




Smart Open Services for European Patients
Open eHealth initiative for a European large scale pilot of
Patient Summary and Electronic Prescription

Open Source NCP Design

APPENDIX B

D 3.B.2

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	Appendix B: Open Source NCP Design and Release Notes	Document Short name: OSS NCP
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	WP3.B: epSOS OSS NCP Implementation	Date: 22/05/2014

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Dissemination level: PU = Public, PP = Restricted to other programme participants, RE = Restricted to a group specified by the consortium, CO = Confidential, only for members of the consortium.

ABSTRACT
<p>“Open Source NCP Design and Release Notes” represents the basic document to identify the NCP “core” components, together with their interfaces, that will be centrally developed as Open Source and made available to all through the identified Open Source Community.</p> <p>Country specific components will be also outlined, to allow PN’s to adopt their own implementation strategy and the integration strategy with Core components.</p>

Change History					
Version	Date	Status Changes	From	Details	Review
V0.1	17/04/2012	Draft	S.Manniche	First draft, summarising currently achieved results. The draft includes the document provided by Fraunhofer-Fokus team as well as the document provided by SALAR	CDA display Team
V0.2	25/04/2012	Draft	S.Manniche	Introducing a general architecture diagram, revising the component descriptions and the introduction	

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V0.3	27/04/2012	Draft	S.Manniche	Introducing chapters for deliveries, project infrastructure, revising the general architecture, listing component segregations and incorporating comments from reviewers	S.Gustafsson, K. Hyppönen and C. Parisot
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V0.9-RC6	04/09/12	Draft	M.Melgara	Inclusion of contribution on Licensies and CCD License table	M.Melgara
V0.9-RC7	21/01/13	Draft	M.Melgara	Inclusion of Annex 1: OpenNCP 1.x release notes	M.Melgara
V0.9-RC8	08/03/13	Draft	Licínio Mano Marcelo	Revision and filling of Annex 1: OpenNCP Home and	Licínio Mano

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V0.9-RC9	08/03/13	Draft	Marcello Melgara	Version for QA	Marcello Melgara
V0.9-RC10	29/03/13	Draft	Marcello Melgara	Version for QA	Marcello Melgara
V1.0	31/03/13	Final	Marcello Melgara	Final	Marcello Melgara
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V1.1-RC0	22/05/2014	Final	M.Melgara	Revised according to QA indications	Marcello Melgara
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1 OSS NCP Design Introduction

1.1 Scope

This document specifies the high level structure of the National Contact Point (NCP), derived from D3.3.2 NCP Architecture, D3.4.2 v.2.2 epSOS Technical Specification, D3.9.1 v1.1 epSOS Proof of Concept and D3.10.1 epSOS Proof of Concept Testing. It is based on the currently implemented solutions (Common Components of the “NCP in a Box” and the components developed by some Participating Nations).

The goal of the activity is to design and develop the OpenNCP as a set of Open Source Components, by applying the Implementation Strategy jointly defined by WP 2.2 Policy and Strategy and WP3.B Implementation and documented in D3.B.1 Implementation Strategy.


1.2 Introduction

This section describes the team which developed this specification and the general approach that has been followed for this document.

1.2.1 The project team

This is the team that has been involved in this specification. It includes HCPs and technical experts from different countries as well as implementers’ representatives.

- Alexander Berler
- Soeren Bittins
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- Joerg Caumanns
- Stefan Gustafsson
- Annika Hansen
- Gergely Héja
- Konstantin Hypponen
- Kostas Karkaletsis
- Milada Kovarova
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- Steen Manniche
- Licinio Kustra Mano
- Juan Pablo Martinez Bartuilli
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- Massimiliano Masi
- Charles Parisot
- Andreas Rehn
- Norbert Repas
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- Luca Pagliara
- Fredrik Dahlman
- Ivo Pinheiro
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- Arnaud Gaudinat
- Anders Nyström
- Gareth Woodham Stéphane Spahni
- Mika Myllyvirta
- Luis Pinto
- Akis Papadopoulos

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1.2.2 General approach and rules

1.2.2.1 Project approach


1. The epSOS Basic Pillars have to be fulfilled
 - a. Cross border interoperability **MUST** comply to the legal, organisational and technical requirements defined in epSOS specifications
 - b. No interference with the operational national Infrastructures, procedures and policies **SHOULD** be introduced
2. The concept of “Design centrally, develop locally” **SHOULD** be flexibly applied:
 - a. Providing a set of common components, which PN’s opting for an Open Source solution can adopt to build their local implementation of the NCP components.
3. The first release of the OpenNCP **MUST** be totally interoperable with the NCP currently in operation
 - a. Compliance to epSOS 1 specification **MUST** be given.
 - b. Compliance to epSOS 2 specification will be provided with OpenNCP Version 2.
4. OpenNCP Miniprojects **SHOULD** be based on existing Open Source epSOS Components, derived from FET CCD and provided by PN’s (e.g. Turkey, Finland, Sweden)
5. OpenNCP component **MUST** be provided by each Miniproject after unit testing and demonstration of integrability¹ and Integration testing.
6. The licensing criteria, including maintenance process of OpenNCP components **MUST** be defined in conjunction with WP2.2.
7. OpenNCP components **MUST** be made available through an Open Source Community supported by the EC. Agreement between epSOS and the Open Source Community **MUST** be handled by WP2.2, WP3.D.

1.2.2.2 Project preconditions and framing

The components developed within the OpenNCP project **MUST** adhere to the protocols, standards and profiles set forth by the epSOS specifications.

The OpenNCP National Infrastructure Interfaces will be defined to operate in close conjunction with the components developed in the project and will not necessarily

¹OpenNCP should not be provided as an already integrated product, but it has to be demonstrated that the single miniprojects are suited to be integrated.


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follow any predefined implementations. The project consultants and developers will continuously evaluate suggestions made by project participants.

The implementation of the OpenNCP components will only use open source components as third party contributions. Furthermore, the project will strive to develop all components according to existing enterprise standards. More precise licensing requirements for the third party inclusions may be provided later by other WP 3.B documents.

In the implementation the reuse of currently available APIs and components is generally preferred over the implementation of new specific components.

The design of the components must be flexible enough to reasonably easily accommodate the addition of new epSOS services (known as epSOS Phase II).

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2 OpenNCP Specification

2.1 Scope

The contents of the open source NCP common components implementation – OpenNCP - revolves around providing the components that comprise the common NCP infrastructure and which are independent of national infrastructures. Prospectively, the phrase “common components” or “NCP components” refer to the above stated understanding of NCP components. As such, the implementation of the common components is scoped by, in one end: the IHE profiles specified in the D3.A.1 document and in the other end: the integration points to the local infrastructure. The NCP follows the general SOA paradigm, and each component in the NCP must operate as a service which is externally scoped by the NCP, but internally available to the other components. While the NCP as a whole is mandated to operate in a synchronous manner, the individual services that the components implement may operate asynchronously. For instance, the issuing of instructions to log audit events should not halt the processing of the message, only guarantee for its own completion.

2.2 Introduction

Because the NCP is stateless and operates in a synchronous manner, the NCP as a whole can be seen as handling messages between systems and interaction between NCP’s revolves around the exchange of messages in a request-reply, point-to-point pattern. The requests are queries from countries that have assumed responsibility for treating a patient, called Country-B and operating via a NCP-B server. The responses are given at the country of affiliation, called Country-A, which operates via a NCP-A server. The high-level view of this setup can be seen in fig. 1.




Figure 1 Overview of NCP communication

The NCP fundamentally serves two modes of operation: one as NCP-A and one as NCP-B. Both roles are mediators of messages, where NCP-B acts as an initiating mediator and NCP-A as a receiving mediator.

The common components support all mediating operations within the NCP when it’s acting as a NCP-A as well as when it’s acting as a NCP-B. The epSOS specification [D3.A.1] identifies five core services that the NCP servers must support:


1. Identification Service
2. Patient Service

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3. Order Service
4. Dispensation Service, and
5. Consent Service
6. Health Care Encounter Report (HCER) Service
7. Medication Related Overview (MRO) Service
8. Patient Access (PAC) Service

In this specification, these services are considered the business logic supporting the use cases of the epSOS phase 1 specification. These services are exposed by the implementation of the IHE profiles XCPD, XCA and XDR. The retrieval of the requested information/setting of information within the national infrastructure is not within the scope of the OpenNCP project. In addition to the above services, this document will specify and describe the NCP components needed to support the internal operations.

Not all of the above listed components are subject for implementation in the OpenNCP project. Some of them are third party open source products while other are to be implemented by the PN's. The following sections will describe this in more detail.

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2.3 NCP Common Component Architecture

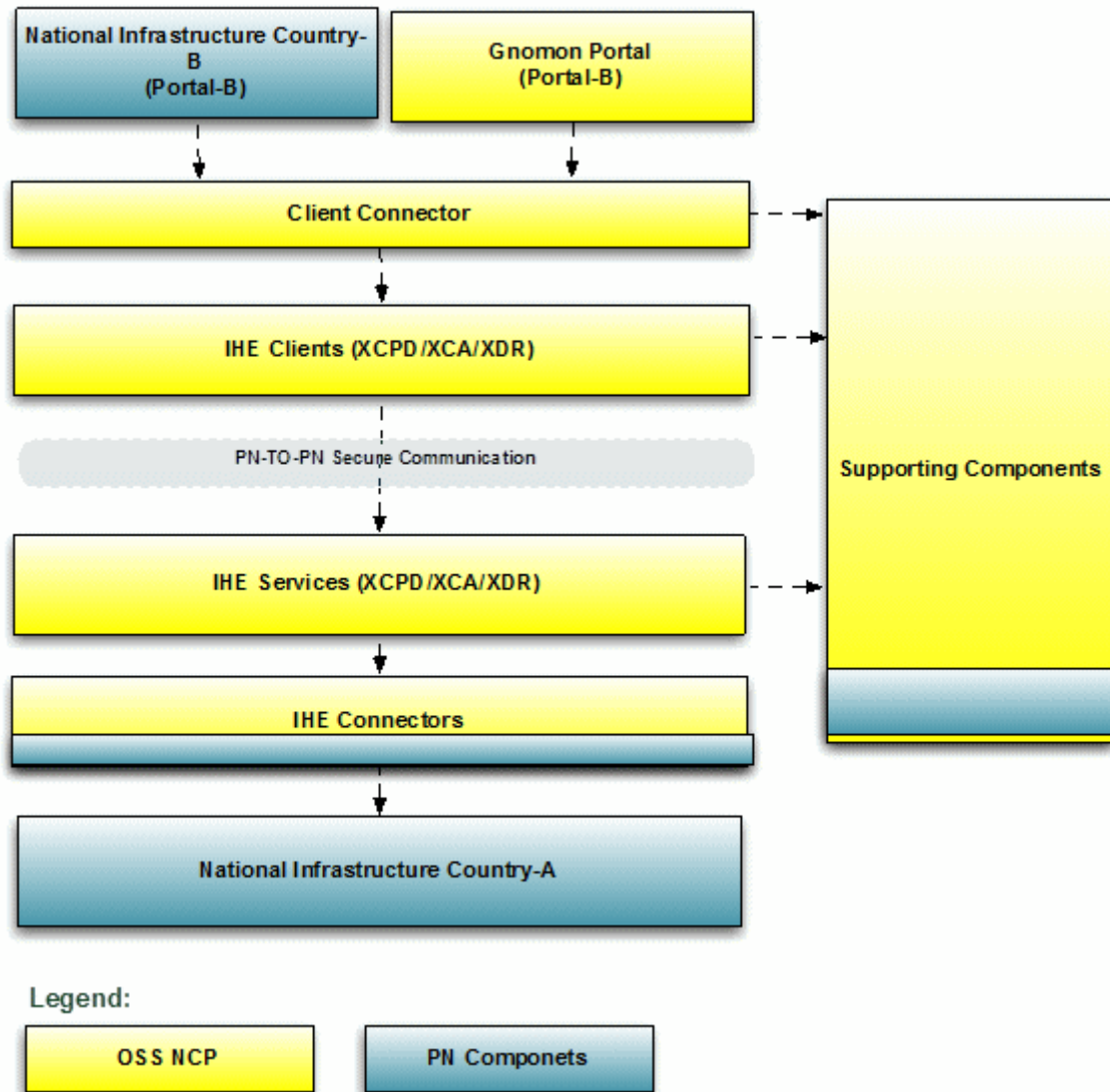



Figure 2 NCP architecture, Logical High Level Model

The GNOMON Portal was generalised by the OpenNCP team as “OpenNCP Portal”. It was used as a basis by several PNs to develop their specific epSOS web Portal.

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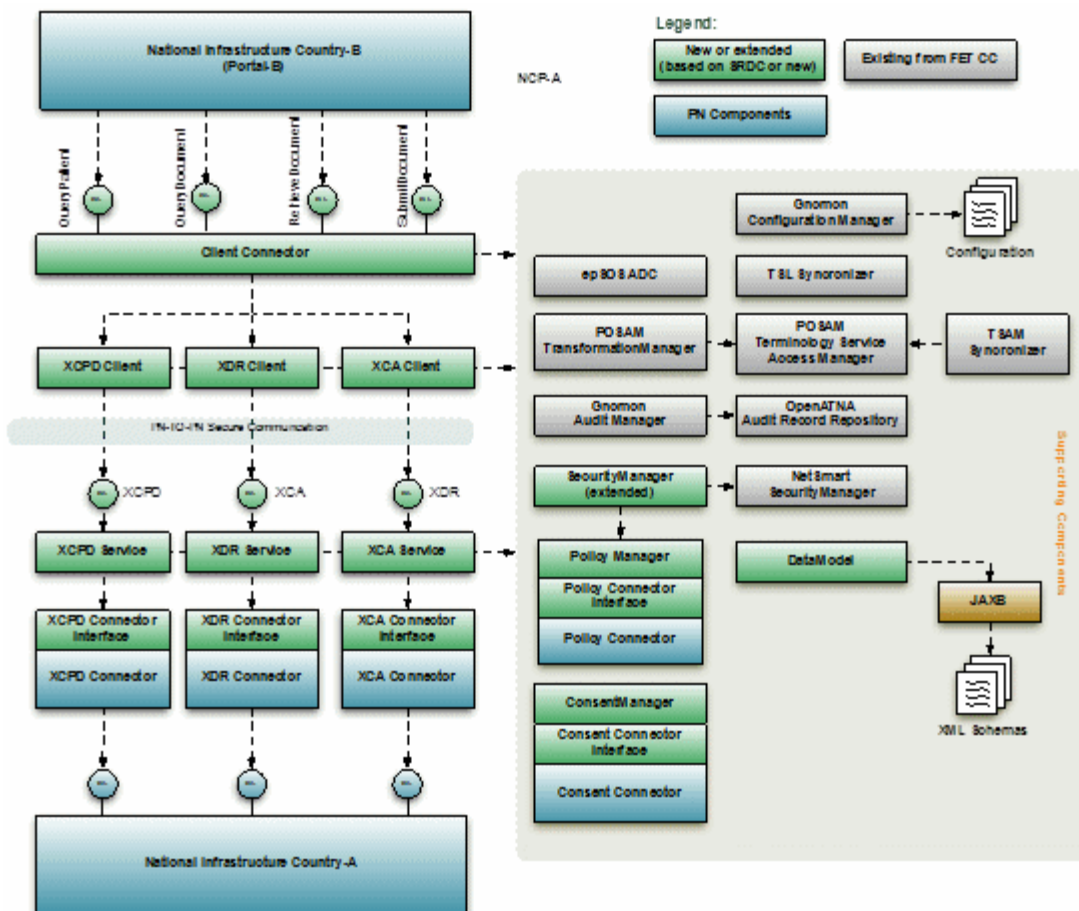



Figure 3 NCP architecture, Logical Component Model

2.4 Component development approach

The development and distribution of the common components is divided into separate software modules, which are described in detail in this chapter.

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Component and Dependency Graph OpenNCP Service Provider

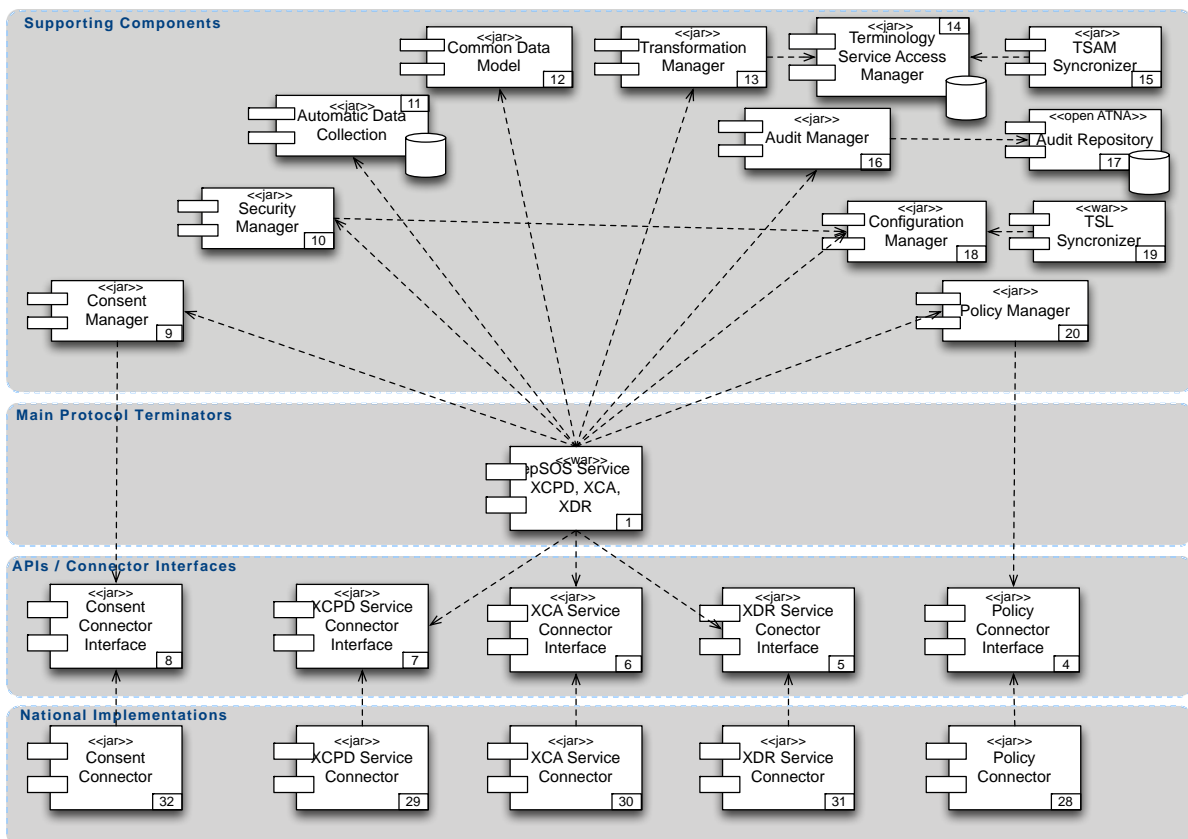



Figure 4 NCP-Architecture describing deployable components and the dependencies between them

2.4.1 NCP-IHE Service implementations

The preferred approach is the adoption of the SRDC NCP IHE Service implementations (XCPD, XCA, XDR services). The communication with the national infrastructure in the SRDC NCP solution relies on a simple API used for calling nationally implemented services (patient search, patient summary search, patient summary retrieval and consent manager). The workflow management in NCP-A is performed by IHE services.

2.4.2 epSOS Phase 1 services (Protocol Terminators)

The initial implementation of the common components aims at providing only epSOS Phase 1 compliant services. The following sections describe the epSOS-1 services and their scope within the OpenNCP project. The operations of the epSOS-1 services are implemented through IHE services within the NCP framework.

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2.4.2.1 IdentificationService

The *IdentificationService* is used for obtaining or creating a unique identifier of the patient, which has to be used for all subsequent calls for the medical data of this patient, based on traits supplied by the HCP in Country B. Identity management for patients is the concern of Country A and the identification of patients is performed by the National Infrastructure. Based on the information gathered from the PN's use of identity management, it seems that more or less every country has implemented an integration to their own Identity Providers. The OpenNCP project should provide integration points for obtaining the patient identity information provided by the National Infrastructures. The service will communicate through the XCPD Service implementation.

2.4.2.2 OrderService

The ordering of prescriptions uses the XCA service to communicate with the National Connector Interface implementations for retrieval of prescriptions. The OrderService needs a National Connector Interface to retrieve the relevant data and, given the presence of this data, uses the business logic within the TransformationManager and the XDR service to deliver dispensation information about the prescription to the requestor.

2.4.2.3 ConsentService


The handling of consent given by patients is, as with the IdentificationService, a matter that is handled by the PN's. How consent is given and whether it allowed to be recorded from a foreign NCP varies with the PN's. This service is managed by the XDR Service. Very few (if any) of the PN's in epSOS phase 1 allows this, consequently it is a candidate to be moved to version 2 of OSS NCP.

2.4.2.4 DispensationService

The DispensationService handles the registration of dispensations of medicine dispensed in Country B based on prescriptions administered in Country A. The service notifies a NCP-A on actions taken by a NCP-B regarding the dispensation of medicine described in retrieved ePrescriptions. There are no obligations for the PN's to take action on the messages passed through the DispensationService. This service uses the XDR Service implementation

2.4.2.5 PatientService

This service is used to retrieve patient summaries, given a valid patient identifier and that the patient has given consent for the distribution of this information. This service uses the XCA Service implementation.

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Component and Dependency Graph OpenNCP Service Consumer

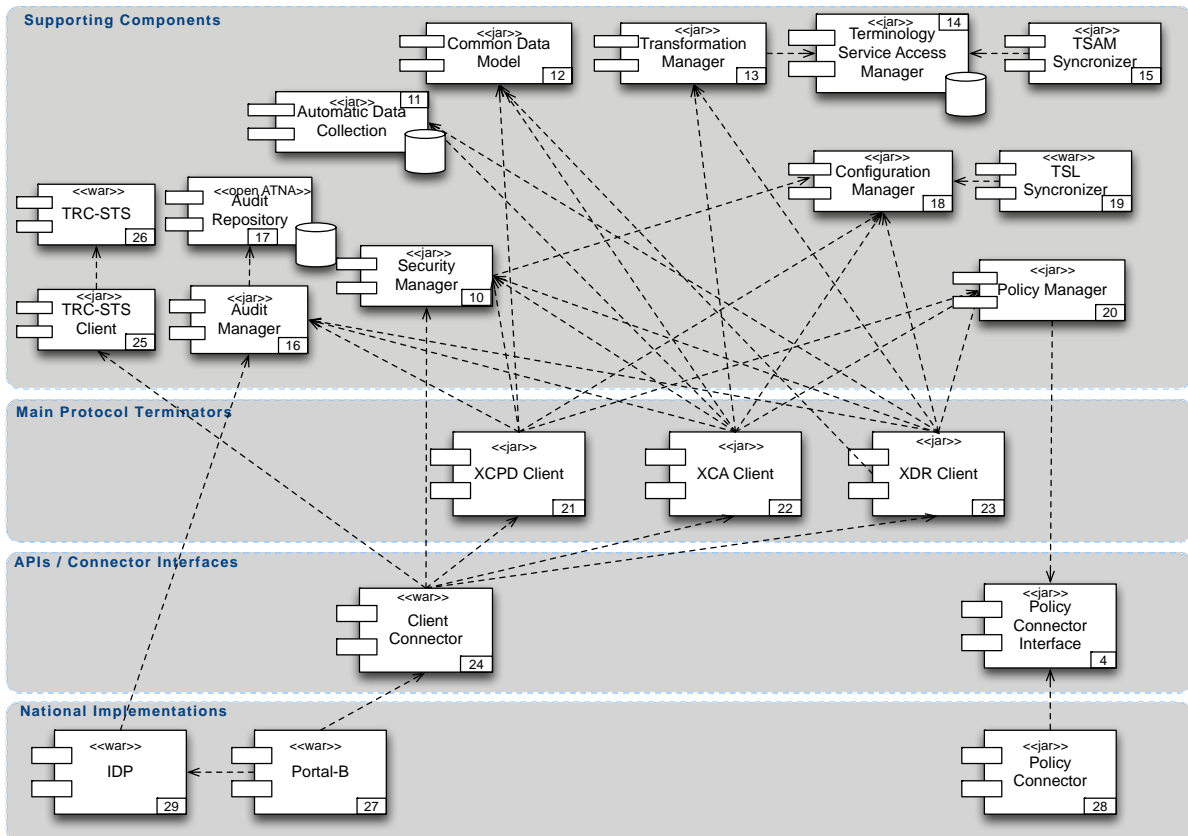


Figure 5 NCP-B architecture describing deployable components and the dependency between them

2.4.3 NCP-B - Client Connector

The preferred approach is to expose a client API supporting the epSOS workflows. The service should implement an open protocol and be designed as a simple stateless API. Thereby the API should be usable in any web portal solution.


2.4.4 Supporting Components

2.4.4.1 Consent Manager

We recommend that the effort is kept to a minimum for the OpenNCP project and put on each PN to provide their specific implementation of choice. The OpenNCP project provides the PN's with an integration point (figure 3 & 5).

2.4.4.2 Audit Manager

The Gnomon Audit Manager/Service including client stubs is open source, stable and should be completely re-usable. The OpenNCP project should adapt these as external dependencies and provide for a way to plug them in to the NCP Infrastructure.

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2.4.4.3 **Configuration Manager**

We recommend not extending the configuration manager with new requirements in the first phase of the OpenNCP solution. Keep the scope of the delivery to a minimal viable solution, new or changed requirements could be included in later phases or as a side projects.

2.4.4.4 **Transformation Manager**

The Transformation Manager handles the mapping of information gathered from the NI as a Friendly-A document to a common format known as the epSOS pivot document, and also translation of a Pivot document to Country-B language. The epSOS pivot document is an intermediate format that is meant to build a bridge between the national information formats and the HL7 CDA format as well as to serve audit and log purposes. The Transformation Manager component will be provided as a third party component.

2.4.4.5 **epSOSPolicyManager**

The aim of the OpenNCP project is to be compliant with the epSOS specifications regarding the use of SAML [D3.3.2#6.6.9]. The first implementation approach is to adopt the SRDC NCP solution. In the SRDC solution, the country level policy enforcement is rudimentary (i.e. hard coded based on permission attributes of the requestor) and does not implement the full XACML data flow described in epSOS security specification. The OpenNCP project provides an integration point in the form of a standard Java interface that PN's can implement (figure 3, 4 & 5).

2.4.4.6 **epSOSSecurity Manager**

The OSS implementation of the security manager provided by NetSmart should be stable, sufficient and fully re-usable in the OpenNCP solution. The OpenNCP project should provide for a way to plug it in to the NCP Infrastructure.


2.4.5 **epSOS Phase 2 services**

The design and engineering strategy for epSOS Phase 2 services was based on the Extension Pattern². By this pattern the team aimed to add and support new services by extending the available interfaces and business logic, without loosing any of the compliance with epSOS Phase 1 services.

The epSOS Phase 2 service design and engineering strategy included the following services and tools:

- Services:
 - Patient Access (PAC): possibility for a patient to directly retrieve its Patient Summary and display/print into an epSOS language.

² See D3.B.1 epSOS 2 Implementation strategy

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- Health Care Encounter Report (HCER): report returned from the Country of treatment to the Country of affiliation.
- Medication Related Overview (MRO): The overall purpose to be achieved by this use case is to enable a foreign HCP to review the medical information of a patient consulting her, thereby securing an updated and more safe further treatment of the patient.
- Tools:
 - Continuous Integration (CI) and Conformance Testing services, allowing the automated use of the IHE Gazelle Testing tools. The whole purpose of this tool is to aid PNs to assess the conformance of their NCP instances by automatically validating all the transactions, audit messages and the related CDA documents, avoiding manual interventions, prone to errors.

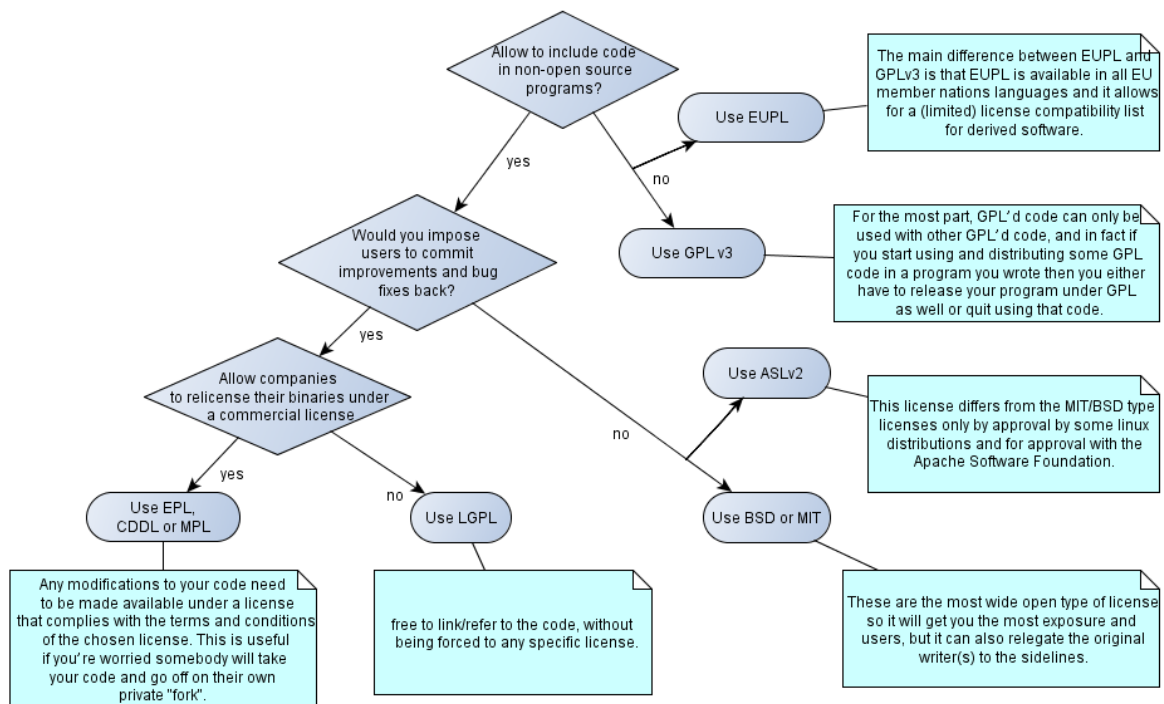
These new services and tools have been provided to Participating Nations with the OpenNCP V2.x.x releases. The detailed technical design for this services and tools can be found in the Open Source NCP Design and Release Notes on the OpenNCP wiki area (<https://openncp.atlassian.net/wiki/>)

2.5 License Terms of OpenNCP components

2.5.1 Introduction

The diagram in figure 6 lists some of the most popular open source licenses and their consequences to the software distributed under these licenses.

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	Can be used in close source	Programs that includes this code can be sold for profit	Source to modifications and bug fixes must be released
GPLv3	Not in derived works	Not for license fees	Yes, if distributed
BSD/MIT	Yes	Yes	No
LGPL	Yes	Yes	Yes, if distributed
EPL/CDDL/MPL	Yes	Yes	Yes, but only the modifications
ASLv2	Yes	Yes	No
EURL	not in derived works unless released under a permissive license	not unless released under a permissive license	Yes, if distributed under a license that mandates so

Source: <http://www.opensource.org/licenses/alphabetical>

Acronyms:
 ASLv2: Apache Software License v2
 BSD: Berkeley Software License (revised version)
 CDDL: Common Development and Distribution License
 EPL: Eclipse Public License
 EURL: European Union Public License
 GPLv3: GNU Public License v3
 LGPL: Lesser GNU Public License
 MIT: MIT License
 MPL: Mozilla Public License


Notes to the matrix on the left:
 The matrix is a very simplified comparison matrix, and there are subtle differences to the licenses, which will be apparent upon closer scrutiny

Disclaimer:
 this is just intended for informal purposes. It is not a substitute for advice from a qualified legal professional.

Figure 6: OSS license decision diagram

2.5.2 Licensing of the epSOS OS components

All software components which are newly developed by epSOS will be exclusively licensed under the ASL v.2 scheme. Developers of software components are given the responsibility to check that no other licensing rights pertain to any elements

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embedded or related to a newly developed component, particularly but not limited to libraries.

The OpenNCP community is responsible in co-operation with the epSOS PN's, to ensure that the licenses of all open source components used in the project are compatible with the purpose and scope of the project.

2.5.3 Use and consequence of the licenses

This project is developed under the ASLv2 (epSOS developed components) and GPLv3 licenses (SRDC contributed elements). As the GPLv3 is a strong copyleft license, some care has to be taken when linking between the different components of this project.

In general, software libraries developed under ASLv2 can be used by GPLv3 licensed applications while both retain their license terms (see the Apache text on GPL compatibility at <http://www.apache.org/licenses/GPL-compatibility.html>). However, the other way around, the GPLv3 license will invoke the clauses set forth in section 10 of its license text:

10. Automatic Licensing of Downstream Recipients.


Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

Specifically, when using any of the components that are licensed under the GPLv3, potential clients of these applications or libraries MUST take special care to observe its license.

To sum it up: In general there are no problems with linking within the project components, as the components licensed under ASLv2 can be used by the GPLed part without license consequences. The issue arises the other way around, when ASLv2 licensed code links against GPLed code. Thus, special care has to be taken when thirdparty libraries are used by the ASLv2 licensed components.

The individual miniprojects are responsible for providing a list of the licenses used by their respective components. This list resides in a file named README located at the root of the project, alongside its pom.xml file.

Using GPL licensed software from closed source software has the consequence that such software is subject to the terms stated in the GPL license, because closed software licensed code cannot link directly to GPL licensed code without having to disclose the source code in some form (either through a public repository or through requests of disclosure). This in practice means that it is not possible to directly use GPL licensed software from closed source software without disclosing the closed source software.

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2.5.4 Open source software from SRDC

The software elements from SRDC are licensed under the GPLv3 scheme.

In Section 2.10, the list of OpenNCP components is provided, indicating which of them are affected by the GPLv3 scheme selected by SRDC.

2.6 Development and distribution

2.6.1 Working platform

The following code has initially been placed on the Google Code site

(<http://code.google.com/p/epsos-common-components/>).

- All existing code developed within epSOS, including but not limited to the open source code from the FET NCP development
- the software contributed by SRDC

All newly developed software components MUST also be placed on Google Code as governed by the epSOS miniproject leaders. The links between the individual components and their respective miniprojects are described in wiki entries on the Google Code site.

epSOS grants unlimited read rights to anyone for the software deposited on Google Code.

Access, moderator or commit rights are governed by the rules set forth in the following sections.


2.6.2 Software distribution

epSOS applies a release policy. Consult D3.B.2, appendix A1, section 2.9.3 for the release of components. Software which has reached a major release (1.0, 2.0, etc.) MUST be copied onto the JoinUp platform. Minor releases and patch releases SHOULD be published if they are tested and if they are stable, as indicated in 3.B.2, appendix A1, section 2.9.3.

Joinup is the EU's platform for sharing and reusing open source software, semantic assets and other interoperability solutions for public administrations. The epSOS project's software is to be found here:

<https://joinup.ec.europa.eu/software/ecc/home>

Any member of the general public can request membership of the epSOS project domain within Joinup. It includes read access to code uploaded by the project. Access is granted by epSOS' Joinup administrators. Generally epSOS welcomes new members and does not currently (08/2012) have criteria for exclusion.

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The software uploaded to the EC operated Joinup platform MUST be freely accessible once membership is granted by epSOS and it can be used as long as the license terms are adhered to.

epSOS has placed a waiver of liability on Joinup that no support will be provided and that no responsibility and liability regarding the functioning of the software is accepted. There is also an additional disclaimer on the Google Code site: <http://code.google.com/p/epsos-common-components/wiki/Disclaimer>

2.7 Organisation of the OpenNCP Community

The aim of building an epSOS OpenNCPcommunity is manifold:

- To present time schedules, architecture and roadmap for the development
- To moderate discussion, code contributions and issue requests
- To ensure coherence, continuity and sustainability of the project

We define three roles within the OpenNCPcommunity:

- User
- Contributor
- Administrator


Administrators are strongly affiliated with the OpenNCP project, have write access to the code repository, moderator access to the issue tracker, wiki and the mailing lists and they administer the Roadmap and the adherence to code quality and architecture.

The contributors are people active in the community by submitting code, documentation or specialist advice. They participate on the developer mailing lists and can be assigned to issues.

Users are active users of the software and primarily provide feedback on the build, setup and use of the software artifacts. They usually manifest their participation on the user mailing list.

Of the three roles, all have read access to the code repository, issue tracker and any other artifacts that the project produces. Only the administrators and contributors assigned access by administrators have write or moderator access.

The OpenNCP community administrators MUST initially be selected by the members of the epSOS governing body. They act on a mandate from the epSOS Participating Nations (PN's) and MUST be granted the right to select additional members of the community on a basis of merit. It is the epSOS project that specifies the architecture in which the OpenNCP community should navigate and the epSOS project authorizes the Roadmap for the development of the OpenNCP. The Roadmap is a normative artifact, but with a certain level of descriptiveness in it; time schedules may change and, in dialogue with the epSOS project, the individual entries on the Roadmap can be modified.

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2.8 Communication and governing of the OpenNCP project

Any and all communication underlying the decisions made within the OpenNCP community MUST be done via the mailing lists. Additional communication channels such as the issue tracker or the documentation site MUST provide tracking of the execution of decisions and documentation of practices, but the mailing lists are the authoritative source of decision communication. The OpenNCP will track changes in an adequate tool, which shall be able to monitor effort spent on the individual issues. Atlassian provides JIRA instances free of charge for open source projects.

The JoinUp project (www.joinup.eu) will be used by OpenNCP to present the project in general, communicate releases and distribute software artifacts produced by the OpenNCP community.

2.9 Source Code Management

The individual components MUST be developed as independent software deliveries, each with its own roadmap, section in the issue-tracker, build scripts, test suites, documentation and administrative responsible body. The source code MUST reside in an open, centrally managed revision control system, with write access for trusted parties and read access for everyone. In order to ease distributed development and encourage de-centralized engagement, the OpenNCP project uses git as a VCS.

Generally, all commits MUST reference an issue identifier. Exceptions from this rule are typically non-code corrections or non-logic updates to code, such as spelling corrections, documentation refinement, reordering of code blocks that does not affect business logic etc.


All commits to the authoritative code repository MUST be managed by the OpenNCP administrators. As mentioned in section 2.7, the administrators MAY delegate this responsibility to trusted parties within the OpenNCP community.

2.9.1 Quality Management

Code quality has a discernible impact on development speed. Code that is modular, testable, consistent in naming convention and in technical design is generally easier to maintain and to extend.

Therefore, all public APIs MUST be covered by test cases that encodes the epSOS-I use cases as a minimum. The issue tracker will have a separate section for delivering test cases to the OpenNCP development team. Unit-testing MUST be employed as extensively as possible and demonstration of existing bugs MUST be encoded as test cases. The same applies for patches delivered by the community.

Furthermore, the code MUST be committed to a continuous build server, which will ensure that the code compiles and that all tests are run on every commit. The code

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repository will also have nightly builds which are submitted to a static code analysis tool.

2.9.2 Commit Management

We recommend that write access to the code repository **MUST** be governed by meritocracy³, where the working definition of 'merit' is that of presenting the project with a code submission that adheres to the software quality criteria that has been set up for the project. The Administrators of the Open Source Community **MUST** have the responsibility of administering the acceptance or refusal of submissions, according to the guidelines set forth.

2.9.3 Release and Distribution Principles

A Release is defined as the publication of a software artifact consisting of one of the OpenNCP components. The release schedules are decided by the epSOS governing body in coordination with the OpenNCP administrators.


All releases **MUST** be defined by roadmaps which in turn are made up of issues. The release process consists of:

1. Feature freeze, which locks a set of issues to a specific release
2. Stabilization phase, in which work on the set of issues are finalized and severe bugs within the existing release scope are fixed
3. Release candidate cycle, in which release candidates are published. If no serious issues are found, the last release candidate automatically becomes the final release. There **SHOULD** be at least one week between the last release candidate and the final release.
4. Final release; the official release of the artifact

The OpenNCP project **MUST** follow semantic versioning⁴ in all phases of development.

³http://en.wikipedia.org/wiki/Meritocracy#Meritocracy_Online

⁴<http://semver.org>

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2.10 The Miniprojects within the OpenNCP

OpenNCP team adopted a concurrent development by “Miniprojects”. The individual Miniprojects are developed and released independently of each other. Any integration points within the miniprojects MUST be covered by integration tests, such that each software artifact delivered by the miniproject has an explicit method of exposing the assumptions made in the integration with the other components.

The following table summarizes the OpenNCP Components available at the date of release of this document and associates the type of license

Miniproject	Responsible	Repository	License
ProtocolTerminators	SALAR	ncp-a interface	GPLv3
		ws-clients	GPLv3
		ws-server	GPLv3
		xca-implementation	GPLv3
		xcpd-implementation	GPLv3
		xdr-implementation	GPLv3
		Utils	GPLv3
		Datamodel	GPLv3
Authentication and Authorization	NSI	Assertionvalidator	GPLv3
		Auditmanager	ASLv2
		Auditmonitoring	ASLv2?
		Consentmanager	GPLv3
		Openatna	ASLv2
		Securitymanager	ASLv2
		trc-sts	ASLv2
		trc-sts-client	ASLv2
GUI	GNOMON	cdadisplaytool	ASLv2
		gnomonportal	ASLv2
Semantic Services	HUG ⁵	tsam	ASLv2
		tsam-synchronizer	ASLv2
		transformationmanager	ASLv2
Configuration Management	GNOMON	configmanager	ASLv2
		tsleditor	ASLv2
		tslsync	ASLv2
		eposadc	ASLv2
		syncapp	ASLv2

⁵ PoSam contributed to the maintenance and evolution of the semantic components to implement epSOS 2 services.

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The overall activities of the different Miniprojects are orchestrated by the Integration Miniproject, initially led by DK and SALAR. From June 2013 OpenNCP Integration responsibility moved to Portugal. The Open NCP orchestration became an umbrella where miniprojects contributions were fused, coordinated and integrated.

The Integration/OpenNCP Miniproject includes:

- Overall planning / Miniprojects monitoring
- Component integration
- Integration testing (initially managed by ELGA, currently by OpenNCP Community)
- Documentation (initially managed by ELGA, currently by OpenNCP Community)

Detailed and updated description of the Miniprojects and Components can be found on the OpenNCP Community homepage:

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Community+Home>

2.11 Long term sustainability of the OpenNCP

One of the major success criteria for open source projects is sustainability. The epSOS project itself has made a specific point in addressing sustainability of the project itself, and the OpenNCP project aims to do the same.


The objective of the OpenNCP project is to maintain operation at least as long as the epSOS project is active. To achieve this goal, the epSOS project and PN's should provide funding and resource allocation to the OpenNCP project for the duration of its lifetime. A viable alternative is to have the OpenNCP project go dormant after a fixed set of releases, where the releases should be considered stable and production ready.

2.11.1 Defining sustainability

There exist several factors that support sustainability of open source projects. A sustainable open source project is one that is able to support itself for an, in advance, specified duration of time. This primarily means that the project is able to cover the costs it incurs for that duration of time. Failure to do this may result in a premature termination of the project. In the case of the OpenNCP project, the costs are raised through its participants, namely the PN's. Other participants may join the project and thereby raise the probability of sustainability for the project.

In order to attract participants, the OpenNCP project should at all time:

- have a clearly expressed vision and purpose
- have runnable and easily deployable code artifacts
- use open standards

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- continuously manage expectations
- be open to new ideas, new input and new people

These criteria are necessary, but not sufficient for forming the basis for long term sustainability of the OpenNCP project and the OpenNCP participants should at all times strive to fulfill these five criteria.

2.11.2 Sustainability parameters

Sustainability is perceived through different parameters and at various levels for those parameters. The matrix in table 1 shows the different parameters mainly used when assessing the sustainability of software projects⁶. For a project to be sustainable, it is not necessary for it to meet all of the expectations, and there are no clearly defined thresholds for when a given parameter reaches a certain level.

Parameter	Low level	High level
Culture	Innovative	Servicing
Value proposition	Features	Stability
User trade-offs	Functionality	Simplicity/ease of use
Focus of development	Technology/features	Use
Recognition tokens	Peer recognition	Market share
Documentation	Wiki, code comments	Published books
Releases	Erratic, ad-hoc	Predictable, regular
Quality	Runnable	Fully tested and readily deployable
Support	Developer mailing lists	Professional support organization


Table 1 Sustainability parameters and levels

The 2007 University of Oxford and JISC study on sustainability in open source projects define some characteristics of sustainable projects, which in this context can be applied to low-level respectively high-level sustainable projects.

2.11.1.1 Characteristics of low-level sustainable projects

The software meets immediate needs: the knowledge and skill set for maintaining the software is available to the PN's, which means that PN resources are sufficient to support maintenance and evolution (further development) of the software.

⁶ Inspired by the University of Oxford and JISC study on sustainability in open source projects. Available at <http://www.jisc.ac.uk/media/documents/programmes/distributedlearning/sustainabilitystudy-1%5B1%5D.0.pdf>

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Typically, however, there is no central organisation supporting the mini-projects for non-development-participant PN's. For those outside the immediate community of developers or those without the necessary skills in their information technology organisation, there are potential risks and uncertain costs associated with this kind of project maturity.

2.11.1.2 Characteristics of high-level sustainable projects

The software meets the immediate needs of all PN's for the cross border health data exchange. Software suppliers are developing the product, complete documentation is available and professional support is available (such as training, on-call technical support, and consultants).

Projects that have reached this level of sustainability are considered mature and will be accessible and readily usable even for rPN's who did not participate in the software development and therefore have little to none detailed knowledge about the software. Such PN's may lack advanced skills or may have limited resources to support the development of the project. Professional documentation and support is required for these PN's to get the software installed and running.

2.11.2 Risks associated with the sustainability of the project


Of the projects ranging from low-level to high-level, three general types of project models can be identified: Community-driven, Committee-driven and Commercially-driven. The matrix in table 2 lists their characteristics and key parameters as well as their key risks.

	Community-driven	Committee-driven	Commercially-driven
Decision makers	Meritocracy	Decision makers are elected by a committee	For-profit vendor decides
Transparency	High, all communication is open	Communication within the committee usually closed, otherwise open	Communication very restricted, except possibly for very large customers
Backing	User contribution, corporate sponsorships	Resources managed by committee	Licensing and/or support fee
Key risks	Schedules and releases are volatile. Project can be abruptly stopped	Influence and incitements are limited by those mandated by the committee	Insular, with self-interests outweighing the users if they are not correlating

Table 2 Characteristics of project models

2.11.3 Addressing the risks

In a community based project the original project owner will, sooner or later, stop participating in the project. This event should be anticipated and clearly communicated to the community as soon as it's actualisation is known. Similarly, a very small team cannot stay involved in a large number of projects for longer periods of time. The risk of an orphaned project is ever-present in the community

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model, therefore it is necessary to make it possible for someone else to take over project ownership. If a project is orphaned in the open source world, the user community will retain rights to access the code base and can continue using and supporting the project themselves as long as they feel it is useful. When a closed source team stops supporting a project, its users are simply out of luck.⁷

Planning is of absolute essence for a community based project and the prerequisite for good planning in this context are:

- An active developer community
- Representative governance
- Release plans agreed and executed in public
- Conflicts resolved in public
- Roadmap published and maintained
- Maintained and publicly available documentation

If these criteria are met, the probability of successful execution of the plans are high.

2.11.3.1 The risk of premature termination

From both a project leader's perspective and the perspective of (current as well as future) developers, the risk of premature termination of the project is central to their willingness to invest time and effort in the project. For the consumers of the project, premature termination can leave them stranded with a product that can no longer be maintained or supported. The OpenNCP project must take special care in organising and publishing the plans and roadmaps of the project. It must also clearly state that the scope of the OpenNCP project is the scope of the epSOS project, and that development, maintenance and support reaching over this period cannot be guaranteed.


Similarly, the value of the low-level parameters must be clearly communicated on the project site, both joinup.eu and the google code site. Each of the parameters assess a liability, which must be clearly communicated to developers, users and the public in general.

2.11.4 OpenNCP suggested Road to Sustainability

As described in the main D3.B.2 document, Section 4.4, the OpenNCP Community tried to face the topic of Community Sustainability, providing suggestions on how to stimulate the creation and the maintenance of the OpenNCP, in strict relation with the establishment of the eHealth Ecosystem.

The Community page:

⁷ John D'Addamio, What's different about testing open source projects?, http://blogs.msdn.com/b/john_daddamio

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<https://openncp.atlassian.net/wiki/display/ncp/Road+to+Sustainability>

collects the indications and the suggestions from the stakeholders participating to the OpenNCP Community.

The basic idea is to disseminate the knowledge and build upon the gained experience.

Two initiatives were proposed, looking for ways to engage countries that could sustain and expand the OpenNCP Community work.

1. As first step we believe that for being able to participate and contribute countries should have the opportunity for better understand - HOW THINGS WORK.
2. As second step - to allow new elements to interact and learn from more experienced team members - could be a hands on encounter, for immersive and intensive discussion on activities related to OpenNCP technology - HANDS ON.

2.11.4.1 HOW THINGS WORK (webinar)

For the first step, we recommend the organisation of 3 Webinars


(Over the Internet - 1hour each, organised on 30min presentation + 30min debating).

Topics Proposition

- a. Tools and Method
- b. Architecture and Technologies
- c. Testing and Deploying

Points to be clarified to organise the webinar:

1. Who is the target audience for these Webinars?
 - a. NEPC
 - b. NEPC Technical Leaders
 - c. Developers
2. When could they happen?
 - a. First quarter 2014 (bi-weekly)
3. Who will prepare and lead sessions?
 - a. OpenNCP Community members
4. What technology would be used?
5. Is project place still available after epSOS?

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2.11.4.2 HANDS ON (workshop)

For the first step, we recommend the organisation of 1 Workshop


(Face 2 Face - 2days, presentations, tutorials, testing, operation scenarios, roadmap and future activities).

Agenda Proposition

- a. Real Life Operation - Struggles
- b. Security Hackathon
- c. Performance Hackathon
- d. 3rd Party Projects Collaboration
- e. Designing the Future - evolutions roadmap

Points to be clarified to organise the webinar:

1. Who is the target audience for this Workshop?
 - a. Developers
 - b. HealthCare ICT Influencers
 - c. HealthCare ICT Architects
2. When could it happen?
 - a. First quarter 2014 - February
3. Should this workshop be aligned with and HealthCare ICT event (e.g. conference, IHE Connectathon)?
4. Where could it happen?
 - a. Sweden
 - b. Portugal
 - c. Austria (Connectathon)
5. Who is responsible for engaging countries in order to obtain their commitment on participation?
 - a. The OpenNCP Community in a joint effort with epSOS NEPC.
 - b. Invite countries that are not using the OpenNCP but have interest on it or in cross-border healthcare ICT, like: Germany, Netherlands, Austria, etc.
6. Engaged countries (so far):
 - a. Portugal
 - b. Sweden
 - c. Luxembourg
7. Who will prepare and lead sessions?
 - a. Each session should be led by a different member, even the purpose should be promote Collaborative Work;


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8. In case of budget needed for holding the event, who can provide the the financial means?
 - a. ?? Is EXPAND able to provide the framework
9. In case of budget needed for logistic (travel and accommodations), where can countries obtain financial means?
 - a. The workshop organization may try to obtain preferential condition, but most probably each country will have to provide the financial means for it;
10. What technology infrastructure would be used?

2.12 Closing remarks

The purpose of the OpenNCP project is to make the source code for the NCP common components available to the PN's, who will then have the possibility to adapt the source code to their needs and hopefully also bring back improvements to the OpenNCP community.

Specific safeguards and actions have to be undertaken, before epSOS ends, to stimulate the Community to stay alive and the OpenNCP toolkit to be maintained and evolve in line with the eHealth market evolution and expectations.

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4 References

[D3.A.1] epSOS Common Components D3.A.1 Deliverable EED-Design II - Common Components Specification 25/11- 2011

[D3.3.2] Final epSOS System Technical Specification v1.4 30/4-2010


[D3.4.2] TBD

5 Further reading

Avoiding abandonware: <http://www.oss-watch.ac.uk/resources/odm.xml>

Assessing open source projects: <http://aisel.aisnet.org/cgi/viewcontent.cgi?article=1553&context=jais>

OSS governance models: <http://www.oss-watch.ac.uk/resources/governanceModels.xml>

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6 Annex 1: OpenNCP1.x and OpenNCP 2.x

Annex 1 provides some of the documentation made available on:

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Home>

(recently updated as:

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Community+Home>)

Each of the following sections will represent the content available at the OpenNCP wiki page either by including the same elements or by pointing to relevant links.

In the following picture, you may see the front page and all the functional areas presented in this annex.



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Figure 2 - OpenNCP Wiki Page

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6.1 OpenNCP Community Home






















In the sequel, the main sections and subsections are listed.


For document maintainability reasons it is suggested to get the links from the specified page:

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Community+Home>

6.1.1 The sub-projects of OpenNCP

OpenNCP Development

Project	Key	Project Lead
 Assertion Validator	AV	Konstantin Hyppönen
 Audit Manager	AM	Kostas Karkaletsis
 CDA Display Tool	CDT	Kostas Karkaletsis
 Configuration Manager	COMA	Marcelo Fonseca
 Consent Manager	CM	Konstantin Hyppönen
 Datamodel	DATA	Konstantin Hyppönen
 Default Policy Manager	PM	Konstantin Hyppönen
 epSOS Automatic Data Collector	EADC	Marcelo Fonseca
 Epsos-Web	EPW	Gareth Woodham
 OpenATNA	OP	Ivo Pinheiro
 OpenNCP	OPENNCP	Licínio kustra Mano
 OpenNCP Portal	GPB	Kostas Karkaletsis
 Protocol Terminators	PT	Konstantin Hyppönen
 Security Manager	SEC	Ivo Pinheiro
 Transformation Manager	TM	Arnaud Gaudinat
 TRC-STs	TRCSTS	Kostas Karkaletsis
 TSAM	TSAM	Arnaud Gaudinat
 TSAM Synchronizer	TSYNC	Arnaud Gaudinat
 TSLEditor	TSLED	Kostas Karkaletsis
 TSLSync	TSLSYN	Kostas Karkaletsis
 Util	UT	Marcelo Fonseca

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6.1.2 OpenNCP Releases

Please check chapter 7.2.

6.1.3 OpenNCP Developers pages

- Developer's Corner
- Version Management
- OpenNCP Specification and Design
- HCER Service for Patient Summary Extension
- Medication Related Overview
- Patient Access
- epSOS-2 Semantic Questions
- OpenNCP meetings minutes
- Meeting Minutes

6.1.4 Want to understand, install and setup the OpenNCP?

Please start by the installation overview, in order to understand the base technologies that are used in the OpenNCP.

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Installation+Overview>

Introduction

Welcome to the OpenNCP installation overview. The purpose of this document is to give an overview of the OpenNCP components and their installation.

OpenNCP is a suite of epSOS NCP software publicly available under Open Source licensing (partly GPL v. 3 and partly ASL v. 2). The software acts as a bidirectional technical, organisational and legal interface between the existing national infrastructures and also acts as a mediator as far as the legal and regulatory aspects are concerned.

OpenNCP Community is an open group of people orchestrated by an agile software development methodology conducting effort on designing, coding, testing and delivering OpenNCP software.


JoinUp is a collaborative platform created by the European Commission and funded by the European Union via the Interoperability Solutions for Public Administrations (ISA) Programme.

Some OpenNCP software components are licensed under the GPL v. 3 license, and some under the ASL v.2 license. Developers of software components are given the responsibility to check that no other licensing rights pertain to any elements embedded or related to a newly developed component, particularly but not limited to libraries.

For connecting the OpenNCP implementation to a participating nation's national infrastructure, a separate national connector must be implemented by the NCP operator. The connector is not supplied as part of OpenNCP, because the implementations and functionalities of the national infrastructures differ among the participating nations.

epSOS participating nations and other enquirers are responsible in co-operation with the OpenNCP community, to ensure that the licenses of all open source components used in the project are compatible with the purpose and scope of the project.

System Requirements

	Appendix A1: Open Source NCP Design and Release Notes	Document Short name: OSS NCP
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Typical Hardware Requirements

- 2 GHz Xeon Processor or equivalent
- 20 GB Storage
- 4 GB Memory

Suggested Software Requirements

- Linux or Microsoft Windows Operating System
- Oracle Java SE Development Kit 7 (>jdk7u22 does not work)
- Apache Tomcat 6.0.x or 7.0.x
- Relational Database (tested with MySQL, Postgres, Oracle)
- Openswan 2.6.x for IPsec (needed in epSOS, but not part of OpenNCP as such)

Overview of components

OpenNCP consists of the following components all of which are available for download at JoinUp.

Protocol Terminators

The core of OpenNCP is the Protocol Terminators and consists of these two components:

- epsos-ws-server - Server Side (Country A)
- epsos-client-connector - Client Side (Country B)

These components are packaged as web applications and are deployed to a servlet container such as Tomcat.

TRC-STs

This component is a "Security Token Service" (STS) for issuing "Treatment Relationship Confirmation" (TRC) Assertions. It is another web application that is deployed to Tomcat. TRC-STs is used by an epSOS portal (e.g. OpenNCP portal or epsos-web), which must include the TRC-STs client for retrieving the TRC assertions from the security token service.


TSL-sync

TSL-sync connects to Central Services and downloads the Trusted Service Lists (TSL) with NCP endpoint addresses and certificates of the other Participating Nations. It is a web application deployed to Tomcat. TSL-sync may be configured to run for example every night.

TSAM-sync

The Terminology Service Access Manager (TSAM) Synchronizer is another OpenNCP component. It is a standalone jar file with configuration files and a start script. This application may be scheduled to run for example on a daily basis and will download terminology data from the Central Services repository into the local database (LTR - Local Terminology Repository).

OpenATNA

	Appendix A1: Open Source NCP Design and Release Notes	Document Short name:	OSS NCP
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OpenATNA is an implementation of the Audit Trail and Node Authentication (ATNA) profile. It is a web application and is deployed to Tomcat. The application has two main functionalities: (1) receiving the audits from NCP components and storing them into the audit repository and (2) getting access to the stored audits using a web interface.

Database

A local database is required for storing the following information:

- ATNA audit messages
- epSOS Automatic Data Collection (eADC) records
- TSAM data, i.e. code and value sets, code mappings etc.
- Configuration settings for the OpenNCP server, client and portal

The configuration settings also include the endpoint addresses of the other NCPs, received in the form of TSLs from the central services.

Portals

There is a choice of two web portals:

- OpenNCP Portal (deployed on Liferay Community Server)
- epSOS-Web (deployed on Tomcat)

IPsec

Communication between NCPs is secured using HTTPS over IPsec. IPsec is not part of the OpenNCP software, but it is needed for establishing VPN connections between epSOS NCPs. Internet Protocol Security (IPsec) is a protocol suite for securing Internet Protocol (IP) communications by authenticating and encrypting each IP packet. A common implementation of IPsec for Linux is Openswan. It must be installed on the NCP machine.


More information

For further information refer to the **OpenNCP Installation Manual**. It describes the installation of the OpenNCP software in more detail and provides sample configuration files along with tips and tricks for successful deployment of the NCP.

Support

The OpenNCP Community provides support and other benefits, including:

- Ongoing technical support.
- Release upgrades at no additional cost.
- Support requests may be sent in a number of ways:
 - Technical requests should be sent by electronic mail to jira@openncp.atlassian.net
 - General requests can be sent using the online support form <http://www.epsos.eu/home/about-epsos/contact.htm>

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Then, for a more complete set of instructions concerning the installation and setup from an NCP based on OpenNCP technology, you should move to a more detailed installation manual that can be reached at: <https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Installation+Manual> and also in section 7.3.

6.1.5 Looking for OpenNCP releases?

Please check section 7.2 or give a look in:

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Release+Notes>

6.1.6 Want to contribute to OpenNCP?

Please give a close reading in the “OpenNCP General Presentation” available at:

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+General+Presentation>

The following page can also be checked:

- OpenNCP Usage: <https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Usage>

6.2 OpenNCP Home: Release Notes


[Pages / OpenNCP Community Home](#)

OpenNCP Release Notes

Created and last modified by Ivo Pinheiro on Jul 31, 2013

List of OpenNCP release notes

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- [2.1.0-RC0 Release Changelog and Notes](#)
- [2.0.3 Release Changelog and Notes](#)
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6.2.1 1.0.0 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/1.0.0+Release+Changelog+and+notes>

Release 1.0 of the OpenNCP, based on the original SRDC NCP, with many additions and enhancements by OpenNCP team.

- ConfigurationManager 1.1, which contains
 - Configmanager 1.2
 - TSLEditor2.4
- TSLSync 2.7.5
- util 0.2.3
- datamodel 0.3.3
- consentmanager 0.2.1
- assertionvalidator 0.2.1
- security-manager 1.1
- auditmanager 2.3.5
- openatna 1.2
- transformation-manager 1.0.15
- trc-sts 1.0.1
- terminology-service-access-manager 1.0.9
- TSAM Synchronizer 7.2
- ProtocolTerminator 1.0
- ncp-pt-utils 1.0


NCP-A

Implementation for the Country A role is based on the Axis2 framework. There are three service endpoints (XCPD, XCA and XDR). The following operations are implemented:

- Identification service, operation getIdentityByTraits(). Only search by patient ids is implemented. One or multiple ids may be used for identifying the patient.
- Order service, operations list() and retrieve().
- Patient service, operations list() and retrieve().
- Dispensation service, operation initialize(). Operation discard() is not implemented.
- Consent service, operation put(). Operation discard() is not implemented.

Interfaces for connecting the international part and national connector gateways are included. Some instructions are provided on page Integration of Protocol Terminators with National Connector, and developers can study comments in the code of the interface classes.

Note that there are certain memory leaks in NCP-A. This issue is to be fixed in 1.1.

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6.2.2 1.0.1 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/1.0.1+Release+Changelog+and+notes>

Release date: January 8th, 2013

Release 1.0.1 of the OpenNCP is a scheduled bugfix release, among other things collecting on the experiences done by Finland and Portugal during the IHE PPT session before Christmas 2012.

- eu.europa.ec.joinup.ecc.epsos-util 0.2.4
- eu.europa.ec.joinup.ecc.epsos-datamodel 0.3.4
- eu.europa.ec.joinup.ecc.epsos-configuration-manager 1.2.1
- eu.europa.ec.joinup.ecc.epsos-security-manager 1.1.1
- eu.europa.ec.joinup.ecc.epsos-audit-manager 2.3.6
- eu.europa.ec.joinup.ecc.epsos-assertion-validator 0.2.2
- eu.europa.ec.joinup.ecc.epsos-terminology-service-access-manager 1.0.10
- eu.europa.ec.joinup.ecc.epsos-tslutils.tslsync 2.7.6
- eu.europa.ec.joinup.ecc.epsos-TRC-STS 1.0.2
- eu.europa.ec.joinup.ecc.epsos-transformation-manager 1.0.16
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 0.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 1.0.1

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6.2.3 1.0.2 Release Changelog and Notes


<https://openncp.atlassian.net/wiki/display/ncp/1.0.2+Release+Changelog+and+notes>

Release date: January 9th, 2013

Release 1.0.2 of the OpenNCP is a hotfix release, adding the dependencies of the defaultpolicy manager released with 1.0.1.

The components touched by this release includes

- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 1.0.2

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6.2.4 1.1.0 Release Changelog and Notes


<https://openncp.atlassian.net/wiki/display/ncp/1.1.0+Release+Changelog+and+Notes>

Release date: January 24th, 2013

Release 1.1.0 is the first PPT-tested release of OpenNCP, and as such, OpenNCP is considered out of beta testing!

The following components are included in this release:

- eu.europa.ec.joinup.ecc.epsos-assertionvalidator 0.3.1
- eu.europa.ec.joinup.ecc.epsos-auditmanager 2.4.0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.tsamexporter 2.2.0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.xslttransformer 1.10.0
- eu.europa.ec.joinup.ecc.epsos-configurationmanager 1.4.0
- eu.europa.ec.joinup.ecc.epsos-consentmanager 0.3.0
- eu.europa.ec.joinup.ecc.epsos-datamodel 0.4.3
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 0.2.0
- eu.europa.ec.joinup.ecc.epsos-eadc 1.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 2.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 2.0.0
- eu.europa.ec.joinup.ecc.epsos-securitymanager 1.2.0
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 1.1.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts 1.1.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts-client 1.0.5
- eu.europa.ec.joinup.ecc.epsos-tsam 1.1.0
- eu.europa.ec.joinup.ecc.epsos-tslutils.tslsync 2.8.1
- eu.europa.ec.joinup.ecc.epsos-util 0.3.0
- eu.europa.ec.joinup.ecc.openncp-portal 1.1.0

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6.2.5 1.1.1 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/1.1.1+Release+Changelog+and+Notes>

Release date: March 5th, 2013


Release 1.1.1 is the result of the experiences gathered by the nations testing at the December 2012 PPT.

The following components are included in this release:

- o [eu.europa.ec.joinup.ecc.epsos-assertionvalidator 0.3.2](#)
- o [eu.europa.ec.joinup.ecc.epsos-auditmanager 2.4.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.tsamexporter 2.2.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.xsltransformer 1.10.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-configurationmanager 1.4.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-consentmanager 0.3.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-datamodel 0.4.4](#)
- o [eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 0.2.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-eadc 1.0.2](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 2.0.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-securitymanager 1.2.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-transformationmanager 1.1.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-trc-sts 1.1.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-trc-sts-client 1.0.6](#)
- o [eu.europa.ec.joinup.ecc.epsos-tsam 1.1.1](#)
- o [eu.europa.ec.joinup.ecc.epsos-tslutils.tslysync 2.8.2](#)
- o [eu.europa.ec.joinup.ecc.epsos-util 0.3.1](#)
- o [eu.europa.ec.joinup.ecc.openncp-portal 1.1.1](#)

6.2.6 1.1.2 Release Changelog and Notes


<https://openncp.atlassian.net/wiki/display/ncp/1.1.2+Release+Changelog+and+Notes>

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	WP3.B: epSOS OSS NCP Implementation	Date:	30/06/2014

Release date: April 10th, 2013

The following components are included in this release:

- eu.europa.ec.joinup.ecc.epsos-assertionvalidator 0.3.3
- eu.europa.ec.joinup.ecc.epsos-auditmanager 2.4.2
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.tsamexporter 2.2.1
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.xslttransformer 1.10.1
- eu.europa.ec.joinup.ecc.epsos-configurationmanager 1.4.2
- eu.europa.ec.joinup.ecc.epsos-consentmanager 0.3.1
- eu.europa.ec.joinup.ecc.epsos-datamodel 0.4.5
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 0.2.2
- eu.europa.ec.joinup.ecc.epsos-eadc 1.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 2.0.2
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 2.0.2
- eu.europa.ec.joinup.ecc.epsos-securitymanager 1.2.1
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 1.1.2
- eu.europa.ec.joinup.ecc.epsos-trc-sts 1.1.3
- eu.europa.ec.joinup.ecc.epsos-trc-sts-client 1.0.6
- eu.europa.ec.joinup.ecc.epsos-tsam 1.1.2
- eu.europa.ec.joinup.ecc.epsos-tslutils.tslsync 2.8.2
- eu.europa.ec.joinup.ecc.epsos-util 0.3.2
- eu.europa.ec.joinup.ecc.openncp-portal 1.1.2
- eu.europa.ec.joinup.ecc.epsos-tslutils.epsos-tsl-sync 2.8.4
- eu.europa.ec.joinup.ecc.epsos-tslutils.epsos-tsl-editor 2.4

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6.2.7 1.1.3 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/1.1.2+Release+Changelog+and+Notes>

Release date: May 8th, 2013

The following components are included in this release:

- eu.europa.ec.joinup.ecc.tsam-sync 7.3.1
- eu.europa.ec.joinup.ecc.auditmanager 2.4.3
- eu.europa.ec.joinup.ecc.epsos-assertionvalidator 0.3.4
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.tsamexporter 2.2.2
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.xslttransformer 1.10.2
- eu.europa.ec.joinup.ecc.epsos-consentmanager 0.3.2
- eu.europa.ec.joinup.ecc.epsos-datamodel 0.4.6
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 0.2.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 2.0.3
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 2.0.3
- eu.europa.ec.joinup.ecc.epsos-securitymanager 1.2.2
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 1.1.3
- eu.europa.ec.joinup.ecc.epsos-trc-sts 1.1.4
- eu.europa.ec.joinup.ecc.epsos-trc-sts-client 1.0.7
- eu.europa.ec.joinup.ecc.epsos-util 0.3.3
- eu.europa.ec.joinup.ecc.openncp-portal 1.1.3
- eu.europa.ec.joinup.ecc.epsos-tslutils.epsos-tsl-sync 2.8.5

	Appendix A1: Open Source NCP Design and Release Notes	Document Short name:	OSS NCP
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6.2.8 2.0.0 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/2.0.0+Release+Changelog+and+Notes>


Release date: June 20th, 2013

Included components:

- eu.europa.ec.joinup.ecc.auditmanager 3.0.0
- eu.europa.ec.joinup.ecc.epsos-assertionvalidator 1.0.0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.tsamexporter 3.0.0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.xslttransformer 2.0.0
- eu.europa.ec.joinup.ecc.epsos-datamodel 1.0.0
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 1.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 3.0.0
- eu.europa.ec.joinup.ecc.epsos-securitymanager 2.0.0
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 2.0.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts 2.0.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts-client 2.0.0
- eu.europa.ec.joinup.ecc.epsos-util 1.0.0
- eu.europa.ec.joinup.ecc.openncp-portal 2.0.0
- eu.europa.ec.joinup.ecc.epsos-tslutils.epsos-tsl-sync 2.8.6

Notes:

- INCLUDED All the functionality of **epSOS 1 services**, together with **epSOS 1 Audit Trail** schemas (included in version **1.1.3** and previous);
- INCLUDED The functionality for **epSOS 2** services, namely **PAC** and **HCER**;

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6.2.9 2.0.1 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/2.0.1+Release+Changelog+and+Notes>


Release date: August 6th, 2013

Included components:

- eu.europa.ec.joinup.ecc.auditmanager 4.0.0
- eu.europa.ec.joinup.ecc.epsos-assertionvalidator 1.0.0
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool.tsamexporter 3.0.0
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool.xslttransformer 2.0.0
- eu.europa.ec.joinup.ecc.epsos-datamodel 1.0.1
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 1.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 3.0.1
- eu.europa.ec.joinup.ecc.epsos-securitymanager 2.0.0
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 2.0.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts 2.0.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts-client 2.0.0
- eu.europa.ec.joinup.ecc.epsos-util 1.0.0
- eu.europa.ec.joinup.ecc.openncp-portal 2.0.1
- eu.europa.ec.joinup.ecc.epsos-tslutils.epsos-tsl-sync 2.8.6

Notes:

- INCLUDED Included new version of auditmanager, with new audit message event Id's
- INCLUDED Audit messages for PAC and HCER (epsos 2 services).

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6.2.10 2.0.2 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/2.0.2+Release+Changelog+and+Notes>


Release date: 12 September 10th, 2013

Included components:

- eu.europa.ec.joinup.ecc.auditmanager 4.1.0
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 3.0.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 3.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 3.1.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts 2.1.0
- eu.europa.ec.joinup.ecc.epsos-tsam-sync 7.4.0
- eu.europa.ec.joinup.ecc.epsos-tslutils.epsos-tsl-sync 2.8.7
- eu.europa.ec.joinup.ecc.epsos-openatna 2.0.0


Main changes:

- Protocol Terminators - epsos-ws-server.war
 - Changed the log file to epsos-ws-server.log placed in TOMCAT_HOME/log/epsos-ws-server.log
- Protocol Terminators - client-connector.war
 - Changed the log file to epsos-client-connector.log placed in TOMCAT_HOME/log/epsos-client-connector.log
- OpenATNA - epsos-openatna.war
 - Changed the log file to epsos-openatna.log placed in TOMCAT_HOME/log/epsos-openatna.log
 - OpenATNA can be now installed inside Apache Tomcat Container
 - It is necessary to set startup property to set the location of openatna.properties file. You should add this line to the TOMCAT startup.sh:

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JAVA_OPTS="-
DopenATNA.properties.path=file:\$EPSOS_PROPS_PATH/ATNA_resources/openat
na.properties \$JAVA_OPTS"

- TRC-STTS - TRC-STTS.war
 - Changed the log file to epsos-trc-sts.log placed in TOMCAT_HOME/log/epsos-trc-sts.log
- TSL-SYNC - tsl-sync.war
 - Changed the log file to epsos-tsl-sync.log placed in TOMCAT_HOME/log/epsos- tsl-sync.log
- Transformation Manager
 - Transformation manager has now a new structure of TM_RESOURCES files place inside \$EPSOS_PROPS_PATH folder.
You can download these files from the following URL
<https://openncp.atlassian.net/wiki/download/attachments/11075686/epsos-configuration.zip?api=v2>
 - Include the changes made by POSAM

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6.2.11 2.0.3 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/2.0.3+Release+Changelog+and+Notes>


Release date: November 4th, 2013

Included components:

- eu.europa.ec.joinup.ecc.epsos-assertion-validator 1.0.1
- eu.europa.ec.joinup.ecc.auditmanager 4.1.1
- eu.europa.ec.joinup.ecc.epsos-transformationmanager 3.0.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 3.1.1
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 3.1.1
- eu.europa.ec.joinup.ecc.epsos-util 1.0.1
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool 2.0.1
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool.epsos-xslttransformer 2.0.1
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool.epsos-tsamexporter 3.0.1
- eu.europa.ec.joinup.ecc.epsos-cdutils.epsos-cdutils 1.0.0
- eu.europa.ec.joinup.ecc.epsos-trc-sts 2.0.2

Main changes:

This version does not include new features it only includes bug-fixing for issues reported and resolved during PPT5.

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6.2.12 2.1.0-RC0 Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/2.1.0-RC0+Release+Changelog+and+Notes>

Release date: November 25th, 2013

Included components:

- eu.europa.ec.joinup.ecc.epsos-util 1.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-data-model 1.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-audit-manager 4.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-transformation-manager 3.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 1.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 3.2.0-RC0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.epsos-xsltransformer 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-cdadisplaytool.epsos-tsamexporter 3.0.2-RC0
- eu.europa.ec.joinup.ecc.epsos-cdautils.epsos-cdautils 1.0.1-RC0
- eu.europa.ec.joinup.ecc.openncp-portal 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.epsos-openatna 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-all 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-anom 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-archive 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-audit 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-jaxb 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-net 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-report 2.1.0-RC0


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- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web-all 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web-service 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web-web 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.syslog 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.syslog-core 2.1.0-RC0
- eu.europa.ec.joinup.ecc.epsos-openatna.syslog-mina 2.1.0-RC0

Main changes:

In this version was implemented:

1. Support for a NEW epSOS 2 Service: Medication Related Overview (MRO)
 1. The overall purpose to be achieved by this service is to enable a foreign HCP to review the medical information of a patient consulting her, thereby securing an updated and more safe further treatment of the patient.
2. CI Automated Testing Suite Enhancements
 1. Powerful tool and mechanism that empower OpenNCP technology adopters with testing technology that can improve Quality Assurance tasks as well reduce effort in reporting conformance evidences (e.g. IHE);
 2. For taking full advantage from this testing technology, the OpenNCP "cooked" a "How to use" manual (<https://openncp.atlassian.net/wiki/x/BgDEAQ>);
3. New artifacts were introduced on epsos-openatna (Please see issue - OpenATNA should build two different WAR artifacts Closed)
 1. openatna-web-all: War contains both OpenATNA Service and Log Viewer
 2. openatna-web-service: War contains only OpenATNA Service
 3. openatna-web-web: War contains only OpenATNA Log Viewer

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6.2.13 2.1.0 (Cold Release) Release Changelog and Notes

<https://openncp.atlassian.net/wiki/display/ncp/2.1.0+Release+Changelog+and+Notes>

Release date: December 17th, 2013 (GOLD release for epSOS)

Included components:

- eu.europa.ec.joinup.ecc.epsos-util 1.1.0
- eu.europa.ec.joinup.ecc.epsos-data-model 1.1.0
- eu.europa.ec.joinup.ecc.epsos-audit-manager 4.2.0
- eu.europa.ec.joinup.ecc.epsos-transformation-manager 3.1.0
- eu.europa.ec.joinup.ecc.epsos-defaultpolicymanager 1.1.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-integration-test 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-client-connector 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xca-es-client 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xcpd-ws-client 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-client.epsos-xdr-ws-client 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-client-consumer 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-pt-utils 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-interface 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-nc-mock-it 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-ws-server 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xca-ws-server-impl 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xcpd-ws-server-impl 3.2.0
- eu.europa.ec.joinup.ecc.epsos-protocol-terminators.epsos-ncp-server.epsos-xdr-ws-server-impl 3.2.0
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool 2.1.0
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool.epsos-xsltransformer 2.1.0
- eu.europa.ec.joinup.ecc.epsos-cddisplaytool.epsos-tsamexporter 3.0.2
- eu.europa.ec.joinup.ecc.epsos-cdutils.epsos-cdutils 1.0.1
- eu.europa.ec.joinup.ecc.openncp-portal 2.1.0
- eu.europa.ec.joinup.ecc.epsos-openatna.epsos-openatna 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-anom 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-archive 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-audit 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-jaxb 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-net 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-report 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web-all 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web-service 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.openatna-web-web 2.0.1


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- eu.europa.ec.joinup.ecc.epsos-openatna.syslog 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.syslog-core 2.0.1
- eu.europa.ec.joinup.ecc.epsos-openatna.syslog-mina 2.0.1

Main changes:

In this version was implemented:

1. Support for a NEW epSOS 2 Service: Medication Related Overview (MRO)
 1. The overall purpose to be achieved by this service is to enable a foreign HCP to review the medical information of a patient consulting her, thereby securing an updated and more safe further treatment of the patient.
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 1. Powerful tool and mechanism that empower OpenNCP technology adopters with testing technology that can improve Quality Assurance tasks as well reduce effort in reporting conformance evidences (e.g. IHE);
 2. For taking full advantage from this testing technology, the OpenNCP "cooked" a "How to use" manual (<https://openncp.atlassian.net/wiki/x/BgDEAQ>);
3. New artifacts were introduced on epsos-openatna (Please see issue **OP-16** - OpenATNA should build two different WAR artifacts Closed)
 1. openatna-web-all: War contains both OpenATNA Service and Log Viewer
 2. openatna-web-service: War contains only OpenATNA Service
 3. openatna-web-web: War contains only OpenATNA Log Viewer

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6.3 OpenNCP Installation Manual

<https://openncp.atlassian.net/wiki/display/ncp/OpenNCP+Installation+Manual>

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- [2. Obtain artifacts](#)
- [3. Adjust configuration parameters](#)
 - [3.1 Configuration Manager Database](#)
 - [3.2 NCP First-Time Configuration Utility](#)
- [4. Install and setup components](#)
 - [4.1 TRC-STIS](#)
 - [4.2 TSL-Sync](#)
 - [4.3 TSAM-Sync](#)
 - [4.4 Transformation Synchronization Access Manager \(TSAM\)](#)
 - [4.5 Transformation Manager \(TM\)](#)
 - [4.6 Automatic Data Collector \(eADC\)](#)
 - [4.7 Audit Repository \(OpenATNA\)](#)
 - [4.8 Server Side \(NCP-A\)](#)
 - [4.9 Client Side \(NCP-B\)](#)
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 - [4.10.1 OpenNCP Portal](#)
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- Attachments:5
- Added by [Marcelo Fonseca](#), last edited by [Marcelo Fonseca](#) on Feb 05, 2013 ([view change](#))


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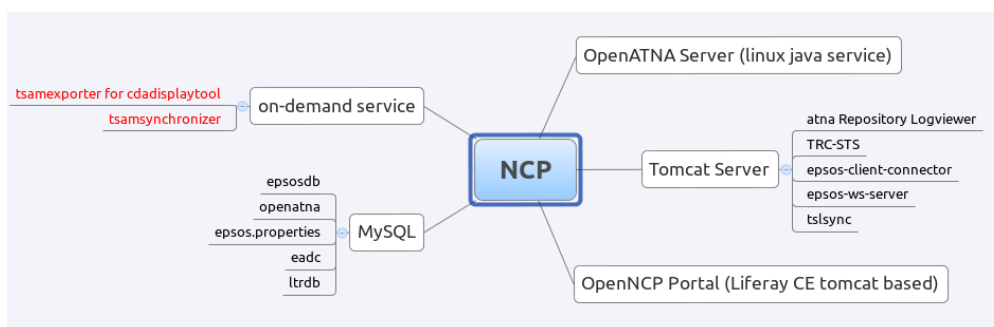


The main goal of this page is to provide an installation manual for new OpenNCP adopters.

It tries to cover all possible setup and configuration operations and it can be used not only as a step-by-step guide but also as a supporting guide to install a certain component - you can check the table of contents on the right side of the page.

Please feel free to leave suggestions or expose your doubts at the bottom of the page.

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1. Setup application server

The software components are able to run on all Java application servers, we recommend you to install them at an **Apache Tomcat** instance.


You can download it at <http://tomcat.apache.org/> and you may use the most recent version.

To perform the installation of the server you may also follow this instructions: <http://tomcat.apache.org/tomcat-7.0-doc/setup.html> (For Apache Tomcat 7.0)

2. Obtain artifacts

In order to install OpenNCP, you must obtain the following artifacts (**Please use the last versions for each component**):

- TRC-STS (War): <https://joinup.ec.europa.eu/nexus/content/repositories/releases/eu/europa/ec/joinup/ecc/epsos.TRC-STS/>
- TSL-Sync (War): <https://joinup.ec.europa.eu/nexus/content/repositories/releases/eu/europa/ec/joinup/ecc/epsos-tslutils/epsos-tsl-sync/>
- TSAM-Sync (Jar): <https://joinup.ec.europa.eu/nexus/content/repositories/releases/eu/europa/ec/joinup/ecc/epsos-tsam-sync/>
- Server Side - NCP-A (War): <https://joinup.ec.europa.eu/nexus/content/repositories/releases/eu/europa/ec/joinup/ecc/epsos-protocol-terminators/epsos-ncp-server/epsos-ws-server/>
- Client Side - NCP-B (War): <https://joinup.ec.europa.eu/nexus/content/repositories/releases/eu/europa/ec/joinup/ecc/epsos-protocol-terminators/epsos-ncp-client/epsos-client-connector/>
- OpenATNA (Jar): <http://code.google.com/p/epsos-common-components/source/checkout?repo=openatna> (OpenNCP custom version)
- Portal (War): <https://joinup.ec.europa.eu/nexus/content/repositories/releases/eu/europa/ec/joinup/ecc/openncp-portal/>
-

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3. Adjust configuration parameters

First, to hold all your configuration files, you can first start to create a folder and name it "**epsos-configuration**" for instance. (You can take a quick look at the last step of the guide to see a recommended folder structure for the NCP)

Then you will need to associate the folder location to a environment variable, called **EPSOS_PROPS_PATH**, you can do it with the following command:

```
?
exportEPSOS_PROPS_PATH=/opt/epsos-configuration/
```

For more information about environment variables, you can check: <https://help.ubuntu.com/community/EnvironmentVariables> for Ubuntu, but that can be applicable to other distros.


Next, you may download and unzip the content from the following file to the newly created folder.

11075686	Are you sure you	You are not perm	false	epsos-configuration	false		
display							
ZIP	Archive	epsos-configuration.zip	430 kB	Marcelo Fonseca	Jan 30, 2013	None	Content of fresh install properties folder
<u>Name</u>	<u>Size</u>	<u>Creator</u>	<u>Creation Date</u>	<u>Labels</u>	<u>Comment</u>		
true							

Folder content:

```
?
/epsos-configuration
|-- /EADC_resources
|-- /TM_resources
|-- configmanager.hibernate.xml
|-- eadc-ds.xml
|-- pn-oid.xml
|-- ISO_3166-1.xml
|-- tm.properties
+-- tsam.properties
```

All the provided files will be used and configured in this manual.

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At this step you need to add entries to your country at **pn-oid.xml** and **ISO_3166-1.xml**

3.1 Configuration Manager Database

In order to hold the biggest part of your NCP configuration properties (i.e. countries endpoints, truststore locations, and others) you will need to create a database and an hibernate configuration file.

To do that, you may follow the "**Setup**" section, available at [Configuration Manager](#).

(If you already have an existent setup with the old configuration files - epsos.properties and others - you can also follow the "**How To Migrate**" section. If you are doing a fresh install please ignore this line.)

3.2 NCP First-Time Configuration Utility

To help you on the process of setting up you NCP, you can use a special utility to populate your database with the basic required parameters, related to your scenario.


To do that you just need to fill a provided unfilled properties file, according to your scenario and execute the utility Jar.

You must have your EPSOS_PROPS_PATH defined and the properties database (with no tables) already created, before using this utility.

You can download the utility, together with the properties file here:

11075686	Are you sure you	You are not perm	false	OpenNCP-config	false			
display								
ZIP	Archive	OpenNCP-7.22 configuration-utility.zip	MB	Marcelo Fonseca	Jan 30, 2013	None	OpenNCP	first-time configuration utility
<u>Name</u>	<u>Size</u>	<u>Creator</u>	<u>Creation Date</u>	<u>Labels</u>	<u>Comment</u>			
true								

Once you have run the utility with success, you may delete the properties file, the jar and check if the database was correctly filled, using the appropriate database admin tool.

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4. Install and setup components

4.1 TRC-STS

The main purpose of this component is to generate and return security assertions on demand. It is a war application that will run also on your Application Server instance.

In order to install it, you will need to obtain the artifact, named **epsos-TRC-STS-X.X.X.war**, then it is advised to rename it to just **TRC-STS.war**.

Next you can just deploy it in your Application Server instance. You can follow these instructions for Tomcat 7: <http://tomcat.apache.org/tomcat-7.0-doc/deployer-howto.html>

After that, you can check the property "**secman.sts.url**" at your ncp properties database to see if it matches the installed application URL.

4.2 TSL-Sync

This component will connect to the central services and fetch all the other countries configuration elements (such as endpoints) to your local properties database, together with all the certificates.

Before running this component, make sure that you already have your trust store and key store already created (under your EPSOS_PROPS_PATH, i.e: \$EPSOS_PROPS_PATH/cert), together with their passwords and alias.

In order to install this component, you need to download the war file, following the link in **step 2** and deploy it to your server.

Then, according to your configuration. present in the properties database, it will fetch all the central services informations and sync them to your key stores and properties database.


This tool will execute every 5 seconds, you can adjust this time by editing this file, present at the deploy dir:

```
<application server root>/webapps/epsos-tsl-sync/WEB-INF/classes/quartz_data.xml
```

4.3 TSAM-Sync

The TSAM-Sync component will connect to HealthTerm repository to fetch your country terminologies and load them in your LTR database.

This application is a standalone jar that can be placed in custom location, together with a required group of folders.

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For instance:

```
?
tam-sync-custom-location
|-- conf
| |-- epsos.properties
| |-- hibernate.cfg.xml
| |-- log4j.xml
| |-- logging.properties
| +-- settings.properties
|-- lib
| +-- jdbc-connector.jar
|-- tsam-sync.jar
+-- sync.sh
```

The **conf** folder will contain several configuration files that you need to adjust to your scenario. Please pay special attention to:

- **hibernate.cfg.xml**: where you will place your database configuration
- **settings.properties**: where you will define your credentials to access HealthTerm servers

The **lib** folder will contain your JDBC drivers.

In the root folder you will find **sync.sh**, which is a script to help you pass the required parameters to the jar execution.

When you have set up the folder structure you should download the jar from the repository mentioned in step 2 and place it at the folder root - also you may adjust the **sync.sh** script to match the jar name.


If you do not have the LTR database already, you can just create it in the same way you create the properties database. Then adjust the TSAM-Sync configuration, present in the conf folder and run the jar. It will create your tables and fill the database with the terminologies.

You can download the folder contents here:

11075686	Are you sure you	You are not perm	false	tsam-sync-folder	false
display					

ZIP Archive [tsam-782 sync-folder.zip](#) 782 kB [Marcelo Fonseca](#) Jan 30, 2013, None This file contains the folder content and structure for TSAM-Sync

Name	Size	Creator	Creation Date	Labels	Comment
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true

4.4 Transformation Synchronization Access Manager (TSAM)

In order to TSAM work properly, you should setup the **tsam.properties** file, already provided and located under your **EPSOS_PROPS_PATH**. You can find an example bellow:


tsam.properties Configuration File

[expand source?](#)

```

1 #####
2 #####
3 # #
4 # #
5 # TSAM configuration #
6 # #
7 # #
8 #####
9 #####
10 #####
11 ##### Languages #
12 ##Code of a language, which country B uses for designations in pivot
13 documents created in
14 ##translation (local language of a country)
15 translationLanguage=pt-PT
16 ##Code of a language, which country A uses for designations in pivot
17 documents created in
18 ##transcoding (epSOS defines it as English)
19 transcodingLanguage=en
20 #####
21 ### Database Setup #
22 ## MySQL DB URL
23 ltr.db.url=jdbc:mysql://hostaddress:3306/tsam?useUnicode=true&characterE
24 ncoding=UTF-8
25 ## DB Credentials
26 ltr.db.user=username
27 ltr.db.password=password
28 ## Driver Setup

```


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```

2 ltr.hibernate.dialect=org.hibernate.dialect.MySQL5Dialect
0 ltr.db.driverClass=com.mysql.jdbc.Driver
2
1
2
2
2
2
3

```

Give special importance to:

Languages

- **translationLanguage:** here you will place your country language;
- **transcodingLanguage:** this property will hold the country A language, defined as "en" in epSOS;

Database Setup (**you will need to fill these parameters according to the database you created in step 4.4**)

- **ltr.db.url:** will hold the link to the database system, where the LTR database will be placed;
- **ltr.db.user:** the database username;
- **ltr.db.password:** the database password;
- **ltr.hibernate.dialect:** the dialect used for DB connections;
- **ltr.db.driverClass:** the driver class used to establish the connection;

After setting up your config file for TSAM, please add the required library for DB connection, at server lib folder.

4.5 Transformation Manager (TM)

Also for TM work properly, you should setup the **tm.properties** file, also provided and located under your **EPSOS_PROPS_PATH**.

It probably will suit your needs with the default values, but you can always take a look at it.

You can find an example bellow:

tm.properties

[expand source?](#)

```

1 #####
2 #####
3 # #
4 # #

```



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```
5 # TM configuration #
6 # #
7 # #
8 #####
9 #####
10 ##### Element
11 List Configuration #
12 ##Flag indicating that for identification of coded elements configurable
13 list of
14 ##elements should be used.
15 tm.configurableelementidentification=false
16 ## Coded Element Processing
17 tm.codedelementlist.enabled=false
18 ## Actual path to coded_element_list.xml file
19 tm.codedelementlistpath=TM_resources/coded_element_list.xml
20 ##### Basic CDA
21 Schema Configuration #
22 ## Actual path to schema file
23 tm.schemafilepath=TM_resources/schema/CDA_extended.xsd
24 ## Schema validation enabled
25 tm.schema.validation.enabled=true
26 #####
27 Schematron Configuration #
28 ## Actual path to patientSummarySchematron file
29 tm.schematron.path.patientsummary=TM_resources/schematron/PatientSummary
30 .sch
31 ## Actual path to ePrescriptionSchematron file
32 tm.schematron.path.eprescription=TM_resources/schematron/ePrescription.s
33 ch
34 ## Actual path to eDispensationSchematron file
35 tm.schematron.path.edispensation=TM_resources/schematron/eDispensation.s
36 ch
37 ## Actual path to schematron XSL directory
38 tm.schematron.path.xsldir=TM_resources/xsl
39 ## Schematron validation enabled
40
```



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```
6 tm.schematron.validation.enabled=false
2 #####
7 Document Type epSOS Codes #
2 ## epSOS code for patient summary CDA document
8 tm.documenttype.patientsummary=60591-5
2 ## epSOS code for ePrescription CDA document
9 tm.documenttype.eprescription=57833-6
3 ## epSOS code for eDispensation CDA document
0 tm.documenttype.edispensation=60593-1
3 ##### Audit
1 Trail Configuration #
3 ## Audit Trail enabled/disabled
2 tm.audittrail.enabled=false
3 ## Audit Trail Event Log - The number of transaction including the
3 epsos- prefix
4 tm.audittrail.transactionnumber=epsos-94
3 ## Audit Trail Event Log - The IP Address of the target Gateway
5 tm.audittrail.targetip=
6 ## Audit Trail Audit Service - The facility number according to log4j
3 tm.audittrail.facility=13
7 ## Audit Trail Audit Service - The severity of the message
3 tm.audittrail.severity=2
8
3
9
4
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```

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4.6 Automatic Data Collector (eADC)

To setup and install the Automatic Data Collector you can follow the instructions present on the following page:

[Setup eADC in OpenNCP](#)

4.7 Audit Repository (OpenATNA)

In order to install and setup the OpenATNA you may download and build the OpenNCP custom version, following the link presented in step 2.

Then to perform the installation of the generated artifacts, you may follow the official instructions, available at: <https://www.projects.openhealthtools.org/sf/go/page1071>


4.8 Server Side (NCP-A)

At this moment you probably have all the configurations finished and correctly adjusted. So in order to install the Server Side (NCP-A) you will need to obtain the artifact named **epsos-ws-server-X.X:X.war**, as explained in **Step 2**.

It is advised to symlink (making a symbolic link) to epsos-ws-server.war from the original versioned artifact, thus making it easier to discern versions and ease upgrades. Then you should deploy it on your Tomcat instance. (To deploy the application you may follow this instructions: <http://tomcat.apache.org/tomcat-7.0-doc/deployer-howto.html> for Tomcat 7).

4.9 Client Side (NCP-B)

For client side it is used the same approach used in Server side. You should download the artifact named: **epsos-client-connector-X.X.X.war**, as explained in **Step 2**.

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It is advised to symlink (making a symbolic link) to epsos-ws-server.war from the original versioned artifact, thus making it easier to discern versions and ease upgrades. Then you should deploy it on your Tomcat instance. (To deploy the application you may follow this instructions: <http://tomcat.apache.org/tomcat-7.0-doc/deployer-howto.html> for Tomcat 7).

4.10 OpenNCP Portal or epSOS-Web

4.10.1 OpenNCP Portal

To install the OpenNCP portal, you may follow the provided instructions, available at:

[Installing Liferay Portal](#)

[Configuring portal](#)

4.10.2 epSOS-Web

[epSOS-Web Get Started](#)


5. Final Considerations

After performing the installation of all components you may end with this sample folder setup (considering that we placed all the files under the **/opt** folder)

```

/opt
|-- /apache-tomcat-7.X.XX
| |-- /bin
| |-- /conf
| |-- /logs
| |-- /temp
| |-- /work
| +-- /webapps
| |-- /epsos-client-connector
| |-- /epsos-ws-server
| |-- /epsos-tsl-sync
| |-- /TRC-STS

```

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```

| +-- /atna
|-- /tsam-sync
| |-- /conf
| | |-- epsos.properties
| | |-- hibernate.cfg.xml
| | |-- log4j.xml
| | |-- logging.properties
| | +-- settings.properties
| |-- /lib
| | +-- jdbc-connector.jar
| |-- tsam-sync.jar
| +-- sync.sh
+-- /epsos-configuration
|-- /EADC_resources
|-- /TM_resources
|-- configmanager.hibernate.xml
|-- eadc-ds.xml
|-- pn-oid.xml
|-- ISO_3166-1.xml
|-- tm.properties
+-- tsam.properties

```