       --,@IndexEngineComputerName = 'SKIPTEV2'
       --,@IndexVolumeEvIds = '78578, 76341, 79173, 79174'
```

- Above command will re-run migration on all the items found in "**ERRORED**" migration state, for the given Search ID based collection.

- Without taking any action, if you want to know which items will be re-tired from the above command, run the above command with "`@TakeAction = 0`".

- If you want to re-run some items based on some more filters, you can uncomment the filters above and use them to be more specific. For example, you can specify the items with specific EV Saveset IDs.

- Once you run the above SQL command, the migration of the selected item will start automatically (assuming the agents are running). These items will be fetched and uploaded. And will also go through the verification stage.

Scenario C: Want to re-try verification of some items:

- SQL Command to re-run the verification on selected items:

```
 -- 13. Re-Try part of Collection: VERIFICATION (i.e., Retry verification
operation again "some" items)

EXECUTE [BL_RetryPartOfCollection]
       @SearchID = <COLLECTION_ID>
       ,@TakeAction = 1, @ShowMatchingRows = 1
       ,@OpType = 'VERIFICATION'
       ,@ItemVerificationStatus = 'QUEUED_FOREVER'

       --,@ItemDBIds = '356656, 356658'
       --,@ItemSSIds =
'202101221292717~20210122035430000~Z~30C289364C184491225F4F15C7A5FD51,
202101221317851~20210122112455000~Z~8046240F9BE643AFF0DF7BEF4D01F581'
       --,@ItemAssoEVArchiveIDs =
'1D51B749D63385E47905E2C9A6E9751C41110000SKIPTEV.skcert.local,
1E6B4971DE834254BABA2A6E0056E5E771110000SKIPTEV.skcert.local2'
       --,@ItemMigrationStatus = 'NOT_YET_VERIFIED'
       --,@ItemBatchCodes = '6614d378-f7e0-4aec-aee0-948d79c4ebe0, 4f820c45-
7ca8-431a-90c3-eecadd3a5caf'
       --,@ItemAssoIndexVolumeEvIds = '80033, 79842'
       --,@IndexEngineComputerName = 'SKIPTEV2'
       --,@IndexVolumeEvIds = '78578, 76341, 79173, 79174'
```

- Above command will re-run migration on all the items found in "**QUEUED_FOREVER**" migration state, for the given Search ID based collection.

- Without taking any action, if you want to know which items will be re-tired from the above command, run the above command with “`@TakeAction = 0`”.

- If you want to re-run some items based on some more filters, you can uncomment the filters above and use them to be more specific. For example, you can specify the items with specific EV Saveset IDs.

- Once you run the above SQL command, the migration of the selected item will start automatically (assuming the agents are running). These items will go through the verification process again.

Terminate a Data Migration

This section guides you on how to terminate an ongoing Data Collection:

Step 1: Stop all the agents. To do that, you need to stop the Agent service from running on all the Agent nodes.

Step 2: Run the handy SQL command, to terminate a collection.

Step 3: Start all the agents again.

SQL Command to Terminate a Data Collection:

```
 -- 7. Terminate Collection (NOTE: Stop all Agents First, and then Terminate
Search)
 EXECUTE [BL_TerminateCollection] @CollectionID = <COLLECTION_ID>
```

Re-Start a Data Migration

This section will guide you about how to restart a Data Collection again:

Step 1: Stop all the agents. To do that, you need to stop the Agent service running on all the Agent nodes.

Step 2: Run the handy SQL command, to restart a collection.

Step 3: Start all the agents again.

SQL Command to restart a Data Collection:

```
-- 8. Restart Collection (NOTE: Stop all Agents First, and then Terminate
Search)
--
EXECUTE [BL_RestartCollection] @CollectionID = <COLLECTION_ID>
```

Archive or Un-Archive Data Migration Info

By default, once a Data Collection is complete, all the records related to this collection, are moved to secondary tables as archived records, after 24 hours. This action is done for purely performance reasons. This will have no impact on the end user.

Even when the records related to a data collection are archived, the reports can still be generated.

However, there are some scenarios in which you may want to manually archive (or un-archive) a given Data collection record. For example, if a collection finished last week with some failed items, it will be in an archived state. In such a scenario, if you try to re-run failed items of this collection, you may get as an error saying this collection is archived. You will have to manually unarchive that collection first, to be able to re-run the migration of some of its items.

This section guides you on how to Archive a Data Collection related records:

SQL Command to Archive a Data Collection related records:

```
-- 9. Archive a Collection (and related records like Index Volumes and Search
Result)
--
EXECUTE [BL_ArchiveCollection]     @CollectionID = <COLLECTION_ID>
```

SQL Command to Un-Archive a Data Collection related records:

```
-- 10. Un-Archive a Collection (and related records like Index Volumes and
Search Result)
--
EXECUTE [BL_UnArchiveCollection] @CollectionID = <COLLECTION_ID>
```

Monitoring Agents and Tasks

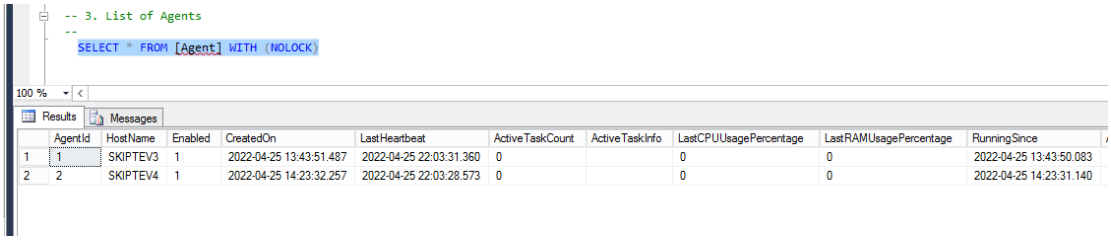
This section will help you monitor the agent's health and get detailed information on which tasks are being executed currently:

Note: All the commands referred to in this section are available in Handy SQL command – "**Agents and Task.sql**"

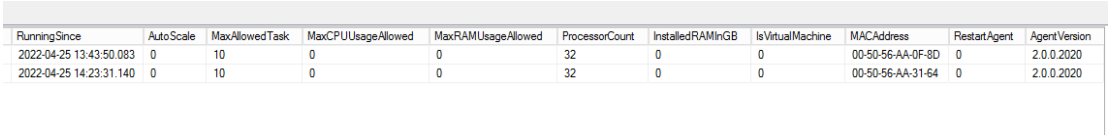
List of all the Registered Agents:

```
-- 3. List of Agents
--
SELECT * FROM [Agent] WITH (NOLOCK)
```

Sample output of the above command:



	AgentId	HostName	Enabled	CreatedOn	LastHeartbeat	ActiveTaskCount	ActiveTaskInfo	LastCPUUsagePercentage	LastRAMUsagePercentage	RunningSince
1	1	SKIPTEV3	1	2022-04-25 13:43:51.487	2022-04-25 22:03:31.360	0		0	0	2022-04-25 13:43:50.083
2	2	SKIPTEV4	1	2022-04-25 14:23:32.257	2022-04-25 22:03:28.573	0		0	0	2022-04-25 14:23:31.140



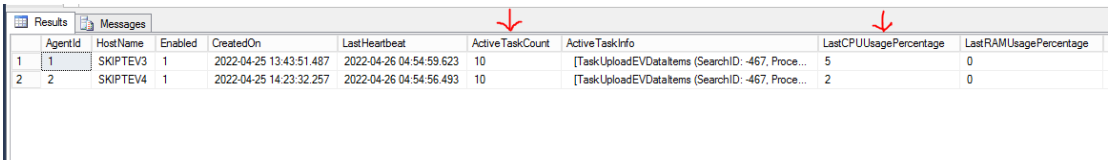
RunningSince	AutoScale	MaxAllowedTask	MaxCPUUsageAllowed	MaxRAMUsageAllowed	ProcessorCount	InstalledRAMInGB	IsVirtualMachine	MACAddress	RestartAgent	AgentVersion
2022-04-25 13:43:50.083	0	10	0	0	32	0	0	00-50-56-AA-0F-8D	0	2.0.0.2020
2022-04-25 14:23:31.140	0	10	0	0	32	0	0	00-50-56-AA-31-64	0	2.0.0.2020

- Note the above output includes both Active and dead agents.
- The “Last Heartbeat” column value indicate when the last time this agent was active. Datetime value is in UTC.

List of all the Active Agents along with Health information:

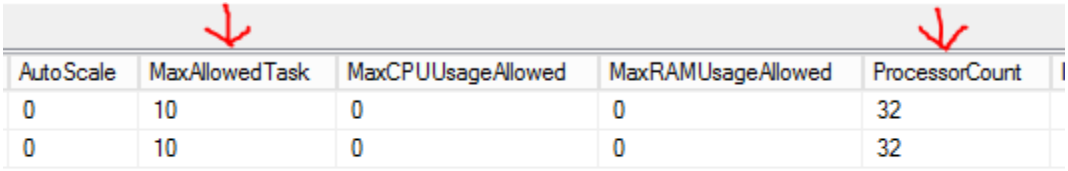
```
-- 4. List of Agents (Alive)
--
SELECT * FROM [Agent] WITH (NOLOCK)
WHERE LastHeartbeat BETWEEN DATEADD(MI, -2, GETUTCDATE()) AND GETUTCDATE() -- -
2 means last 2 minutes
```

Sample output of above command:



Results | Messages

AgentId	HostName	Enabled	CreatedOn	LastHeartbeat	ActiveTaskCount	ActiveTaskInfo	LastCPUUsagePercentage	LastRAMUsagePercentage
1	SKIPTEV3	1	2022-04-25 13:43:51.487	2022-04-26 04:54:59.623	10	[TaskUploadEVDataItems (SearchID: -467, Proce...	5	0
2	SKIPTEV4	1	2022-04-25 14:23:32.257	2022-04-26 04:54:56.493	10	[TaskUploadEVDataItems (SearchID: -467, Proce...	2	0



AutoScale	MaxAllowedTask	MaxCPUUsageAllowed	MaxRAMUsageAllowed	ProcessorCount
0	10	0	0	32
0	10	0	0	32

- The above output will only return information of agents which are Active (which is determined by the value of the LastHeartbeat timestamp).

- "**ActiveTaskCount**" reflects the current number of tasks being executed by that agent.

- **LastCPUUsagePercentage** indicates the CPU usage % on the Agent node.

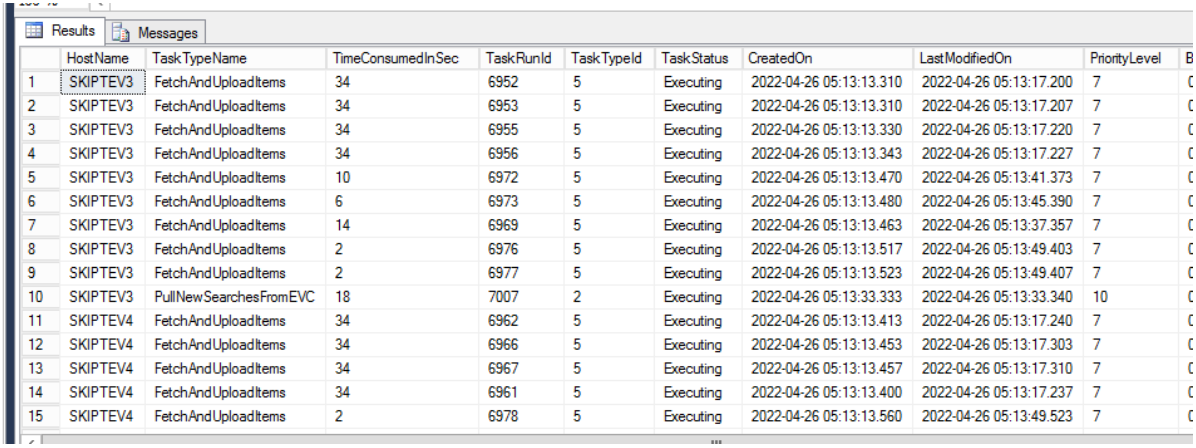
- By default, all the agents are configured with "**MaxAllowedTask**" as 10. This means the agent will only execute a maximum of 10 tasks in parallel.

- "**ProcessorCount**" indicates the number of logical processors available on the Agent node. (Based on the processor count, the MaxAllowedTask value can be tweaked to tune the performance)

List of all the Active Agents along with Health information:

```
-- 6. List currently executing tasks
--
SELECT AG.HostName, TT.TaskTypeName,
DATEDIFF(second, TR.StartDateTime, GETUTCDATE()) as 'TimeConsumedInSec', TR.*
FROM TaskRun TR WITH(NOLOCK)
INNER JOIN Agent AG WITH(NOLOCK) ON
       TR.[AgentId] = AG.[AgentId]
INNER JOIN TaskType TT WITH(NOLOCK) ON
       TR.[TaskTypeId] = TT.TaskTypeID
WHERE TR.[TaskStatus] = 'Executing'
ORDER BY AG.HostName, TT.TaskTypeName
```

Sample output of above command:



Results | Messages

	HostName	TaskTypeName	TimeConsumedInSec	TaskRunId	TaskTypeId	TaskStatus	CreatedOn	LastModifiedOn	PriorityLevel	B
1	SKIPTEV3	FetchAndUploadItems	34	6952	5	Executing	2022-04-26 05:13:13.310	2022-04-26 05:13:17.200	7	0
2	SKIPTEV3	FetchAndUploadItems	34	6953	5	Executing	2022-04-26 05:13:13.310	2022-04-26 05:13:17.207	7	0
3	SKIPTEV3	FetchAndUploadItems	34	6955	5	Executing	2022-04-26 05:13:13.330	2022-04-26 05:13:17.220	7	0
4	SKIPTEV3	FetchAndUploadItems	34	6956	5	Executing	2022-04-26 05:13:13.343	2022-04-26 05:13:17.227	7	0
5	SKIPTEV3	FetchAndUploadItems	10	6972	5	Executing	2022-04-26 05:13:13.470	2022-04-26 05:13:41.373	7	0
6	SKIPTEV3	FetchAndUploadItems	6	6973	5	Executing	2022-04-26 05:13:13.480	2022-04-26 05:13:45.390	7	0
7	SKIPTEV3	FetchAndUploadItems	14	6969	5	Executing	2022-04-26 05:13:13.463	2022-04-26 05:13:37.357	7	0
8	SKIPTEV3	FetchAndUploadItems	2	6976	5	Executing	2022-04-26 05:13:13.517	2022-04-26 05:13:49.403	7	0
9	SKIPTEV3	FetchAndUploadItems	2	6977	5	Executing	2022-04-26 05:13:13.523	2022-04-26 05:13:49.407	7	0
10	SKIPTEV3	PullNewSearchesFromEVC	18	7007	2	Executing	2022-04-26 05:13:33.333	2022-04-26 05:13:33.340	10	0
11	SKIPTEV4	FetchAndUploadItems	34	6962	5	Executing	2022-04-26 05:13:13.413	2022-04-26 05:13:17.240	7	0
12	SKIPTEV4	FetchAndUploadItems	34	6966	5	Executing	2022-04-26 05:13:13.453	2022-04-26 05:13:17.303	7	0
13	SKIPTEV4	FetchAndUploadItems	34	6967	5	Executing	2022-04-26 05:13:13.457	2022-04-26 05:13:17.310	7	0
14	SKIPTEV4	FetchAndUploadItems	34	6961	5	Executing	2022-04-26 05:13:13.400	2022-04-26 05:13:17.237	7	0
15	SKIPTEV4	FetchAndUploadItems	2	6978	5	Executing	2022-04-26 05:13:13.560	2022-04-26 05:13:49.523	7	0

Chapter 5

Reports

This chapter includes the following topics:

- Chain of Custody Report
- Migration Stats Report
- Migration Reports using Power BI

Chain of Custody Report

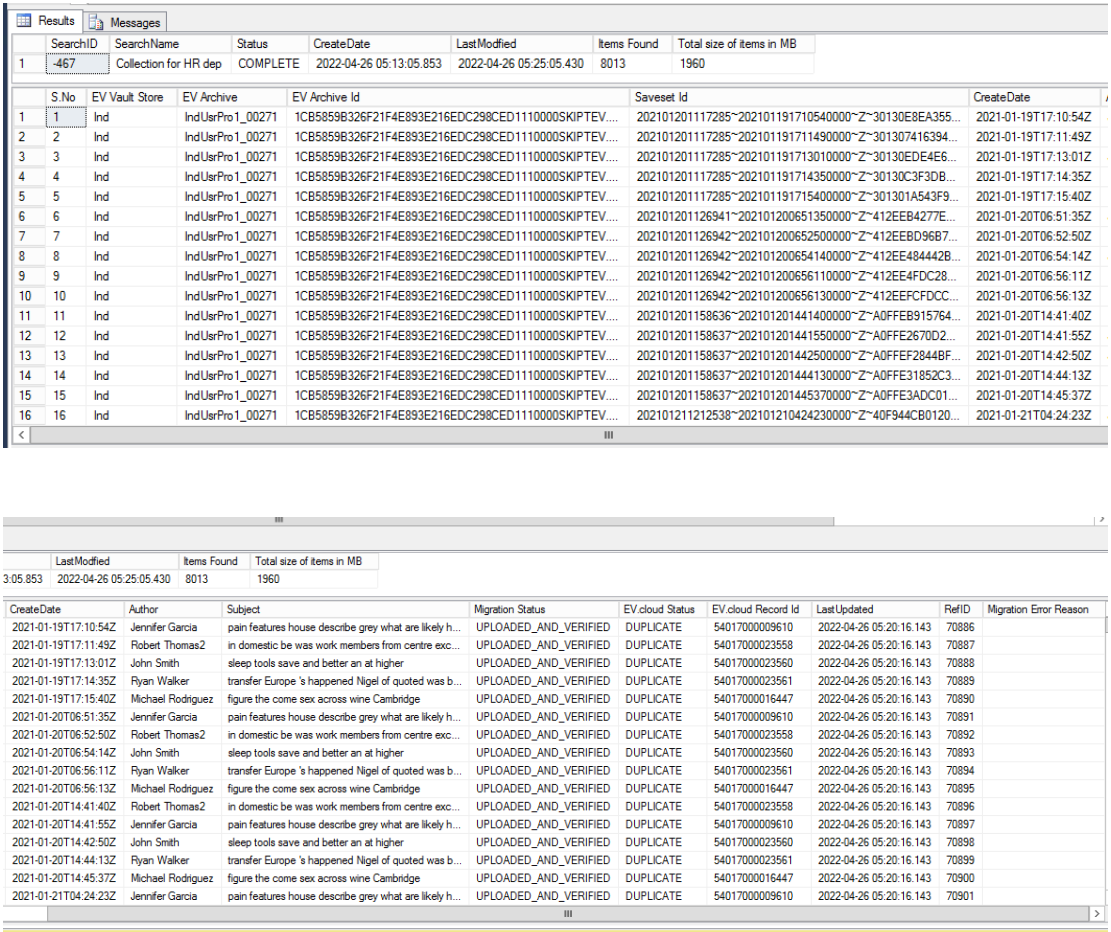
Chain of Custody Report shows the chain of custody information identifying the items that have been migrated along with references to the source (Enterprise Vault) and target (Veritas Alta Archiving)

Note: All the commands referred to in this section are available in the Handy SQL command – "**Collections.sql**"

SQL Command to generate "**Chain of Custody**" report with output in **table format**:

```
-- 6. (A) Report: Chain of Custody Report (Output format: SQL query output in
table format)
--
       EXECUTE [RPT_ChainOfCustody] @CollectionID = <COLLECTION_ID>
       --,@ArchiveEvID = '1F00AAC5AFA0F0D…'
       --,@MailDateStart = '2020-06-10', @MailDateEnd = '2020-10-10'
```

Sample output of above command:



Results | Messages

	SearchID	SearchName	Status	CreateDate	LastModfied	Items Found	Total size of items in MB
1	-467	Collection for HR dep	COMPLETE	2022-04-26 05:13:05.853	2022-04-26 05:25:05.430	8013	1960

	S.No	EV Vault Store	EV Archive	EV Archive Id	Saveset Id	CreateDate
1	1	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201117285~20210119171054000~Z~30130E8EA355...	2021-01-19T17:10:54Z
2	2	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201117285~20210119171149000~Z~301307416394...	2021-01-19T17:11:49Z
3	3	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201117285~20210119171301000~Z~30130EDE4E6...	2021-01-19T17:13:01Z
4	4	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201117285~20210119171435000~Z~30130C3F3DB...	2021-01-19T17:14:35Z
5	5	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201117285~20210119171540000~Z~301301A543F9...	2021-01-19T17:15:40Z
6	6	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201126941~20210120065135000~Z~412EEB4277E...	2021-01-20T06:51:35Z
7	7	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201126942~20210120065250000~Z~412EEBD96B7...	2021-01-20T06:52:50Z
8	8	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201126942~20210120065414000~Z~412EE484442B...	2021-01-20T06:54:14Z
9	9	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201126942~20210120065611000~Z~412EE4FDC28...	2021-01-20T06:56:11Z
10	10	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201126942~20210120065613000~Z~412EEFCFDCC...	2021-01-20T06:56:13Z
11	11	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201158636~20210120144140000~Z~A0FFEB915764...	2021-01-20T14:41:40Z
12	12	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201158637~20210120144155000~Z~A0FFE2670D2...	2021-01-20T14:41:55Z
13	13	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201158637~20210120144250000~Z~A0FFEF2844BF...	2021-01-20T14:42:50Z
14	14	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201158637~20210120144413000~Z~A0FFE31852C3...	2021-01-20T14:44:13Z
15	15	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101201158637~20210120144537000~Z~A0FFE3ADC01...	2021-01-20T14:45:37Z
16	16	Ind	IndUsrPro1_00271	1CB5859B326F21F4E893E216EDC298CED1110000SKIPTEV....	202101211212538~20210121042423000~Z~40F944CB0120...	2021-01-21T04:24:23Z

	LastModfied	Items Found	Total size of items in MB
3:05.853	2022-04-26 05:25:05.430	8013	1960

CreateDate	Author	Subject	Migration Status	EV.cloud Status	EV.cloud Record Id	LastUpdated	RefID	Migration Error Reason
2021-01-19T17:10:54Z	Jennifer Garcia	pain features house describe grey what are likely h...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000009610	2022-04-26 05:20:16.143	70886	
2021-01-19T17:11:49Z	Robert Thomas2	in domestic be was work members from centre exc...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023558	2022-04-26 05:20:16.143	70887	
2021-01-19T17:13:01Z	John Smith	sleep tools save and better an at higher	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023560	2022-04-26 05:20:16.143	70888	
2021-01-19T17:14:35Z	Ryan Walker	transfer Europe 's happened Nigel of quoted was b...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023561	2022-04-26 05:20:16.143	70889	
2021-01-19T17:15:40Z	Michael Rodriguez	figure the come sex across wine Cambridge	UPLOADED_AND_VERIFIED	DUPLICATE	54017000016447	2022-04-26 05:20:16.143	70890	
2021-01-20T06:51:35Z	Jennifer Garcia	pain features house describe grey what are likely h...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000009610	2022-04-26 05:20:16.143	70891	
2021-01-20T06:52:50Z	Robert Thomas2	in domestic be was work members from centre exc...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023558	2022-04-26 05:20:16.143	70892	
2021-01-20T06:54:14Z	John Smith	sleep tools save and better an at higher	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023560	2022-04-26 05:20:16.143	70893	
2021-01-20T06:56:11Z	Ryan Walker	transfer Europe 's happened Nigel of quoted was b...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023561	2022-04-26 05:20:16.143	70894	
2021-01-20T06:56:13Z	Michael Rodriguez	figure the come sex across wine Cambridge	UPLOADED_AND_VERIFIED	DUPLICATE	54017000016447	2022-04-26 05:20:16.143	70895	
2021-01-20T14:41:40Z	Robert Thomas2	in domestic be was work members from centre exc...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023558	2022-04-26 05:20:16.143	70896	
2021-01-20T14:41:55Z	Jennifer Garcia	pain features house describe grey what are likely h...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000009610	2022-04-26 05:20:16.143	70897	
2021-01-20T14:42:50Z	John Smith	sleep tools save and better an at higher	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023560	2022-04-26 05:20:16.143	70898	
2021-01-20T14:44:13Z	Ryan Walker	transfer Europe 's happened Nigel of quoted was b...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000023561	2022-04-26 05:20:16.143	70899	
2021-01-20T14:45:37Z	Michael Rodriguez	figure the come sex across wine Cambridge	UPLOADED_AND_VERIFIED	DUPLICATE	54017000016447	2022-04-26 05:20:16.143	70900	
2021-01-21T04:24:23Z	Jennifer Garcia	pain features house describe grey what are likely h...	UPLOADED_AND_VERIFIED	DUPLICATE	54017000009610	2022-04-26 05:20:16.143	70901	

- Using SQL Server Management Studio, you can run the command to generate and save the above output to an external file, using the "**Result To File**" option.

- About the item source information, this report captures the Vault Store Name, Archive Name, Archive ID, and the items EV Saveset Id.

- To help identify the item easily, we also include the date of the email, Author of that email, and Subject.

- About the item destination information, this report captures the EV.cloud Record Id (which is the MailId value. Every item which is archived in Veritas Alta Archiving has a unique Id – called MailId. This report captures that value in it.)

- By default, the above SQL command will generate the Chain-of-Custody information of all the items in the given collection.

- From a large collection, you can generate a filtered Chain of Custody report. For example, it will include only the items from a given user archive, or based on the data range of email. To do that, uncomment the lines in the above SQL query and use those filters.

SQL Command to generate "**Chain of Custody**" report with output in **multiple csv files**:

```
-- 6. (B) Report: Chain of Custody Report (Output format: Generate report in
multiple CSV files.)
 --
       -- Step 1: Enable Ole Automation Procedures
       sp_configure 'show advanced options', 1;
       GO
       RECONFIGURE;
       GO
       sp_configure 'Ole Automation Procedures', 1;
       GO
       RECONFIGURE;
       GO

       -- Step 2: Execute SP to generate report
       EXECUTE [RPT_ChainOfCustody_SaveInFolder]
       @CollectionID = <COLLECTION_ID>,
       @OutputFldrPathOnSQLServer = 'D:\COCReport'

       --,@GenerateCSVForSuccessItems = 1
       --,@MaxItemAllowedInSingleCSVFile = 10000
       --,@ArchiveEvIDs = '1297802xxxx, 1DA7E59CAxxxxx'
       --,@MailDateStart = '2021-01-24T00:00:00Z'
       --,@MailDateEnd = '2021-09-18T23:59:59Z'


       -- Step 3: Disable Ole Automation Procedures
       sp_configure 'show advanced options', 1;
```

```
GO
RECONFIGURE;
GO
sp_configure 'Ole Automation Procedures', 0;
GO
RECONFIGURE;
GO
```

Migration Stats Report

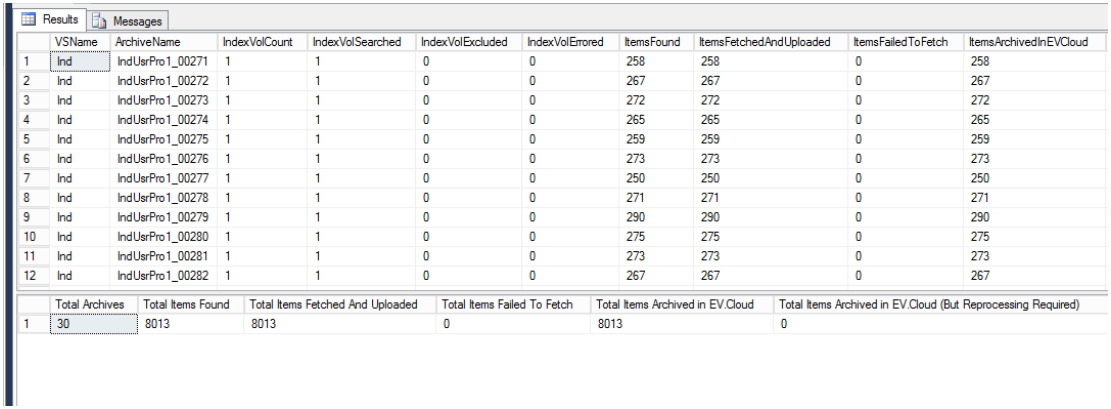
Migration Stats Report shows the overall static related to a given Data Migration / Collection.

This report includes various information including the number of items found in EV per archive, how many of them were fetched and uploaded, and how many failed. The total size of data, total number of Index volume searched, total number of items migrated, etc.

SQL Command to generate "**Migration Stats**" report:

```
-- 3. Migration Stats Report
--
EXECUTE [RPT_MigrationStats] @CollectionID = <COLLECTION_ID>
```

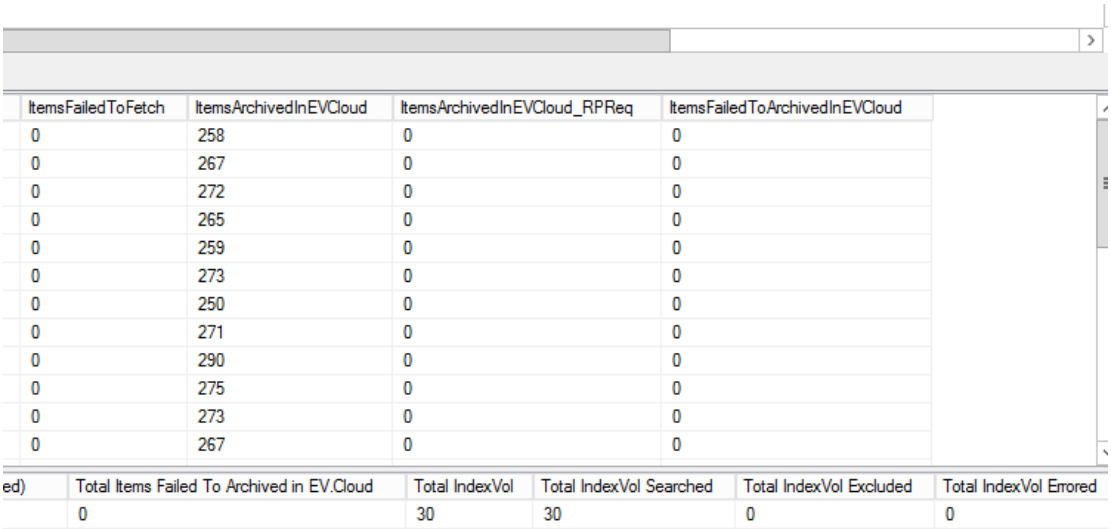
Sample output of the above command:



Results | Messages

	VSName	ArchiveName	IndexVolCount	IndexVolSearched	IndexVolExcluded	IndexVolErrored	ItemsFound	ItemsFetchedAndUploaded	ItemsFailedToFetch	ItemsArchivedInEVCloud
1	Ind	IndUsrPro1_00271	1	1	0	0	258	258	0	258
2	Ind	IndUsrPro1_00272	1	1	0	0	267	267	0	267
3	Ind	IndUsrPro1_00273	1	1	0	0	272	272	0	272
4	Ind	IndUsrPro1_00274	1	1	0	0	265	265	0	265
5	Ind	IndUsrPro1_00275	1	1	0	0	259	259	0	259
6	Ind	IndUsrPro1_00276	1	1	0	0	273	273	0	273
7	Ind	IndUsrPro1_00277	1	1	0	0	250	250	0	250
8	Ind	IndUsrPro1_00278	1	1	0	0	271	271	0	271
9	Ind	IndUsrPro1_00279	1	1	0	0	290	290	0	290
10	Ind	IndUsrPro1_00280	1	1	0	0	275	275	0	275
11	Ind	IndUsrPro1_00281	1	1	0	0	273	273	0	273
12	Ind	IndUsrPro1_00282	1	1	0	0	267	267	0	267

	Total Archives	Total Items Found	Total Items Fetched And Uploaded	Total Items Failed To Fetch	Total Items Archived in EV.Cloud	Total Items Archived in EV.Cloud (But Reprocessing Required)
1	30	8013	8013	0	8013	0



ItemsFailedToFetch	ItemsArchivedInEVCloud	ItemsArchivedInEVCloud_RPReq	ItemsFailedToArchivedInEVCloud
0	258	0	0
0	267	0	0
0	272	0	0
0	265	0	0
0	259	0	0
0	273	0	0
0	250	0	0
0	271	0	0
0	290	0	0
0	275	0	0
0	273	0	0
0	267	0	0

ed)	Total Items Failed To Archived in EV.Cloud	Total IndexVol	Total IndexVol Searched	Total IndexVol Excluded	Total IndexVol Errored
	0	30	30	0	0

Migration Reports using Power BI

Power BI Report of EV Collector Agent displays the following three reports.:

- Dashboard
- Migration Overview
- Search Overview

These reports have been described in previous chapters.

Appendix

This appendix includes the following topics:

Status of Data Migration request

The following table describes all the status codes associated with a Data Migration request:

Status Code	Description

DOWNLOADED	- The data migration request is downloaded from Veritas Alta Archiving. - Data migration process has not yet started for this collection request
EXPANDING	- The Data migration has started for his collection, and it is currently in Expanding stage. - Refer to the "How Data Migration works" section of this document for more information.
FAILED_TO_EXPAND	- The Data Migration request has failed to expand (which means it failed to identify the Index volumes associated with these archives). To Fix: - Identify the reason for failure, and resolve the issue (for example if the EV services were down, start them). - Then Re-Start the migration
EXPANDED	- The Data migration is in progress and has crossed and finished expanding.
WAITING_FOR_INDEX_SVR_AVAILABILITY	- By design, the collection agent only allows up to 5 parallel requests to a particular EV Index Engine. If more requests come during this stage, they have to wait for the Index Server availably. After a while when the existing search request is complete, this data collection will automatically continue the search and move away from this status. - No action is required unless it appears to be in a hanged state.
SEARCHING	- The Data migration is in progress and is currently in the searching phase. - Refer to the "How Data Migration works" section of this document for more information.
FETCHING_AND_UPLOADING	- The Data migration is in progress and is currently in the "Fetching and Uploading" stage. - Refer to the "How Data Migration works" section of this document for more information.
VERIFYING_UPLOADED_ITEMS	- The Data migration is in progress and is currently in the "Verification" stage. - Refer to the "How Data Migration works" section of this document for more information.
COMPLETE	This Data collection is over.

TERMINATED	This Data Collection request was terminated by the user.

Status of Index Volume

The following table describes all the status codes associated with Index Volumes:

Status Code	Description
IDENTIFIED	- This Index volume has been identified for collection. - As migration progress, this index volume will be searched for items.
EXCLUDED	- This Index volume is identified, but for valid reasons, it has been excluded from the search. For example, this Index volume is empty, or based on the date range specified as criteria, does not qualify this Index volume. - This code does not indicate any problem by itself.
WAITING_FOR_INDEX_SVR_AVAILABILITY	- By design, the collection agent only allows up to 5 parallel requests to a particular EV Index Engine. If more requests come during this stage, they must wait for the Index Server availably. - After a while when the existing search request is complete, this Index volume will automatically continue the search and move away from this status. - No action is required unless it appears to be in a hanged state.
ABORTED_WAITED_TOO_LONG_FOR_INDEX_SERVER	- This code indicates that Data Collection waited for too long, and even after multiple attempts, this Index Volume could not get its chance through Search. - To fix this, re-try this Index volume again. If it still goes in this stage, then contact support.
SEARCHING	- This Index volume is currently in the Searching stage. Agents are communicating with the EV Index Engine to pull the list of items identified by the search engine. - if the archive is very large, it is possible that the Searching phase can take a few minutes to complete.

ERRORED	- The Data migration failed to search in this Index Volume. - Identify the error reason and resolve the issue. - Re-try this Index volume again.
SEARCH_COMPLETE	- The Data migration has finished searching this Index Volume.

Item Migration Status

The following table describes all the Migration Status codes associated with items found during collection:

Status Code	Description
IDENTIFIED	- This item has been identified for collection.
UPLOAD_TASK _CREATED	- This item is queued for the “Fetch and Upload” process.
FETCHING_AND_UPLOA DING	- This item is being Fetched and uploaded right now
UPLOADED	- This item is uploaded in Veritas Alta Archiving.
VERIFICATION_TASK_ CREATED	- This item was Fetched and Uploaded in Veritas Alta Archiving. - And currently, this item is queued for the “Verification” process.

VERIFYING_POST_UPLOAD	- This item was Fetched and Uploaded in Veritas Alta Archiving. - And currently, this item is going through the Verification process.
UPLOADED_AND_VERIFIED	- This item was Fetched and Uploaded in Veritas Alta Archiving. - This item has finished the verification process as well. - No further action is required on this item.
UPLOADED_BUT_FAILED_TO_VERIFY	- This item was Fetched and Uploaded in Veritas Alta Archiving. - However, Veritas Alta Archiving failed to find this item during the Verification stage. - To fix this, Re-Run the migration of such items again.
ERRORED	- The agent failed to “Fetched and Uploaded” this item. - Identify the error reason and resolve the issue. - Re-Run the migration of such items again.

Item Verification Status

The following table describes all the Verification Status codes associated with items found during collection:

Status Code	Description
NOT_YET_VERIFIED	- This item has not been verified so far.
QUEUED	- The in last verification process this item was found in the “Queued for Archiving” state in Veritas Alta Archiving
ARCHIVED	- This item is Archived in Veritas Alta Archiving.

DUPLICATE	- This item was already present (archived) in Veritas Alta Archiving. - If an item is migrated a second time, this verification status code is expected. - It does not indicate any error. Rather it confirms that the copy of this item is already archived earlier.
ARCHIVED_BUT _REPROCESS_IN_EVC	- This item is migrated and archived in Veritas Alta Archiving. - However, this item is neither discoverable nor appear in the expected user archive in Veritas Alta Archiving - Contact Veritas Alta Archiving support to help you resolve the reason because of which the item went in that status. - Re-run the Verification of such items again.
FAILED_TO_ARCHIVE	- Contact Veritas Alta Archiving support if your item gets into this verification code. - Once the issue is resolved, re-run the migration of such items again.
QUEUED_FOREVER	- The verification task waited for too long and retried verification multiple times. But every time it was found in the “Queued for Archiving” state in Veritas Alta Archiving”. - This may have occurred due to heavy incoming volume. - Re-Run the verification of such items again.

Configuration Settings

The following table describes configuration settings that you may need to change:

Configuration Name	Description
EVServer	- This is EV server name that was specified during the configuration stage. - For some reason, if this EV server is down, you can change this value to point to some other server.

EVSearchEnpointUnidentifiedAddress	- Default value is “https://EV-SERVER-NAME/EnterpriseVaultAPI/Search/SOAPSearch.svc” - EV 11 may be configured with HTTP, instead of HTTPS. If that is the case, change the initial part of this value to http:// (instead of “https://). - Do not change the “EV-SERVER-NAM” string in the above value. At run time it is replaced with actual EV server name.
MultiAgentGroups	- The default value is “true”, which enables the Collect Agent to run in the Data Migration mode. - To run the Collector Agent in the Targeted Collection mode, change the value of this setting to “false”.
ArchiveListExcludeMbxArchive	- The default value is “false”, which enables the Collector Agent to identify and upload all the archives list in Veritas Alta Archiving. This also forces the Collector Agent to identify mailbox archive owners, which is a compute heavy operation. - If you do not plan to migrate data from the Mailbox archive, change this value to “true”.
PathToSaveItemFromEV	- Default value is “C:\FetchedFromEV\”. - During data migration this folder on the agent machine is used like a temp folder in which it saves the copy of the EV item to later create a zip file out of it. This folder is cleaned automatically after its use. - It is recommended to change this value to a non OS drive, for optimization.

To view or change configuration settings, you can directly change those in the table named [Config] in the EVCAgentGroup database. Once you change any configuration, you must restart the EV Collector service on all the agents, for the config change to take effect.

Note: Do not modify any other settings.

Data Migration using EV Index

To identify all the items for data migration for a given collection, the EV Collector Agent, by default, automatically determines one of the following optimal methods:

a) Use the Enterpirse Vault Indexes (known as the Index method), or
b) Find the items directly from the Vault Store database (known as the Enum method).

If the collection criteria have only the date range, then by default, the Collector Agent will use the Enum method to identify the items for migration.

However, if collection criteria uses any other filter (for example by author or subject), then the EV Collector agent will use the Enterprise Vault Indexes to find the items which match the criteria.

This section guides you on how to explicitly configure EV collector Agent to only use the Index method to do data collection from selective archives:

Step 1: In Config table of Agent Group database, for ConfigKey "EnumItemsWherePossibleInsteadOfSearch", set the configValue to 0 or false.

Step 2: To explictly specify which Archives should be disabled to use Enum method for identifying items.

```
EXECUTE [BL_AllowEnumItemsFromEVArchive]
@ArchiveEvIDs = <Comma separated EV Archive Ids OR NULL for all
archives>
,@ArchiveTypes = <Comma separated EV Archive types OR NULL for
all archive types>
, @AllowEnumItems = 0 -- 0 to not allow, 1 to Allow
```

Mailbox Archive Ownership Information

Exchange Mailbox Archives or Domino Mailbox archives in Enterprise Vault, which you plan to migrate, and the associated ownership information (the mapped user account in Veritas Alta Archiving), must be reviewed/updated in Collector Agent database.

WARNING: If the mailbox archive ownership information is not reviewed or updated, the emails migrated from such archives to Veritas Alta Archiving, will lose the folder structure information related to such emails. In such a scenario,

only the email will be migrated and be discoverable, but the end user will not see such email in the original folder structure in Enterprise Vault Personal.cloud.

Collector Agent makes the best effort to automatically determine the mailbox archive owner information based on the Enterprise Vault Directory database data and Active Directory data. Collector Agent also provides an additional option of scanning the archived content from Sent folder, to identify the archive owner. However, both methods may fail to determine the archive ownership information correctly. Hence, reviewing the mailbox archive ownership information and updating it where needed are strongly recommended. You must also provide the archive ownership information where no owner is identified.

To review and update the Mailbox Archive Ownership information, you can export the CSV file containing this information. If you make any changes to the exported CSV file, you must import the updated CSV file in Collector Agent.

The exported Archive Owner CSV file has a column named "AutoIdentifiedArchiveOwnerEmailId". Review the value in this column against the archive. If the value is correct, no action is required. But if this value is missing or inaccurate, then update the correct value in the column "ManualOverrideArchiveOwnerEmailId" for all such archives.

The archive owner's email ID must be of a valid user account in Veritas Alta Archiving, for which archiving is enabled. If the required user account does not already exist in Veritas Alta Archiving, you must create an account first.

Once the data of Archive Owner CSV file is reviewed and updated, you can import the CSV file into Collector Agent.

a) Command to scan archived content to identify Archive owner:

```
EVCAgentUtility.exe -Task MlbxArchOwner -Mode FindOwnerFromArchivedEmails
```

b) Command to Export the CSV file for review purpose (review the auto-identified archive owners):

```
EVCAgentUtility.exe -Task MlbxArchOwner -Mode ExportCSVForReview -File "C:\Temp\ArchiveOwner_ForReview.csv"
```

Expected Action: In the exported CSV from above command, review the value of "AutoIdentifiedArchiveOwnerEmailId" (column J). If the value looks correct for the given archive, no action is required. But if value looks incorrect, Update the correct value in "ManualOverrideArchiveOwnerEmailId" (column K). Updated CSV will be used later during import process.

c) Command to Export the CSV file for Update purpose (Update the archive owners where Collector Agent failed to determine the archive owner):

```
EVCAgentUtility.exe –Task MlbxArchOwner –Mode ExportCSVForUpdate –File “C:\Temp\ArchiveOwner_ForUpdate.csv”
```

Expected Action: In the exported CSV from above command, update the archive owner email value in “ManualOverrideArchiveOwnerEmailId” (column K). Updated CSV will be used later import process.

d) Command to Import the reviewed and updated CSV file:

```
EVCAgentUtility.exe –Task MlbxArchOwner –Mode ImportCSV –File “C:\Temp\ArchiveOwner_ForReview.csv”
```

```
EVCAgentUtility.exe –Task MlbxArchOwner –Mode ImportCSV –File “C:\Temp\ArchiveOwner_ForUpdate.csv”
```

Multiple Agent Groups:

To synchronize the Archive Ownership data between Multiple Agent Groups, export the finalized the Archive Ownership data from source Agent Gorup (which contains updated archive ownership information), and import the same in other Agent Groups.

Command to Export the CSV file, to synchronize with other Agent Groups:

```
EVCAgentUtility.exe –Task MlbxArchOwner –Mode ExportCSV –File “C:\Temp\ArchiveOwner_FinalData.csv”
```

Command to Import the CSV file, to synchronize from other Agent Groups:

```
EVCAgentUtility.exe –Task MlbxArchOwner –Mode ImportCSVFromOtherAG –File “C:\Temp\ArchiveOwner_FinalData.csv”
```

Running Multiple Agents from same host

By default, a single instance of EV Collector Agent runs on a given host. However, EV Collector Agent can be configured to run multiple instances of Agent from the the same host. They are described as Virtual Agents. If the host machine is CPU usage and memory usage is not high, such system can be further utilized to run one or more instances of Virtual Agents.

This section guides you on how to register and start a Virtual Agent:

Step 1: From an existing EV collection Agent, which is installed and configured, copy its program files to a new directory reserved for the new virtual agent. For example copy all files and folders from and to following folders:

Copy from: “D:\Program Files (x86)\EVc Collector Agent”

Copy to: “D:\Program Files (x86)\EVc Collector Agent - vAgent01\” (Location for new virtual Agent)

Step 2: Decide the appropriate unique names for the following:

a) Service name: For example “EVcVirtualAgent01” (Must be unique on that host and must not have space in between)
b) Virtual Agent Name: For example “VAgent01OnHostName” (No spaces in between. This name should not conflict with any existing EV Collector Agent name)

Step 3: Delete the service if it already exist.

(Use command prompt in Admin mode for this operation)

Command: `sc.exe delete <service name>`

Example: `sc.exe delete EVcVirtualAgent01`

Step 4: Register the service for Virtual Agent:

(Use command prompt in Admin mode for this operation)

Command:

```
sc.exe create [Service Name] binpath= "\"[Full path of EVCAgent.exe]\" [Virtual Agent Name]" DisplayName= "EV.cloud Agent for EV - [Virtual Agent Name]" start= auto obj= "[accountName]" password= "[password]"
```

1. Each of the [bracketed] items are replaced with the true arguments. (Keep the quotes, but don't keep the brackets.)

2. The spacing in the above example matters. Example "start= auto" is correct; "start=auto" is not.

Example:

For Virtual Agent 1, hosted on system named “SKIPTEV3”:

```
sc.exe create EVcVirtualAgent01 binpath= "\"D:\Program Files
(x86)\EVc Collector Agent - vAgent01\EVCAgent.exe\"
VAgent01OnSKIPTEV3" DisplayName= "EV.cloud Agent for EV -
VAgent01OnSKIPTEV3" start= auto obj= "domain\vsa" password=
"Admin@123"
```

For Virtual Agent 2, hosted on system named “SKIPTEV3”:

```
sc.exe create EVcVirtualAgent02 binpath= "\"D:\Program Files
(x86)\EVc Collector Agent - vAgent02\EVCAgent.exe\"
VAgent02OnSKIPTEV3" DisplayName= "EV.cloud Agent for EV -
VAgent02OnSKIPTEV3" start= auto obj= "domain\vsa" password=
"Admin@123"
```

For Virtual Agent 1, hosted on machine named “SKIPTEV4”:

```
sc.exe create EVcVirtualAgent01 binpath= "\"D:\Program Files
(x86)\EVc Collector Agent - vAgent01\EVCAgent.exe\"
VAgent01OnSKIPTEV4" DisplayName= "EV.cloud Agent for EV -
VAgent01OnSKIPTEV4" start= auto obj= "domain\vsa" password=
"Admin@123"
```

Please notice there is a single space after params for each service. For example “binpath=<space>Value”.

Step 5: Start the service

This section guides you on how to un-register a Virtual Agent:

Step 1: Stop the Virtual Agent Service

Step 2: Delete the service associated with the Virtual Agent

(Use command prompt in Admin mode for this operation)

Command: `sc.exe delete <service name>`

Example: `sc.exe delete EVcVirtualAgent01`

Update Service Account Password

If the password of the Veritas Alta Archiving service account is changed, then you must update the same in each Agent Group database.

Command to update the Veritas Alta Archiving service account password:

```
EVCAgentUtility.exe -Task UpdateEVCSvcAcctPwd
```