

# General Specifications

## Basic Endpoint Security Solution

GS43D02T30-05EN

### OVERVIEW

This General Specification (GS) describes the Yokogawa basic endpoint <sup>(\*)</sup> security solution. This solution provides the industrial-grade security control to endpoints of Integrated Control and Safety Systems (ICSSs) thru both security updating and antivirus software, whereby ICSSs are protected in a way following industrial security standards. With this solution, endpoints of ICSSs are protected from various kinds of cyber-threats.

\*1: In this GS, the term "endpoint" refers to a Windows-based computer connected to a control system or its network.

### FEATURES

#### Basic Endpoint Security Solution

Yokogawa recommends implementing a right control to reduce a risk of malware infection and impacts on the system by malware, such as deteriorated performance and limited operability. On the other hand, ICSSs face a risk of an unintended shutdown or malfunction by incompatible security programs. Basic Endpoint Security Solution (hereafter referred to as "Basic EPS") provides a validation report of Microsoft Security Updates tested with Yokogawa ICSS products at the Yokogawa security laboratory. The report helps the customer update security programs of Microsoft products used by Yokogawa products while keeping stable plant operation by reducing the risk above. The Basic EPS provides the report on every second Tuesday of each month<sup>(2)(3)</sup>. The Basic EPS has two optional solutions for further security and efficiency.

\*2: Hardware environment is not included in the validation item of the test.

\*3: Japan Standard Time (UTC+9)

\*4: The delivery date might be changed depending on the situation.

#### Option: Replication XML file

Yokogawa recommends Windows Server Update Service (WSUS) for security updating of Microsoft products in a system having lots of endpoints. Yokogawa simplifies the updating process of Microsoft Security Updates with a dedicated configuration file (hereafter referred to as "replication XML file") for WSUS<sup>(5)</sup>, reducing a working cost of the process. The replication XML file configures WSUS servers<sup>(6)(7)</sup> to have the servers distribute only Microsoft Security Updates compatible with Yokogawa ICSS products based upon the test results at the Yokogawa security laboratory. Yokogawa provides the replication XML file on every second Tuesday of each month<sup>(8)(9)</sup>.

\*5: Yokogawa imports the replication XML file.

\*6: The WSUS server must be built and configured by Yokogawa.

\*7: The WSUS server must be connected to the Internet directly or through a host WSUS server to download Microsoft Security Updates.

\*8: Japan Standard Time (UTC+9)

\*9: The delivery date might be changed depending on the situation.

The replication XML file is applicable to the following WSUS servers <sup>(10)</sup>:

- Windows Server 2008 R2 SP1 Standard (English/Japanese)

- Windows Server 2012 R2 Standard (English/Japanese)

\*10: Ask Yokogawa for further details

#### Option: Yokogawa standard antivirus software (ENS)

Yokogawa recommends protecting endpoints with antivirus software to take the system to a higher security level. Antivirus software prevents, detects, and removes malware in endpoints, whereas security programs of operating systems do not achieve or focus on it. As an option, the Basic EPS provides a software license of Yokogawa Standard Antivirus Software (ENS), which is a Yokogawa certified product based on McAfee's product, and verified update programs and virus definition file for the Yokogawa Standard Antivirus Software (ENS). Yokogawa provides verified updates files on every second Tuesday of each month<sup>(11)(12)</sup>.

\*11: Japan Standard Time (UTC+9)

\*12: The delivery date might be changed depending on the situation.

The Yokogawa Standard Antivirus Software (ENS) is in two editions: Advanced and Basic editions. The Advanced edition is optimized for Yokogawa ICSSs, and has the following features for the applicable Yokogawa products in addition to the functions of the basic edition. The features are not available in off-the-shelf products of McAfee or other security vendors.

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**Table 1 Applicable functions of the Yokogawa Standard Antivirus Software (ENS)**

Features	Edition	
	Advanced	Basic
Optimized configuration	Yes	No
Stable operation of Yokogawa ICSSs	Yes	No
Minimal false-positives	Yes	No
Yokogawa file extension and service exclusion	Yes	No

**- Optimized configuration**

The Yokogawa Standard Antivirus Software (ENS) is installed with optimized configuration for Yokogawa ICSS products by Yokogawa.

**- Stable operation of Yokogawa ICSSs**

The Yokogawa Standard Antivirus Software (ENS) and its components are continuously tested with Yokogawa ICSS products at the Yokogawa security laboratory. Yokogawa provides only software, patch, engine, and virus definition file which have been verified that they do not affect the operation of the Yokogawa ICSS products.

**- Minimal false-positives**

The Yokogawa Standard Antivirus Software (ENS) achieves a minimal false-positive <sup>(\*)13</sup> rate by collaborating with McAfee.

<sup>\*</sup>13: A result that antivirus software falsely detects a legitimate program as malware.

**- Yokogawa file extension and service exclusion**

Antivirus software may degrade the performance of a computer while scanning by removing or quarantining a program or file for a legitimate application. To avoid the risk above, antivirus software, especially for industrial use, exclude some folders for specific applications from the scope of scanning, whereas it deteriorates the security level of a system. The advanced edition of Yokogawa Standard Antivirus Software (ENS) achieves Yokogawa file extension and/ service exclusion while keeping a minimal false-positive against Yokogawa ICSS products.

## ■ APPLICABLE PRODUCTS

The Basic EPS is applicable to a Windows computer on which the following Yokogawa product is installed.

**Table 2 List of Applicable Products (ENS)**

Product Name	Revision	Basic EPS <sup>(9)</sup>	Option: Standard AV software (ENS) <sup>(10)</sup>		Option: Replication XML file
			Advanced Edition <sup>(15)</sup>	Basic Edition <sup>(18)</sup>	
CENTUM VP	R5, R6	✓	✓	--	✓
ProSafe-RS	R3, R4	✓	✓	--	✓
Exaopc	R3.70 or later	✓	✓	--	✓
Exaplog	R3.40 or later	✓	✓	--	✓
Exapilot	R3.90 or later	✓	✓	--	✓
Exaquantum (PIMS/Web Server)	R2.70 or later, R3	✓	✓	--	✓
STARDOM (FCN/FCJ software)	R3.10 or later, R4	✓	✓	--	✓
PRM	R3.10 or later, R4	✓	✓	--	✓
FAST/TOOLS	R9.04 or later, R10	✓	✓	--	✓
Exasmoc	R4.03 or later	✓	✓	--	✓
Exarqe	R4.03 or later	✓	✓	--	✓
PACE	R5.01.10 or later	✓	✓	--	✓

\*14: Exclude Windows 2000, Windows XP/Server 2003, and Windows Vista/Server 2008.

\*15: Exclude Windows 10 Pro

\*16: Windows 7 and Windows Server 2008 R2 are not applicable if the operating system is installed on a computer that has a 7th-generation or later generation of Intel/AMD processor.

\*17: Virtualization platform is not applicable.

\*18: The Basic edition can be installed with third party's products other than above Yokogawa Products listed in Table 2 with the following conditions:

- The virus definition file for Yokogawa Standard Antivirus Software (ENS) is updated at the customer's own risk.
- Only the software license of Yokogawa Standard Antivirus Software (ENS) is provided. The features of Yokogawa Standard Antivirus Software (ENS) described above for Advanced Edition are not available.
- Supported Microsoft OS and hardware in table 3

**Table 3. Supported Microsoft windows operating system and hardware requirements**

Operating System	Service Pack	32-bit	64-bit	Processor	RAM	Minimum Hard Disk Space Free
Windows 10 LTSC Windows 10 IoT Enterprise Windows 10 pro 1511/1607/1703/1709/1803		✓	✓	2 GHz or higher	3 GB	1 GB
Windows 8.1 Update 1		✓	✓	2 GHz or higher	3 GB	1 GB
Windows 7	SP1	✓	✓	1.4 GHz or higher	2 GB	1 GB
Windows Embedded 8		✓	✓	1 GHz or higher	1 GB	1 GB
Windows Server 2016 Windows Server 2016 1607/1709/1803			✓	2 GHz or higher	3 GB	1 GB
Windows Server 2012 R2 Windows Server 2012 R2 Update 1			✓	2 GHz or higher	3 GB	1 GB
Windows Server 2012			✓	2 GHz or higher	3 GB	1 GB
Windows Server 2008 R2		✓	✓	1.4 GHz or higher	2 GB	1 GB

## ■ MODEL AND SUFFIX CODE

Table 4. License for Windows computer

		Description
Model <sup>(*)19)</sup>	LS1SN001	Endpoint security license (initial)
	LS1SR001	Endpoint security license (renewal)
Suffix Code	-E	English
	-J	Japanese
	0	Always 0
	1	1 year
Option Code <sup>(*)20)(*)21)(*)22)(*)23)</sup>	/AV	AV software for applicable products
	/AVX	AV software for other products
	/XML	Replication XML file

\*19: A license is valid for one year, and the license can be purchased for up to three years together. If a multi-year license is needed, licenses must be purchased as separated items as follows:

E.g. Three-year license for two computers,

- LS1SN001 x 2 + LS1SR001 x 2 + LS1SR001 x 2; if the customer does not have LS1SN001 licenses for the computers.
- LS1SR001 x 2 + LS1SR001 x 2 + LS1SR001 x 2; if the customer has initial licenses for the computers.

\*20: Specify the option code "/AV" to install the Yokogawa Standard Antivirus Software (ENS) on the applicable Yokogawa products listed in Table 2 and update its patches, engines, or virus definition files.

\*21: Specify the option code "/AVX" to install the Yokogawa Standard Antivirus Software (ENS) on products other than the applicable Yokogawa products listed in Table 2. This option provides the software license of the standard AV software only. Some features equipped with the option code "/AV" are not applicable for the option code "/AVX." The option codes "/AV" and "/XML" cannot be purchased in combination with "/AVX."

\*22: The option code "/AV" is common for Standard and Advanced editions.

\*23: Specify the option code "/XML" to allow Yokogawa to import the replication XML file to the WSUS server.

## ■ NOTES

- This solution reduces a security risk; however, it does not guarantee that the system is free from any cyber-attacks or -threats, or all the malware can be detected or deleted.
- Microsoft Security Updates and Yokogawa Standard Antivirus Software (ENS) are tested at the Yokogawa security laboratory; however, it does not guarantee that there will be no issue occur in the customer's systems, including false-positives by Yokogawa Standard Antivirus Software (ENS).
- The Yokogawa Standard Antivirus Software (ENS) is installed by Yokogawa.
- Engineering fees are not included in the license of the Basic EPS. Engineering fees are added when:
  - Yokogawa installs Microsoft Security Updates or Yokogawa Standard Antivirus Software (ENS),
  - Yokogawa imports the replication XML file to a WSUS server, and
  - Yokogawa updates components of Yokogawa Standard Antivirus Software (ENS), including software patches, engines, and virus definition files.
- Any installation media, manuals, and configurations of the software are not provided to the customer.
- The license is needed per computer and virtual machine in virtual environment. If the hardware is replaced because of updating of Yokogawa products or other reason, a new initial license for that product is required again.
- A renewal license can be purchased only when renewing an initial or renewal license, and the renewal license starts from the expiration date of the previous license. A renewal license cannot be purchased for the first year.
- Yokogawa supports only Yokogawa Standard Antivirus Software (ENS) with the components tested by Yokogawa, including software patches, engines, and virus definition files.

## ■ TRADEMARKS

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