Automation Engine

Troubleshooting

07 - 2020

Contents

1. Alerts

Concept

Alerts is an (old) tool to inform Pilot users about important events related to Automation Engine's working or configuration.

Many of these events are also managed with more recent tools, like the *'Server Checks'* or the *'Connection Doctor'*.

Typical for alerts is that they pop up in the Pilot, in a separate dialog.

Types and examples

- A red alert reports a system problem or urgent important information. For example: Containers that can't be accessed, database problems, upcoming shutdown of the server, communication related errors (Access Points), etc.
- An orange alert advises you to make some change. For example: Change how a workflow is constructed because it generated an excessive amount of *tokens* (which slows down the server).

Managing Alerts

- Cleanup: The only way to clean up the list of alerts is to manually (multi-)select items and press 'delete'.
- Some alerts can be switched off. This is done per user. Learn more in *User Properties - OLD*.

2. Troubleshooting the Server

In the **Automation Engine Server Web Page**, the section **Server Checks** helps an Automation Engine administrator to diagnose and fix any problems.

You can open the server web page by entering `http://<name of your server>` or `http://<name of your server>:9999` in the address field of your browser.

Note: You will be asked to log in using an administrator account or use an account that is a member of the **BGADMIN** user group on the Automation Engine server.

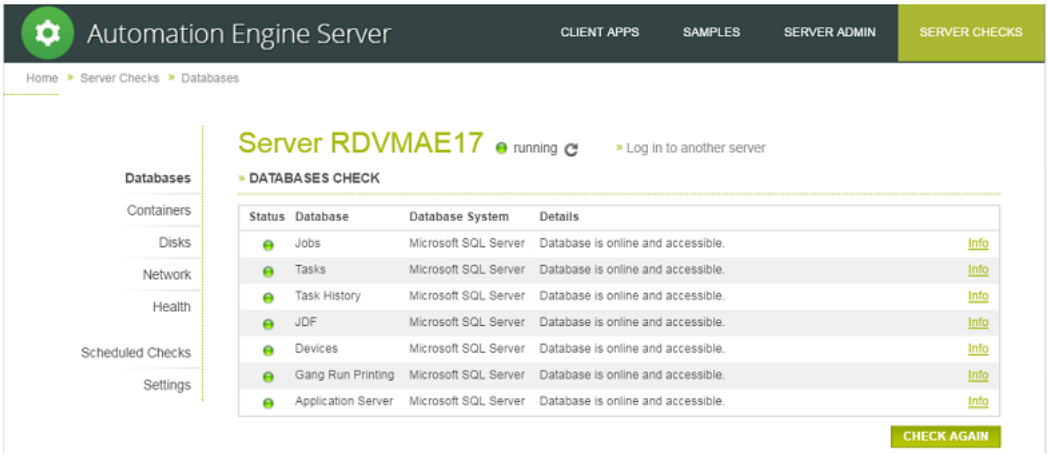
2.1. Checking the Databases

The **Databases** page checks

- if the database system of the database is up and running.
- if the database is online and accessible for the Automation Engine server.
- if the size of the database is not nearing its size limit.

Click **Info** to see some more information like the database file name and the SQL Server and/or SQL Server instance where the database is located (if the database system is Microsoft SQL Server).

Note: These are the databases that are configured in the Configure tool, in *Automation Engine Databases*.



The **Status** of the database can be one of these:

- The database is online and accessible.
- The database is online and accessible, but there are one or more warnings (for example the database is near its size limit or the connection speed is not sufficient).

Note: The connection speed is checked by this small test:

1. Start the timing
2. Connect to the specific database
3. Retrieve some data (db query of "`select @@Version`")
4. Stop the timing.

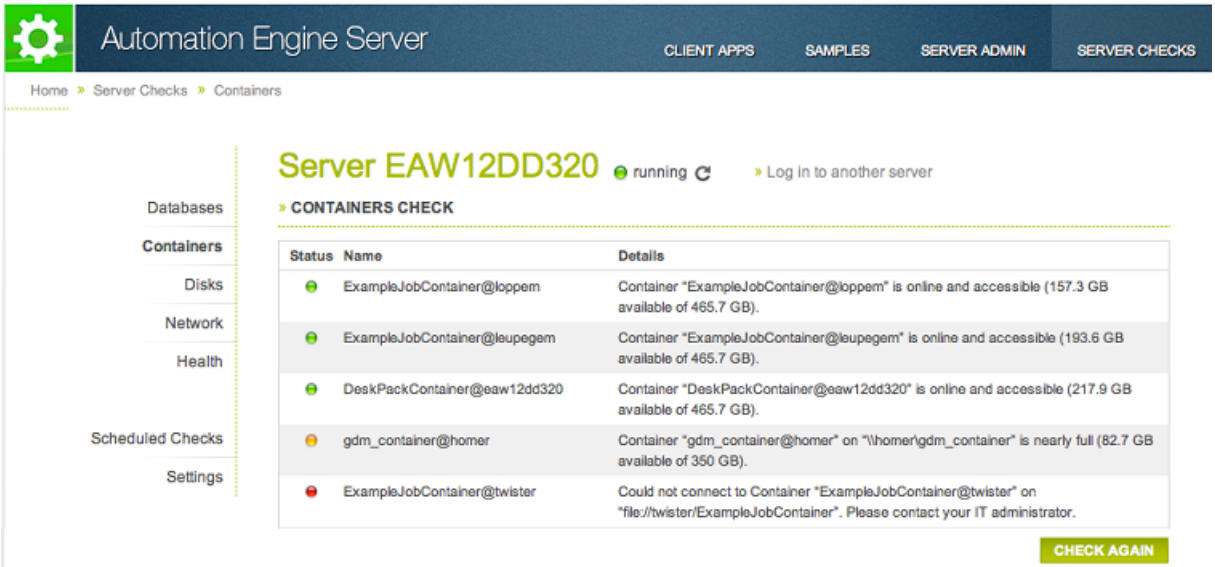
This test is repeated 10 times, and then an average is calculated. When that average speed exceeds 100 ms, the status is a warning.

- The database is not online or is not accessible (for example no connection could be made to the database system, or the login failed).
- The status of the database is unknown. This is the case when the DBMS type of your Application Server database is Oracle or when any of the other databases is an Embedded database. There are no tests available for these two types.

Note: When the Automation Engine server is not running, you can still check the status of its databases. In this case however, the **Database System** field will be empty.

2.2. Checking the Containers

The **Containers** page checks the status of each container configured on this Automation Engine server.



This page checks

- if the container is online and accessible for the Automation Engine server.
- if the used disk space of the disk where the container is located is not getting too high. The percentage of used disk space at which you get a warning or an error can be set in the **Settings** page.

2.3. Checking Disks

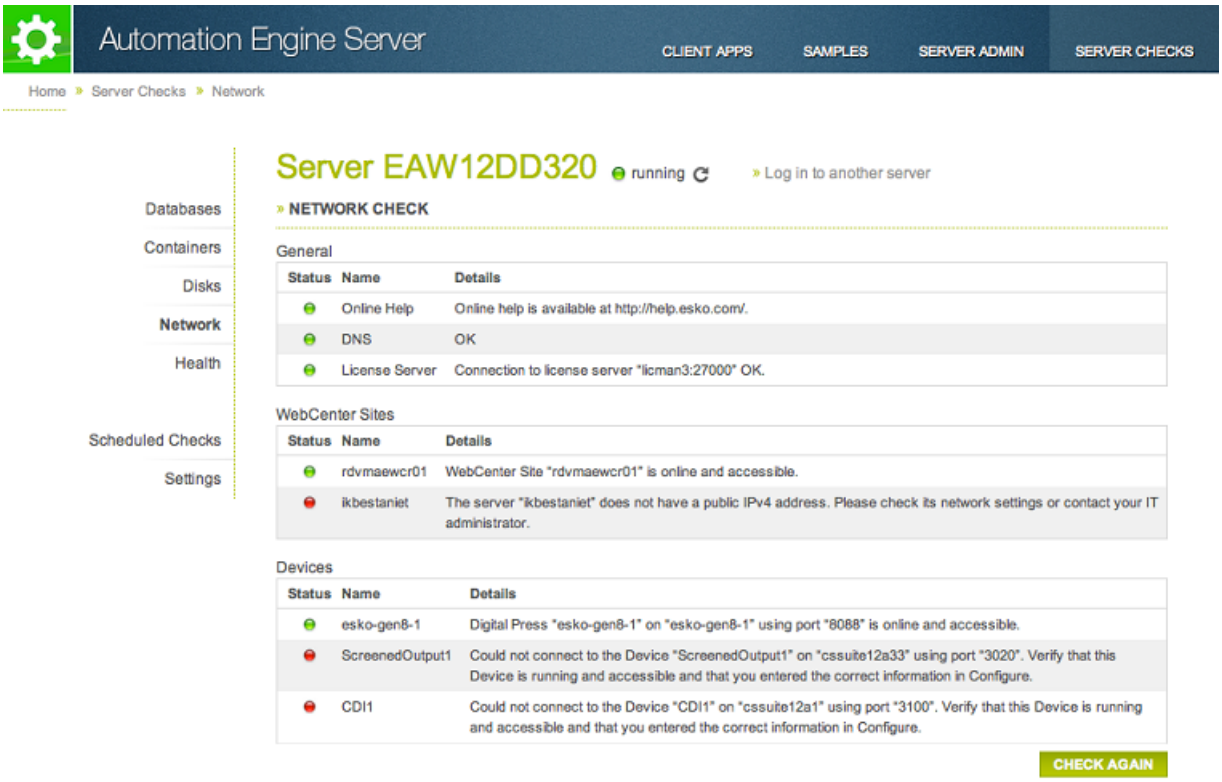
The **Disks** page checks and shows detailed information about the disks where the Automation Engine system folders are located.

For every Automation Engine system folder, this page checks:

- If the disk where the system folder is located is accessible to the Server.
- If the free disk space of the disk where the system folder is located is not getting too low.
  - When the free disk space is less than 20 GB, the check will show a warning.
  - When the free disk space is less than 5 GB, the check will show an error.

2.4. Checking the Network

The **Network** page checks and shows detailed information about network connections of the Automation Engine server, including those to external systems like the **License Server**, **WebCenter Sites** and **Devices**.



The network checks are grouped into 3 categories:

- **General**: This category checks
  - if the Automation Engine server can connect to the **Online Help** (*http://help.esko.com*).
  - if the **DNS** settings are configured correctly (does the server name of this server computer match with what the DNS returns to other systems when they try to access it).
  - if the **License Server** can be reached (in case of failure, basic network tests are done to verify DNS configuration and TCP/IP connectivity).
  - if the **Assistant Server(s)** can be reached (in case of failure, basic network tests are done to verify DNS configuration and TCP/IP connectivity).
- **WebCenter Sites**: This category checks the network connection between the Automation Engine server and the configured *WebCenter sites*.
- **RIPs**: The connection with configured Imaging Engines or FlexRips.
- **Workflow Servers**: The connection between the Automation Engine server and *Nexus* or *Odystar* servers, which are used by the '**Send to** ...tasks' (by now outdated' tasks).
- **Digital Presses**: The connection with configured *digital presses*.
- **Devices**: The connection with configured *Devices* (*CDI Imagers* or *Kongsberg tables*).
- **Esko Cloud Locations**. Learn more in *Collaborating via Esko Cloud*.

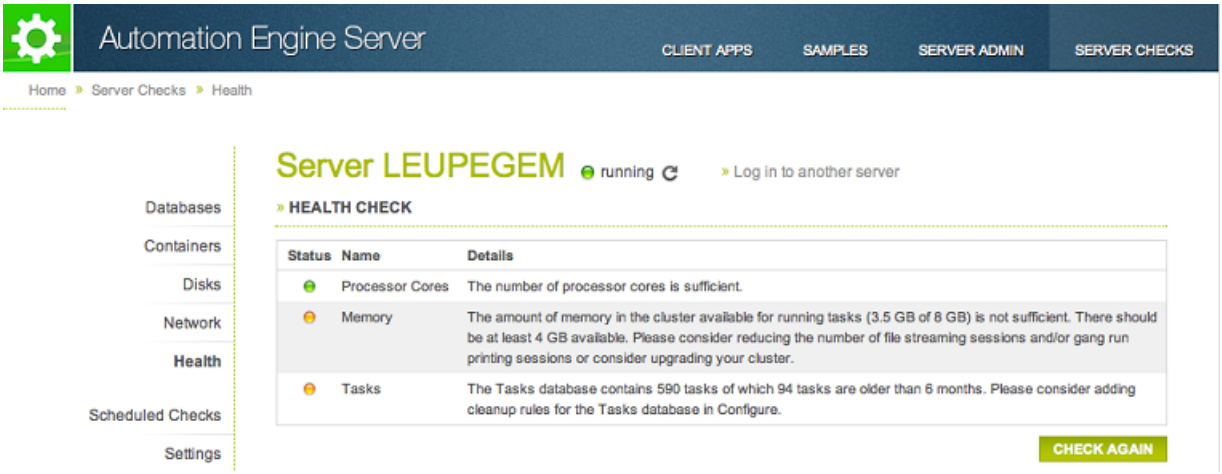
If there are no network checks available or applicable for a certain category, then that category will not be shown, except for the **General** category, which is always shown.

Possible Statuses

- The network test succeeded.
- The network test succeeded, but there are one or more warnings.
- The network test failed.
- The network test was not applicable or was skipped.

2.5. Checking System Health

These three categories check the health of your server computer: **Processor Cores**, **Memory** and **Tasks**.



Processor Cores

The check determines if sufficient processor cores are present for the current Automation Engine setup.

For each Automation Engine server (master and assistants):

- The number of processor cores is calculated that are required to run the configured number of file streaming sessions (the **Viewer**) and **Gang Run Printing** sessions.
  - **2 file streaming sessions require 1 processor core.** If the number of file streaming sessions is not even, an extra processor core is required.
  - **1 gang run printing session requires 1 processor core.**
- Based on this calculation, if there are not enough processor cores, the resulting status is a warning and a specific message. An example:

  ```
  The number of processor cores in "name-of-the-server" ({1}) is not
  sufficient. A system that can run {2} file streaming sessions and {3}
  gang run printing sessions requires at least {4} processor cores.
  ```

For the whole cluster, the remaining number of processor cores is checked against the number of defined processing channels. **1 processing channel requires 1 processor core**.

Note: The remaining number of processor cores in the cluster is the sum of all remaining cores in each host after subtracting the ones needed for file streaming and gang run printing sessions.

When there are not enough processor cores to run tasks, the resulting status is a warning and a message appears. An example:

```
The number of processor cores in the cluster available for running tasks
({0}) is not sufficient. There should be at least {1} processor cores
available. Please consider reducing the number of file streaming sessions
and/or gang run printing sessions or consider upgrading your cluster.
```

Memory

This check determines if sufficient memory (RAM) is present for the current Automation Engine setup.

For each Automation Engine server (master and assistants):

- The amount of memory is calculated that is required to run the configured number of file streaming sessions (**Viewer**) and gang run printing sessions. **1 file streaming session requires 1 GB. 1 gang run printing session requires 500 MB.**
- Based on this calculation, if there are is not enough memory, the resulting status is a warning and a specific message is shown. An example:

  ```
  The amount of memory in "{hostname}" ({1}) is not sufficient. A system
  that can run {2} file streaming sessions and {3} gang run printing
  sessions requires at least {4}.
  ```

For the whole cluster, the remaining amount of memory is checked against the number of processing channels defined. **1 processing channel requires 2 GB.**

Note: The remaining amount of memory in the cluster = the sum of all remaining memory in each host after subtracting the memory needed for file streaming and gang run printing sessions.

If there is not enough memory to run tasks, the resulting status is a warning and a specific message appears. An example:

```
The amount of memory in the cluster available for running tasks ({0}) is
not sufficient. There should be at least {1} available. Please consider
reducing the number of file streaming sessions and/or gang run printing
sessions or consider upgrading your cluster.
```

Tasks

The number of tasks in the tasks database is checked against some predefined thresholds. Also, a check for old tasks is done.

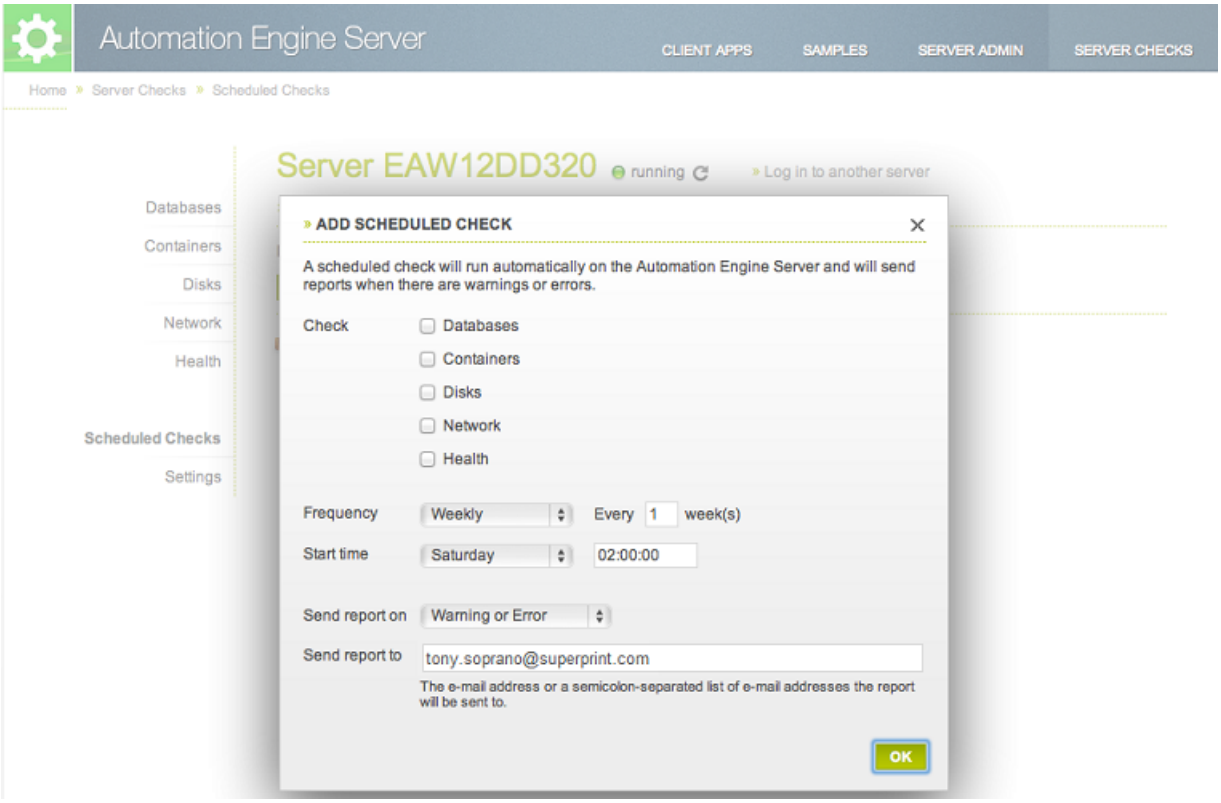
- The thresholds depend on the database version:
  - For an SQL Express edition, the warning threshold is 30.000, the error threshold is 100.000 .
  - For all other database versions, the warning threshold is 200.000, the error threshold is none.
- Old tasks are tasks that were launched more than 6 months ago. The check returns a specific message. An example:

```
The Tasks database contains {0} tasks of which {1} tasks are older than
6 months. Please consider adding cleanup rules for the Tasks database
in Configure.
```

2.6. Scheduled Checks

This page allows to schedule automatic runs of the **Server Checks**. When there are warnings or errors, they send a report via e-mail.

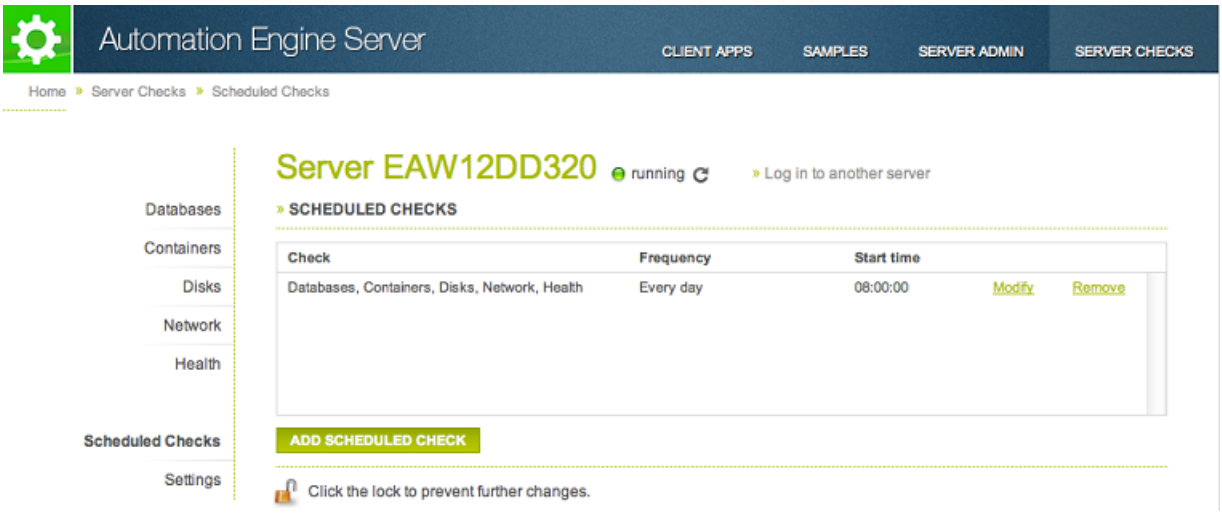
To add a scheduled check, click the **Add Scheduled Check** button.



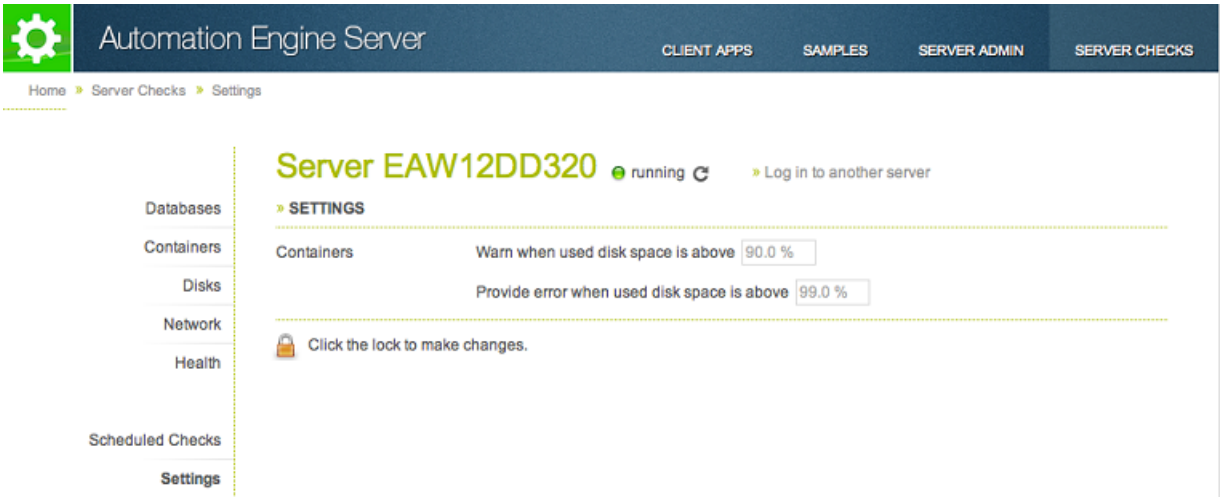
- Select one or more items to **Check**.
- Select the **Frequency** and the **Start time**.
- Specify if you want the report to be sent on **Warning or Error** or on **Error Only**.
- Specify the e-mail address or a semicolon-separated list of e-mail addresses that the report should be sent to.

Click **OK** to add the scheduled check.

Your scheduled check appears in the list. Add more if you want to.



2.7. Settings



Enter the new values for the settings you wish to change and click **Apply**. The new values will be used the next time those checks are done.

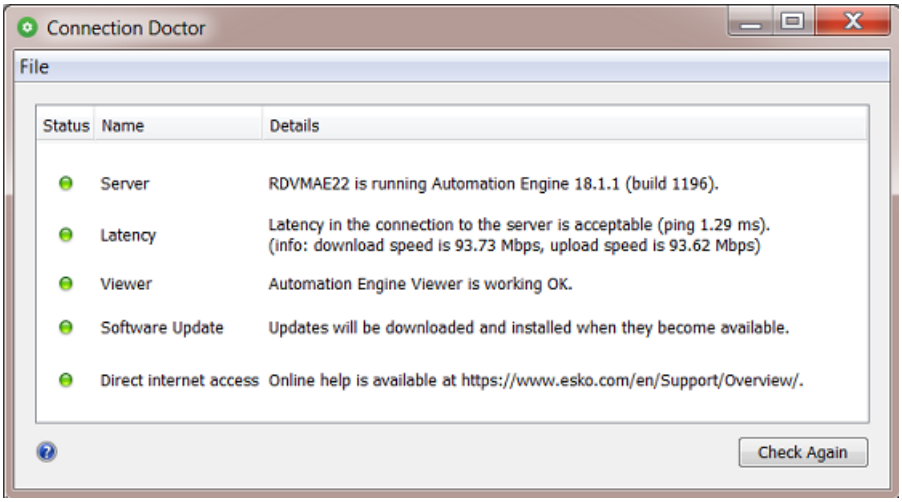
For the check on **Containers**, you can decide the percentage of used disk space that triggers a warning (90% by default) or an error (99% by default).

3. Troubleshooting the Pilot

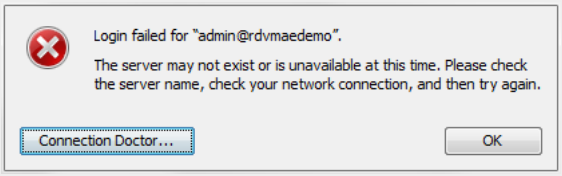
The **Connection Doctor** checks if the Pilot's connection to the Automation Engine server works properly. This tool helps you to fix a problem without the need to contact Esko support.

Consulting the Connection Doctor

In the Pilot, choose **Tools** > **Connection Doctor**.



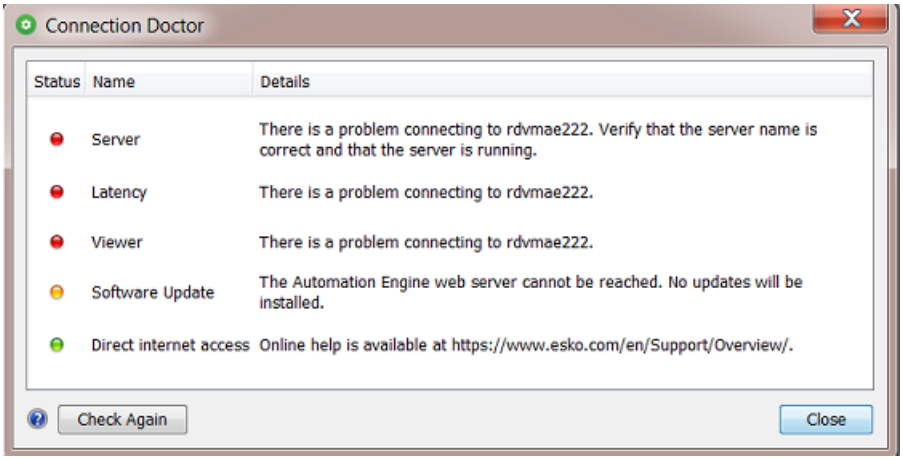
Note: When you have troubling logging on to the Pilot (or Shuttle), the error message will also allow to start up this tool:



This tool checks:

- Access to the Automation Engine server software
- Latency in the network between client and server
- Access to the service on the server that runs the Automation Engine Viewer
- Access to updates of the client software (triggered by a change of the server software)
- Direct access to the internet (of this client computer).

Example:



Status Details

Detailed messages explain the result of the check:

Table: Server

Message	Clarification
The Automation Engine server is down for maintenance. Please try again later or contact your administrator.	The maintenance status includes: server updates, server upgrades or the installation of hot fixes.
The Automation Engine server is restarting. Please try again in a moment.	This can take a few seconds to a few minutes.
The server you're connecting to is an assistant server. Please connect to the master server <host_name of the master>.	In setups where Automation Engine runs on multiple servers, one server is designated as master. The other servers take up the role of assistants. The master server is the server you need to log in to.
The server is currently set to idle. Please try again later or contact your administrator.	When a server has no or expired licenses and a server restart is done, the server starts up in **idle** mode ; it then does not accept connections.
There was a problem connecting to <host_name>. Please check that the host name is correct and <host_name> is on.	This computer is unable to connect to the host. Please check that the host name is filled in correctly and that the computer is switched on. Contact your IT department for more assistance.
There was a problem connecting to <host_name>. Please check that the server is running.	This client computer is unable to connect to the Automation Engine server. The most common reason for this is that the server software is not running. If the server software is running, check if your computer is correctly connected to the network.

Message	Clarification
	Contact your IT department for more assistance.
There was a problem connecting to <host_name>. Please check that the server is running, and verify with your IT administrator if the "<host_name>'s" host file is correct.	This computer is unable to connect to the Automation Engine server. The most common reason for this is that the server software is not running. If the server software is running, verify if the **hosts file** of your operating system is correct. The hosts configuration of this computer contains explicit references to the Automation Engine server's host name and its IP addresses. A configuration error could be the cause of this connection problem. Contact your IT department for more assistance.
There was a problem connecting to <host_name>. Please check that your computer is connected to the network.	This computer is unable to access the network. You can try and diagnose the problem by using one of the following methods: • On Mac, go to: **Applications** > **System Preferences** > **Network** > **Assist me...** to test your connection . • On Windows, go to: **Start** > **Control Panel** > **Network and Internet** > **Network and Sharing Center** > **Troubleshoot Problems** > **Network Adapter** to test your connection.

Table: Latency

Message	Clarification
Latency in connection to the server is acceptable.	The response time between this computer and the server (the 'ping') is less than 20 milliseconds, which is considered good (green status).
Latency in connection to the server can be problematic.	The response time between this computer and the server is between 20 milliseconds and 100 milliseconds (orange status). This is OK for normal operations.
Latency in connection to the server is likely unacceptable.	The response time between this computer and the server is more than 100 milliseconds (red status). This is considered too slow for normal operation. Consult with your IT department what can be done to improve the speed.

Table: Viewer

Message	Clarification
There was a problem connecting to the Application Server. Please check that the server is running. Contact your administrator if the problem persists.	Esko's 'Application Server' is a dedicated software service that enables the Viewer tool. In this case this service could not be reached. Check if the server is running.
The Application Server <host_name> is not running on port <port_number>. Please contact your administrator.	The Application Server is not running on the designated port.

Note: Since v20, the Viewer no longer uses this Application Server.

Table: Software Update

Message	Clarification
Software updates will be downloaded and installed when they become available.	The Automation Engine Web Server is accessible from this computer. Updates of the client software will be available.
The Automation Engine Web Server could not be reached. Software updates will not be installed on this machine.	This is most likely due to firewall restrictions. Contact your administrator to resolve this issue.

Note: The Automation Engine server hosts software updates for its client applications like the Pilot and Shuttle. This test checks if software updates can be downloaded from the server to the client computer. The test will fail if the Automation Engine Web Server is not correctly hosted on port 9999. For example, if another web service has claimed this port on the server. Please contact your Automation Engine administrator to resolve this issue.

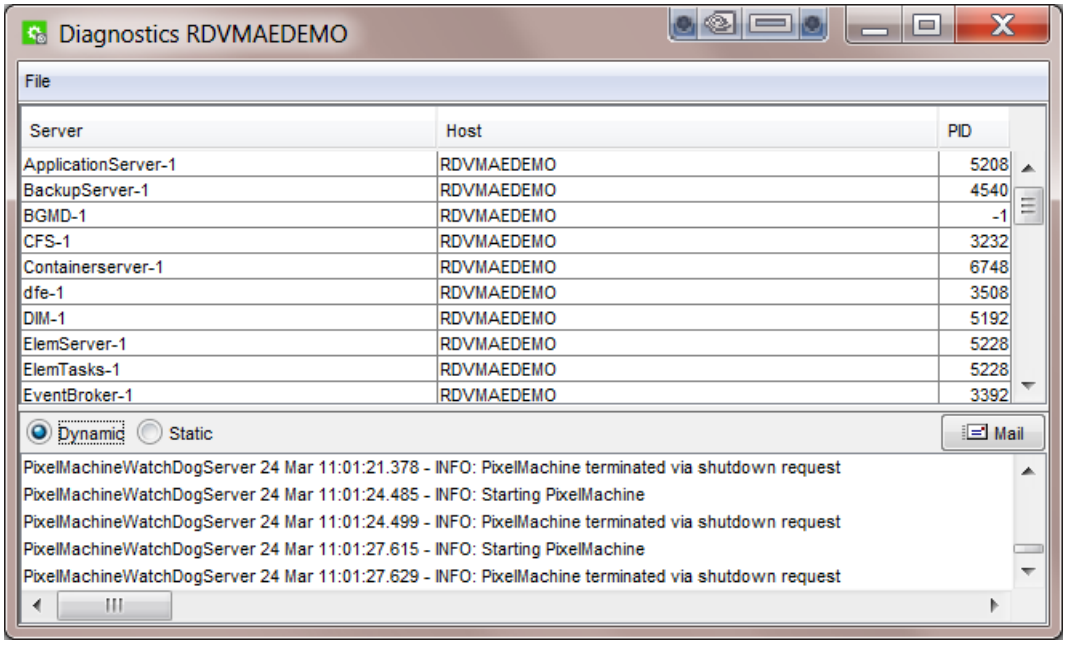
Table: Direct internet access

Message	Clarification
Esko online help is available at *http://help.esko.com/*.	This computer can access the internet.
Pilot was unable to connect to the Internet. Please check the Internet proxy preferences of your operating system if you have experience problems accessing Esko online help.	This computer was unable to connect to the internet (it failed to, as a sample test, access Esko's help pages). Check the internet proxy preferences of your operating system. Contact your IT department for more assistance.

Note: When Esko's online help pages are unreachable, a warning is shown. This does not necessarily mean that the online help is unavailable. Your internet browser, which is used to display the help pages, may be configured with an internet proxy that enables you to access the online help even if the Pilot is unable to connect to it. Please contact your IT administrator for more information.

4. Troubleshooting the Software

The **Diagnostics** tool allows you to monitor the status and activity of the Automation Engine software in deep technical detail. This tool is typically used by Esko support staff. In case they want you to use it, they will instruct you how to use it.



This tool is automatically installed on any client computer that downloaded a Pilot and/or Shuttle from the **Automation Engine Server web page**. You can start it up by using its desktop shortcut.