d.ecs monitor: Administrator

Table of Contents

1. d.ecs monitor

1.1. Introduction

1.1.1. About d.ecs monitor

The application d.ecs monitor is used to monitor the d.3 system.

The d.ecs monitor is based on the operation of decentralized agents. These agents are used for the documentation and monitoring of the d.3 system.

The system provides d.3 administrators with an overview of the system environment. Moreover, detailed information on the currently executed d.velop AG applications is compiled.

The system consists of the following two components:

d.ecs monitor agent

A Windows-service as a server component which is executed on the application servers. This Windows-service collects information on the on-premises system and the d.3 processes executed there.

d.ecs monitor

A Windows-service as a client component which is centrally executed. This Windows-service compiles the information from the individual agents. Moreover, it provides a web application to display the information.

The actual structure of a d.ecs monitor system is described in chapter Architecture and functionality.

> **Note**
> All illustrations in this documentation were mainly created with the browser window being minimized. When maximized or with a different width, the dialog content may look different.

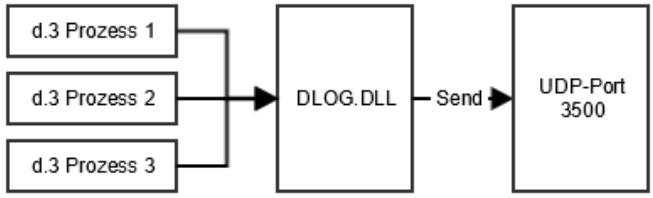
Available wrappers

You can find a list of the available wrappers in the d.velop service portal.

For further information please refer to the corresponding product documentation.

1.1.2. Architecture and functionality

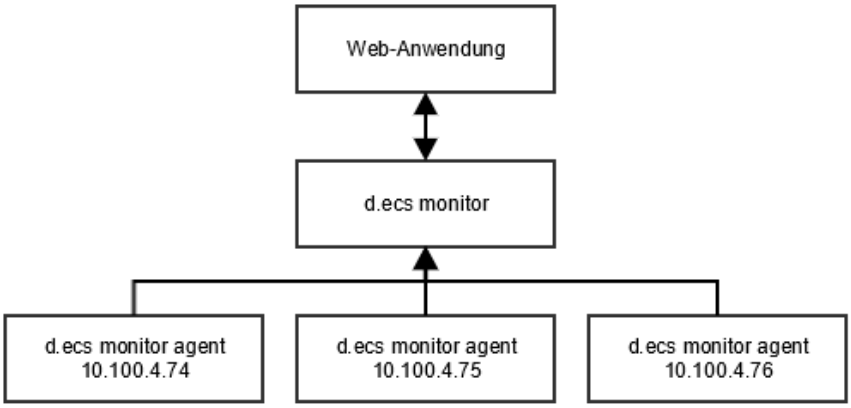
Using the `DLOG.DLL` allows d.velop AG applications to send monitoring information as a UDP broadcast:



The d.ecs monitor agent installed and running on the application server, receives this monitoring information and adds the related d.3 processes accordingly to the list of its applications to be monitored. Moreover d.ecs monitor agent determines additional information on the application server such as the

CPU-load, the available main memory and the available harddisk capacity. Processed and additionally determined information is then transmitted to d.ecs monitor.

The d.ecs monitor provides a web application allowing you to centrally retrieve the collected information:



To keep the effort for d.3 administrators as low as possible, the system configures itself after the start.

1.1.3. Prerequisites

DLOG.DLL

The monitoring system d.ecs monitor requires using the **DLOG.DLL**.

This DLL allows d.velop AG applications to broadcast monitoring information within a network. The DLL is located in the directory **SysWOW64** under Microsoft Windows and sends UDP broadcasts to the port 3500. The port 3500 cannot be modified. This mechanism is already used in combination with the d.3 object monitor.

The d.ecs monitor at least requires version 1.3.1.24 of the **DLOG.DLL**.

The d.ecs monitor allows monitoring all d.velop server products.

For the processes d.3 server, d.3 async, and the d.3 hostimport, the sending of UDP messages can be suppressed in the d.3 config by setting the parameter **UDP_SUPPORT** to "No". Additional information on the parameter **UDP_SUPPORT** can be found in the d.3 administration documentation.

Firewall settings

To be able to operate d.ecs monitor and d.ecs monitor agent when using a firewall (e.g. Windows Firewall), various ports must be opened.

Firewall settings - d.ecs monitor

Following two program rules must be enabled for d.ecs monitor:

Program rule - d.ecs monitor

To reach d.ecs monitor from d.ecs http gateway, all ports opened by the application **MonitorApp.exe** must be accessible from outside. The port of the application d.ecs monitor (**MonitorApp.exe**) is assigned automatically on startup, therefore a program rule is required.

- Define the protocol as **TCP**.
- Set the direction to **Inbound**.

Optional: It is possible to explicitly specify the used TCP port via the configuration file **AppSettings.ini**, which is located in the d.ecs monitor program directory. In this case, only this port must be released.

Port 3600 - d.ecs monitor

The port is used for the autonomous configuration of the system and cannot be modified.

- Define the protocol as **UDP**.
- Set the direction to **Inbound**.

Port 3501 - d.ecs monitor

The port is used for the autonomous configuration of the system and cannot be modified.

- Define the protocol as **UDP**.
- Set the direction to **Inbound**.

Firewall settings - d.ecs monitor agent

Program rule - d.ecs monitor agent

To reach d.ecs monitor agent from d.ecs http gateway, all ports opened by the application **d.ecs monitor agent.exe** must be accessible from outside. The port of the application d.ecs monitor agent (**d.ecs monitor agent.exe**) is assigned automatically on startup, therefore a program rule is required.

- Define the protocol as **TCP**.
- Set the direction to **Inbound**.

Optional: It is possible to configure the used TCP port via the configuration file **AppSettings.ini**, which is located in the d.ecs monitor agent program directory. In this case, only this port must be released.

Furthermore the following three ports must be enabled for d.ecs monitor agent:

Port 3600 - d.ecs monitor agent

The port is used for the autonomous configuration of the system and cannot be modified.

- Define the protocol as **UDP**.
- Set the direction to **Outbound**.

Port 3500 - d.ecs monitor agent

The port is used by the d.velop services to receive the UDP messages.

- Define the protocol as **UDP**.
- Set the direction to **Inbound**.

Port 3501 - d.ecs monitor agent

The port is used for the autonomous configuration of the system and cannot be modified.

- Define the protocol as **UDP**.
- Set the direction to **Inbound**.

1.1.4. License

d.ecs monitor Basic

D.ecs monitor can be used to monitor your d.3 system already without a license. If you do not have a license for d.ecs monitor but the d.ecs license server is available, the d.ecs monitor is executed in the basic mode. The basic mode initially only provides basic monitoring tools.

The d.ecs monitor in the basic version is free of charge and does not require a separate license. It only checks if the license server is available to prevent the product from being used in non d.velop scenarios.

d.ecs monitor Advanced

One advanced license must be purchased for each monitored server. Agents are installed on the servers, which debit the license. No license is required for d.ecs monitor itself. If it is installed on a server that is not monitored, no extra license is required.

An agent is required for:

- the monitoring of server resources (CPU, RAM, hard disks)
- the monitoring of the d.velop products including the automatic configuration (d.cold, d.3 hostimp, d.3 async, d.ecs rendition server,...). A license is required on each computer on which d.velop products are installed.

Example::

A customer has a system with:

- 2 x Server cluster: d.3 server
- 1 x Server: d.3 hostimp, d.3 async
- 1x Server: d.cold, d.ecs rendition server
- 1 x database server Oracle
- 1 x server for the hosting of his homepage

He wants to use the d.ecs monitor:

- Monitor all d.velop products.
- Validate SQL tables via SQL scripts.
- Check if his website is online.

Required licenses:

- 4 (2x Server Cluster, 1 x Server d.3 hostimp, d.3 async, 1x Server d.cold/RS)
- The monitoring of the database tables and the web service is performed, for example, by the agent on the d.cold computer and does not require a separate license.

Once a valid license is found for d.ecs monitor, the basic mode is disabled and additional features are available:

- You can create and edit groups to organize computers and d.velop services.
- E-mail configurations can not only be applied globally but based on groups. This allows to send an e-mail only to specific users etc.
- Individual maintenance windows can be configured next to global maintenance windows for groups, computers and d.velop services.
- Configuring availability rules to secure the execution of a specific number of instances for a service.
- Interpretation, view and customization of the monitoring-objects of d.velop services. Only with the special monitoring-objects of a d.velop service, you can comprehensively monitor the application. The general process monitoring, as well as the monitoring objects of d.ecs monitor powershell executer are already available in basic mode.
- Displaying linked pages of a process. Using the links sent by the d.velop services to directly jump to the respective application.
- Monitoring and administration of available disk space of hard disks.
- The automatic monitoring of product configurations (working directories, job tables,...) can be used (if necessary, wrapper installation necessary).
- Start, stop and restart of services and programs in the process manager on the monitored computers is possible via the d.ecs monitor user interface.

- Automatic reactions to status changes of individual objects can be defined (via script), so that known errors can be corrected automatically by the system.
- Hostimport directories can be managed and errors can be corrected directly in the user interface.

In which mode d.ecs monitor is currently running can be seen in the Product information.

1.2. Installation - d.ecs monitor

1.2.1. Preliminary notes on the installation

Basic information

First install d.ecs monitor and afterwards the d.ecs monitor agents. The d.ecs monitor agent must be installed on all application servers to be monitored.

> **Note**
> It is enough to install d.ecs monitor on exactly one application server.
>
> To ensure reliability d.ecs monitor can be installed on a second application server. Both d.ecs monitor instances then run in an active/passive cluster. To do this d.ecs jstore must be connected to a cluster on both instances, so that both d.ecs monitor instances can access the same database and a cluster among the d.ecs monitor instances can be created automatically.

Windows services

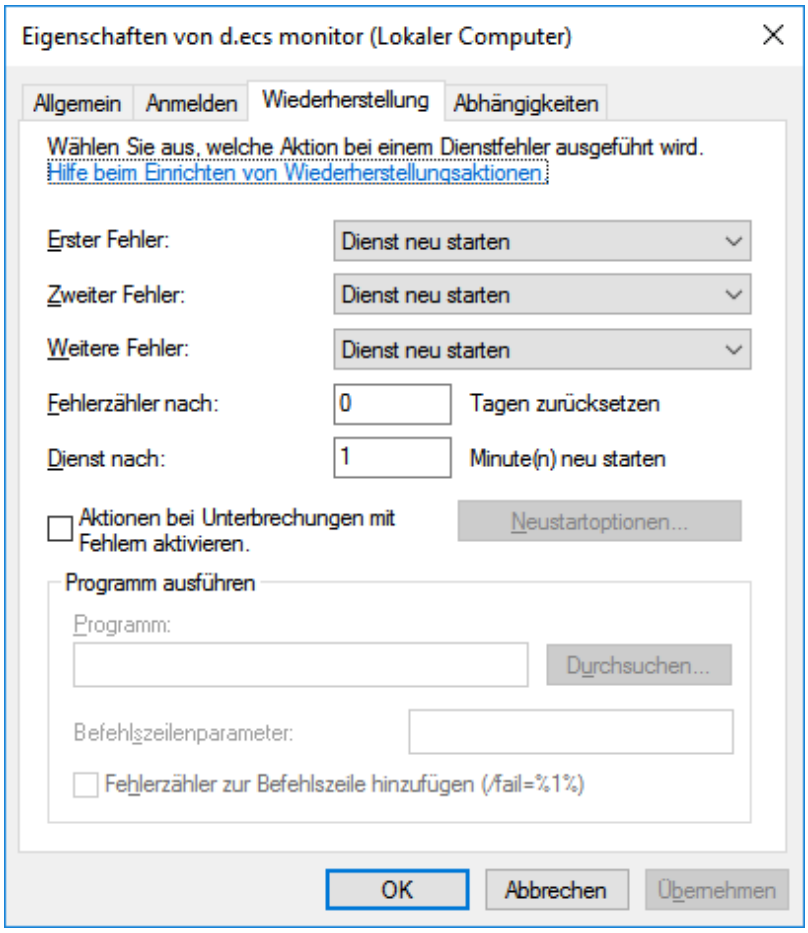
The two applications d.ecs monitor and d.ecs monitor agent, building the d.ecs monitor monitoring system, are Windows services.

> **Note**
> Having successfully installed, the respective Windows service is started automatically.

> **Note**
> The Windows service for d.ecs monitor, d.ecs monitor agent and the d.ecs monitor wrappers must run under the account of a local system or an account with local administration rights. This is necessary because the Windows services provide web services that are bound to the hostname to enable operation in a d.ecs http gateway cluster.

Recovery options

The Windows services are automatically configured to restart after one minute in case of an error (a crash). The recovery behavior can be configured in the respective service properties:



1.2.2. Installing the components

Introduction

To install the product d.ecs monitor, follow these steps:

Thoughts on the architecture

The product d.ecs monitor comprises 2 components. The d.ecs monitor agent and the application d.ecs monitor. The d.ecs monitor agent must be installed on all machines to be monitored. The d.ecs monitor collects information, interprets them and displays them afterwards.

> **Note**
> For the interpretation and collection of the information, the application d.ecs monitor requires CPU performance Typically, the CPU load with one CPU core ranges from 0 to 60%.

Sequence of the installation:

1. Install d.ecs monitor
2. Install d.ecs monitor agent

1.2.3. Installing d.ecs monitor

Installing d.ecs monitor with d.velop software manager

You install the software exclusively using d.velop software manager. If an application is required for different products, the corresponding software packages are also installed automatically.

For further information on installing the software, see the d.velop software manager manual.

Installing updates of d.ecs monitor with d.velop software manager

You can only update the software using d.velop software manager.

For further information on updates, see the d.velop software manager manual.

Uninstalling d.ecs monitor with d.velop software manager

The software you installed using d.velop software manager can only be uninstalled with d.velop software manager. If the software to be uninstalled has dependencies with other software packages, you must resolve these conflicts accordingly.

For further information on uninstallation, see the d.velop software manager manual.

1.2.4. Installing d.ecs monitor agent

Now, install all d.ecs monitor agent on the computers that you want to monitor.

Follow these instructions: d.ecs monitor agent Setup The computers should be visible in the d.ecs monitor web interface after installation.

d.ecs monitor agent Setup

Information on how to obtain the setup for the installation of the d.ecs monitor agent and important information for the installation can be found under Distribution of the Agents - Configuration wizard.

The installation of the d.ecs monitor agent using the .exe setup will be described below:

- Start **d.ecs monitor agent setup.exe**.
- Select the **Target folder**, in which the d.ecs monitoring agent is to be installed.
- Validate the summary.
- Select **Install**.
- Close the setup with **Finish**.

> **Note**
>
> If the final page with **Finish** contains a link to the configuration of d.ecs monitor agent, the agent could not be configured automatically.
>
> Information on the configuration of a d.ecs monitor agent can be found in chapter Configuration - d.ecs monitor agent.

If you did not get any error messages during installation and eventually see the page **Finish** without a link, d.ecs monitor agent was installed correctly.

Complete the setup with a click on **Finish**:

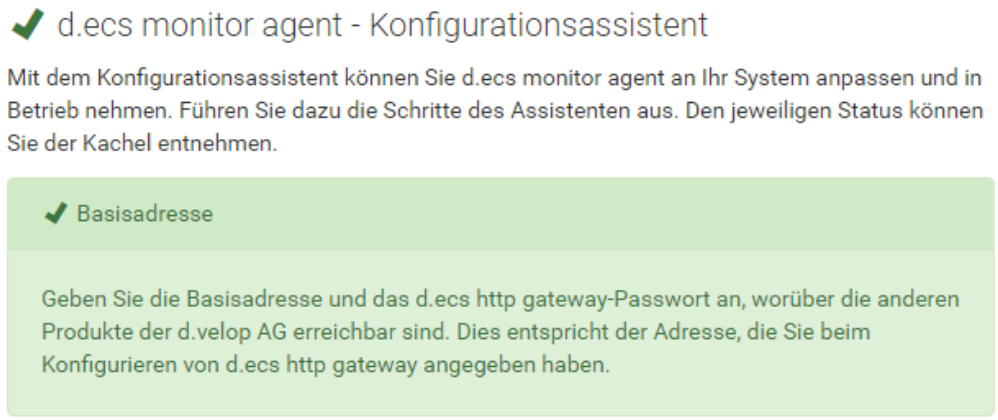
d.ecs monitor agent - setup wizard

Configuration page of the d.ecs monitor agent setup wizard is only required, if d.ecs monitor agent could not find d.ecs monitor via UDP or if d.ecs monitor could not be accessed.

IN this case, the page is provided as a link at the end of the setup.

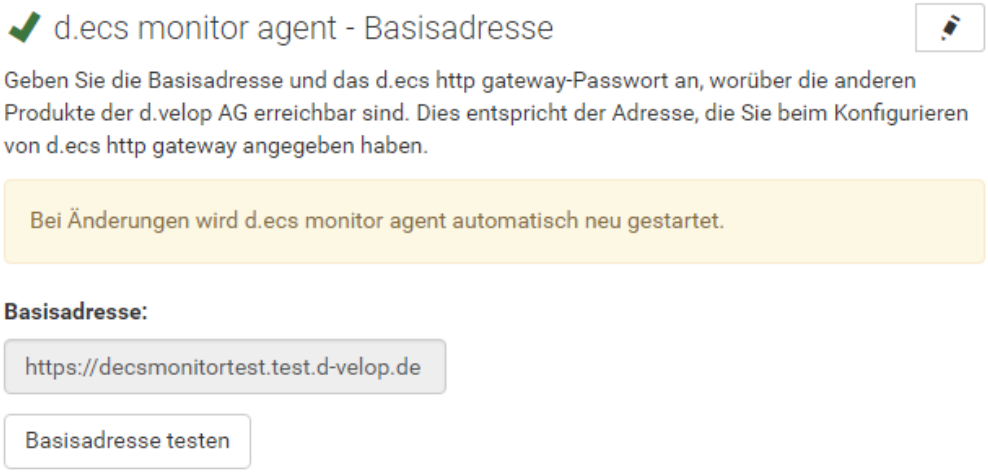
You can open the page manually via the link **Start menu | Programs | d.velop | d.ecs monitor agent**.

Setup wizard



d.ecs monitor agent - base address

This page allows you to change the base address of d.ecs monitor at runtime. To do so, open the edit mode and change the base address. Afterwards, save the settings. The base address is only adopted, if a d.ecs monitor agent could be accessed under this base address.



Manually configuring the d.ecs http gateway connection

You may want to change the connection data to d.ecs http gateway, but you cannot use the Setup wizard to do so.

In this case, you can also enter the necessary data manually.

This is how it works

1. Determine the **AppSettings.ini** of the agent. For details, see chapter d.ecs monitor agent.
2. Enter the system host name of the desired d.ecs http gateway into the AppSettings.ini of the agent. Use for this as a key **System.BaseUri**.
   AppSettings.ini (Extract)

   ```
   [AppSettings]
   Base.Uri=https://<System host name>
   ```
3. Create a **conf** folder in the installation directory of the agent.
4. Create a new **httpGatewayApp.pwd** file in the **conf** folder.
5. Retrieve the password hash from d.ecs http gateway.
   To do this, navigate to the URI http://localhost:6380/store/httpgateway/config on the machine where d.ecs http gateway is installed.
6. Copy the value for the **password** key to the **httpGatewayApp.pwd** file you created earlier.

7. Restart d.ecs monitor agent to apply the manual settings.

Installing updates from d.ecs monitor agent

> **Warning**
> Please note the following when updating d.ecs monitor agent:
>
> - In first step, update d.ecs monitor.

Update d.ecs monitor agent via the d.ecs monitor web interface.

1. Open the tile **Configuration wizard** in the d.ecs monitor.
2. Please select **Distribution of monitoring components**.
3. Please select **Update all** or decide to **Update** of individual monitoring components.

Uninstalling d.ecs monitor agent

You can remove the application d.ecs monitor agent via the control panel sections **Programs and features**.

The procedure for uninstalling is described in the following General:

- Open the uninstallation under **Programs and features**.
- Confirm the message for the removal with **Yes**.
- Wait for the uninstallation to be finished.

The uninstallation may take a few minutes.

If you did not receive any error messages during the uninstallation, the application was successfully removed.

Removing the computer from d.ecs monitor

If you do not want to monitor the computer anymore, you can remove the computer from d.ecs monitor. Note that removal removes all data related to the computer and its child services and is unrecoverable.

You have the option to have the computer removed from d.ecs monitor directly during the uninstallation process. To do this, confirm the corresponding question in the uninstall wizard.

Alternatively, you can perform the removal manually at any time after the uninstallation. Follow the instructions on the Computer listpage.

1.2.5. Language selection

By default, d.ecs monitor supports the languages German and English.

> **Note**
> The display language for the d.ecs monitor depends on the language settings in Internet Explorer. Select German or English as the main language. The main language is displayed at the top of the Internet Explorer language settings. If you main language in the browswr is not supported by d.ecs monitor, d.ecs monitor is automatically displayed in English.

1.3. d.ecs monitor agent

1.3.1. Configuration file

Configuration is carried out via Settings - Settings or via the d.ecs monitor agent - Setup wizard . Alternatively, some configurations can also be set via Call parameters.

The configuration of d.ecs monitor agent is located in the **AppSettings.ini in** the installation directory. However, a user should typically not have to apply any manual adjustments here.

However, it may be necessary to configure the port manually instead of via call parameters under which the agent should start its web interface. To set the port, a value is assigned to the key **Port** in the configuration file under the section **AppSettings**.

Example::

An extract from **AppSettings.ini**. The port is set to 12345.

AppSettings.ini (partial extract)

```
[AppSettings]
Port=12345
```

Furthermore, it can be defined whether the communication between d.ecs monitor agent and d.ecs http gateway should take place via HTTP (standard) or HTTPS. This can be defined via the protocol parameter.

AppSettings.ini (partial extract)

```
[AppSettings]
Port=12345
Protocol=HTTPS
```

When using the HTTPS protocol, it is mandatory to specify a fixed port, since the HTTPS protocol must be activated for this port with a corresponding certificate from the Windows certificate store. To do this, you must run two commands in a command prompt that is open as an administrator.

```
netsh http add urlacl url=https://[HOST]:12345/ user=Everyone
```

HOST is hostname of the computer on which the d.ecs monitor agent is installed and this command is executed. The "Everyone" specification is the group for each user and may vary depending on the operating system language.

```
netsh http add sslcert ipport=0.0.0.0:12345 certhash=[Fingerprint of the
certificate to be used] appid={[GUID]}
```

The GUID must be specified in the format "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxx" and be unique on the host.

In addition, the log level can be configured manually if required. In the default configuration, the log level is set to "INFO". If necessary, the log level can be adjusted via **AppSettings.ini**. The following options are available for configuration: **DEBUG, INFO, WARN, ERROR**.

AppSettings.ini (partial extract)

```
[AppSettings]
LogLevel=WARN
```

1.3.2. Call parameter

There are several call parameters that can control the behavior of this application. This includes various functions such as configuration helpers, calling the web interface and more.

You can get a description of the available call parameters using the **--help** call parameter.

Example call

```
C:\d3\d.ecs monitor agent\bin>"d.ecs monitor agent.exe" --help

Usage:
d.ecs monitor agent <Option> <Parameter>
Option:
...
If no option is specified the d.ecs monitor agent is run as a console
application.
```

1.4. d.ecs monitor

1.4.1. Web application

Introduction

The d.ecs monitor provides a web application generally available on the server under the following URL: http://localhost/monitor/

The information displayed there is automatically refreshed.

> **Note**
> The interval for refreshing the information is static and cannot be configured.

Authentication

The d.ecs monitor can only be operated by an administrator. To ensure this the d.ecs identity provider is used.

The steps required for the d.ecs monitor to identify you as an administrator can be found in the documentation for the d.ecs identity provider.

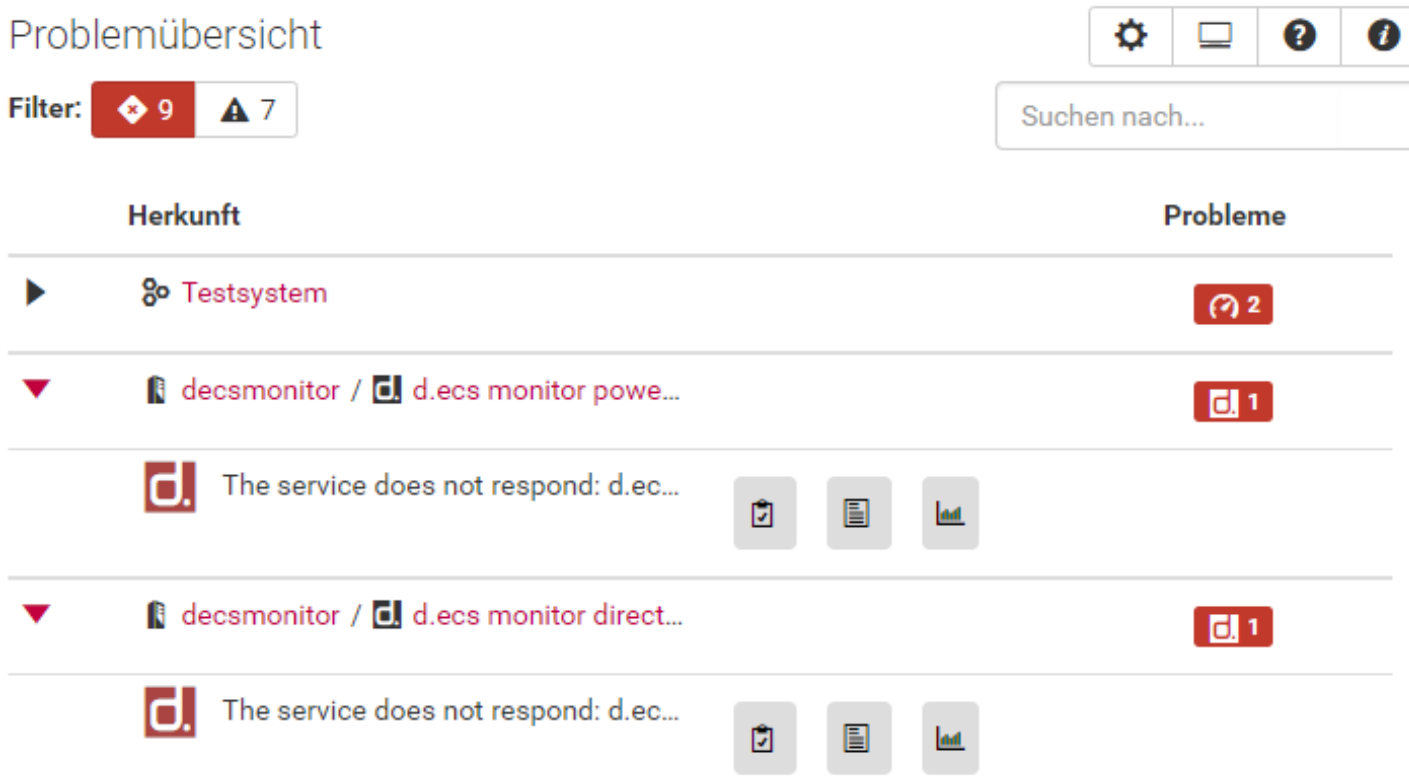
Start page

Call the URL https://<servername>/monitor to open the start page of d.ecs monitor.

The start page is structured in two panels. On the left-hand side you will see the standard **Groups** listed in the standard. The left side shows the **Problem overview**.

In addition, you will be offered a jump point to the d.velop metrics analyzer Dashboard for each problem in the **problem overview**.

> **Warning**
> The jump is only offered as long as you have correctly configured and activated the connection to the d.velop metrics analyzer under **Configuration > Settings**.



Use the menu bar at the top right to call up more options.

- Configuration
  You will be redirected to the Configurations of d.ecs monitor.
- View selection
  You get a selection of which view you want to see on the **Start page**.
- Help
  You will be redirected to the d.ecs monitor documentation.
- Product information
  You will be redirected to Information about the used product d.ecs monitor.

Notification history

The notification history can be accessed via the**"NotificationHistory"** button in the top right-hand area of the start page. This is a chronologically sorted overview of all messages in the current system, such as status changes relating to monitored agents and hard disks.

The message history table contains 4 columns:

- **Time:** When the event was reported.
- **Source** Origin of the event, for example the name of the agent or service. By clicking on the origin, the user is forwarded directly to the corresponding page.
- **Status**: New status that occurred after the event**(OK**, **Warning** or **Error**).
- **Message** Individual message with additional information on the respective event.

Above the table, the user has several options for filtering:

- by status: Events can be filtered according to a specific status using the buttons on the left.
- by date: The calendar widget can be used to display events from specific days.
- Search: The table can be filtered according to search terms using the input field on the right-hand side. The columns **Origin** and **Message** are taken into account.

Problem overview

The page **Problem overview** lists warnings and errors of all objects to be monitored in a sorted and structured way.

The start page filters the display of the objects for the status Error. The filter Warning is applied, if no objects exist in status Error. The problem overview can be filtered based on three factors:

- Status
- Status of acknowledgement
- Search text

> **Note**
> In the problem overview, you want to get an overview of not yet processed, existing problems in the context of d.3 host import. You can use the following filters for this purpose, for example:
>
> - The problem should be in the "Warning" status.
> - The problem should be in the "not acknowledged" state.
> - The problem should contain the text "host import".

Each line in the overview stands for an object to be monitored (service, computer or group), which is defined in the column **Origin**. The column **Problems** lists the cumulated errors of the respective object.

A click on the respective origin opens the page for the selected object. A click on a row opens the list of all issues of the selected object.

The following objects can be displayed in the problem overview:

- Computer monitoring
  - Hard disk monitoring
  - CPU monitoring
- Service monitoring
- Monitoring objects
- Availability rules

A problem line first shows the type of the problem by an icon. The icon is followed by the title of the problem.

By clicking on the acknowledgement symbol  you open a view in which you can acknowledge the problem. You can also add notes to a problem. These notes are deleted as soon as the problem no longer exists. If notes exist, the number of notes is displayed next to the acknowledgement symbol. If a problem was acknowledged, the image of the acknowledging user is displayed. This happens if the user's icon is configured in the system, otherwise the default icon  is displayed.

By clicking on the notes symbol  a view opens in which notes can be added to the object affected by the problem. These notes remain stored even if the problem no longer exists. The number of available notes is also displayed here.

Last, the line of a problem represents the current, problematic value of the monitored object.

Acknowledging problems

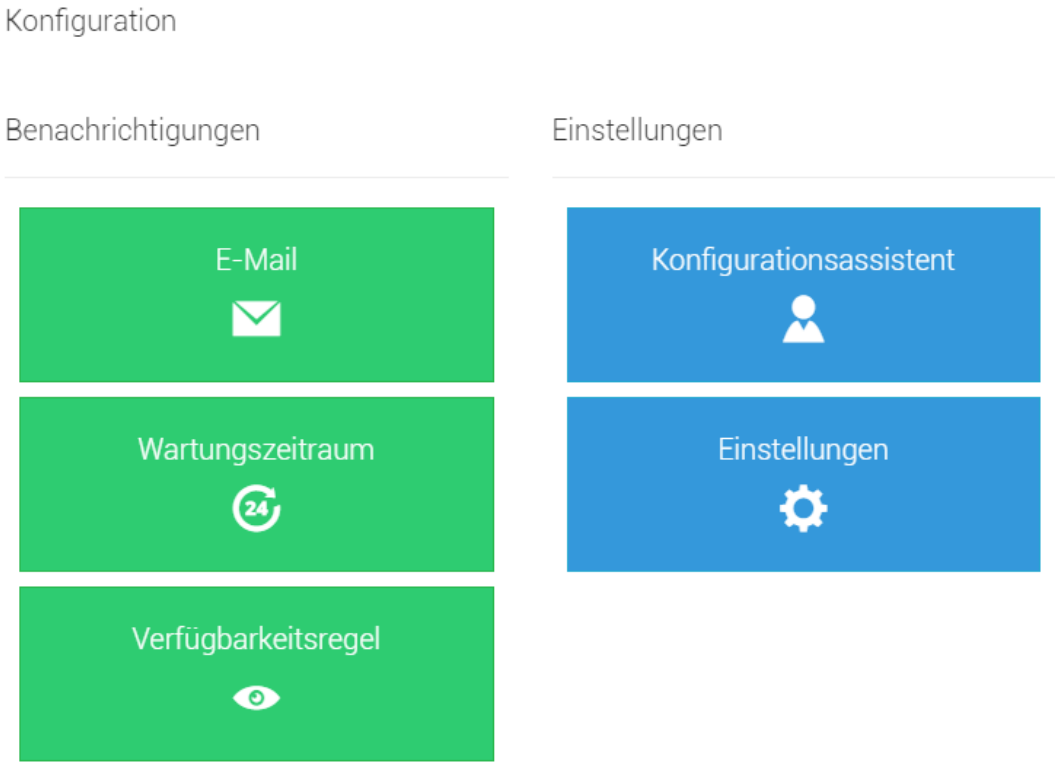
A click on the acknowledgement symbol of a problem in the problem overview opens the dialog for the acknowledgement of a problem. The processing of the problem can be assigned/accepted here as well as removed. You can also add notes to the current state of processing of the problem. These notes are automatically deleted once the problem is resolved.

Note
Please note that a note can be a maximum of 2000 characters long.

The number of remaining characters can be seen on the left below the text field.

Configuration - d.ecs monitor app

The page **Configuration** is opened via the gray cogwheel icon on the start page. This page takes you to the configuration options for d.ecs monitor. It differentiates between **Messages** and **Settings**.



Messages - Configuration

The messages differentiate between **E-mail**, **Maintenance time period**, **Availability rule**, **Third-party application** , **Status notification** and **External monitoring**.

E-mail notifications

This page allows you to view and edit the global e-mail configuration and the configuration of the e-mail notification for all groups.

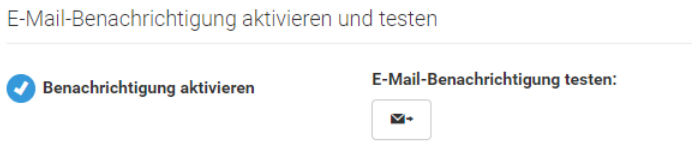
> **Note**
> Configure the SMTP-configuration in the global e-mail configuration, before you configure notifications for groups.

Global e-mail configuration

This page allows you to configure the e-mail settings.

Enable and test the e-mail notification

Enable the configuration of notifications here and test the current settings.



E-mail sending settings

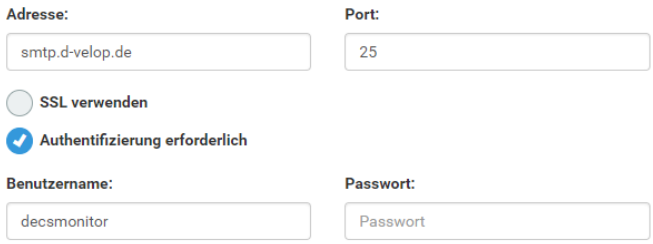
Configure how notifications are sent.

SMTP connection data

Select whether you want to send via SMTP or Office 365.

SMTP

Enter the SMTP connection data for the SMTP server here.



Office 365

To enable mail delivery via Office 365 (Azure), you must first register an application in your Azure portal(https://portal.azure.com). This is done via the "App registrations" resource.

The following is an abbreviated description of the different settings required for app registration in order to be able to connect mail dispatch in d.ecs monitor as of June 2023.

You can give the app any name you like. For the setting "Supported account type", please select the option “Accounts in this organizational directory only".

From the overview, the values for "Application (client) ID" and the "Directory (tenant) ID" are required for later configuration in d.ecs monitor.

In the next step, configure how you want to log in to Azure under "Certificates & secrets". The d.ecs monitor supports login via a certificate and login via a secret client key.

To log in via certificate, upload the public key of the certificate. Please note that certificates are subject to a validity period and no more e-mails can be sent by d.ecs monitor after expiry.

If you want to log in using a secret client key, select the corresponding option and have a new key created. It should also be noted here that client keys are only valid for a limited time.

Furthermore, the value of the secret client key is only visible immediately after creation and cannot be displayed again at a later time.

Only the API authorization "Mail.Send" of type “Application permissions" from Microsoft Graph must be configured and provided with administrator consent for sending mail. Furthermore, the API authorization "Application.Read.All" should be assigned, also with administrator consent, as this allows d.ecs monitor to query the validity period of the login and display it in the configuration.

Further authorizations are not used by d.ecs monitor and can be removed if available and not otherwise required.

Select "Office 365" as the server type in the d.ecs monitor mail settings.

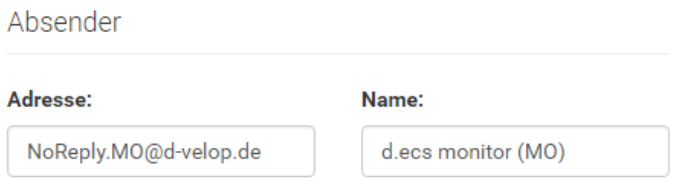
You can configure below whether the login uses a certificate or a secret client key.

Depending on the selection, the necessary settings are displayed and filled with the values previously configured in the Azure portal.

When logging in via a certificate, this is uploaded to the d.ecs monitor via the "Select certificate" button. The certificate must be available as a PFX file and contain both the public and the private key. If a certificate password has been assigned, you must also enter this.

Sender

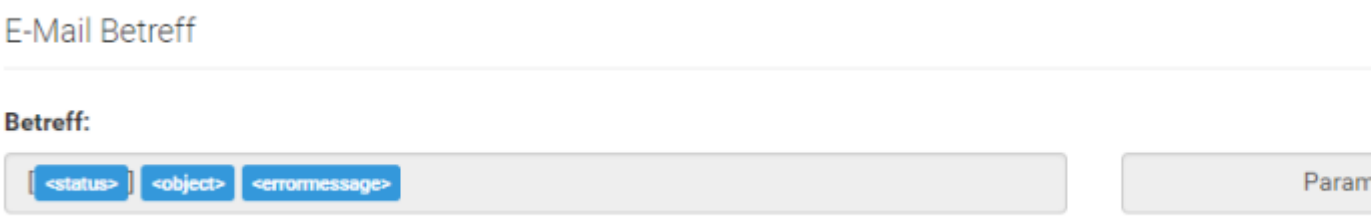
Specify under which name the e-mails are to be sent.



E-mail subject

Specify how the e-mail subject is to be structured. Different placeholders can be used.

1. <status>
   This parameter represents the current status of an object.
2. <object>
   This parameter is a description of the object that triggered the e-mail.
3. <errormessage>
   The error message is a short summary of the existing problem.
4. <priority>
   This parameter represents the priority of the object.



Grace period

A grace period can be used to delay the sending of e-mail notifications. A notification is sent as soon as a status remains stable over the duration of the grace period. The consideration of the grace period can be activated for each recipient individually.

Recipients

Specify here the recipients who should receive an e-mail. Additional recipients can be added via the **+**.

You must enter an e-mail address. You can change the format of the e-mail from **HTML** to **Text** by clicking on the dropdown in front of the e-mail address. For example, select the format **Text** to send a e-mail an SMS recipient.

Another mandatory entry is the name of a recipient. This is used as display name when sending e-mails.

There is the possibility of assigning a scheme to the recipient via the drop-down menu **Assigned scheme**. By default a recipient has no scheme assigned. More information about e-mail schemes can be found in chapter E-mail schemes - settings.

If the use of the grace period has been activated globally, it can be activated for a recipient using **Consider the grace period for notifications.**.

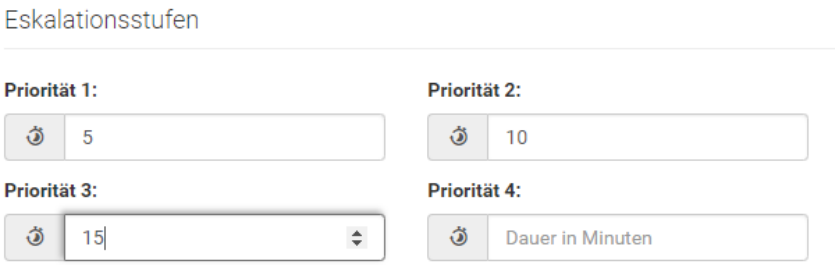
The recipients of the global e-mail configuration are automatically used for sending system notifications from d.ecs monitor. Via **Receive system notifications** this can be disabled for recipients if they should not receive such messages.

The system notifications include the following notifications:

- Regular status information
- Notifications about an expiring product license

Escalation level

Enter an escalation period in minutes for the individual priorities here.



> **Warning**
> Note that you do not assign the same time values for each priority, but ascending ones.
>
> Priority 1 > Priority 2 > Priority 3 > Priority 4
>
> However, it is also possible not to set an escalation time for priorities. No escalation e-mails are sent for priorities for which no escalation time has been defined.

Escalation recipients

Enter the escalation recipients who are to receive an e-mail in the event of an escalation.

You must enter an e-mail address. You can change the format of the e-mail from **HTML** to **Text** by clicking on the dropdown in front of the e-mail address. For example, select the format **Text** to send a e-mail an SMS recipient.

Another mandatory entry is the name of a recipient. This is used as display name when sending e-mails.

There is the possibility of assigning a scheme to the recipient via the drop-down menu **Assigned scheme**. By default a recipient has no scheme assigned. More information about e-mail schemes can be found in chapter E-mail schemes - settings.

You can add additional recipient with the **+**.

All e-mail configurations

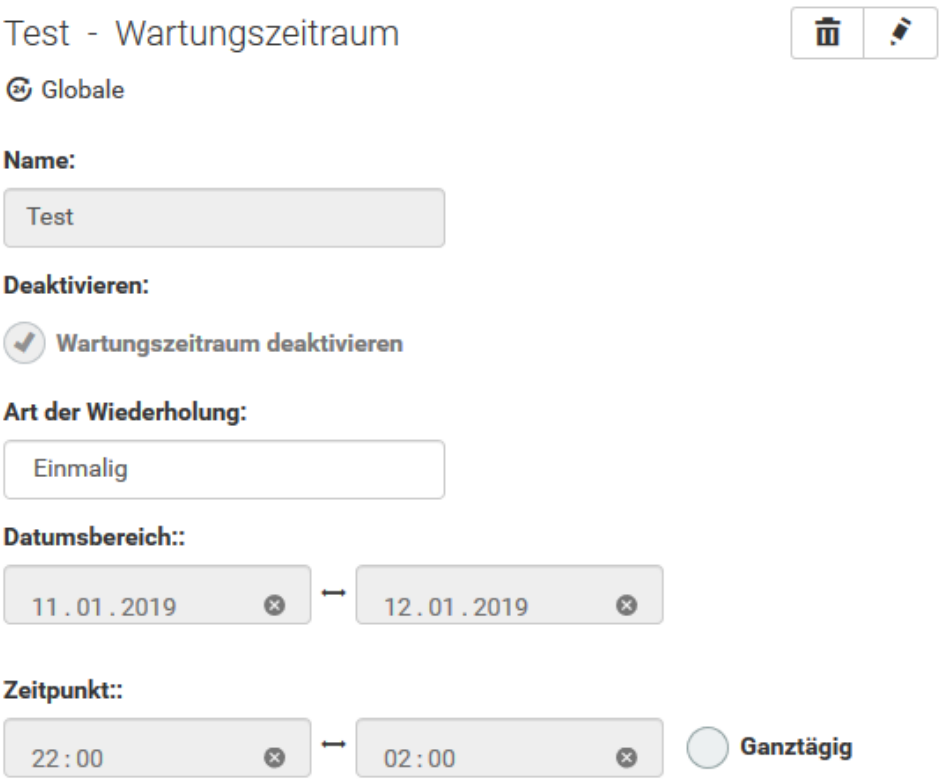
On this page you can view and change all e-mail configurations. Click on the respective entry to open the respective configuration. The **Source** column describes which e-mail configuration is used for which object.

Maintenance time period - messages

This page allows you to create a new **Maintenance time period** or to edit an existing **Maintenance time period**.

First, select **Enable edit mode** (gray pencil icon). The option **New maintenance time period** is displayed for selection.

The following configuration options are available when creating or editing a maintenance time period:



Name: Specify a unique name for the maintenance time period to keep the overview, later.

The source of the maintenance period is displayed below the name.

Disable: You can disable the maintenance time period as required.

Type of repetition: This allows you to configure the recurrence for the maintenance tome period. Three options are available.

- **Once**: Defines a date range and time.
- **Weekly** The weekly recurrence allows you to select the weekdays on which the maintenance time period is applied.
- **Monthly:** The monthly recurrence allows you to select days of the month.

Depending on the selected repetition, the following appears:

- **Date range:** For a on-time recurrence, you can configure the start and end time of the time slot in which to apply the maintenance time period.
- **Week day**: Select one or more week days.
- **Month**: Select one or more calendar days.

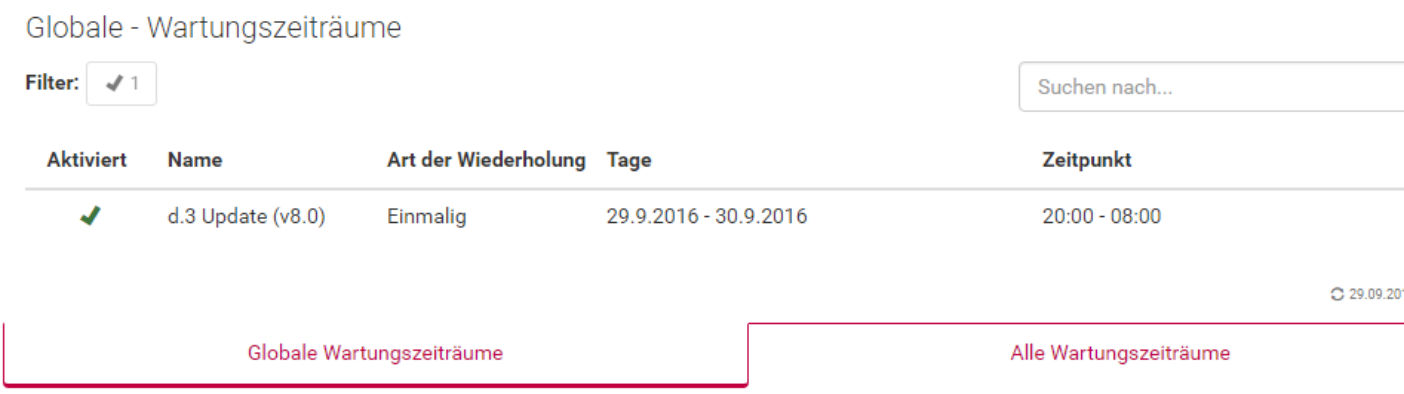
Time: Define the time range. You can optionally specify time ranges beyond **00:00** h. The times must be specified in the format HH:mm (24-hour-format). Alternatively, you can also enable the option **All day**.

Maintenance time periods - Overview

Global maintenance time periods

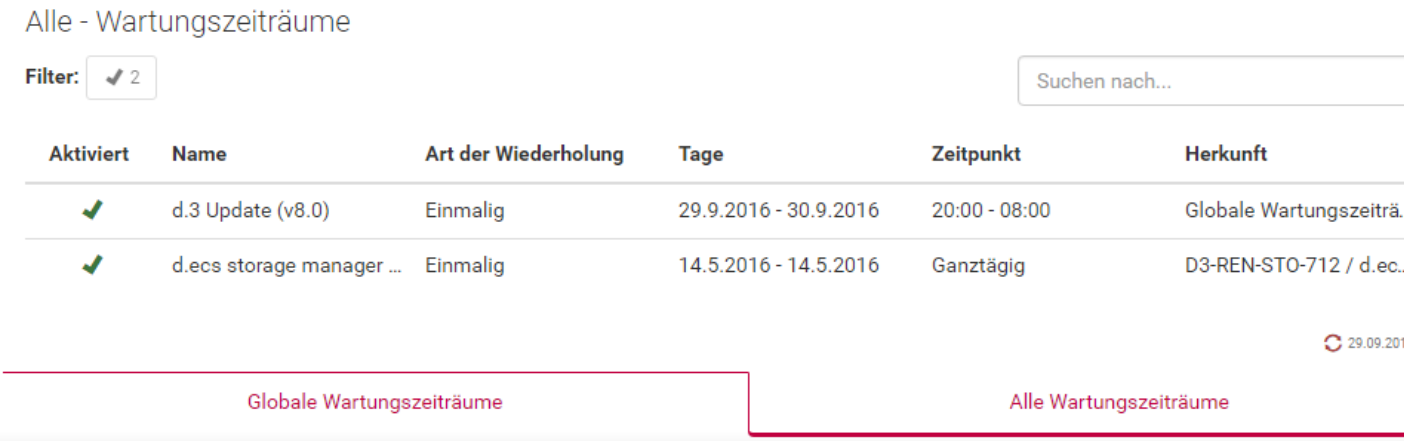
This page allows you to view the maintenance time periods configure on your entire system. The Maintenance time periods lists the groups, machines and processes in the status **Maintenance**. The elements under Maintenance time periods do not send messages in case of errors.

The edit mode allows you to add a new maintenance time period. With a click on a row you open the configuration for a maintenance time period.



Any maintenance time periods

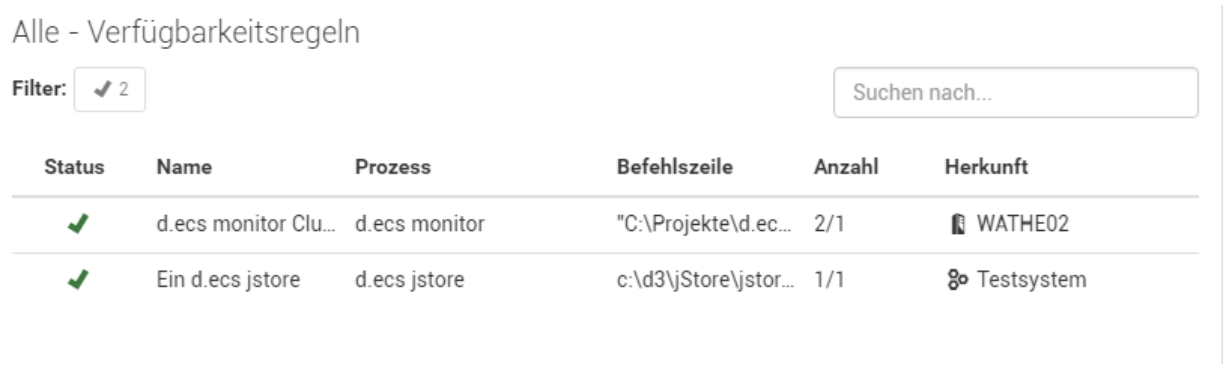
On opening the Overview of maintenance time periods via the configuration, you see two tabs. The first tab lists the global maintenance time periods. The second tab allows you to view all maintenance time periods configured on your system with their origin. This overview allows you to add new maintenance time periods or reconfigure existing ones.



Availability rule - Notification

This page allows you to view all configured availability rules and edit or remove them. To create availability rules look here: Availability rules - Group

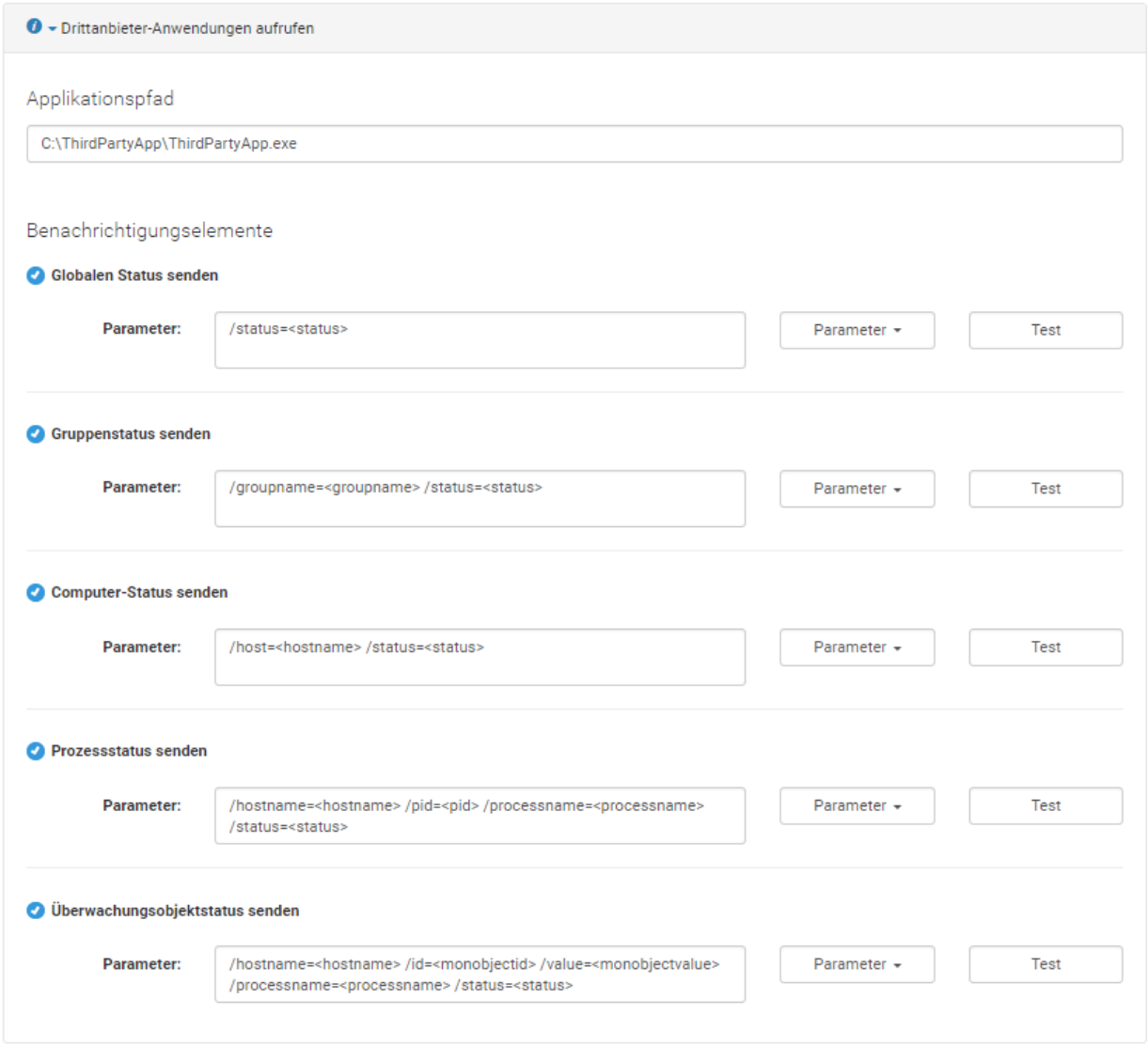
The column **Origin** shows the object for which the availability rule was created.



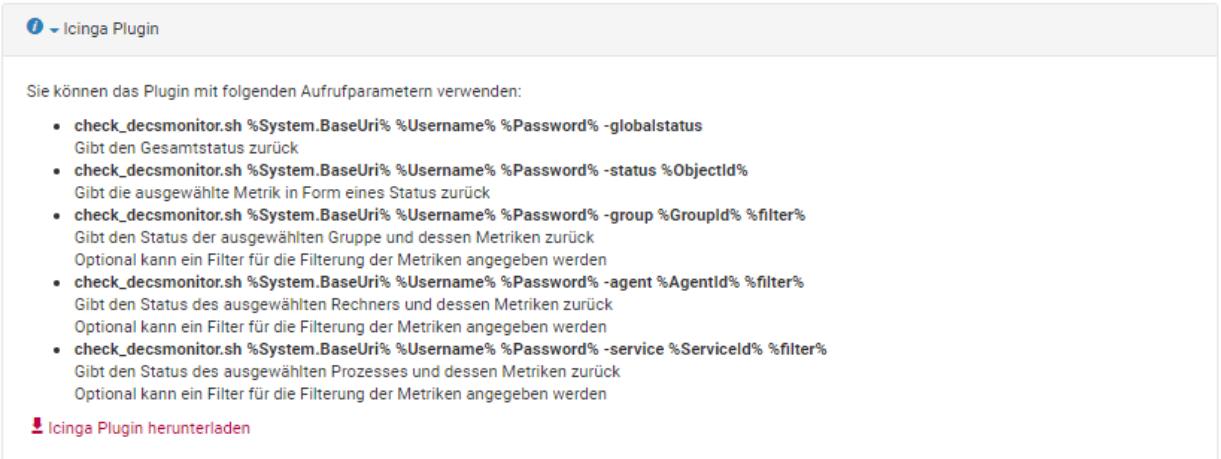
Third-party application

On this page you can configure a third-party application to be connected to d.ecs monitor. You can transfer parameters to the application in the form of placeholders. The possible placeholders can be selected in the respective parameter menu. You can also specify whether and when a status change is to

be transferred to the application. A click on the respective test button executes the application with the respective specified parameters. The placeholders are filled with test data.



Furthermore, a plug-in script for Nagios or Icinga monitoring systems can be downloaded to include the status information of d.ecs monitor objects.



Available parameters - Third-party application

Global status

<status>

Inserts the global status

Groups status

<groupname>

Inserts the name of the group.

<status>

Inserts the groups status.

Computer status

<hostname>

Inserts the hostname of the computer.

<status>

Inserts the computer status.

Process status

<hostname>

Inserts the hostname of the computer.

<pid>

Inserts the process ID of the process.

<processname>

Inserts the name of the process.

<status>

Inserts the status of the process.

Monitoring object status

<hostname>

Inserts the hostname of the computer.

<monobjectid>

Inserts the ID of the monitored object.

<monobjectvalue>

Inserts the current value of the monitored object.

<pid>

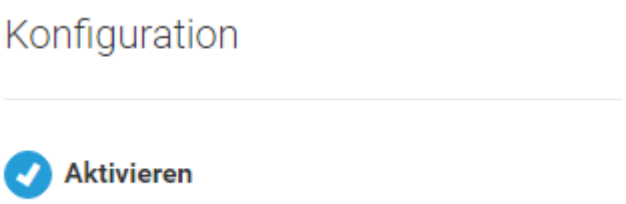
Inserts the process ID of the process.

<status>

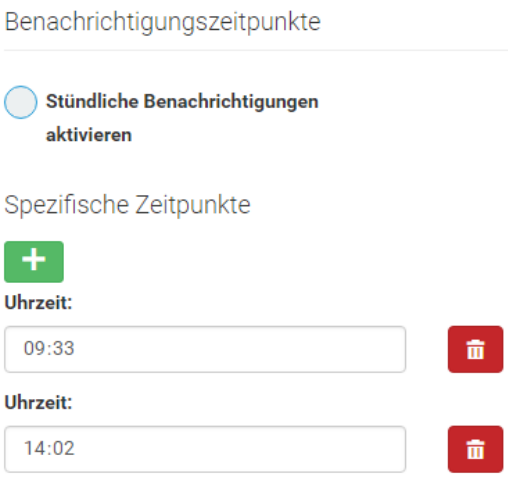
Inserts the status of the process.

Status notification

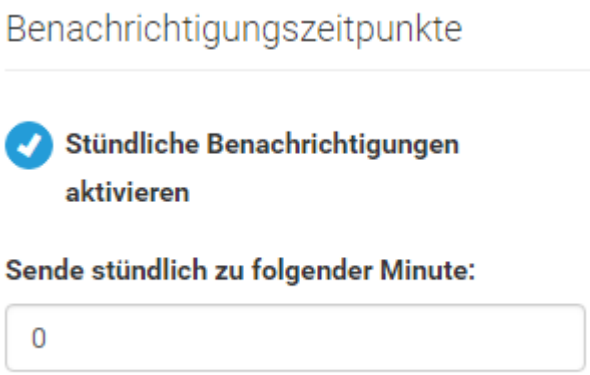
In this configuration dialog, the following information can be specified. When this function is activated, status information is sent from d.ecs monitor to the global e-mail recipients at adjustable times. The status information includes an overview of the current problems and also offers the possibility to monitor the availability of d.ecs monitor.



The button **Enable** can be used to activate and deactivate the sending of status notifications.



If sending is enabled, notification times can be added.

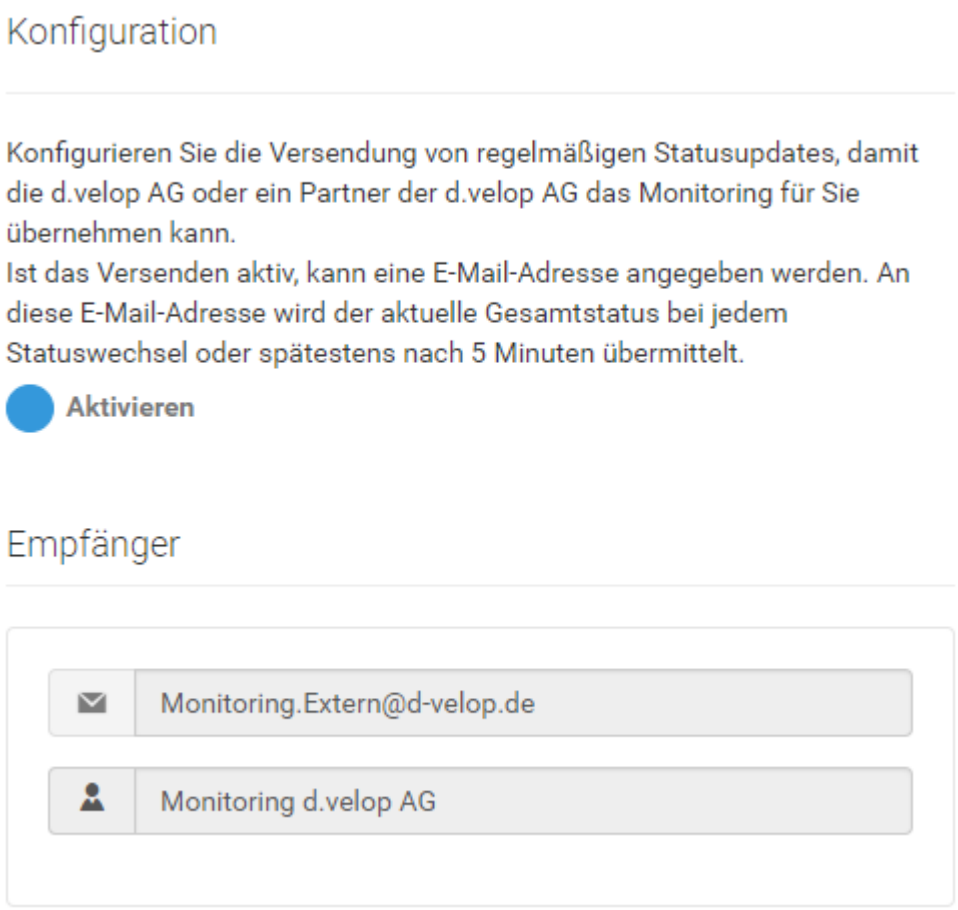


If it is desired that d.ecs monitor sends a status notification every hour, this can be activated by using the switch **Enable hourly notification**. As a second value for this setting, a number of minutes must be specified at **Send hourly to the following minute** to which the notification is to be sent every hour.

In the following, you can alternatively or additionally add specific times at which a status notification is sent. Any number of entries can be added via the **Delete** and **Add** buttons.

External monitoring

Configure the sending of regular status updates so that d.velop AG, or a partner of d.velop AG, can take over the monitoring for you.



The button **Activate** can be used to activate and deactivate the sending of regular status updates.

If sending is active, an e-mail address can be specified. The current overall status is transmitted to this e-mail address every time the status changes or at the latest after 5 minutes. The following information is transmitted:

- License information
  - License key
  - Contact name
  - Street
- Base address

Summary of existing problems

- Object description (name of the group, computer, service or monitoring object)
- Error message
- Status

> **Note**
> Enter Monitoring.Extern@d-velop.de as e-mail address so that the monitoring can be carried out by d.velop AG.

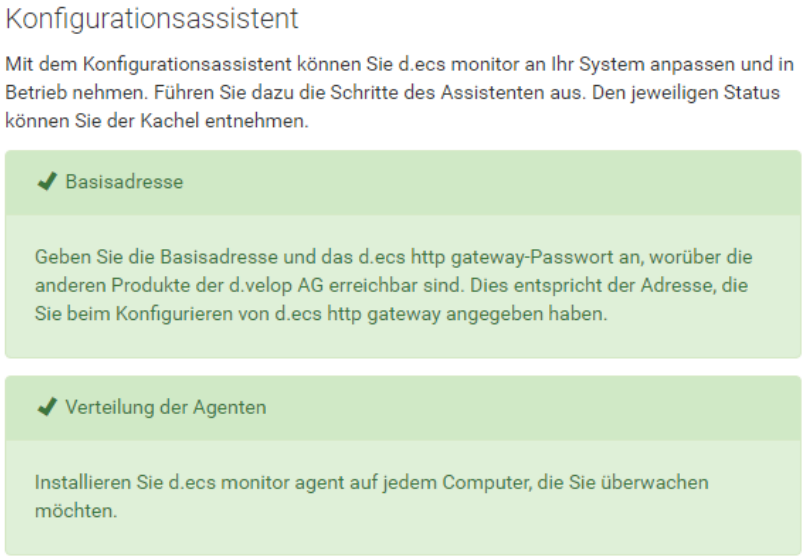
Choosing the priorities

Specify which priorities should be taken into account for e-mail notifications (**Priority 1**, **Priority 2**, **Priority 3**, **Priority 4**, and**Without priority**). Using the corresponding buttons below the recipient configuration, you can decide for which type of problems you would like to receive status updates. All priority types are active by default. However, you can disable any priority types so that the corresponding priorities are no longer included in the status updates.

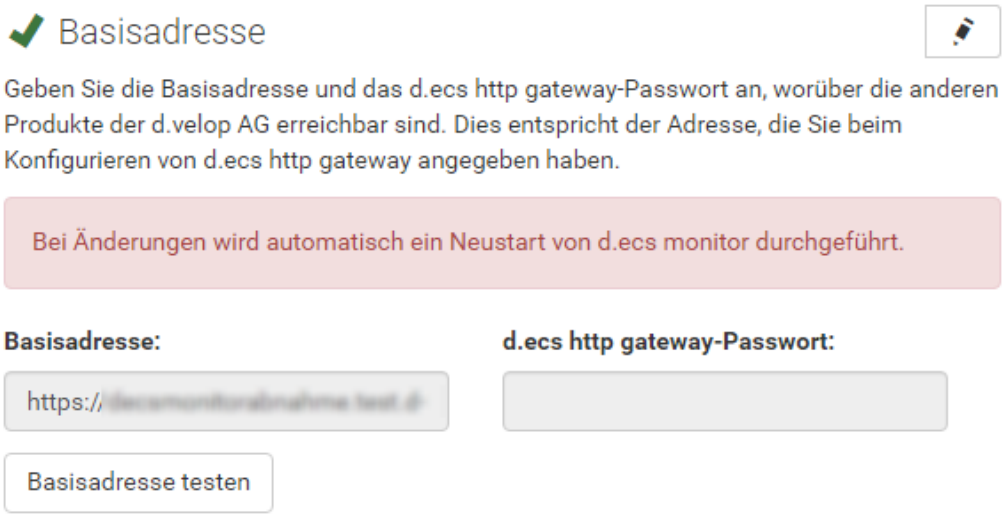
Settings - Configuration

The section Settings allows you to choose between **Configuration wizard** and **Settings**.

Configuration wizard - Settings



Base address - Configuration wizard



Distribution of the Agents - Configuration wizard

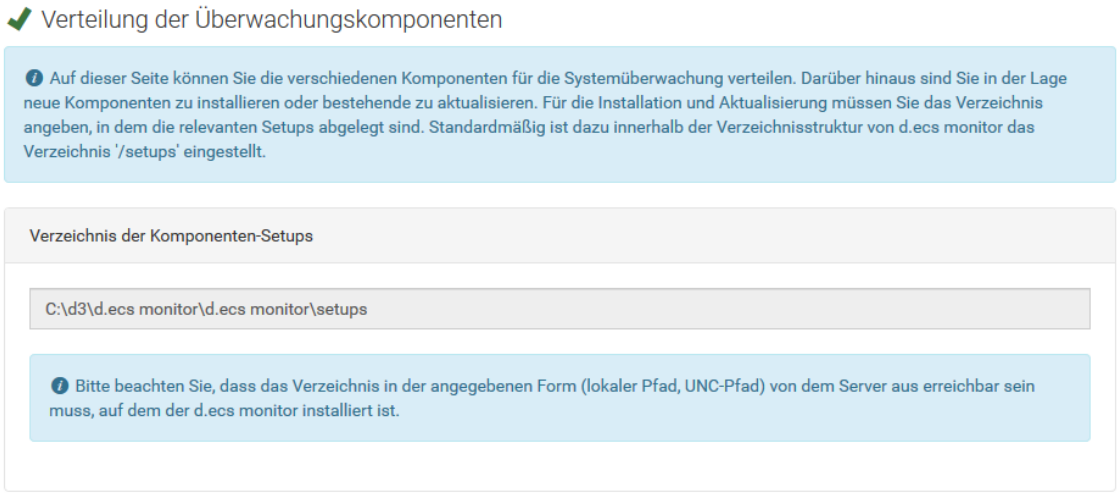
Remote installation of agents

In the **Remote installation** section, you can add a computer for monitoring and then install additional monitoring components on the computer.

The setups of the monitoring components are stored by default in the directory **setups** below the d.ecs monitor installation directory.

If you prefer a different storage location, you can specify it here. You can specify on-premises paths or a UNC path.

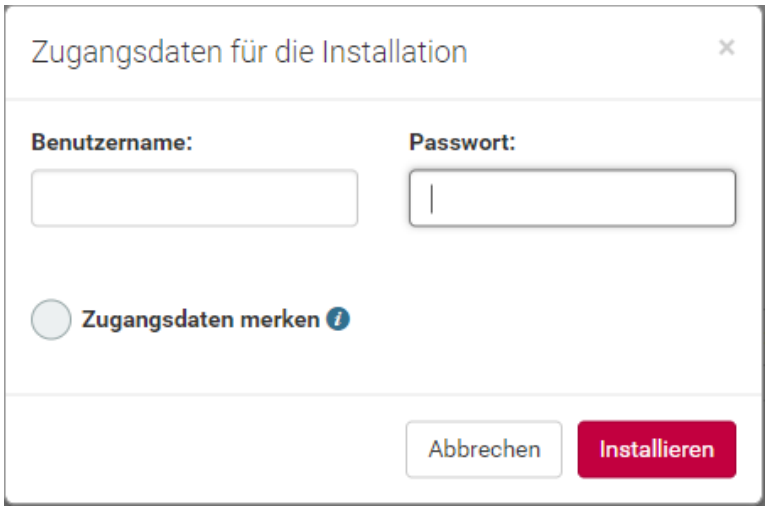
> **Note**
> Please note that the directory must be accessible from the server with the system user account of the server on which d.ecs monitor is running.



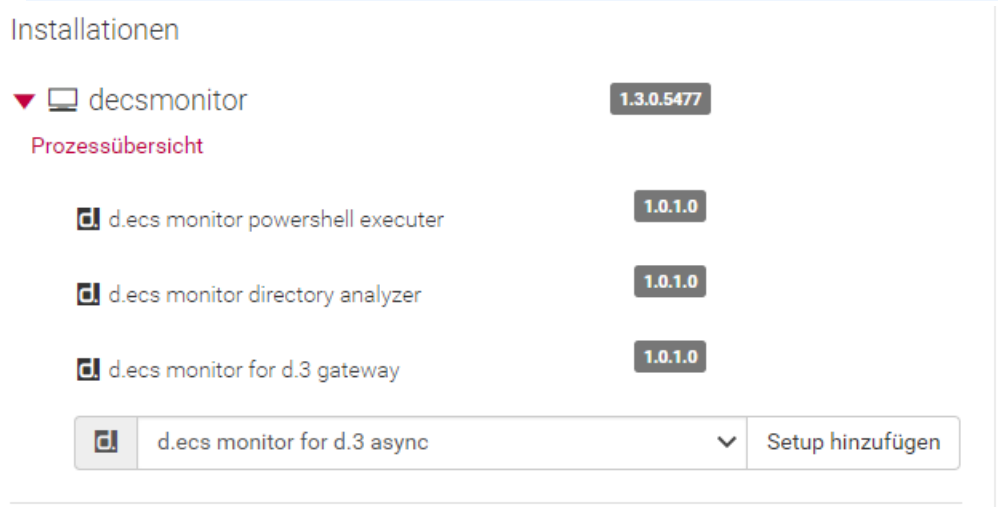
You can optionally specify an alternative installation path. Otherwise, the default path of the setup is used. When updating d.ecs monitor agent or a d.ecs monitor wrapper, the already used installation path is retained.

To do this, select a computer from the drop-down menu below **Add computer** and add it with the button **Add computer**.

You will then be prompted in a modal dialog to enter a user name and password of a user who has administration rights on the selected computer.



> **Note**
> If you use the option **Remember credentials**, the access data is stored in the browser until you leave the page.



In the section **Installations** you can see all monitored computers including the installed d.ecs monitor agent version number. If an update is available for d.ecs monitor agent, the **Update** button is displayed. A click on this button will update the computer.

By clicking on a computer name, you can view the installed monitoring components and their version numbers on the computer. A click on **Process overview** leads you directly to the process overview of the respective computer.

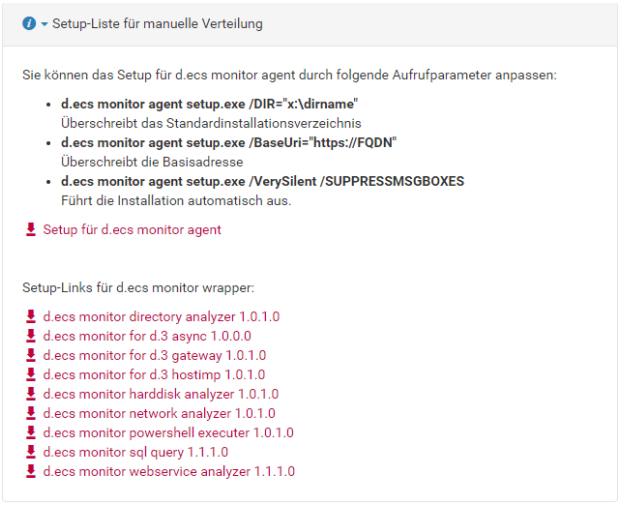
> **Note**
> Only those monitoring components are displayed for which a setup has been stored under **<Installation Directory>/setups**.

If there is an update for a monitoring component in the **setups** folder, the button **Update** is displayed. You can also install new monitoring components on your computer by selecting a component from the dropdown list and then clicking **Add setup**.

> **Note**
> To install or update a monitoring component, a user with administration privileges on the target computer is always required.
>
> In addition, system requirements such as .NET Framework 4.7.1 and d.ecs jstore must be installed manually.

List of setups for manual distribution

In the section **Setup list for manual distribution** the d.ecs monitor agent setup and all further setups of the monitoring components are offered for download. All setups below **<installation directory>\setups** are displayed. After downloading the setups you can install them manually on your computer.



General settings

On this site, you can configure general settings, message histories and the handling of Windows processes.

Under **General** you can make the following settings:

Log level: This option sets the Log level for d.ecs monitor. You can select from the following options:

- **Debug**
- **Info**
- **Warning**
- **Error**
- **Fatal**

Agent - update interval (sec.): This setting allows you to set the update interval for the respective agents. The update interval specifies the frequency at which an agent sends its own status and the status of the processes to the d.ecs monitor app.

> **Note**
> If a d.ecs monitor agent fails to send a status within two-and-a-half times the set time, the d.ecs monitor agent will be reported as **not responding**.

Process - update interval (sec.): This setting determines the update interval for the processes. The update interval for the process specifies the frequency at which the information concerning a process is updated by the agent. This includes information such as the CPU and random access memory.

Resend notification after (sec.): This setting allows you to define the timespan during which a process should not be monitored due to frequent changes in status. Processes with this status will no longer send

notifications until the processes have a stable status again. The process receives a stable status if the status has not changed within the specified time period.

Authorization

Under **Authorization**, you can make the following settings:

Group with full access: Specify which group should have access to d.ecs monitor in addition to the global administrators.

Group with read access: Specify which group should have read-only access to the d.ecs monitor.

> **Note**
> Note that it can take up to five minutes for an adjustment of the access groups in d.ecs monitor to be applied to the wrappers.

License

Under **License**, you can make the following settings:

Disable Advanced Functions (Basic): Specify whether you want to disable the advanced features provided by a trial license early. You can enable the extended functions again at any time within the trial license period.

Message history

Under **Message history**, you can make the following settings:

Number of messages: Specify the number of messaging messages per group, computer or process to be stored in the message history. Errors and warnings do not count here.

Number of errors: Specify the number of error messages per group, computer or process to be stored in the message history.

Number of warnings: Specify the number of warning messages per group, computer or process to be stored in the message history.

> **Note**
> In addition to the set number of messages, the application additionally stores up to two messages of the "OK" status.

Time period for histories

Specify the time period for the history graphs. You can choose between **default number** and **definable time period**. If the default number is selected, a maximum of ten data points will be shown in the graphs. The maximum time period which the history graphs are to display in the definable period can be set in minutes or hours using the input field.

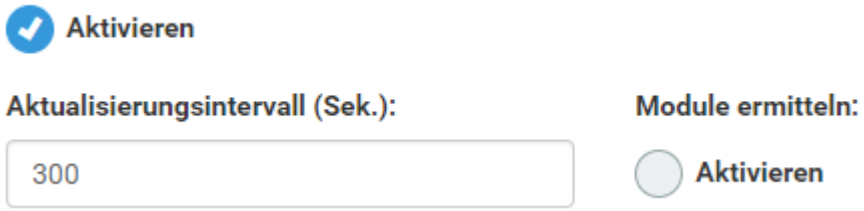
Windows processes

Under **Windows processes**, you can make the following settings:

Enable: This option enables determining the Windows processes. Windows processes do not report to d.ecs monitor as d.velop services.

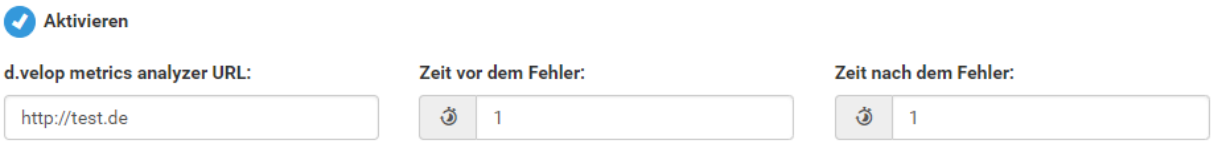
Update interval (sec.): This setting defines the refresh interval for the Windows processes. The Windows processes are checked every 300 seconds by default.

Detect modules: With this option, you specify, if the loaded modules should also be detected for Windows processes.



Connection to d.velop metrics analyzer

Below **Connection to d.velop metrics analyzer** you can configure the jump to the d.velop metrics analyzer dashboard.



Enable

With this option you activate the connection to d.velop metrics analyzer.

d.velop metrics analyzer URL

Here, enter the complete URL of your d.velop metrics analyzer dashboard.

Time before the error

Specify the number of seconds to jump back from the error time.

Time after the error

Specify here the number of seconds that should be jumped forward from the error time.

Automatic cleanup of processes

Under **Automatic cleanup of processes** you can configure certain processes to be removed from monitoring when they are terminated. The removed processes are no longer shown as shut down in monitoring. The settings for the processes are discarded and cannot be restored (e.g. limits, messages or priorities). Configure automatic cleanup for processes that restart frequently and may make it difficult to keep track due to the large number of shut down instances. Process cleanup is performed upon standard termination and if the processes are not cancelled. Alternatively, you can click **Execute now** to start cleaning up the processes manually. If you click on **Save**, a message may appear stating that changes to the configuration for cleaning up processes have been detected. You can then execute the configurations directly. If processes are restarted, the processes automatically reappear in the monitoring.

In edit mode, click the plus icon to add a new automatic cleanup configuration. Enter the following regular expressions for the configuration:

- In the **Regular expression "Name"** field, configure the expression with which the display name of a process is compared.
- In the **Regular expression "Command line"** field, configure the expression with which the command line of a process is compared.
- You can use the drop-down menu in the **Regular expression “Name” field** to select frequently used default settings and apply them to the current configuration.

For a process to be cleaned up automatically, there must be at least one configuration in which both regular expressions apply to the process. If only one of the two regular expressions needs to be taken into account, e.g. because only the display name of the process is relevant, you can enter the placeholder **.*** for the expression that is not required.

You can test the configured expressions by clicking on the gear icon. The processes detected by the configured expressions are displayed in a new dialog.

> **Note**
> We recommend that you create availability rules for the automatically cleaned up processes. This ensures that the processes continue to be monitored if a certain number of processes need to run (e.g. **d3odbc32.exe**).

E-mail schemes - Settings

Common

E-mail schemes can be used to send notifications under certain conditions. For this you can assign a scheme to a recipient. The recipient then only receives e-mail notifications if a rule of the assigned scheme is fulfilled. Without an assigned scheme, notifications for a recipient are always sent.

The configuration of e-mail schemes consists of an overview of all schemes and the single page of a scheme.

Overview page

In the overview you can see the existing schemes. In edit mode you can modify the list:

You can create new schemes via **Add new scheme**.

Existing schemas can be deleted using the **Remove** icon.

Scheme page

A schema must contain a **Scheme title** by which it can be identified.

Vou can activate **Summarized notifications**. When this feature is activated for a recipient, the system waits for the configured time before sending a message. During this time, all messages for this recipient are collected and sent as one message after the **Aggregation duration** has expired.

For a scheme you can manage **Rules** in a list. A scheme can contain any number of rules.

- A scheme without any rules is always fulfilled and will not filter out any notifications.
- When checking whether a scheme is fulfilled, at least one rule must be applicable. Rules define which status change must occur for a notification and/or which priority the object with the status change must have.
- If necessary, add further rules via **+**.

Mass data configuration - Settings

Common

You can use the mass data configuration to manage multiple monitoring objects in the system. The mass data configuration offers you the possibility to view and compare the limit values of several monitoring objects, as well as the bundled adjustment of limit values of many monitoring objects.

The mass data configuration lists all monitoring objects of the system in a table. The following information about the monitoring object is displayed per entry:

- **Name**
- Description of the monitoring object
- Monitoring object origin computer and service
- Limit values (represented by corresponding symbol)
  - Report error for values less than or equal to
  - Report warning for values less than or equal to
  - Report warning for values greater than or equal to
  - Report error values greater than or equal to

Filtering

You can filter the entries in the table using various options:

- Origin Service:
  Enables filtering by the monitoring object origin service. When selecting a service, only monitoring objects belonging to the selected service are displayed.
- Origin computer:
  Enables filtering by the source computer of the monitoring object. When selecting a computer, only monitoring objects belonging to the selected computer will be displayed.
- Display name:
  Allows filtering by the display name and description of a monitoring object.

In case of an entry, this can be set as a filter by clicking on the originating computer or service.

Tabular editing

You can edit the limits directly in the table. Input fields are displayed for the limit values, in which you can enter the desired values. The entries you make are validated directly and marked as incorrect if the values are invalid.

If no input is possible for a limit value, this limit value is write-protected. In the case of a read-only limit value without content, the complete input field is not displayed. In case of a read-only limit with default value, a read-only input field is displayed.

Selection

You have the possibility to adjust the limits of several monitoring objects at once. To do this, you must first select all the monitoring objects to be edited.

You can select a monitoring object in two ways:

1. Individual entries via checkbox in the line of the respective monitoring object.
2. All filtered entries using the checkbox in the header.
   All entries that meet the current filters of the monitoring objects are selected.

You can deselect a monitoring object in three ways:

1. Individual entries via checkbox in the line of the respective monitoring object.
2. All filtered entries using the checkbox in the header.
   All entries that meet the current filters of the monitoring objects are deselected.

3. Use the **Deselect all**button to deselect all entries, regardless of the filters of the monitoring objects. This button displays the number of currently selected entries at any given time.

Editing the selected monitoring objects

To edit the selected monitoring objects use the **Change selected limits** button. A dialog opens in which input fields for the four limit values are displayed. For each limit you can specify a number, which should be taken over for all selected monitoring objects as the new value of this limit. The limit values entered are validated directly. In the case of invalid values, you must first correct them before further steps are possible.

In the default setting, the value of a limit is not changed. To override a limit you must activate the check-box in front of the line or enter a value, which will automatically activate the checkbox. If overwriting of a limit is activated but the input field is left empty, this limit is emptied for the selected monitoring objects.

After you have entered the desired values, confirm the dialog with **OK** to actually write the values for the selected monitoring objects. In this step, the existing limits and any read-only limits are merged with the values you specify. You will see a summary of the changes made. This includes up to three options:

1. The entered limits were taken over completely for a monitoring object.
2. The entered limits were partially adopted for a monitoring object.
   The monitoring object had read-only limits, which could not be adjusted. However, the other limits, which are not read-only, have been adjusted.
3. The entered limits could not be accepted for a monitoring object.
   In combination with existing limits, the resulting intervals would not have been valid. No changes were made to these monitoring objects.

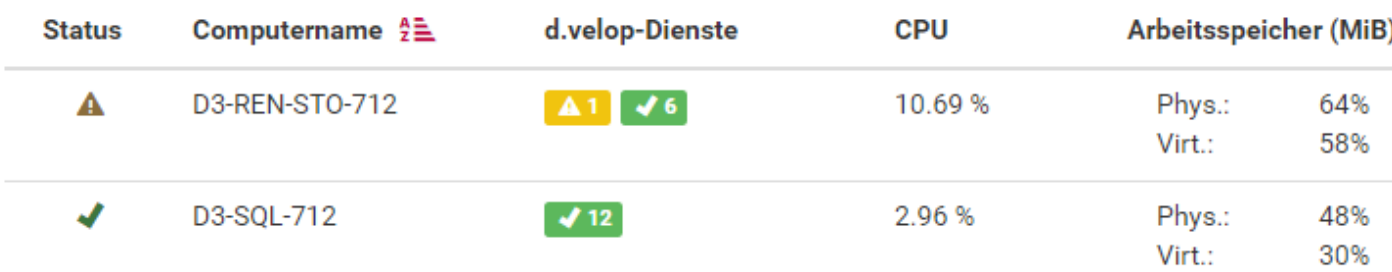
Group Details page

The **Group Details page** displays all information on a group.

Computer list - Group

The Computers page displays the information on all machines in the selected group. The search field allows you to filter the list as required. A click on **Status** allows you to filter the list accordingly. A click on **Computer name**, **CPU** or **Main memory** allows you to sort the list accordingly.

Clicking on a line will take you to the Computer of the selected computer.



Process overview - Group

The Process overview page displays the information on all d.velop and Windows processes in the selected group.

The search field allows you to filter the list as required. Clicking on column descriptions will sort the table accordingly in ascending or descending order. A click on the Windows or d.velop icon allows you to filter the process list accordingly.

Clicking on a line takes you to the Process overview of the selected process.

In edit mode it is possible to delete shut down or incorrect processes or to set the shut down status for processes with error or unknown status.

Monitoring objects - Group

On this page you can find information about all monitoring objects in the selected group.

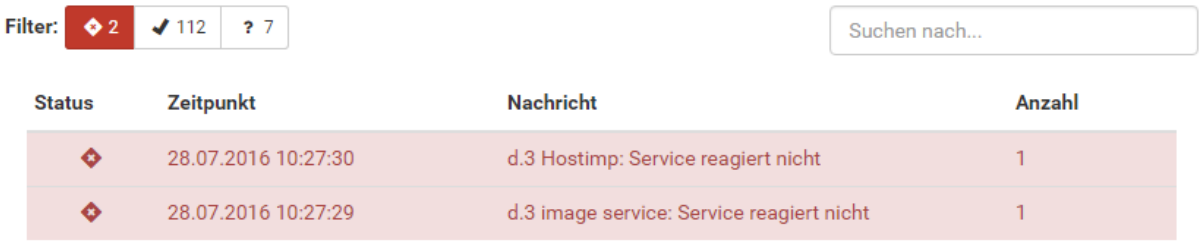
Through the filter bar you have the possibility to filter the entries. It is possible to filter by status as well as by search text.

If you click on the description of a column, the table will be sorted according to this property in ascending or descending order.

With a click on a row you open the Detail viewof the selected processes.

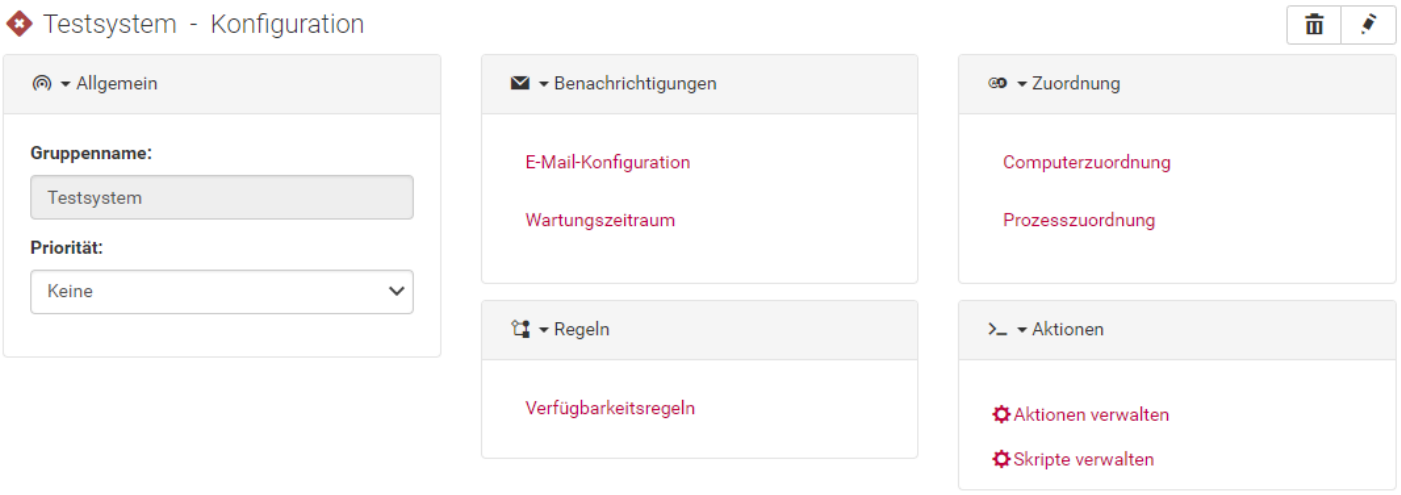
Messages - Group

The Messages page displays all messages on the selected group.



Configuration - Group

The configuration page of the **Group** allows you to edit the selected group.



Priority

A priority can be assigned to the group. The priority is inherited to child objects (computers and processes) if the priority "Inherit" has been defined for these objects.

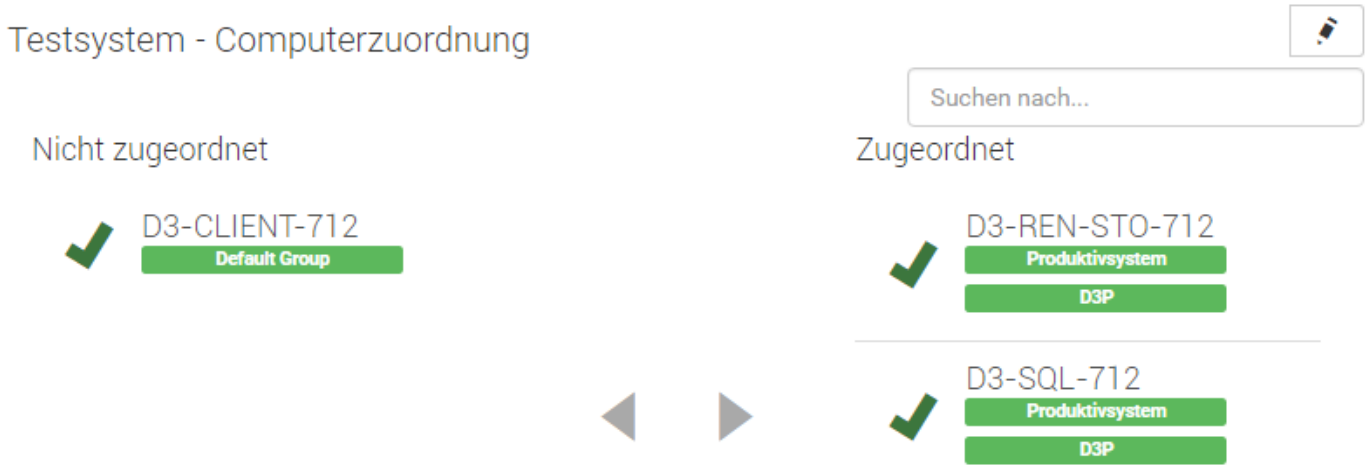
Actions

For Groups **Actions** can be configured. For more information about configuring actions, see chapter Actions for status change.

Computer assignment - Group

This page allows you to select which computers should belong to a group. To do so, either select the respective computers or click on the respective arrow. Alternatively, you can also move the computers to the respective other list by drag & drop.

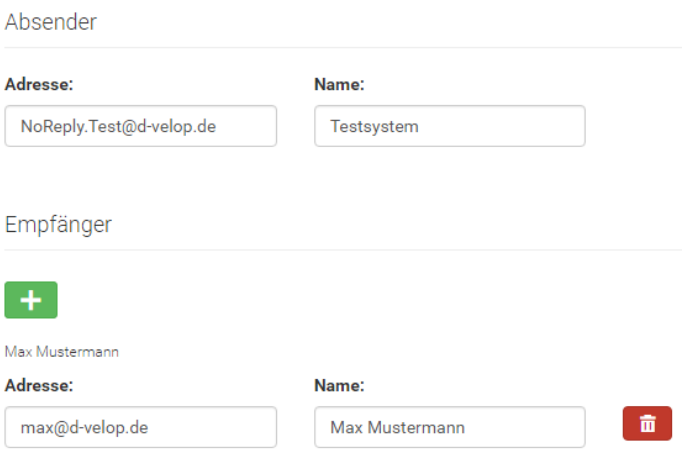
> **Warning**
> A machine cannot be removed from the default group if it is only located in this group.



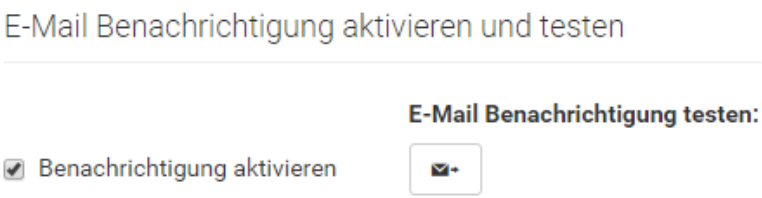
Messages - Group

This page allows you to configure the E-mail settings for a group.

If a service in the group has a critical status change, the e-mail recipients and the sender are used from this configuration and not the globally defined one(Global e-mail configuration).



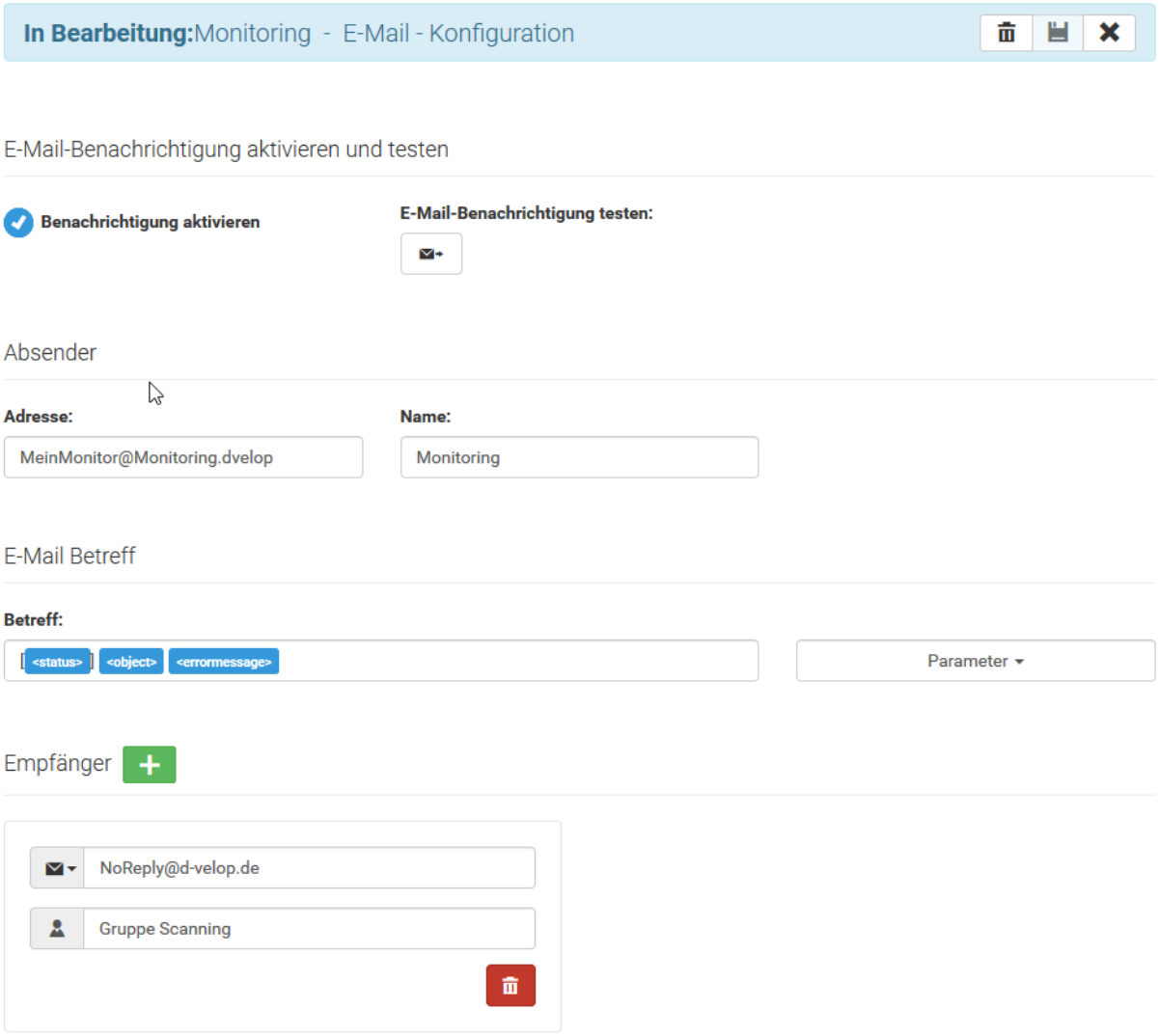
After the entry, the new recipient is enabled with **Enable notification** and is tested with **Test e-mail notification**.



E-mail configuration - Group

On this page, you can define the e-mail recipients to be notified when the status of the group or an object in the group changes. The global e-mail recipients are ignored if the group distribution list has been configured for a problem.

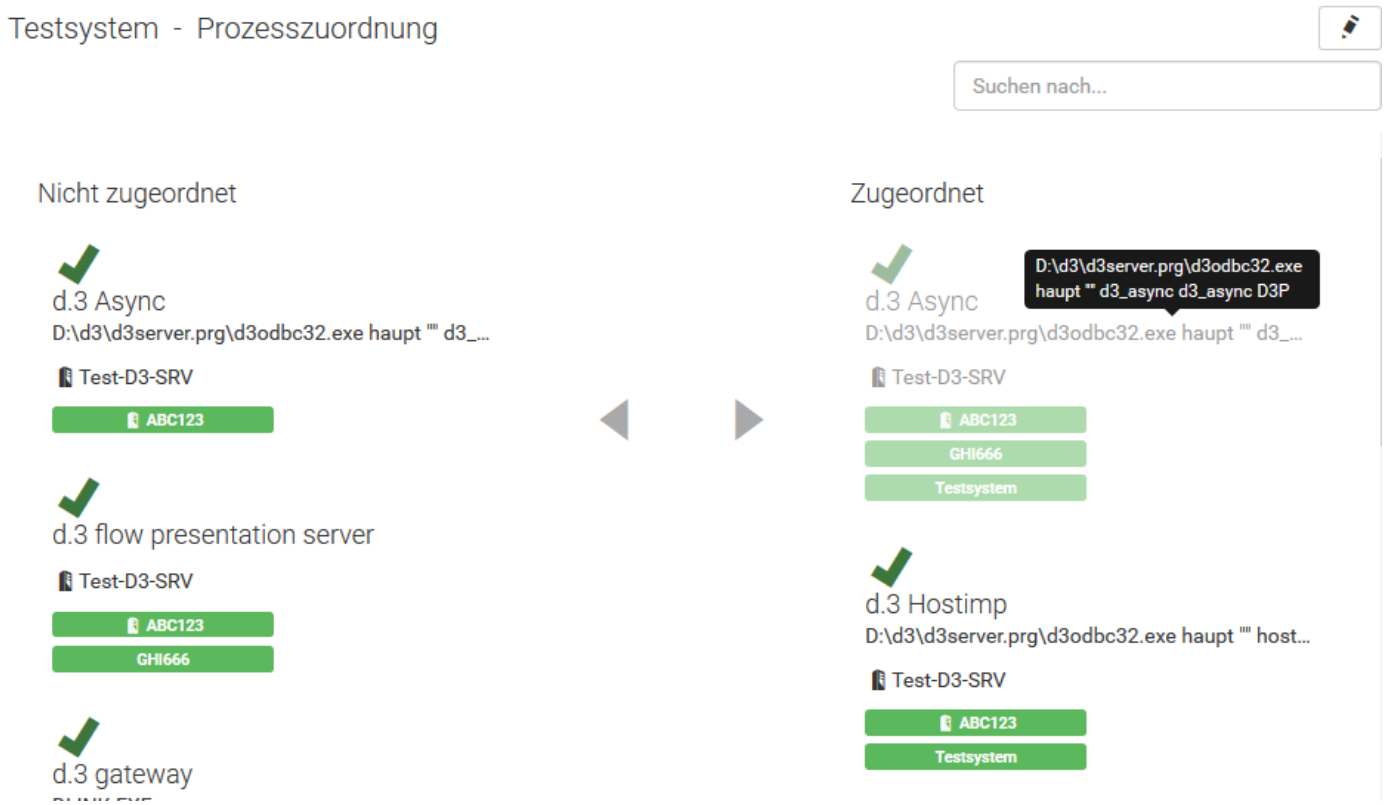
How to configure the points is described in the Global e-mail configuration chapter.



Process overview - Group

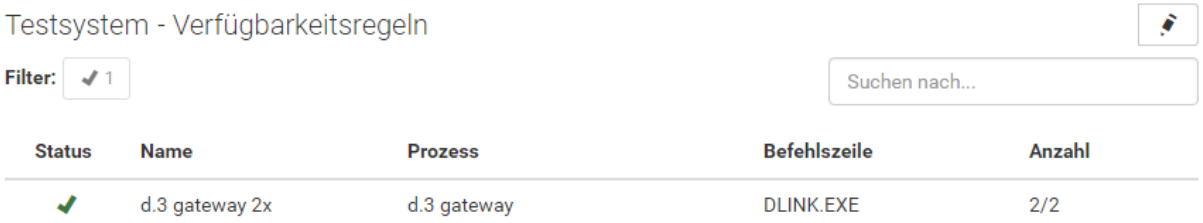
This page allows you to select which processes should belong to a group. To do so, either select the respective processes or click on the respective arrow. Alternatively, you can also move the processes to the respective other list by drag & drop.

> **Warning**
> The process cannot be removed from the default group if it is only located in this group. Moreover, a service cannot be removed from a group inherited from a computer.



Availability rules - Group

This page allows you to configure the availability settings for a group. Moreover, the current status can be determined by configured rules. With a click on a rule you open the Availability rule. A new rule can be created in the edit mode using the button **New rule**.



Availability rule

This page allows you to configure the parameters of a rule and directly view the affected processes. To create an availability rule, the following settings must be applied:

1. **Name**: Enter a descriptive name for the rule.
2. **Process**: Determine for which process you want to configure a rule.
3. **Minimum number**: Specify the minimum number of cycles for the process.
4. **Command line**: If the selected process is executed with a different command line, determine which command lines apply for this rule.

Click on **Affected Processes** to show the processes that can be assigned to the stored availability rule.

> **Warning**
> In the course of the update to d.ecs monitor 1.3.0 some process names were changed, e.g. d.3 server host import instead of d.3 Hostimp. The basic function of the availability rules remains the same. If you want to adjust an availability rule, the process must be manually selected and saved once.

Maintenance time period - Group

You can also define a maintenance time period for the groups. Please find details on how to do this in chapter Maintenance time period - Overview

Group list

The groups page displays information on all groups created in d.ecs monitor. Through the filter bar you have the possibility to filter the entries. It is possible to filter by status as well as by search text.

Following options are available:

- **Group**: You will be taken to the Groups detail page where you will find more detailed information about the selected group.
- **Computer**: You will be taken directly to the Computer list.
- **Processes**: You will be taken directly to the process overview.
- **Monitoring objects**: You will be taken directly to the List of assigned monitoring objects.
- **Status** below a signature: You will get to the corresponding list filtered by the respective status.

> **Note**
> If the **OK** status is selected below **Processes**, you are taken directly to the Process overview filtered to all services that have the **OK** status.

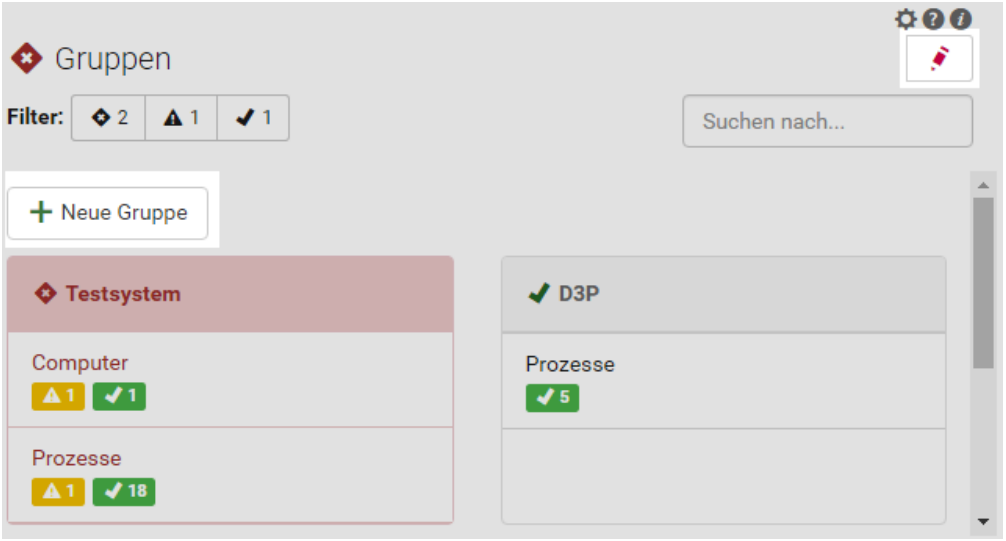
Select the pencil icon in the upper right corner to enable the Management of the groups in edit mode.

Managing groups

The group list page allows you to manage the individual group.

To add or remove groups, you must enable the edit mode. This can be done with the grey pencil icon in the upper-right corner.

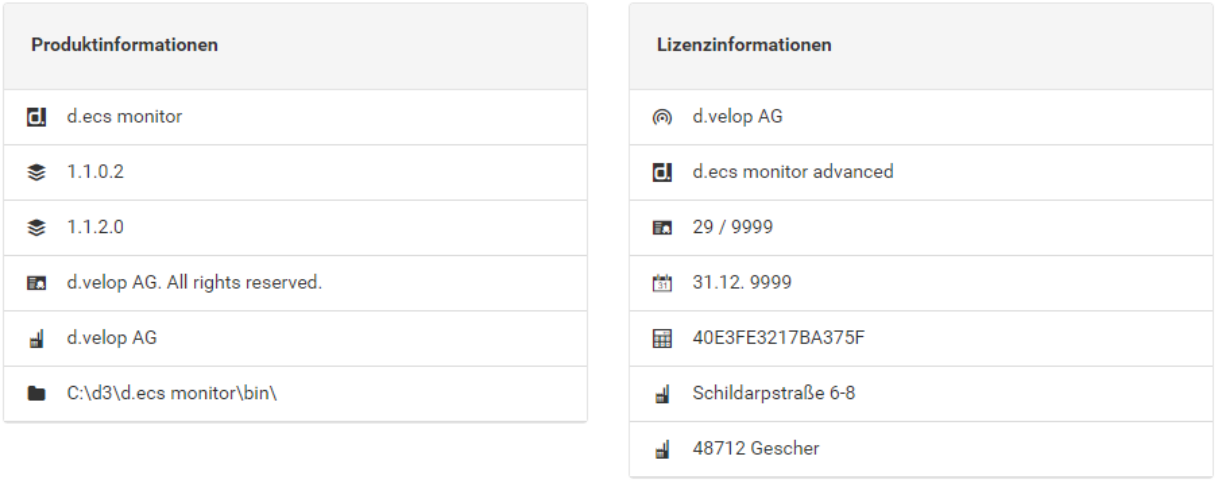
You can create a new group with **New group**.



On selecting a group in edit mode, the Overview of the group is displayed and the group can be removed or edited.

Product information

The page **Product information** can be accessed via the start page. The page **Product information** contains information on the currently used version. Under **License information** you will find information about the license of d.ecs monitor.



Computer

The computer list displays all information on a computer.

Overview

The computer detail page displays information on the selected computer. The upper section contains static information on the computer. In the lower area you will find dynamic time values.

By clicking on the context action **Remote desktop** in the right bar, you download a remote desktop file. The Remote desktop file contains the connection data of the displayed agent.

Group assignment

The groups of the computer are displayed here. A click on a Group name opens the respective detail page.

In addition, you can manage the group membership of the selected computer. To edit the group assignment, you must activate the edit mode by clicking on the pencil icon in the upper right corner. By clicking on the plus symbol you can assign an already created group to the computer. By clicking on the cross symbol next to the assigned groups, you can cancel the membership again.

A computer passes its groups to the services. Also see: Service overview

> **Note**
> A computer must always be assigned to at least one group and is thus always located in the **Default group**, if it is not assigned to any other group.

The assignment of computers to groups can also be applied in the Computer assignment.

Priority

You can define a priority for the computer. If you have defined the priority "Inherit", the computer inherits the priority of the groups to which it belongs.

Mark as shutdown

You can set the shutdown status for processes with error status or unknown status.

Check for updates

You can check if updates are available for the computer. If updates are available, a d.velop software manager feed update can be started on the computer by clicking on "Update".

Drives

In this area the hard disks of the computer are displayed as a list. Each list entry contains summary information about the state of the drive.

By clicking on the "Advanced" icon you will get to the Detail view of the hard disk.

CPU

Various information about the CPU is displayed. On the one hand, a graph with the last values of the computer is displayed. The graph additionally contains the **Time span** of the acquired data as well as the **Average value of the last two minutes**.

If you click on the **full-screen icon**, the graph is displayed enlarged.

If you click on the "Advanced" icon, you will be taken to the Detail view of the CPU.

Physical memory

In this area you will find the history of the computer's physical memory.

If you click on the **full-screen icon**, the graph is displayed enlarged.

Virtual memory

In this area you will find the history of the computer's virtual memory.

If you click on the **full-screen icon**, the graph is displayed enlarged.

Restart d.ecs monitor agent

By clicking on the **Restart icon**, which is located in the upper right corner, you can restart d.ecs monitor agent on the computer.

Agent information

This tab shows information about d.ecs monitor agent.

Notes

You can create notes for a computer. The currently logged in user is stored as the author.

Configuration

Availability rules

Selecting **Availability rules** opens the availability rules of the computer. These are equivalent to the availability rules of the groups. Accordingly, see: Availability rules - Group

Maintenance windows

You can also define a **Maintenance time period** for a computer. Please find details on how to do this in chapter Maintenance time period - Overview

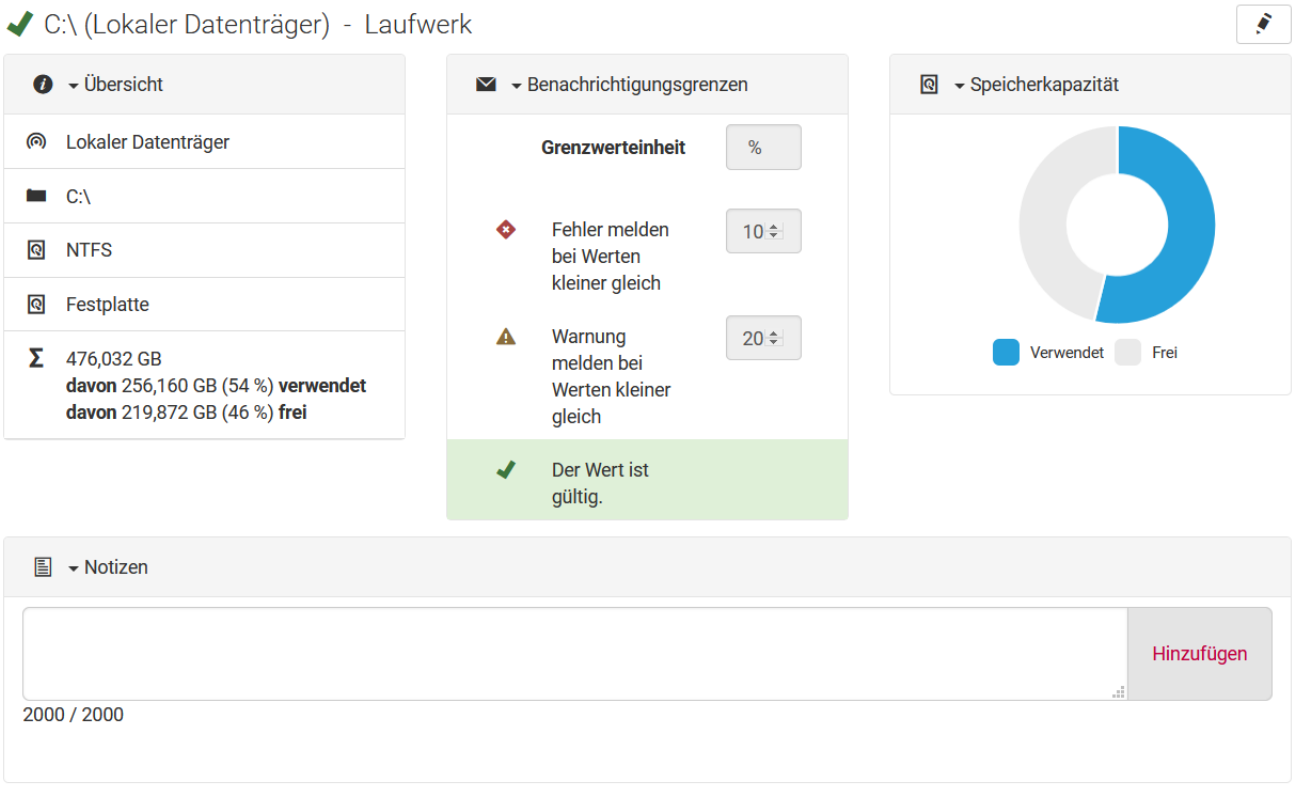
Actions

You can configure **Actions** for computers. For more information about configuring actions, see chapter Actions for status change.

Drives - Overview

This page displays all information on the selected drive.

In the edit mode, you can adjust the notification thresholds for warnings and errors. By default, these values are set to 10% or 15%.



CPU - Overview

On this page you can see the information about the selected computer CPU.

Overview

In this area you will find general information about the CPU. Listed are:

- **Computer name**The name of the computer whose CPU is currently displayed.
- **Average value of the last two minutes**
  To calculate the status of the CPU, an average value is formed from all CPU values of the computer measured in the last two minutes.

Notification limits

The limits against which the current value is validated to calculate the status of the CPU.

In the edit mode you can adjust the notification limits. If required, the limits can be completely disabled by deselecting the **Enable** checkbox. Thus the CPU remains permanently in the status "OK". If limit values are changed, they can be reset to the default values via the **Reset notification limits** icon.

History

A graphical representation of the last CPU values of this computer.

If you click on the **full-screen icon**, the graph is displayed enlarged.

Process overview

The Process overview page displays the information on all d.3 and Windows processes installed and executed on a computer. The search field allows you to filter the list as required. Clicking on column descriptions will sort the table accordingly in ascending or descending order. A click on the Windows or d.velop Icon allows you to filter the process list accordingly.

Clicking on a line takes you to the Process overview of the selected process.

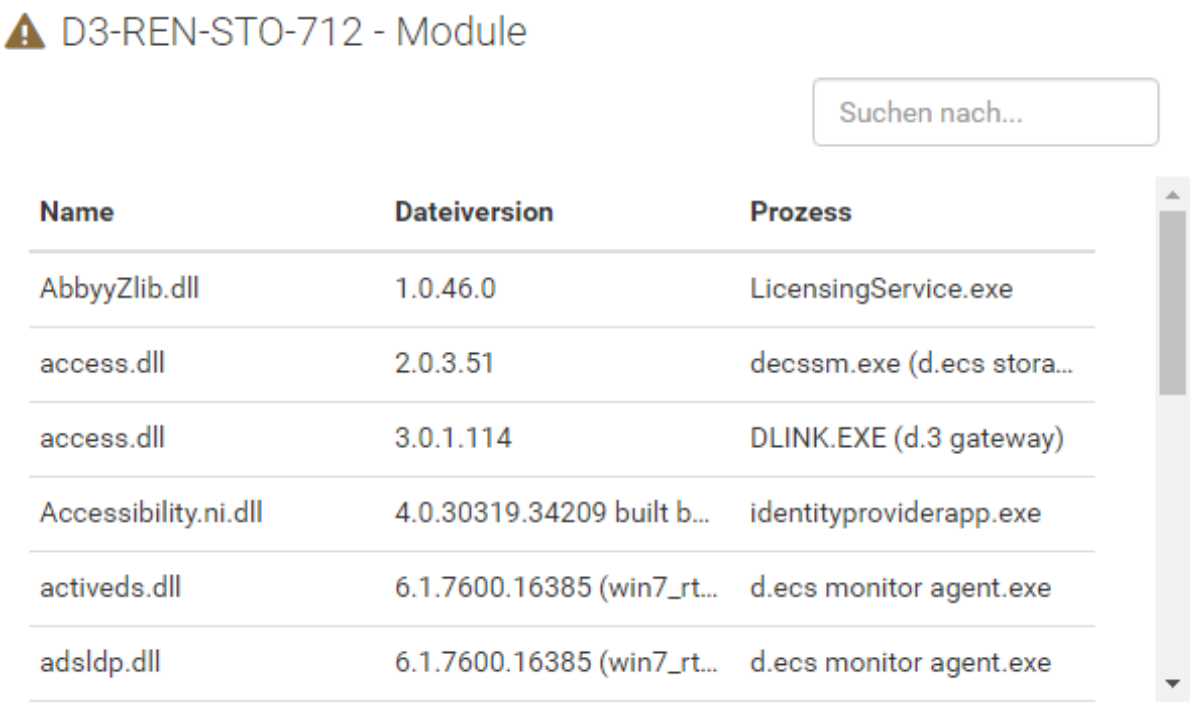
In edit mode it is possible to delete shut down or incorrect processes or to set the shut down status for processes with error or unknown status.

Module list

The Modules page displays information on all modules loaded by all services of the selected computer. The search field allows you to filter the list as required. Clicking on Name, d.velop Service or File Version will sort the table in descending or ascending order, respectively.

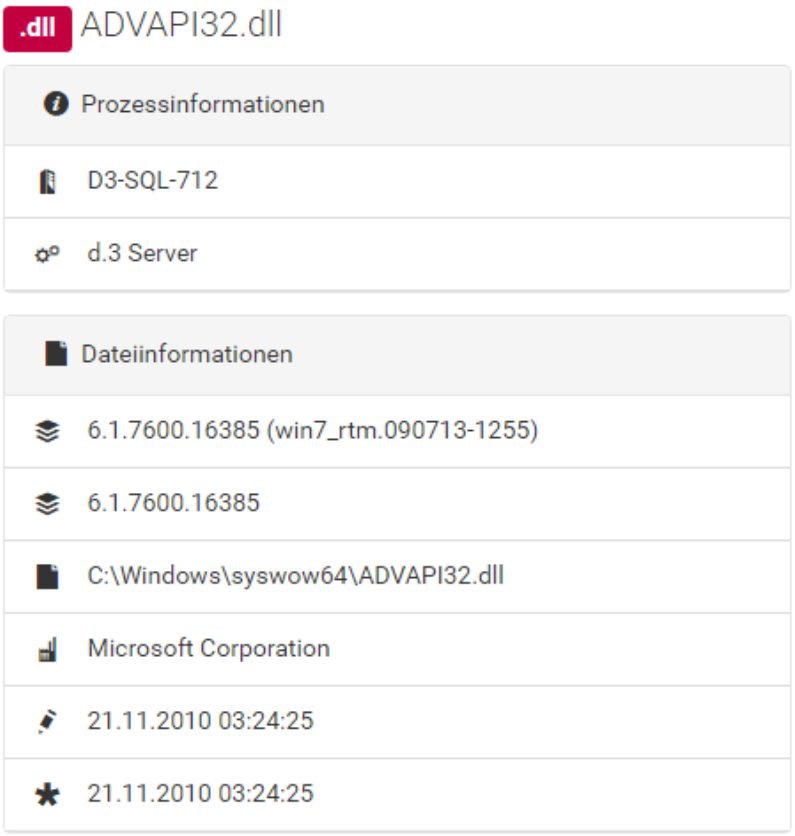
The Modules page displays information on all modules loaded by all services of the selected computer. The search field allows you to filter the list as required. Clicking on Name, d.velop Service or File Version will sort the table in descending or ascending order, respectively.

Clicking on a module name takes you to the Module details page of the selected module.



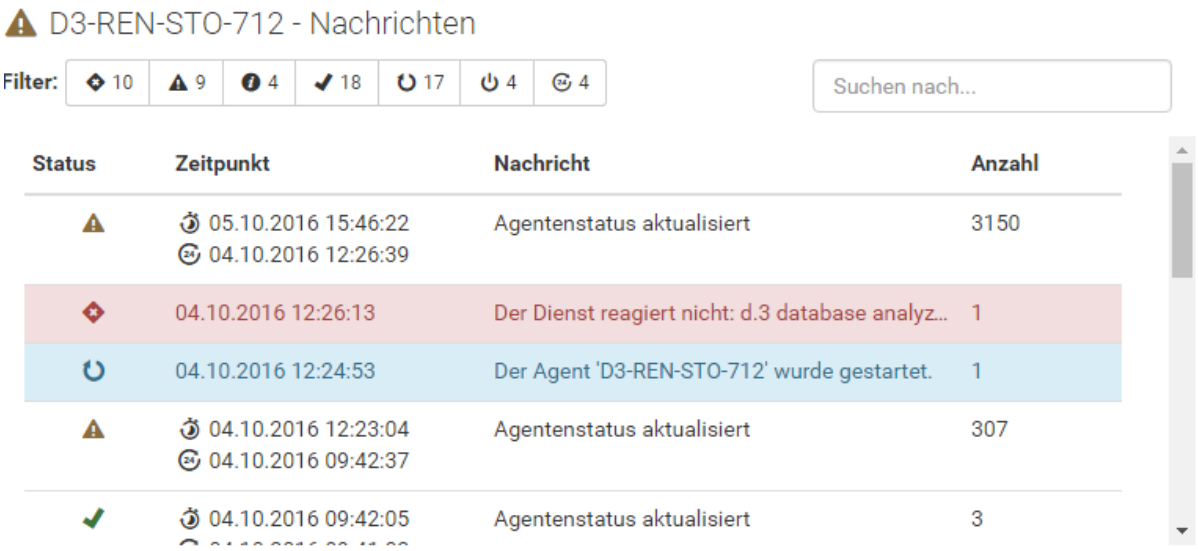
Module detail page

The module detail page displays information on the selected module of a service. Separated in **Process information** and **File information**.



Messages

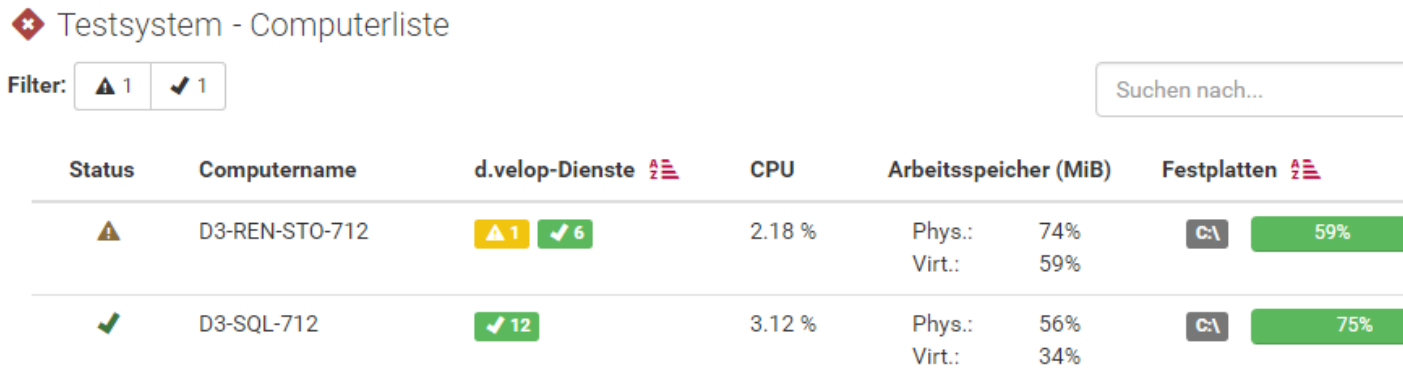
The Messages page lists the 100 most recent messages of the agent.



Computer list

On the **Computer List** page you can find information about all computers that have connected to d.ecs monitor. The search field allows you to filter the list as required. A click on Status allows you to filter the list accordingly. A click on **Computer name**, **CPU** or **Main memory** allows you to sort the list accordingly.

Click on a line to go to the Computer of the selected computer.



In the edit mode you have the possibility to remove shutdown computers by clicking on the trash can icon. For example, you can remove computers from d.ecs monitor that previously had d.ecs monitor agent uninstalled. Note that removal removes all data related to the computer and its child services and is unrecoverable.

Process overview

On the **Process overview page**, you will find information on a list of processes. The **Process overview page** is used in various applications, e.g. as a global process overview or as a process overview of a computer.

You can use the search field to filter the list individually. If you click on one of the status icons in the filter bar, only processes with the corresponding status will be displayed. If you click on the header of the table, you can sort the list according to the various columns.

Click on a line to go to the detail page of the selected process.

In edit mode, you have the option of removing shutdown or faulty processes by clicking on the remove icon. You can also mark a faulty process as shut down using the power symbol. You can also mark several processes and execute these functions for all selected processes using the buttons in the menu bar.

Overview - Process

The Process detail page displays information on the selected module of a service. The information is divided into the following areas:

- Monitoring object
- Linked pages
- Process information
- CPU
- Main memory
- File information
- Handles / Threads / GDI objects

Each area is displayed on a tab. Click on the title to expand and minimize the tab.

Monitoring object

The first five monitoring objects are displayed in this tab. Sorting is by status. Clicking on the status summary in the title takes you to a filtered list of the monitored objects. Clicking on a monitored object takes you directly to the details of the monitored object. For further information, please visit here.

Linked pages

If there are pages linked to a process, they are listed in this tab. With one click you open the link. The link either in a new resource or in a new browser window.

Process information

This tab lists the information about the process. A click on a **Group name** or a **Computer name** opens the respective detail page.

If you are in edit mode, you can change the group to which the process belongs.

To edit the group assignment, you must activate the edit mode by clicking on the pencil icon in the upper right corner. By clicking on the plus symbol, an already created group can be assigned to the service. A click on the cross icon next to the assigned groups allows you to remove the assignment again.

A service inherits the groups from the computer. This group association can only be removed via the computer. Also see: Computer overview.

> **Note**
> A service must always be assigned to at least one group. A service is therefore always in the "Default Group" if it has not been assigned to another group.

You can also assign computers to groups here in the Process overview - Group.

Priority

You can define a priority for the process. If you define the "Inherit" priority, the process will inherit the priority from the computer it is running on or from the groups it is a member of. To change the priority, you must activate the edit mode.

Check for updates

You can check if updates are available for the package. Here, additional dependencies can be listed, which would also be installed when updating the package. If updates are available, a click on **Update** will start a d.velop software manager package installation on the computer.

CPU

This card shows the CPU history of the process.

If you click on the **full-screen icon**, the graph is displayed enlarged.

Main memory

This tab shows the memory history of the process.

If you click on the **full-screen icon**, the graph is displayed enlarged.

File information

This tab shows information about the executed file.

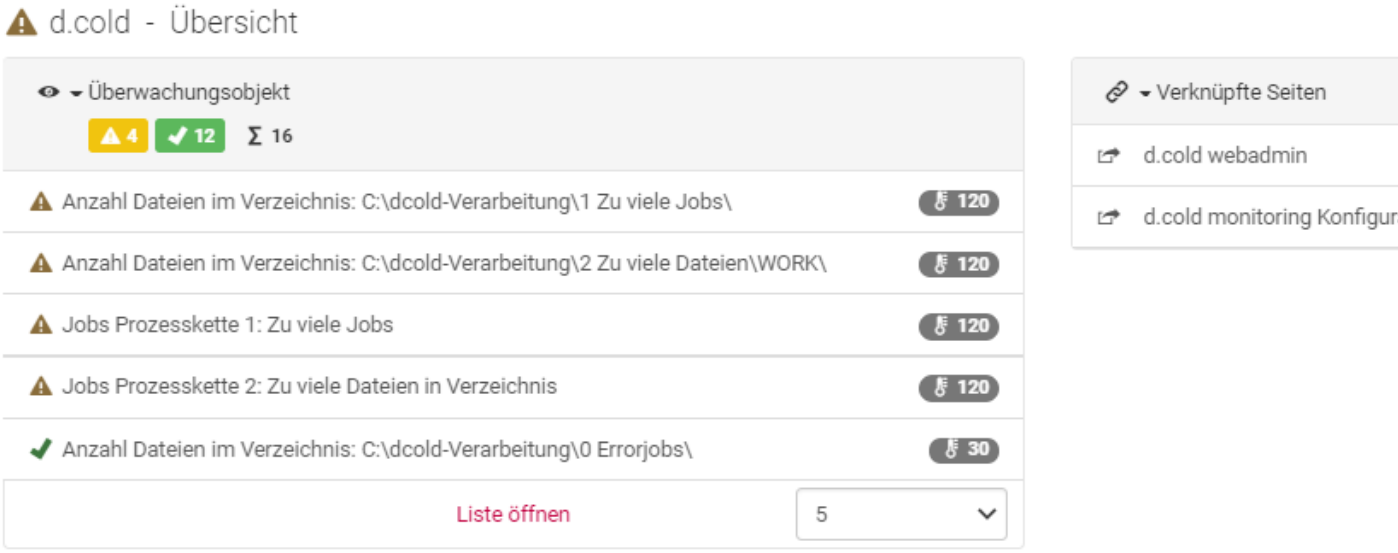
Handles / Threads / GDI objects

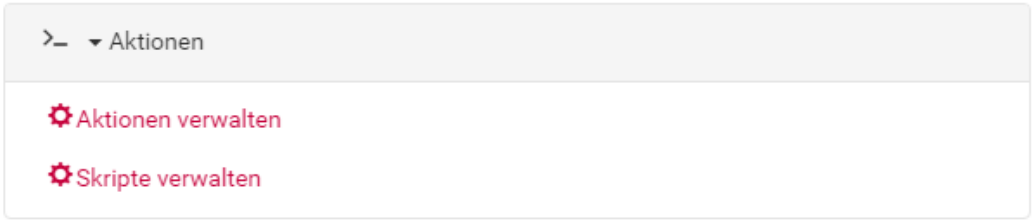
This tab shows the handle / thread / GDI object history of the process.

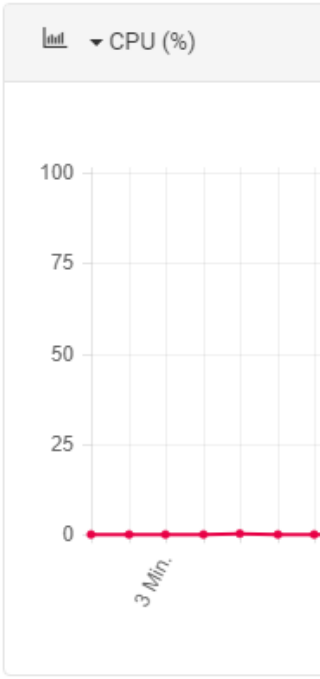
If you click on the **full-screen icon**, the graph is displayed enlarged.

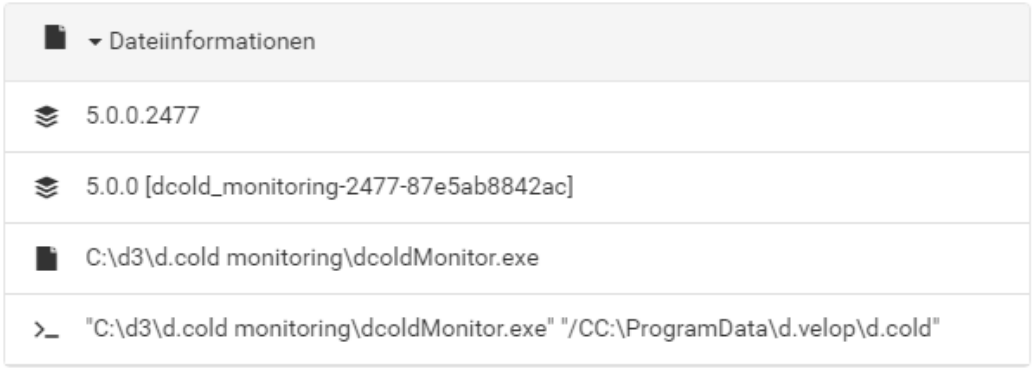
Start/stop/restart processes and Windows services

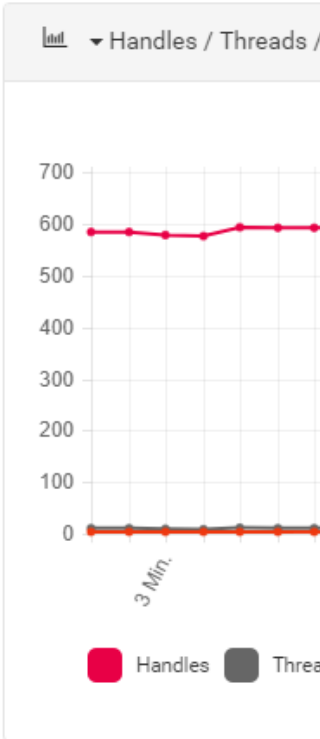
Processes that are executed by the d.ecs process manager or as a Windows service can be accessed via the buttons at the top right. You can stop, start, or restart processes. If a process is executed later due to the settings in the d.ecs process manager, the next start time is displayed.




Aktionen
Aktionen verwalten
Skripte verwalten


CPU (%)
100
75
50
25
0
3 Min.


Dateiinformationen
5.0.0.2477
5.0.0 [dcold_monitoring-2477-87e5ab8842ac]
C:\d3\d.cold monitoring\dcoldMonitor.exe
"C:\d3\d.cold monitoring\dcoldMonitor.exe" "/CC:\ProgramData\d.velop\d.cold"


Handles / Threads /
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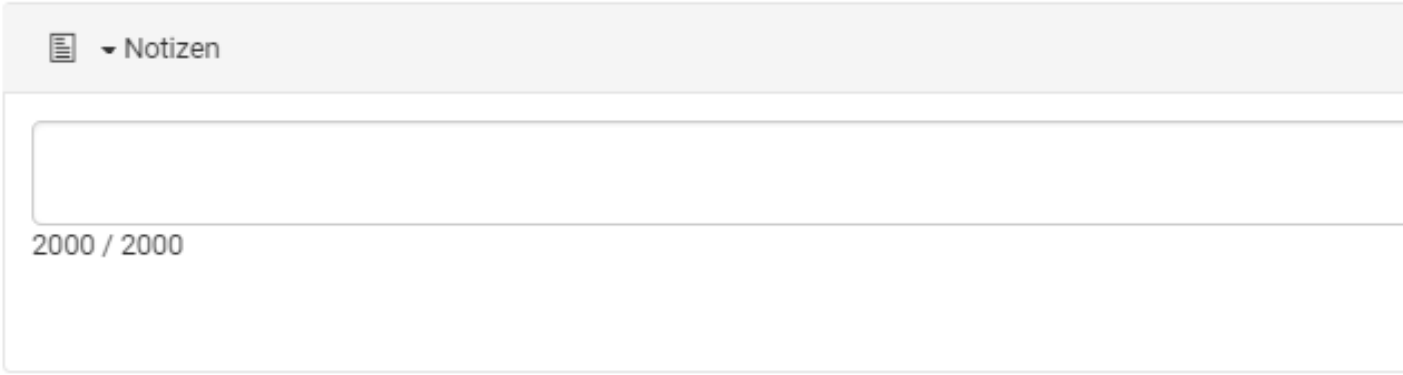


Actions

For processes **Actions** can be configured. For more information about configuring actions, see chapter Actions for status change.

Notes

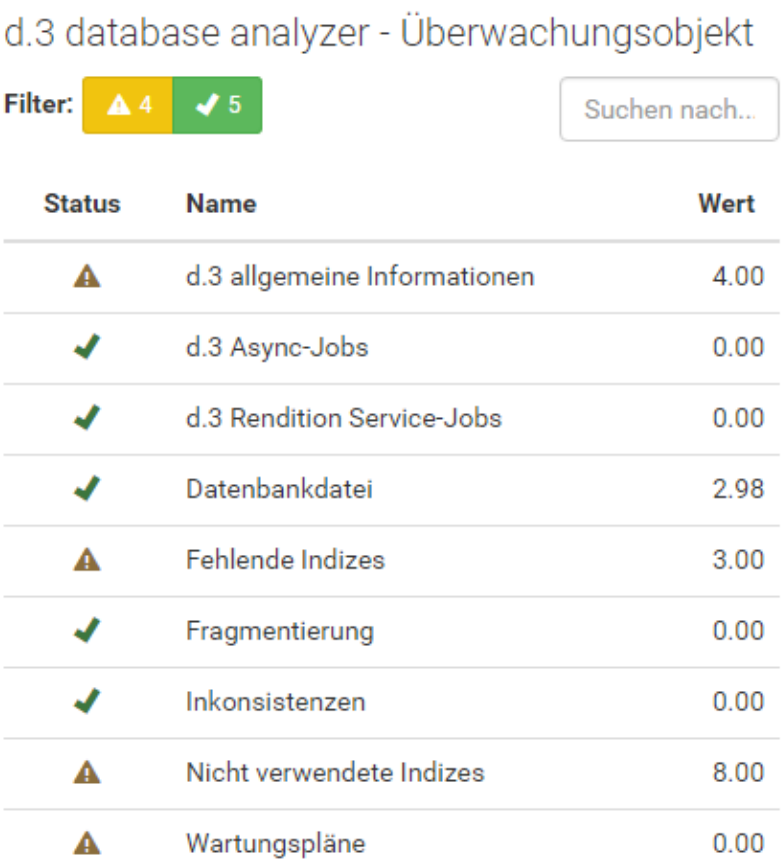
You can create notes for a process. The currently logged in user is stored as the author.

Monitoring objects

A monitoring object for a process is only available, if the row with the monitoring objects is displayed in the Process overview.

A click allows you to display the sum total of all monitoring objects or of an individual category.

This page allows you to display all view all monitoring objects and their status of a process. A click opens the Monitoring objects - Details.



Monitoring object - Details

This page allows you to view details on a monitoring and the notification thresholds and the history.

Overview

In this area you will find general information about the monitoring object. Listed are:

- **Priority**This can be adjusted in edit mode. If the priority "Inherit" is defined, the monitoring object inherits the priority of the parent process.
- **Name**
  The display name of the monitoring object.
- **Groups**Both groups inherited from the parent process and manually assigned groups are listed. In the edit mode, the manually assigned groups can be managed.
- **Value**
  The current value of the monitoring object, by which its status is also calculated.
- **Description**
  A description of what the monitoring object means.
- **Recommendation**
  A recommendation on what steps may need to be taken if the monitoring object has changed to a faulty state.

Notifications

In edit mode, you can adjust the notification thresholds, if they have not been configured in the parent process as **read-only**.

History

A graphical representation of the last values of this monitoring object.

If you click on the **full-screen icon**, the graph is displayed enlarged.

Actions

For monitoring objects, **Actions** can be configured. For more information on configuring actions, refer to the chapter Actions for status change

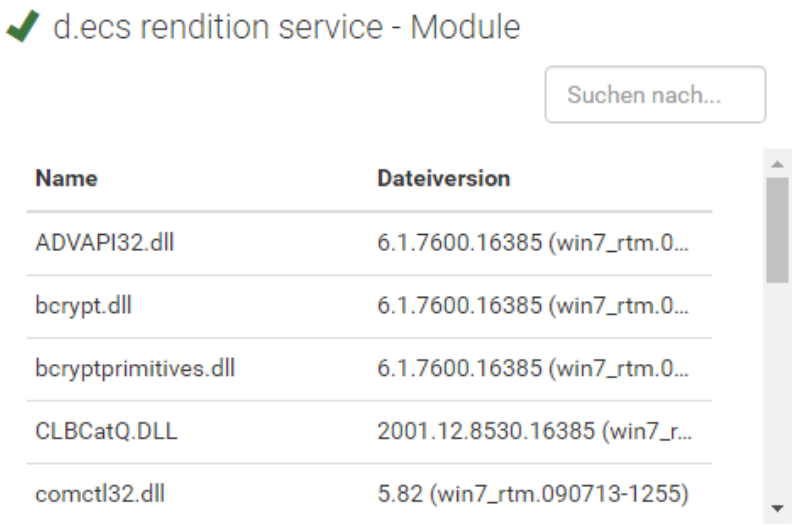
Notes

Notes can be created for a monitoring object. The currently logged in user is stored as the author.

Modules - Process

The Modules page displays information on all modules loaded by a service. The search field allows you to filter the list as required. A click on **Name** or **File version** the table is sorted in descending or ascending order.

Clicking on a module name takes you to the Module details page of the selected module.

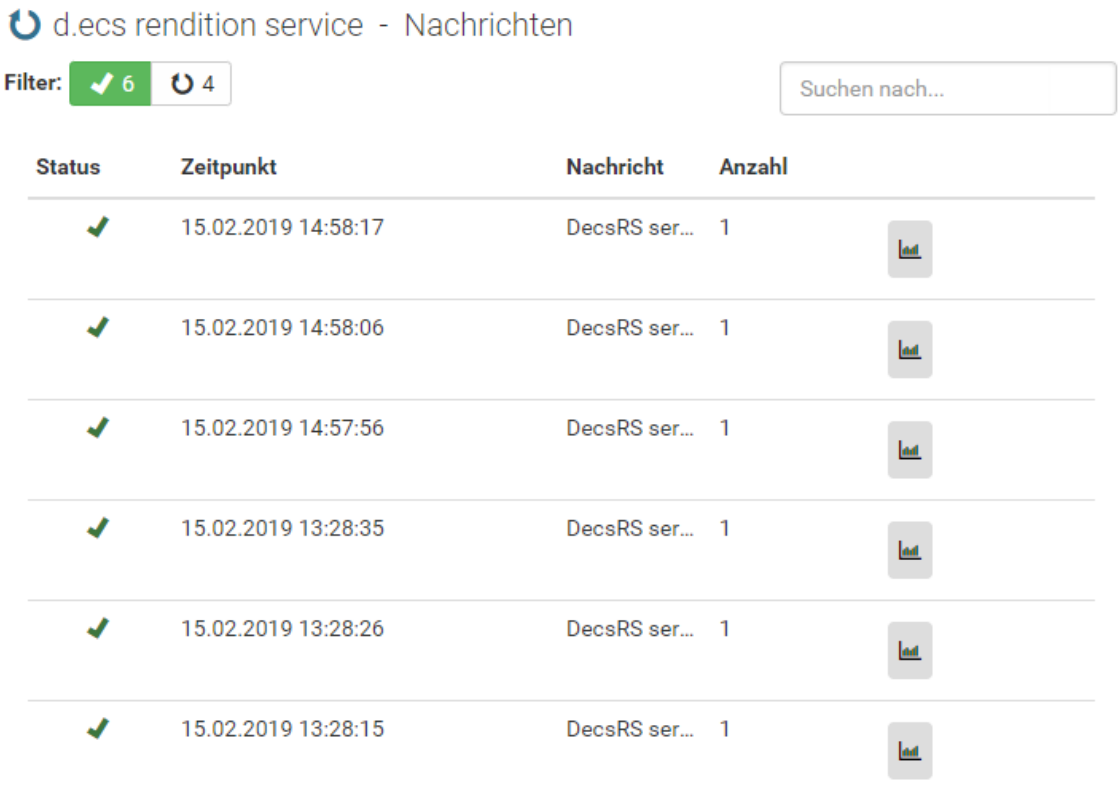


Messages - Process

On the **Messages** page you will find all the messages sent by the selected service. The search field allows you to filter the list as required. A click on **Time** or **Message** sorts, the table in descending or ascending order.

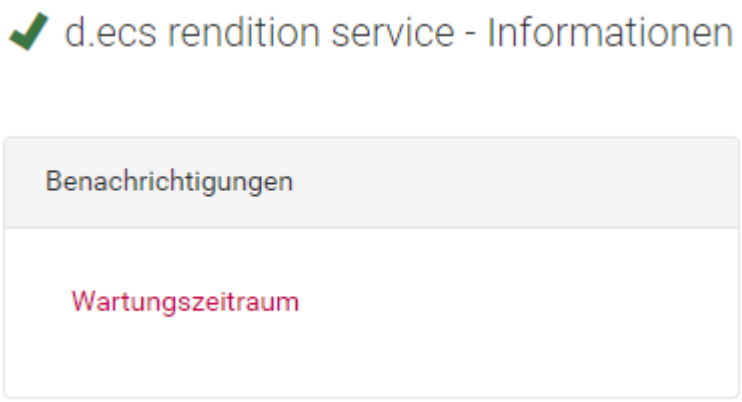
In addition, a jump point into the d.velop metrics analyzer dashboard is displayed.

> **Warning**
> The jump is only offered as long as you have correctly configured and activated the connection to the d.velop metrics analyzer under **Configuration > Settings**.



Information - Process

Information



Maintenance time period

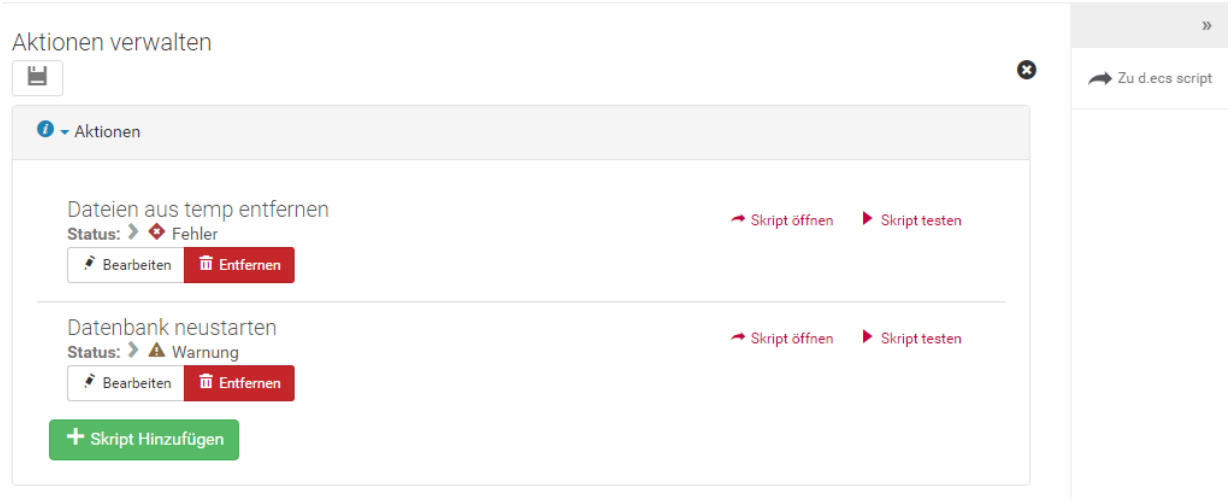
You can also define a maintenance time period for the processes. You can find out how to do this in the chapter Maintenance periods - overview.

Actions for status change

On this page, you can define actions to be performed when a status change occurs.

> **Warning**
> This function requires d.ecs jstore, d.ecs script and d.ecs http gateway. It is not possible to execute a script if one of the components is not available

> **Note**
> If a frequent status change is detected, the scripts are not executed. The script is not executed until the status is stable again, if defined.
>
> Below the messages you will find information about when a script was executed and whether it was executed successfully.



Actions created in the list can be managed. The following buttons are available for this:

Open

Displays the stored script in d.ecs script.

Test script

Tests whether the stored script can be called in d.ecs script.

Edit

Opens a dialog to edit the action.

Remove

Removes the selected action.

Via the button **Add script** a new action can be added.

Status change to

Defines the target status for a status change that must be achieved.

Script:

Specifies which script to run when a status change occurs.

Validate last message:

If this option is enabled, the last error message is checked using a regular expression.

Regular expression

Defines the regular expression used to check the error message when the status changes.

Test regular expression

The value from this input field is checked with the regular expression by pressing the button **Test**.

Test script:

This button checks if the execution in d.ecs script can be started.

Close:

Ends the current dialog without adding the action.

Add:

Ends the current dialog and adds the specified action.

Structure of the ScriptDtos

With each call a ScriptDto with certain information is passed into the script. The ScriptDto has a certain structure per object type. The structure of the individual Dtos is described below:

AgentScriptDto (for script calls triggered by an agent)

- AgentDto Agent
  - int Id
  - string Hostname
  - string Status
  - double PhysicalMemory
  - double VirtualMemory
  - double Cpu

GroupScriptDto (**for script calls triggered by a group**)

- GroupDto Group
  - int Id
  - string Name
  - string Status

ServiceScriptDto (**for script calls triggered by a service**)

- AgentDto Agent
  - int Id
  - string Hostname
  - string Status
  - double PhysicalMemory
  - double VirtualMemory
  - double Cpu
- ServiceDto service
  - int Id
  - string Name
  - string Status
  - double Memory
  - double Cpu

MonitoringObjectScriptDto (**for script calls triggered by a monitoring object**)

- AgentDto Agent
  - int Id
  - string Hostname
  - string Status
  - double PhysicalMemory
  - double VirtualMemory
  - double Cpu
- ServiceDto Service
  - string Id
  - string Name
  - string Status
  - double Memory
  - double Cpu
- MonitoringObjectDto MonitoringObject
  - string Key
  - string Name
  - string Status
  - double? Value

Product list

The product list shows you the installed d.velop products with the respective versions.

The entries can be interacted with via click. The action is based on the known instances of the product with exactly this version on the respective computer:

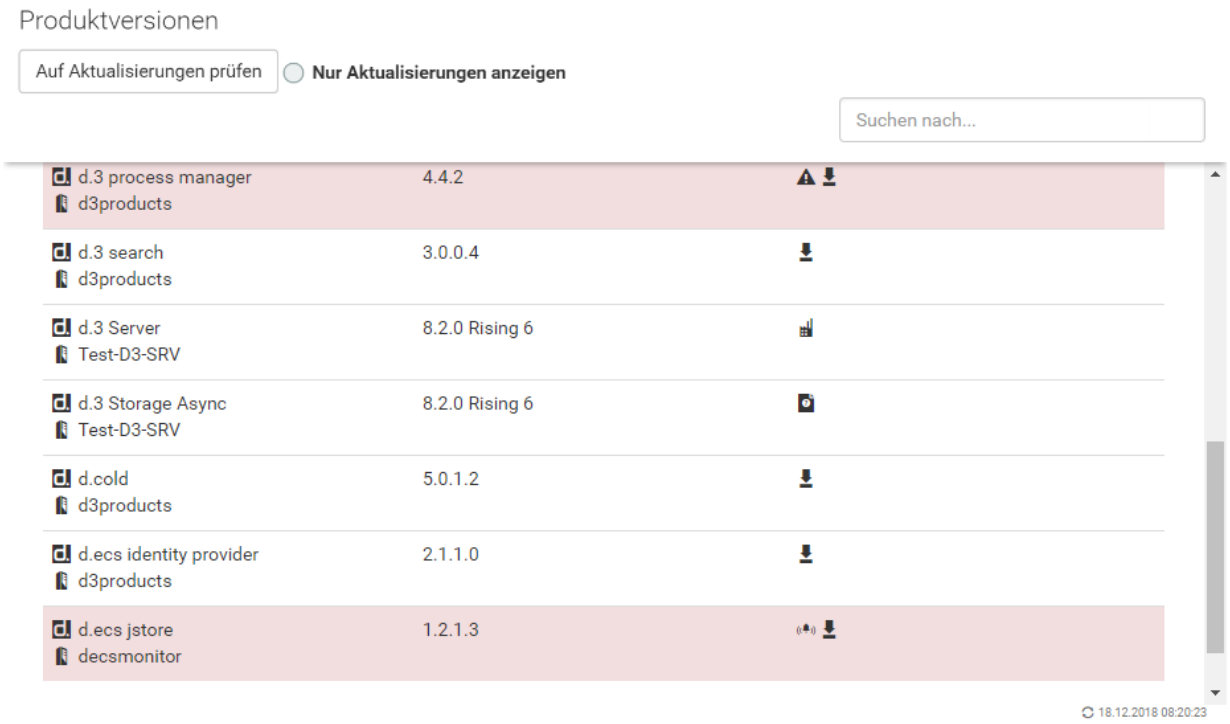
- If there is only one known instance for an entry, this instance will be called directly when clicked.
- If there are multiple known instances for an entry, a list of these instances will be called when clicked.
- If the entry is from d.ecs monitor agent, the corresponding computer overview is called up.

Additionally, you can check for currently available versions by clicking the **Check for updates** button.

- Manually installed applications from the d.velop service portal are compared with the current versions from the d.velop service portal.
- Applications installed via d.velop software manager are compared with the version stored in the d.velop software manager feed.

The installed products, the versions and the license information are transferred to d.velop AG.

You will then receive an overview page. On the overview page, you can quickly see for which products updates are available. With one click you can access the updates.



Symbol: Meaning

: Indicates that the maintenance period of a product has expired.

: A click on this symbol opens the product page in the d.velop service portal.

: Indicates that a more recent version is available via d.velop software manager. A click on this icon opens the respective process page to initiate an update via d.velop software manager in d.ecs monitor.

: Indicates that the product is an unreleased version.

 : Indicates that the product was not found in the d.velop service portal.

 : Indicates that the product is a pre-release version that has now been officially released.

d.velop software manager overview

This page provides an overview of d.velop software manager in your system. The installed packages on all monitored computers are displayed. In addition, it is displayed for packages whether another version is available in the d.velop software manager feed.

The entries can be interacted with via click. Here, the action depends on the known processes of the selected package of d.velop software manager on the respective computer:

- If there is only one known instance for an entry, this instance will be called directly when clicked.
- If there are multiple known instances for an entry, a list of these instances will be called when clicked.

In the header of the page, under **Last update of the overview**, you will find the time at which d.ecs monitor last queried the software installations from all computers. The overview is automatically updated by d.ecs monitor if it is more than one day old. However, you can also request a reload manually using the **Update** button.

After that, all monitored computers will be listed.

Monitored computers

First of all, each computer has a header. In it, the computer name is always displayed with an icon. You can navigate to the relevant Computer page via the name of the computer. If the retrieval of the data from the computer was successful, two items are additionally displayed:

- In front of the name there is an arrow for folding in and out the installations.
- Behind the name is the feed of the computer.

Detailed information computer

The header is followed by the detailed information of the computer.

A loading hint is displayed if the software overview of a computer is currently being queried.

If the retrieval of data from the computer was successful, all installed packages will be listed. Per package the **Package name**, **Package ID**, installed **Version** and **Software status** is displayed.

With the **Version**, the installed **Package**hash can be displayed via the **Fingerprint icon** via tooltip.

Under **Software status**, the installation is marked as the **Current version** if the installed version is also the currently available one in the feed. Otherwise, the available version is displayed and the available **Package hash** can again be viewed via the **Fingerprint icon**via tooltip.

Error during retrieval

If the retrieval was not successful, there can be several reasons for this. The following information can be displayed:

- d.ecs monitor agent on this computer is currently down or not responding.
- d.ecs monitor agent on this computer does not seem to support the query of the software overview.
- On this computer, d.velop software manager does not seem to be installed.
- An unexpected error occurred while querying this computer.

1.4.2. Description of status

The d.ecs monitor works based on status. This way, the state of items is presented to you pictorially. This allows you to quickly grasp the different statuses. You can also filter according to the different status.

The following items have a status: Groups, Agents, Services, Monitoring-objects, Availability rules, Hard disks and Maintenance time periods.

In addition to the items, messages and license notifications can also display the described status.

Error

Usage:

- Groups
- Agents
- Services
- Monitoring-objects
- Availability rules
- Hard disks

This status typically occurs in error situations.

A service can be in this status for various reasons. Basically, it changes to this status, if it does not communicate for a specific time. If the monitoring objects assigned to the service are in this status, the service also changes to this status. The service object in the monitor moreover adopts the status of the messages sent by the service so that the service status changes to this status, if the message was sent on an internal error. An agent changes to this status, if the agent itself detected an internal error or one of the services monitored by this agent is erroneous. Groups have this status, if at least one assigned agent or service is in this status.

Monitoring-objects adopt this status, if their values are within the configured error thresholds. Availability rules which are not met change to this status as well as hard disks which exceeded the error thresholds. If an expired license is detected, a message with this status is sent.

Messages display this status, if a message represents an error.

If an expired license is detected, a message with this status is displayed.

Warning

Usage:

- Groups
- Agents
- Services
- Monitoring-objects
- Hard disks

This status is used, if items are in a status which may lead to an error soon.

Agents change to this status, if the agent itself wants to warn of a dangerous status or one of the services monitored by this agent is in this state. Groups have this status, if at least one assigned agent or service is in this status.

Monitoring-objects and hard disks adopt this status, if their current values according to their configuration lead to a warning.

Messages display this status, if a message represents a warning.

During a license check, messages with status are sent one month before a license expires.

Information

Usage:

- Agents

This status is displayed for messages notifying you about adding or removing services to an agent.

Started

Usage

- Groups
- Agents
- Services

An item in this status is being started. During the start, services as well as agents typically send messages with this status.

Messages display this status, if a message represents a start process.

OK

Usage:

- Groups
- Agents
- Services
- Monitoring-objects
- Availability rules
- Hard disks

An item with this status is working properly and can neither detect errors nor does it warn of potential error situations.

A service is only in this status, if the service is sending messages with this status or the monitoring-objects assigned to it are in this status. A service is only in this status, if the service is sending messages with this status or the services monitored by it are in this status and the availability rules assigned to it are in this status. A group is only in this status, if the assigned agents and services are in this status and the availability rules assigned to it are in this status.

Monitoring-objects and hard disks are in this status, if their current values according to their configuration are OK. Availability rules have this status, if all requested services are available.

Messages display this status, if a message represents a notification without specific properties such as keep-alive messages of the service.

The license check in this status, if the license is still valid for more than a month.

Shutdown

Usage:

- Groups
- Agents
- Services

An item in this status is being shut down or has shut down.

During the beginning of the shutdown process, services as well as agents typically send messages with this status. A service remains in this status afterwards. Agents are in this status only, if they have been shut down explicitly. Group are in this status only, if the assigned agents and services and services are in this status.

Messages show this status when a message represents a shutdown process.

A service can be in this status before the agent monitoring it is shut down. If this shut down service still has not sent any further messages on the next update of the agent, it is assumed that the service is still in this shut down status.

Maintenance

Usage:

- Groups
- Agents
- Services

An item in this status is currently in a maintenance time period. Items in this status are not considered for the further processing, e.g. when sending error messages.

A group is in this status, if one or more maintenance time periods of the group are active at the time. An agent is in this status, if one group assigned to it are in this status or one or more maintenance time periods are active at the time. A service is in this status, if one group assigned to it or the agent monitoring it or one or more maintenance time periods of the service are active at the time.

Messages display this status, if a message is displayed during a maintenance time period.

Unknown

Usage:

- Groups
- Services
- Availability rules

The actual status of an item with this status is unknown.

A service is in this status, if it can no longer communicate with the agent monitoring it. This may happen if the agent has crashed, encounters network issues or has been shut down explicitly. A group is in this status only, if all assigned services are in this status.

Availability rules are in this status after their creation until they have been first validated.

Messages display this status, if one message is displayed in an unknown status.

An shut down service, which is usually in status Shutdown, changes to this status, if the agent monitoring it is shut down. If the communication with this agent can be re-established and the previously shut down service still does not send any messages, then the service changes from this status to the status Shutdown as it is assumed that the service is still shut down.

Disabled

Usage:

- Maintenance time periods

A maintenance time period can be enabled. Disabled maintenance time periods have this status in the list of maintenance time periods.

Enabled

Usage:

- Maintenance time periods

A maintenance time period can be enabled. Enabled maintenance time periods have this status in the list of maintenance time periods.

1.4.3. Configuration file

In the installation directory of d.ecs monitor there is the INI configuration file **AppSettings.ini**. This configuration file should not be edited directly by the user. These settings can be adjusted in d.ecs monitor via the web interface (see Settings - Configuration). Alternatively, some configurations can also be set via Call parameters.

However, it may be necessary to configure the port manually instead of using call parameters under which d.ecs monitor should start its web interface. To set the port, a value is assigned to the key **Port** in the configuration file under the section **AppSettings**.

Example::

An extract from **AppSettings.ini**. The port is set to 12345.

AppSettings.ini (partial excerpt)

```
[AppSettings]
Port=12345
```

Furthermore it can be defined whether the communication between d.ecs monitor and d.ecs http gateway should be done via HTTP (standard) or HTTPS. This can be defined via the **Protocol** parameter.

AppSettings.ini (partial excerpt)

```
[AppSettings]
Port=12345
Protocol=HTTPS
```

When using the HTTPS protocol, it is mandatory to specify a fixed port, since the HTTPS protocol must be activated for this port with a corresponding certificate from the Windows certificate store. To do this, you must run two commands in a command prompt that is open as an administrator.

1. command

```
netsh http add urlacl url=https://[HOST]:12345/ user=Everyone
```

HOST is hostname of the computer on which the d.ecs monitor agent is installed and this command is executed. The "Everyone" specification is the group for each user and may vary depending on the operating system language.

2. command

```
netsh http add sslcert ipport=0.0.0.0:12345 certhash=[Fingerprint of the
certificate to be used] appid={[GUID]}
```

The GUID must be specified in the format "xxxxxxxx-xxxx-xxxx-xxxx-xxxxxxxxxx" and be unique on the host.

1.4.4. Call parameter

There are several call parameters that can control the behavior of this application. This includes various functions such as configuration helpers, calling the web interface and more.

You can get a description of the available call parameters using the **--help** call parameter.

Example call

```
C:\d3\monitor> MonitorApp.exe --help

Usage:
MonitorApp <Option> <Parameter>
Option:
...
If no option is specified the app is run as a console application.
```

1.4.5. Prometheus metrics

It is possible to query metrics in Prometheus format in d.ecs monitor. These metrics are provided at the URL https://[BaseUri]/monitor/metrics. To access the metrics, login data is required, which must be transferred to d.ecs monitor via HTTP Basic-Authentication.

The following metrics are provided:

Global:

- Global status

Computer:

- Hard disks: Capacity and free space
- CPU usage
- Maximum physical memory and its current memory usage

- Maximum physical memory and its current memory usage
- Timestamp of last update
- Availability rules
- Status (internal and accumulated)

Processes:

- CPU usage
- Thread count
- Number of GDI objects
- Memory usage
- Timestamp of last update
- Monitoring objects (value and status)
- Status (internal and accumulated)

Groups:

- Availability rules
- Status (accumulated)

Example::

The following is an example to integrate the metrics of d.ecs monitor into Prometheus:

```
  - job_name: 'd.ecs monitor'
    metrics_path: '/monitor/metrics'
    scheme: 'https'
    basic_auth:
        username: 'admin'
        password: 'admin'
    static_configs:
        - targets: ['decsmonitorserver']
```

This section must be added to the Prometheus configuration file at **scrape_configs**: and adapted.

The status is displayed with the following values as a metric:

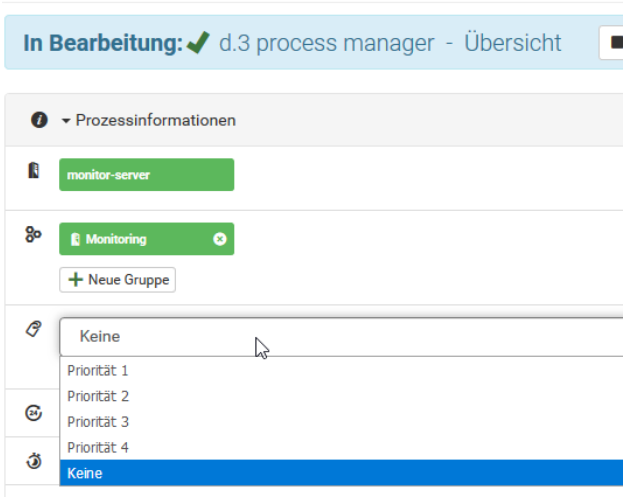
- **Unknown**; Value: 0
- **Maintenance windows**; Wert:1
- **Shutdown**; Value: 2
- **Disabled**; Value: 3
- **Started**; Value: 4
- **Okay**; Value: 8
- **Information**; Value: 16
- **Warning**; Value: 64
- **Error**; Value: 128

1.4.6. Scenarios

Escalation management

Not every monitored service has the same priority. Some are so important that a failure directly results in employees no longer being able to work. With other monitored services, you can take care of it later because the error is not time-critical. Therefore, you have the option of attaching a priority to each group, computer, service or key-value pair. Depending on the priority, you can define when an escalation is to be triggered. In this case an additional e-mail distributor will be informed about the problem.

You always set the priority on the overview page of the object. Switch to edit mode to assign a priority.



It should be noted that priorities can be inherited from top to bottom. If, for example, a group gets a priority of 1, this priority is inherited to all objects of the group (computers, services, key-value pairs) for which no own priority is set or which are not set to "Not inherited".

Depending on the priority, the time period after which an escalation should be triggered can be set in the Global e-mail configuration . If, for example, you enter 30 (minutes) here at **Priority 1**, an e-mail will be sent to an additional escalation mailing list after 30 minutes in the event of an error. It happens if the error has not been solved or has not been confirmed by any employee. Acknowledge in this case means that the user is working on this problem. See chapter Acknowledge of problems.

Notifications/Mailing

At the latest when serious problems occur, you want to be informed about them. With d.ecs monitor the notification takes place via e-mail. The configuration of d.ecs monitor is configured via the e-mail settings. First, you need to configure the global e-mail configuration so that the connection to the e-mail server is configured correctly. See chapter To the global e-mail configuration.

Global e-mail recipients can also be defined here, who are informed of every status change for which no other e-mail recipients have been defined.

E-mail recipients can be defined at the following levels:

1. Global e-mail configuration
2. E-mail configuration - Group

Accordingly, you have the option of choosing different e-mail distributors for different business or prioritized processes, who will be informed of the problem

If an error occurs in a group with separately configured e-mail recipients, the e-mail is only sent to these recipients. The globally set recipients are ignored.

To enable SMS/WhatsApp sending, various Internet services can be used, which forward an e-mail as SMS/WhatsApp to a mobile phone. Especially for this case there is the possibility to send the e-mail in text format. Thus, the presentation of important data is often significantly better.

In the event of a subsequent status change, information is sent via e-mail:

- Ok => Warning
- Ok => Error
- Warning => Errors
- Warning => Ok
- Warning => Shutdown
- Error => Warning
- Error => Ok
- Error => Shutdown

Examples:

Case 1: Global e-mail distribution only

In this case, all problems will be sent to this e-mail list.

Case 2: Global e-mail distributor + one e-mail distributor for each group

In this case, only the group mailing lists will be used to send e-mails in the event of problems.

Case 3: Global e-mail distributor + group distributor Group 1 - no distributor Group 2

This is the most interesting case. Here, all problems that occur in group 1 are only sent to this group distributor. All group 2 problems are sent to the global distribution list. If a process is defined in both groups, both distribution lists will also be notified.

Process migrations

1.5. Logging and troubleshooting

If a status does not work as desired or crashed constantly, you should first analyze the Windows Event Viewer. Moreover, the d.3 log contains various information which can be used to analyze the error:

Entries in the Event Viewer

Moreover, relevant events are logged in the Windows Event Viewer

Open the section **Windows-logs** to find events of the category **Application**. The events are structured into the two applications d.ecs monitor and d.ecs monitor agent accordingly.

Note
Events are written into the Event Viewer in the following situations:

- **Information**: One of the two service applications is starting.
- **Warning**: One of the two service applications was stopped.
- **Error**: An unexpected error occurred.

1.5.1. Edit mode cannot be opened or closed
Make sure that no other user or you have opened d.ecs monitor in another browser.

If the problem continues, restarting the browser may help. The timeout for the cache is 15 seconds.

1.5.2. The Internet Explorer crashes unexpectedly in edit mode.
In rare cases, it may happen that the Internet Explorer crashes with the message "Internet Explorer has stopped working" when entering data in an input field in edit mode.

In such a case, you should check the version of the Internet Explorer. The component **mshtml.dll** of the Internet Explorer version prior to 11.589.10586.0 has lead to these crashes.

Thus, the Internet Explorer 11 should at least be update to the version mentioned above. Using a different browser also provides a solution to this problem.

1.5.3. A process becomes an unknown process
In rare case, it may happen that a process is displayed with the name **{ID} is unknown**. **{ID}** can be a number or a letter.

In this case, delete the process. Afterwards, the process is automatically added again correctly.

1.6. Wrapper
In the d.ecs monitor advanced version, it is possible to add functions to d.ecs monitor. So-called wrappers are available for this. These allow either the special monitoring of individual d.velop products or provide required additional monitoring.

For example, d.ecs monitor for d.cold automatically monitors

- All processing directories of all process chains
  - Number of Err files
  - Total number of files
- Jobs in all process chains
  - Number of error jobs
  - Total number of jobs

The advantage is, for example, that a changed or newly created process is automatically monitored directly in d.cold. No configuration in the d.ecs monitor is necessary.

Additional functions that were implemented via wrappers are e.g.:

- d.ecs monitor webservice analyzer
  Monitoring whether a web service is available
- d.ecs monitor sql query
  Analysis of database tables

An overview of all currently available wrappers can be found in the service portal. This can also be accessed from d.ecs monitor configuration in the configuration wizard.

The wrappers should always be installed on the computer that requires the monitored function or meets the corresponding requirements, e.g.

- d.ecs monitor for d.cold
  Installation on the d.cold computer
- d.ecs monitor sql query
  Installation on a computer connected to the database via a corresponding ODBC32 data source.
- d.ecs monitor directory analyzer
  Installation on the computer hosting these directories (to minimize network traffic) or from which the directories must be accessible (to monitor accessibility)

> **Warning**
> Wrappers can only be installed on computers where a d.ecs monitor agent is running.

The configured access groups from the d.ecs monitor are taken into account by the wrappers.

Note that it can take up to five minutes for an adjustment of the access groups in d.ecs monitor to be applied to the wrappers.

> **Note**
> The Windows service for d.ecs monitor, d.ecs monitor agent and the d.ecs monitor wrappers must be run under the account of a local system or an account with local administration rights, as the Windows services provide web services that are bound to the host name to enable operation in a d.ecs http gateway cluster.

1.6.1. Delivery scope

Currently the following d.ecs monitor wrappers are delivered together with d.ecs monitor:

- d.ecs monitor directory analyzer
- d.ecs monitor for d.3 async
- d.ecs monitor for d.3 gateway
- d.ecs monitor for d.3 hostimp
- d.ecs monitor for d.3 repositories
- d.ecs monitor harddisk analyzer
- d.ecs monitor log analyzer
- d.ecs monitor network analyzer
- d.ecs monitor powershell executer
- d.ecs monitor sql query
- d.ecs monitor webservice analyzer

1.7. Additional information sources and imprint

If you want to deepen your knowledge of d.velop software, visit the d.velop academy digital learning platform at https://dvelopacademy.keelearning.de/.

Our E-learning modules let you develop a more in-depth knowledge and specialist expertise at your own speed. A huge number of E-learning modules are free for you to access without registering beforehand.

Visit our Knowledge Base on the d.velop service portal. In the Knowledge Base, you can find all our latest solutions, answers to frequently asked questions and how-to topics for specific tasks. You can find the Knowledge Base at the following address: https://kb.d-velop.de/

Find the central imprint at https://www.d-velop.com/imprint.