

# **NovaBACKUP®**

## **Virtual Dashboard**

### *User Manual*



**NovaStor / April 2020**

---

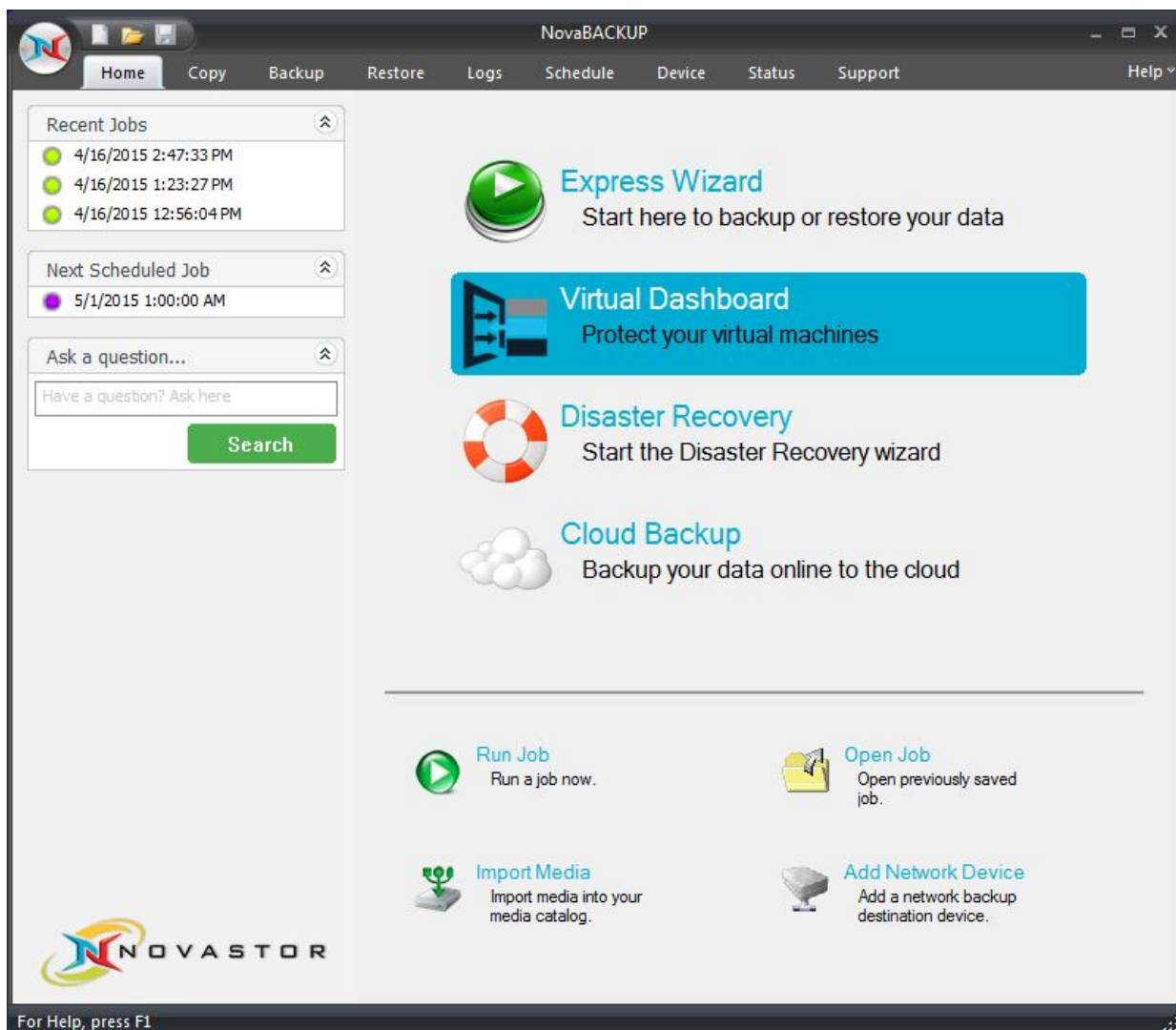
<b>NovaBACKUP Virtual Dashboard</b> .....	<b>3</b>
Introduction .....	3
<b>Virtual Dashboard for VMware Hypervisors</b> .....	<b>4</b>
Adding a VMware Hypervisor .....	4
Editing a VMware Hypervisor .....	6
Removing a Hypervisor .....	8
Backing up Virtual Machines .....	9
Creating and Configuring a Backup Job .....	10
Restoring a Backup .....	14
VMware Replication .....	17
Setting up VMware Replication .....	18
<b>Virtual Dashboard for Hyper-V Hypervisors</b> .....	<b>21</b>
Adding a Hypervisor .....	21
Editing a Hyper-V Hypervisor .....	23
Removing a Hypervisor .....	25
Backing up Hyper-V Hypervisors .....	26
Creating a Backup Job for a Hyper-V Hypervisor .....	27
Restoring a Hyper-V .....	31
Hyper-V Replication .....	35
Setting up Hyper-V Replication .....	35

# NovaBACKUP Virtual Dashboard

## Introduction

The Virtual Dashboard is where all VMware and Hyper-V backups that are capable of restoring individual files take place. It is also the center of VMware and Hyper-V replication operations. These backups are not the same as backups that are done through the Backup tab.

In order to access the Virtual Dashboard users will need to start NovaBACKUP and then click the "Virtual Dashboard" from the "Home" tab.

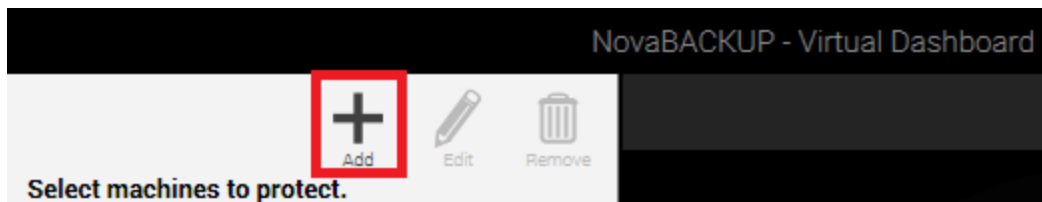


# Virtual Dashboard for VMware Hypervisors

## Adding a VMware Hypervisor

Upon opening the Virtual Dashboard, users will be prompted with the option to add a hypervisor.

Click the **Add** ("+") button at the top of the Hypervisor's menu.



Once clicking "**Add**" users will be prompted to enter information relating to their hypervisor.

Select VMware, then continue to enter the following:

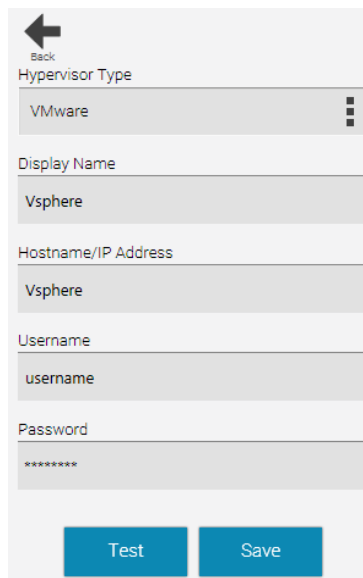
**Display Name:** This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

**Hostname / IP Address:** The Hostname or IP address of the VMware ESXi or vCenter application

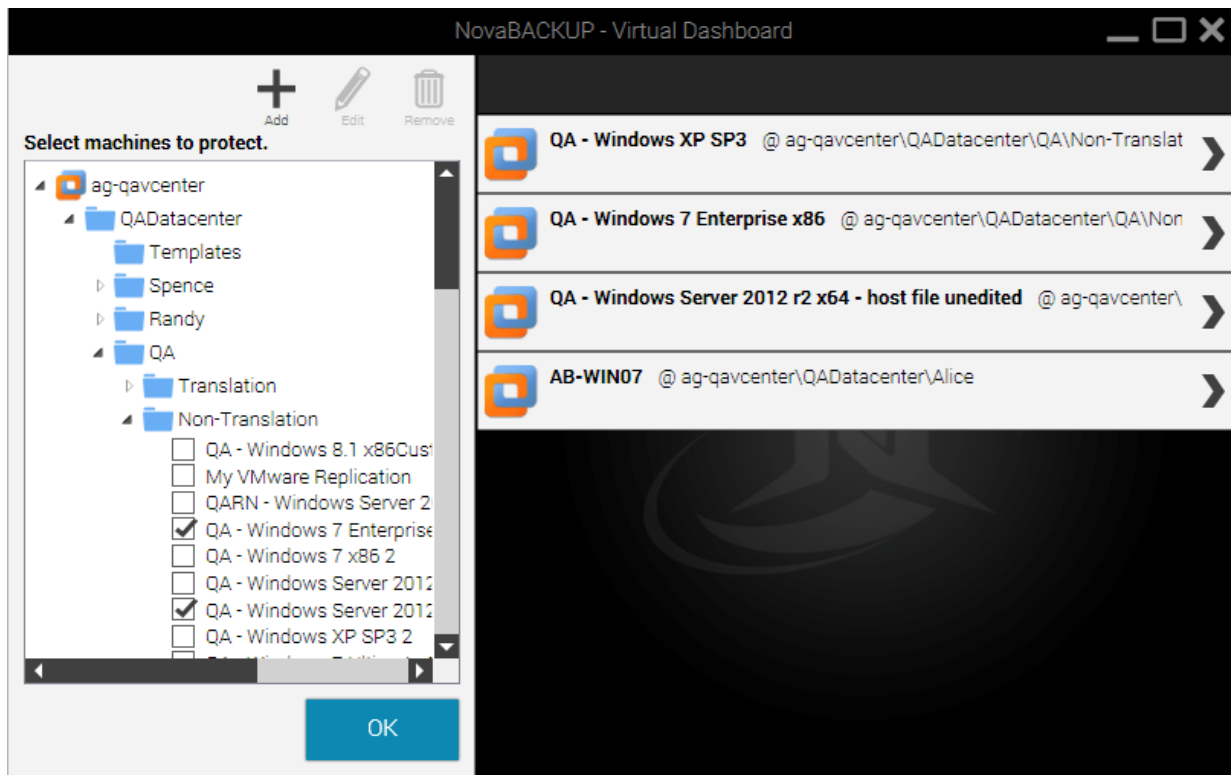
**Username:** The username with access to the ESXi or vCenter application

**Password :** The password for the user

**Test / Save:** Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.



Once the VMware hypervisor is added, you can then select the individual Virtual Machines that you want to run a backup and restore on.

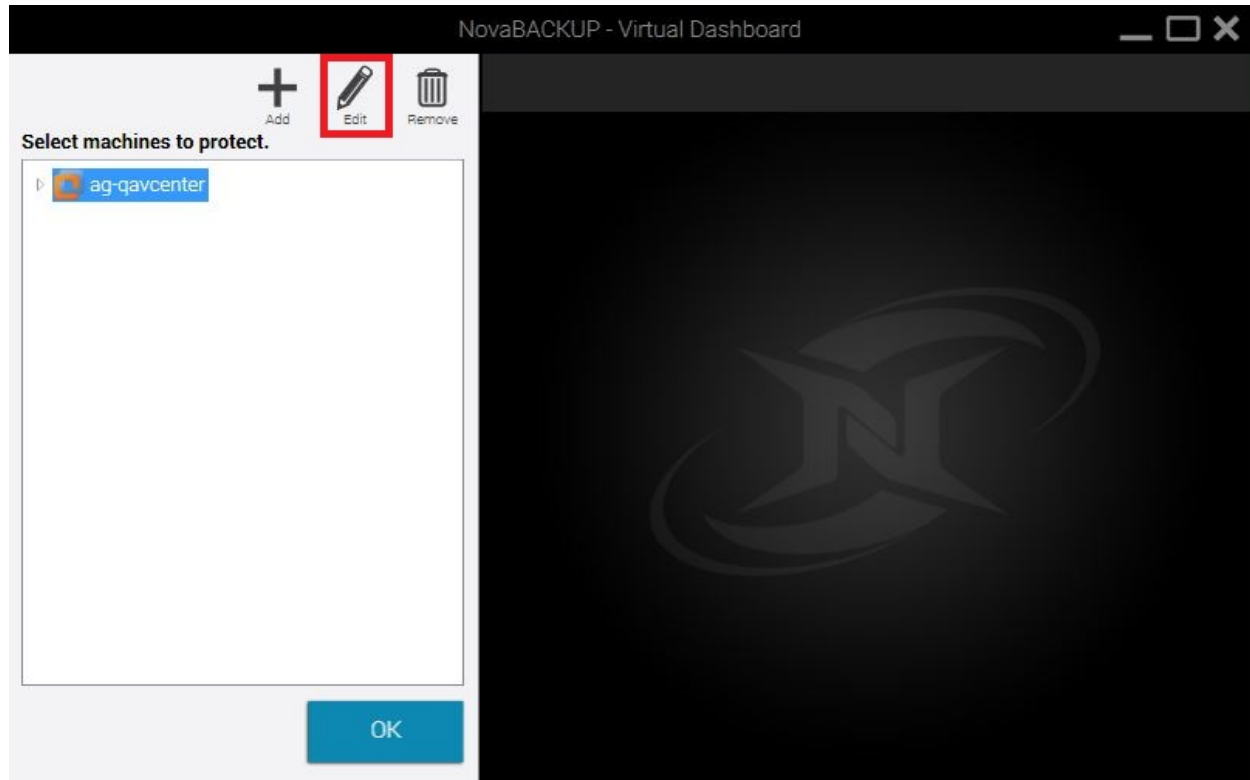


To create a backup job, you must select the individual Virtual Machine once it pops up on the right side of the screen by selecting the panel that is associated with it.

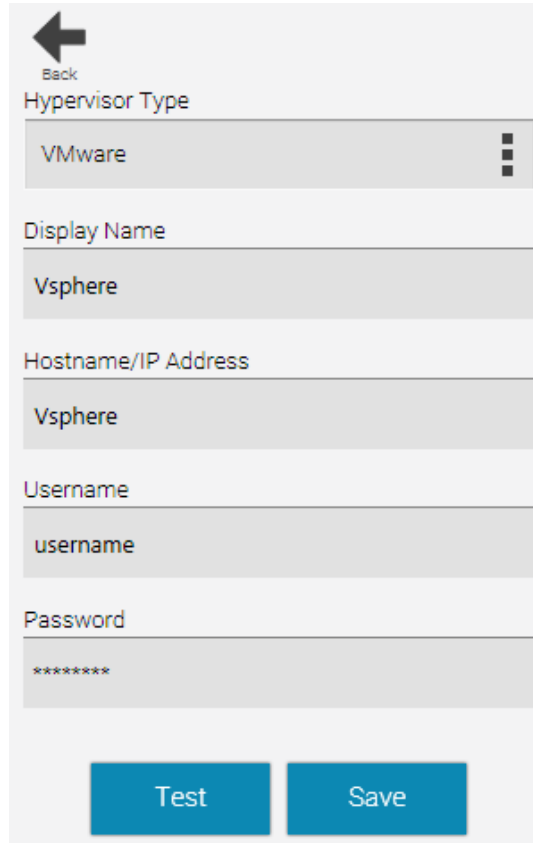
**Example:** Clicking on the panel "AB-WIN07" above will select that particular Virtual Machine.

## Editing a VMware Hypervisor

To edit a hypervisor, click "Edit" after selecting the hypervisor to be edited under the "Select machines to protect" list.



Once a user is in the "**Edit**" menu of Virtual Dashboard, select VMware. Users will then have four options that are already filled out with preexisting information from the initial addition of the Hyper-V hypervisor.

A screenshot of a mobile application interface for editing a VMware hypervisor. At the top left is a back arrow icon with the text 'Back' below it. The form contains five input fields: 'Hypervisor Type' with 'VMware' selected, 'Display Name' with 'Vsphere', 'Hostname/IP Address' with 'Vsphere', 'Username' with 'username', and 'Password' with '\*\*\*\*\*'. At the bottom are two blue buttons labeled 'Test' and 'Save'.

**Display Name:** This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

**Hostname / IP Address:** The Hostname or IP address of the VMware ESXi or vCenter application

**Username:** The username with access to the ESXi or vCenter application

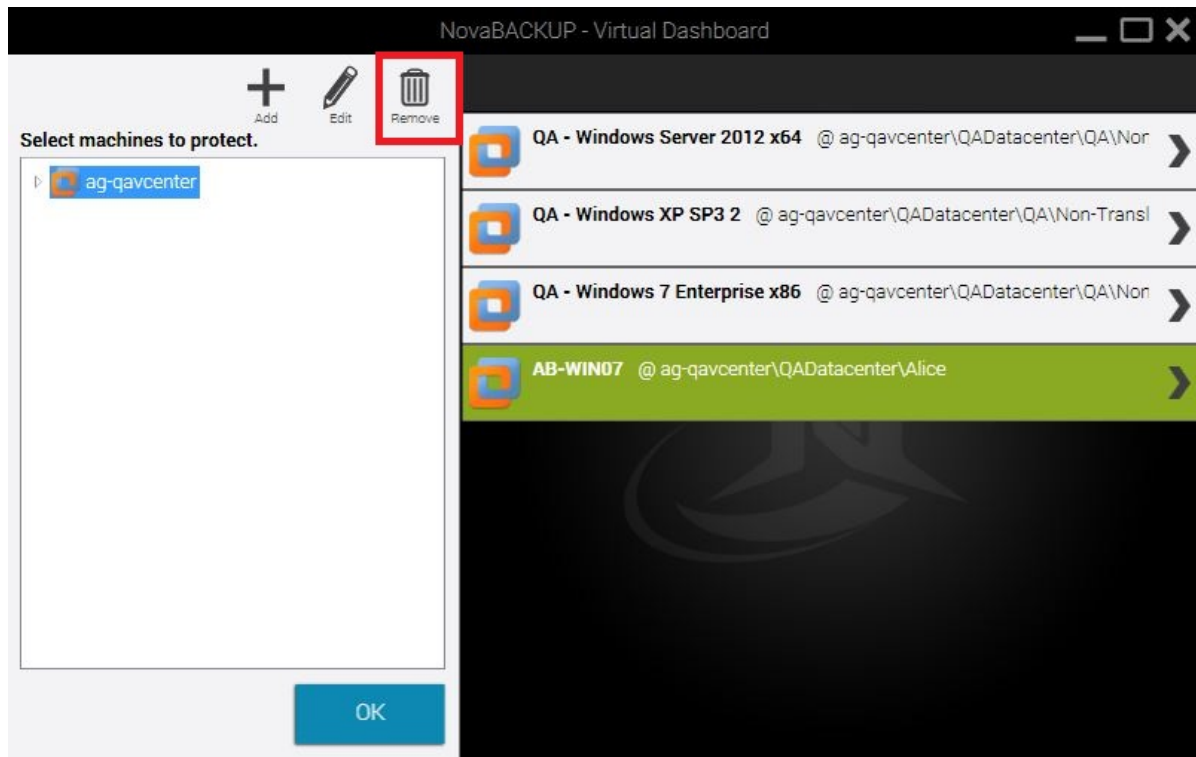
**Password:** The password for the user

**Test / Save:** Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

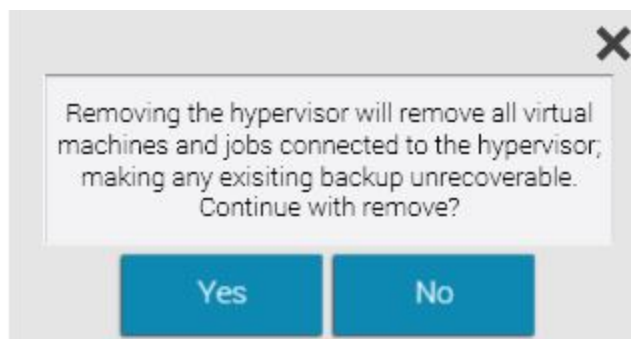
A user may then alter that information in order to edit the VMware hypervisor.

## Removing a Hypervisor

To remove a hypervisor, click "Remove" after selecting the hypervisor to be edited on the "select machines to protect" list.



**Note:** Removing a Hypervisor will remove all protected virtual machines and their backups from the Virtual Dashboard. Remove a virtual machine removes the ability to restore that virtual machine through the Virtual Dashboard. The following window will pop up ensuring a deletion is desired.







## Backing up Virtual Machines

After adding a specific virtual machine to the list of protected virtual machines, users are able to create backup jobs that are capable of restoring individual files directly back into the hypervisor.

When creating a backup job, files will be stored in a hierarchical folder structure rather than a single file. After selecting a target folder on the user's machine, the Virtual Dashboard will automatically create another folder labeled NovaBACKUP underneath that folder. Users may continue to select the original destination for all future backup jobs.

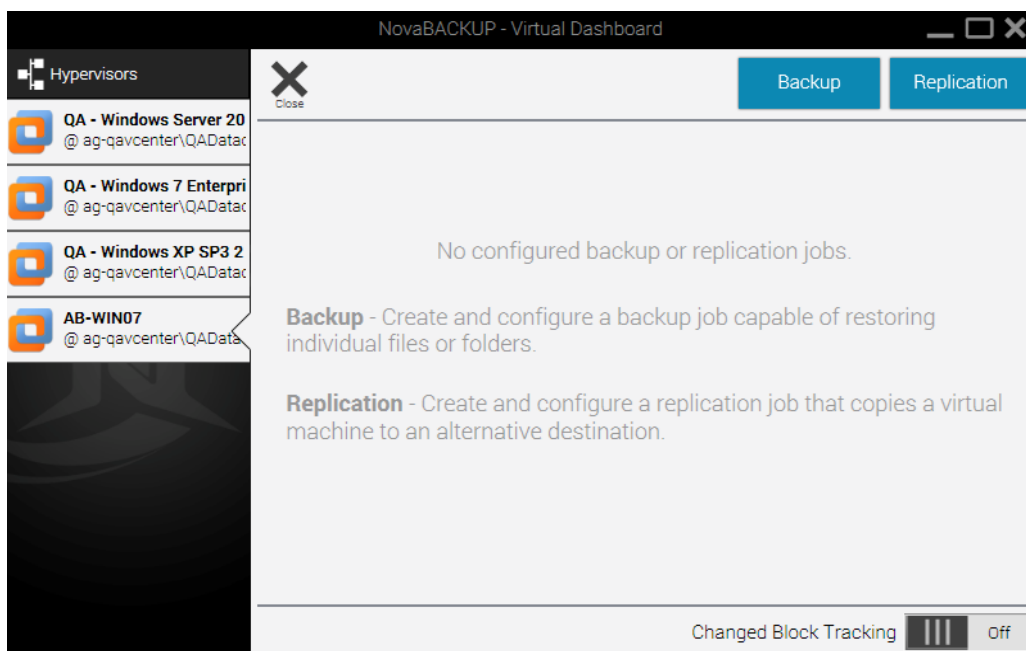
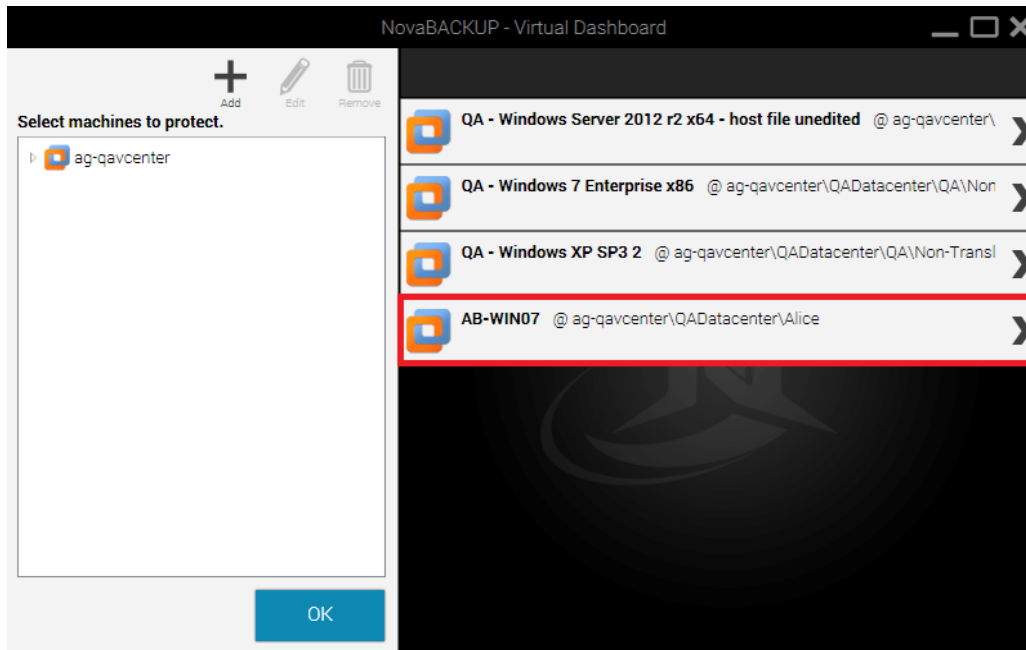
*Example:* A user selecting C:\Backups\ may continue to select this folder for all future backup jobs. After the first backup job runs, users will see a separate folder:  
C:\Backups\NovaBACKUP\

VMware backups can be performed from any Windows 7 or Server 2008 R2 machine or greater.

## Creating and Configuring a Backup Job

### Step 1

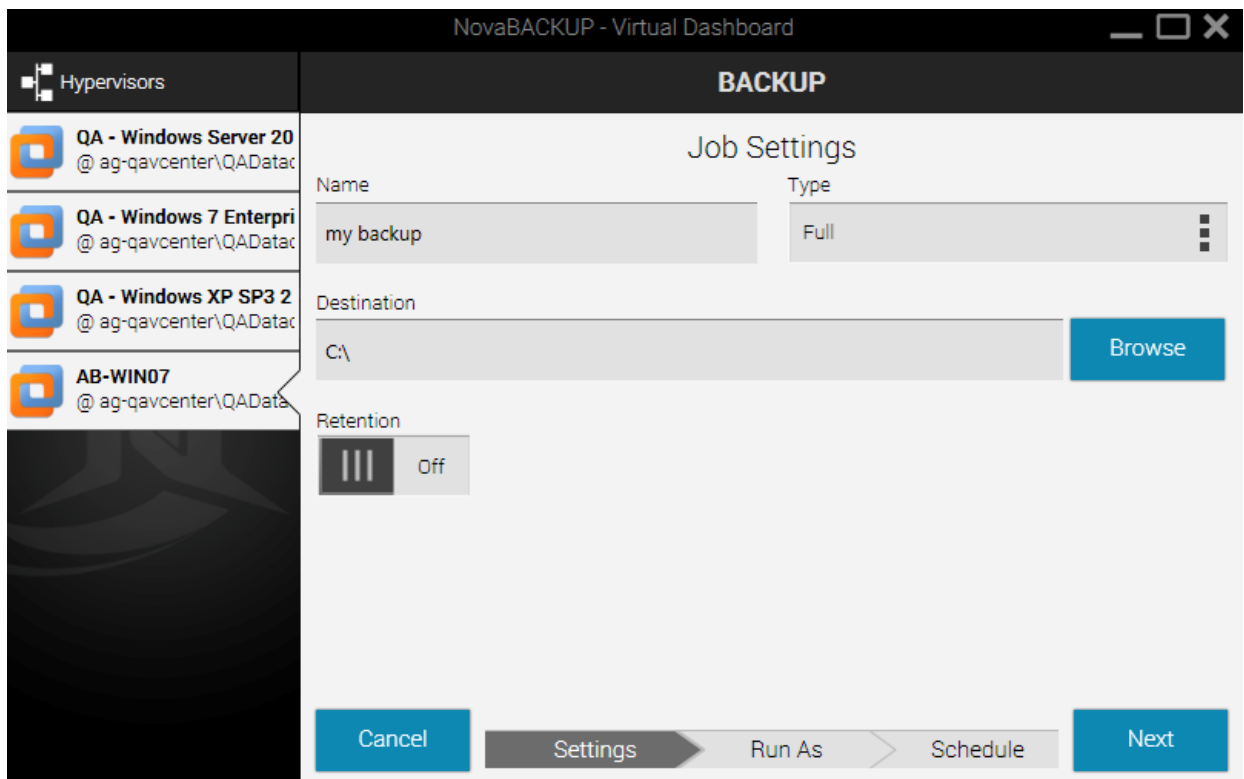
Click on a specific Virtual Machine and then click on the Backup tab in the top right corner.



## Step 2

Create a Backup name, Select the type, and choose the Destination. Then click Next

- **Full:** A full backup is a backup of the entire virtual machine all at once. These backups can be very large in nature and users should be aware of how much storage space is available on the destination.
- **Incremental:** Incremental backup jobs are backup jobs that base themselves on the last incremental backup job run. This means each incremental job is dependent upon the previous incremental backup in order to restore any particular file.
- **Differential:** Differential backup jobs are backup jobs that base themselves on the last full backup job run. This means that each differential backup job is independent from each other and only the last full backup and the desired differential backup are required to restore a particular file.



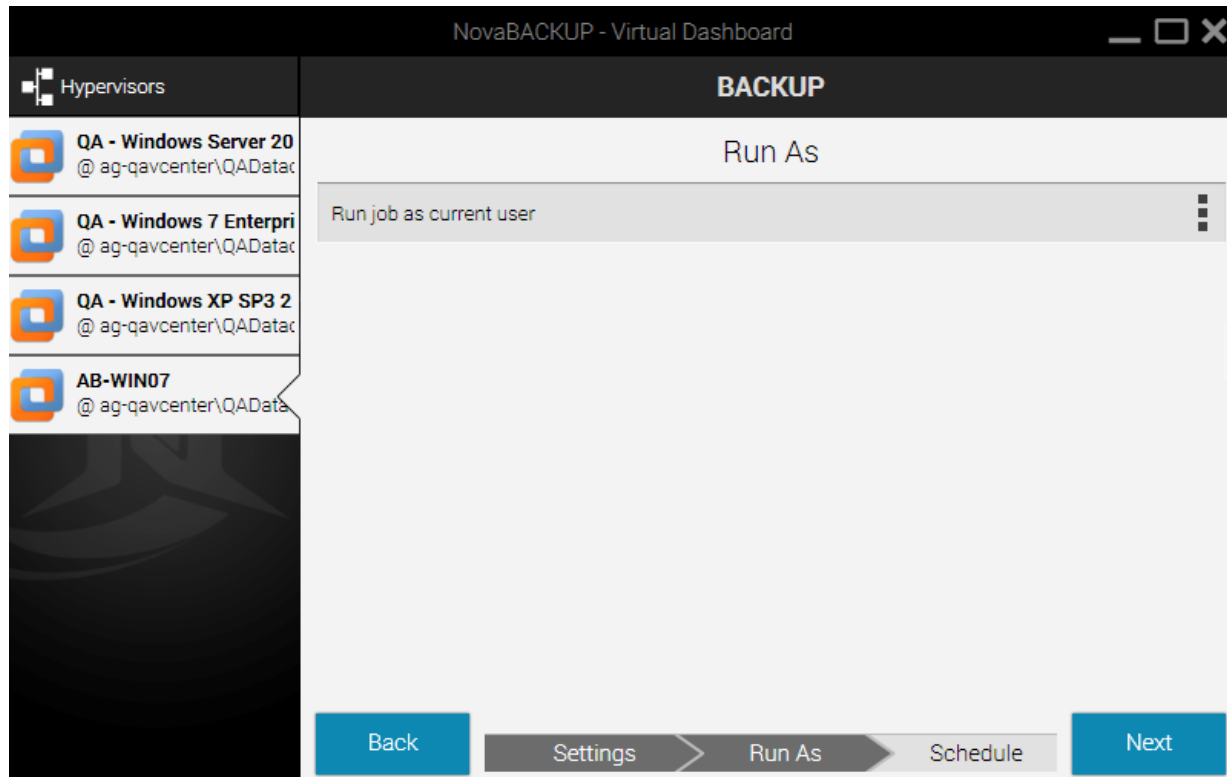
The screenshot shows the NovaBACKUP - Virtual Dashboard interface. On the left, under the 'Hypervisors' tab, there is a list of virtual machines: 'QA - Windows Server 20', 'QA - Windows 7 Enterpri', 'QA - Windows XP SP3 2', and 'AB-WIN07'. The main area is titled 'BACKUP' and 'Job Settings'. It contains the following fields and controls:

- Name:** A text box containing 'my backup'.
- Type:** A dropdown menu set to 'Full'.
- Destination:** A text box containing 'C:\' with a 'Browse' button to its right.
- Retention:** A toggle switch currently set to 'Off'.

At the bottom of the window, there is a navigation bar with the following buttons: 'Cancel', 'Settings', 'Run As', 'Schedule', and 'Next'.

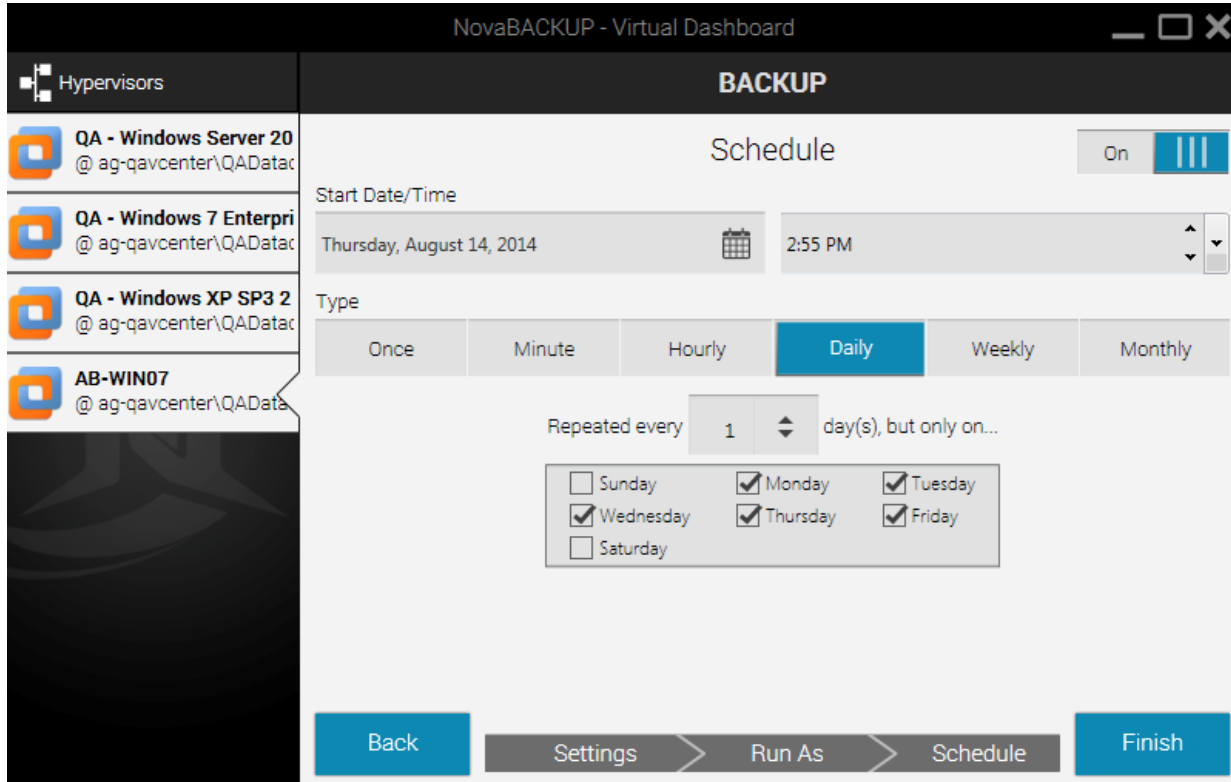
### Step 3

Next, users may choose to run the backup job as either a current user or a specified user



#### Step 4

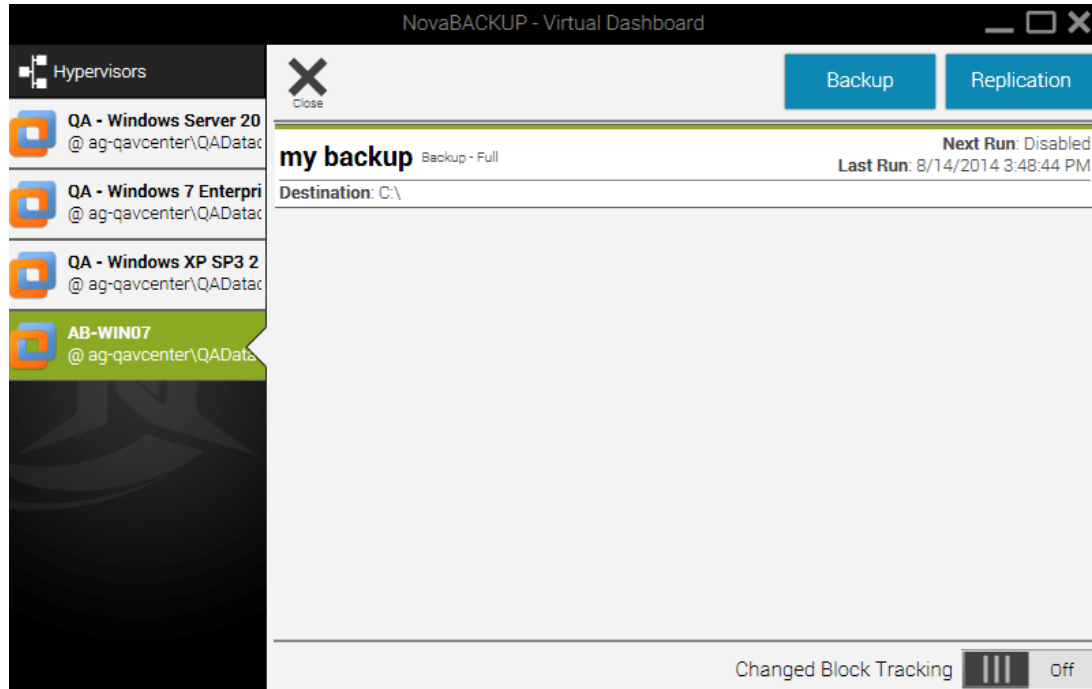
Lastly, Users may choose to schedule the job in a variety of methods. If no schedule is desired, users may toggle the "Schedule" switch in the top right to turn off the scheduler.



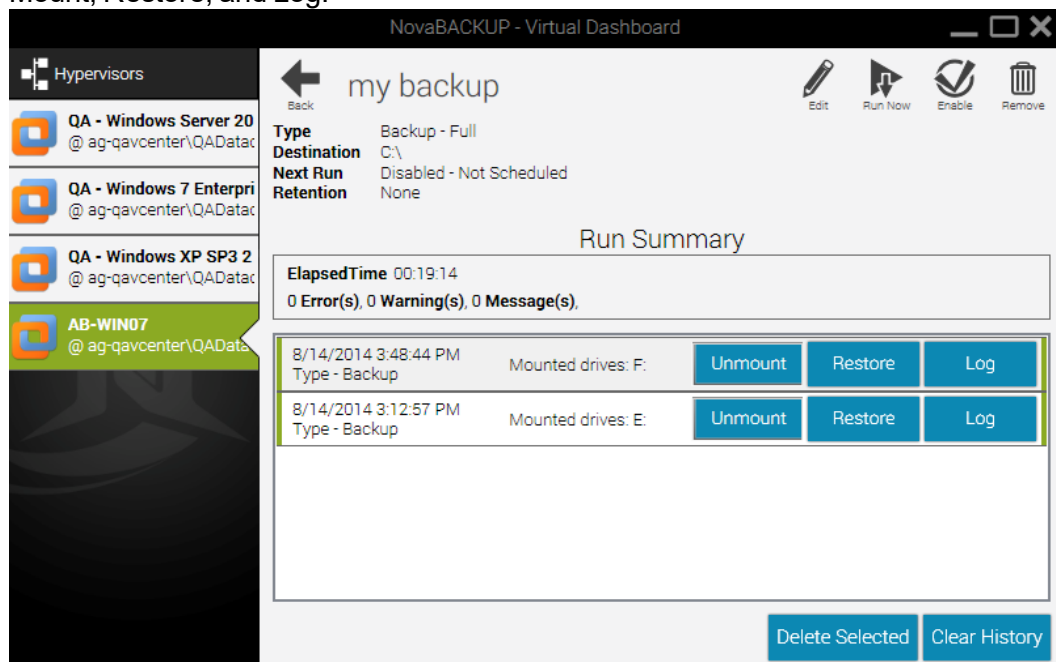
The screenshot displays the 'NovaBACKUP - Virtual Dashboard' window. On the left, a sidebar lists four hypervisors: 'QA - Windows Server 20', 'QA - Windows 7 Enterpri', 'QA - Windows XP SP3 2', and 'AB-WIN07', all located at '@ ag-qavcenter\QADat...'. The main area is titled 'BACKUP' and shows the 'Schedule' configuration for a selected job. At the top right of the main area is a toggle switch labeled 'On' with a blue bar and three vertical lines. Below this, the 'Start Date/Time' is set to 'Thursday, August 14, 2014' at '2:55 PM'. The 'Type' section offers options: 'Once', 'Minute', 'Hourly', 'Daily' (selected), 'Weekly', and 'Monthly'. Under 'Daily', it specifies 'Repeated every 1 day(s), but only on...'. A grid of checkboxes shows the days of the week: Sunday (unchecked), Monday (checked), Tuesday (checked), Wednesday (checked), Thursday (checked), Friday (checked), and Saturday (unchecked). At the bottom, a navigation bar includes buttons for 'Back', 'Settings', 'Run As', 'Schedule', and 'Finish'.

## Restoring a Backup

To restore a VMware backup, browse to the previously configured VMware backup job and click it.



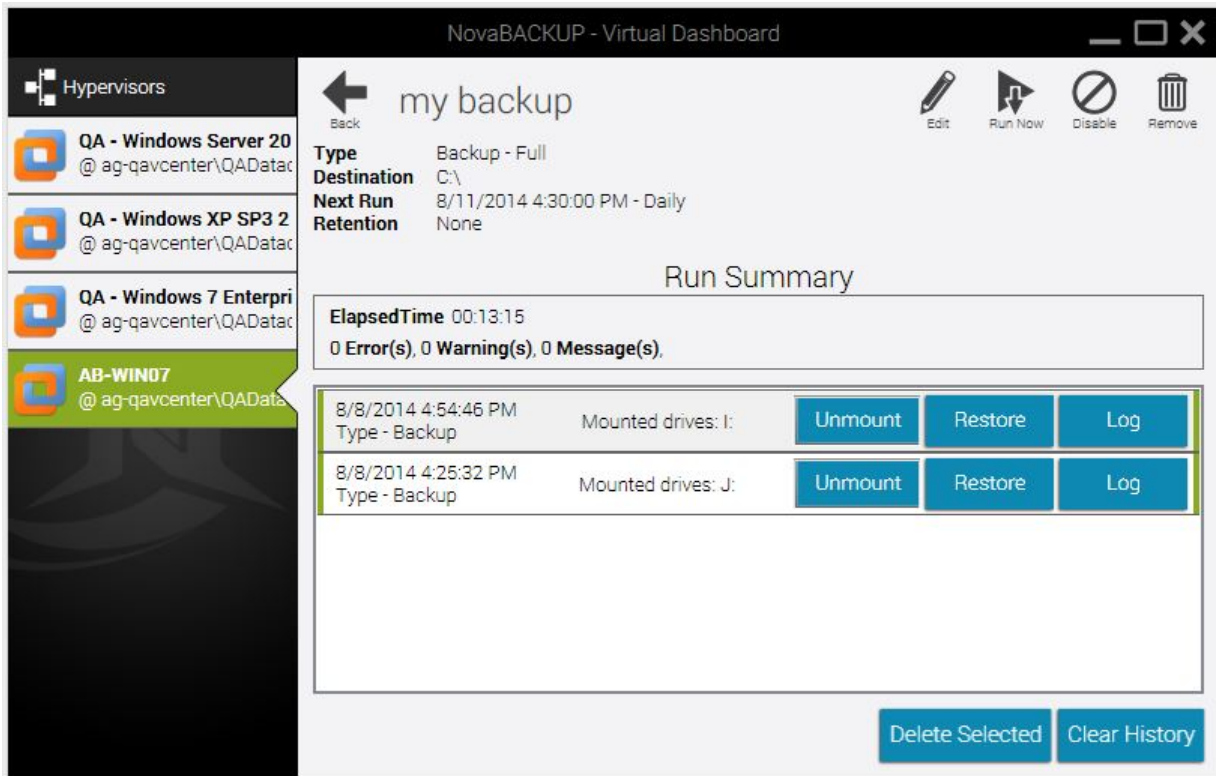
On the following window, immediately below the "Run Summary" section will be a list of old and new backup job logs. Backup jobs that are still available for restore will be listed with three commands: Mount, Restore, and Log.



To restore a VMware backup, users are given two options:

### Mount (individual file restore):

Clicking the "Mount" button will mount the virtual machine's virtual hard drives on the local computer as physical drives. Once the drive has been mounted a Windows Explorer will appear to browse the file structure. Additionally, if a drive is already mounted, users will be shown the current drive letter of the mounted image.



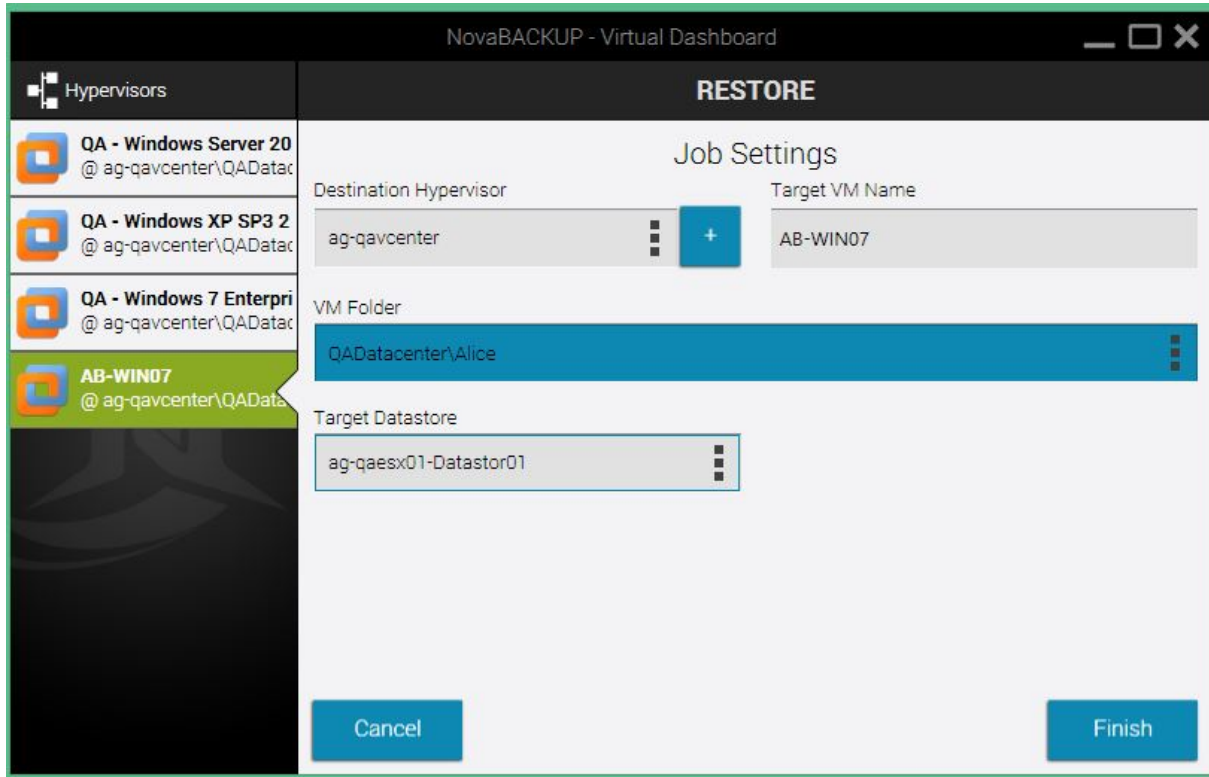
The screenshot displays the NovaBACKUP - Virtual Dashboard interface. On the left, a sidebar lists hypervisors: QA - Windows Server 20, QA - Windows XP SP3 2, QA - Windows 7 Enterpri, and AB-WIN07. The main area shows a backup summary for 'my backup' with details: Type (Backup - Full), Destination (C:\), Next Run (8/11/2014 4:30:00 PM - Daily), and Retention (None). Below this is a 'Run Summary' section showing an elapsed time of 00:13:15 and 0 errors, warnings, or messages. A table lists two mounted drives: I: and J:, both mounted on 8/8/2014. Each row includes buttons for 'Unmount', 'Restore', and 'Log'. At the bottom right, there are buttons for 'Delete Selected' and 'Clear History'.

Timestamp	Type	Mounted drives	Unmount	Restore	Log
8/8/2014 4:54:46 PM	Backup	I:	Unmount	Restore	Log
8/8/2014 4:25:32 PM	Backup	J:	Unmount	Restore	Log

Once mounted, the Mount button will switch to read "Unmount." After a user is finished restoring any requested individual files from the Virtual Machine, clicking Unmount will disconnect that virtual machine's virtual hard drive.

## Restore (Restore to hypervisor):

To restore an image directly to a hypervisor a user must fill in the following information and then click Finish.



The screenshot shows the 'RESTORE' window in the NovaBACKUP - Virtual Dashboard. On the left, there is a list of hypervisors under the 'Hypervisors' tab, including 'QA - Windows Server 20', 'QA - Windows XP SP3 2', 'QA - Windows 7 Enterpri', and 'AB-WIN07'. The 'AB-WIN07' hypervisor is selected. The main area is titled 'Job Settings' and contains the following fields:

- Destination Hypervisor:** A dropdown menu showing 'ag-qavcenter' with a blue '+' button to add a new hypervisor.
- Target VM Name:** A text field containing 'AB-WIN07'.
- VM Folder:** A dropdown menu showing 'QADatadcenter\Alice'.
- Target Datastore:** A dropdown menu showing 'ag-qaesx01-Datastor01'.

At the bottom of the window, there are two buttons: 'Cancel' and 'Finish'.

**Destination Hypervisor:** This is the destination, or target, hypervisor. This will display any currently configured VMware hypervisors. If the desired hypervisor has not already been configured, users may click the blue "+" sign to add a hypervisor at this time.

**Target VM Name:** The name of the virtual machine at its destination hypervisor.

**VM Folder:** The target ESXi / vCenter datastore that the user wishes to replicate this virtual machine into

**Target Datastore:** The target ESXi / vCenter datastore that the user wishes this VM to be replicated to

## Log

This will display the information about that particular backup, including which files were backed up and the duration of the job.





## VMware Replication

VMware replication uses the NovaBACKUP Backup / Copy Engine to copy data from either a single ESXi / vCenter host to itself or from one host to another.

### Changed Block Tracking

Changed Block Tracking (CBT) is a VMware feature that helps perform incremental backups. After clicking on a protected virtual machine, users will see an option for CBT in the bottom right of the virtual machine's individual dashboard. Checking this box will enable CBT or show the current status of CBT on that virtual machine.

Without CBT enabled, replication jobs will be transferred in full each time the job is executed, which could increase replication time significantly.

**Note:** Enabling or disabling CBT may take time, as this is a VMware function change.

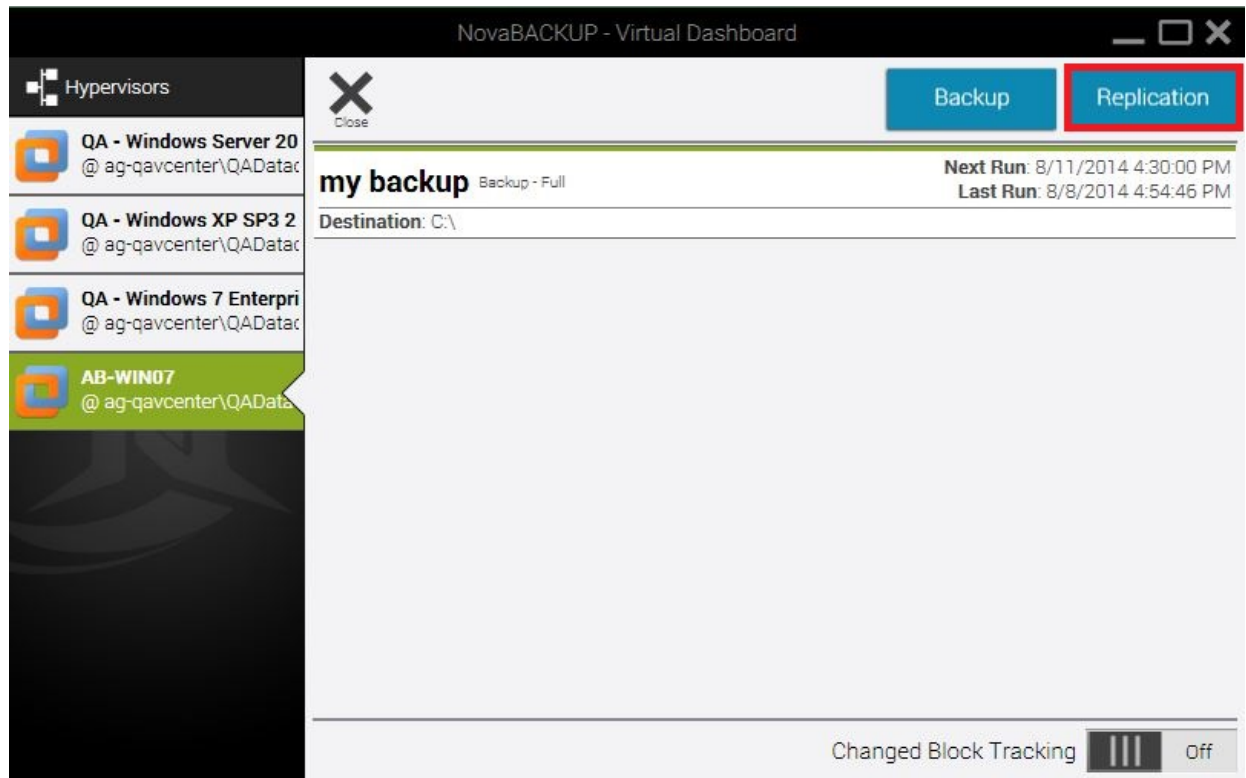
### *VMware Replication Retention*

VMware backups are able to maintain a retention value in either generations (count) or days for Full or Differential backups. In order to apply retention to an Incremental backup, users will need to target the same folder as their incremental backup with a scheduled or manually run full backup job that includes a retention value.

## Setting up VMware Replication

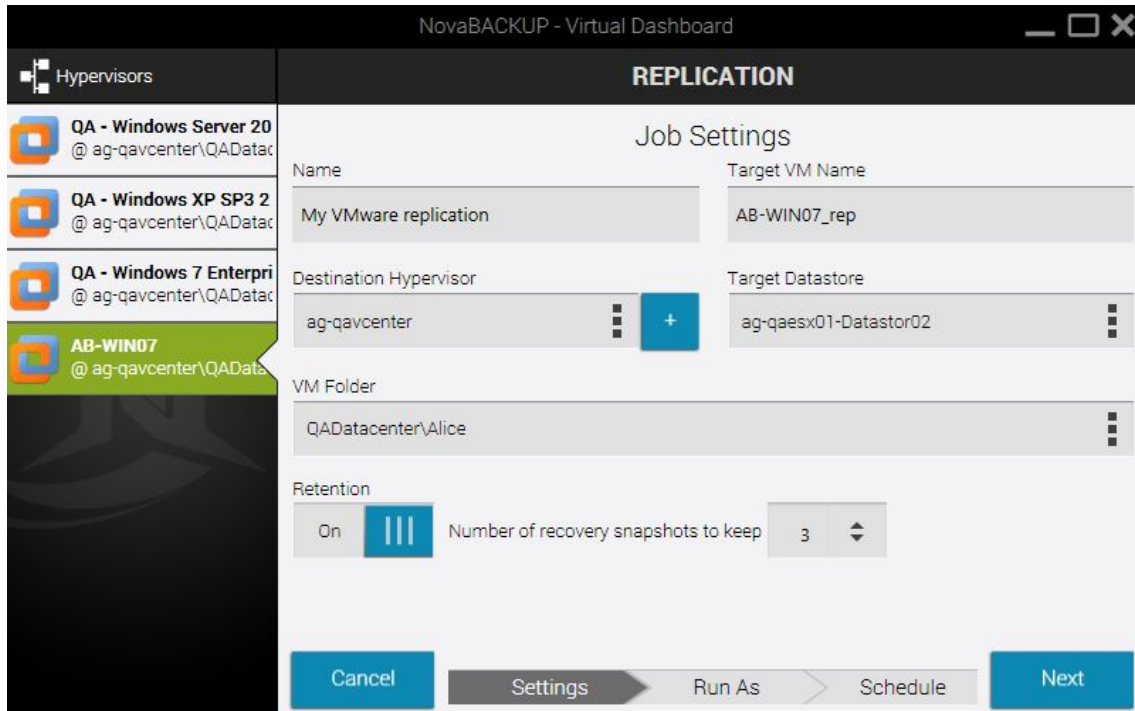
### Step 1

Select an individual Virtual Machine and select the "**Replication**" button



## Step 2

After clicking "**Replication**" users are presented with the following options:



The screenshot shows the NovaBACKUP - Virtual Dashboard interface. On the left, a sidebar lists several hypervisors: QA - Windows Server 20, QA - Windows XP SP3 2, QA - Windows 7 Enterpri, and AB-WIN07. The main area is titled "REPLICATION" and contains "Job Settings". The settings include: Name (My VMware replication), Target VM Name (AB-WIN07\_rep), Destination Hypervisor (ag-qavcenter), Target Datastore (ag-qaesx01-Datastor02), VM Folder (QADatcenter\Alice), and Retention (On, Number of recovery snapshots to keep: 3). At the bottom, there are buttons for Cancel, Settings, Run As, Schedule, and Next.

**Name:** The name of the backup job within the Virtual Dashboard

**Target VM Name:** The name of the virtual machine at its destination hypervisor. This will default to whatever the current name is plus the suffix of "**\_rep**"

**Destination Hypervisor:** This is the destination, or target, hypervisor. This will display any currently configured VMware hypervisors. If the desired hypervisor has not already been configured, users may click the blue "+" sign to add a hypervisor at this time.

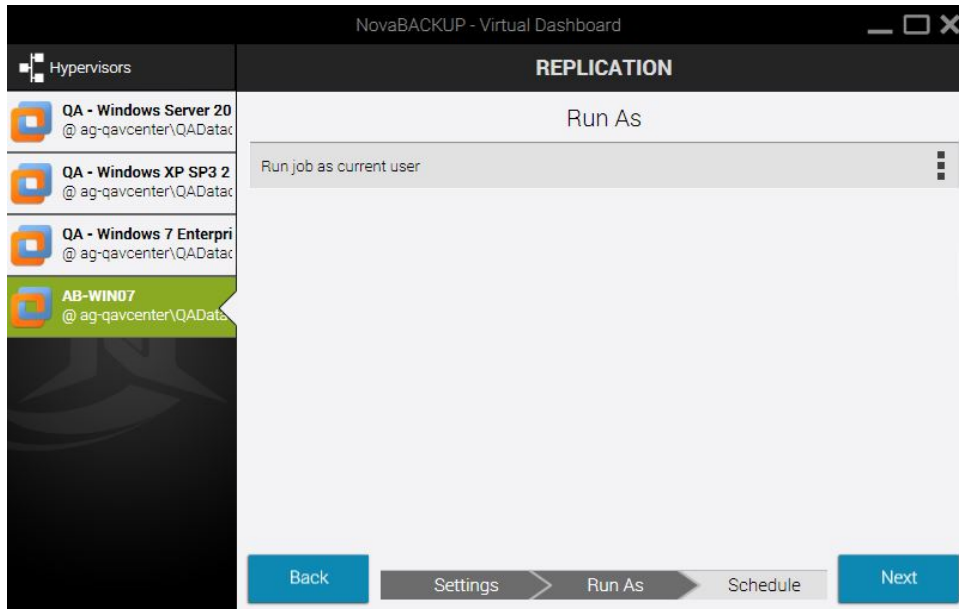
**Target Datastore:** The target ESXi / vCenter datastore that the user wishes this VM to be replicated to

**VM Folder:** The target ESXi / vCenter datastore that the user wishes to replicate this virtual machine into

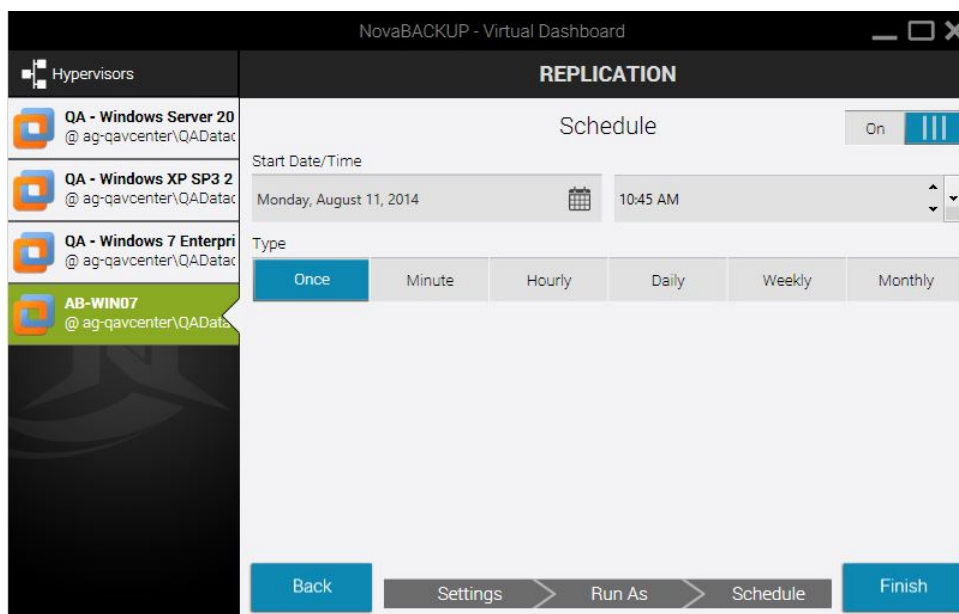
**Retention:** The number of previously available versions stored on the target destination ESXi / vCenter. These are stored as snapshots within the ESXi / vCenter.

### Step 3

Next, the following screen will prompt how you want to run the replication job as.



### Step 4



Here, users may choose to schedule the job in a variety of methods. If no schedule is desired, users may toggle the "Schedule" switch in the top right to turn off the scheduler.

# Virtual Dashboard for Hyper-V Hypervisors

## Adding a Hypervisor

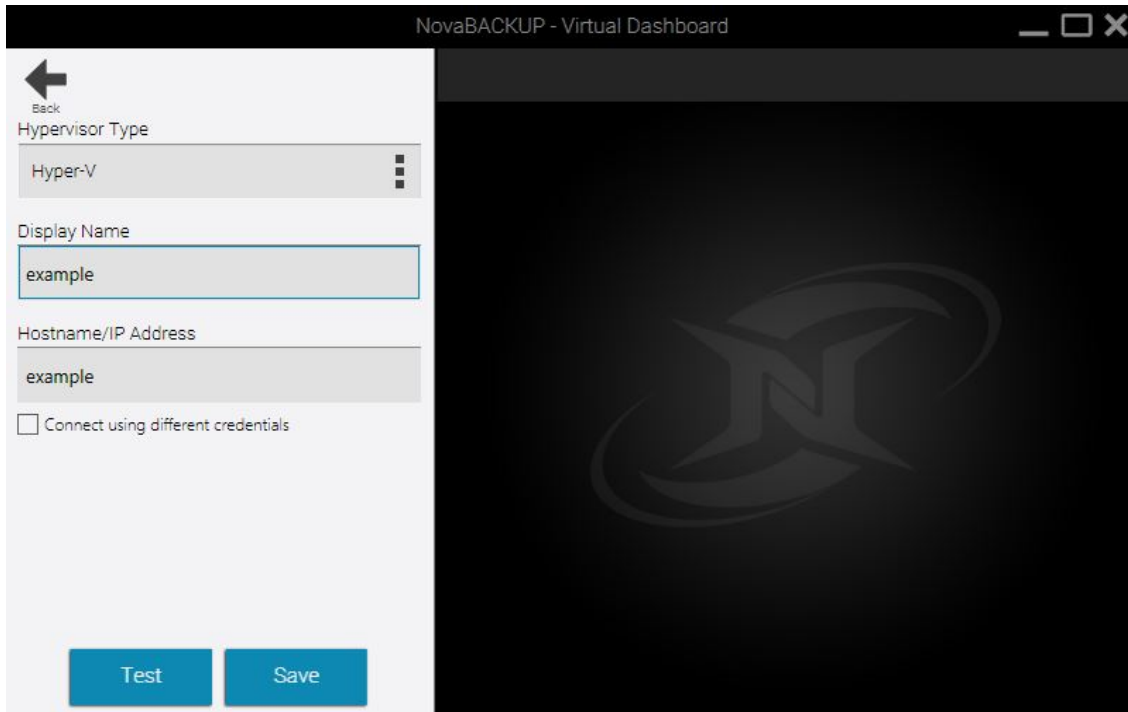
Upon opening the Virtual Dashboard users will be prompted with the option to add a hypervisor. Click the **Add "+"** button at the top of the Hypervisor's menu.

Once clicking "**Add**" users will be prompted to enter information relating to their Hypervisor.

**Note:** If there are already VMware hosts added through the legacy backup functionality in NovaBACKUP, those servers will already be added to the Virtual Dashboard.

Once a user is in the "**Add**" menu of the Virtual Dashboard, select Hyper-V. Users will then be presented with two options.

## Adding a Local Hyper-V Hypervisor

A screenshot of the 'NovaBACKUP - Virtual Dashboard' application window. The window has a dark title bar with standard minimize, maximize, and close buttons. The main interface is split into a light gray left sidebar and a dark gray right pane. The sidebar contains a 'Back' button with a left arrow, a 'Hypervisor Type' dropdown menu currently set to 'Hyper-V', a 'Display Name' text input field with 'example' entered, a 'Hostname/IP Address' text input field with 'example' entered, and an unchecked checkbox labeled 'Connect using different credentials'. At the bottom of the sidebar are two blue buttons labeled 'Test' and 'Save'. The right pane is dark and features a large, faint, light-gray watermark of the NovaBackup logo.

If NovaBACKUP is being installed onto a local Hyper-V host, users will not need to enter user credentials to access the Hyper-V service. Users will need to add two fields on information as seen in the picture above.



**Display Name:** This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

**Hostname:** This is the Fully Qualified Domain Name (FQDN) or hostname of the Hyper-V host.

**Test / Save:** Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

## Adding a Remote Hyper-V Hypervisor

If NovaBACKUP is being installed on a machine to manage a remote Hyper-V host, users will need to enter user credentials to access the Hyper-V service. Users will need to add four fields of information. If the Hyper-V is remote, check the "**Connect using different credentials**" checkbox.

The screenshot shows a web-based configuration window titled "NovaBACKUP - Virtual Dashboard". On the left is a sidebar with a "Back" button (a left-pointing arrow) and a "Hypervisor Type" dropdown menu currently set to "Hyper-V". Below this are input fields for "Display Name" (containing "example"), "Hostname/IP Address" (containing "example"), a checked checkbox for "Connect using different credentials", a "Username" field (containing "accessusername"), and a "Password" field (masked with asterisks). At the bottom of the sidebar are two blue buttons: "Test" and "Save". The main area of the window is dark grey and features a large, faint, stylized logo of the letter 'N'.

**Display Name:** This is the friendly name for the hypervisor. This can be anything and is designed for ease of use.

**Hostname:** This is the Fully Qualified Domain Name (FQDN) or hostname of the Hyper-V host.

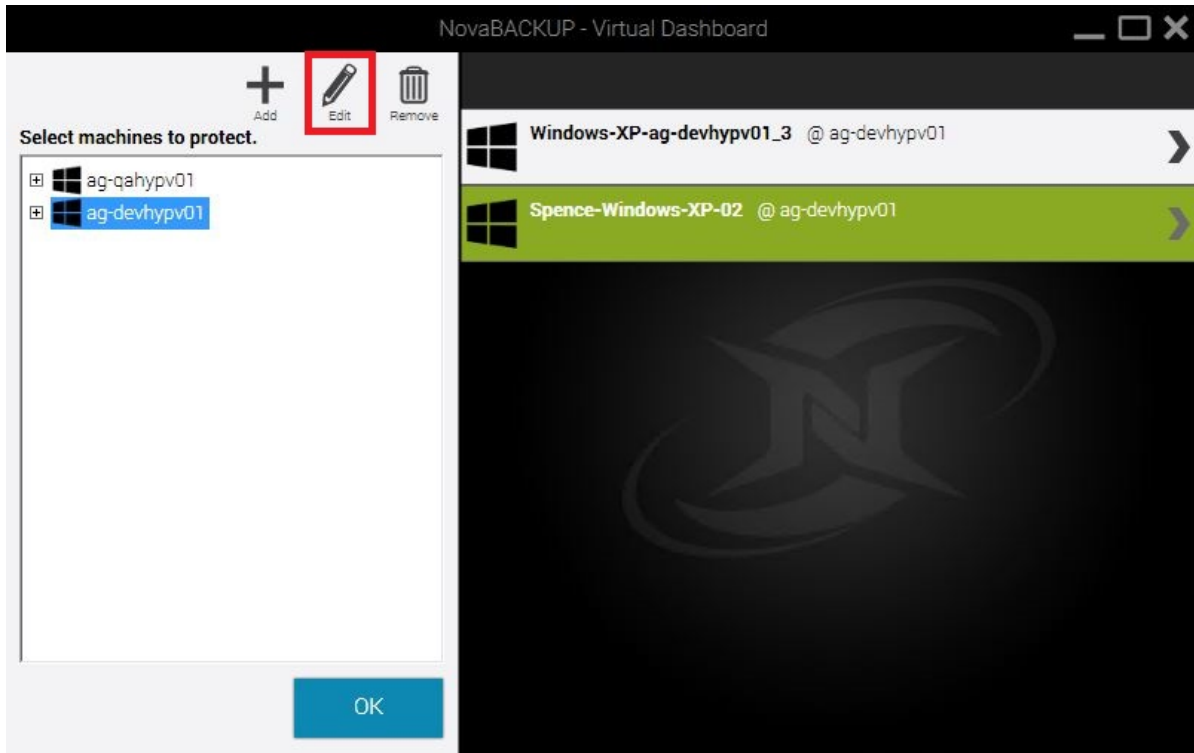
**Username:** The local or domain username with access to the Hyper-V host

**Password:** The password for the user

**Test / Save:** Test the provided configuration or Save the provided configuration. Clicking Save will also test the credentials.

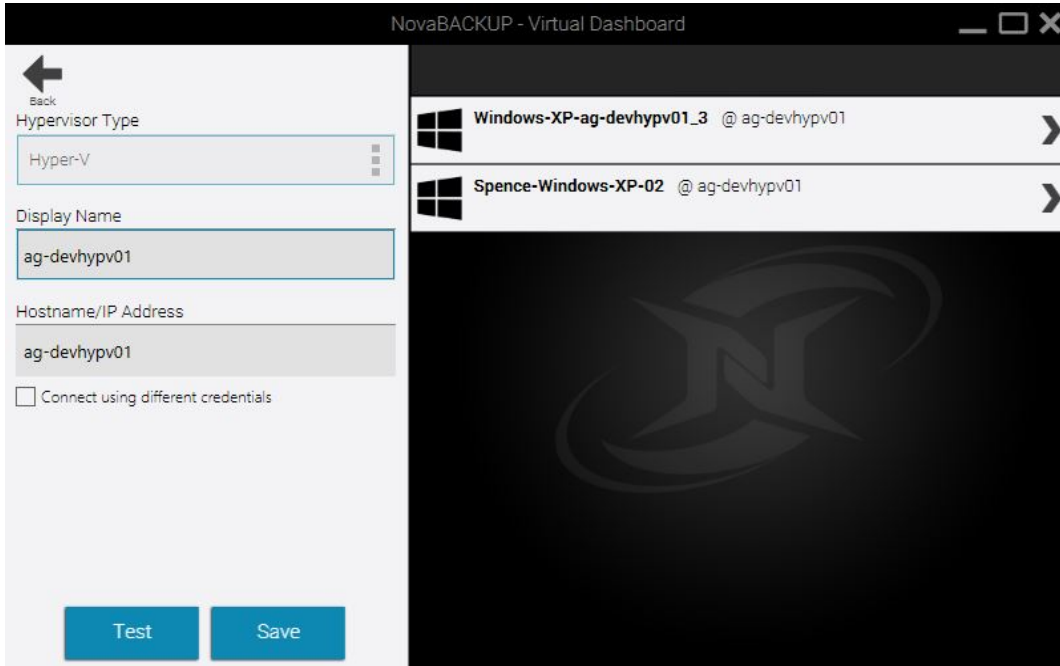
## Editing a Hyper-V Hypervisor

To edit a hypervisor, click **"Edit"** after selecting the hypervisor to be edited on the "Select machines to protect" list.



Once a user is in the **"Edit"** menu of Virtual Dashboard, select Hyper-V. Users will then be presented with two options that are already filled out with preexisting information from the initial addition of the Hyper-V Hypervisor.

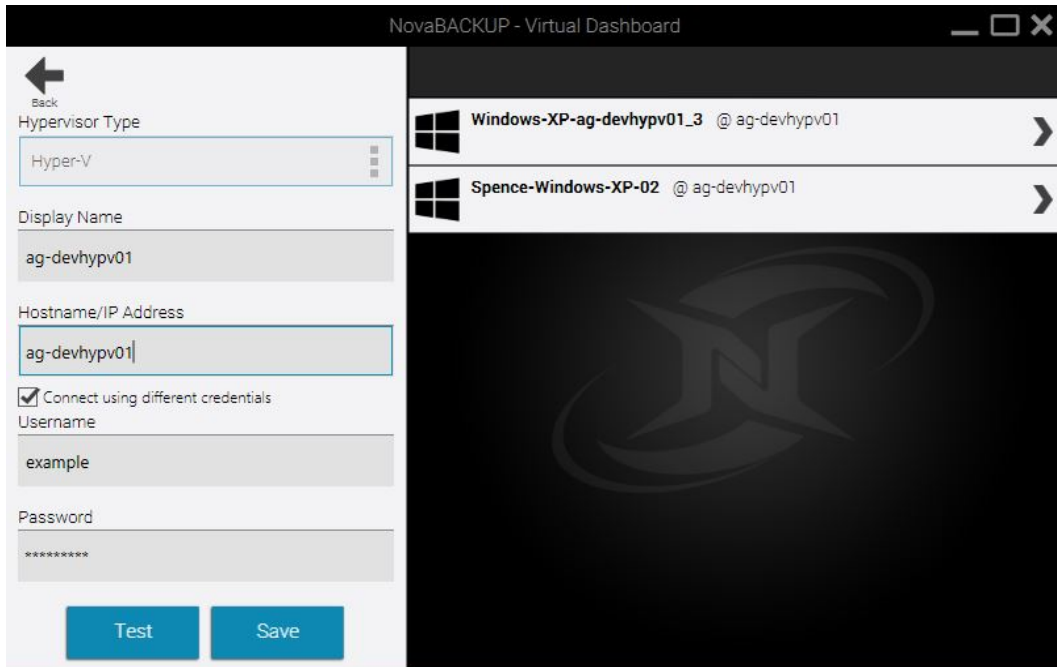
## Editing a Local Hyper-V Hypervisor



The screenshot shows the 'NovaBACKUP - Virtual Dashboard' window. On the left, there is a configuration panel for a local Hyper-V hypervisor. The 'Hypervisor Type' is set to 'Hyper-V'. The 'Display Name' is 'ag-devhypv01'. The 'Hostname/IP Address' is also 'ag-devhypv01'. There is an unchecked checkbox for 'Connect using different credentials'. At the bottom of the panel are 'Test' and 'Save' buttons. On the right, a list of virtual machines is shown: 'Windows-XP-ag-devhypv01\_3 @ ag-devhypv01' and 'Spence-Windows-XP-02 @ ag-devhypv01'. Below the list is a large black area with a faint NovaBACKUP logo.

In which a user can alter the Display Name and Hostname that were filled out in the initial addition of the Hyper-V hypervisor.

## Editing a Remote Hyper-V Hypervisor

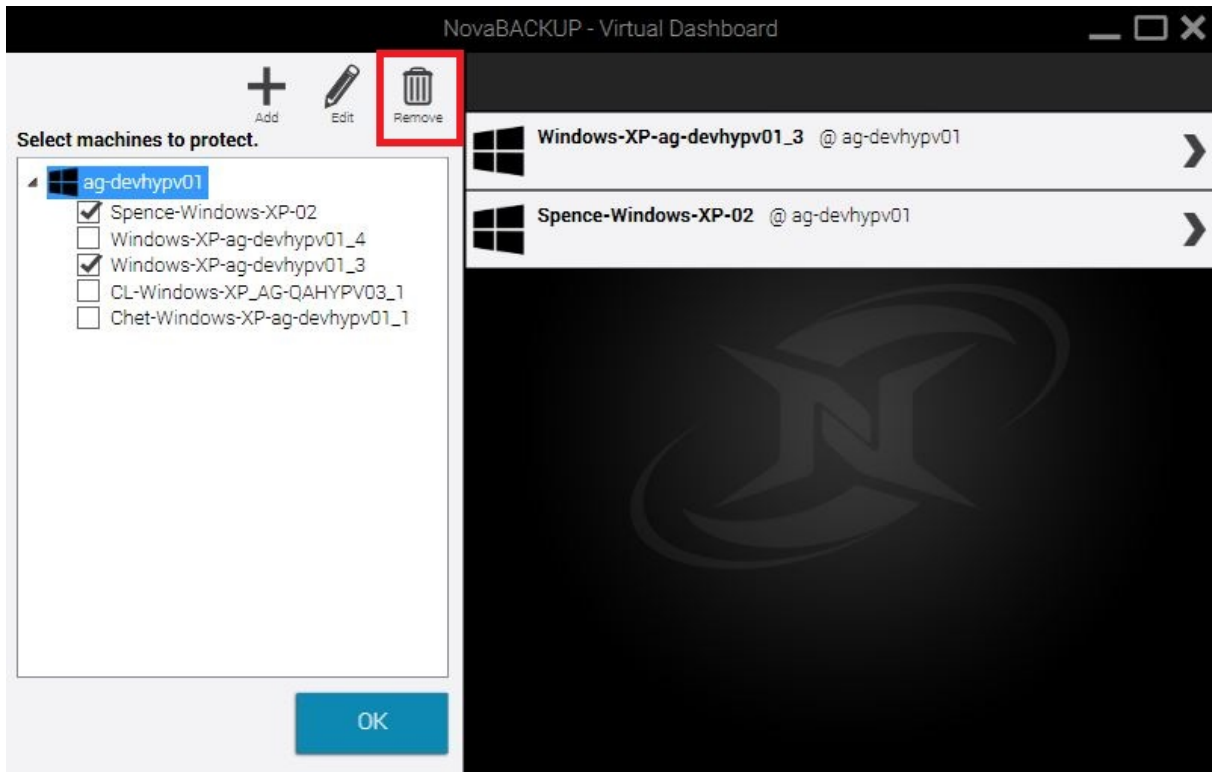


The screenshot shows the 'NovaBACKUP - Virtual Dashboard' window. On the left, there is a configuration panel for a remote Hyper-V hypervisor. The 'Hypervisor Type' is set to 'Hyper-V'. The 'Display Name' is 'ag-devhypv01'. The 'Hostname/IP Address' is 'ag-devhypv01'. The 'Connect using different credentials' checkbox is checked. Below it, the 'Username' is 'example' and the 'Password' is masked with asterisks. At the bottom of the panel are 'Test' and 'Save' buttons. On the right, the same list of virtual machines is shown: 'Windows-XP-ag-devhypv01\_3 @ ag-devhypv01' and 'Spence-Windows-XP-02 @ ag-devhypv01'. Below the list is a large black area with a faint NovaBACKUP logo.



Here a user can alter the Display Name, Hostname, Username, Password and retest the credentials to save the provided configuration.

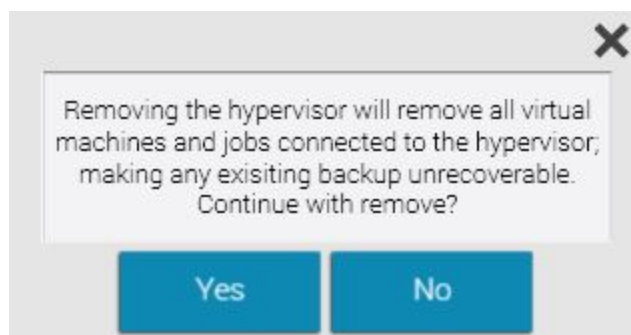
## Removing a Hypervisor



To remove a hypervisor, click "**Remove**" after selecting the hypervisor to be edited

**Note:** Removing a Hypervisor will remove all protected virtual machines and their backups from the Virtual Dashboard. Remove a virtual machine removes the ability to restore that virtual machine through the Virtual Dashboard.

The following dialog will appear upon clicking "Remove" to ensure that removal of the hypervisor was intentional.





## Backing up Hyper-V Hypervisors

After adding a virtual machine to the list of protected virtual machines, users are able to create backup jobs that are able to restore individual files as well as directly back into the hypervisor.

When creating a backup job, files will be stored in a hierarchical folder structure rather than a single file. After selecting a target folder on the user's machine, the Virtual Dashboard will automatically create another folder labeled NovaBACKUP underneath that folder. Users may continue to select the original destination for all future backup jobs.

**Example:** A user selecting C:\Backups\ may continue to select this folder for all future backup jobs. After the first backup job runs, users will see a separate folder:  
C:\Backups\NovaBACKUP\

Hyper-V backups can be performed from either the Hyper-V 2012 or Hyper-V 2012 R2 host machine. Unlike VMware backups, NovaBACKUP must be installed on the Hyper-V host where the virtual machine desired to be backed up is located.

### ***Setting up Hyper-V backups.***

For Local Hyper-V connections, select the individual Hyper-V that you want to create a backup plan for and skip the following paragraph.

For remote Hyper-V connections, first connect to the remote Hyper-V by accessing the remote desktop connection and providing the hostname of the Hyper-V and your credentials to access it. From there, a user must install NovaBACKUP and access the Virtual Dashboard on the Hyper-V machine.

When creating a new backup job, users will be presented with the following options:

**Name:** The name of the backup job as it appears in the Virtual Dashboard

**Retention:** In either "Generations" (number of versions to keep or count) or "Days old" (number of days to keep available)

**Run as:** Users may choose to run the job as either the current user or as a specified user

**Schedule:** Users may choose to schedule a job in a variety of methods. If no schedule is desired, users may toggle the "Schedule" switch in the top right to turn off the scheduler.

### **Hyper-V Retention**

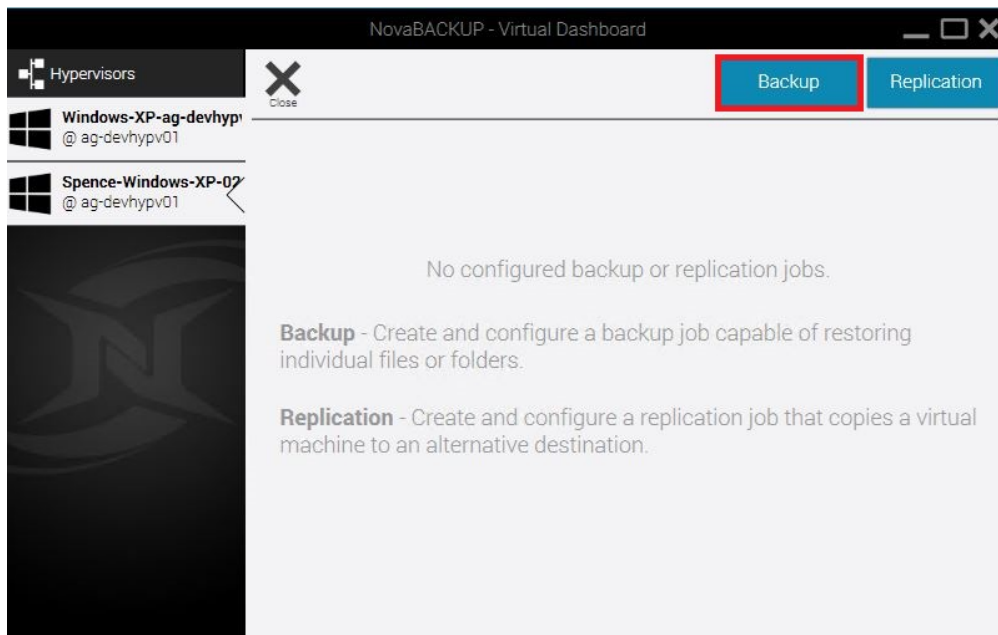
Hyper-V backups can currently only be run in a full mode. Retention maintains either a Generation (count) or number of Day's

## Creating a Backup Job for a Hyper-V Hypervisor

Once a user is locally connected to a Hyper-V the following steps can be taken to create a backup plan.

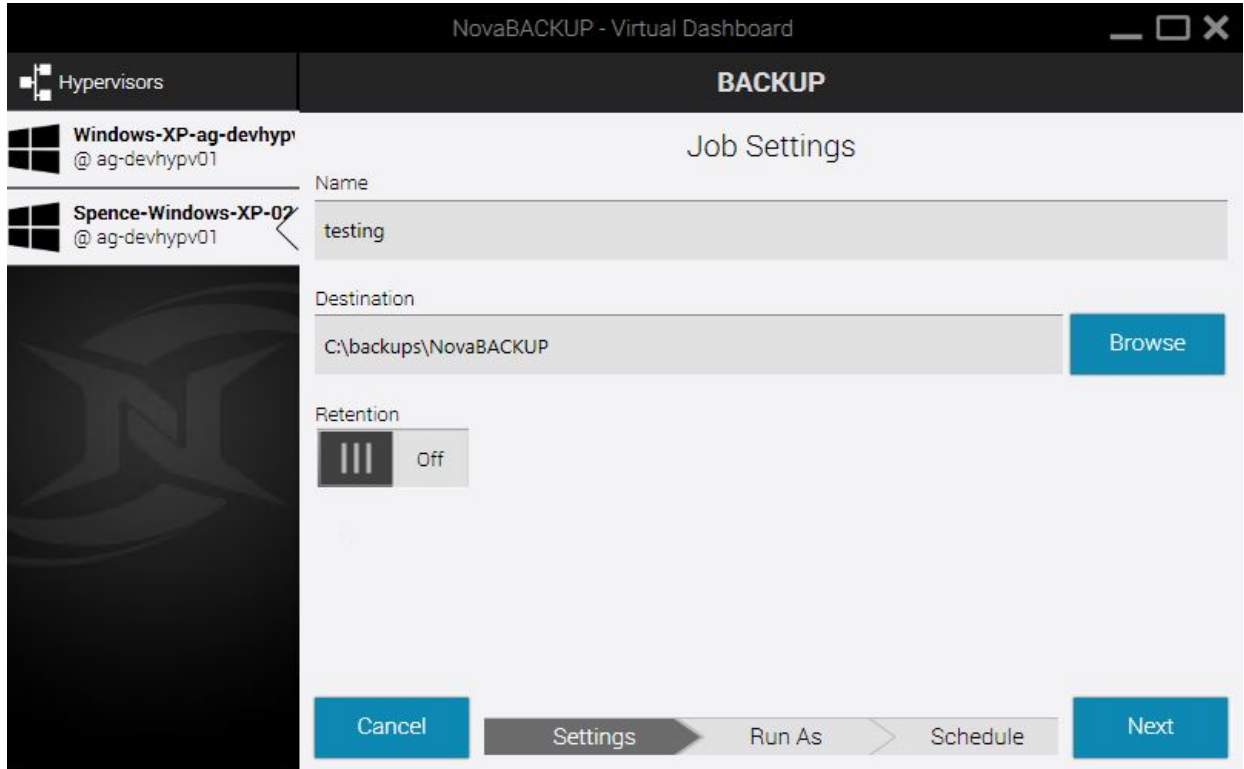
### Step 1

Select the individual Hyper-V machine you want to create a backup job for and then select the Backup Button on the top right corner.



## Step 2

After clicking the backup button, the following window will prompt users to create a backup job name and select the destination and the selection of retention.



NovaBACKUP - Virtual Dashboard

**BACKUP**

**Job Settings**

**Hypervisors**

- Windows-XP-ag-devhypv01 @ ag-devhypv01
- Spence-Windows-XP-02 @ ag-devhypv01

Name: testing

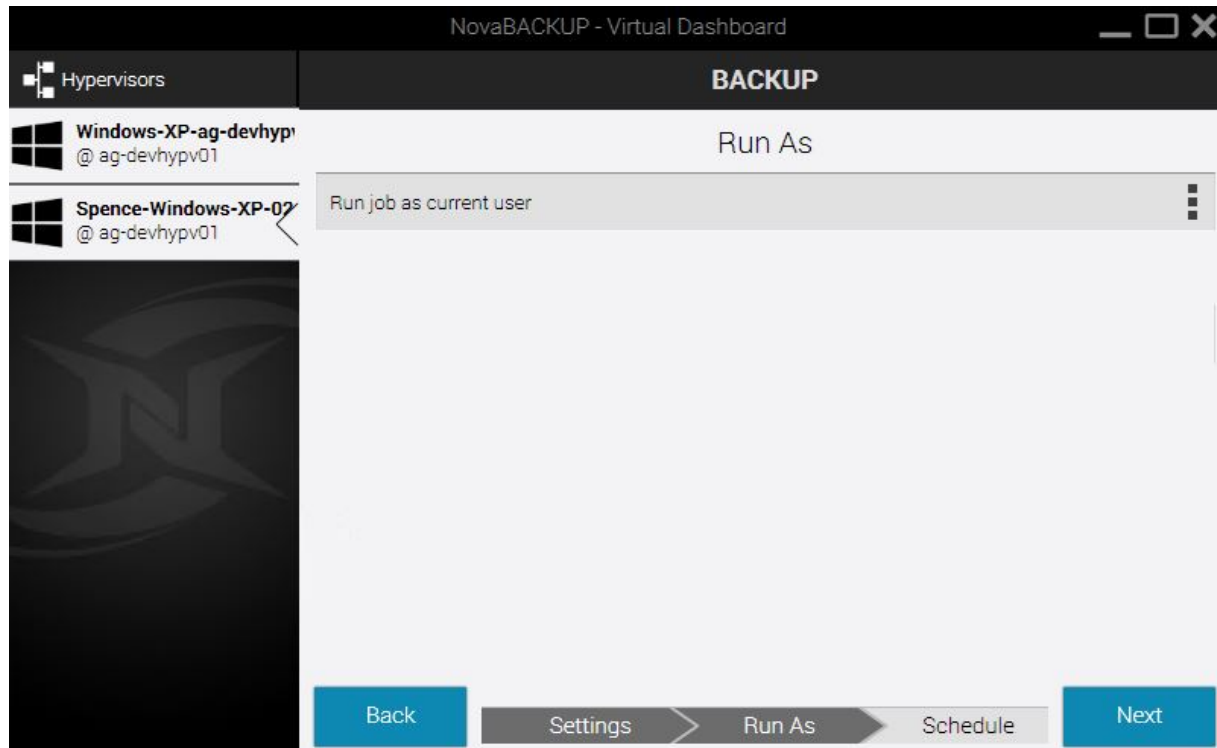
Destination: C:\backups\NovaBACKUP [Browse](#)

Retention: ☐ Off

[Cancel](#) [Settings](#) [Run As](#) [Schedule](#) [Next](#)

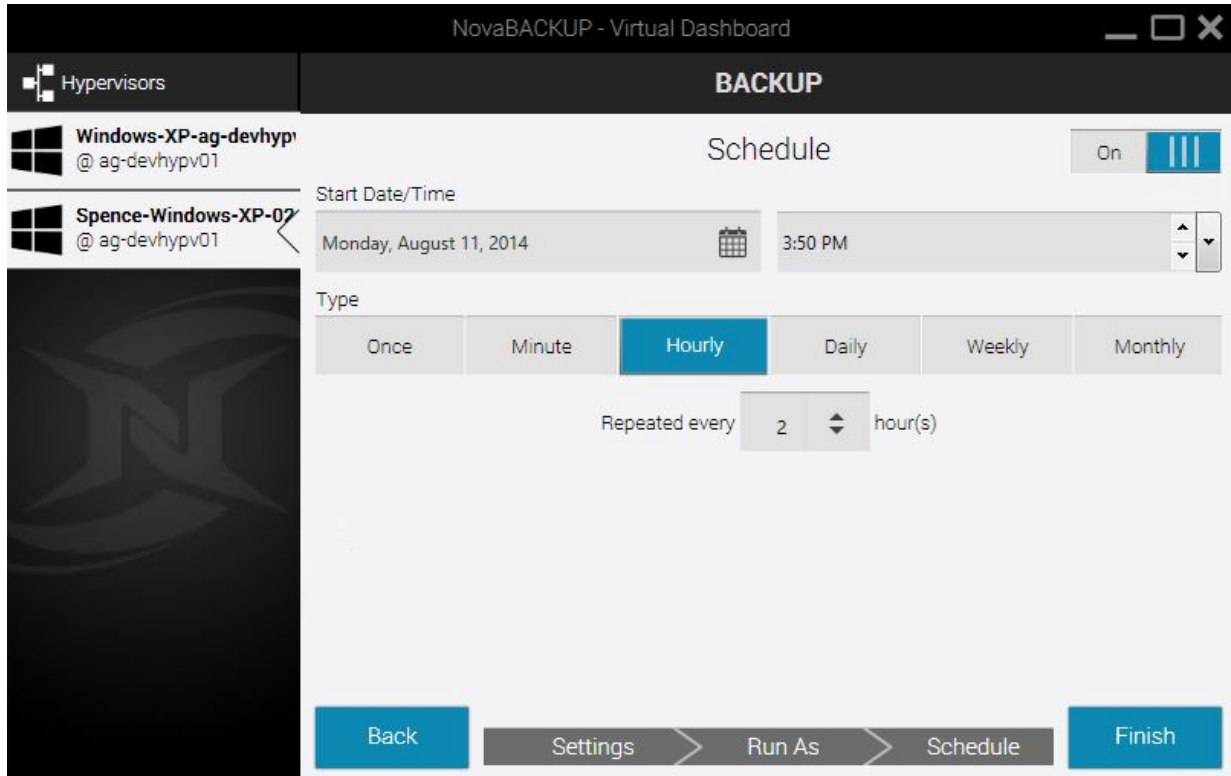
### Step 3

Next a user will select how the backup job will be run



#### Step 4

Finally, a user will select how often they want the Hyper-V backup to occur.



The screenshot shows the 'NovaBACKUP - Virtual Dashboard' window. On the left, under 'Hypervisors', two virtual machines are listed: 'Windows-XP-ag-devhypv01' and 'Spence-Windows-XP-02'. The 'Spence-Windows-XP-02' VM is selected. The main area is titled 'BACKUP' and 'Schedule'. It shows the backup is 'On' with a status icon. The 'Start Date/Time' is set to 'Monday, August 11, 2014' at '3:50 PM'. The 'Type' of backup is set to 'Hourly' (selected from a list including Once, Minute, Hourly, Daily, Weekly, and Monthly). The frequency is 'Repeated every 2 hour(s)'. At the bottom, there are navigation buttons: 'Back', 'Settings', 'Run As', 'Schedule', and 'Finish'.

NovaBACKUP - Virtual Dashboard

Hypervisors

Windows-XP-ag-devhypv01 @ ag-devhypv01

Spence-Windows-XP-02 @ ag-devhypv01

BACKUP

Schedule

On

Start Date/Time

Monday, August 11, 2014 3:50 PM

Type

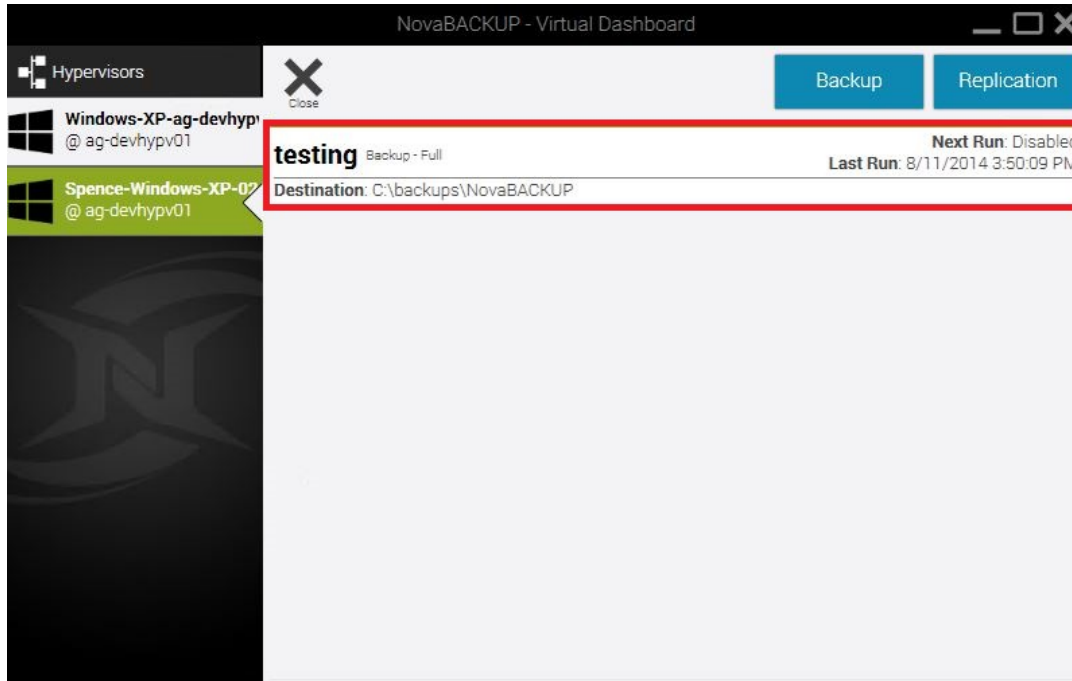
Once Minute Hourly Daily Weekly Monthly

Repeated every 2 hour(s)

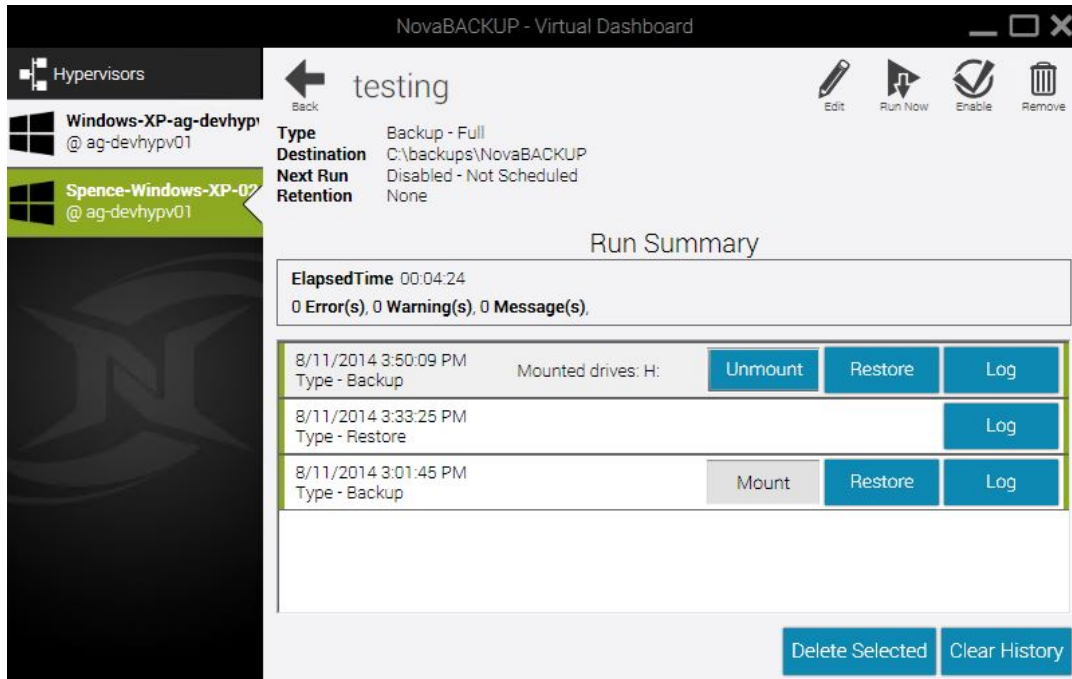
Back Settings Run As Schedule Finish

## Restoring a Hyper-V

To restore a Hyper-V backup, browse to the previously configured Hyper-V backup job and click it.



Immediately below the "Run Summary" section will be a list of old and new backup job logs. Backup jobs that are still available for restore will be listed with three commands: Mount, Restore, and Log.



The screenshot shows the NovaBACKUP - Virtual Dashboard interface. On the left, there is a sidebar with 'Hypervisors' and two listed virtual machines: 'Windows-XP-ag-devhypv01' and 'Spence-Windows-XP-02'. The main area displays details for a backup operation named 'testing'. The details include: Type: Backup - Full, Destination: C:\backups\NovaBACKUP, Next Run: Disabled - Not Scheduled, and Retention: None. Below this is a 'Run Summary' section showing an elapsed time of 00:04:24 and 0 errors, warnings, or messages. A table lists three backup events with their timestamps and types. The first event is a backup at 8/11/2014 3:50:09 PM, mounted to drive H:, with 'Unmount', 'Restore', and 'Log' buttons. The second event is a restore at 8/11/2014 3:33:25 PM, with a 'Log' button. The third event is a backup at 8/11/2014 3:01:45 PM, with 'Mount', 'Restore', and 'Log' buttons. At the bottom right, there are 'Delete Selected' and 'Clear History' buttons.

Timestamp	Type	Mounted drives	Actions
8/11/2014 3:50:09 PM	Type - Backup	Mounted drives: H:	Unmount, Restore, Log
8/11/2014 3:33:25 PM	Type - Restore		Log
8/11/2014 3:01:45 PM	Type - Backup		Mount, Restore, Log

### Mount (individual file restore)

Click the "Mount" button will mount the virtual machine's virtual hard drives on the local computer as physical drives. Once the drive has been mounted a Windows Explorer will appear to browse the file structure. Additionally, if a drive is already mounted, users will be shown the current drive letter of the mounted image.

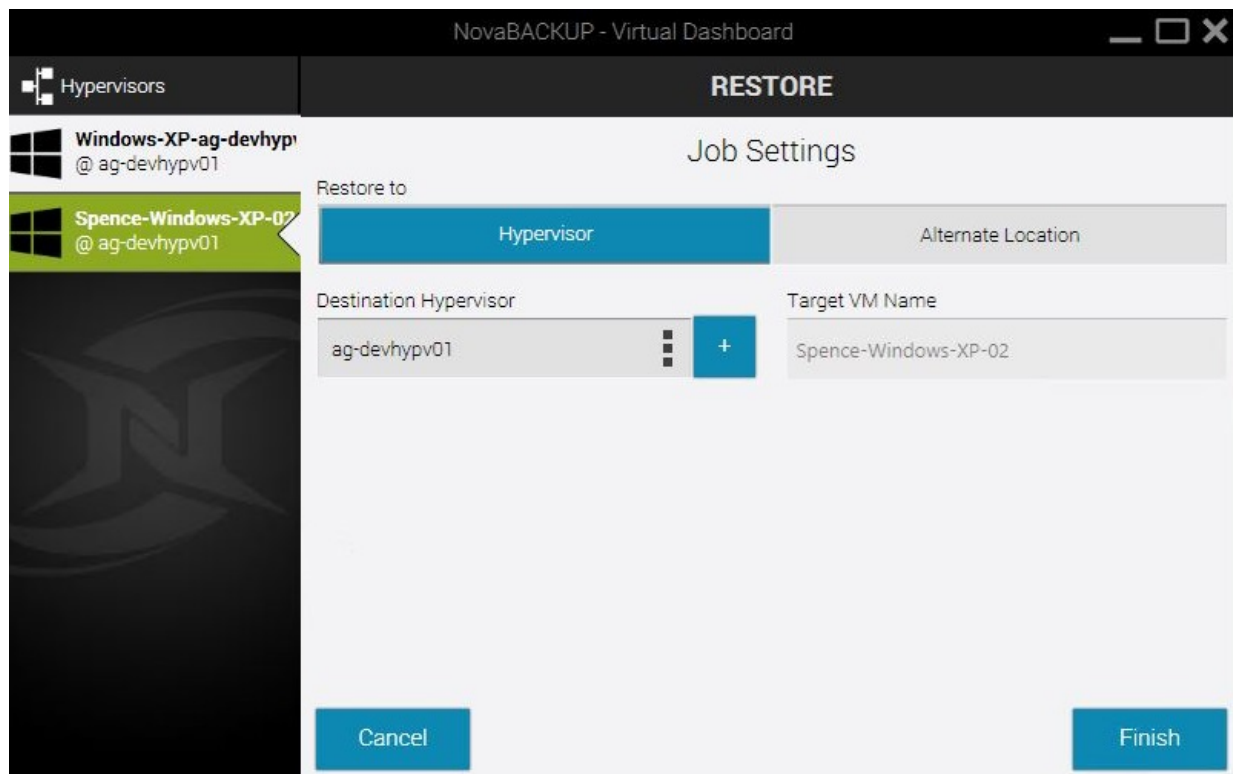
Once mounted, the Mount button will switch to Unmount. After a user is finished restoring any requested individual files from the Virtual Machine, clicking Unmount will disconnect that virtual machine's virtual hard drive.

### Restore (Original Location)

Restoring to the original location allows a user to place the backed up copy of the virtual machine directly back in place to its original location in the Hyper-V server. This will overwrite any existing Hyper-V machines that might still be in place.

Select the Destination Hypervisor and click Finish to begin.





### Restore (Alternate Location)

Restoring to an alternate location allows a user to export a copy of the backed up virtual machine to a new destination in so that it may be moved (Example: restore to USB or NAS to manually move to an alternate location).

Browse to the VHD Folder Path for the destination of the Restore and click Finish to begin.

NovaBACKUP - Virtual Dashboard

Hypervisors

RESTORE

Job Settings

Windows-XP-ag-devhypi  
@ ag-devhypv01

Spence-Windows-XP-02  
@ ag-devhypv01

Restore to

Hypervisor

Alternate Location

VHD Folder Path

C:\backups\NovaBACKUP

Browse

Cancel

Finish

## Hyper-V Replication

Hyper-V Replication uses the Hyper-V Replica technology through Microsoft's Hyper-V service. The Hyper-V Replica technology is a block-level, asynchronous transfer from one Hyper-V host to another. After an initial full transfer, Hyper-V maintains a regularly occurring block transfer to the alternate destination.

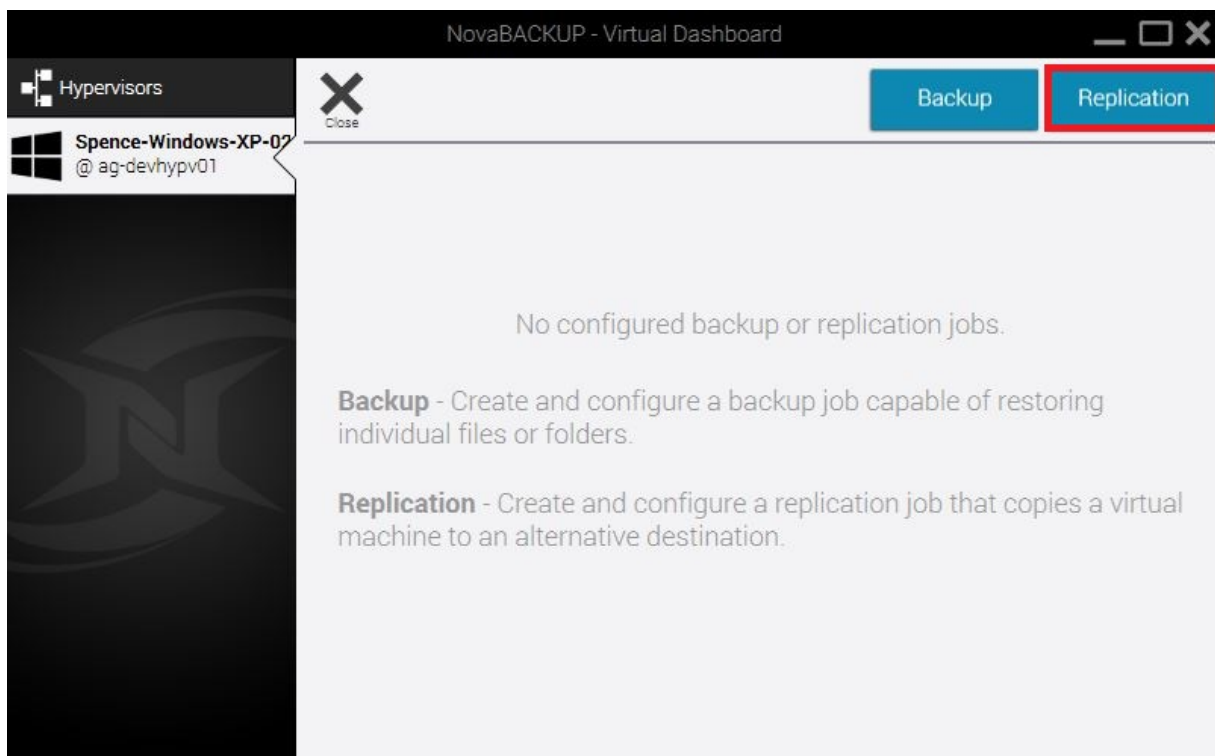
### Requirements

In order to successfully configure Hyper-V replication, users will need to properly configure their Hyper-V hosts. Hyper-V hosts must be Hyper-V 2012 or newer and all Hyper-V hosts are required to connect to a domain (for authentication purposes). Additionally, the target or destination Hyper-V server needs to be configured as a Hyper-V Replica destination.

## Setting up Hyper-V Replication

### Step 1

Select the individual Hyper-V that you want to replicate and then click the "**Replicate**" button on the top right.



## Step 2

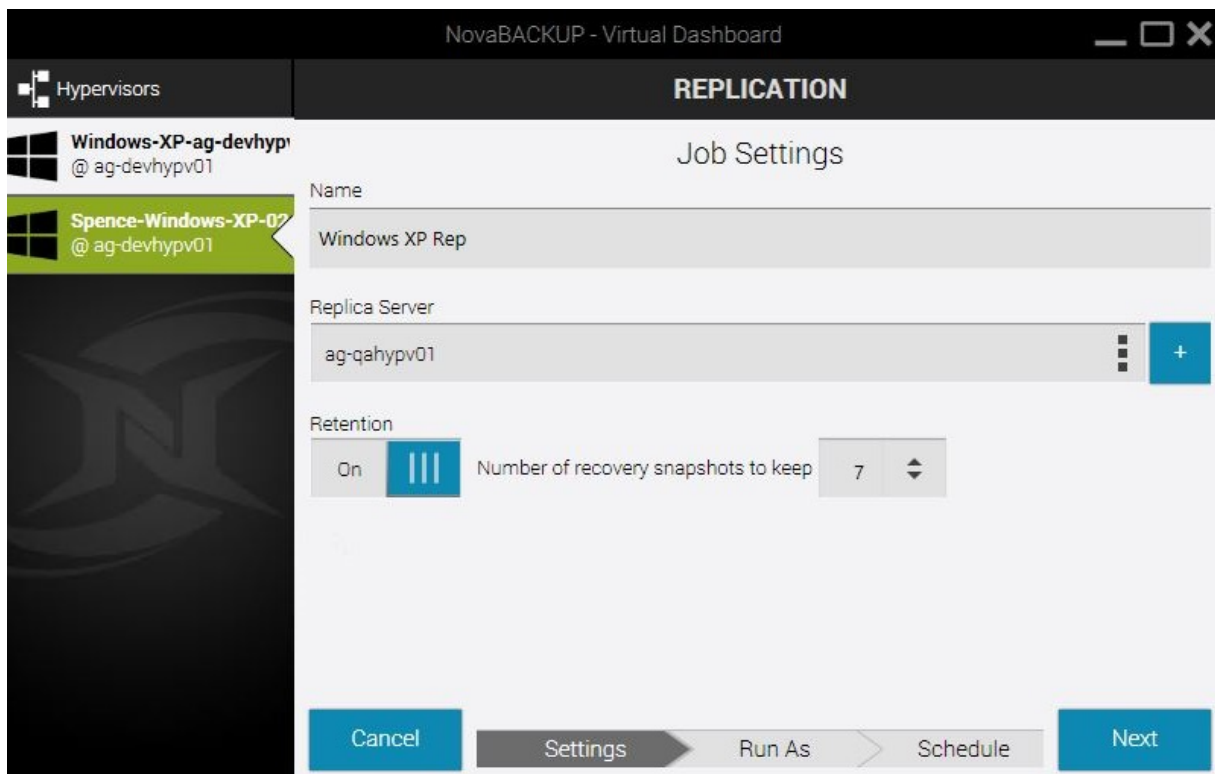
After clicking "**Replicate**" users are presented with the following options:

**Name:** The name of the backup job within the Virtual Dashboard

**Replica Server:** This is the destination, or target, hypervisor. This will display any currently configured Hyper-V hypervisors that are not the source Hyper-V. If the desired hypervisor has not already been configured, users may click the blue "+" sign to add a hypervisor at this time.

**Retention:** The number of previously available versions stored on the target Hyper-V hypervisor

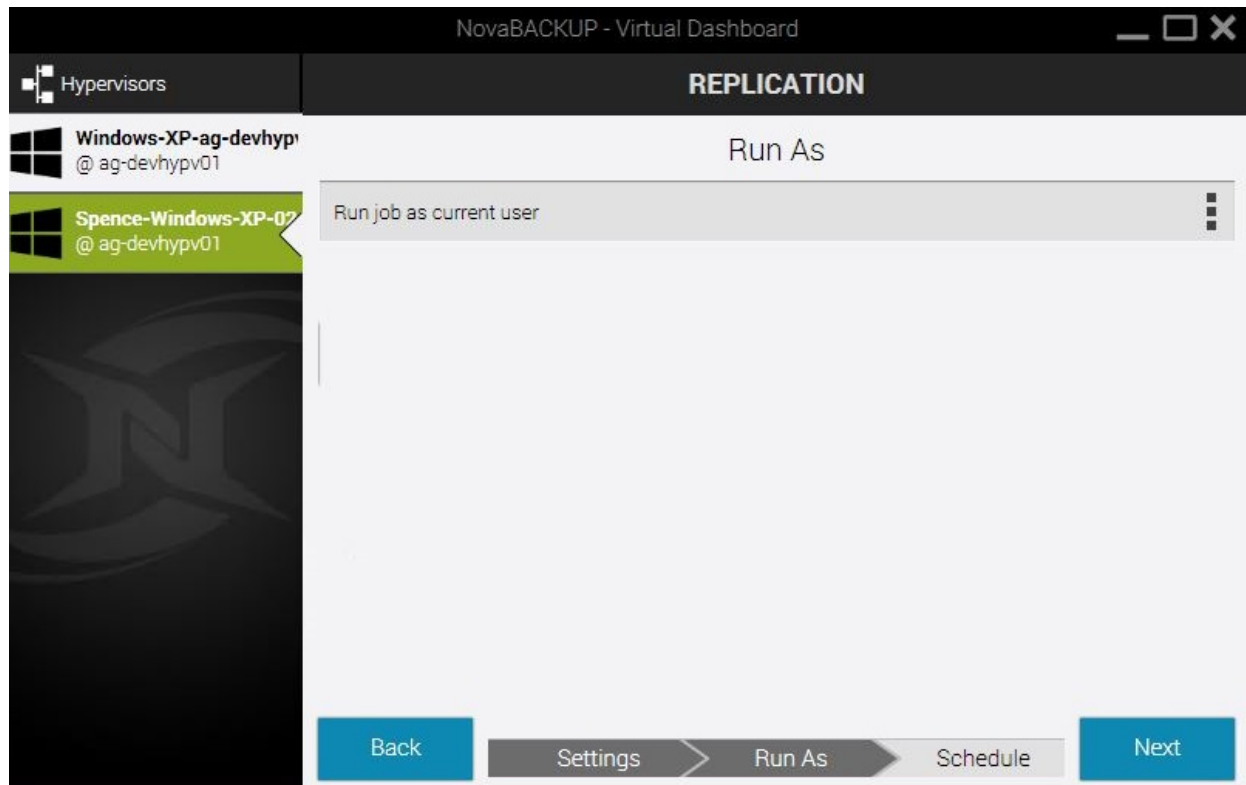
**Note:** Replication is a single-run job type and only needs to be executed once to initialize the replication. After being configured, the Virtual Dashboard reports on the current health of the virtual machine's replication.



The screenshot shows the NovaBACKUP - Virtual Dashboard interface. On the left, there is a sidebar with a "Hypervisors" section containing two entries: "Windows-XP-ag-devhypv01" and "Spence-Windows-XP-02-ag-devhypv01". The main area is titled "REPLICATION" and "Job Settings". It contains three fields: "Name" with the value "Windows XP Rep", "Replica Server" with the value "ag-qahypv01" and a blue "+" button to the right, and "Retention" with a toggle set to "On" and a spinner box showing "7" with the text "Number of recovery snapshots to keep". At the bottom, there are five buttons: "Cancel", "Settings", "Run As", "Schedule", and "Next".

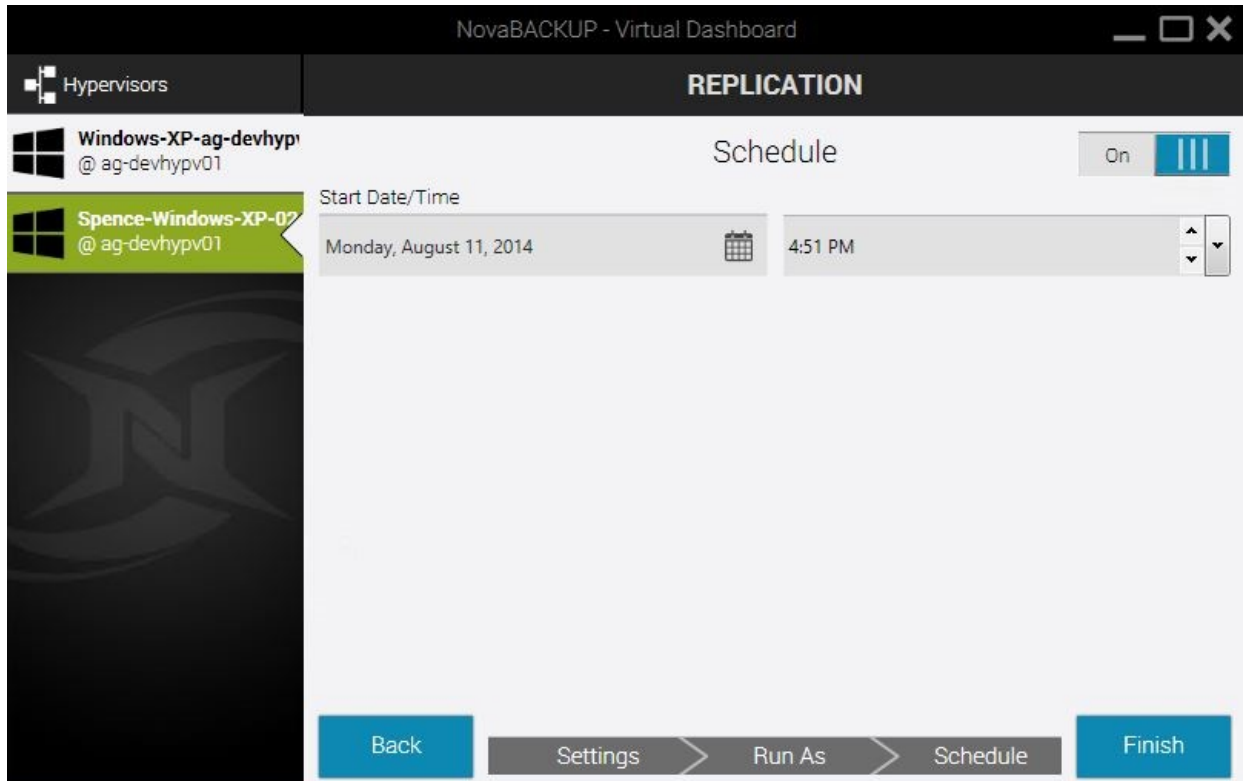
### Step 3

Next a user may select how they want to run the replication job, as either the current user or a specified user.



#### Step 4

Lastly, users may choose a schedule for when the first initial replication takes place. If no schedule is desired, users may toggle the "Schedule" switch in the top right to turn off the scheduler.



The screenshot shows the NovaBACKUP - Virtual Dashboard interface. The main window is titled "REPLICATION" and displays the "Schedule" settings for a specific backup job. The job name is "Spence-Windows-XP-07" and it is located at "@ ag-devhypv01". The "Schedule" toggle is currently set to "On". The "Start Date/Time" is set to "Monday, August 11, 2014" at "4:51 PM". The interface includes a "Back" button, a "Settings" button, a "Run As" button, a "Schedule" button, and a "Finish" button. The "Schedule" button is highlighted, indicating it is the current step in the process.