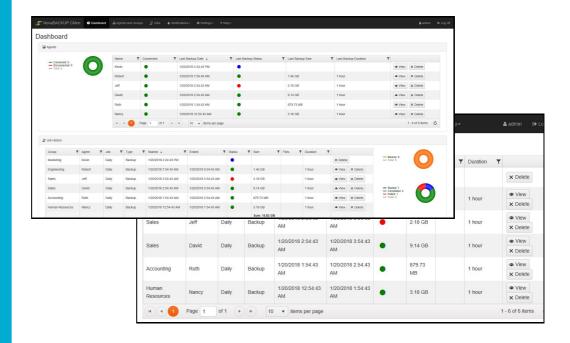


NovaBACKUP® CMon v19.1

User Manual



Features and specifications are subject to change without notice.

The information provided herein is provided for informational and planning purposes only.

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Introduction

Thank you for choosing NovaBACKUP® CMon by NovaStor

CMon (Central Monitoring Console) is an application that works along side your NovaBACKUP PC, Server, and Business Essentials backup software. The CMon can be utilized to monitor the associated backup jobs in your entire backup environment, all from a single pane of glass style website interface. CMon is accessible via web browser and can be viewed via Internet Explorer 9+, Google Chrome, Mozilla Firefox as well as most smart phone web browsers.

NovaBACKUP® CMon is composed of 2 components.

- 1. The CMon (Central Monitoring Console) application enables the capability to monitor backup agents from any edition of NovaBACKUP® PC, Server, or Business Essentials, **version 18.0** and above. Typically CMon is installed on a Windows Server machine which does not have NovaBACKUP backup software installed on it. CMon can run on the same server that NovaBACKUP backup client is installed but it may perform better on a separate server. Read the System Requirements section for more information.
- 2. Your installations of NovaBACKUP® PC, Server and Business Essentials, version 18.0 or higher, which are installed on your systems to backup critical data, such as SQL and Exchange databases, as well as virtual environments. This quick start guide will describe how to setup the CMon, along with how to connect one installation of NovaBACKUP® (referred to as an agent) to the CMon. Subsequent installations of NovaBACKUP® PC, Server and Business Essentials will require configuration to connect to the CMon in the same manner.

System Requirements

Operating Systems:

- Microsoft Windows Server 2008 SP2
- Microsoft Windows Server 2008 R2 SP1
- Microsoft Windows Server 2012
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2016

Connectivity to one of the following:

- Built in SQLite database
 - The following is completely **optional** if you do not want to utilize the **built in SQLite** database which is the default:
- Microsoft SQL 2008 R2
- Microsoft SQL 2012
- Microsoft SQL 2016
- Microsoft SQL 2017

Miscellaneous

- Microsoft .NET Framework 4.x
- Modern HTML5 supported desktop web browsers such as Internet Explorer 9 and above, Chrome, Firefox, Safari, Opera,
 Edge
- Modern HTML5 supported mobile web browsers such as Android 5.0, iOS 9.0, Windows 10, BlackBerry 10, Opera Mobile, Amazon Silk
 - **Note**: To test HTML5 compatibility with your current browser please test it here: https://html5test.com/. A points score closer to 500 is optimal.
- IIS with IIS 6 compatibility or utilize the built in standalone web server (if the Microsoft IIS option is utilized during installation)
- Intel **Dual Core** CPU or better
- 4 GB of RAM minimum
- 3 GB free hard drive available space on OS drive
- TCP/IP network

Installation

The first step is the successful installation of the CMon. This is where all of the agents will check into and allow you to centrally monitor your backups across multiple machines through a web browser. The CMon needs to be installed onto a Windows Server 2008 R2 or 2012 machine that all of the other machines on which you install agents can talk to. Please check the System Requirements for the NovaBACKUP® CMon for the machine requirements for installation of the software.

The agents themselves connect to the CMon through port 4502 by default, though this is configurable. The built-in web server will use port 80, allowing you to connect to the web page and monitor your backups. This may also be configured at the time of CMon installation.

The default choices for the installation of the CMon should be sufficient for most environments and you are advised to utilize the default choices.

The SQLite database can easily handle 25 agents, and if you do not already have IIS installed on the machine which the CMon will be installed - the built-in web server will work great.

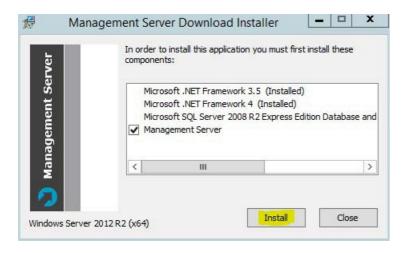
For more detailed steps through the installation of the CMon please consult the section on CMon Installation coming up next in this User Manual.

Things to note for the installation of the CMon:

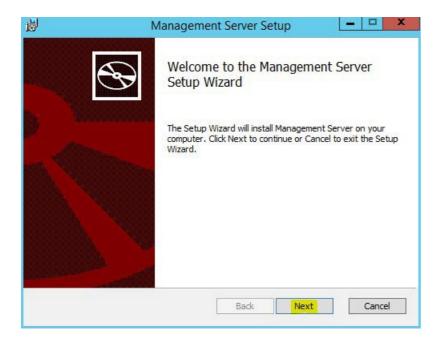
- Make sure the incoming and outgoing firewall default ports 80 and 4502 are correctly configured to allow for proper communication.
- During the installation of the CMon you will be asked for the Public Server Address of the management server (CMon). This needs to be an address or URL where all of the agents can reach the CMon.
- Before connecting agents to the CMon make sure you can login to it. There will be a shortcut in your Start Menu that opens a web page with the CMon login. The default login user is "admin" and the default password is "admin"

To **install CMon**, run the setup executable to begin the installer wizard, the installer will let you know what things you are missing for the prerequisites to install the software. The optional "Microsoft SQL Server 2008 R2.." component is unchecked because the CMon software is shipped with a built in SQLite database that is able to handle many agents, but the option to use "Microsoft SQL Server 2008 R2 Express Edition" is there if you decide to utilize it.

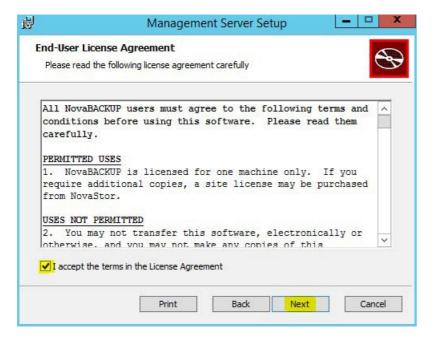
Upon running the installer, the following screen comes up to ensure all prerequisite components are installed.



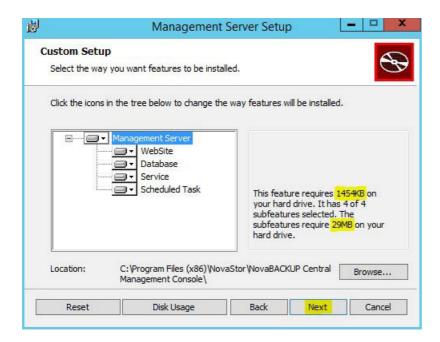
After you have all the prerequisites installed, the following screen will come up:



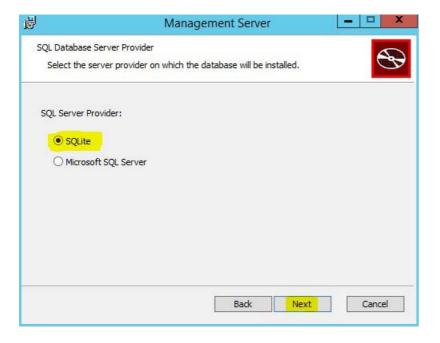
Clicking next on this screen will present you with the End-User License Agreement screen which needs to be accepted before continuing.



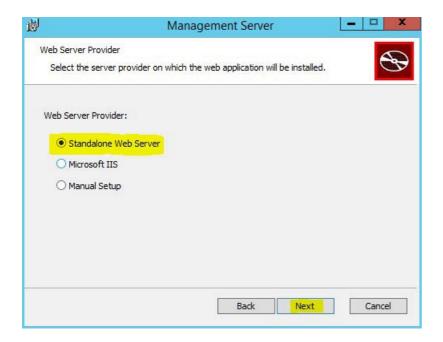
After accepting the EULA the next screen shows what features will be installed, it is recommended to keep everything with the defaults here unless there is a specific reason you need to change them.



The following screen allows you to choose whether or not you are going to use the **built in SQLite** database or utilize a Microsoft SQL Server. From internal testing, unless you have a larger installation of over 30 agents that you will be controlling the SQLite database works well.

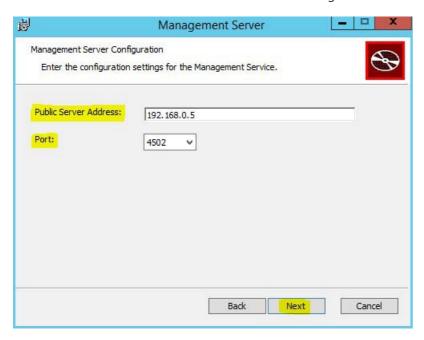


Assuming you choose the SQLite database the next screen you will see is the screen that will ask you where you want to host the web application. If you do not already have IIS installed on your machine, we have found in testing that the standalone web server works very well. If you have IIS installed it is recommended that you use it, otherwise you will have a conflict of open ports.

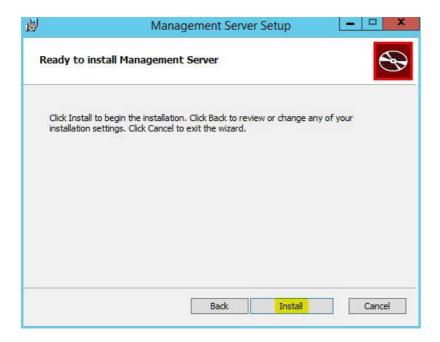


After choosing where you want the web application installed to it is time to configure the web application. The Public Server Address dialog box shown in this screen is the IP, DNS name, or computer name that the NovaBACKUP agents are going to be communicating with. The Port dropdown box contains the available ports that the NovaBACKUP agents can communicate to the CMon on.

The computer that hosts CMon needs to have the port that you choose open on it so the NovaBACKUP agents can communicate with the CMC. The agents themselves do not need to open any incoming ports, but they have to be configured to use the correct port. All agent communication is initiated from the agent so no incoming communication from the CMC is initiate so there should not be much to deal with firewalls on the NovaBACKUP agents.



At this point all the information needed to install CMon has been gathered and the installer is ready to start installing it.



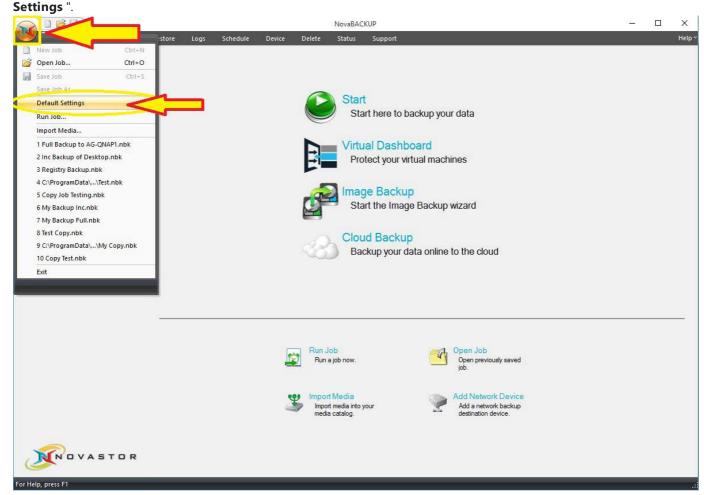
When the installer completes you will see the following screen which starts the required Services. Click "Finish" to complete the installation. If any other CMon installation related screens are still open at this point you can close them.



Setting up the backup client

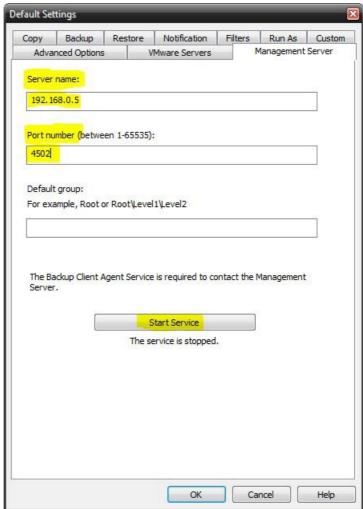
Now that you have the CMon successfully installed it's time to connect an agent to it. This section will cover how to setup the backup client software to connect to CMon.

- 1. The first thing you need to do is install a backup client (NovaBACKUP® PC, Server, or Business Essentials) on the machine you'd like to back up. For instructions on how to do this please consult the NovaBACKUP® Quick Install Guide. By accepting all default options during installation, all necessary items will be installed. Once NovaBACKUP® PC, Server, or Business Essentials is installed we need to configure the connection to CMon. NovaBACKUP PC, Server, and Business Essentials clients require a setting to be configured in order for the backup client to become an Agent.
- 2. Start the NovaBACKUP client and click on the Home tab.
- 3. From the main menu click the large circle NovaStor logo button highlighted at the top left, and then click " **Default**



This will open a screen with a series of additional tabs.

4. Once in " **Default Settings** " you will click on the " **Management Server** " tab. You will be required to configure the " **Server name** " and " **Port number** " variables on this screen. Enter the server address or IP address of the machine where CMon is installed in the "**Server name**" field. Enter the port number CMon is configured to use in the "**Port number**" field. These values should be the same values entered during the CMon installation. The default port number is 4502. The "Default group" option on this screen will automatically place this agent into the group specified on the CMon. In general you do not need to enter anything in the Default Group option at this point. If you do not choose a Default group this agent



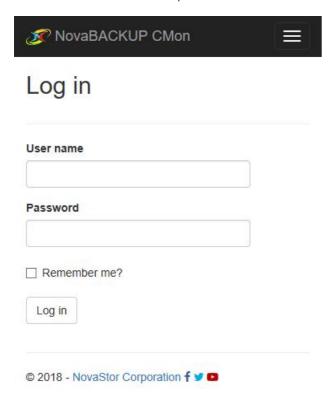
will be placed in the "Pending" group in CMon.

- 5. Click the "**Start Service**" button to start the service. "The service is started" is displayed when the service has started successfully which is required in order to connect to CMon. Click the "OK" button to save the changes. Now you have the CMon installed, the backup client installed, and the agent connected to CMon. You should now be able to login to the CMon and see the agent.
- 6. To verify the service is an automatically starting service, open up Windows Services. Once in the Services screen, find the service named "Backup Client Agent Service". This is the service that actually connects to the CMon so you can monitor your agent. By default this service is set to Manual, go to the properties of this service and set it to Automatic (Delayed Start), and [Apply]. You may now exit out of Windows Services.
- 7. Additional agents may be connected using these same steps.

Logging In

Logging in to the CMon is as simple as opening a web browser on your computer and browsing to the IP address, DNS name, or computer name along with the port number that you configured during the CMon installation; the default web port is 80. A shortcut to the website is installed on the computer where CMon was installed in the Start Menu in the "NovaStor" group for convenience.

The CMon website should work with any modern web browser including Internet Explorer 9 and above, Google Chrome, Mozilla Firefox as well as most smart phone web browsers.



The default login Username is **admin** with a Password of **admin**.

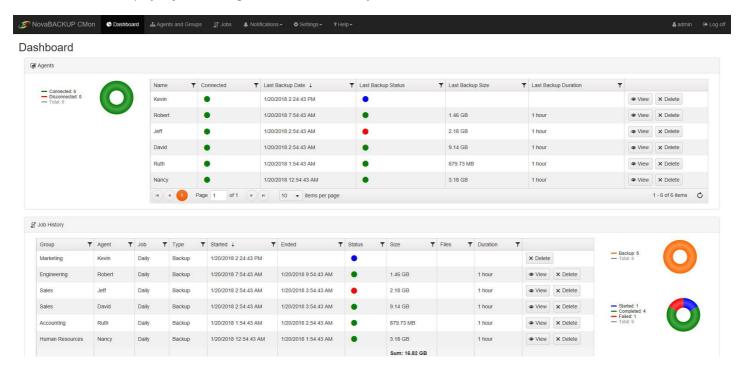
After logging in for the first time, it's recommended to change your password using the Account Management page.

If the number of time time a user fails to log in because of an invalid password exceeds the maximum number configured in the web application configuration file, the user will be locked out. Use the Users page to unlock an account. To unlock the admin account, use the Server Administration Desktop Application.

Dashboard

The CMon can be utilized to monitor all of the NovaBACKUP clients and the associated backup jobs in your environment, all from a single pane of glass interface. CMon is accessible via web browser and can be viewed via Internet Explorer 9 +, Google Chrome, Mozilla Firefox as well as most smart phone web browsers.

The **Dashboard** is displayed just after login. It is an overview of your NovaBACKUP environment.



The "Menu" that is displayed on the top of each page shows the various functions that can be quickly accessed. If the browser's width is too narrow, the menu will be collapsed and in order to expand the menu, click on the 3 horizontal lines near the top right corner of the page.

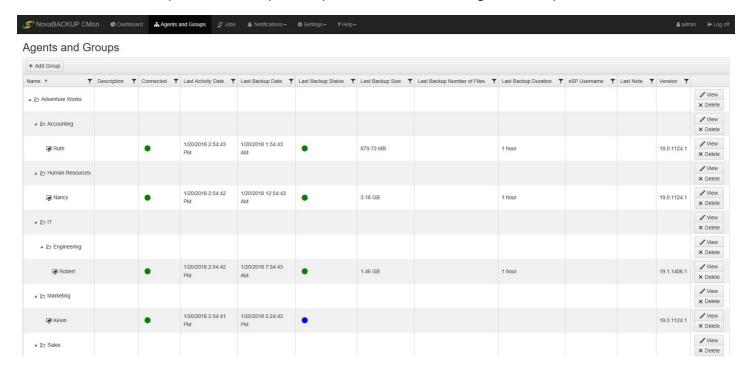
On the Dashboard screen you can perform various functions.

To view more details about a particular NovaBACKUP Agent in your environment, you can double-click on an "Agent" via the Dashboard screen. An Agent is simply a computer that is running NovaBACKUP backup client software that was configured to utilize the CMon application for monitoring.

You can hover over the circular pie-chart graphic near the bottom right of the screen to see your job statuses. To display jobs with all of the various types of status including Failed, Successful, Warning, Stopped, and Started jobs.

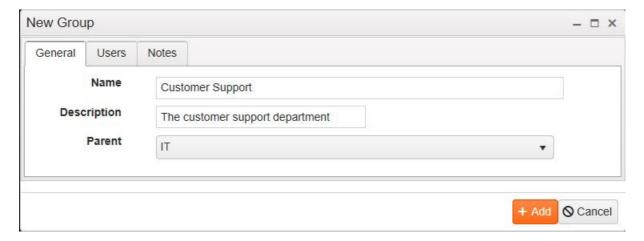
Agents & Groups

Agents & Groups is the area in CMon where you will view all of your client software that has been configured to connect to the CMon. You can create Groups here as well as print a Report of the contents of the Agents & Groups area.



Agents & Groups - Add Group function example:

Adding a Group is performed by clicking the " Add Group " function as seen in this example.

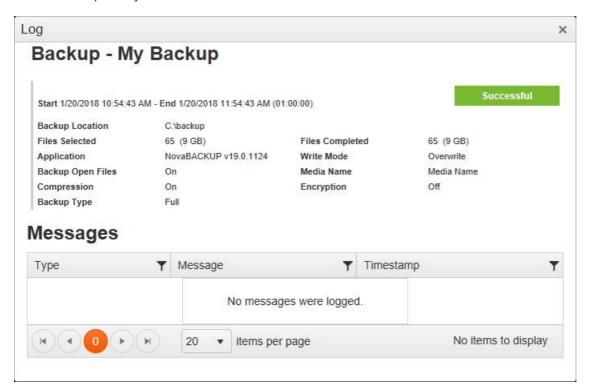


Log Viewer

Log Viewer via the Dashboard example (1 of 2):

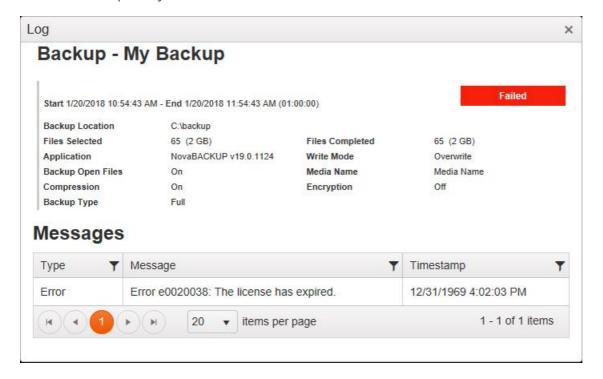
Via the Dashboard you can double-click on any agent name that you are interested in seeing the log for and it will display the backup log as seen in this example.

This first example is a job with Successful status.



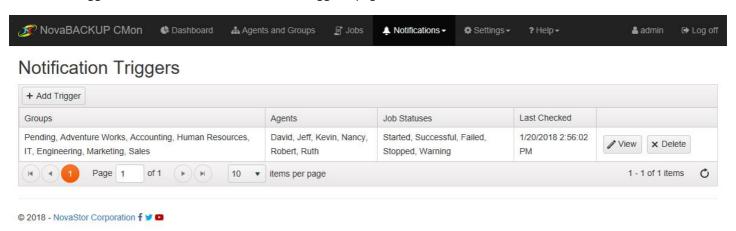
Log Viewer via the Dashboard example (2 of 2):

This second example is a job with Failed status.

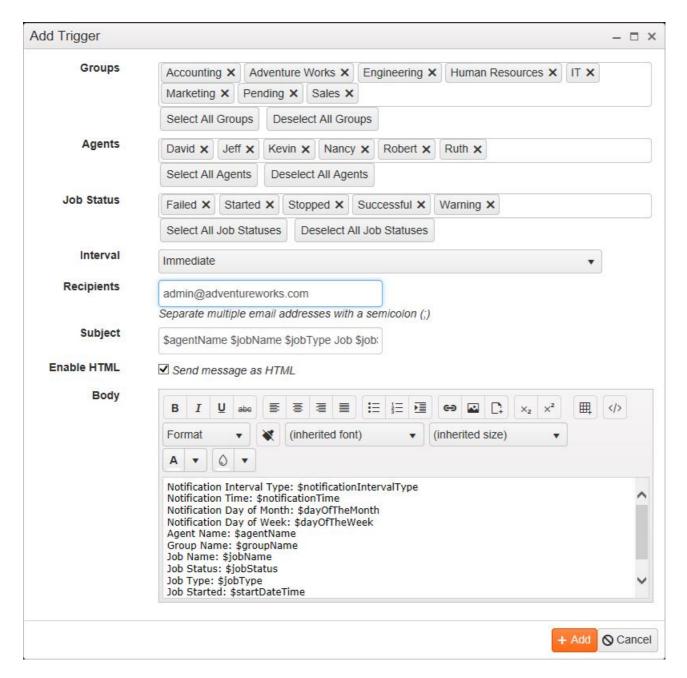


Triggers and Notifications

A **Notification Trigger** is an e-mail notification for selected groups of agents on an interval basis. A single trigger can be created for an entire group of agents. The notification will be an e-mail sent to the e-mail addresses specified in the trigger configuration. The current triggers are shown in the "Notification > Triggers" page.



When creating a **New Trigger**, you are asked some questions including the agents and groups that will be included in the notification. The "**Notification Interval** " choices are Daily, Weekly, Monthly and Immediate. You can set a custom subject, message text, etc. When done configuring click the Add button.



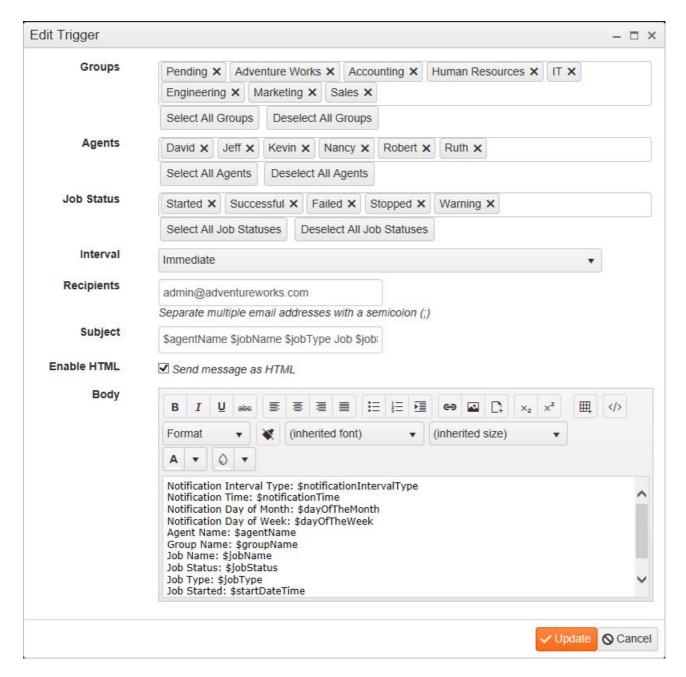
Once a **New Trigger** is added you can "**View**" or "**Delete**" the existing trigger by clicking on the buttons on the right-side of the screen in the Action column. To **Edit** you can click the **View** button.

The following custom email substitution variables can be used in the subject and body of the notification email.

Variable	Description	Examples
\$notificationIntervalType	The notification interval type name.	Daily Weekly Monthly Immediate
\$notificationTime	The notification time in the format <i>hh:mm:ss tt</i> as specified for a Daily interval.	07:34:55 PM
\$dayOfTheMonth	The notification day of the month as specified for a Monthly interval.	15
\$dayOfTheWeek	The notification day of the week as specified for a Weekly interval.	Sunday
\$agentName	The agent friendly name for which the job was run on.	agent1

\$groupName	The group name of the agent for which the job was run on.	group1
\$jobName	The name of the job that ran.	job1
\$jobStatus	The status of the job at the time of the notification.	Started Successful Failed Stopped Warning
\$jobType	The type of the job.	Backup Restore Copy Import Image Backup Virtual Machine File Level Backup Virtual Machine Replication Backup Virtual Machine File Level Restore
\$startDateTime	The time the job started.	6/15/2016 7:47:34 PM
\$endDateTime	The time the job finished. If the job has not finished yet, the value will be empty.	6/15/2016 7:54:13 PM
\$backupClientVersionNumber	The backup client version number.	18.0.1813.1

Example:

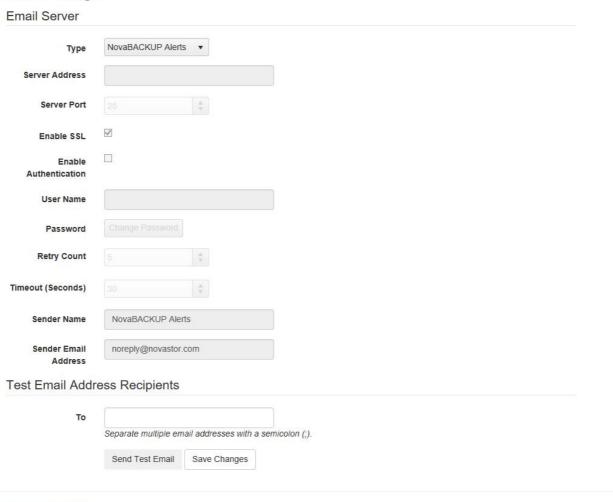


To configure how the **Notification e-mails** are sent you, click on the "**Notification**" menu item under the "**Settings**" menu item. Notification e-mails are delivered **by default** via the built-in "NovaBACKUP Alerts" SMTP service.

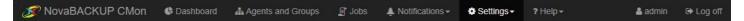


Notification Settings

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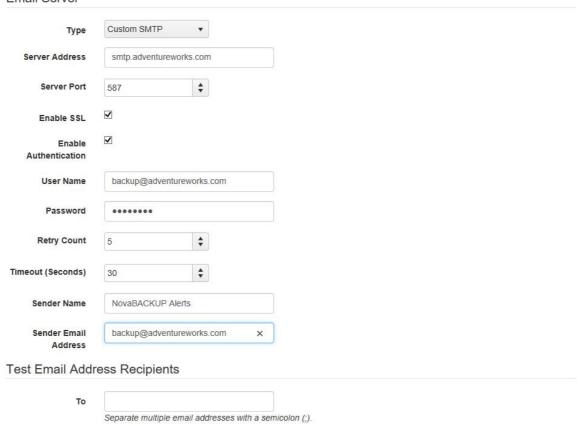


You can also configure CMon to send Notifications using a "**Custom SMTP**" server. Make sure to fill in all of the details that are prompted for. Once the prompts are filled in click the " **Test Email Settings** " button to verify all of the settings are correct prior to saving, otherwise your Notification e-mails will fail.



Notification Settings

Email Server



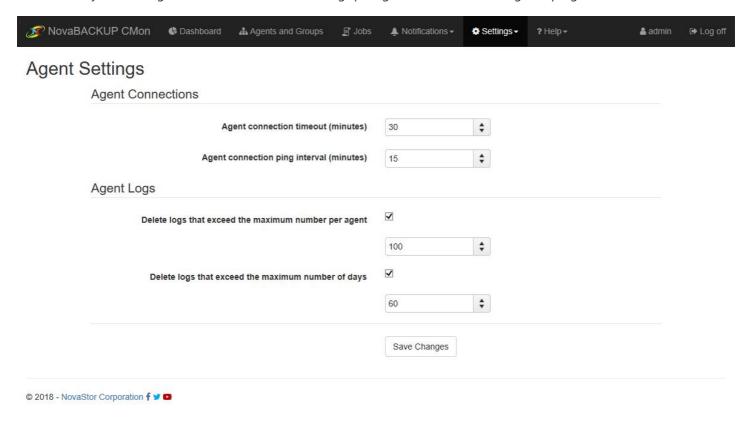
Send Test Email Save Changes

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Agent Settings

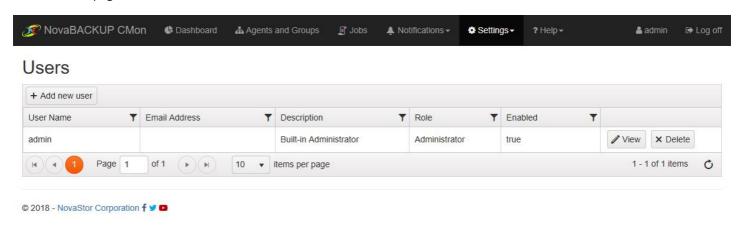
The Agent Settings page allows you to configure the timeout and ping interval for agent connections.

It also allows you to configure the maximum number of logs per agent and the time old logs are purged from the database.

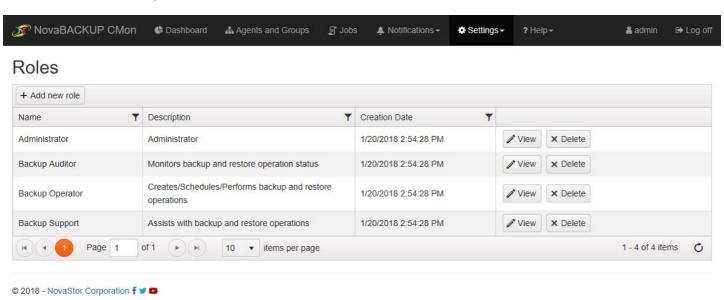


Users & Roles

The "Users" page is where you can set up CMon to work with more than just the single built-in "admin" account. Once on the "Users" page you have the ability to add users by clicking on the "Add new user" button. Custom Roles can be created for users via the "Role" page.



The "**Roles**" page contains the ability to create and edit Roles. Once on the **Roles** page you can click on "**Add new role**" button to add new rolws. From there you will be able to define a custom role.



Account Management

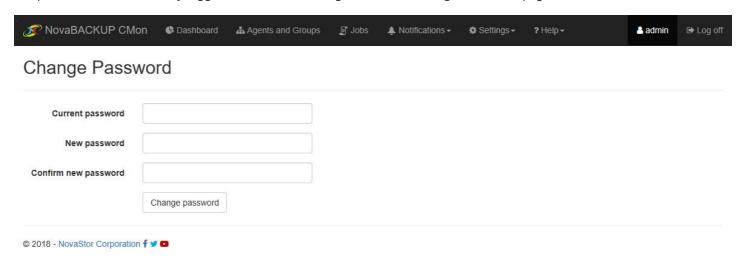
To manage the currently logged in user account, click on the username in the navigation menu.

The account management page provides the ability to change the following:

- Password
- Time zone
- Language

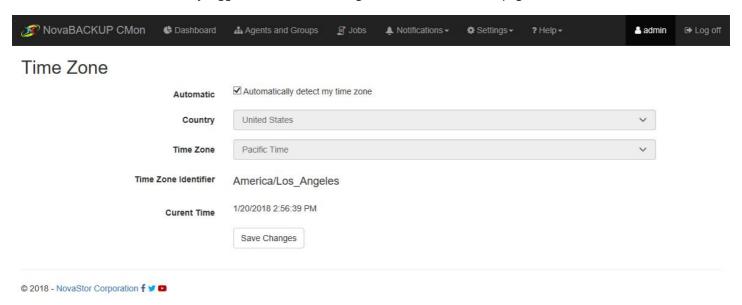
Password

The password for the currently logged in user can be changed from the "Change Password" page.



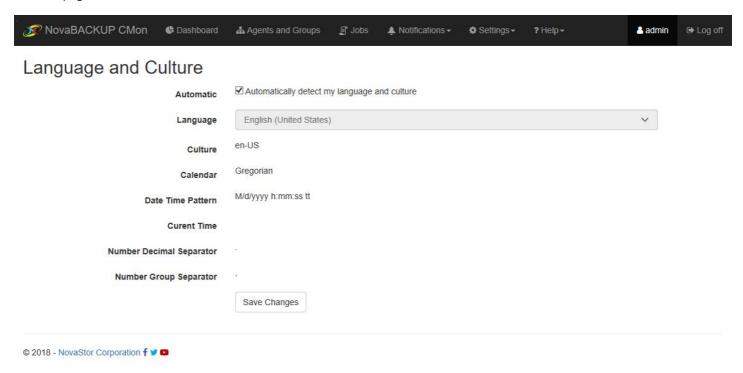
Time Zone

The date and time for the currently logged in user can be changed from the "Time Zone" page.



Language and Culture

The format dates, times, and numerals are displayed for the currently logged in user can be changed from the "Language and Culture" page.



Server Administration Desktop Application

The CMon Server Administration utility is a desktop application installed on the local server where CMon is installed.

A shortcut is created in the Start menu called "NovaBACKUP CMon Server Administration".

It allows you to change the CMon server address and port number and unlock user accounts.

Help / Technical Reference

The **Help** menu.

The Help menu will allow you to view the CMon - Central Monitoring Console User Manual.

A link is provided on the bottom of the help documentation to download a PDF version.

You can send us feedback by clicking the "Send Feedback" button on the right.

Known Issues with CMon

- Copy, Retention, and Import jobs are not monitored/reported
- When using CMon over HTTP, usernames and passwords are sent in plain text
- It is recommended to use SSL/HTTPS for security reasons.
- Some inputs are not validated for maximum lengths.

Troubleshooting

The "Management Server" windows service configuration file is used for troubleshooting.

For example, with a default installation, it is located here: "C:\Program Files\NovaStor\NovaBACKUP Central Management Console\Service\ManagementServer.Service.WindowsServiceHost.exe.config".

When this file is modified, the internal services will automatically restart and use the latest changes. If the configuration file contains errors, the windows service will not start. If the windows service is already started, it will automatically stop. In both cases, errors will be logged in the app_tracelog.svclog file in the Logs directory. For example, with a default installation, it is located here: "C:\Program Files\NovaStor\NovaBACKUP Central Management Console\Service\Logs".

If using the standalone web server, the "Management Web Server" windows service configuration file is used for troubleshooting.

For example, with a default installation, it is located here: "C:\Program Files\NovaStor\NovaBACKUP Central Management Console\WebRoot\Web\bin\ManagementServer.WebServer.WindowsServiceHost.exe.config".

These files can be edited in a simple text editor (ex. notepad).

The Management Service may not be started.

The Management Service must be started to be accessible. Run the Services control panel and start the "Management Service" windows service. If it fails to start, see the "How to enable logging for the 'Management Server' windows service" section in this topic for troubleshooting.

The Web Server may not be started.

The Web Server must be started to be accessible. Depending on which web server hosts the console application, run the Services control panel and start the appropriate windows service:

- If using the standalone web server, start the "Management Web Server" windows service. If it fails to start, see the "How to enable logging for the 'Management Web Server' windows service" section in this topic for troubleshooting.
- If using Internet Information Services (IIS), start the "World Wide Web Publishing Service" windows service.

A firewall may be blocking one or more required ports.

If the Management Service is behind a firewall, make sure its configured port is open. The port number was specified during installation and saved in the "Management Server" windows service configuration file. You can launch the Server Administration utility to quickly view and optionally edit the port number. The Management Service uses the TCP protocol.

If the web server is behind a firewall, make sure its configured port is open. The port number may have been specified during installation and saved in the "Management Web Server" windows service configuration file if the standalone web server was selected.

The Management Service address may be incorrect.

The Management Service address must be configured correctly to be accessible. The server address was specified during installation and saved in the "Management Server" windows service configuration file. You can launch the Server Administration utility to quickly view and optionally edit the server address.

How to enable logging for the "Management Server" windows service

Open the "Management Server" windows service configuration file, perform the steps outlined below, and then save the file. This generates a fairly large amount of trace data in the Logs directory. After you are done troubleshooting, remember to revert your

changes.

Enable Log Listeners

Enable logging to the Application Event Log and a Flat File.

Change this: XML

to: XML

Enable WCF Verbose Activity Tracing

Set the switchValue attributes to Verbose, ActivityTracing.

Change this: XML

to: XML

Enable Message Logging

Enable logMessagesAtServiceLevel, logMalformedMessages, and logMessagesAtTransportLevel.

Change this: XML

to: XML

How to enable logging for the "Management Web Server" windows service

Open the "Management Web Server" windows service configuration file, perform the step outlined below, and then save the file. This generates a log.txt file in "C:\Program Files\NovaStor\NovaBACKUP Central Management Console\WebRoot" for example. After you are done troubleshooting, remember to revert your changes.

Enable Log Listeners

Enable logging to a Flat File.

Change this: XML

to: XML