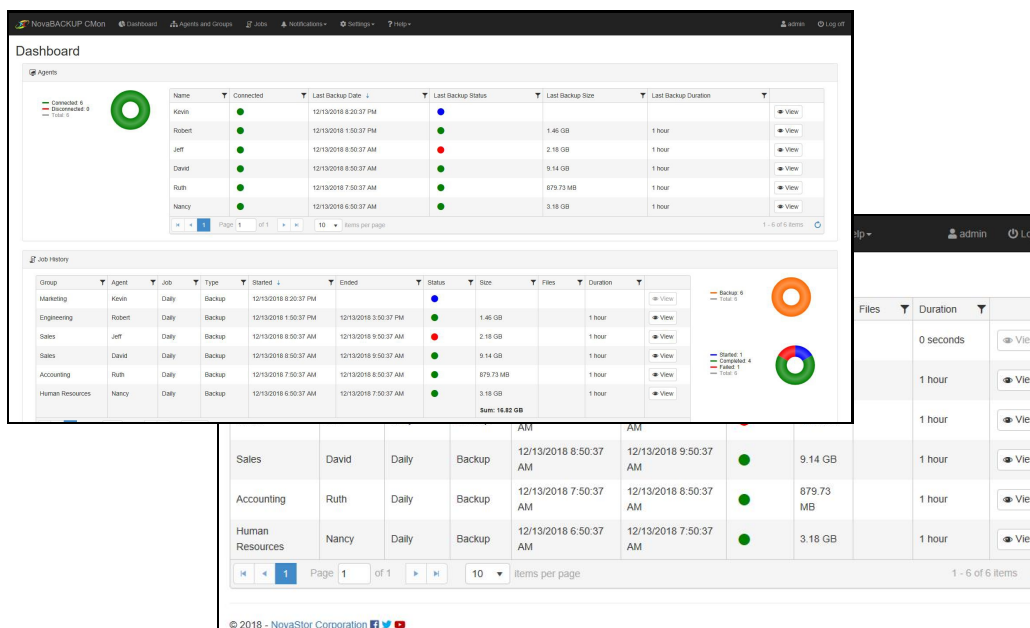




NovaBACKUP® CMon v19.3

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 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 SP1
- Microsoft Windows Server 2008 SP2

Connectivity to one of the following:

- Built in SQLite database (supports up to 5 agents, if more than 5 agents use Microsoft SQL Server)
The following is completely **optional** if you do not want to utilize the built in SQLite database which is the default:

- **Microsoft SQL Server (all Windows editions, including Express, Standard, Enterprise):**

- Microsoft SQL 2017
- Microsoft SQL 2016
- Microsoft SQL 2014
- Microsoft SQL 2012
- Microsoft SQL 2008 R2

Note: If more than 5 backup agents, use Microsoft SQL Server and not SQLite. 2012 and 2008 R2 versions may have less performance and are not recommended for CMon.

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 (up to 5 backup agents) / 8 GB of RAM minimum (if more than 5 backup agents)
- 10 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 built-in SQLite database can easily handle 5 agents, if more than 5 agents use Microsoft SQL Server (Express or Standard edition), and if you do not already have IIS installed on the machine which the CMon will be installed then the built-in web server will work great.

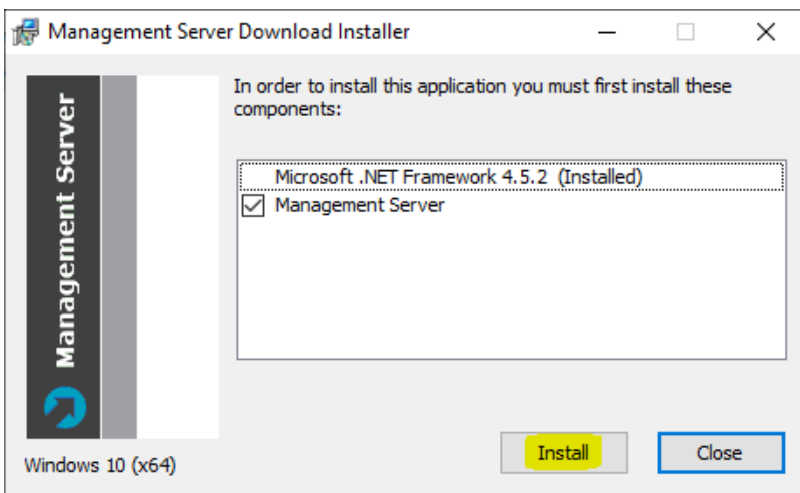
For more detailed steps through the installation of the CMon please consult the section on CMon Installation coming up next in this User Manual.

Things to note for the installation of the CMon:

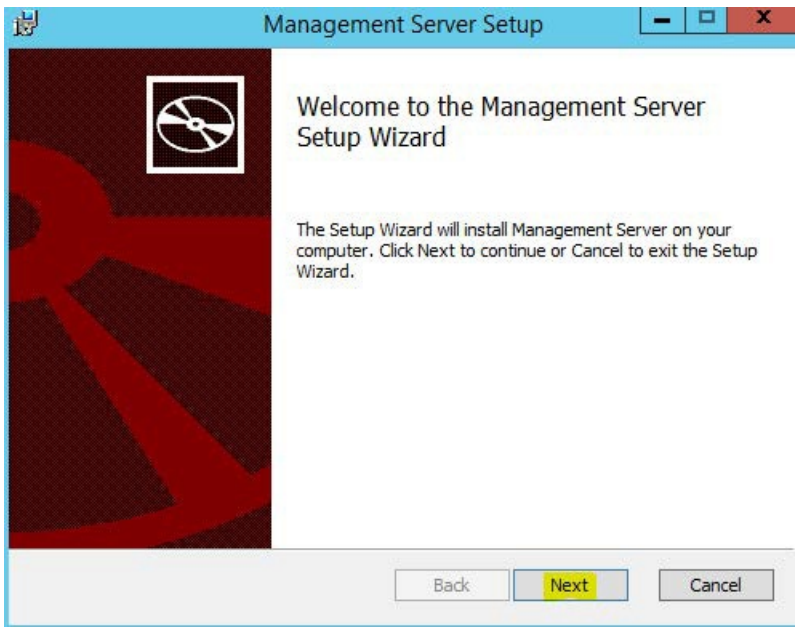
- Make sure the incoming and outgoing firewall default ports 80 and 4502 are correctly configured to allow for proper communication.
- During the installation of the CMon you will be asked for the Public Server Address of the management server (CMon). This needs to be an address or URL where all of the 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 which items you are missing for the prerequisites to install the software.

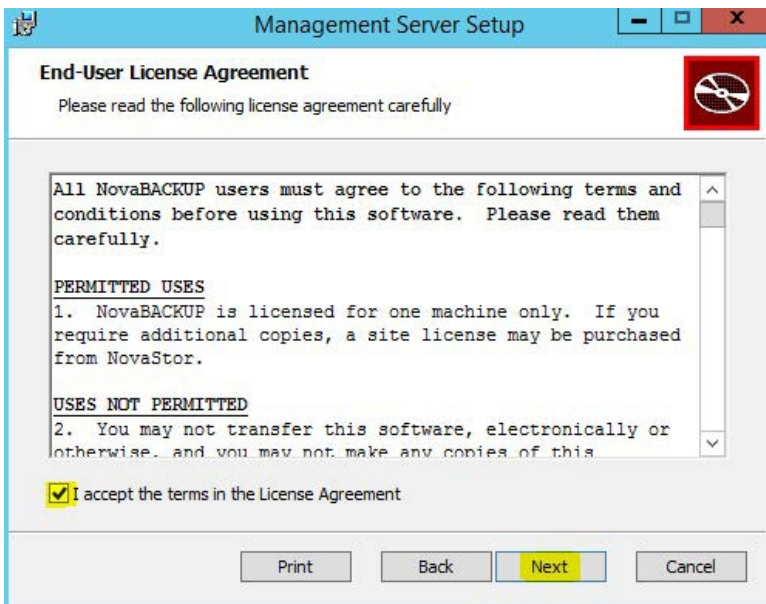
Upon running the installer, the following screen comes up to ensure all prerequisite components are installed.



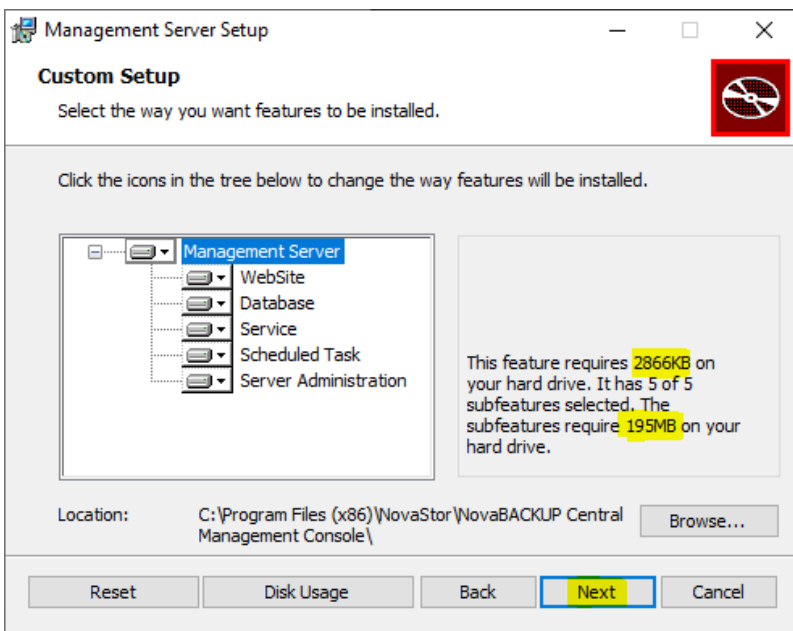
After you have all the prerequisites installed, click on Install and the following screen will display:



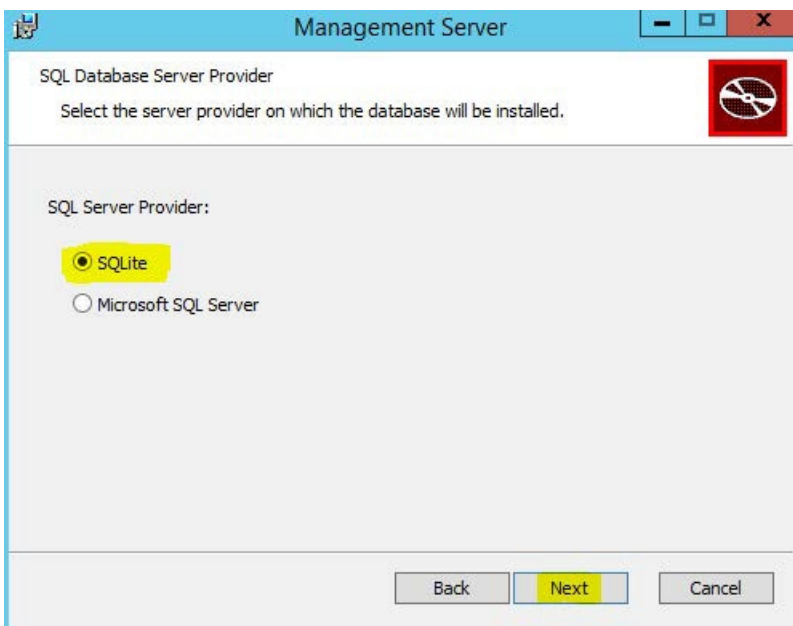
Clicking next on this screen will present you with the End-User License Agreement screen which needs to be accepted before continuing.



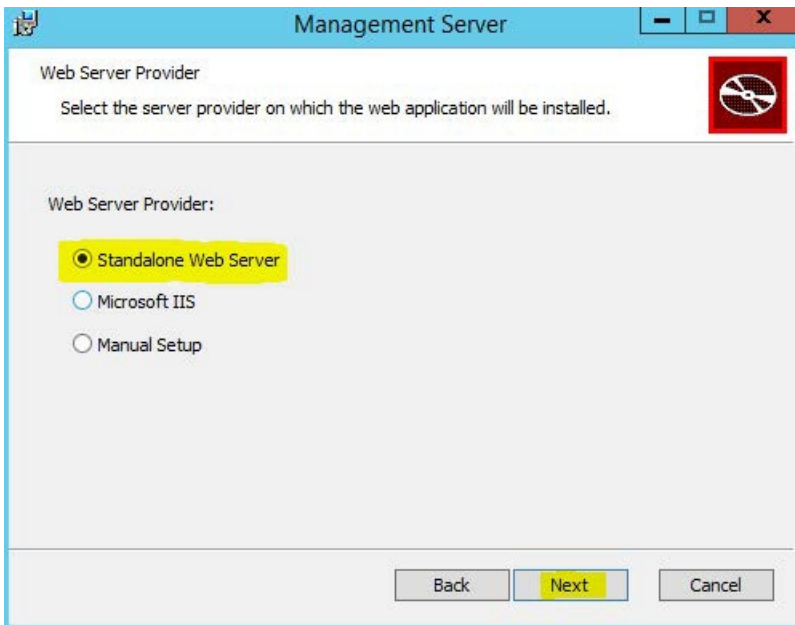
After accepting the EULA the next screen shows what features will be installed, it is recommended to keep everything with the defaults here unless there is a specific reason you need to change them.



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 5 agents that you will be controlling the SQLite database works well. If you have over 5 agents, it is best to use Microsoft SQL Server which can be SQL Server 2014, 2016, and 2017 for Express and Standard editions. Microsoft SQL Server versions prior to that will not perform well and are not supported.

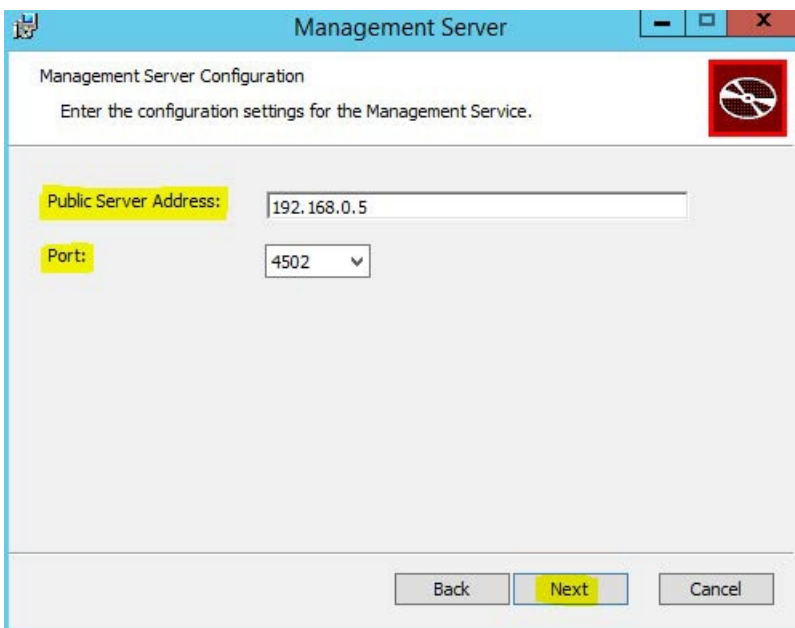


Assuming you choose the SQLite database the next screen you will see is the screen that will ask you where you want to host the web application. If you do not already have IIS installed on your machine, we have found in testing that the standalone web server works very well. If you have IIS installed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

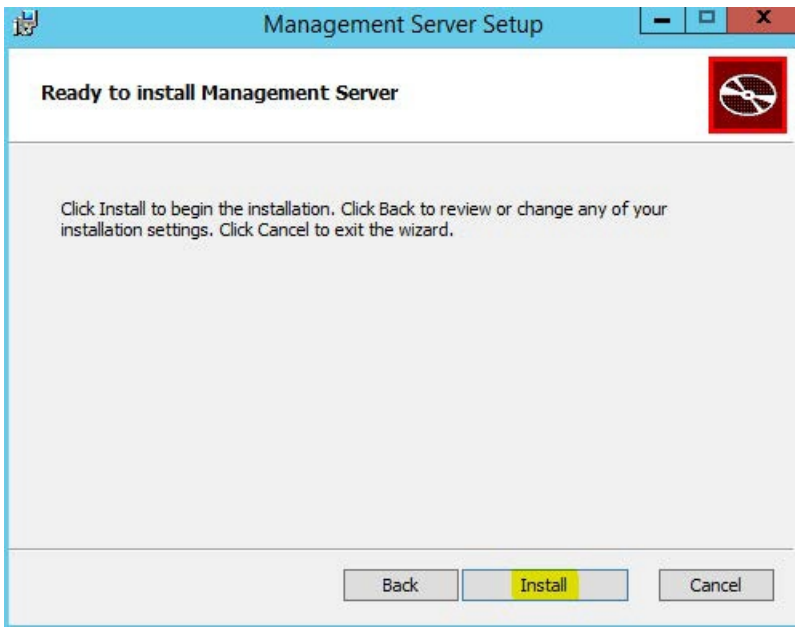


After choosing where you want the web application installed to it is time to configure the web application. The Public Server Address dialog box shown in this screen is the IP, DNS name, or computer name that the NovaBACKUP agents are going to be communicating with. The Port dropdown box contains the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

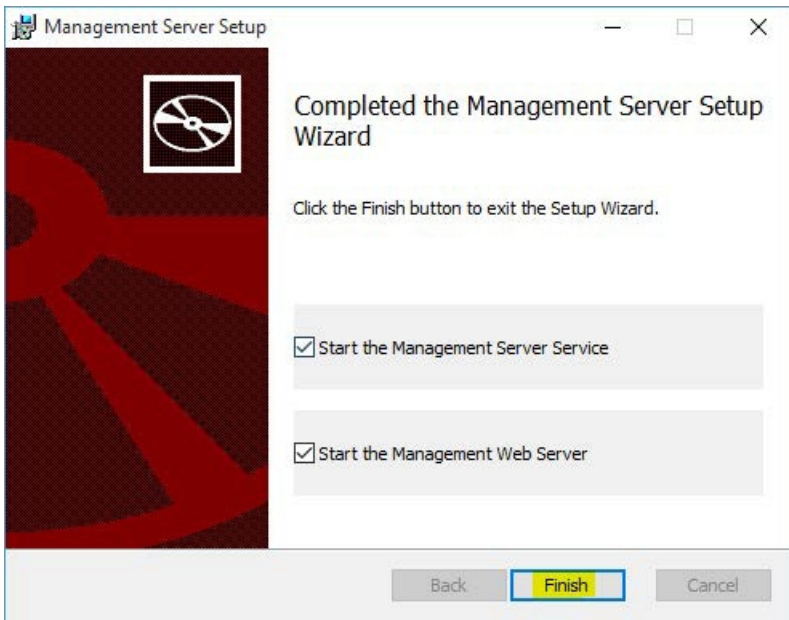
The computer that hosts CMon needs to have the port that you choose open on it so the NovaBACKUP agents can communicate with the CMC. The agents themselves do not need to open any incoming ports, but they have to be configured to use the correct port. All agent communication is initiated from the agent 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.

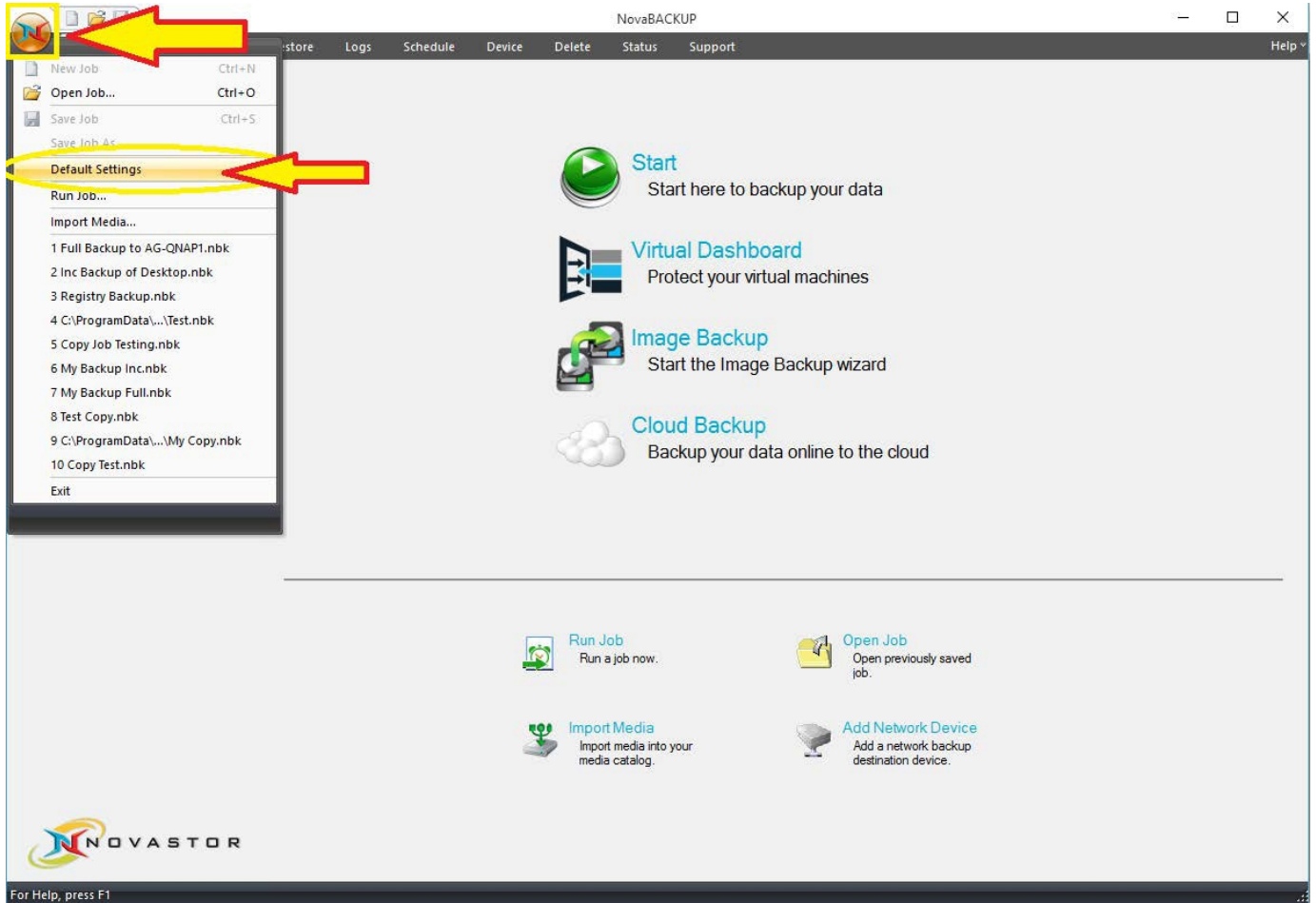


Setting up the backup client

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.

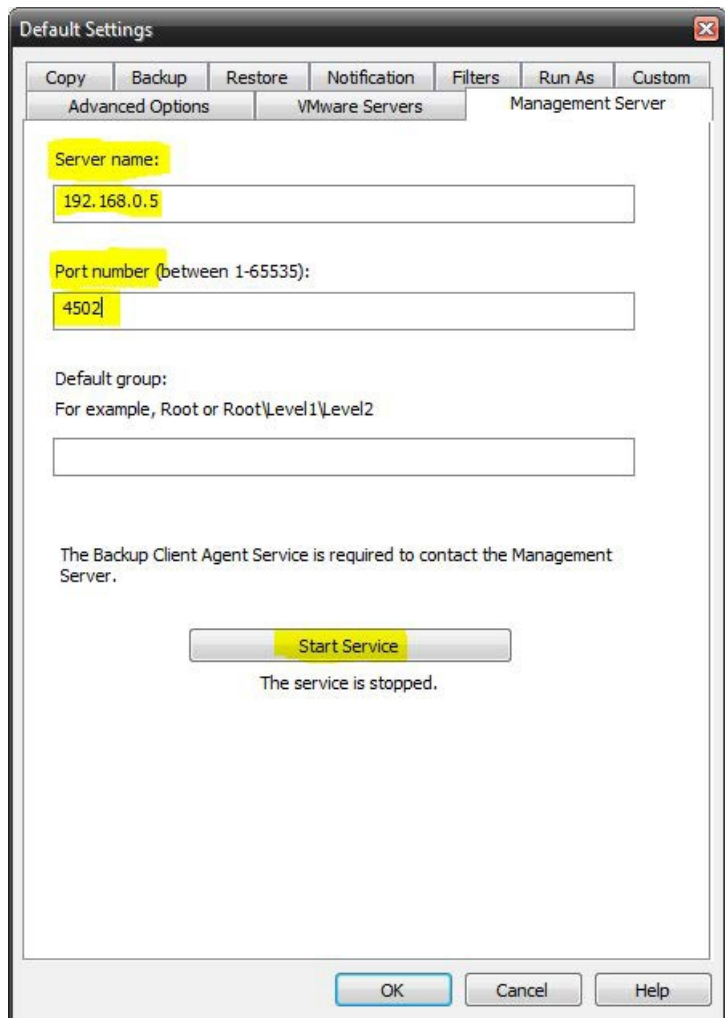
1. The first thing you need to do is install a backup client (NovaBACKUP® PC, Server, or Business Essentials) on the machine you'd like to back up. For instructions on how to do this please consult the NovaBACKUP® Quick Install Guide. By accepting all default options during installation, all necessary 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**

Settings ".



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.



Log in

User name

Password

Remember me?

© 2018 - NovaStor Corporation [f](#) [t](#) [v](#)

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 times a user fails to log in because of an invalid password exceeds the maximum number configured in the [Web 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](#).

Users logging in or registering from the embedded web browser in the backup client will automatically be redirected to view or create a new cloud storage account if permitted.

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 screenshot displays the NovaBACKUP CMon Dashboard. At the top, a navigation menu includes 'NovaBACKUP CMon', 'Dashboard', 'Agents and Groups', 'Jobs', 'Notifications', 'Settings', and 'Help'. The user 'admin' is logged in. The main content is divided into two sections: 'Agents' and 'Job History'.

Agents Section: A table lists six agents with their connection status, last backup date, status, size, and duration. A green donut chart shows 6 connected and 0 disconnected agents.

Name	Connected	Last Backup Date	Last Backup Status	Last Backup Size	Last Backup Duration	View
Kevin	●	12/13/2018 8:20:37 PM	●			View
Robert	●	12/13/2018 1:50:37 PM	●	1.46 GB	1 hour	View
Jeff	●	12/13/2018 8:50:37 AM	●	2.18 GB	1 hour	View
David	●	12/13/2018 8:50:37 AM	●	9.14 GB	1 hour	View
Ruth	●	12/13/2018 7:50:37 AM	●	879.73 MB	1 hour	View
Nancy	●	12/13/2018 6:50:37 AM	●	3.18 GB	1 hour	View

Job History Section: A table lists backup jobs for various groups. A status legend on the right shows 6 backups, 4 completed, and 1 failed. A multi-colored donut chart visualizes these statistics.

Group	Agent	Job	Type	Started	Ended	Status	Size	Files	Duration	View
Marketing	Kevin	Daily	Backup	12/13/2018 8:20:37 PM		●				View
Engineering	Robert	Daily	Backup	12/13/2018 1:50:37 PM	12/13/2018 3:50:37 PM	●	1.46 GB		1 hour	View
Sales	Jeff	Daily	Backup	12/13/2018 8:50:37 AM	12/13/2018 9:50:37 AM	●	2.18 GB		1 hour	View
Sales	David	Daily	Backup	12/13/2018 8:50:37 AM	12/13/2018 9:50:37 AM	●	9.14 GB		1 hour	View
Accounting	Ruth	Daily	Backup	12/13/2018 7:50:37 AM	12/13/2018 8:50:37 AM	●	879.73 MB		1 hour	View
Human Resources	Nancy	Daily	Backup	12/13/2018 6:50:37 AM	12/13/2018 7:50:37 AM	●	3.18 GB		1 hour	View

Sum: 16.82 GB

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.

NovaBACKUP CMon Dashboard Agents and Groups Jobs Notifications Settings Help admin Log off

Agents and Groups

+ Add new group

Name	Description	Connected	Last Activity Date	Last Backup Date	Last Backup Status	Last Backup Size	Last Backup Number of Files	Last Backup Duration	xSP Username	Last Note	Version	
Adventure Works												View
Accounting												View
Ruth		●	12/13/2018 8:50:37 PM	12/13/2018 7:50:37 AM	●	879.73 MB		1 hour			19.0.1124.1	View
Human Resources												View
Nancy		●	12/13/2018 8:50:36 PM	12/13/2018 6:50:37 AM	●	3.18 GB		1 hour			19.0.1124.1	View
IT												View
Engineering												View
Robert		●	12/13/2018 8:50:37 PM	12/13/2018 1:50:37 PM	●	1.46 GB		1 hour			19.1.1406.1	View
Marketing												View
Kevin		●	12/13/2018 8:50:36 PM	12/13/2018 8:20:37 PM	●						19.0.1124.1	View
Sales												View
David		●	12/13/2018 8:50:35 PM	12/13/2018 8:50:37 AM	●	9.14 GB		1 hour			19.0.1124.1	View
Jeff		●	12/13/2018 8:50:35 PM	12/13/2018 8:50:37 AM	●	2.18 GB		1 hour			19.0.1124.1	View
Pending	Machines not assigned to groups											View

Page 1 of 1 10 Items per page 1 - 2 of 2 items

Agents & Groups - Add new group function example:

Adding a Group is performed by clicking the " **Add new group** " button as seen in this example.

NovaBACKUP CMon Dashboard Agents and Groups Jobs Notifications Settings Help admin Log off

Create Group

Group Users Notes

Name
Customer Support

Description
The customer support department X

Parent
IT

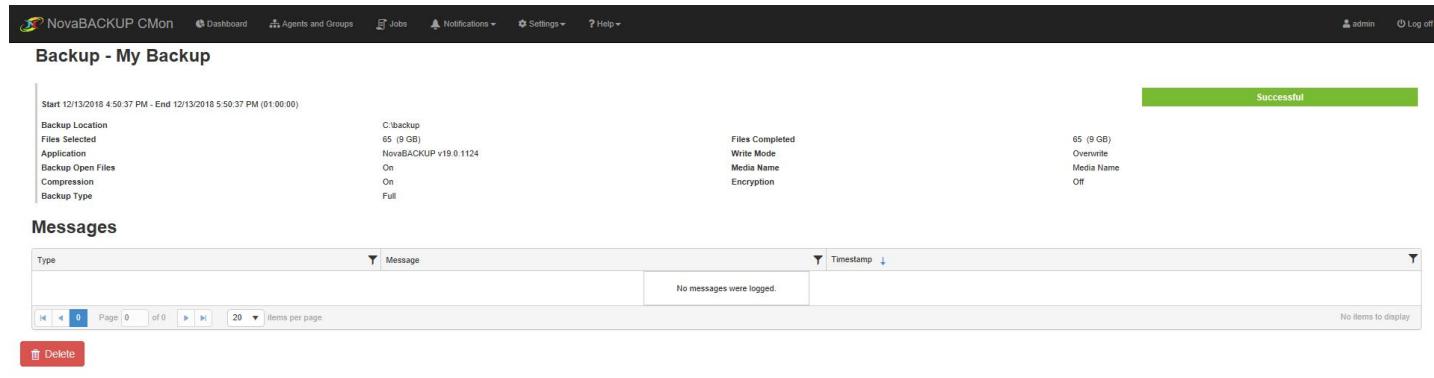
Save

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.



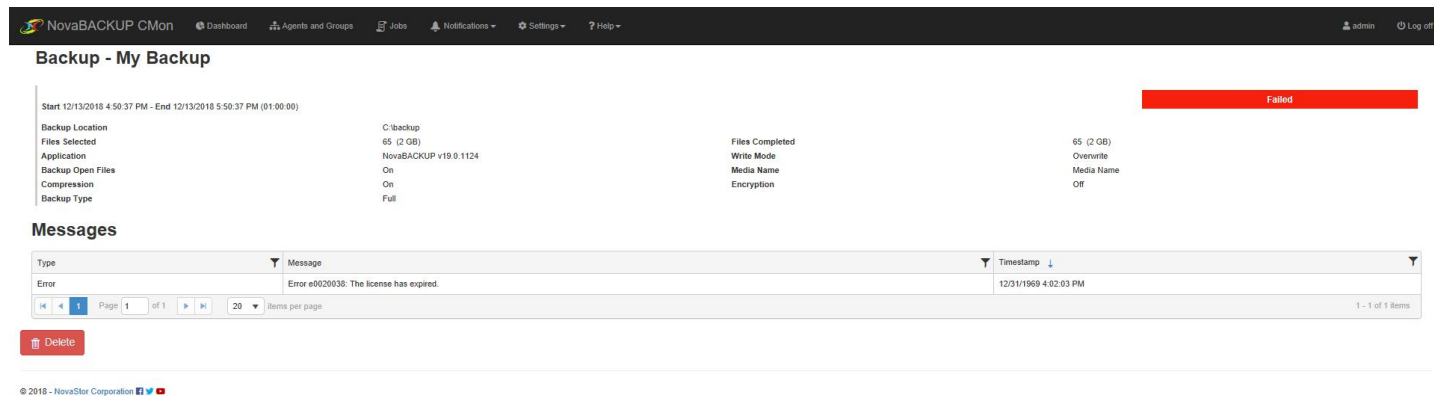
The screenshot shows the NovaBACKUP CMon interface. At the top, there is a navigation bar with links for Dashboard, Agents and Groups, Jobs, Notifications, Settings, and Help. The user is logged in as 'admin'. The main heading is 'Backup - My Backup'. Below this, a green bar indicates the job status is 'Successful'. The log details are as follows:

Start	12/13/2018 4:50:37 PM - End 12/13/2018 5:50:37 PM (01:00:00)		
Backup Location	C:\backup	Files Completed	65 (9 GB)
Files Selected	65 (9 GB)	Write Mode	Overwrite
Application	NovaBACKUP v19.0.1124	Media Name	Media Name
Backup Open Files	On	Encryption	Off
Compression	On		
Backup Type	Full		

Below the log details is a 'Messages' section with a table header: Type, Message, Timestamp. The table is empty, with the message 'No messages were logged.' displayed. A 'Delete' button is visible at the bottom left of the messages section.

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

This second example is a job with Failed status.



The screenshot shows the NovaBACKUP CMon interface. At the top, there is a navigation bar with links for Dashboard, Agents and Groups, Jobs, Notifications, Settings, and Help. The user is logged in as 'admin'. The main heading is 'Backup - My Backup'. Below this, a red bar indicates the job status is 'Failed'. The log details are as follows:

Start	12/13/2018 4:50:37 PM - End 12/13/2018 5:50:37 PM (01:00:00)		
Backup Location	C:\backup	Files Completed	65 (2 GB)
Files Selected	65 (2 GB)	Write Mode	Overwrite
Application	NovaBACKUP v19.0.1124	Media Name	Media Name
Backup Open Files	On	Encryption	Off
Compression	On		
Backup Type	Full		

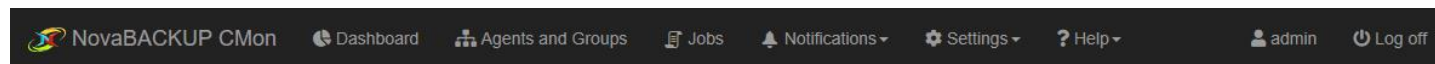
Below the log details is a 'Messages' section with a table header: Type, Message, Timestamp. The table contains one message:

Type	Message	Timestamp
Error	Error e0020030: The license has expired.	12/31/1999 4:02:03 PM

A 'Delete' button is visible at the bottom left of the messages section.

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.



Notification Triggers

+ Add Trigger				
Groups	Agents	Job Statuses	Last Checked	
Pending, Adventure Works, Accounting, Human Resources, IT, Engineering, Marketing, Sales, Customer Support	David, Jeff, Kevin, Nancy, Robert, Ruth	Started, Successful, Failed, Stopped, Warning	12/13/2018 8:52:03 PM	View Delete

Page 1 of 1 | 10 items per page | 1 - 1 of 1 items

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.

Add Trigger
— □ ×

Groups

Accounting ×
Adventure Works ×
Customer Support ×
Engineering ×
Human Resources ×
IT ×
Marketing ×
Pending ×
Sales ×

Select All Groups
Deselect All Groups

Agents

David ×
Jeff ×
Kevin ×
Nancy ×
Robert ×
Ruth ×

Select All Agents
Deselect All Agents

Job Status

Failed ×
Started ×
Stopped ×
Successful ×
Warning ×

Select All Job Statuses
Deselect All Job Statuses

Interval

Immediate
▼

Recipients

admin@adventureworks.com

Separate multiple email addresses with a semicolon (;)

Subject

\$agentName \$jobName \$jobType Job \$job:

Enable HTML

Send message as HTML

Body

B
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abc

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☷
☷

☰
☷
☷

↺
↻
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📄

×₂
×²

🔍
</>

Format ▼
(inherited font) ▼
(inherited size) ▼

A ▼
👉

```
Notification Interval Type: $notificationIntervalType
Notification Time: $notificationTime
Notification Day of Month: $dayOfTheMonth
Notification Day of Week: $dayOfTheWeek
Agent Name: $agentName
Group Name: $groupName
Job Name: $jobName
Job Status: $jobStatus
Job Type: $jobType
Job Started: $startDateTime
```

+ Add
⊘ Cancel

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:

Edit Trigger
— □ ×

Groups

Pending ×
Adventure Works ×
Accounting ×
Human Resources ×
IT ×

Engineering ×
Marketing ×
Sales ×
Customer Support ×

Select All Groups
Deselect All Groups

Agents

David ×
Jeff ×
Kevin ×
Nancy ×
Robert ×
Ruth ×

Select All Agents
Deselect All Agents

Job Status

Started ×
Successful ×
Failed ×
Stopped ×
Warning ×

Select All Job Statuses
Deselect All Job Statuses

Interval

Immediate

Recipients

admin@adventureworks.com

Separate multiple email addresses with a semicolon (;)

Subject

\$agentName \$jobName \$jobType Job \$job:

Enable HTML

Send message as HTML

Body

B
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abc
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☰
☰
☰

Format
✖
(inherited font)
(inherited size)

A
👉
👈

```

Notification Interval Type: $notificationIntervalType
Notification Time: $notificationTime
Notification Day of Month: $dayOfTheMonth
Notification Day of Week: $dayOfTheWeek
Agent Name: $agentName
Group Name: $groupName
Job Name: $jobName
Job Status: $jobStatus
Job Type: $jobType
Job Started: $startDateTime

```

✓ Update
⊘ Cancel

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

Email Server

Type	<input type="text" value="NovaBACKUP Alerts"/>
Server Address	<input type="text"/>
Server Port	<input type="text" value="25"/>
Enable SSL	<input type="checkbox"/>
Enable Authentication	<input type="checkbox"/>
User Name	<input type="text"/>
Password	<input type="text"/>
Retry Count	<input type="text" value="5"/>
Timeout (Seconds)	<input type="text" value="30"/>
Sender Name	<input type="text" value="NovaBACKUP Alerts"/>
Sender Email Address	<input type="text" value="noreply@novastor.com"/>
<input type="button" value="Save Changes"/>	

Test Email Address Recipients

To	<input type="text"/>
<small>Separate multiple email addresses with a semicolon (;).</small>	
<input type="button" value="Send Test Email"/>	

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

Type	Custom SMTP ▾
Server Address	smtp.adventureworks.com
Server Port	587 ▲▼
Enable SSL	<input checked="" type="checkbox"/>
Enable Authentication	<input checked="" type="checkbox"/>
User Name	backup@adventureworks.com
Password	●●●●●●
Retry Count	5 ▲▼
Timeout (Seconds)	30 ▲▼
Sender Name	NovaBACKUP Alerts
Sender Email Address	backup@adventureworks.com ✕
<input type="button" value="Save Changes"/>	

Test Email Address Recipients

To	<input type="text"/>
<i>Separate multiple email addresses with a semicolon (;).</i>	
<input type="button" value="Send Test Email"/>	

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.

NovaBACKUP CMon Dashboard Agents and Groups Jobs Notifications Settings Help admin Log off

Agent Settings

Agent Connections

Agent connection timeout (minutes)

Agent connection ping interval (minutes)

Agent Logs

Delete logs that exceed the maximum number per agent

Delete logs that exceed the maximum number of days

[Save Changes](#)

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.

User Name ↑	Email Address	Description	Role	Enabled	
admin		Built-in Administrator	Administrator	true	View

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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 roles. From there you will be able to define a custom role.

Name ↑	Default	Description	
Administrator	false	Administrator	View
Backup Auditor	false	Monitors backup and restore operation status	View
Backup Operator	false	Creates/Schedules/Performs backup and restore operations	View
Backup Support	false	Assists with backup and restore operations	View
User	true	The default user role	View

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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.

Change Password

Current password

New password

Confirm new password

Time Zone

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

Time Zone

Automatic Automatically detect my time zone

Country United States

Time Zone Pacific Time

Time Zone Identifier America/Los_Angeles

Curent Time 12/13/2018 8:52:43 PM

Save Changes

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.

Language and Culture

Automatic	<input checked="" type="checkbox"/> Automatically detect my language and culture
Language	English (United States) ▾
Culture	en-US
Calendar	Gregorian
Date Time Pattern	M/d/yyyy h:mm:ss tt
Curent Time	12/13/2018 8:52:49 PM
Number Decimal Separator	,
Number Group Separator	,

Save Changes

Storage Servers

The "Storage Servers" view allows an administrator to manage NovaBACKUP xSP Storage Servers.

In order for users to create cloud storage accounts, a Storage Server must be added.

To add a new storage server, click on the "Add new storage server" button.

Enter the web URL and key for the Storage Server API and click the Next button to continue.

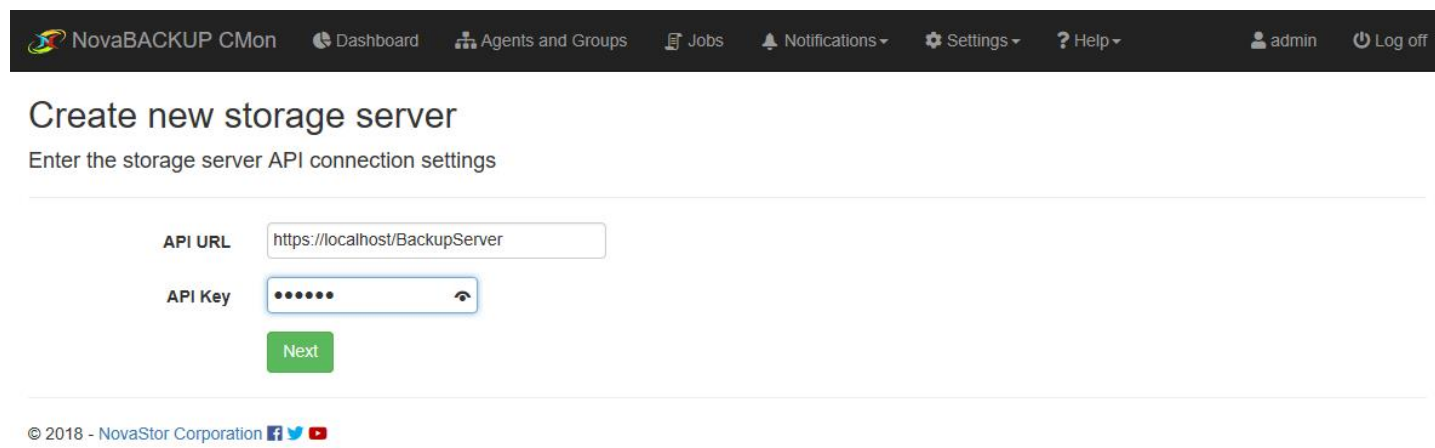
The storage server API is an optional feature installed with the NovaBACKUP Storage Server by default.

It's recommended to use HTTPS for a secure connection.

If a secure connection could not be established because of SSL certificate errors, the errors can be ignored in [Security Settings](#), but this is not recommended.

The API key is configured in the storage server API's "web.config" file and is case sensitive.

A randomly generated API key is created by default.



The screenshot shows the NovaBACKUP CMon interface. At the top, there is a navigation bar with the following items: NovaBACKUP CMon, Dashboard, Agents and Groups, Jobs, Notifications, Settings, Help, admin, and Log off. Below the navigation bar, the main heading is "Create new storage server". Underneath the heading, it says "Enter the storage server API connection settings". The form contains two input fields: "API URL" with the value "https://localhost/BackupServer" and "API Key" with a masked value of six dots. Below the input fields is a green "Next" button. At the bottom of the page, there is a copyright notice: "© 2018 - NovaStor Corporation" followed by social media icons for Facebook, Twitter, and YouTube.

Configure the default user account creation settings and click the "Next" button to continue.

When the user is required to enter a backup client license key and the "Quota Setting" field is set to "Custom", the user account's quota will be set according to the quota specified for the backup client license key provided when the user signs up for an account.

Otherwise, the "Quota (Megabytes)" field must be specified if the user is not required to enter a backup client license key and the "Quota Setting" field is set to "Custom".

If a backup client license is used with a data storage quota greater than 2,147,483 GB, then the data storage quota on the cloud storage account will be limited to 2,147,483,647 MB.

When the "Quota Setting" field is set to "Group", the user account's quota will be set according to the quota specified for the group in the "Group" field on the storage server.

When the "Quota Setting" field is set to "No Quota", the user's account will have an unlimited amount of storage space.

The number of computers that can be backed up to the cloud storage account will be based on the maximum number of activations set on the backup client license used to create the account.

If a backup client license is used with a maximum number of activations greater than 5000, then the number of computers on the cloud storage account will be limited to 5000.

If the user is not required to enter a backup client license key, then the "Number of computers" must be specified if the "Multiple computers allowed" checkbox is checked.

The storage server help documentation contains more details about the other settings.

Create new storage server

Enter the default user account creation settings

Server Address: localhost

Server Port: 308

Enabled

Group: Everyone

Account Status: Active

License Status: Normal

Master key access

User is required to enter a backup client license key

Multiple computers allowed

Number Of Computers: 1

Multiple storage enabled

Quota Setting: Custom

Quota (Megabytes): 200

Near Quota Percent: 90

Near Quota Action: Report Warning

At Quota Action: Warning Window

Over Quota Percent: 110

Over Quota Action: Disable Backup

Previous Restore Window Length: 1

Previous Restore Window Type: Months

Primary Storage Path: C:\UserData

Back Next

Configure the user account data deletion policy and click the "Save" button to continue.

If the cloud storage account was created with a backup client license key, the account will automatically be disabled if the backup client license is disabled, expired, no longer supports cloud storage, or if the upgrade subscription is expired.

The cloud storage account will automatically be re-enabled if the license and upgrade subscription, if any, become valid again.

An account can also be disabled from the storage server directly.

After an account is disabled, the user will not be able to connect to the storage server.

If this feature is enabled, the account's data will be deleted after the specified grace period since the account was disabled.

Create new storage server

Enter the user account deletion policy settings

Delete account data after a grace period since the account was disabled

Grace period (in days) before account data is deleted

60

Back Save

After creating the storage server, it will be displayed in the data grid.

Storage Servers

+ Add new storage server

Address ↑	Port	API URL	
localhost	308	https://localhost/BackupServer	View

Page 1 of 1 10 items per page 1 - 1 of 1 items

Only one storage server is supported.

The CMon will periodically query the license for any changes and update the xSP account accordingly.

Cloud Storage Accounts

The "Cloud Storage Accounts" view allows users to manage their cloud storage accounts.

The administrator must add a [Storage Server](#) in order for users to create cloud storage accounts.

The screenshot displays the "Cloud Storage Accounts" management interface. At the top, there is a navigation bar with the NovaBACKUP CMon logo, the current page title "Cloud Storage Accounts", a help menu, and the user's email "michael@adventure-works.com" with a "Log off" button. Below the navigation bar is the main heading "Cloud Storage Accounts" and a button to "+ Add new cloud storage account". The main content area features a table with the following columns: Username, Last Backup Date, Used Space, Total Storage Space, Quota Status, Quota Percent, Backup Client License Key, Expiration Date, and Days Until Expiration. A single account is listed with the username "michael@adventure-works.com", 1 GB of used space, 5 GB of total storage space, a "Below Quota" status, a 20% quota usage bar, a "license key" as the backup client license key, an expiration date of "1/27/2019 8:53:15 PM", and 45 days until expiration. A "View" button is present in the last column. Below the table is a pagination control showing "Page 1 of 1" and "10 Items per page". The footer of the interface includes the copyright notice "© 2018 - NovaStor Corporation" and social media icons for Facebook, Twitter, and YouTube.

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The column menus can be used to sort, show and hide columns, and filter the data.

The "Free Space" column is hidden by default.

The "Quota Percent" will turn from blue to orange when the account is near quota, and red when at or over quota. If there's no quota on the account, the percentage bar isn't displayed.

The "Expiration Date" field displays the closest expiration date for the license or its upgrade subscription, if a license key was used to create the account.

The "Days Until Expiration" will start as orange and fill up when there are 45 or less number of days until the license expires, and red when there are 14 or less. If the license doesn't expire, the countdown timer bar is not displayed.

Create an account

From the "Cloud Storage Accounts" view, click on the "Add new cloud storage account" button to create a new cloud storage account.

Enter a username, password, your backup client license key, and click the "Save" button to create a new cloud storage account.

The username must be unique.

The backup client license key may not be required to create a cloud storage account.

If the backup client license is disabled, expired, doesn't support cloud storage, or if it has an expired upgrade subscription, it can't be used to create a cloud storage account.

The backup client license key will be automatically populated if the user is signing up inside the embedded web browser of the backup client.

A new "Cloud Storage" device will automatically be added to the backup client when the user signs up inside the embedded web browser of the backup client, or re-connects to an existing cloud storage account.

When re-connecting to an existing cloud storage account, the user will be asked for their cloud storage account password.



Create new cloud storage account

Username	<input type="text" value="michael@adventure-works.com"/>
Password	<input type="password" value="••••••"/>
Confirm Password	<input type="password" value="••••••"/>
Backup Client License Key	<input type="text" value="license key"/>
	<input type="button" value="Save"/>

Connect to an account

The embedded web browser dialog from within the backup client must be used in order to successfully connect to a cloud storage account.

The embedded web browser dialog can be launched from either the "Home" or the "Device" tabs.

From the "Home" tab, click on the "Cloud Backup" button.

From the "Device" tab, click on the "Click HERE to add an online device" list item.

If a cloud storage account has already been added, the web browser dialog will not be displayed.

View details of an account

From the "Cloud Storage Accounts" view, click on the "View" button next to the cloud storage account to view its details.

NovaBACKUP CMon Cloud Storage Accounts ? Help michael@adventure-works.com Log off

Cloud device

Username	michael@adventure-works.com
Used Space	1 GB
Free Space	4 GB
Total Storage Space	5 GB
Quota Status	Below Quota
Quota Percent	20%
Backup Client License Key	license key
Expiration Date	1/27/2019 8:53:15 PM
Days Until Expiration	45

Refresh Connect Edit View computers Delete

View computers

From the cloud storage account details view, click on the "View computers" button to view the computers attached to the cloud storage account.

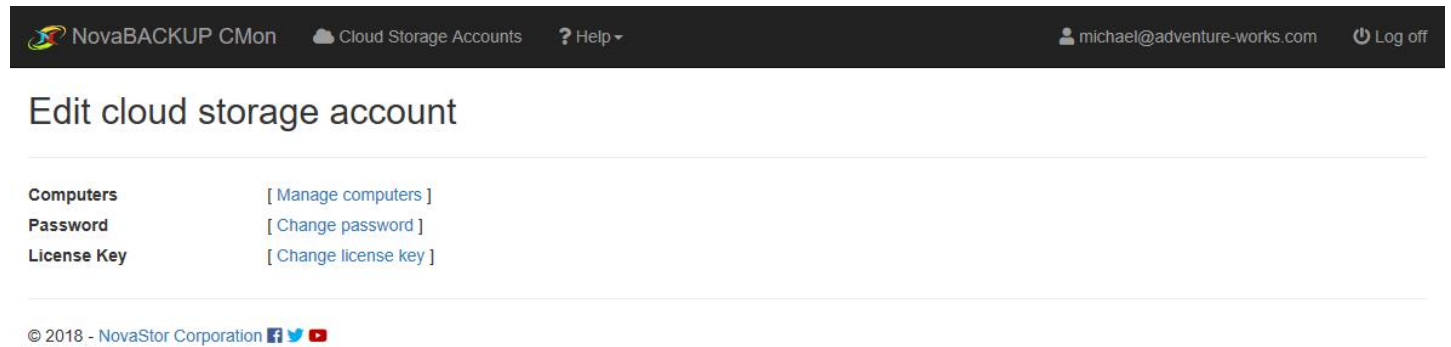
Cloud Storage Account Computers

Computer Name	Created	Modified	
WINDOWS-PC	12/13/2018 8:54:05 PM	12/13/2018 8:54:05 PM	Delete
WINDOWS-LAPTOP	12/13/2018 8:54:05 PM	12/13/2018 8:54:05 PM	Delete

Page 0 of 0 10 items per page No items to display

Change the password

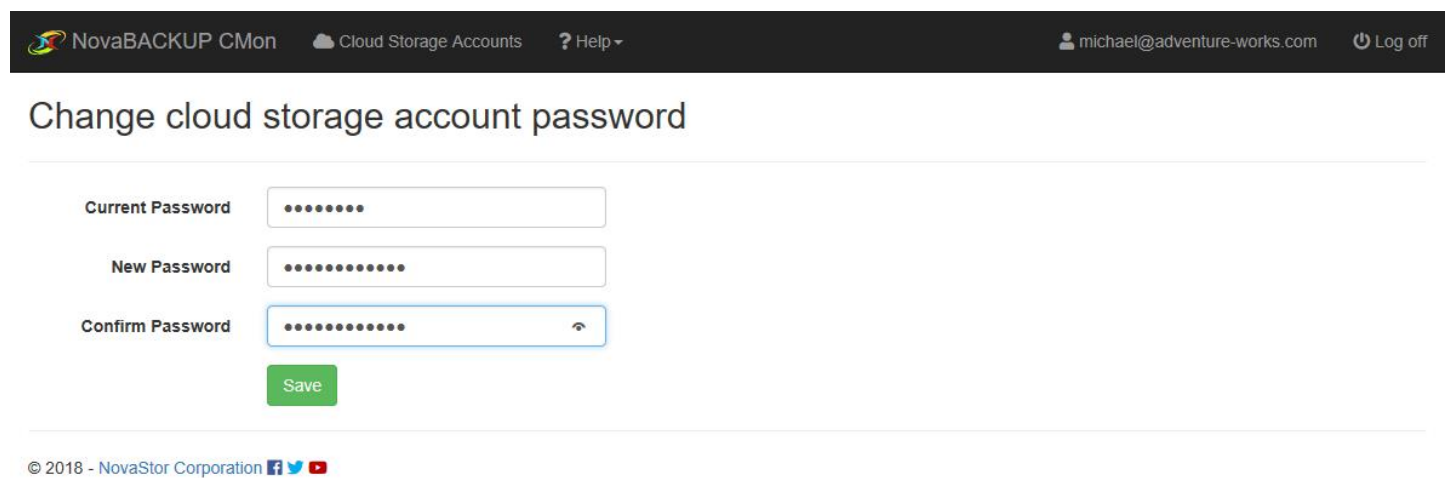
From the cloud storage account details view, click on the "Edit" button.



The screenshot shows the top navigation bar with the NovaBACKUP CMon logo, 'Cloud Storage Accounts', and a 'Help' dropdown. The user's email 'michael@adventure-works.com' and a 'Log off' button are on the right. The main heading is 'Edit cloud storage account'. Below it, there are three links: 'Computers' with '[Manage computers]', 'Password' with '[Change password]', and 'License Key' with '[Change license key]'. At the bottom, there is a copyright notice '© 2018 - NovaStor Corporation' and social media icons for Facebook, Twitter, and YouTube.

Click on the "Change password" link.

Enter the current cloud storage account password, the new cloud storage account password, and click on "Save" to continue.

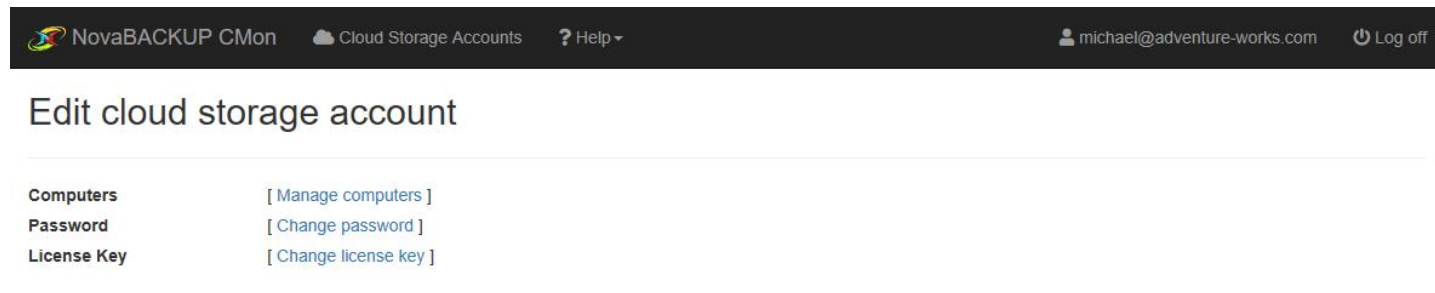


The screenshot shows the 'Change cloud storage account password' form. It has three input fields: 'Current Password' with 7 dots, 'New Password' with 10 dots, and 'Confirm Password' with 10 dots and a visibility icon. A green 'Save' button is below the fields. The top navigation bar is identical to the previous screenshot. At the bottom, there is a copyright notice '© 2018 - NovaStor Corporation' and social media icons for Facebook, Twitter, and YouTube.

Change the license key

The backup client license key can be changed only if one was used to create the cloud storage account.

From the cloud storage account details view, click on the "Edit" button.



NovaBACKUP CMon Cloud Storage Accounts ? Help ▾ michael@adventure-works.com Log off

Edit cloud storage account

Computers [Manage computers]
Password [Change password]
License Key [Change license key]

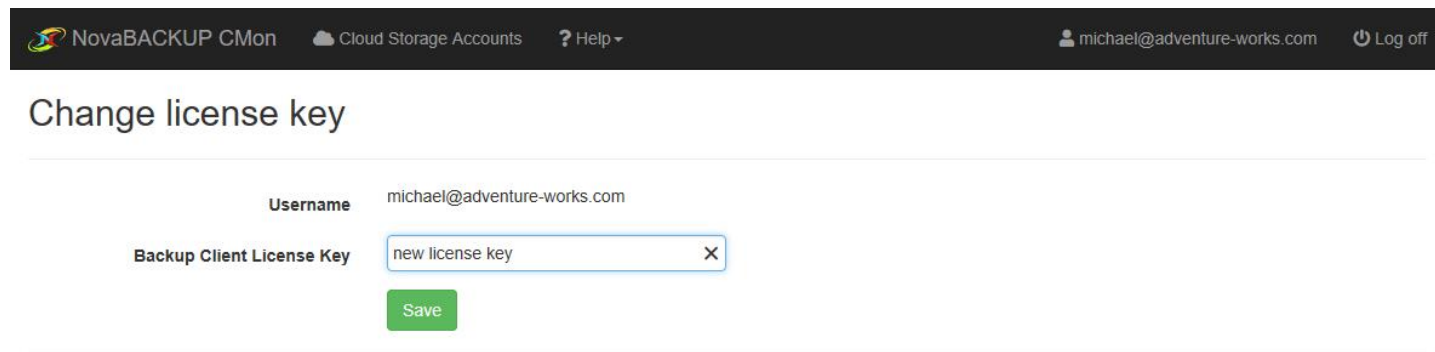
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Click on the "Change license key" link.

The "Change license key" link will not be displayed if a license key wasn't used to create the cloud storage account.

Enter the new backup client license key and click on "Save" to change the license key associated with the cloud storage account.

If the backup client license is disabled, expired, doesn't support cloud storage, or if it has an expired upgrade subscription, it can't be used as the new license key.



NovaBACKUP CMon Cloud Storage Accounts ? Help ▾ michael@adventure-works.com Log off

Change license key

Username michael@adventure-works.com

Backup Client License Key X

Save

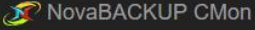



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Delete an account

To permanently delete your cloud storage account, and its associated data, from the cloud storage account details view, click on the "Delete" button.


The following page will allow you to confirm its deletion.




You will not be able to restore any data associated with the account after deleting it.

 NovaBACKUP CMon  Cloud Storage Accounts  Help ▼ michael@adventure-works.com  Log off

Are you sure you want to delete this cloud storage account?

Username	michael@adventure-works.com
Backup Client License Key	license key

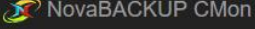





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Delete a computer


To permanently delete a computer attached to the cloud storage account, and its associated data, from the "Cloud Storage Account Computers" view, click on the "Delete" button next to the computer. The following page will allow you to confirm its deletion.




You will not be able to restore any data associated with the computer after deleting it.

 NovaBACKUP CMon  Cloud Storage Accounts  Help ▾ michael@adventure-works.com  Log off

Are you sure you want to delete this computer?

Computer Name	WINDOWS-PC
----------------------	------------

 Delete

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Security Settings

The "Security Settings" view allows an administrator to ignore SSL certificate errors.

Ignoring SSL certificate errors is not recommend.

Security Settings

Ignore SSL Certificate Errors

Save

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.

Web Configuration File

The web configuration file (web.config) contains some of the application settings such as the database connection string, log file path, log verbosity, and persistent login behavior.

The file is located in the Web installation directory. For example,

```
C:\Program Files (x86)\NovaStor\NovaBACKUP Central Management Console\WebRoot\Web\web.config
```

Persistent login settings

When a user chooses to login and persist their login information, the default behavior is to keep them logged in for 7 days since they last visited the web application.

```
<authentication mode="Forms">
  <!-- forms session times out in 7 days -->
  <forms loginUrl="~/Account/Login" slidingExpiration="true" path="/" name="ManagementServer" timeout="10080"
  protection="All"/>
</authentication>
```

For more technical information about these configuration settings, see [forms Element for authentication \(ASP.NET Settings Schema\)](#).

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

- 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 Tips

There are a few configuration files containing settings that can be modified to help troubleshoot issues that may arise.

For example, the main "Management Server" windows service configuration file with a default installation 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 by default.

For example, with a default installation, it is located here: "C:\Program Files\NovaStor\NovaBACKUP Central Management Console\Service\Logs"

Also, if using the standalone web server, the main "Management Web Server" windows service configuration file with a default installation 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 "system.serviceModel.services.config" 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 main "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 "system.serviceModel.services.config" 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 main "Management Server" windows service configuration file, unless otherwise specified, 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**

```
<configuration>
...
<loggingConfiguration ...>
...
<categorySources>
  <add switchValue="All" name="General" />
</categorySources>
...
```

to: **XML**

```
<configuration>
...
<loggingConfiguration ...>
...
<categorySources>
  <add switchValue="All" name="General" >
    <listeners>
      <add name="Event Log Listener" />
      <add name="Flat File Trace Listener" />
    </listeners>
  </add>
</categorySources>
...
```

Enable WCF Verbose Activity Tracing

Set the switchValue attributes to Verbose, ActivityTracing.

Change this: **XML**

```
<configuration>
...
<system.diagnostics>
  <sources>
    <source name="System.ServiceModel" switchValue="Warning" propagateActivity="true">
      ...
    <source name="System.ServiceModel.MessageLogging" switchValue="Warning">
      ...
  </sources>
...
```

to: **XML**

```
<configuration>
...
<system.diagnostics>
  <sources>
    <source name="System.ServiceModel" switchValue="Verbose, ActivityTracing" propagateActivity="true">
      ...
    <source name="System.ServiceModel.MessageLogging" switchValue="Verbose, ActivityTracing">
      ...
  </sources>
</system.diagnostics>
</configuration>
```

Enable Message Logging

Open "system.serviceModel.diagnostics.config" and enable logMessagesAtServiceLevel, logMalformedMessages, and logMessagesAtTransportLevel.

Change this: **XML**

```
<configuration>
...
<system.serviceModel>
  ...
  <diagnostics>
    <messageLogging logMessagesAtServiceLevel="false" logMalformedMessages="false"
logMessagesAtTransportLevel="false" />
  </diagnostics>
</system.serviceModel>
</configuration>
```

to: **XML**

```
<configuration>
...
<system.serviceModel>
  ...
  <diagnostics>
    <messageLogging logMessagesAtServiceLevel="true" logMalformedMessages="true"
logMessagesAtTransportLevel="true" />
  </diagnostics>
</system.serviceModel>
</configuration>
```

Enable Message Logging with Personally Identifiable Information

For example, this logs the remote IP address of clients connecting to the service.

Open "C:\Windows\Microsoft.NET\Framework\v4.0.30319\Config\machine.config" and set enableLoggingKnownPii.

Change this: **XML**

```
<configuration>
...
<system.serviceModel>
  ...
  <machineSettings enableLoggingKnownPii="false" />
</system.serviceModel>
</configuration>
```

to: **XML**

```
<configuration>
...
<system.serviceModel>
  ...
  <machineSettings enableLoggingKnownPii="true" />
</system.serviceModel>
</configuration>
```

Open "system.serviceModel.diagnostics.config" and enable logMessagesAtServiceLevel, logMalformedMessages,

logMessagesAtTransportLevel, logEntireMessage, and logKnwonPii.

Change this: **XML**

```
<configuration>
...
<system.serviceModel>
...
  <diagnostics>
    <messageLogging logMessagesAtServiceLevel="false" logMalformedMessages="false"
logMessagesAtTransportLevel="false" />
...

```

to: **XML**

```
<configuration>
...
<system.serviceModel>
...
  <diagnostics>
    <messageLogging logMessagesAtServiceLevel="true" logMalformedMessages="true"
logMessagesAtTransportLevel="true" logEntireMessage="true" logKnwonPii="true" />
...

```

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**

```
<configuration>
...
<loggingConfiguration ...>
...
  <categorySources>
    ...
    <add name="Info" switchValue="All" />
  </categorySources>
...

```

to: **XML**

```
<configuration>
...
<loggingConfiguration ...>
...
<categorySources>
...
<add name="Info" switchValue="All" >
  <listeners>
    <add name="Flat File Destination" />
  </listeners>
</add>
</categorySources>
...
```