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USER MANUAL

FOXMAN-UN

Licensing Model

Licensing Structure and Options

Hitachi Energy

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1 Preface

This document gives an overview on the FOXMAN-UN R18 license options, the covered functions, and related order codes.

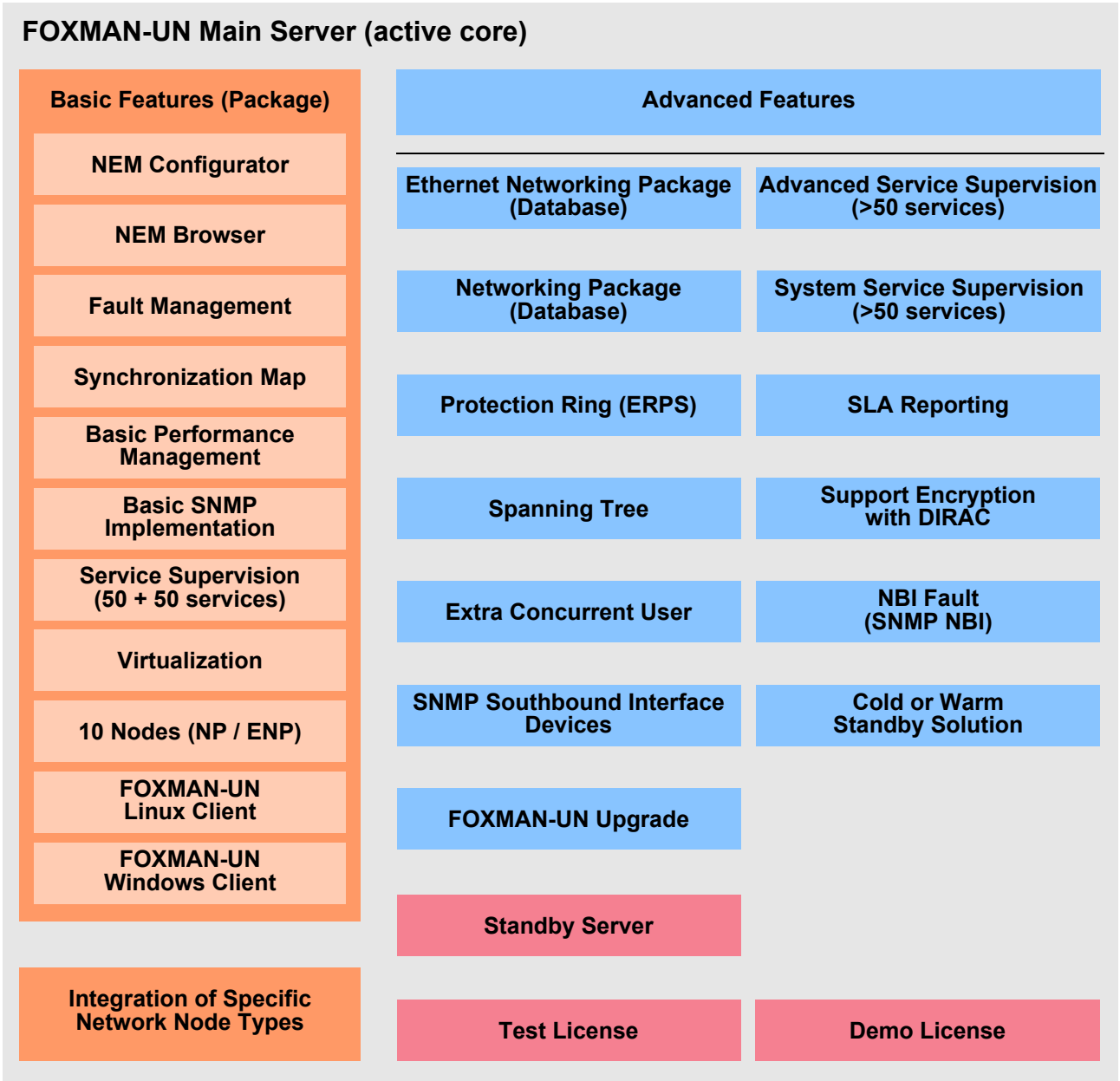
2 Licensing Model Overview

Licensing options are available for various features and components of FOXMAN-UN. The following figures provide an overview for FOXMAN-UN R18 licensing model, licensing types, covered main features, and order codes.

For features where no order codes are provided click on the colored blocks for more details.

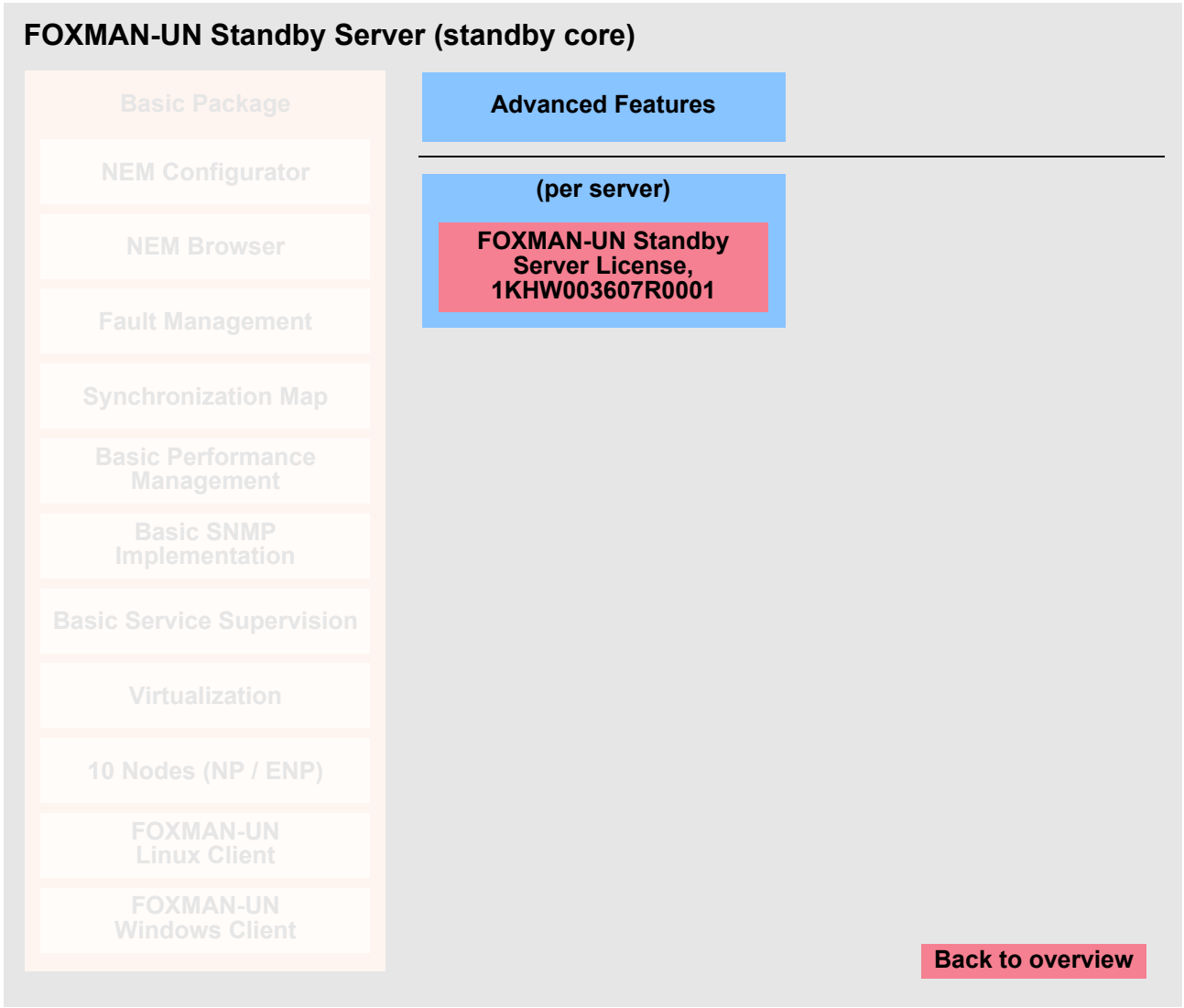
2.1 Main Server & Client

Licensing type: for main server: per server installation. Machine ID of the main server is required to create the license file.



2.2 Standby Server

Licensing type: per server installation. Machine ID of the main server is required to create the license file.



Order codes: 1KHW003607R0001

2.3 Non-commercial Demo License

FOXMAN-UN Main Server, Demo License

Demo License details:

- One-time demo license
- license valid for maximum of 180 days upon installation;
- per customer / unlimited per internal use;
- includes server installation;
- demo version does not include product maintenance and warranty.

FOXMAN-UN Demo License, 1KHW003678R0001

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Order codes: 1KHW003678R0001

2.4 Test License (lab use)

Licensing type: per server installation; see details.

FOXMAN-UN Main Server, Test License

FOXMAN-UN Test License 3 Years, 1KHW003679R0001

FOXMAN-UN Test License 5 Years, 1KHW003680R0001

Back to overview

Order codes: see figure above.

Details:

Full FOXMAN-UN installation for non-commercial use (lab use) only.

- Customer must have an existing production FOXMAN-UN license.
- The test license cannot be transferred to production license at any time.
- License fee is non-refundable.

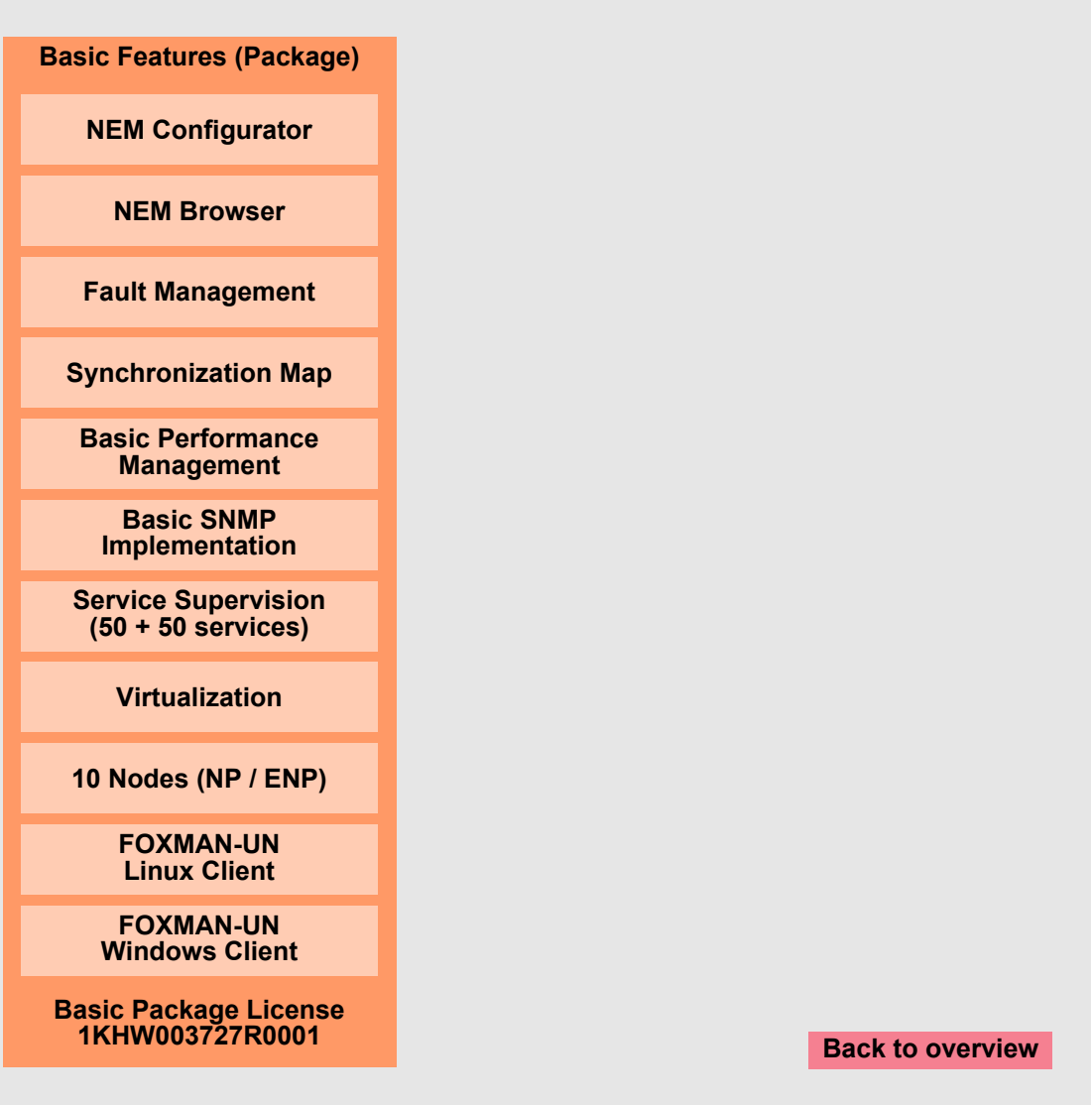
The Test Licenses includes:

- Basic Package, including 10 nodes;
- Networking Package, including 10 nodes as defined in BP above;
- Ethernet Networking Package, including 10 nodes as defined in BP above;
- Service Supervision (up to 50 services);
- FOXMAN-UN Southbound interface, SNMP node license fee for 3rd party device monitoring, for a maximum of 10 nodes;
- FOXMAN-UN SNMP Fault Management via Northbound Interface;
- FOXMAN-UN Windows Client software license fee;
- Free upgrade to higher NMS version during the license validity period;
- License valid for 3 or 5 years upon installation, see figure above;

3 Licensing Model Details

3.1 Basic License

Licensing type: per server installation; see details.



Order codes: 1KHW003727R0001

The Basic FOXMAN-UN license fee covers the provisioning of the license key for the following features:

- Installation and operation of the FOXMAN-UN core on a Linux server[1] which can be either
  - a physical machine or
  - a virtual machine (VM);
- Installation and operation of the FOXMAN-UN client on a Linux machine (physical or virtual);
- Installation and operation of the FOXMAN-UN client on a Windows machine;
- 2 concurrent users (connected locally or remotely from Linux client and/or Windows client);

1. The installation on a VM includes cloning, creation of a snapshot, and replication to a different hosting machine. Installation and operation in parallel on a second VM and/or physical machine is not possible and will require a Standby Server license option.

- Management of 10 network elements (FOX61x or FOX515);
- NEM Configurator;
- NEM Browser;
- Circuit Emulation Manager (CEM);
- Precision Timing Protocol (PTP) Sync Map;
- MPLS Map;
- Fault management;
- Basic performance management;
- Basic SNMP implementation (SNMP southbound interface);
- Synchronization map;
- 10 nodes with Networking Package (NP);
- 10 nodes with Ethernet Networking Package (ENP); this includes the Traffic Engineering feature;
- 50 services in Advanced Service Supervision;
- 50 services in System Service Supervision;
- Support of FOX61x & FOX515 core & service units as defined in the Release Notes;
- Linux client;
- Windows client;
- UCST add-on for Windows Client;
- Virtualization (installation on a virtual machine).

3.2 NEM Client

Licensing type: no specific license; included in Basic Package

Order codes: 1KHW003727R0001, 1KHW003727R0001.

The FOXMAN-UN Basic Package includes:

- Linux Client, the FOXMAN-UN client application for installation on Linux. It is included in the Basic Package license fee.
- Windows Client, the FOXMAN-UN client application for installation on Windows. It provides the same features as the FOXMAN-UN Linux Client, except the NEM Administration tools.
- The Windows Client also supports the local craft terminal UCST for managing FOX515 which can be installed as an add-on to the Windows client; the UCST is doesn't require a license for R18.

  The Windows client is included in the Basic Package license fee.

3.3 Extra Concurrent User

Licensing type: per server installation

Extra concurrent user, 1KHW003608R0001

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Order codes: 1KHW003608R0001.

The Basic License includes 2 concurrent users. For every additional concurrent user a license is required. E.g., for a total of 5 concurrent users, this license is required 3 times.

3.4 Ethernet Networking Package ENP (MPLS-TP)

Licensing type: per node

Ethernet Networking Package for FOX61x 1KHW003602R0001

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Order codes: 1KHW003602R0001.

The Ethernet Networking Package provides the management of MPLS-TP networks based on FOX61x devices. Minimum FOX61x system release required is R6C (not available any longer). With FOXMAN-UN R18 recommended FOX61x system release is R18.

The management of 10 FOX61x nodes is included in the Basic Package. Management of any additional FOX61x node needs to be licensed separately with this specific ENP license.

FOX61x device class corresponds to FOX615, FOX612, and/or FOX611 nodes.

3.5 Networking Package NP (TDM)

Licensing type: per node

Networking Package
FOX515 & FOX61x device class
1KHW003599R0001

Back to overview

Order codes: 1KHW003599R0001.

The Networking Package includes the management of SDH/PDH networks based on FOX515 and/or FOX61x devices.

The management of ten (10) FOX515 and/or FOX61x nodes is included in the Basic Package. Management of any additional FOX515 and/or FOX61x node needs to be licensed separately with this specific NP license.

FOX61x device class corresponds to FOX615, FOX612, FOX611, and/or FOX610 nodes.

FOX515 device class corresponds to FOX515 and/or FOX512 nodes.

3.6 Ethernet Protection Ring (ERPS)

Licensing type: per node

Visualization for Ethernet Ring Protection Switching (ERPS) 1KHW003604R0001

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Order codes: 1KHW003604R0001.

Ethernet Ring Protection Switching (ERPS) map support is suitable for networks built with FOX61x nodes of FOX61x system releases R1C to R1D, using ERPS applications.

Not applicable to networks where the software on the node (ESW) supporting the ERPS application has been upgraded to R16A or beyond as the “Protection Ring” map does not support such nodes.

3.7 Spanning Tree Protocol (STP)

Licensing type: per node

Visualization for Spanning Tree Protocol (STP) 1KHW003603R0001

Back to overview

Order codes: 1KHW003603R0001.

STP map support is suitable for networks built with FOX61x nodes of FOX61x system releases R1C to R1D.

3.8 SNMP Southbound Interface (SBI) Devices

Licensing type: per node

Device Monitoring for SNMP 3rd party devices (SNMP class 1) 1KHW003597R0001

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Device Monitoring for SNMP own devices (SNMP class 2) 1KHW003596R0001

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Order codes: 1KHW003597R0001, 1KHW003596R0001.

The SNMP Southbound Interface (SBI) is included in the Basic License. The support of specific devices on this interface is licensed as follows:

- SNMP device class 1 corresponds to 3rd party SNMP devices.
- SNMP device class 2 corresponds to EDS500 series devices manufactured by Hitachi Energy or its predecessors.

The SNMP southbound interface is required to manage network elements via their SNMP interface. The SNMP southbound interface is provided via FOXMAN-UN agent(s) of type “SNMP”.

3.9 Advanced Service Supervision (>50 services)

Licensing type: per “Service Supervision” service

Order codes: see figure above.

User defined Model, including SLA Processing and reporting. Corresponds to the legacy (R16A and before) Service Supervision by 100%.

This feature has a count-based license restriction (with 50 instances in the base package).

FOXMAN-UN checks at each Service Supervision creation the licensed number usage.

In addition, it generates reports for “Services” that present availability over time (separate license required, see Service Level Agreement (SLA) Reporting).

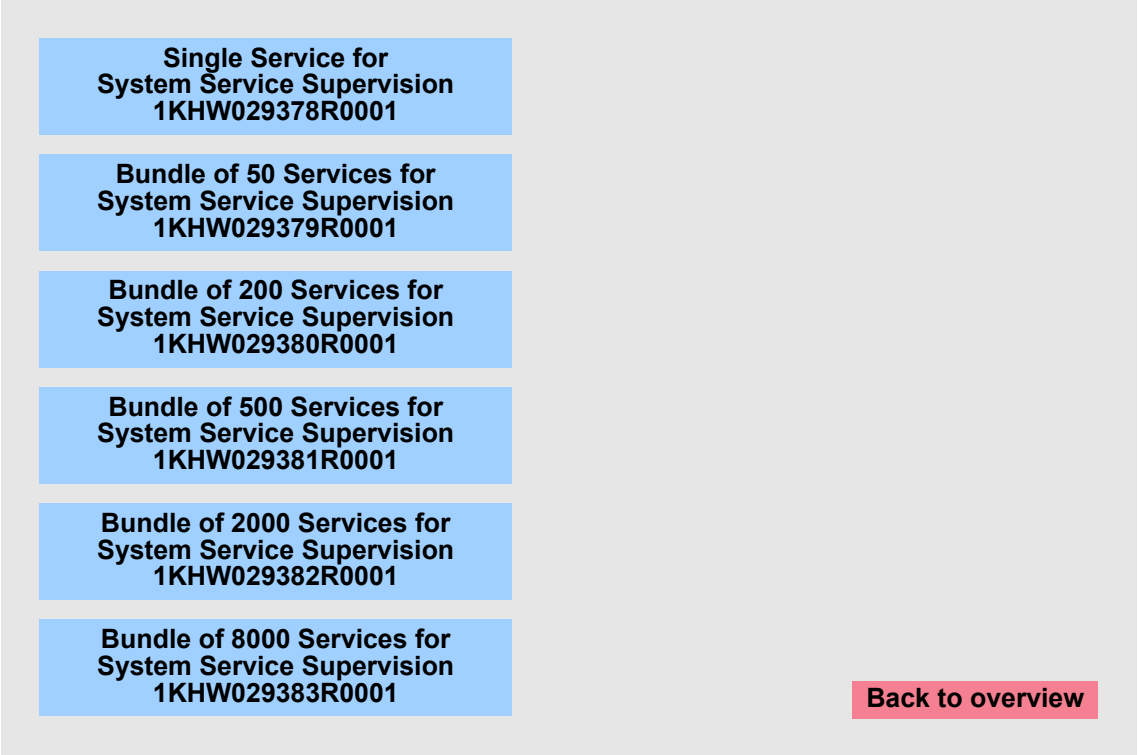
Can be ordered in bundles for integration of up to 8000 services into FOXMAN-UN Service Supervision. In total up to 8.050 services can be supervised (technical limitation).

The following options are available (the number of services in any of these options is in addition to the 50 services included in the Basic License):

Order code	Bundle size (services)	Max # of bundles	License fee per
1KHW003605R0001	1	8000	1 service
1KHW003738R0001	50	160	50 services
1KHW003739R0001	200	40	200 services
1KHW003740R0001	500	16	500 services
1KHW003741R0001	2000	4	2000 services
1KHW003742R0001	8000	1	8000 services

3.10 System Service Supervision (>50 services)

Licensing type: per “Service Supervision” service



Order codes: see figure above and table below.

Service Manager initiated System Service Supervision (e.g. enable / disable supervision per service in the service manager, NP or ENP) - new in system release R16B.

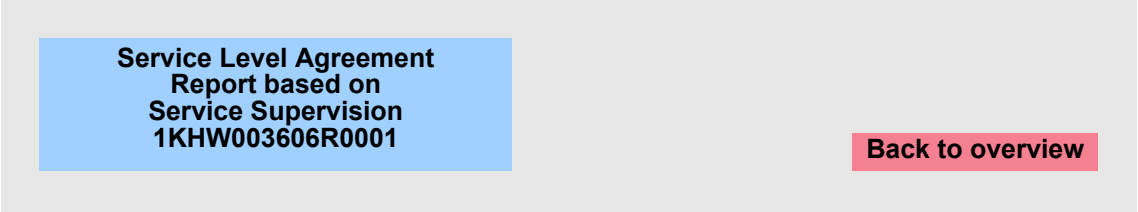
Can be ordered in bundles for integration of up to 8000 services into FOXMAN-UN Service Supervision. In total up to 8.000 services can be supervised (technical limitation).

The following options are available (the number of services in any of these options is in addition to the 50 services included in the Basic License):

Order code	Bundle size (services)	Max # of bundles	License fee per
1KHW029378R0001	1	8000	1 service
1KHW029379R0001	50	160	50 services
1KHW029380R0001	200	40	200 services
1KHW029381R0001	500	16	500 services
1KHW029382R0001	2000	4	2000 services
1KHW029383R0001	8000	1	8000 services

3.11 Service Level Agreement (SLA) Reporting

Licensing type: per Server Installation



Order codes: 1KHW003606R0001.

The SLA Monitoring and Reporting monitors the actual Service Availability and compares it against the Service Availability threshold set in the SLA. If this threshold is crossed, an SLA violation is reported in the Service Reporting dialogue.

Note: Requires at least one of the options in Advanced Service Supervision (>50 services).

3.12 Northbound Interface (SNMP) Fault Management

Licensing type: per node

Northbound Interface for alarm forwarding for FOX515 & FOX61x 1KHW003609R0001

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Order codes: 1KHW003609R0001.

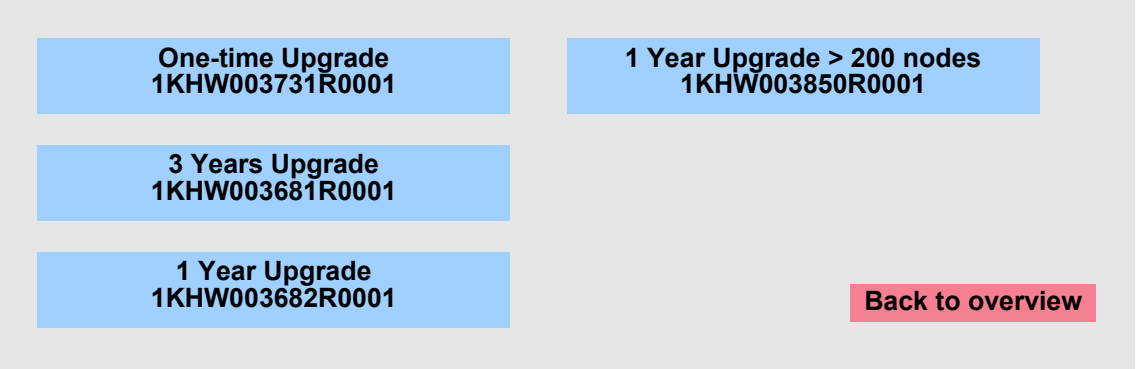
The SNMP Northbound Interface (NBI) is interfacing higher level managers (HLM) through the use of an SNMP proxy agent, which acts as an application gateway on behalf of such HLMs. The SNMP NBI alarm forwarding is done via the SNMP protocol (ports 10161/10162). By propagating NE alarms through SNMP, the surveillance of a network can be accomplished via a HLM.

FOX61x device class corresponds to FOX615, FOX612, and/or FOX611 nodes.

FOX515 device class corresponds to FOX515 and/or FOX512 nodes.

3.13 FOXMAN-UN Upgrade

Licensing type: per node(s)



Order codes: see figure above and table below.

Order code	Upgrade period	Applicability	Network Size	Upgrade covered
1KHW003731R0001	one-time	per node	any	to any higher release
1KHW003682R0001	1 year	per node	up to 200 nodes	to any higher releases
1KHW003850R0001	1 year	per node	more than 200 nodes	to any higher releases
1KHW003681R0001	3 years	per node	any	to any higher releases

Notes:

- The number of nodes is calculated for any connected FOX61x and FOX515 nodes.
- Third party nodes and Foreign Objects (FO) are not counted.

3.14 Integration of Specific Network Node Types

3.14.1 FOX515 Nodes Integration (restricted)

Licensing type: per node

Order codes: 1KHW003729R0001.
The fee applies per FOX515 node to be integrated in FOXMAN-UN.

3.14.2 FOX61x Nodes Integration

Licensing type: per node

Order codes: 1KHW003728R0001.
The fee applies per FOX61x node to be integrated in FOXMAN-UN.

3.14.3 FOX660 Nodes Integration (restricted)

Licensing type: per node

Order codes: 1KHW003730R0001 (restricted).
The fee applies per FOX660 node to be integrated in FOXMAN-UN.

3.14.4 XMC20/UMUX Nodes Integration

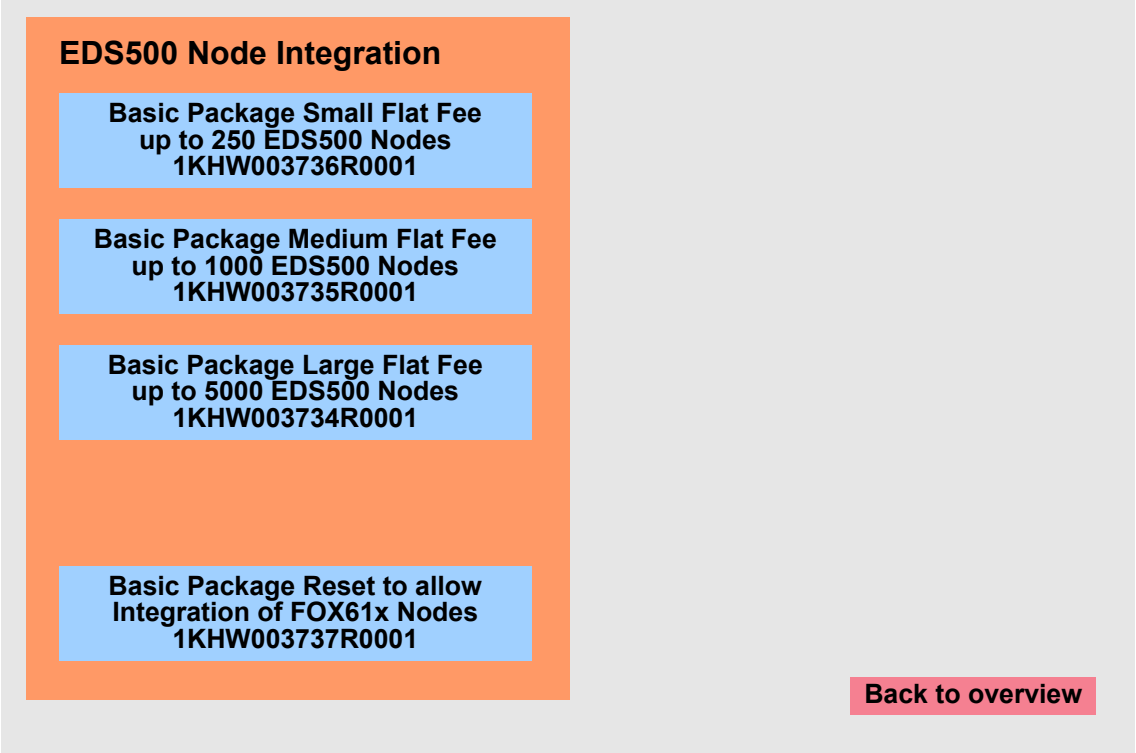
Licensing type: per node

Order codes: 1KHW003733R0001.

The fee applies per XMC20 or UMUX node to be integrated in FOXMAN-UN.

3.14.5 Basic Package with EDS500 Nodes Integration

Licensing type: flat fee



Order codes: 1KHW003736R0001, 1KHW003735R0001, 1KHW003734R0001;
1KHW003737R0001.

The small, medium, and large flat fees apply for a FOXMAN-UN Basic Package with support of up to the mentioned maximum number of EDS500 nodes.

The Basic Package Reset (1KHW003737R0001) to allow integration of FOX61x is a one time adaptation fee that only works for the options 1KHW003734R0001, 1KHW003735R0001, and 1KHW003736R0001 and includes:

License Key Fee per server, incl.

- 10 node license fee and
- 2 concurrent users and
- Basic Performance Management

- Virtualization
- Windows Client
- SNMP Basic Implementation
- 10 nodes NP
- 10 nodes ENP
- 50 Services from Service Supervision

Then, for each new FOX61x or EDS500 node, follows the traditional offering defined as per Release 14A and later.

3.14.6 EDS500 Nodes SBI Integration

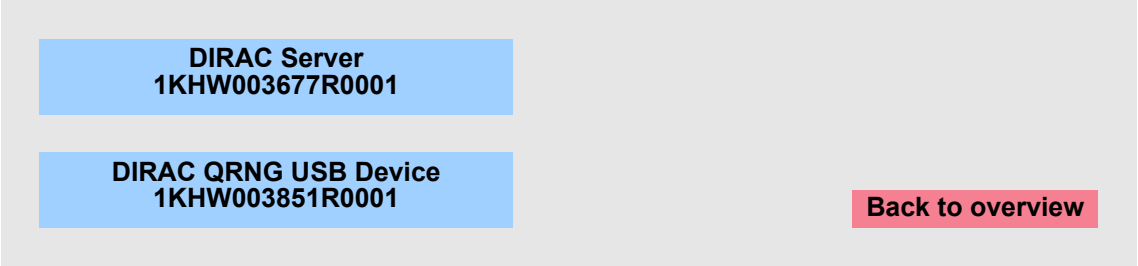
Licensing type: per node:

Order codes: 1KHW003596R0001.

The SBI integration is used to integrate an EDS500 node on an SNMP southbound interface (SBI). Applies for fault and inventory integration, per EDS500 node.

3.15 Support Encryption with DIRAC

Licensing type: per server



Order codes: 1KHW003677R0001, 1KHW003851R0001.

This is the license for the DIRAC Server and the Ethernet Security Manager (ESM).

The DIRAC encryption key manager (Ethernet Security Manager) server license applies per DIRAC installation, with an unlimited number of connected (managed) nodes.

Note: Usually, one DIRAC installation is required per FOXMAN-UN core installation. The DIRAC server manages encryption for tunnels in MPLS-TP networks with FOX61x nodes using SECU1-4, SECU1F4, SECU1-8 and / or SECU1F8 encryption units.

The DIRAC random number generator (QRNG) USB device is an inherent part of DIRAC; the license applies per DIRAC server.

4 Annex

4.1 Document History

Table 1: Document history

Document ID	FOXMAN-UN Release	Rev.	Date	Changes since previous version
1KHW029143	R18	A	2025-06-04	Updated for current system release. Minor editorial corrections.
1KHW029143	R17A	B	2025-02-13	Updated license description in section 3.14.5.
1KHW029143	R17A	A	2024-07-11	Updated for current system release. Minor editorial corrections.
1KHW029143	R16B	B	2024-01-19	Removed “R16A and following” from the ERPS license details in Ethernet Protection Ring (ERPS).
1KHW029143	R16B	A	2023-08-11	Added new license options, removed old license options; updated information on some license options; editorial changes.
1KHW029143	R16A	A	2022-08-02	Updated information on some license options; editorial changes.
1KHW029143	R15B	A	2022-01-07	Updated information on some license options; editorial changes.
1KHW029143	R15A	A	2021-06-30	Updated information on some license options; editorial changes.
1KHW029143	R14A	B	2020-11-20	Enhanced information on some Basic License options; editorial changes.
1KHW029143	R14A	A	2020-09-29	First edition for FOXMAN-UN R14A.

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