



Orchestra

HEALTHCARE EDITION

# RELEASE NOTES

OHE / [RELEASE 18.3.1](#)

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<b>Product</b>	<b>Orchestra - Healthcare Edition</b>
<b>Version</b>	Based on Orchestra 4.7.4.2
	<b>Release 18.3.1</b>
<b>Datum</b>	30.11.2018

## CONTENT

The purpose of this document is to summarize the functional scope of the Product “Orchestra Healthcare Edition” in Version R 18.3.1.

Furthermore, this document identifies new features , changes and fixes in this Release Version of the product.

## TARGET GROUP

This document is intended as release information for experts in health care information technology, including solution architects, project managers, consultants as well as developers and administrators.

The release 18.3.1 enhances the functionality of the previous released Version 18.2.1.  
The following document gives an overview about the new added features.

# 1. Release Changes

## 1.1 Features and Functionalities

### 1.1.1 DICOM Module Features

[#OHE-1157 & #OHE-1150 & #OHE-1267 & #OHE-1426 & #OHE-1588]

- MPPS Channel
- Radiation Dose Package – save dose values from MPPS
- DICOM Router v2.0
- DICOM Worklist Inbound Communication
- Calling AET is configurable

## 1.2 Document Encryption

[#OHE-1154]

- decryption channel for Document Encryption (DEN)
- encryption channel for Document Encryption (DEN)

## 1.3 Cross-Community Patient Discovery

[#OHE-1366]

- ITI-55 Initiating Gateway
- ITI-55 Responding Gateway

## 1.4 Terminology Server

[#OHE-1126 & #OHE-1071]

- Create import method for IHE SVS value sets
- restriction user to codesystem (role based)

## 1.5 Pharmacy Documents

[#OHE-1198]

- ITI-18 Query Pharmacy Documents in PHARM-1

## 1.6 Patient Relation Management API

[#OHE-1305]

- REST (FHIR oriented) API for querying physicians
  - including appointments of the resource
- REST (FHIR oriented) API for querying hospitals
- REST (FHIR oriented) API for querying patients
  - including appointments of the resource

## 1.7 FHIR bridge

[#THP-698]

- FHIR bridge-scenario to address classic MPIs with FHIR

## 1.8 ATNA Block-Chain validation assurance

[#OHE-1415 & #OHE-1550]

- block chain based module to ensure the unspoiled state of log-files in a community

## 1.9 RESTful Query to ATNA

[#OHE-1328]

- RESTful Query is available for the Audit Record Repository

## 1.10 Improvements:

- [OHE-1206] - Make cipher suites configurable for PIX, PDQ, and PAM
- [OHE-1268] - TLS-refactoring
  - Set 128-bit cipher suites as default values
  - Do not write TLS settings to system properties
  - TLS protocol dropdown menu in env-entry
- [OHE-1183] - ITI-43: implement ResponseStatusType PartialSuccess
- [OHE-1119] - ITI-86 Remove Documents: implement PartialSuccess logic
- [OHE-1290] - Display SOAP request & response messages in Client Channel Process Model
- [OHE-1588] - Dicom Router V2 - Calling AET configurable

## 2. Quality Assurance

The product Orchestra Healthcare Edition was tested with automatic tests and manual test cases. The software is based on an IHE-architecture under usage of different industry standards. The verification process included relevant IHE-workflows and guarantees a solid level of functionality.

The usability and functional correctness was tested and validated by the criteria of the IHE guidelines and under usage of different toolkits (e.g. NIS testing tool, IHE XDS-Toolkit).

The list below contains some minor issues discovered during the testing and quality assurance phase of the product.

### 2.1 Solved Issue

*The following known issues from release 18.2.1 are solved with the version 18.3.1:*

OHE-1096	Look forward does not do work as expected in List Associations
OHE-1112	ATNA Port in the Orchestra Designer can only be changed after unchecking and checking "use atna"
OHE-1106	TS: Creating a new version of a term with children does not change the associations to the new version

## 3. Known Issues

OHE-1673	TermServer ExportCSV exports metadata parameters indeterministically
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*The following functional (required) and quality (optional) set of issues was recommended to reach the state of a solid release between the Trunk-Version and the Release Candidate 1. The Release Candidate 1 succeeded as final Release in terms of the quality management and the recommended set of issues was successfully tested: [OHE-1096 & #OHE-1105 & #OHE-1106 & #OHE-1112 & #OHE-1203 & #OHE-1205 & #OHE-1238 & #OHE-1245 & #OHE-1257 & #OHE-1292 & #OHE-1293 & #OHE-1300 & #OHE-1301 & #OHE-1318 & #OHE-1321 & #OHE-1324 & #OHE-1333 & #OHE-1335 & #OHE-1336 & #OHE-1337 & #OHE-1386 & #OHE-1397 & #OHE-1398 & #OHE-1400 & #OHE-1402 & #OHE-1404 & #OHE-1405 & #OHE-1406 & #OHE-1408 & #OHE-1409 & #OHE-1412 & #OHE-1413 & #OHE-1414 & #OHE-1416 & #OHE-1436 & #OHE-1437 & #OHE-1445 & #OHE-1454 & #OHE-1456 & #OHE-1461 & #OHE-1462 & #OHE-1488 & #OHE-1489 & #OHE-1490 & #OHE-1493 & #OHE-1512 & #OHE-1587 & #OHE-1597 & #OHE-1599 & #OHE-1052 & #OHE-1256 & #OHE-1290 & #OHE-1322 & #OHE-1330 & #OHE-1339 & #OHE-1370 & #OHE-1394 & #OHE-1395 & #OHE-1396 & #OHE-1415 & #OHE-1444 & #OHE-1451 & #OHE-1588]*

## 4. Compliancy Tests

### 4.1 IHE - Integrating the Healthcare Enterprise

The Orchestra Healthcare Edition has successfully participated at the European IHE Connectathon 2018 and proved the compliancy with given IHE-profiles as well as interoperability with various products from vendors in the healthcare context.

A detailed list of supported profiles is given in the [IHE Integration Statement](#);

### 4.2 EFAv2.0 Consumer proof of conformity

- EFAv2.0 Member System
- EFAv2.0 Context Manager

### 4.3 EFAv2.0 Provider – Single Peer proof of conformity

- EFAv2.0 Resource Manager – Single Peer

- EFAv2.0 Document Registry – Single Peer
- EFAv2.0 Document Repository
- EFAv2.0 Identity Provider

#### 4.4 Base of [EPD-Box](#) (verification at CH-Projectathons)

- patient data management
- document exchange
- security & authentication
- query to regional / supraregional communities
- communication with central services

## 5. Third-party components used in OHE

### Assimilable Logging Service:

elastic:	beats	- Apache License 2.0
elastic:	elasticsearch	- Apache License 2.0
elastic:	kibana	- Apache License 2.0
elastic:	logstash	- Apache License 2.0

### Assimilable Terminology Server Service:

FHDortmund:	Termserver Version 2.1	- Apache License 2.0
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### Access Control Handling:

WSO2:	Balana Version 1.1.3	- Apache License 2.0
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### DICOM Router Handling:

dcm4che:	dcm4che Version 3.3.8	- Mozilla Public License version 1.1
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## 6. Requirements

### 6.1.1 Server Requirements

The usage of a virtual environment (VM ware) must be given. The following system requirements can be understood as recommended requirements in the context of the Orchestra Healthcare Edition. The actual memory requirements vary in the context of the processed IHE data according to medical specialty areas, data throughput, and log depth.

<b>OS</b>	CentOS 7 or Red Hat Enterprise Linux 7
<b>CPUs</b>	16 cores or better
<b>RAM</b>	32 GB or better
<b>storage</b>	<p>260 GB or better</p> <p>Following partition layout is recommended:</p> <p>hd 1: OS</p> <p>hd2: 25 GB – Orchestra application</p> <p>hd 3: 45 GB – Orchestra system DB (basing on log keep: 30 days)</p> <p>hd 4: 90 GB DB Table Data</p> <p>hd 5: 30 GB DB Logs</p> <p>hd 6: 50 GB Orchestra LTA</p> <p>hd 7: 20 GB Share for daily journal files</p> <p>hd 8 (for DICOM Router): high performance SSD</p> <p>In addition, the following calculation is recommended as the basis for IHE data persistence:</p> <ul style="list-style-type: none"> <li>• report: 500 KB</li> <li>• patient: 60 KB</li> <li>• ATNA-log: 5KB</li> <li>• DICOM: cache according to the local image-load (times max-receiving endpoints times 5)</li> </ul>
<b>DB</b>	<p>MySQL Database 5.7</p> <p>High available databases are strongly recommended.</p> <p>Percona Xtra DB Cluster 5.7 using a dedicated Server (VM) each with 32 GB RAM, 12 high performance core CPUs.</p>
<b>3d party apps</b>	default linux package, Java 8, Tomcat 7 (licenses not included)