



## STAR Device Monitor



Business departments BusinessSoftware & LifestyleSoftware

### Document information

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We are always there for you !

## Welcome

### **Thank you very much for purchasing our software !**

We are pleased that you decided for one of our products. It's our passion to develop powerful software and exciting games.

#### **[About this manual]**

This handbook will help you to become more familiar with our software.

It will explain some of the concepts behind our software and introduce you to the intuitive interface and its fundamental functionality.

Anyway, you can also explore the software of your own - it was our goal to make all features simple and intuitive for everybody.

This user guide contains the following information:

- ☆ Installation and configuration instructions.
- ☆ Detailed information about workflows and feature sets.
- ☆ Overview about available support services and contact details.

We hope you enjoy reading !

The STAR ENTERPRISE software engineering team.

## The first time...

### **The software is ready-to-use instantly - no complex installation required !**

A detailed quick-start guide for this product and other useful expert tips are available on our website: [www.starenterprise.com/en/customer-service/software/](http://www.starenterprise.com/en/customer-service/software/)

Please have a look at the ReadMe file included with each software package. It contains latest information and will assist you with the first steps to use the software.

## Fundamentals - STAR Device Monitor at a glance

STAR Device Monitor is used to **continuously monitor websites, server equipment and many other network devices** within the LAN and the Internet.

Considering web-based services, STAR Device Monitor is also suited for database-driven applications (like e-commerce sites, discussion boards, social communities) as well as various cloud services (e.g. used for storage, performing computations, backups).

### [How it works...]

In user-defined intervals, STAR Device Monitor will **establish connections on resources 1] to check their operational status**.

1] The term "resource" refers to the object being monitored, like a website or mail account.

If **several consecutive checks failed**, the resource is considered as unreachable (down) and the administrator will get **notified about a possible outage**.

### [Installation and operation]

STAR Device Monitor can be used on any desktop PC or compatible device. For continuous operation (24/7/365), the software should be installed on a server (e.g. virtual machine).

Tip: On a desktop computer, use the autostart feature of your operating system to load STAR Device Monitor automatically when booting your PC.

### Tracking the local network connectivity

STAR Device Monitor **detects local network outages** and stops all monitoring activities immediately. This will significantly **reduce the risk of false-positive alarms**. As soon as the local network is up again, monitoring will be automatically restarted.

## Fundamentals - supported protocols

**Ping (ICMP 8)** "Heartbeat" of servers, routers, switches, PCs & other network devices.

Test procedure: Sending an ICMP echo request packet ("ping", ICMP packet type 8), waiting for an ICMP response ("pong", ICMP packet type 0).

Recommended settings: Test interval of one minute.  
Notification after three consecutive failed checks.  
Timeout of 30.000 milliseconds.

Since this test is using the internal ping command of the local operating system, the shortest timeout value may be limited to 1.000 ms.

**TCP** General use; network devices and services, web-based applications.

Test procedure: Initiating connection, sending data (optional) and evaluating the return value (optional).

Recommended settings: Test interval of five minutes.  
Notification after two consecutive failed checks.  
Timeout of 30.000 milliseconds.

**Fundamentals - supported protocols (continued)**

**HTTP(S)** Websites, many other web-based applications.

Test procedure: Equal to TCP, but uses the HTTP(S) protocol on application layer.

Recommended settings: Test interval of five minutes.  
Notification after two consecutive failed checks.  
Timeout of 30.000 milliseconds.

**POP3(S)** POP3(S) = Incoming e-mail service.  
**SMTP(S)** SMTP(S) = Outgoing e-mail service.

Test procedure: POP3(S): Establishing a connection to a mail account.  
SMTP(S): Sending a test message.

Recommended settings: Test interval of five minutes.  
Notification after two consecutive failed checks.  
Timeout of 30.000 milliseconds.

**Fundamentals - tips on configuration****[Hide main window on startup]**

If using the autostart feature of your operating system, you can hide the main application window, so you don't need to "click away" the window each time booting your computer.

**[E-mail fallback for failed notifications]**

In these situations, an e-mail notification can be triggered:

- Notification by SMS text message fails (return value mismatch).
- Call of an external URL fails (HTTP status code  $\neq$  200).

**[Data encryption and password protection]**

STAR Device Monitor uses **strong AES-128 encryption** to hide its internal databases from prying eyes. And a **password protection** restricts access to the user interface.

By default, data is encrypted using a hardcoded encryption key and password protection is turned off. You can change this behaviour by **setting an individual password**.

The individual password is requested every time STAR Device Monitor launches.

Note on backups: Please consider that restored backups may use a different password.

Emergency password reset

Please keep your password on a safe place, because there is absolutely no way to recover lost passwords. Remember: If you forget your password, your data is lost, too.

Anyway, it's possible to reset the internal databases to their factory defaults by deleting the directory `./workspace` (located within your application folder).

## Configuration

Before STAR Device Monitor can send e-mail or text messages (SMS), it is required to set up a dedicated e-mail account or configure access to an SMS messaging gateway.

Note: While disabling a gateway will stop sending of notifications immediately, individual resource settings are not changed and become active once the gateway is turned on again.

New to STAR Device Monitor ? Please read the chapter "Fundamentals" first.

### [Access the software preferences window]

Click on the preferences button (or press F4 key) to **open the preferences window**.

"✗" (or a red indicator) marks mandatory settings.

"✓" (or a yellow/green indicator) marks optional settings.

### [Mail gateway - outgoing mail server]

On the preferences window, enter your e-mail account details (note that passwords are usually handled case-sensitive).

We recommend to set up a dedicated e-mail account exclusively used by STAR Device Monitor (but shared use of your personal mail account will work, too).

**Configuration (continued)****[SMS gateway]**

STAR Device Monitor is compatible to most SMS text messaging gateways as well as other messaging solutions using push technology.

The gateway must support connections by HTTP (port 80/TCP) or HTTPS (port 443/TCP).

STAR Device Monitor uses placeholders within the gateway link URL that become replaced with appropriate contents when sending an SMS text message:

<.Recipients>            Recipient(s) (e.g. phone numbers, terminal identification).

<.MessageContents> Message contents.

**Example of a gateway link URL**

```
https://www.provider.tld/gateway.cgi?key=abc1234&to=<.Recipients>&message=<.MessageContents>&type=1
```

Note: Your gateway may use a different scheme. Please contact your provider for details.

**Message encoding schemes**

Not sure which text encoding scheme to choose ? Give "UTF-8" or "Latin-9 (ISO 8859-15)" a try, because they are matching most Western European languages.

**Return value and e-mail fallback**

Most gateways provide some kind of delivery notification. In the case that the intended return value does not match, STAR Device Monitor can trigger an e-mail fallback.

If no specific return value on successfully sent messages is provided, the HTTP status code is evaluated instead of (200, 3xx = success, others = failed).

**It's time to watch...****[Add new resources, modify existing resources]**

Click on the "plus-sign" toolbar button to add a new resource or click on the "wrench" toolbar button to edit an existing entry.

Depending upon what kind of connection type you choose, you need to fill in some required fields (marked with red indicators), while others are optional.

**[Notes about some specific protocols and settings]**

- In some cases, it is useful to **limit the data returned by the server** that is being analyzed. Unless required, you should set a limit of about 250 KB.
- You can **set a daily maintenance window** to stop monitoring of the resource for doing scheduled maintenance (reduces the risk of false-positive alarms).
- The **pattern search based on regular expressions** is using the PCRE syntax (Perl Compatible Regular Expressions).

Hardcoded options for regular expressions: Non-greedy, case-sensitive; period character "." matches everything except a newline.

- **HTTP(S) protocol:** A custom HTTP status code can be set to be matched for passing a test. By default, HTTP status codes 200 or 3xx are accepted.
- **SMTP(S) protocol:** Outgoing test messages contain this special header entry (useful to filter test messages on the client side):

X-Mailer: STAR Device Monitor | STAR ENTERPRISE - starenterprise.com

**It's time to watch... - individualized contents for notifications**

Notification messages can contain **individual contents based upon the current test result or taken from the resource record**.

Placeholders (so-called "**command tags**") are available for **e-mail messages** (subject and body), **SMS text messages** and **external URL calls**.

During processing, found **command tags are replaced with matching contents**. If there is no content available for a tag, it will be removed (duplicate space chars are cleaned up).

**[How to insert command tags]**

Please use the **contextual menu provided by the input fields**:

Click on the right mouse button while the mouse pointer is placed at the position you want to insert the tag (alternatively: use keys CTRL or ALT on systems with one mouse button).



## Customer service, help & support

**Customer service:** [www.starenterprise.com/en/customer-service/software/](http://www.starenterprise.com/en/customer-service/software/)

Our support website provides resources covering these topics...

- ☆ Quick-start guides (help with installation, instructions for getting started easily).
- ☆ Frequently asked questions (including answers ;-), technical support.
- ☆ Information about available updates and bugfixes.

**Technical support by e-mail:** [support@starenterprise.com](mailto:support@starenterprise.com)

### [Priority support for customers owning an active license]

In order to allow preferred handling of your inquiry, we need to know your license ID. Please always include your license ID with every request !

See Assistance menu of the software for license information (or have a look at the license document received upon purchase).

## Backups and data recovery

**Please ensure to perform regular backups of your data !**

More information about backups in general and how to restore lost data is available on our support website.

## License information

License ID

License owner

Location of use / Host

## Space for your own notes