Tenable Nessus and Thycotic Integration Guide

Last Revised: July 11, 2023

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Introduction

This document describes how to deploy Tenable™ Nessus® for integration with Thycotic Secret Server. Please email any comments and suggestions to Tenable Support.

Security administrators know that conducting network vulnerability assessments means getting access to and navigating an ever-changing sea of usernames, passwords, and privileges. By integrating Thycotic Secret Server with Nessus, administrators now have even more choice and flexibility for reducing the credentials headache.

The Tenable® integration with Thycotic Secret Server delivers a comprehensive authenticated scanning solution that provides security teams better vulnerability insight in order to further protect privileged accounts. This integration supports the storage of privileged credentials in Thycotic Secret Server and their automatic retrieval at scan time by Tenable. This ensures that sensitive passwords are safely stored, controlled, auditable and easily changed without manual intervention.

By integrating Nessus with Thycotic Secret Server, you can:

- Store credentials in Thycotic Secret Server instead of managing and updating the credentials directly within a Tenable solution.
- Reduce the time and effort needed to document credential storage within the organizational environment.
- Automatically enforce security policies within specific departments or for specific business unit requirements, simplifying your compliance process.
- Reduce the risk of unsecured privileged accounts and credentials across the enterprise.

Integration Requirements

You must meet the following minimum version requirements to integrate Tenable Nessus with Thycotic Secret Server:

- Thycotic Secret Sever version 8.9 or later
- Nessus Manager version 6.7 or later

Note: Tenable does not support the Thycotic Cloud product. For more information, contact your Tenable representative.

Note: The integration requires enabling the Thycotic Secret Server web services API, which is available in Secret Server Professional and the hosted version of Secret Server.

Integrate with Thycotic Secret Server

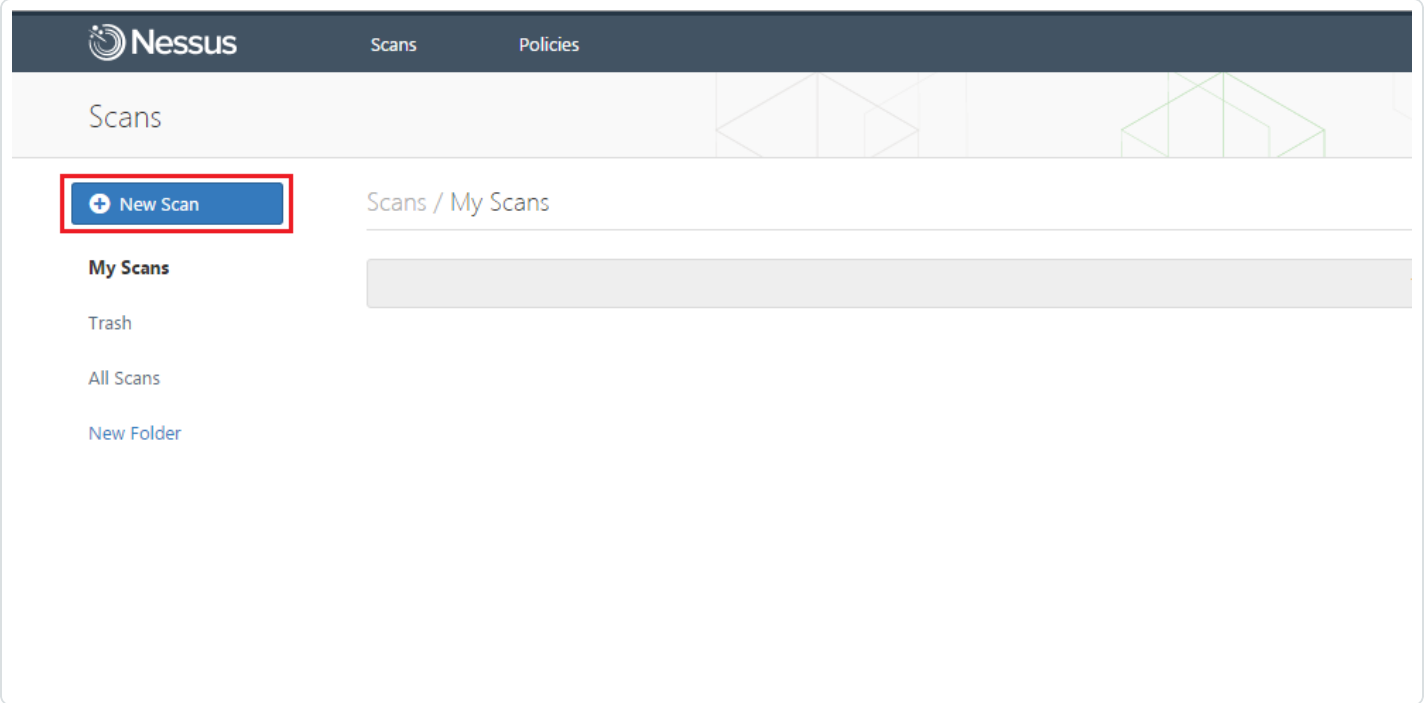
You can configure Nessus Manager to perform credentialed network scans of Windows and Linux systems using Thycotic's password management solution. Credentials are configured similarly to other credentialed network scans.

Configure Windows Credentials

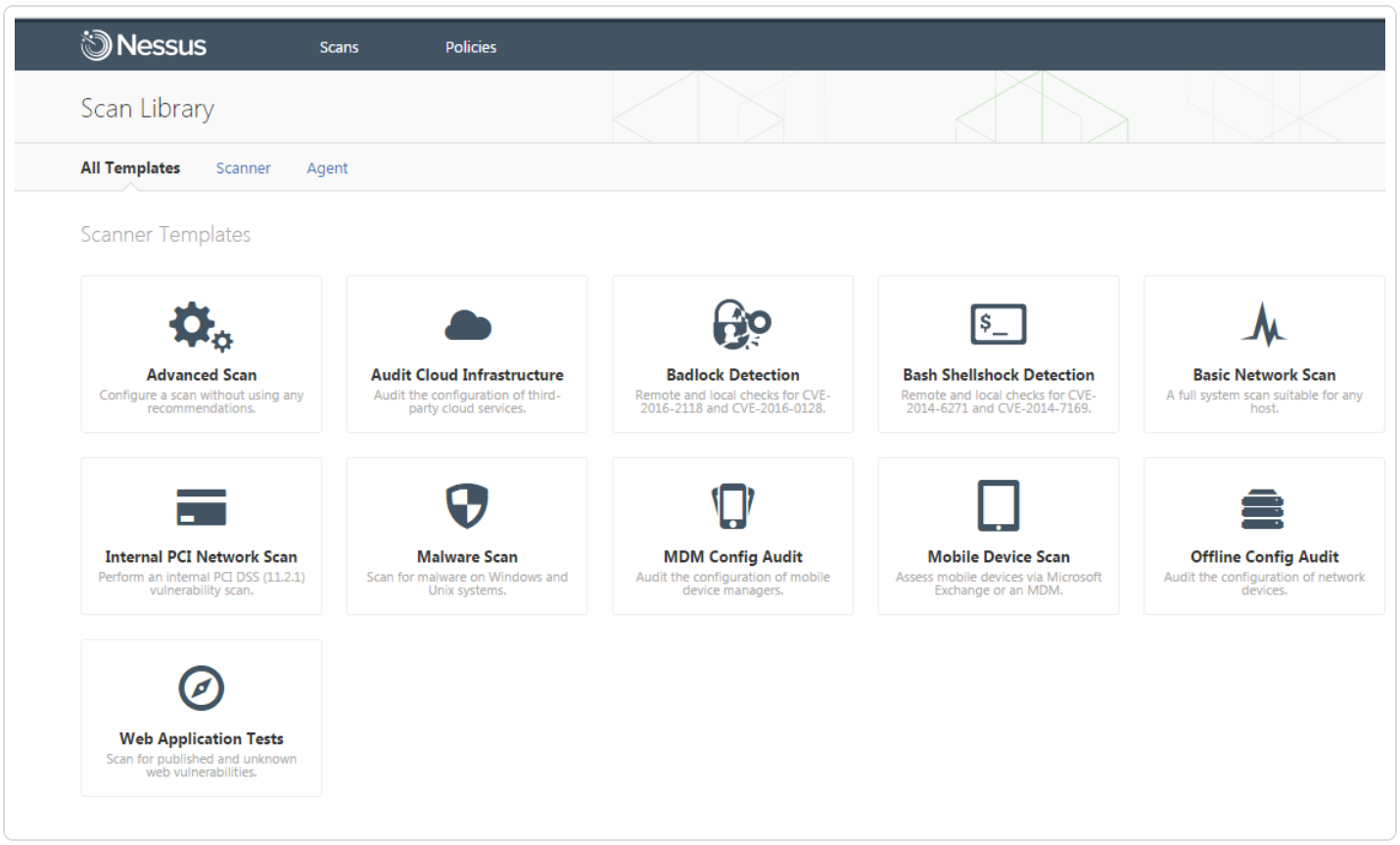
Configure Linux Credentials

Configure Windows Credentials

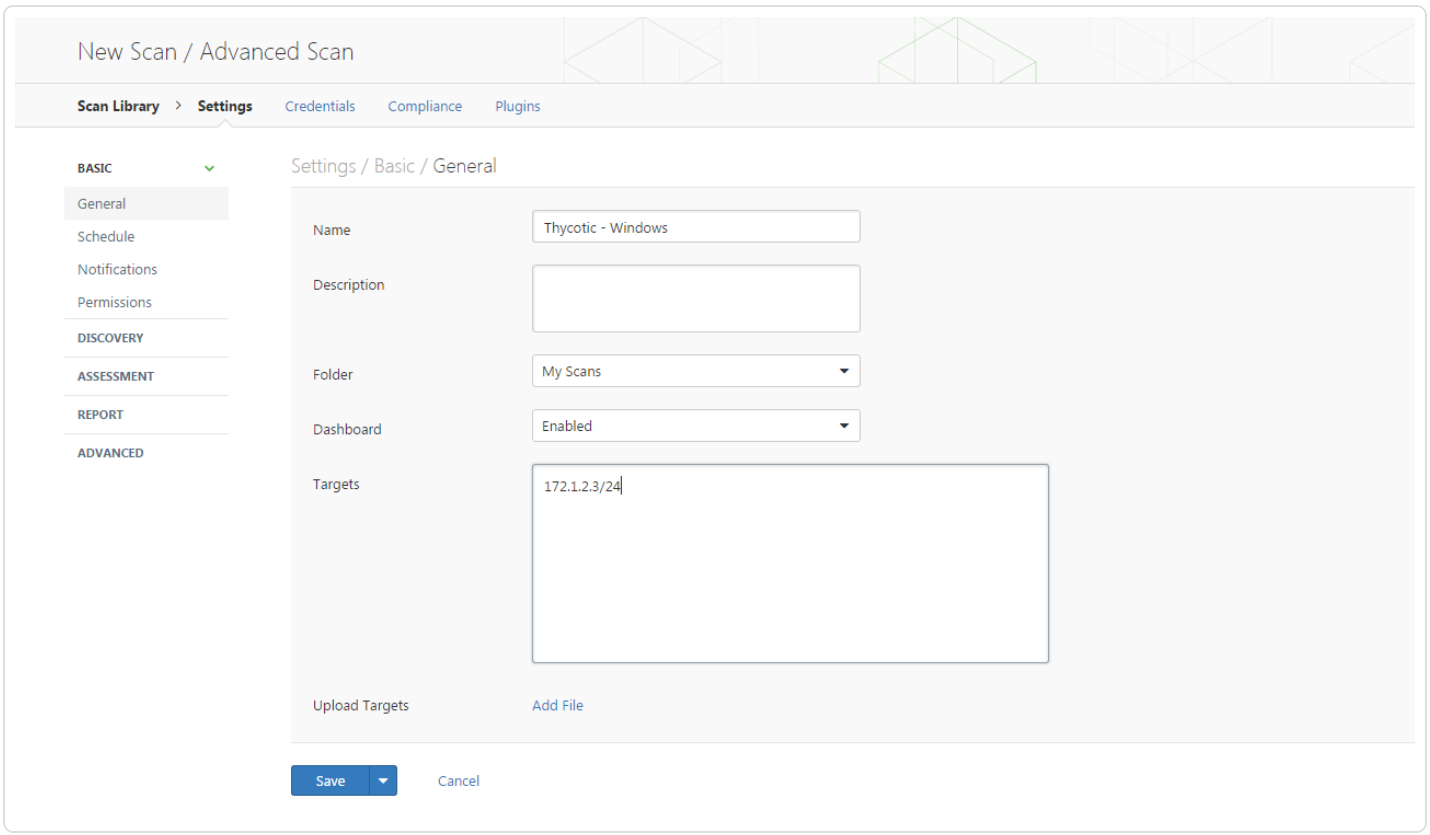
Log in to Nessus Manager and click the **+ New Scan** button to configure Nessus Manager for credentialed scans of Windows systems using Thycotic's password management solution.



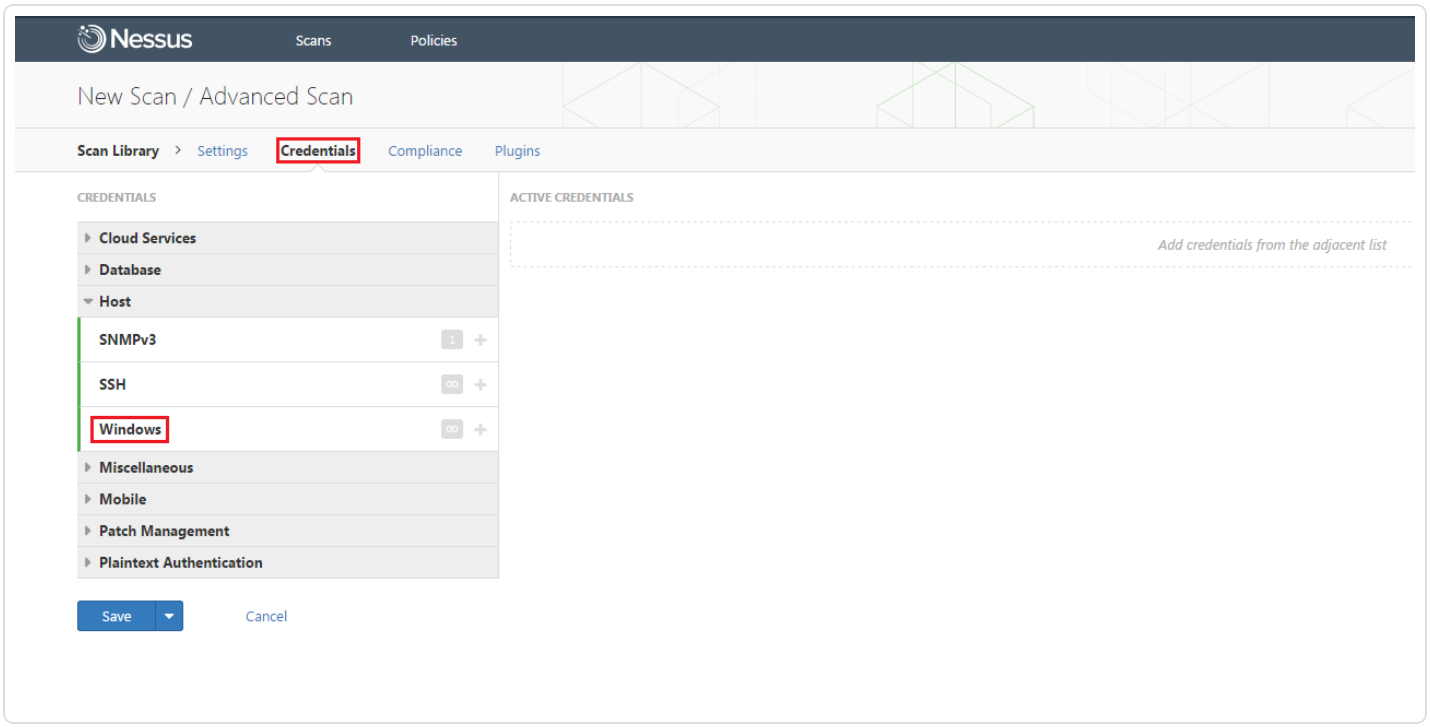
Select a "Scanner Template" for the scan type required for your scan. For demonstration purposes, the "Advanced Scan" template will be used.



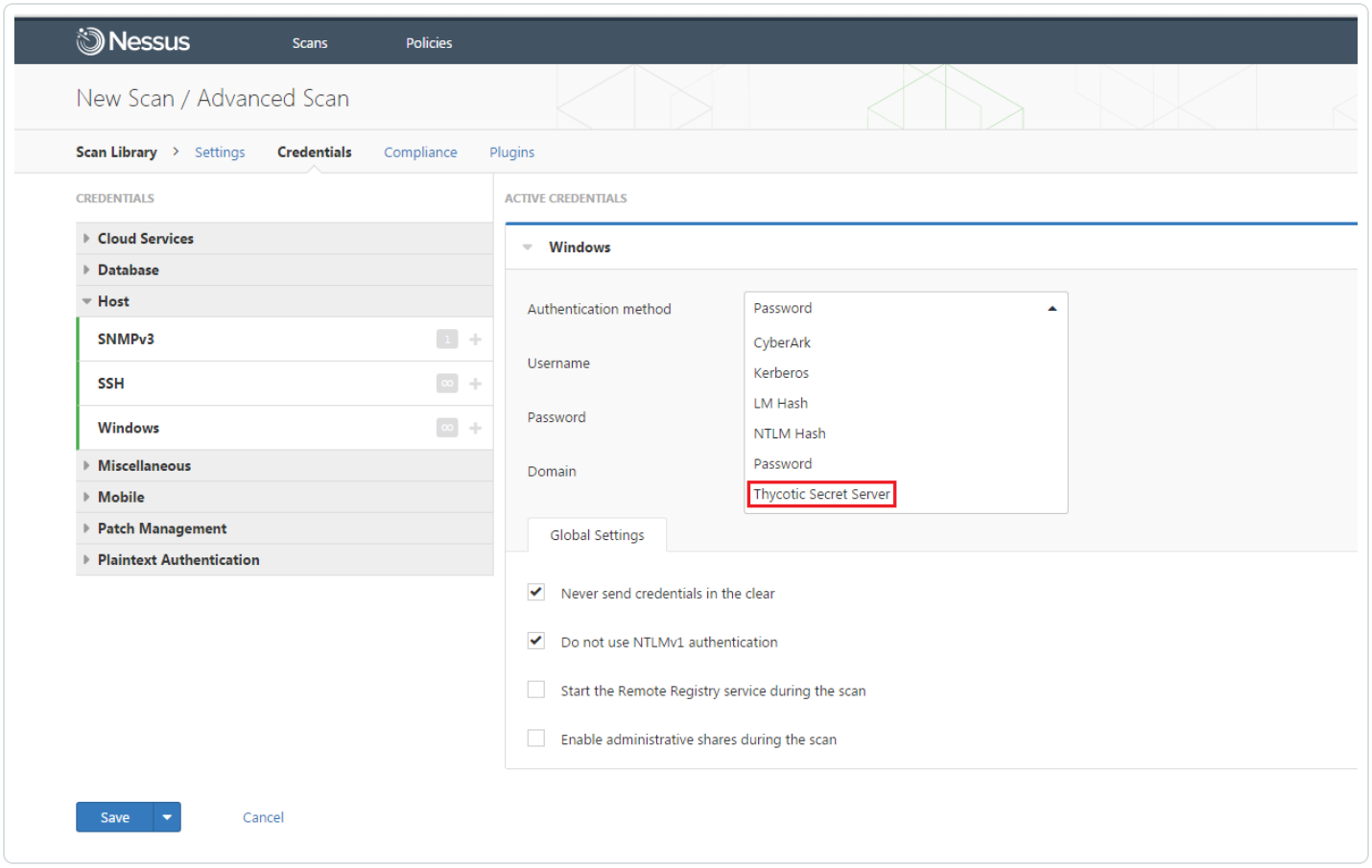
To configure a credentialed scan for Windows systems using Thycotic's password management solution, enter a descriptive **Name** and enter the IP address(es) or hostname(s) of the scan **Targets**.



Once the “Name” and “Targets” have been configured, click on **Credentials** and then select **Windows** from the left-hand menu.



Click the **Authentication method** drop-down and select **Thycotic Secret Server**.



Configure each field for Windows authentication. Refer to “Table 1 – Thycotic Windows Credentials” below for a description of each field. Once the Windows credentials have been configured, click **Save** to finalize the changes.

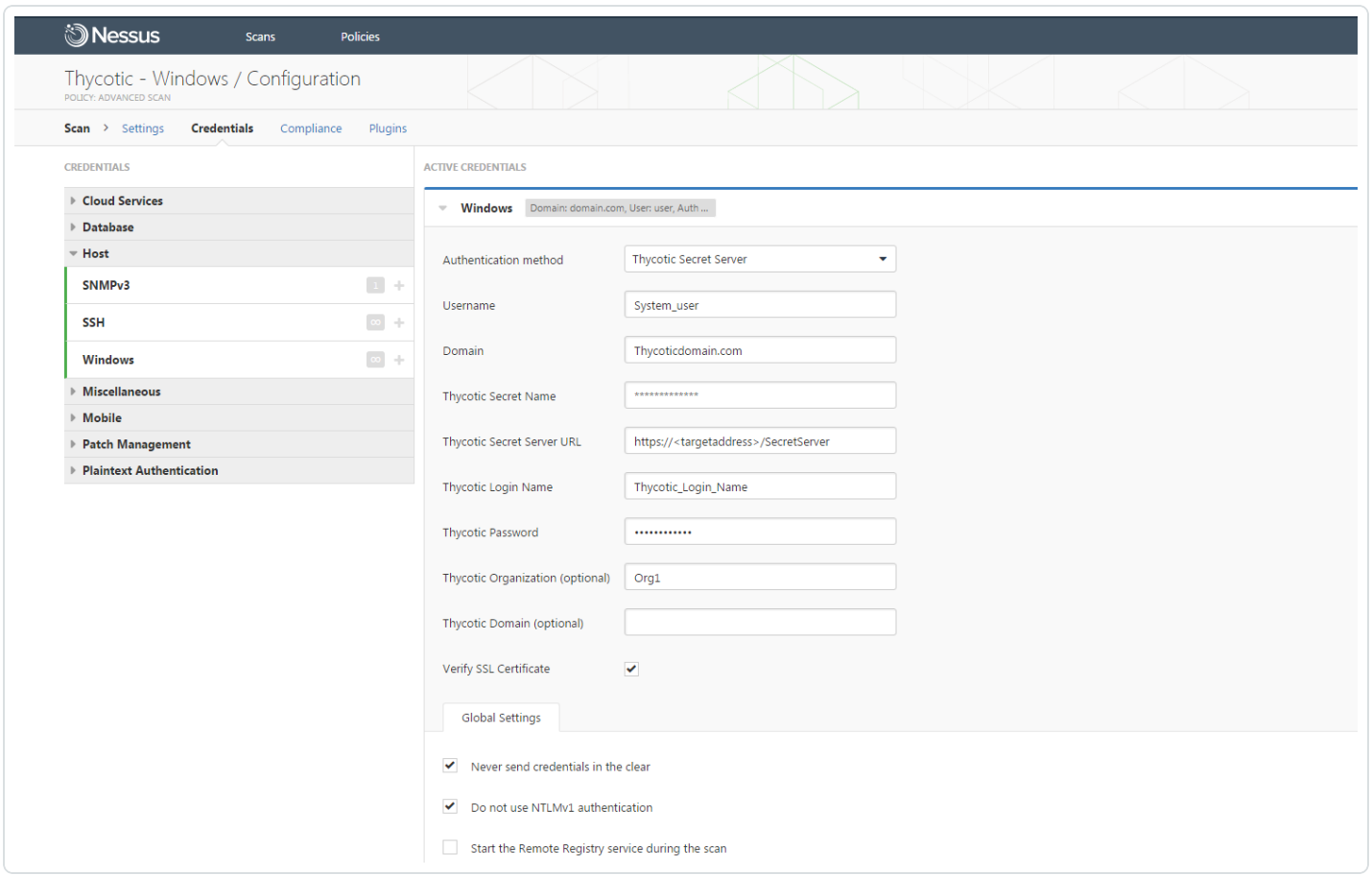
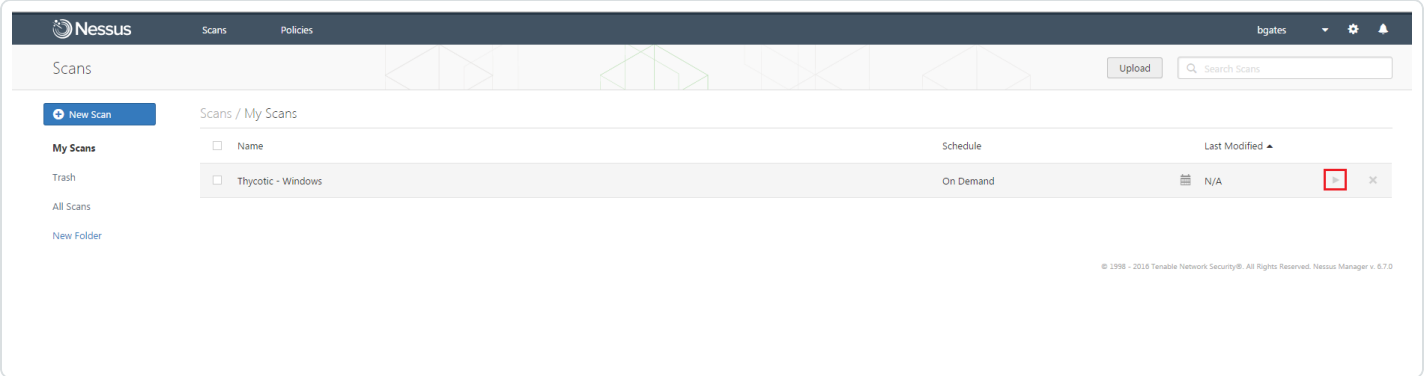


Table 1 - Thycotic Windows Credentials

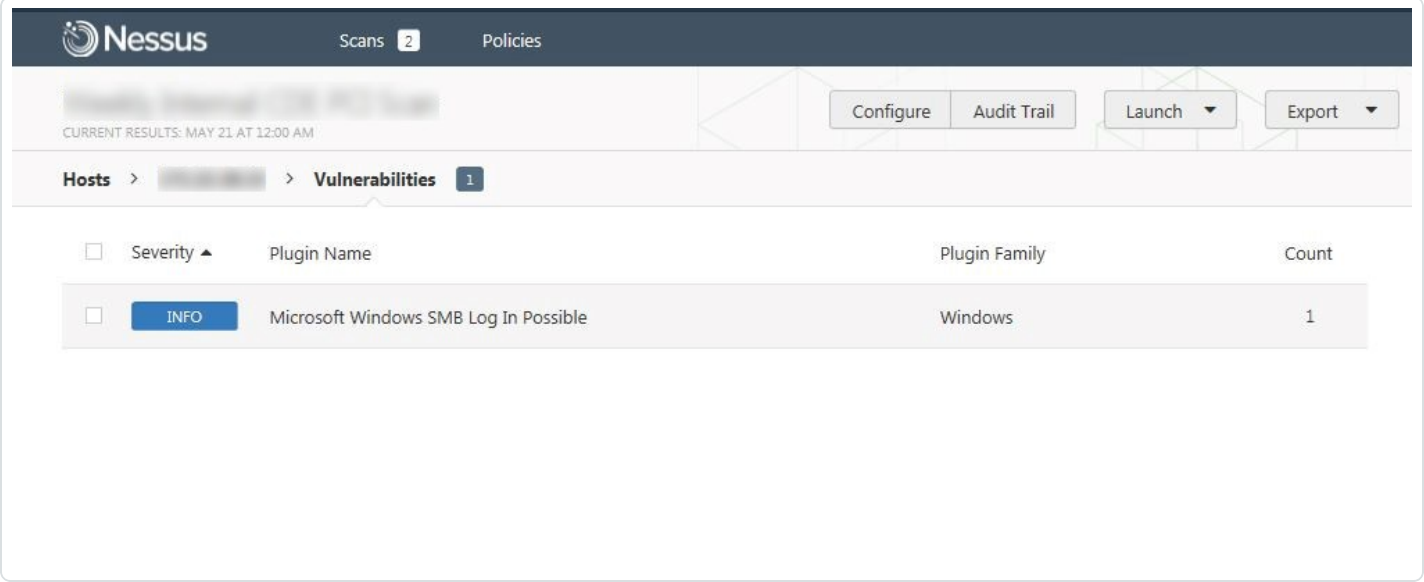
Option	Description
Username	The target system(s) username
Domain	This is an optional field if the above username is part of a domain
Thycotic Secret Name	The value (“Secret Name”) that the secret is stored as on the Thycotic server
Thycotic Secret Server URL	URL of the Thycotic Secret Server, which sets the transfer method, target, and target directory. This information can be found in Admin > Configuration > Application Settings > Secret Server URL on the Thycotic server.
Thycotic Login Name	The username used to authenticate to the Thycotic server
Thycotic Password	The password associated with the Thycotic Login Name

Thycotic Organization (optional)	This is an optional value used in cloud instances of Thycotic to define which organization should be queried
Thycotic Domain (optional)	This is an optional value set if the domain value is set for the Thycotic server
Verify SSL Certificate	Use the Custom_CA setup method to validate SSL server certificates

To verify the integration is working, click the **Launch button** to initiate an on-demand scan.



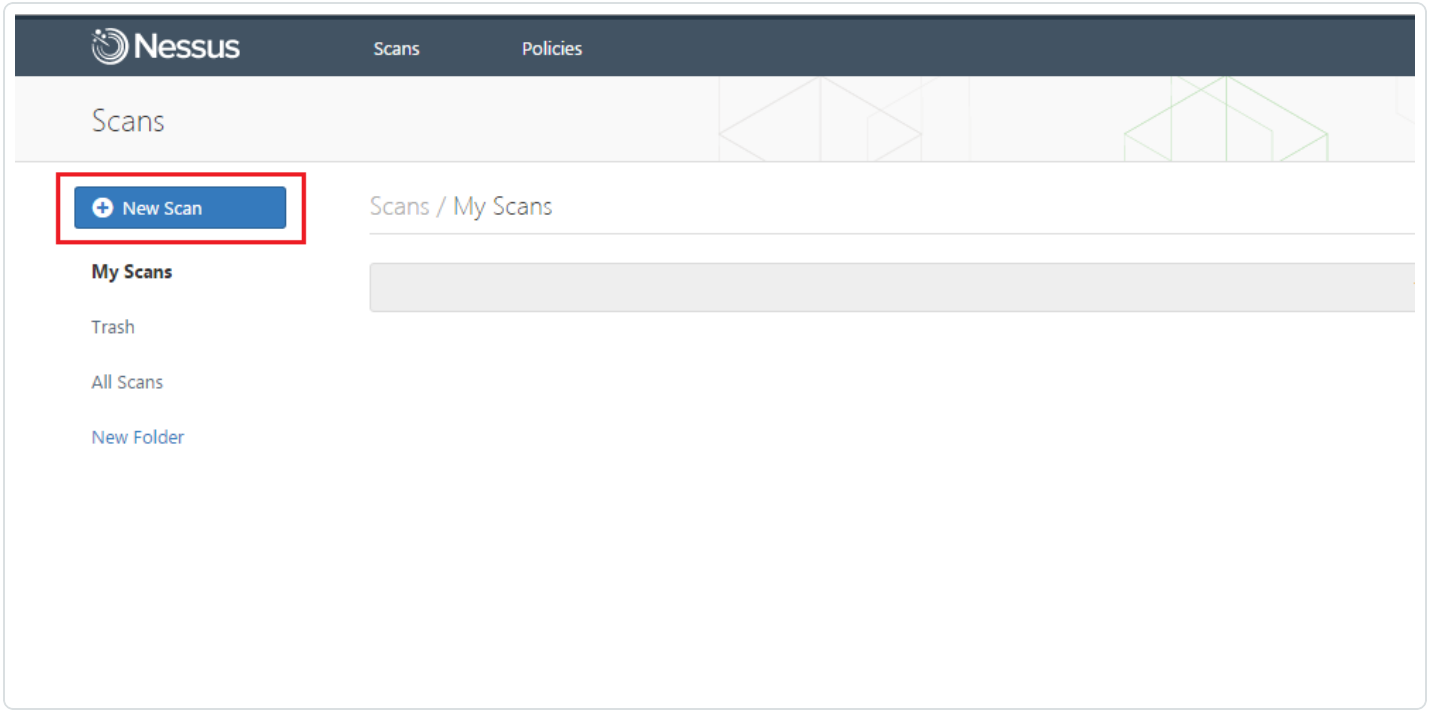
Once the scan has completed, select the completed scan and look for “Plugin ID 10394” (shown below), which validates that authentication was successful. If the authentication is not successful, refer to the “Troubleshooting” section of this document.



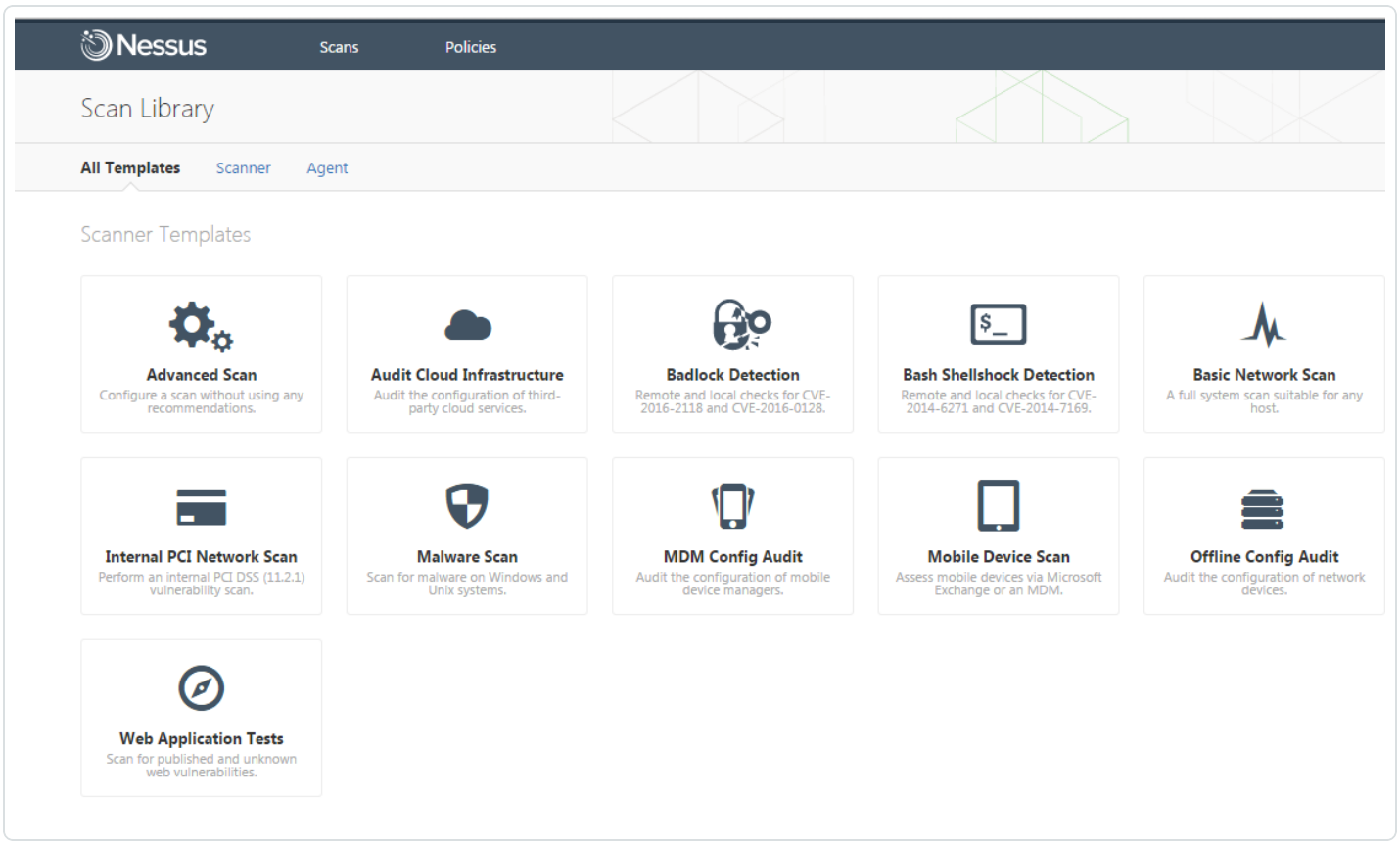
Configure Linux Credentials

Configuring Linux credentialed scans follows the same basic steps as Windows credentialed scans with only a few minor differences.

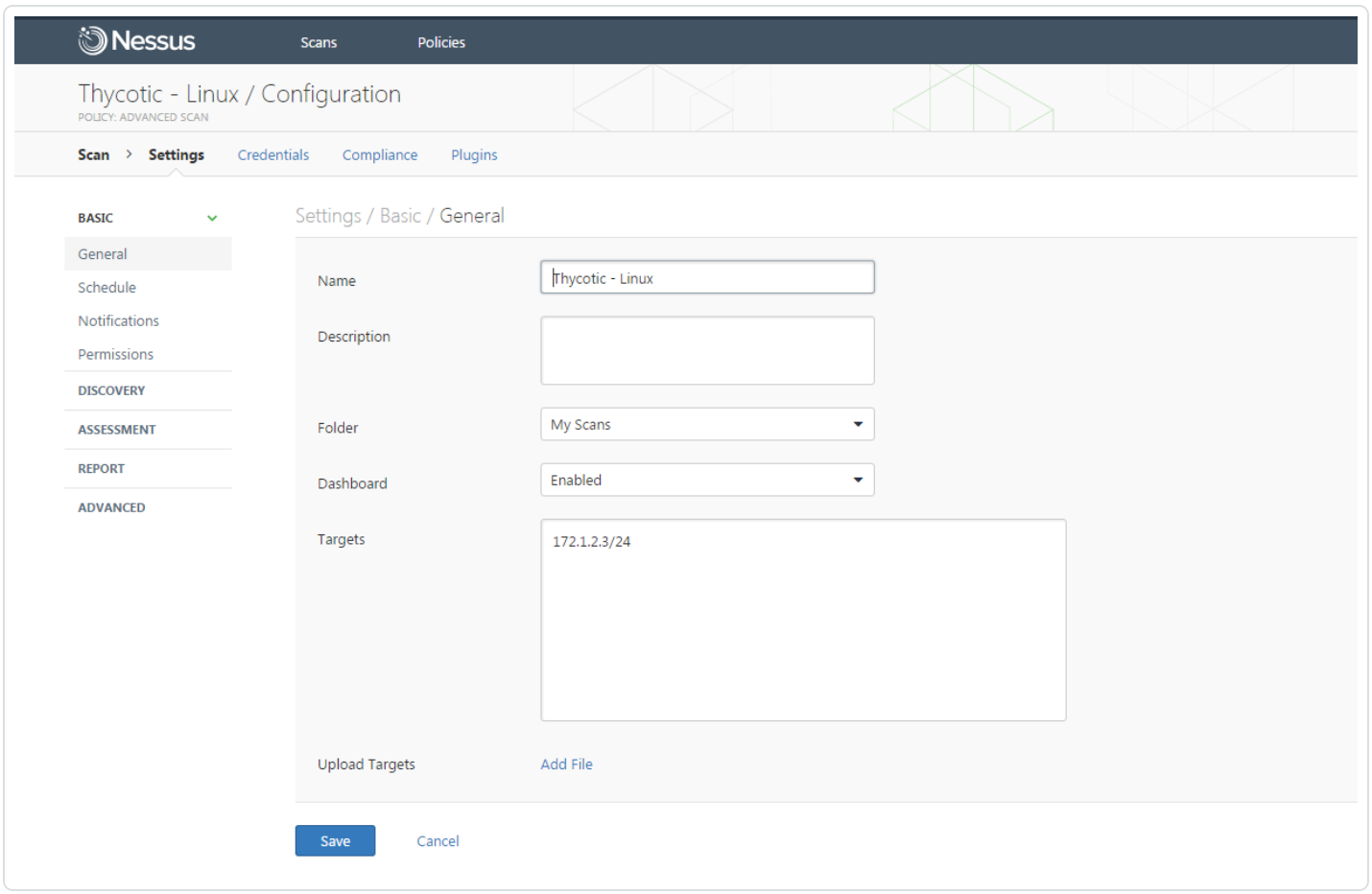
Log in to Nessus Manager and click the **+ New Scan** button to begin the Linux credentialed scan configuration.



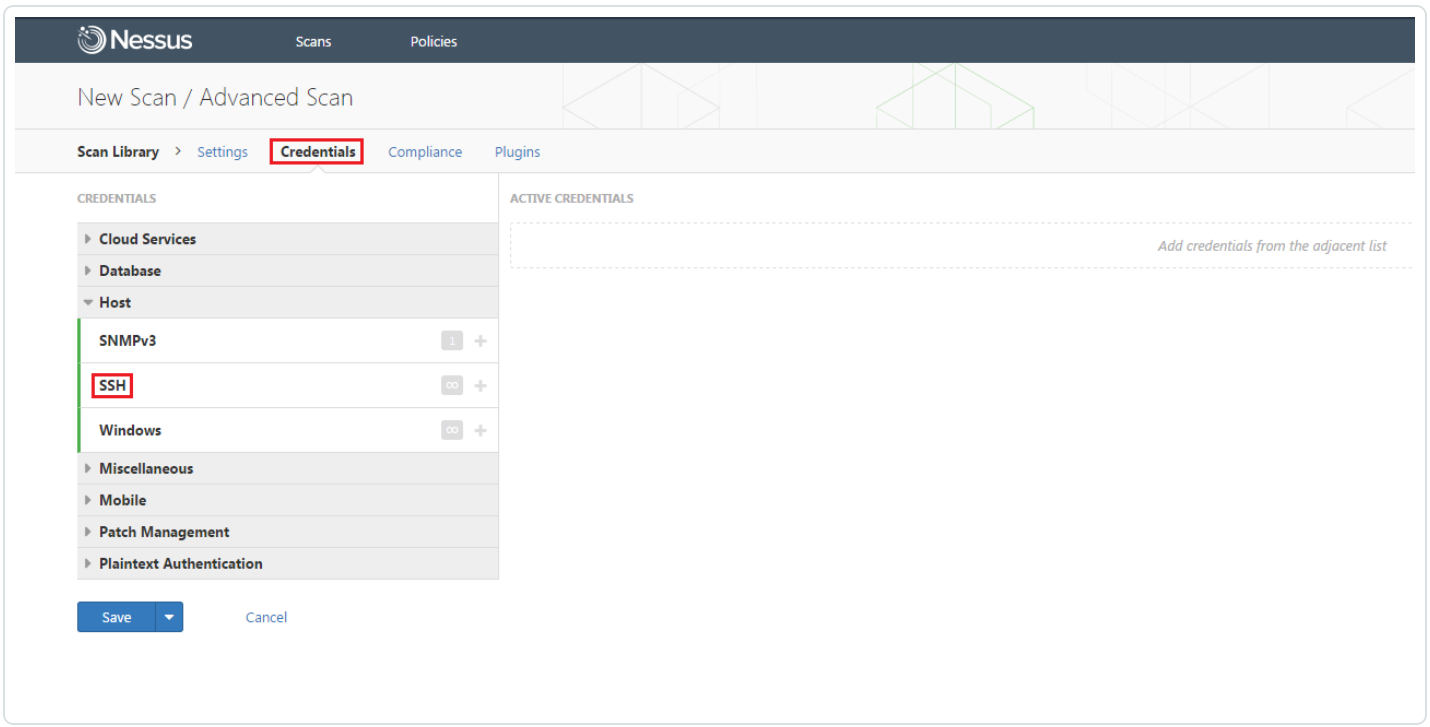
Select a “Scanner Template” for the scan type required for your scan. For demonstration purposes, the “Advanced Scan” template will be used.



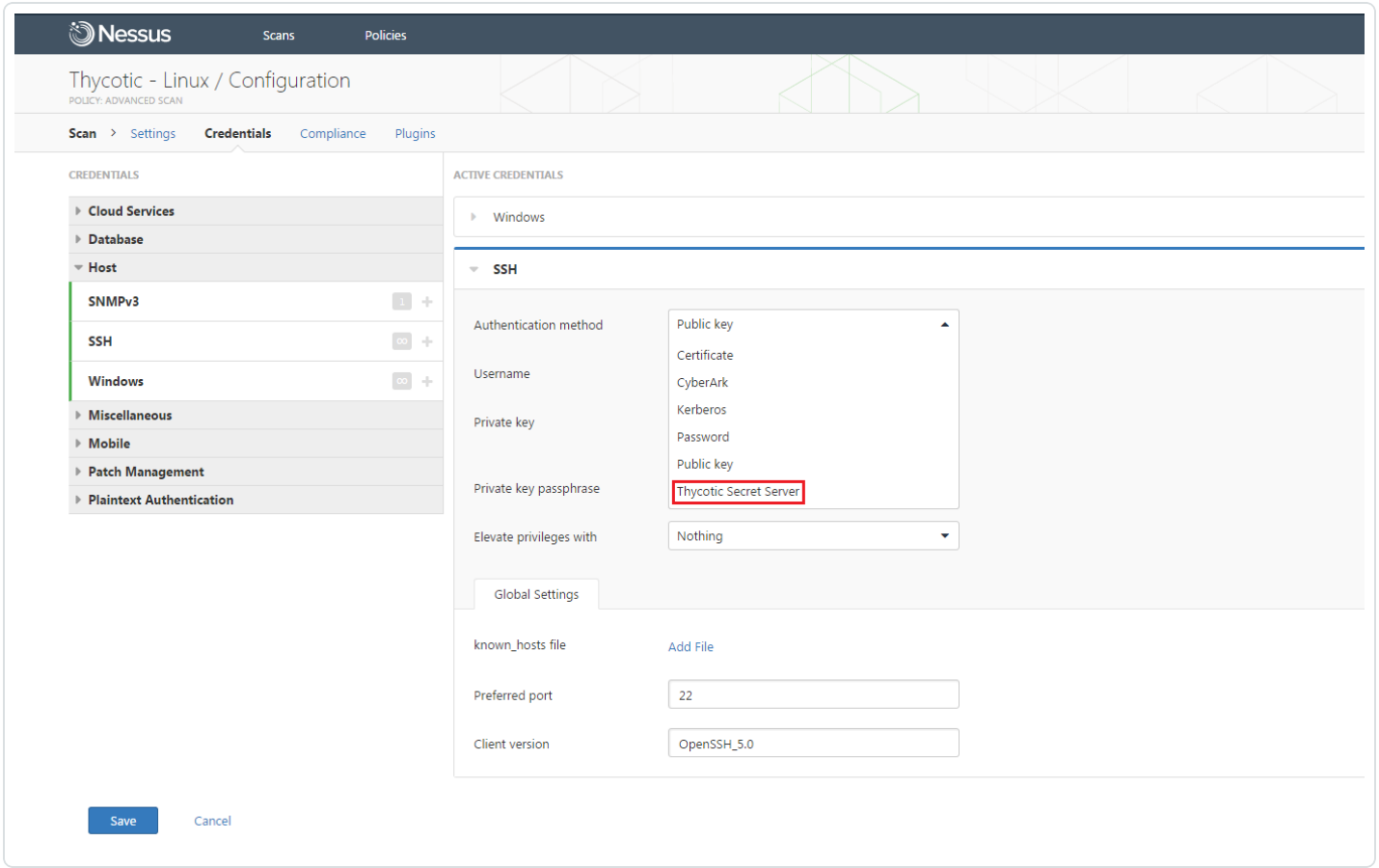
To configure a credentialed scan for Linux systems using Thycotic's password management solution, enter a descriptive **Name** and enter the IP address(es) or hostname(s) of the scan **Targets**.



Once the “Name” and “Targets” have been configured, click on **Credentials** and then select **SSH** from the left-hand menu.



In the **Authentication method** drop-down box, select **Thycotic Secret Server**.



Configure each field for SSH authentication. Refer to “Table 2 – Thycotic SSH Credentials” below for a description of each field. Once the SSH credentials have been configured, click **Save** to finalize the changes.

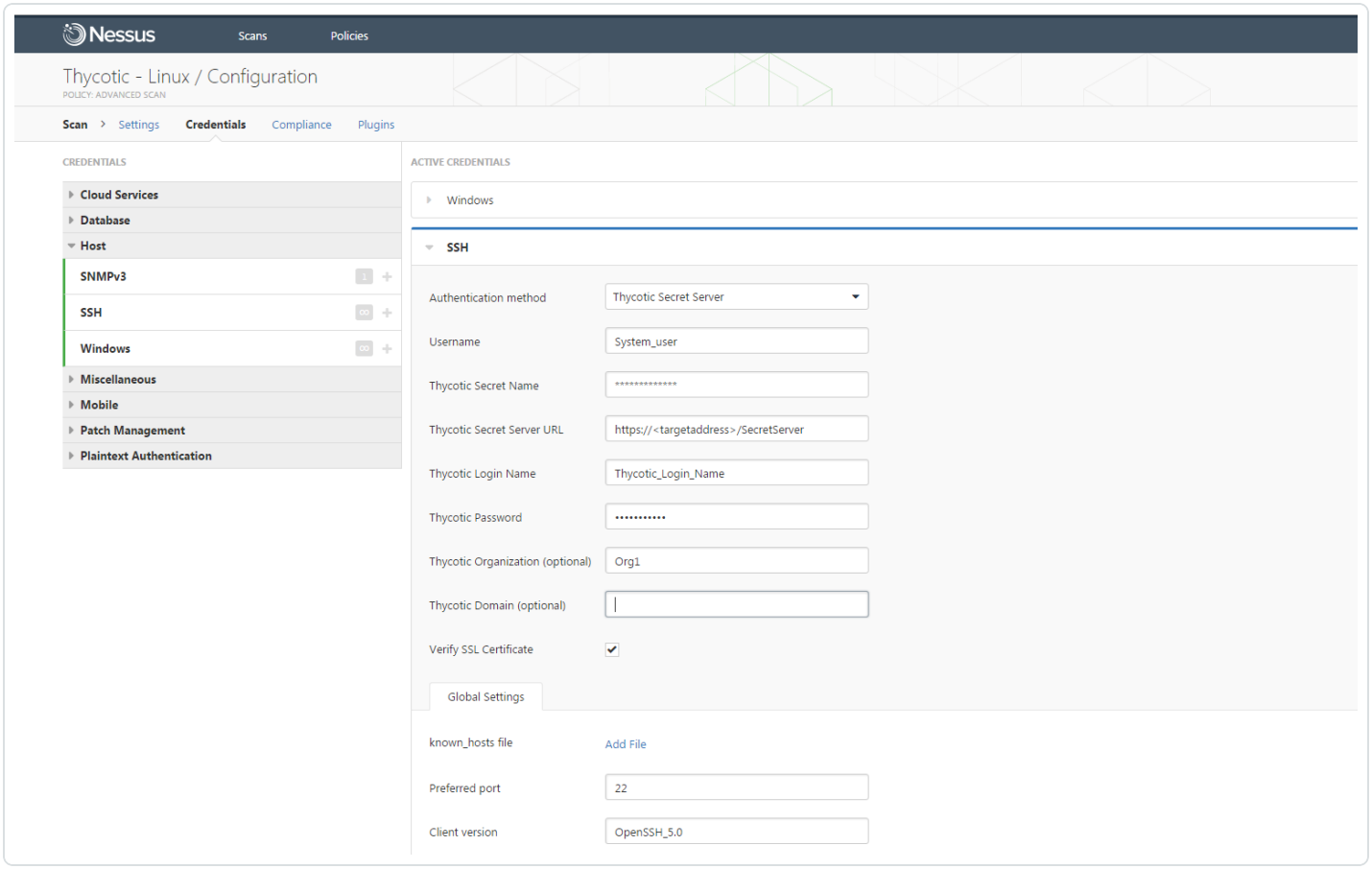
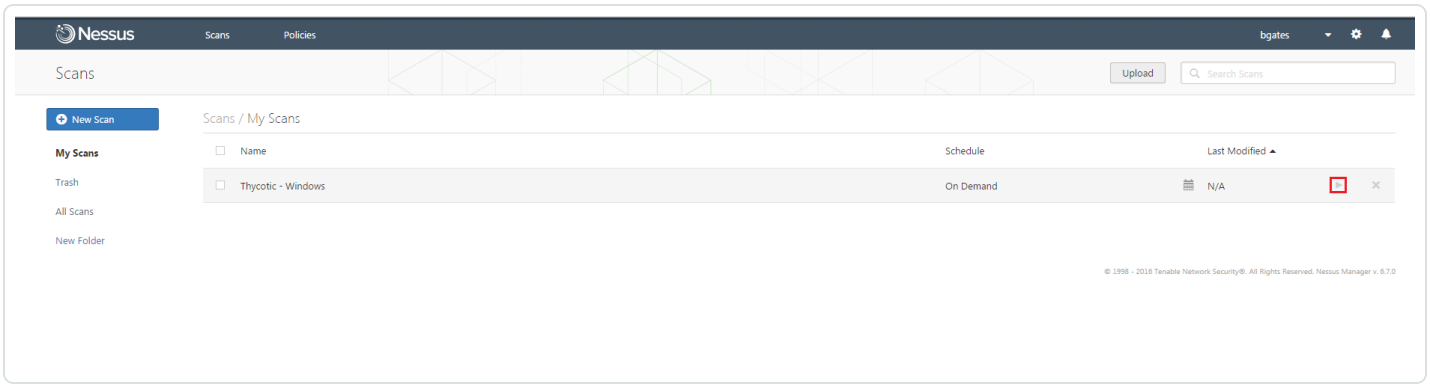


Table 2 – Thycotic SSH Credentials

Option	Description
Username	The username that is used to authenticate via ssh to the system.
Thycotic Secret Name	This is the value that the secret is stored as on the Thycotic server. It is referred to as the “Secret Name” on the Thycotic server.
Thycotic Secret Server URL	This is used to set the transfer method, target , and target directory for the scanner. The value can be found in **Admin > Configuration > Application Settings > Secret Server URL** on the Thycotic server. For example consider the following address

	https://pw.mydomain.com/SecretServer/. We will parse this to know that https defines it is a ssl connection, pw.mydomain.com is the target address, /SecretServer/ is the root directory.
Thycotic Login Name	The username used to authenticate to the Thycotic server.
Thycotic Password	The password associated with the **Thycotic Login Name**.
Thycotic Organization (optional)	This value is used in cloud instances of Thycotic to define which organization your query should hit.
Thycotic Domain (optional)	This is an optional value set if the domain value is set for the Thycotic server.
Use Private Key	Use key based authentication for SSH connections instead of a password.
Verify SSL Certificate	Verify if the SSL Certificate on the server is signed by a trusted CA.
Thycotic elevate privileges with	The privilege escalation method you want to use to increase the user's privileges after initial authentication. Multiple options for privilege escalation are supported, including su, su+sudo and sudo. Your selection determines the specific options you must configure. **Note:** For additional information about all of the supported privilege escalation types and their accompanying fields, see SSH in the Tenable Nessus User Guide.

To verify the integration is working, click the **Launch button** to initiate an on-demand scan.

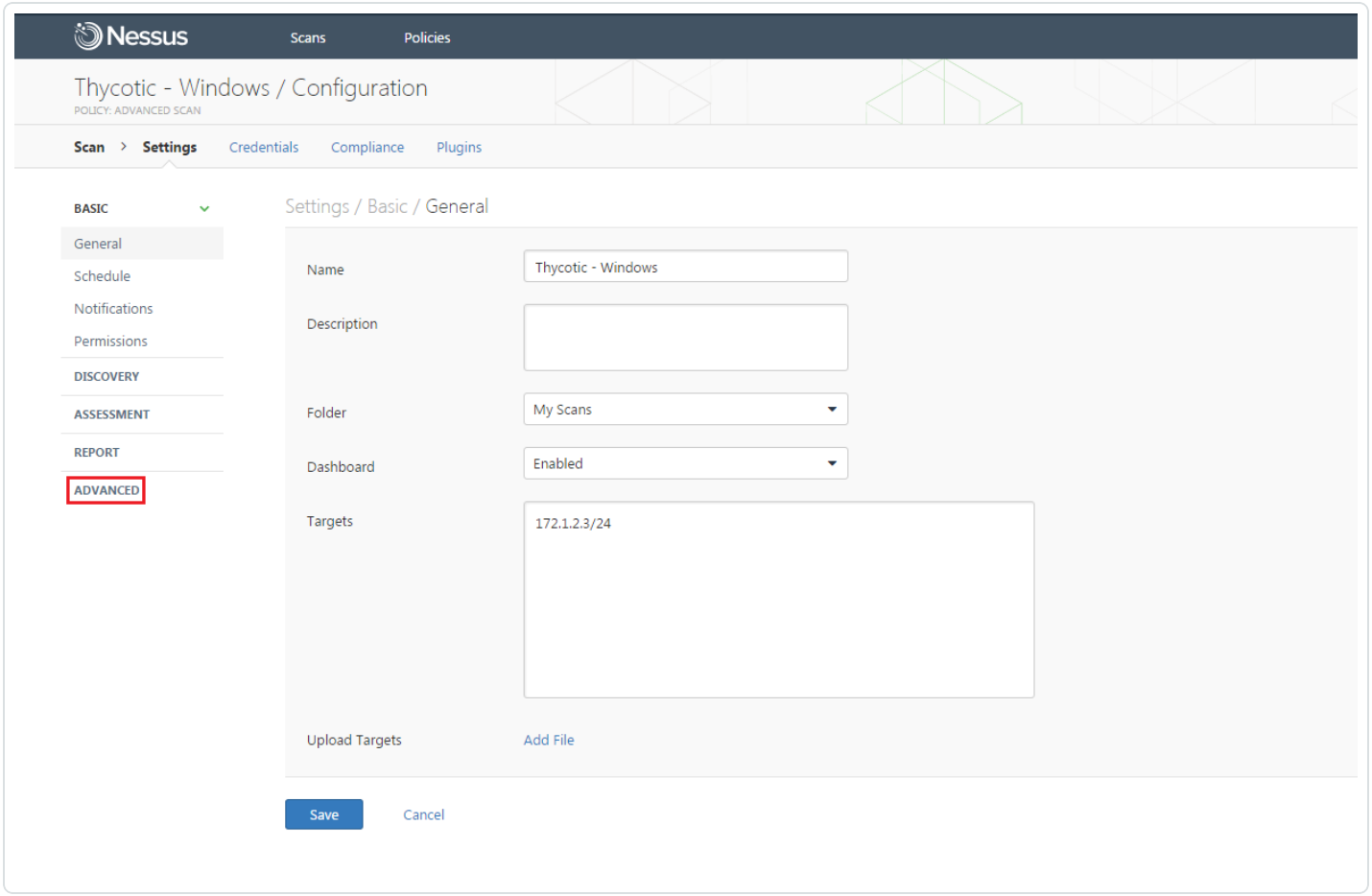


Once the scan has completed, select the completed scan and look for “Plugin ID 12634”, which validates that authentication was successful. If the authentication is not successful, refer to the “Troubleshooting” section of this document.

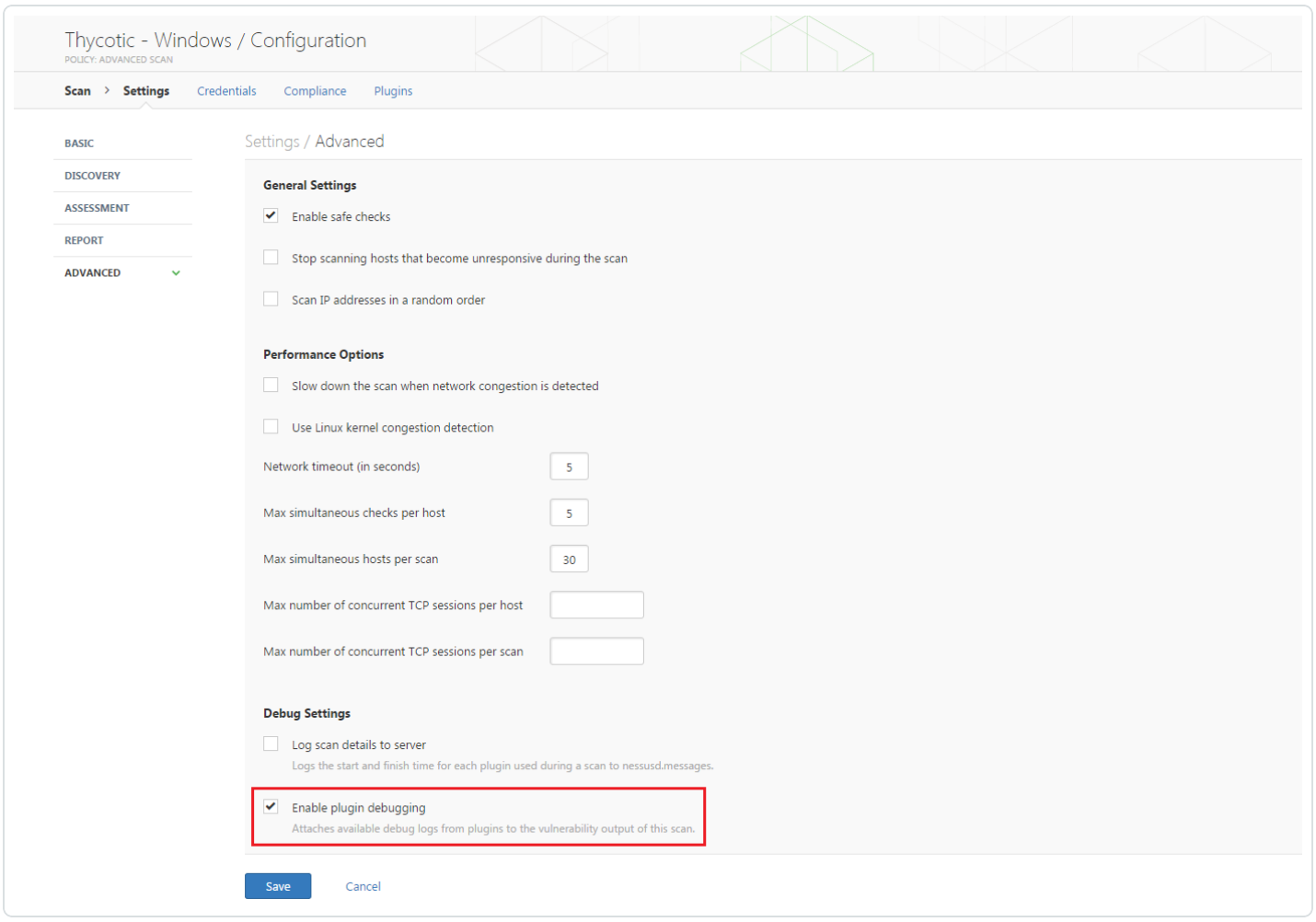
Troubleshooting

Nessus Manager 6.7 offers the ability to enable plugin debugging, which will allow for easier troubleshooting and resolution should issues arise. Enabling plugin debugging attaches available debug logs from plugins to the vulnerability output of the scan it is enabled on.

To enable plugin debugging, navigate to scan **Settings** and click **Advanced** in the left-hand menu.



Select the **Enable plugin debugging** checkbox and click **Save** to finalize the change.


Thycotic - Windows / Configuration
POLICY: ADVANCED SCAN
Scan
Settings
Credentials
Compliance
Plugins
BASIC
DISCOVERY
ASSESSMENT
REPORT
ADVANCED
Settings / Advanced
General Settings
Enable safe checks
Stop scanning hosts that become unresponsive during the scan
Scan IP addresses in a random order
Performance Options
Slow down the scan when network congestion is detected
Use Linux kernel congestion detection
Network timeout (in seconds)
5
Max simultaneous checks per host
5
Max simultaneous hosts per scan
30
Max number of concurrent TCP sessions per host
Max number of concurrent TCP sessions per scan
Debug Settings
Log scan details to server
Logs the start and finish time for each plugin used during a scan to nessusd.messages.
Enable plugin debugging
Attaches available debug logs from plugins to the vulnerability output of this scan.
Save
Cancel