

Hitachi VSP One Object S Series

v4.2.1.5

Implementation Guide

This implementation guide describes instructions for integrating the Hitachi VSP One Object S Series (version 4.2.1.5) with CyberArk Central Policy Manager (CPM) using a custom REST API plugin. It explains how to securely automate password verification, change, and reconciliation operations by leveraging the storage system's native REST API interface.

Hitachi Vantara

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Preface

About this document

This document provides detailed implementation guidance for integrating Hitachi VSP One Object (S Series) with CyberArk's REST API CPM Plugin Framework. It is structured to assist technical users in understanding the setup requirements, configuration structure, and supported use cases for secure and automated credential management.

Document conventions

This document uses the following typographic convention:

Convention	Description
Bold	- Indicates text in a window, including window titles, menus, menu options, buttons, fields, and labels. Example: Click OK. - Indicates emphasized words in list items.
<i>Italic</i>	Indicates a document title or emphasized words in text.
<code>Monospace</code>	Indicates text that is displayed on screen or entered by the user.

Intended audience

The guide is intended for system administrators, security engineers, and integration specialists responsible for configuring CyberArk Central Policy Manager (CPM) to manage credentials on Hitachi VSP One Object S series systems.

Release notes

Please refer to the release notes section for version-specific behavior, limitations, and changes introduced in this release. All updates to this guide, including revisions and enhancements, are documented in the revision history section for tracking purposes.

Revision History

Revision	Changes	Date
v1.0	Initial release of the implementation guide for integrating VSP One Object S Series with CyberArk REST API plugin.	06/17/2025

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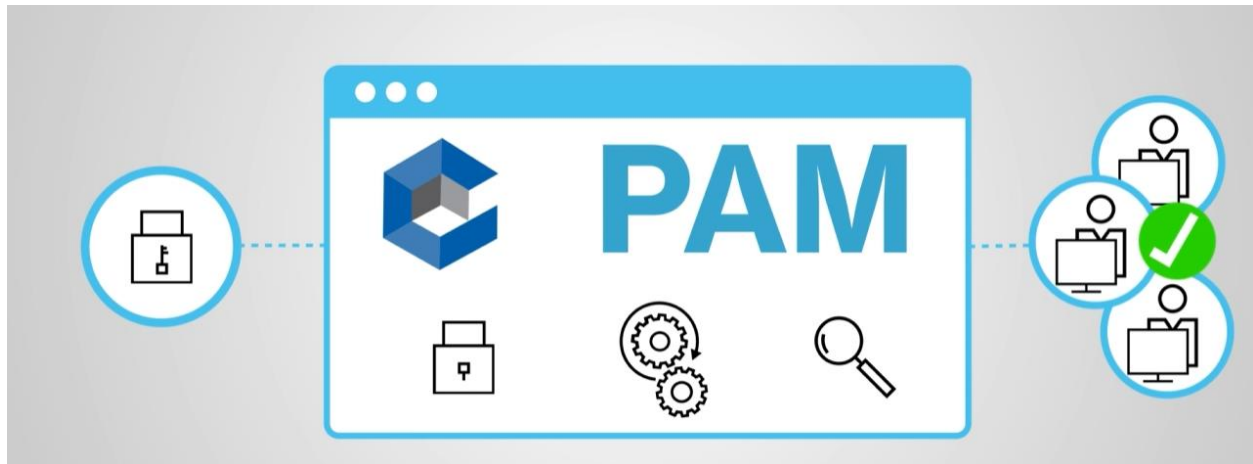
Prerequisites / Introduction

Purpose

This guide documents the implementation of a CyberArk REST API-based CPM plugin to manage user credentials for Hitachi VSP One Object S Series systems. The plugin automates verify, change, and reconcile operations through direct REST API calls with Basic Authentication.

Block Diagram

As illustrated in the diagram, the PAM system securely connects to VSP One Object S series through a defined API interface. Credentials are rotated automatically, access is restricted to authorized users, and all actions are tracked for visibility and compliance. This integration ensures that only verified users gain access to sensitive systems reinforcing enterprise-grade security and operational integrity.



Procedure

Pre-requisites

01. REST API Capability:

Ensure the target VSP One Object S Series supports these endpoints.

- **Token Generation**

Note: This integration currently uses Basic Authentication. If future versions of the API support, a `GenerateToken` step must be introduced in the plugin configuration.

- **Verify Password**

- ✓ GET `https://<address>:9090/mapi/user_accounts/<username>`

- ✓ Headers:

`Authorization: Basic <base64(username:password)>`

`X-HCPS-API-VERSION: 3.2.0`

- **Change Password**

- ✓ POST

`https://<address>:9090/mapi/user_accounts/<username>`

- ✓ Headers: same as above

- ✓ Body:

`{ "password": "<newPassword>" }`

- **Reconcile Password**

- ✓ Uses Reconcile Account Credentials

- ✓ Same API and JSON structure as password change

- **Platform Setup**

- ✓ NET Framework 4.8 installed on the CPM server

- ✓ CPM must have access over port 9090 (HTTPS) to the VSP One Object S series system

- ✓ Trusted CA chain configured on the CPM machine if SSL is used.

Plugin Components

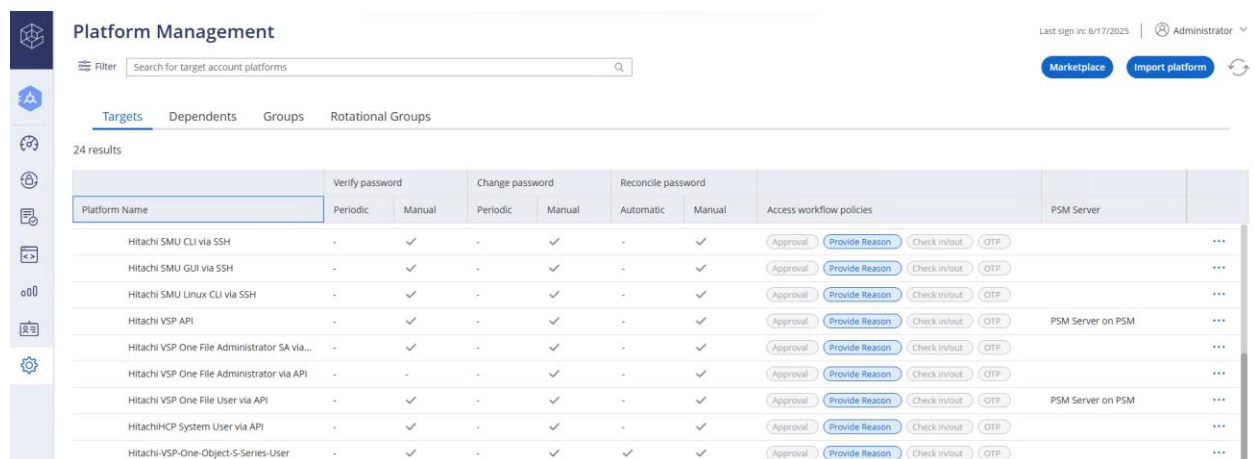
We have created the following:

- Platform Configuration File: `VSPObjectSPluginConfiguration.xml`
- Policy Definition File: `Policy-Hitachi-VSP-One-Object-S-Series-User.xml`
- These align with CyberArk's REST API plugin framework structure:
 - ✓ `<Parameters>` define API endpoints and credentials
 - ✓ `<APICalls>` include Verify Password, Change Password and Reconcile Password actions with proper Basic Auth and version headers.
 - ✓ `<Chains>` define the CPM actions: `verifypass`, `changepass` and `reconcilepass`.

Plugin Implementation

01. Import Platform into PVWA

- Go to PVWA → Administration → Platform Management
- Click Import Platform
- Upload the platform bundle zipped:
 - ✓ Platform ID: `Hitachi-VSP-One-Object-S-Series-User`
 - ✓ Platform Configuration File: `HCPCSPlatformConfiguration.xml`
 - ✓ Management Type: `password`



Platform Name	Verify password		Change password		Reconcile password		Access workflow policies	PSM Server
	Periodic	Manual	Periodic	Manual	Automatic	Manual		
Hitachi SMU CLI via SSH	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	...
Hitachi SMU GUI via SSH	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	...
Hitachi SMU Linux CLI via SSH	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	...
Hitachi VSP API	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	PSM Server on PSM
Hitachi VSP One File Administrator SA via...	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	...
Hitachi VSP One File Administrator via API	-	-	-	✓	-	✓	Approval Provide Reason Check In/out OTP	...
Hitachi VSP One File User via API	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	PSM Server on PSM
HitachiHCP System User via API	-	✓	-	✓	-	✓	Approval Provide Reason Check In/out OTP	...
Hitachi-VSP-One-Object-S-Series-User	-	✓	-	✓	✓	✓	Approval Provide Reason Check In/out OTP	...

02. Assign Platform to Account

In PVWA:

- Navigate to Accounts → Add or edit an account
- Assign Platform ID: `Hitachi-VSP-One-Object-S-Series-User`
- Provide required properties:
 - ✓ Username: `admin`
 - ✓ Address: VSP One Object S series system IP or FQDN
- Link a Reconcile Account with the correct credentials

03. Test Plugin Execution

From PVWA:

- Select the account
- Click Verify → CPM runs `VerifyPassword`
- Click Change → CPM runs both `VerifyPassword` and `ChangePassword`
- Click Reconcile → CPM runs `ReconcilePassword`

Monitor output in:

- `PasswordManager.log`
- `PMPluginTrace.log` (if debug is enabled)

Security Best Practices

- Use `<secure="true">` for sensitive parameters like `access_token`
- Avoid hardcoding credentials; rely on CPM account placeholders
- Use `returnCode` and `<ErrorMessage>` sections to map API status codes
- Set platform parameter `Debug=Yes` during testing only

Summary

This plugin ensures secure and automated credential rotation for user accounts on Hitachi VSP One Object S Series systems. It leverages direct REST API access with Basic Authentication, parses structured JSON responses, and complies with CyberArk's REST plugin framework best practices.

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