

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Control system and/or communication components with verified security capabilities

with type designation(s)

Kongsberg Remote Services and Data Exchange

Issued to

Kongsberg Maritime AS
KONGSBERG, Norway

is found to comply with

DNV GL class programme DNVGL-CP-0231 – Type approval – Security capabilities of control system components

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Issued at **Høvik** on **2017-10-30**

for **DNV GL**

This Certificate is valid until **2019-10-29**.

DNV GL local station: **Sandefjord**

Approval Engineer: **Knut Omberg**

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Odd Magne Nesvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Product description

Kongsberg Remote Services is a tool for Kongsberg certified engineers worldwide to connect to an installation upon customer request and provide remote support. In addition to Remote Support the system is also designed for secure data exchange with the vessel. The product includes the following components:

Component type	Component description	Component ID	DNV GL HW approval	Operating system software version	Application software version
Gateway	Router/firewall	Cisco C892FSP	A-14276	IOS 15.3.(3).M6 (15.y.z)	GSN 2.y.z.(p) revisions
Gateway	Malware Protection System (MPS)	Data Respons 7" Marine Touch Panel Computer	A-13465	Ubuntu 16.04	MPS 3.y.z.(p) or newer
Node	Supervision and Data Exchange Server (ex: K-IMS)	MP8300	A-13771	Windows 2012R2	K-IMS 4.9.3 or 5.y.z.(p)
Node	Supervision and Data Exchange Server (ex: K-IMS, Kognifai Edge)	MP5810	TAA00000H6	Windows 2012R2 or 2016 Server	K-IMS 4.9.3 or 5.y.z.(p)
Border Gateway	Backend GSN HUB	Cisco ISR4331/K9	Not applicable	IOS 15.4.(3).S2 (15.y.z)	GSN 2.y.z.(p) revisions
Border Gateway	License Server and Download Server (ex: MPS defs, Weather, Maps, Routes, VDR)	Virtual Servers	Not applicable	Ubuntu 16.04 and 14.04	GSN 2.y.z.(p) revisions
Border Gateway	Bomgar Appliance	B300 Bomgar Appliance	Not applicable	15.1.3 (15.y.z)	Bomgar Button 1.y.z.(p)
Border Gateway	GSN monitoring and M-Sport Tools	Virtual Servers	Not applicable	Ubuntu 14.04	GSN 2.y.z.(p) revisions
Border Gateway	Self Service Portal GSN-WEB	Virtual Server	Not applicable	Ubuntu 16.04	GSN 2.y.z.(p) revisions

Application/Limitation

This type approval certifies that components listed in "Product description" have security capabilities in accordance with DNV GL class programme DNVGL-CP-0231 (draft version dated December 11. 2016).

At renewal of this type approval certificate, any modified requirements in the current version of DNVGL-CP-0231 shall be addressed (i.e. document assessment and type testing).

Job Id: **262.1-022710-1**
Certificate No: **TAA00001FR**

Any comments to assessment and testing of the security capabilities are stated in document 262.1-022710/21.

For each vessel where Kongsberg Remote Services is installed and where compliance with DNVGL-CP-0231 is required by specific application rules or class notations;

- Correct application and configuration of the approved security capabilities shall be verified.
- Relevant comments stated in document 262.1-022710/21 shall be evaluated specifically.

The type approved security capabilities are implemented in Operating system software and/or in Application software. Correct configuration for each delivered component shall be performed and verified before the product is used onboard. For specific applications or class notations such verification is subject to approval by DNV GL.

Version and revision of Application software is reflected on the format x.y.z.(p) which denotes changes in category "major.minor.update.(patch)". Any changes resulting in modified Operating system software or "major/minor" modification of Application software shall be informed to DNV GL by forwarding a description of the modification(s) including the corresponding new version/revision identifier. In such case, witnessing of testing may be required and the certificate shall be renewed to identify the new software version/revision.

Application software control

All changes to delivered components are to be managed and recorded as long as the system is in use on board.

Type Approval documentation

Documents listed in document 262.1-022710/22 form basis for the type approval.

Tests carried out

Testing of security capabilities in accordance with DNVGL-CP-0231 (draft version dated December 11, 2016).

Marking of product

The components are identified by component ID and software version.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed at renewal of this certificate.

END OF CERTIFICATE