



Service Unit Terminological Services

Introduction to Ontoserver Syndication

Presented by Muhammad Adnan

mii-termserv.de

team@mail.mii-termserv.de

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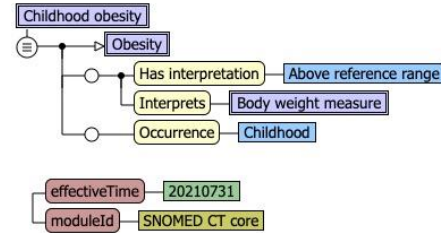
Interoperability! A Solution

Terminology Use: **Problem**

- Each clinical providers use their own interpretation of a patient condition.
- Multiple type of documentation.
- Several terms used to describe Patient condition.
- Cause confusion at the end!

Bigger Picture: How to make this communication interoperable?

- By using Standard Code and Code Systems.
- Independent of language.
- Consistent across systems.



What is Ontoserver?

Turnkey, high performance HL7 FHIR Terminology Service

- Access to all FHIR CodeSystems, SNOMED CT, and LOINC
- Support all those operations on
 - FHIR Resources
 - LOINC
 - SNOMED CT {with support of ECL (Expression Constraint Language)}

Ontoserver API examples:

<https://documenter.getpostman.com/view/634774/TVsuBmc9>

Implementation examples: <https://aehrc.github.io/fhir-ts-exemplars/>

Deployment at University Hospital Cologne

Local Deployment

- Pair of Docker containers
- Ontoserver, Database
 - (& http caching proxy)
- Read/Write Access
- Internal Authorization via KeyCloak

Local Deployment at University Hospital Cologne

HOSPITAL INTERNAL DMZ

VIRTUAL DOCKER HOST



Nginx

HTTP



Terminology
Server

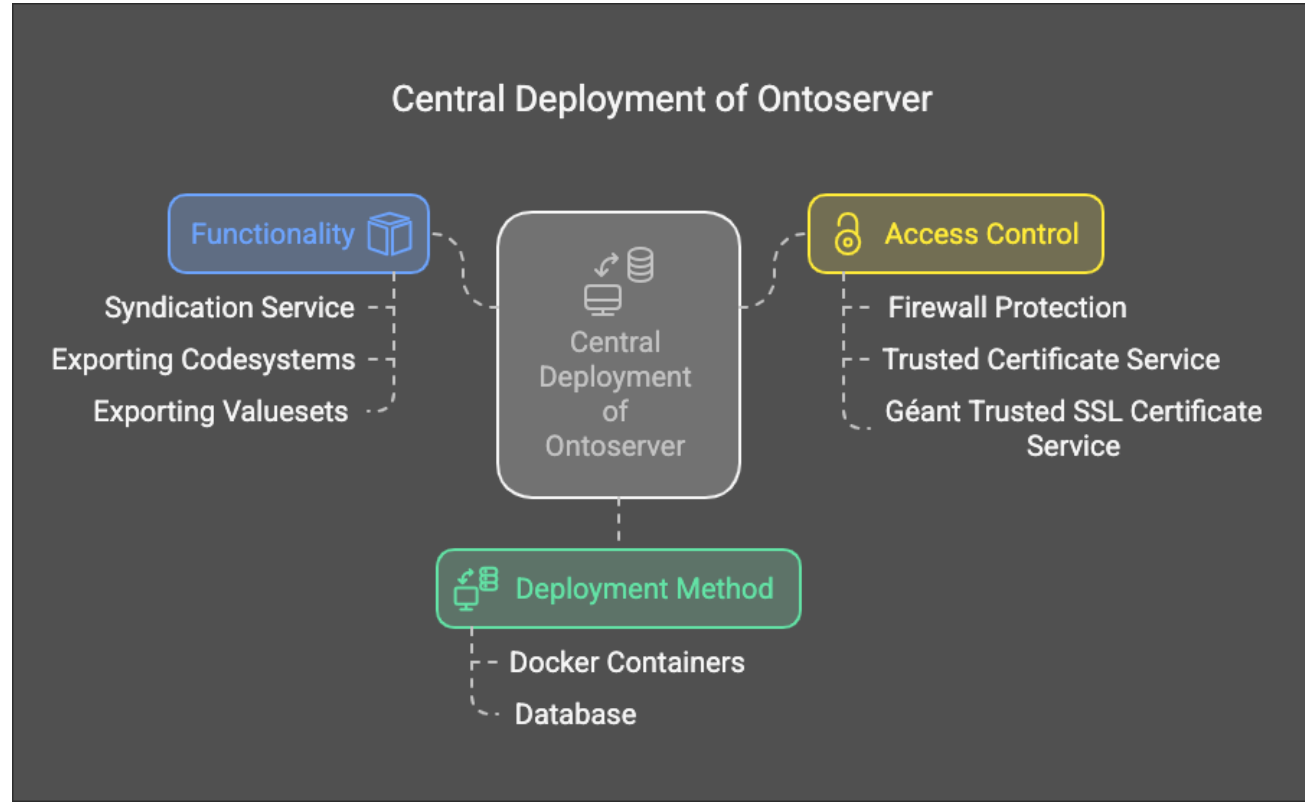
"TCP/IP"



PostgreSQL

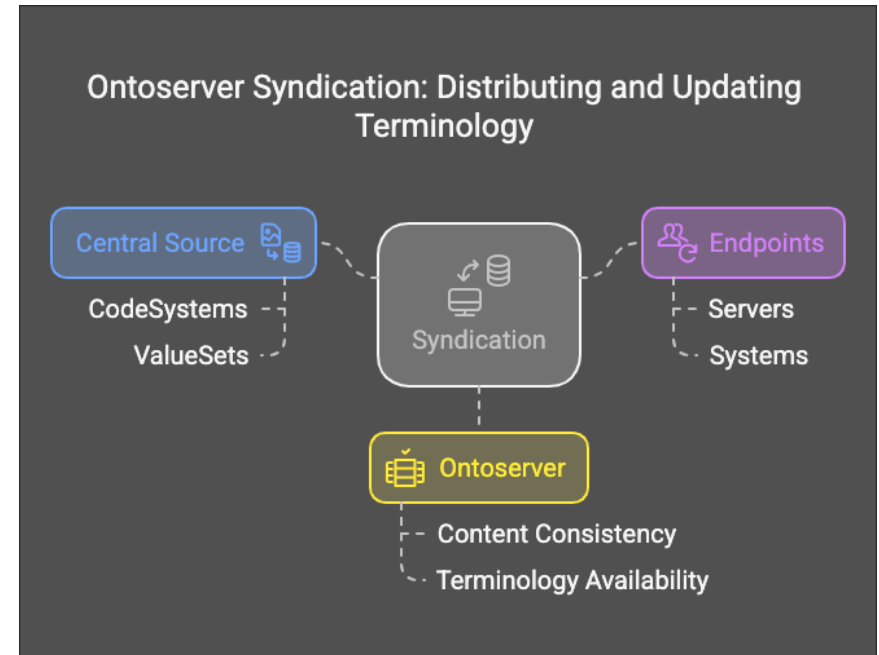
Central Deployment at SU-TermServ

- Deployment in Cologne MeDIC
- Pair of Docker containers
- Ontoserver, Database
 - (& http caching proxy)
- Read-Only access
- Géant Trusted Certificate required



Syndication

- Definition:
 - Syndication refers to the process of distributing and updating content from a central source to multiple endpoints.
- Ontoserver can advertise that it allows other servers to fetch CodeSystems and ValueSets from it
- These are then made available for the down-stream servers
- Do note that you trigger syndication manually

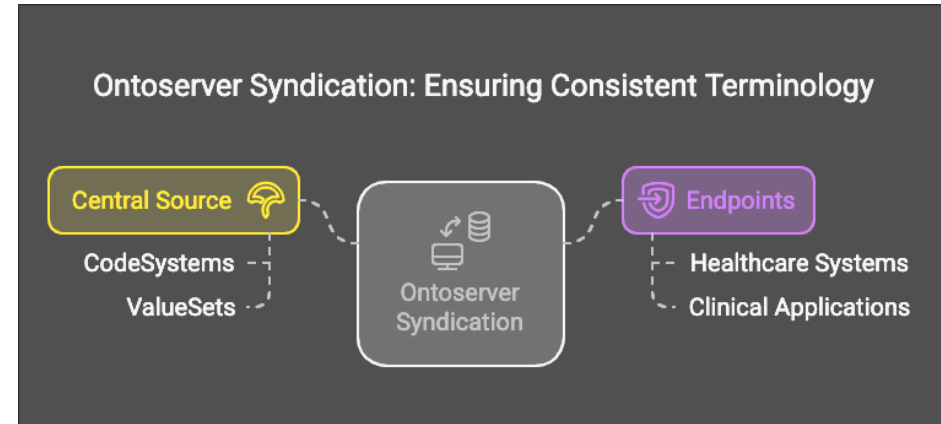


Key Features of Syndication

- **Syndication API:**
 - Ontosever's Syndication API allows it to connect to upstream syndication feeds and import terminology content. This API supports various FHIR resources and binary indexes, making it easy to deploy and access the latest terminologies.
- **Importing and Updating Terminologies:**
 - With Ontosever, you can import content from syndication sources using its built-in syndication client. This process can be configured to occur at startup, manually, automatically when new content is available, or on a schedule.
- **Configuring Syndication Feeds:**
 - Administrators can configure Ontosever with multiple upstream syndication feeds. These feeds can be set up to require authentication, ensuring secure and controlled access to terminology updates.

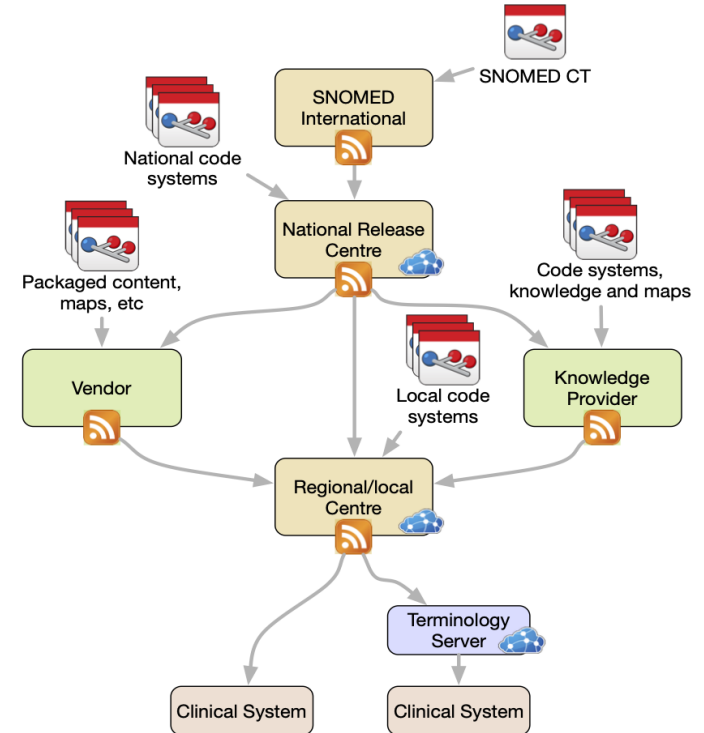
Why syndicate? Benefits?

- **Ensuring Consistency and Accuracy:**
 - By using syndication, Ontoserver ensures that all connected systems have consistent and accurate terminology data, reducing the risk of errors and discrepancies.
- **Reducing Administrative Overhead:**
 - Syndication automates the process of updating terminologies, significantly reducing the administrative burden on healthcare providers and IT staff.
- **Enhancing Interoperability:**
 - With up-to-date terminologies, Ontoserver enhances interoperability between different healthcare systems, facilitating seamless data exchange and improving patient care



Configuring Syndication Feed!

- **Initial setup of up-stream (source):**
- **- Feed location**
atom.syndication.feedLocation=file://syndication.xml
- **Enable security**
 - Ontoserver.security.enabled
 - Ontoserver.security.readOnly.fhir=true
 - Ontoserver.security.readOnly.api=true
 - Ontoserver.security.readOnly.synd=true
- **Config memory**
 - JAVA_OPTS=-Xmx16G
- **Syndication base URLs**
 - Ontoserver.sysd.base={{source_url}}/synd
 - Ontoserver.fhir.base={{source_url}}/fhir
- **Image credit:** <https://ontoserver.csiro.au/docs/6/syndication.html>



Contact details!

- Reach out to us in case of support or general inquiries.
- Our website address is:
 - <https://mii-termserve.de/>
- Write to us @
 - team@mail.mii-termserve.de
- Ping us @ Zulip stream
 - MII-Zulip Stream SU-TermServ