Symantec VIP Quick Start Guide

Windows Server authentication

Version 1.1

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Introduction

Symantec’s VIP authentication offers multi-factor authentication to a variety of applications including the Windows logon screen for Windows servers and other fixed Windows systems. Whether logging on directly at the console or across the network via Remote Desktop, Symantec VIP can secure session access with multi-factor authentication.

Symantec’s integration flexibly offers security for a variety of situations: for all users, for those with credentials, for those in a particular group, and more. This quick start guide summarizes the options available to you.
Design and topology considerations

The Symantec VIP plugin for Microsoft Credential Provider was designed to protect only *internal* resources. The plugin is not designed for logging in to Windows workstations and laptops across the Internet or other untrusted networks.

Below is a typical architecture:

The Windows system needs to be able to contact VIP Enterprise Gateway across the local network. From there, communication to Active Directory is required for some configurations. For all configurations, VIP Enterprise Gateway must be able to contact the Symantec VIP service.
The Symantec VIP plugin for Microsoft Credential Provider utilizes three parameters to control different levels of protection. These are:

- ChallengeLocalUser
- no2fa
- EnablePartial2FA

Together, these can describe multiple protection levels, five of which are outlined below:

- **All users** (not recommended)
- **All Active Directory users** (default and recommended)
- **All Active Directory users, with some manual exceptions**
- **Only Active Directory users with a VIP credential**
- **Only some Active Directory users**

The above five protection levels will be described in this quick start guide, though other combinations are possible.
Configuration Summary

The below configuration descriptions rely upon an initial installation and configuration on the target server and then a subsequent modification of the Windows Registry to customize the configuration. For full details around each setting and general deployment considerations, see the Symantec VIP Integration Guide for Microsoft Credential Provider for details.

Using PUSH to login to the server

The Symantec VIP plugin for Microsoft Credential Provider supports a PUSH login experience when logging in to the target server. In order for the plugin to work correctly, it needs to wait an appropriate amount of time for the PUSH request to reach the user and then for the user to take action. This change is made in two places: the target server’s Time Out registry setting and VIP Enterprise Gateway’s validation server Timeout configuration. The initial suggested value for PUSH timers is 60 seconds – these are depicted below.

Note that CPCconfig.txt can also be used to set these values at initial installation on the target server.

Target server’s registry:

- Retries: REG_SZ, 5
- Time Out: REG_SZ, 60
- Validation Server: REG_SZ, 10.120.0.201:10144:4058

VIP Enterprise Gateway’s Validation Server:

VIP Manager showing the PUSH feature enabled:

<table>
<thead>
<tr>
<th>Mobile Push Authentication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enable Mobile Push:</td>
</tr>
<tr>
<td>Enable both 1st and 2nd factor authentication on mobile:</td>
</tr>
</tbody>
</table>

*Remote Access Service Name/URL: Remote Access Service Name
*VIP Authentication Timeout: 60 seconds
Multifactor authentication for All Users

DANGER: It is possible to lock yourself out of a server using this method!

For this configuration, each target server must have the registry key ChallengeLocalUser set to 1, as in:

HKLM\Software\Symantec\CP\Options\ChallengeLocalUser

If the associated VIP Enterprise Gateway validation server also checks for users against Active Directory, then the following Enterprise Gateway flag must be additionally set (in radserver.conf):

skipLocalUsersForUserStoreSearch

This value is normally set to “False” and must be changed to “True”.

radserver.conf is typically located here on VIP Enterprise Gateway running on Windows:

C:\Program Files (x86)\Symantec\VIP_Enterprise_Gateway\Validation\servers\myValServer\conf\radserver.conf

See the “Local User Authentication with Symantec VIP Credential Provider” in the Symantec VIP Integration Guide for Microsoft Credential Provider.

In this configuration, it may be beneficial to configure some local users in the “no2fa” local group in order to continue to allow access to this server. Without this, in a lockout scenario remotely editing the registry of this server or performing local maintenance in order to remove or modify that registry value would be required.

Multifactor authentication for All Active Directory Users

No special configuration is needed. The default values are listed below, for reference:

Group “no2fa”: does not exist or empty (either as a local group or an Active Directory group)
**Windows Server authentication**

**Registry:** HKLM\SOFTWARE\Symantec\CP:

- **LoginDomainFieldId (DWORD):** 9
- **Retries (String):** 5
- **Time Out (String):** 10
- **Validation Server (String):** VIP-EG-IP:PORT:camouflaged_secret

**Registry:** HKLM\SOFTWARE\Symantec\CP\Options:

- **AllowedCP (String):** {GUID}:{GUID}
- **ChallengeLocalUsers (String):** 0
- **EnablePartial2FA (String):** 0
- **RDPShowConsole (String):** 0
- **Strip Domain (String):** 1
VIP Enterprise Gateway setting: skipLocalUsersForUserStoreSearch: false

178 SecondFactorModule.pushChallengeTimeout = null
179 SecondFactorModule.pushChallengeMessage = null
180 SecondFactorModule.pushMessage = Remote Access Service Name
181 SecondFactorModule.pushEnableLockoutProtection = false
182 SecondFactorModule.skipLocalUsersForUserStoreSearch = false
183 SecondFactorModule.pollingInterval = 2
184 # End VIPEGPROXYSecondFactorModule section

radserver.conf is typically located here on VIP Enterprise Gateway running on Windows:

C:\Program Files (x86)\Symantec\VIP_Enterprise_Gateway\Validation\servers\myValServer\config\radserver.conf
Multifactor authentication for All Active Directory Users, with some exceptions

For this configuration, each target server must have a group created called “no2fa”. Each Active Directory user that bypasses Symantec VIP to logon to this server should be added to this group. Note that this can either be a local group or a group in Active Directory. In either case, changes made to the group affect the logon behavior instantly (the target server does not need to be rebooted). In the case of an Active Directory group, this presumes that the particular domain controller queries has received any appropriate synchronization.

Multifactor authentication for All Active Directory users with a VIP credential

For this configuration, each target server must have a registry key added called “EnablePartial2FA”. It is added at this location in the Windows Registry:

HKLM\Software\Symantec\CP\Options\EnablePartial2FA

EnablePartial2FA is of type String with a value of 1:

![Registry Key Path]

In this configuration, a user without a VIP credential will not be prompted for two factor authentication: username and password will be sufficient to login (provided that user has permission to logon to this server).
Multifactor authentication for only some users

For this configuration, each target server must have a registry key added called “EnablePartial2FA”. It is added at this location in the Windows Registry on the target server:

HKLM\Software\Symantec\CP\Options\EnablePartial2FA

EnablePartial2FA is of type String with a value of 2.

Additionally, this requires configuration on VIP Enterprise Gateway’s User Store and Validation Server.

Example VIP Enterprise Gateway User Store configuration:

User Store

The following User Stores are available for use with VIP Enterprise Gateway. You can also add a new one:

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>JustHR</td>
<td>LDAP</td>
</tr>
<tr>
<td>JustENGR</td>
<td>LDAP</td>
</tr>
<tr>
<td>AllUsers</td>
<td>LDAP</td>
</tr>
</tbody>
</table>

Example VIP Enterprise Gateway Validation Server configuration:

The User Store must select the users that require 2FA. For best practice, restrict logon to the target server to these users so that:

1) Only the select users may logon to that server, and
2) All approved users require 2FA in order to logon.
3) Any exceptions to this are carefully documented and secured.
Third party considerations

Microsoft Credential Provider is utilized during local login, remote desktop login, and unlocking an existing session. Microsoft Credential Provider is not utilized for remote file share access, permissions escalation in Windows, or authenticating via Integrated Windows Authentication (IWA), so VIP cannot secure those resources.

The Credential Provider architecture offers a flexible and extensible method to add authentication to Windows. Some systems make use of other Credential Provider plugins and it is necessary for VIP to interwork with them properly – especially in technology transition scenarios. The Integration Guide for Microsoft Credential Provider covers interworking alongside other plugins in a section title “Allowing Third-party Credential Providers along-with Symantec Credential Provider” in the Symantec VIP Integration Guide for Microsoft Credential Provider guide.
Troubleshooting tips

The Symantec VIP plugin for Microsoft Credential Provider has a number of settings that need to be coordinated on the target server in concert with Windows permissions, the VIP Enterprise Gateway, and more. Occasionally, issues may surface while initially working on this integration. This section offers some general reminders only.

General reminders

- VIP Enterprise Gateway requires that the Validation Server operate in “UserID – Security code” mode.
- A camouflaged password is inserted into CPConfig.txt and the actual password is typed in to VIP Enterprise Gateway.
- After initial installation and any registry key change, a reboot is necessary for the settings to “sink in”
- It takes humans a certain amount of time to respond to a PUSH

For further assistance, please contact:

Symantec Technical Support

https://my.symantec.com

Phone Support:

https://support.symantec.com/en_US/contact-support.html
Appendix A: Additional Resources and Guides

Symantec VIP Quick Start Guides
Symantec VIP Quick Start Guide: PUSH
Symantec VIP Documentation
About Symantec

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