

HV Manager

Getting started Guide

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Summary

HV Manager is a web interface for Hyper-V servers. It provides secure web access and claim-based authentication for windows users and groups. Suitable for small or large organizations, and cloud service providers.

The HV Manager has the following features:

- Manage multiple Hyper-V servers
- Web access via encrypted HTTPS connection
- Connect virtual machines via RDP WEB console
- Web Forms role-based authentication
- Claims based authentication for Windows users and groups
- Assign Virtual Machines to users and groups
- Multi-Tenancy Based Access
- Users Audit and app event logs

Installation and Configuration

System requirements

Hardware

CPU: x64 or x86 processor

Memory: min 1 GB RAM

Hard Disk Space: 12 MB for installation files and sufficient disk space for HV Manager database

Software

HV Manager can be installed on the following OSs:

- Windows Server 2016 includes Nano and Core installations
- Windows Server 2012 R2
- Windows 10 (64-bit only)

Supported Hyper-V Server platforms:

- Windows Server 2016
- Windows Server 2012 R2
- Windows 10 (with Hyper-V feature installed)

Hyper-V Server configuration for remote management:

- Windows Management Instrumentation (WMI) enabled

Supported browsers for HV Manager Web interface:

- Chrome
- Firefox
- Internet Explorer
- Edge

Ports and protocols

WMI default connection ports:

- TCP: 135
- TCP: 445

RDP Connection Ports:

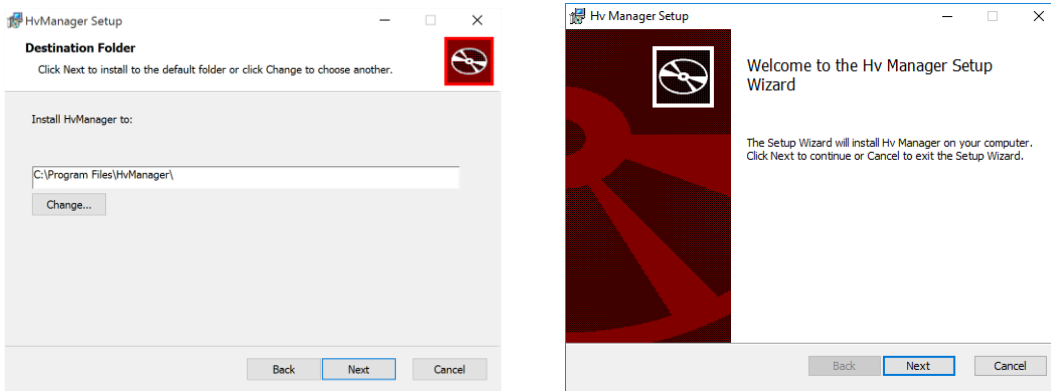
- TCP: 2179 (Hyper-V Console)
- TCP: 3389

Default HV Manager web interface Port:

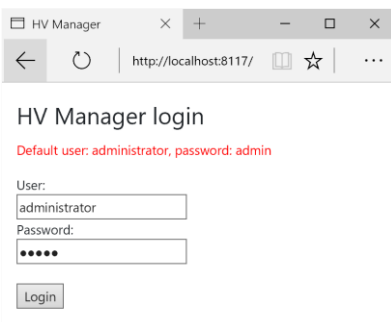
- TCP: 8117

Installation and Quick Start

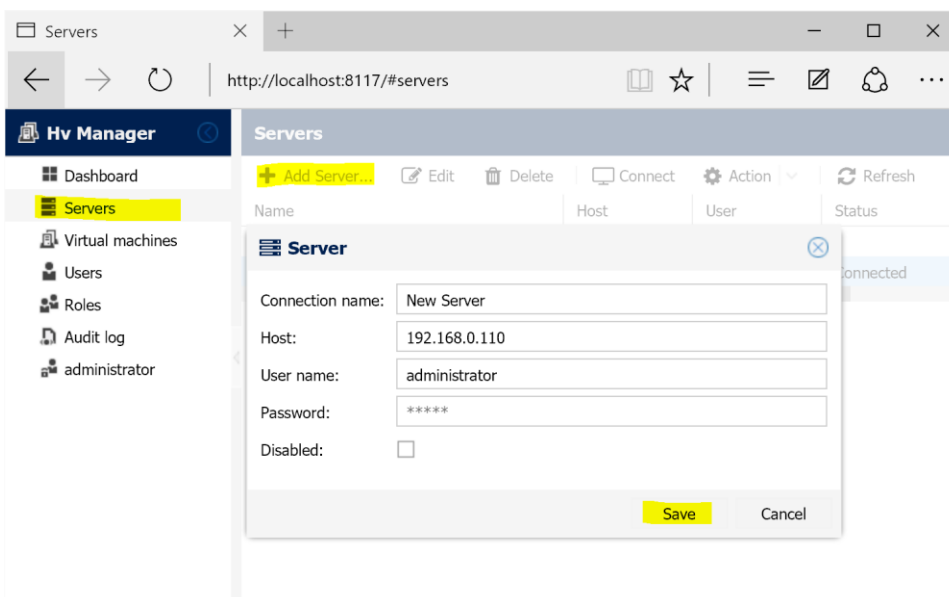
To install HV Manager, download the latest version from <https://www.apreltech.com/HvManager>. Run the HvManager_xxx.msi installation file and complete installation steps.



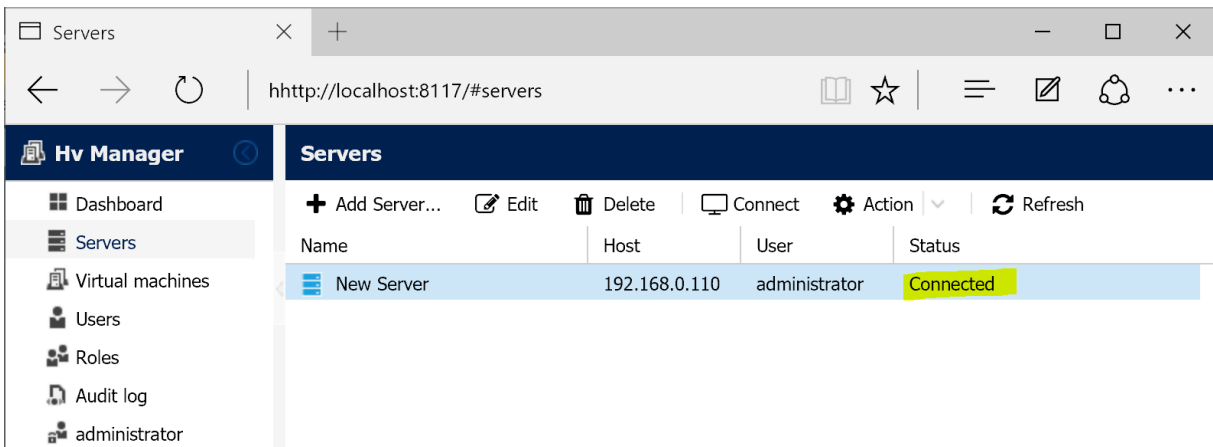
On install completion the default browser will be started with address <http://localhost:8117/>. Enter the default user name 'administrator' and password 'admin' to login.



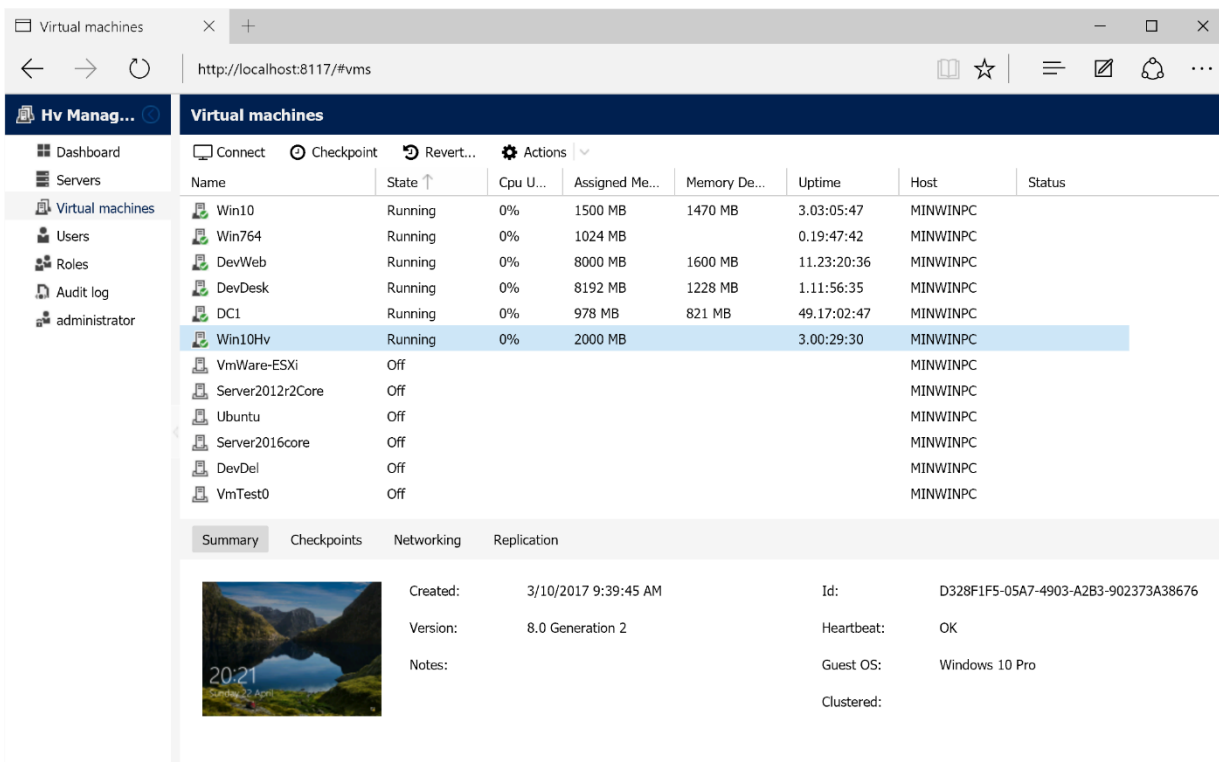
Click on the Servers in the navigation menu on the right side. Then click Add Server. Specify the Hyper-V host address and credentials to connect. Click Save to start the connection.



The connection status will be displayed as 'Connected' or an error message will be displayed on connection failure.



Click Virtual machines on the Navigation panel. The Virtual machines list will be displayed.



Configuration

HV Manager installation automatically creates an instance of the web server that is assessible from any IP address of the PC on port 8117 (<http://+:8117/>). To configure HV Manager instances, use the HV Manager configuration command-line tool hvm.exe.

Hvm Command-line tool

Hvm.exe is a command-line tool that allows you to configure the HV Manager instances. You can open the hvm tool as following two ways:

- Run the HVManager shortcut on the Desktop
- Run the "%Program Files%\HvManager\Hvm.exe" from the Administrator Windows Command Prompt.

```
Select Administrator: Hv Manager 3
HV Manager v3.0.9(evaluation) http://hv-manager.org
Instances
-----
Name:      Hvm
State:     Running
Url:       http://+:8117/
User:      .\HvmService
Auth:      WEBFORM
DbPath:    C:\Users\HvmService\AppData\Local\HvManager\Hvm\hvm.db
Use hvm ? to view available commands.
C:\Program Files\HvManager>
```

The following commands are available:

Command	Description
view-instances	Displays a list of existing instances.
add-instance	Adds a new instance of HV Manager with specified parameters. Usage: add-instance -name -url [-user] [-password] [-auth] [-admin] [-dbpath]
update-instance	Updates an instance with specified parameters. Usage: update-instance -name [-url] [-user] [-password] [-auth] [-admin] [-dbpath]
delete-instance	Deletes an instance. Usage: delete-instance -name
start-instance	Starts an instance. Usage: start-instance -name
stop-instance	Stops an instance. Usage: stop-instance -name
restart-instance	Restarts an instance. Usage: restart-instance -name

Command options:

Option	Description
-name	Instance name. Short unique name to identify the instance.
-url	URL Template. Example: http://+:8117/ , https://10.53.0.1:433/
-user	User account name to run the Web Servicer. If not specified, default account is: <code>.\HvmService</code>
-password	User account password.
-auth	Authentication Scheme: WEBFORM (default) or NTLM
-admin	Administrator user name: <code>Domain\User</code> . This option is valid only if <code>-auth</code> option is set to NTLM.
-dbpath	Database file path. If not specified, default path is: <code>%LOCALAPPDATA%\HvManager\[instanceName]\hvm.db</code>

Note: *option value that contains spaces should be quoted.*

Examples of use

The following command adds a new instance with name `hvm1`, running with default user account `.\HvmService` and Windows (NTLM) authentication. Administrator user is `Domain\Administrator`

```
add-instance -name hvm1 -url http://+:8117/ -auth NTLM -admin Domain\Administrator
```

Authentication Schemes

HV Manager supports two Authentication Schemes: Web Forms and Microsoft NTLM.

NTLM Authentication is the best type of authentication to use in intranet environments using Windows. An enterprise user can use their Windows Domain credentials to access HV Manager web interface. Also, you can link Active Directory Groups with HVManager roles.

If computer running HV Manager is not connected to Active Directory, you can use local computer users and groups to configure HV Manager permissions.

Configuring Forms-based authentication

1. Run the HVManager shortcut on the Desktop to open hvm command-line tool.
2. The following command adds a new instance with name hvm1, running with default user account .\HvmService and Forms-based authentication enabled:

```
hvm add-instance -name hvm1 -url http://+:8117/
```

3. Open a web browser and go to the address <http://localhost:8117/>
4. Enter the Administrator username and password.
5. Click on the Roles in the navigation menu on the right side. Then click Add Role to open the new Role form.
6. On the Role tab select the permissions. Each resource permission item corresponds to the element of the user interface. If the permission is disabled the element will be hidden from the user.
7. To assign virtual machines to the Role select Assigned VMs tab and click the plus button. Select virtual machines from the list (the Hyper-V server connection should be added before). To grant role users access to all VMs leave the Assigned VMs list empty.

The image shows two side-by-side screenshots of web forms. The left form is titled 'Role' and has a 'Name' field containing 'User', a 'Disabled' checkbox, and a 'Comment' text area. Below these fields are two tabs: 'Role' and 'Assigned VMs'. Under the 'Role' tab, there is a list of permissions with checkboxes: Dashboard, Servers, Virtual machines (checked), Users, Roles, and AuditLog. Under the 'Assigned VMs' tab, there is a plus button. The right form is titled 'User' and has a 'Name' field containing 'User1', a 'Role' dropdown menu set to 'User', a 'Password' field with masked characters, a 'Disabled' checkbox, and a 'Comment' text area. Both forms have 'Save' and 'Cancel' buttons at the bottom.

8. Next step is creating an User and assign the Role. Click on the Users in the navigation menu on the right side. Then click Add User to open the New User dialog.
9. Specify the User name, Role and password. Then click Save to create the User.

Configuring NTLM Authentication

1. Run the HVManager shortcut on the Desktop to open hvm command-line tool.
2. The following command adds a new instance with name hvm1, running with default user account .\HvmService and Windows (NTLM) authentication enabled. Administrator user account is Domain\Administrator.

```
add-instance -name hvm1 -url http://+:8117/ -auth NTLM -admin Domain\Administrator
```

To enable NTLM for existing instance use update-instance command as following:

```
update-instance -name hvm1 -auth NTLM -admin Domain\Administrator
```

3. Open a web browser and go to the address <http://localhost:8117/>
4. Enter the Administrator Windows user name and password.
5. Click on the Roles in the navigation menu on the right side. Then click Add Role to open the new Role form.
6. On the Role tab select the permissions. Each resource permission item corresponds to the element of the user interface. If the permission is disabled the element will be hidden from the user.
7. To assign virtual machines to the Role select Assigned VMs tab and click the plus button. Select virtual machines from the list (the Hyper-V server connection should be added before). To grant role users access to all VMs leave the Assigned VMs list empty.
8. Next step is creating an User and assign the Role. Click on the Users in the navigation menu on the right side. Then click Add User to open the New User dialog.
9. Specify the AD or Windows User name and assign the Role. Then click Save to create the User.

The image displays two side-by-side screenshots of the HV Manager web interface. The left screenshot shows the 'Role' configuration dialog. The 'Name' field is set to 'Domain\HvManagerUsers', 'Disabled' is unchecked, and the 'Comment' field contains the text 'This allows access to all members of Domain\HvManagerUsers group.' Below the form, there are two tabs: 'Role' and 'Assigned VMs'. Under the 'Role' tab, a list of resources is shown with checkboxes: Dashboard, Servers, Virtual machines (checked), Users, Roles, and AuditLog. The right screenshot shows the 'User' configuration dialog. The 'Name' field is set to 'Domain\User1', the 'Role' dropdown is set to 'Users', and the 'Password' field is masked with '*****'. Both dialogs have 'Save' and 'Cancel' buttons at the bottom.

There is two ways to organize Windows AD users access to HV Manager:

- Add AD user to HV Manager and assign the Role.
- Link AD Group with HV the Manager Role. It grants access to HV Manager to all group members.

The following table shows HV Manager Role and Windows/AD Group relations:

Role name	Grant HV Manager login rights to
Domain\GroupName	All Domain\GroupName members
BUILTIN\GroupName, Computer\GroupName,	All local Windows GroupName members
RoleName (without '\')	-

The following table shows HV Manager User and Windows/AD User relations:

User name	Assigned Role	Enabled HV Manager permissions
Domain\UserName	RoleName (without '\')	RoleName permissions and Domain Groups permissions (if user's Group added to HV Manager).
BUILTIN\UserName, Computer\UserName	RoleName (without '\')	RoleName permissions and user local Groups permissions (if user's Group added to HV Manager).

Licensing

- **Evaluation license** is a temporary license that can be used only for product evaluation. The Evaluation license is valid for 30 days from the product installation and contains all of functionality that provides the paid license. The free 30-day evaluation license will be applied automatically during the first installation.
- **Free license.** After evaluation period is ended HV Manager can be used for free to manage 5 virtual machines with one server connection and one user.
- **Per-server license.** HV Manager is licensed on a per-server basis. “Server” means a physical or virtual machine capable of running the Microsoft Hyper-V server software. You need to purchase a separate license for each managed Server. You may transfer the license from one server to another. Each license may not be used on more than one server at the same time.

For support and licensing please contact info@apreltech.com or visit www.apreltech.com