

Outages and quality of LAN connections can be monitored by using Watches, which are configured directly on PC. You can set a watch to ping an important work station or server from another PC in the local network, which is constantly turned on. Thanks to periodic evaluation, you are aware of all outages.

The very setup is done through C-Monitor Console on PC - launch Watch Wizard, choose a name for the watch, e.g. "Outages in LAN connection", we recommend to choose the name as short as possible, yet descriptive, as this name will be used in notification emails, SMS messages, and it's efficient that the name doesn't take too much space, and at the same time, you know what the message relates to. After entering the name, press *Next*.

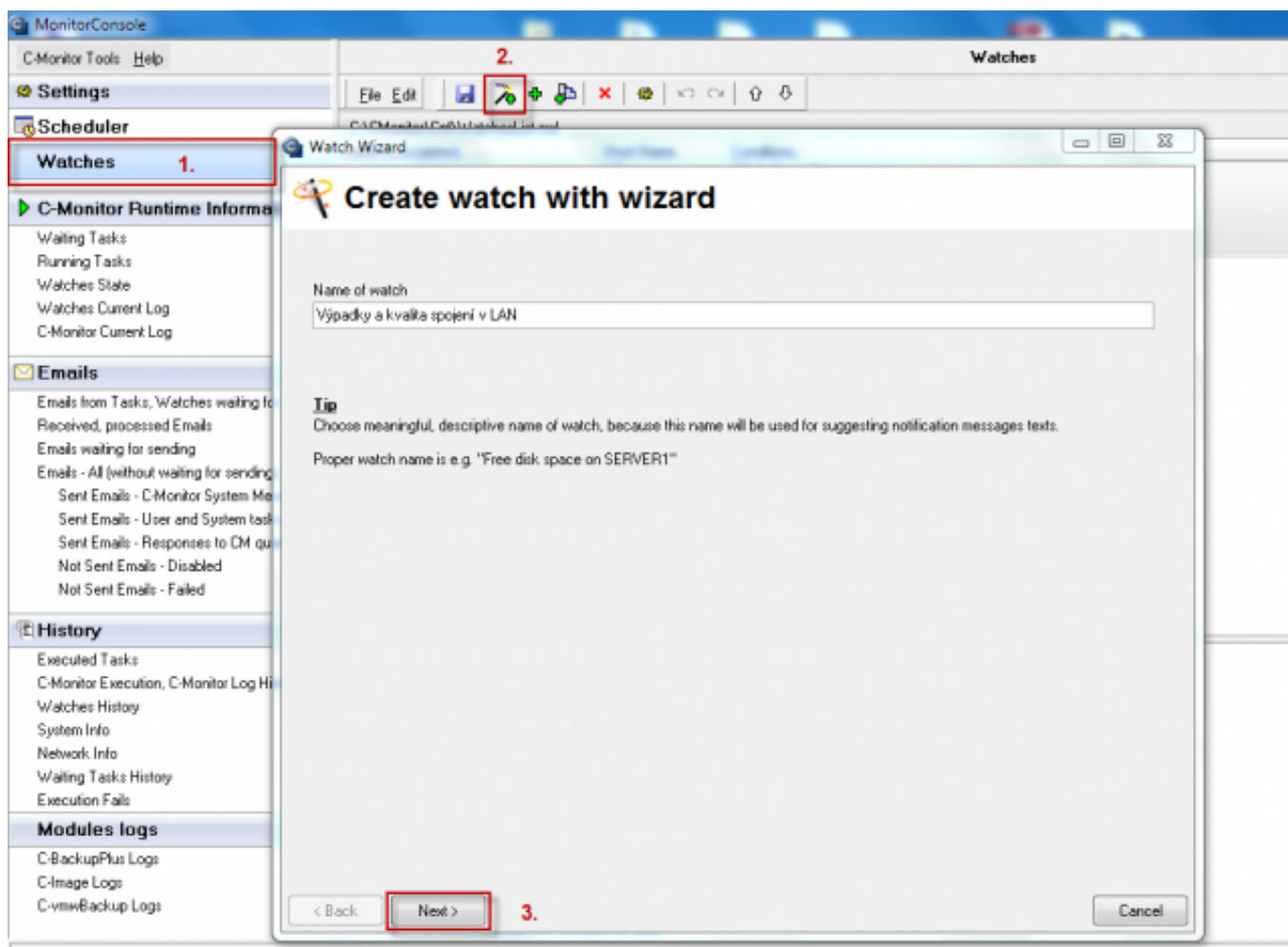


Image: Vstup do nastavenia Watchov pre sledovanie výpadkov a kvality spojení v LAN

Outages and quality of LAN connections are monitored by conditions highlighted on the next image, namely: ping, ping packet loss, ping RTT (response time) set to local IP addresses, Transferred speed in LAN Harddrives - monitoring of data transfer speed from, and to a shared network drive. The individual options are described in the text below.

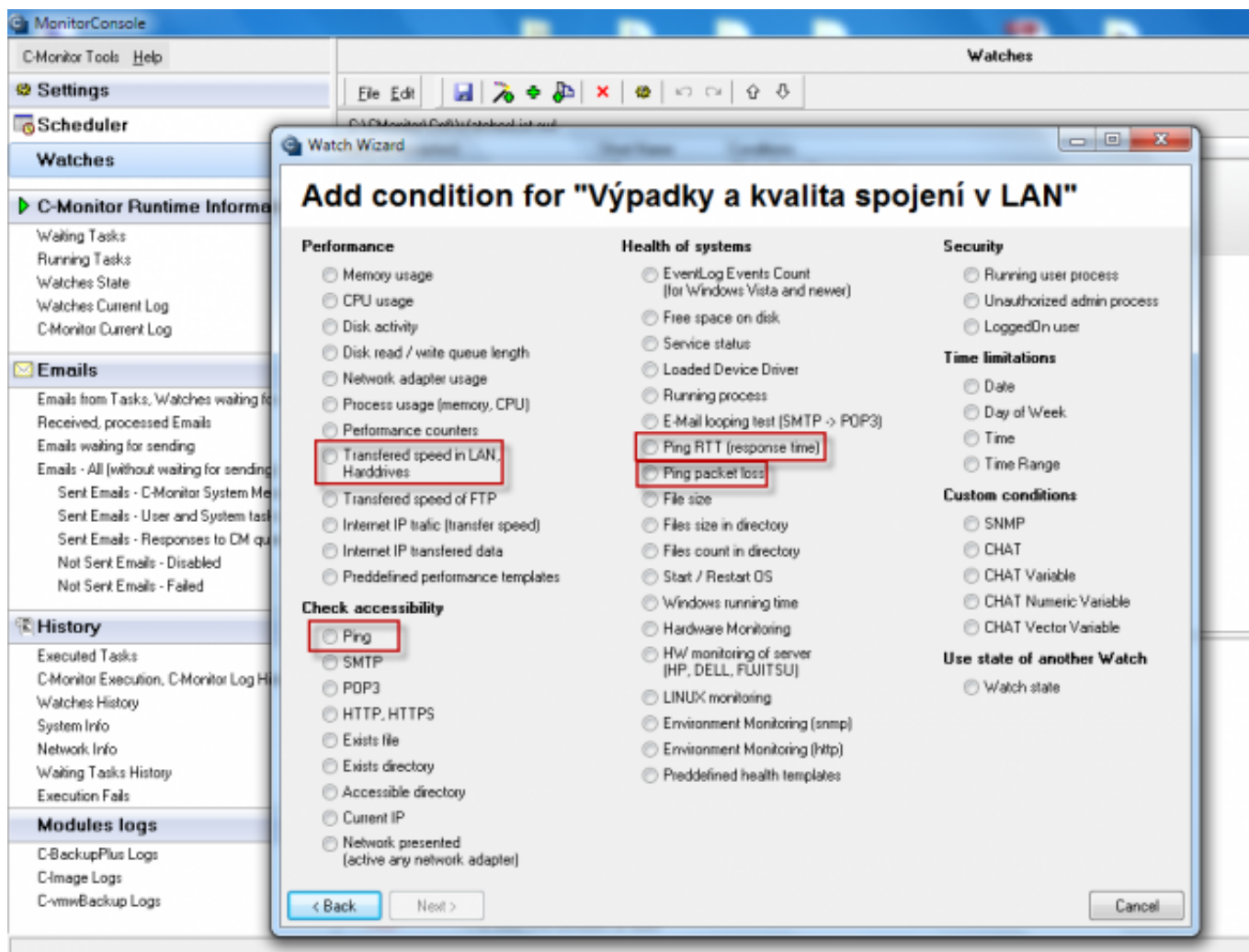


Image: Možnost výberu Watchu

### **Ping packet loss**

In Watch wizard select Ping packet loss and click on Next.

In the next window, enter IP address of a device from LAN into the field **IP (Host)**, best IP address of the server. Select the comparing operator, percentage value (enter 0% to figure an outage, there should be zero packet loss in a LAN network) and testing period (recommended 1min). Other values in square brackets are optional and will be filled by default values (specified in pop-up bubbles, which appear after hovering over these fields), if you don't need to make custom changes. The most relevant of these parameters is the length of history, which is defaultly 12 (meaning that Packet Loss is calculated from the last 12 tests, i.e. last 12 minutes for the recommended settings). You may then have pings written into a log file, in case that connection with CM Server was lost, so you won't lose detailed results of these tests.

Set the change value to e.g. 5%. Each value that reaches change higher than the given number of percent is sent to the CM Server. As the server should not be unnecessarily loaded, choose a reasonable (higher) number, but such, that the view on CM portal shows relevant changes of the monitored parameter.

After setting the parameters, press Next. In the following steps, you may choose actions that will be executed when the state is evaluated as failed, then press Finish. If all settings are correct, the watch will appear in the list of watches and its state is OK.

### **Ping response time**

In Watch wizard, select Ping RTT (response time) and click on Next.

In the next window, you'll choose the address, which is going to be pinged, then enter IP address of a device connected to LAN, e.g. a server or a steady on PC. Select what response time value is going to be monitored in the field Value - either minimal time, maximal, or average value. Then select operator, value in ms and testing period. Other values in square brackets are optional and will be filled by default values (specified in pop-up bubbles, which appear after hovering over these fields), if you don't need to make custom changes.

A reliable internet line should have zero packet loss even for higher loads, and response RTT vary according to type of the line. You should have **the following typical RTT values for your measurements:**

DSL ...cca 15-70ms

UPC (coaxial) ...cca 10-30ms

Optic ...cca 3-10ms

FWA 10.5GHz, 26GHz - cca 10ms

mobile ...HSDPA cca 70-100ms, GPRS over 150ms

Wimax - over 50ms

Wifi 5.4GHz links ...cca 4-10ms

### **Ping**

In Watch wizard select Ping and click on Next.

In the next window, you'll choose the address, which is going to be pinged, you may also enter name of the location, or directly IP address of a device in LAN, which is steady on, e.g. a server. Outage of link between devices in LAN can only occur when the LAN conduction is interrupted, or when the device that is being pinged is turned off.

### **Transferred speed in LAN Harddrives**

This condition serves to track transfer speed between folders, either both local, or local and network. You can measure both Upload (source into the directory) and Download speed.

Setup for testing of copying speed between a local and a network directory is described further in the text.

In section *Folder*, enter path for the network drive, whose availability you want to test, as well as username and password.

In section *Source folder for upload*, enter files on the local drive intended for the testing.

In section *Speed of*, choose whether you want to test upload or download speed, the required operator, value and unit of the transfer speed.

In the next section, choose testing period. You must take note, that this test will load up the disk system, eventually the network as well, if it's testing between local and network directory.

In section *Value from this condition send to CM server*, set size of the value's change, which will cause the watch to be evaluated as failed, and send a notification email, SMS etc.

### **Average time of backups**

Deteriorating quality of LAN connection can be also figured from the zone backup, in section Presentation and Evaluation -> Presentation -> Zones -> Backup and Image. In this section, you can see the total time of backup, if this time will increase for the same volume of backed up data, we can assume worsened quality of the LAN network.

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<table> <tr> <th>Type</th><td>One-way synchronization - Purge (-30 days) - User Confirmation</td><td>Differential Backup ZIP</td><td>One-way synchronization (Backup)</td><td>Differential Backup ZIP</td></tr> <tr> <th>Warnings</th><td>Ignored</td><td>Ignored</td><td>Ignored</td><td>Ignored</td></tr> <tr> <th>User</th><td>FSCMB03@eco</td><td>NT AUTHORITY\SYSTEM</td><td>ELITEBOOK6930gvars</td><td>NT AUTHORITY\SYSTEM</td></tr> <tr> <th>Access credentials</th><td></td><td>seibackup</td><td></td><td>seibackup</td></tr> <tr> <th>Interval</th><td>Every 2 weeks on Tu</td><td>Every day</td><td>Every day</td><td>Every day</td></tr> <tr> <th>Start time</th><td>28.08.2012 12:18:25</td><td>31.08.2012 18:04:54</td><td>30.08.2012 13:36:56</td><td>31.08.2012 10:04:04</td></tr> <tr> <th>Total time</th><td>0:01:55</td><td>0:04:09</td><td>0:00:26</td><td>0:09:59</td></tr> <tr> <th>Copied</th><td>239 files (58,066 MB)</td><td>100 files (15,838 MB)</td><td>6 files (166,293 kB)</td><td>105 files (15,830 MB)</td></tr> <tr> <th>Failed</th><td>0 files (0 B)</td><td>0 files (0 B)</td><td>0 files (0 B)</td><td>0 files (0 B)</td></tr> <tr> <th>Backup total size</th><td></td><td>14,539 MB</td><td></td><td>14,539 MB</td></tr> <tr> <th>Destination folder</th><td>S:\Zakaznici</td><td>\\172.16.75.16\nddbackup\user\ZP2012_08_31_10_040%</td><td>C:\zakaznici</td><td>\\172.16.75.16\nddbackup\user\ZP2012</td></tr> <tr> <th>Full backup folder</th><td></td><td></td><td></td><td></td></tr> </table>					Type	One-way synchronization - Purge (-30 days) - User Confirmation	Differential Backup ZIP	One-way synchronization (Backup)	Differential Backup ZIP	Warnings	Ignored	Ignored	Ignored	Ignored	User	FSCMB03@eco	NT AUTHORITY\SYSTEM	ELITEBOOK6930gvars	NT AUTHORITY\SYSTEM	Access credentials		seibackup		seibackup	Interval	Every 2 weeks on Tu	Every day	Every day	Every day	Start time	28.08.2012 12:18:25	31.08.2012 18:04:54	30.08.2012 13:36:56	31.08.2012 10:04:04	Total time	0:01:55	0:04:09	0:00:26	0:09:59	Copied	239 files (58,066 MB)	100 files (15,838 MB)	6 files (166,293 kB)	105 files (15,830 MB)	Failed	0 files (0 B)	0 files (0 B)	0 files (0 B)	0 files (0 B)	Backup total size		14,539 MB		14,539 MB	Destination folder	S:\Zakaznici	\\172.16.75.16\nddbackup\user\ZP2012_08_31_10_040%	C:\zakaznici	\\172.16.75.16\nddbackup\user\ZP2012	Full backup folder				
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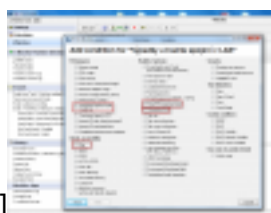
Image: Sledovanie časov zálohovania v časti zóny

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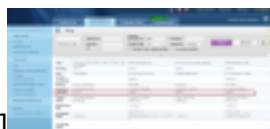
02/11/2012



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[2]



[3]

## Links

[1] <https://customermonitor.eu/sites/default/files/vstup%20do%20watchu.png>

[2] <https://customermonitor.eu/sites/default/files/watches.png>

[3] <https://customermonitor.eu/sites/default/files/cas%20trvania%20zalohovania.png>