Cherwell Ticketing Integration Implementation Guide

Cyber-Ark Password Vault

Cherwell Ticketing Integration

Introduction

The following is a document that describes how to implement the Cherwell ticketing integration.

Once the integration is set up, users will be able to retrieve a password based off of the validity of existing Cherwell tickets.

In the event that Cherwell is unreachable, a failsafe can be configured to either release or not release passwords during an outage.

Pre-requisites

1. Create an EPV account (for retrieving the API Key and Cherwell account)
2. Make the account owner of the safe/s where these accounts reside and provide the following authorizations :
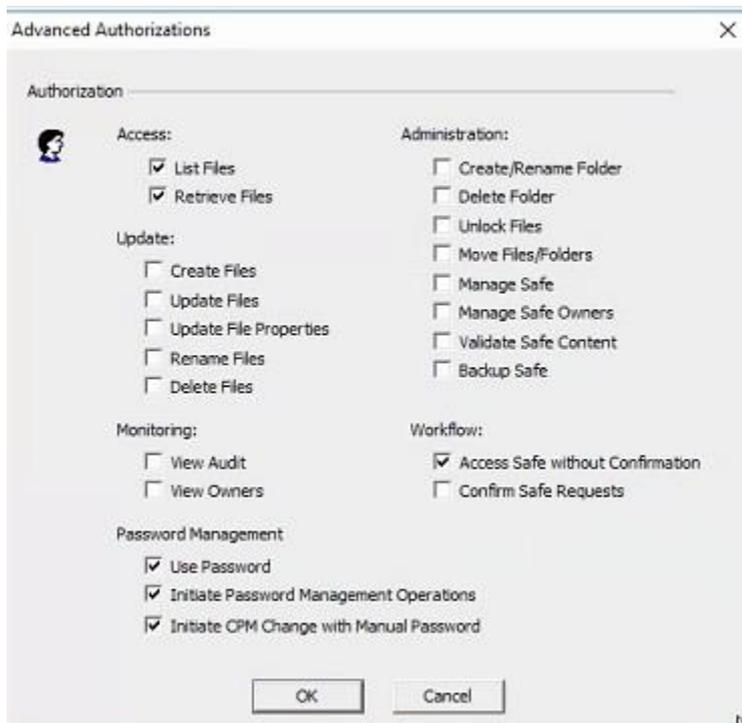
3. Onboard the EPV account into the "Cyberark EPV" platform (which may need to be activated if not active)
4. Keep the object name of this onboarded EPV account for the ticketing system "ConnectionDetails" setting described below
5. Make sure network settings are in place for the PVWA server to access itself as "localhost" . You can verify this by opening the PVWA interface in a browser on the PVWA server and referencing "localhost" instead of the FQDN or IP in the address.

Installation

Installing the Ticketing Integration

(**Note**: adding or editing files in the PVWA's web directory may result in restarting the web application's service, and disconnecting active user sessions in the PVWA.)

- Extract the following files into a temporary location (will be used in configuration stage and for testing) :
  - Example.xml
  - CyberArk.PasswordVault.PublicInterfaces.dll
  - Cyberark.Extensions.Ticketing.ViaRESTExtensionsCherwell.exe
  - Cyberark.Extensions.Ticketing.ViaRESTExtensionsCherwell.dll

- Copy the following files to the bin directory of PVWA.
  (…\inetpub\wwwroot\PasswordVault\Bin\) :
  - Cyberark.Extensions.Ticketing.ViaRESTExtensionsCherwell.dll

Configuration

Configuring the Ticketing Integration

- From PVWA, create an account that will be used to connect to the ticketing system in the PVWATicketingSystem Safe.

- Edit the example.xml file to meet your needs. Reference the "Configuration Parameters" description below to understand what needs to be changed in your environment. Some values have been populated with defaults in the example file as per the requirements.

  At this point you can test the example xml and the integration logic from command line with Cyberark.Extensions.Ticketing.ViaRESTExtensionsCherwell.exe

- Update PVWA's configuration file PVConfiguration.xml in the PVWAConfig safe:
  o   Add the content of the edited example.xml file under the TicketingSystems section.
  (See Appendix A for details)

- Further edits to the ticketing system configuration should be made via the PVWA by logging in with an administrative account, and going to Administration > Options > Ticketing Systems.

Configuration Parameters

ConnectionDetails – Safe and object [file] names for EPV account that has permissions to retrieve the vaulted Cherwell API key and the Cherwell account (username/password) for retrieving the initial API token

Logging-

Debug– Yes/No – whether to create a log for troubelshooitng

Directory Specify the log file location on disk (full path to directory)

Failsafes

TicketSystemNoConnection

ReleasePassword – Whether to release password in this case (Yes/No)

ErrorMessage – Error to display if password is not released for this reason

TicketIDNotFound

ReleasePassword – Whether to release password in this case (Yes/No)

ErrorMessage – Error to display if password is not released for this reason

ExtendedConnectionDetails

PVWAServer – PVWA server serving REST requests to the vault. This will rarely be anything other than "localhost"

ApiKey

Username – Username of the vaulted account holding the Cherwell API key

Safe– Safe of the vaulted account holding the Cherwell API key

TicketingWebServiceAccount

Username – Username of the vaulted account holding the Cherwell credentials

Safe– Safe of the vaulted account holding the Cherwell credentials

TokenEndpoint – Endpoint from which to query for the Cherwell token

WebService – These settings describe how to access the Cherwell REST API

IgnoreSSL – Whether to ignore SSL certificate errors if using https (Yes/No)

BaseAddress – Cherwell web server address

Protocol – Web service protocol (http/https)

Port – Web service port

Timeout – Web service timeout (in ms)

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TicketTypes

<Ticket Type Name> – The ticket types that the system will process. (e.g. Change,Request,Incident)

Regexp - Shows the valid format for this type of ticket in a regular expression format

Endpoint – URL used to retrieve ticket status. The variable {ticketID} will be replaced with the user-provided ticket number and the {ApiKey} placeholder will be replaced by the Cherwell API Key retrieved from the vault.

Validations – parent node for all validations to perform on this ticket type

<Validation name> – Name given to the validation (mainly for logging purposes)

Field – Which field in the web service response to check for

AllowedValues – Comma separated list of accepted values for the above field

Note: If reading the configuration of the ticketing integration fails, the ticketID will not be validated and the user action will fail. There is no failsafe configuration for this (as the configuration itself may not be read).

Activating the Ticketing Integration for a Platform

In PVWA:

- Go to : Administration →Platform Management
- Choose an existing platform or create a new one
- Press "Edit"
- UI & Workflows→Ticketing System →Add Active Ticketing Systems (if not grayed out)
- UI & Workflows→Ticketing System →ActiveTicketingSystems → Add TicketingSystem
- Change new ticketing system name to "Cherwell"
- UI & Workflows→Ticketing System
  - EnterTicketing Info – change to "Yes"
  - Validate Ticket Number – change to "Yes"

- Renaming the ticketing system (optional):
  - Go to : Administration → Options → Ticketing Systems → Cherwell
    - Change the "Name" field to the new name which will be displayed to users.
    - Press "OK" to save changes
  - Go to : Administration →Platform Management
    - Choose the platform for which this ticketing system is activated
    - UI & Workflows→ Ticketing System → ActiveTicketingSystems
      - Change the "Name" field of the "Cherwell" ticketing system to the new name which will be displayed to users.
      - Press "OK" to save changes

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Troubleshooting

Tracing Mode

Set Parameter value of "Logging/Debug" to "yes".

Ensure that the target folder already exists, and that the web application user has read and write access to this folder.

Manual Testing

Provided with this integration is an executable that can be used at the command-line level. Edit the example.xml file to use the desired specifications, and run the executable with the following arguments:

Cyberark.Extensions.Ticketing.ViaRESTExtensionsCherwell.exe example.xml

The credentials prompted for would be the same ones as in the ConnectionAccountSetting (for the EPV account to retrieve the other accounts).

Appendix A : Update PVWA's configuration file PVConfiguration.xml in the PVWAConfig safe

- Open PrivateArk Client
- Go to safe "PVWAConfig"
- Select PVConfiguration.xml -> right click -> Retrieve and Save as
- Choose a temporary location to save the file to
- Copy the file to create a backup (in case you will need to roll back changes)
- Edit the file
- Search for the "TicketingSystems" tag
- Place the content from example.xml within the TicketingSystems tag. (example below)
- Paste the edited file back into the safe and overwrite the file.

Example (added code of example.xml file in red):

```
…
<TicketingSystems EnableTicketingWithoutRequiredReason="Yes">
        <System Name="Cherwell" Assembly="Cyberark.Extensions.Ticketing.ViaRESTExtensionsCherwell">
                <ConnectionDetails Safe="PVWATicketingSystem" File="TICKETING_CRED_ACCOUNT_OBJECT" />
                <TicketingParameters>
        …
                </TicketingParameters>
        </System>
</TicketingSystems>
…
```

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