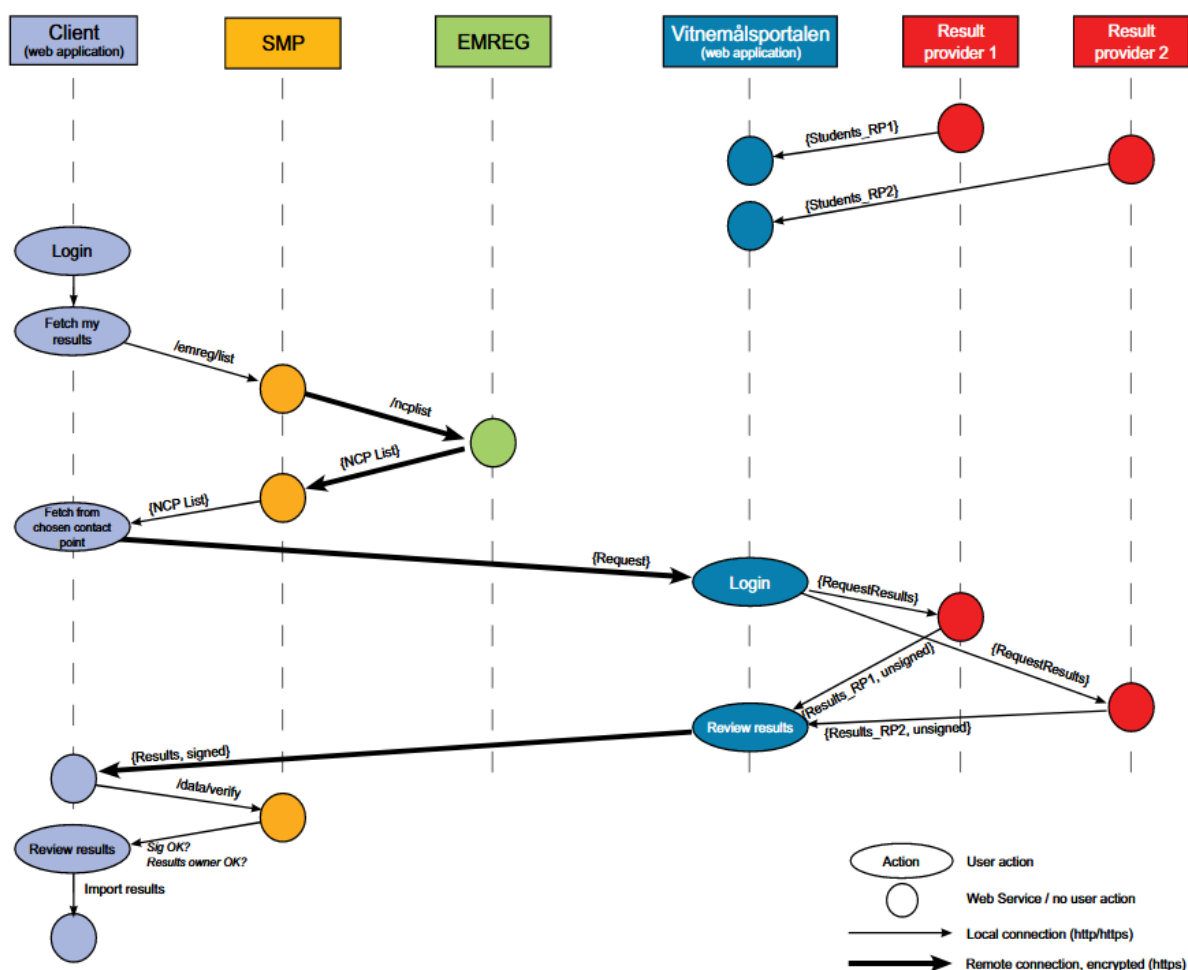
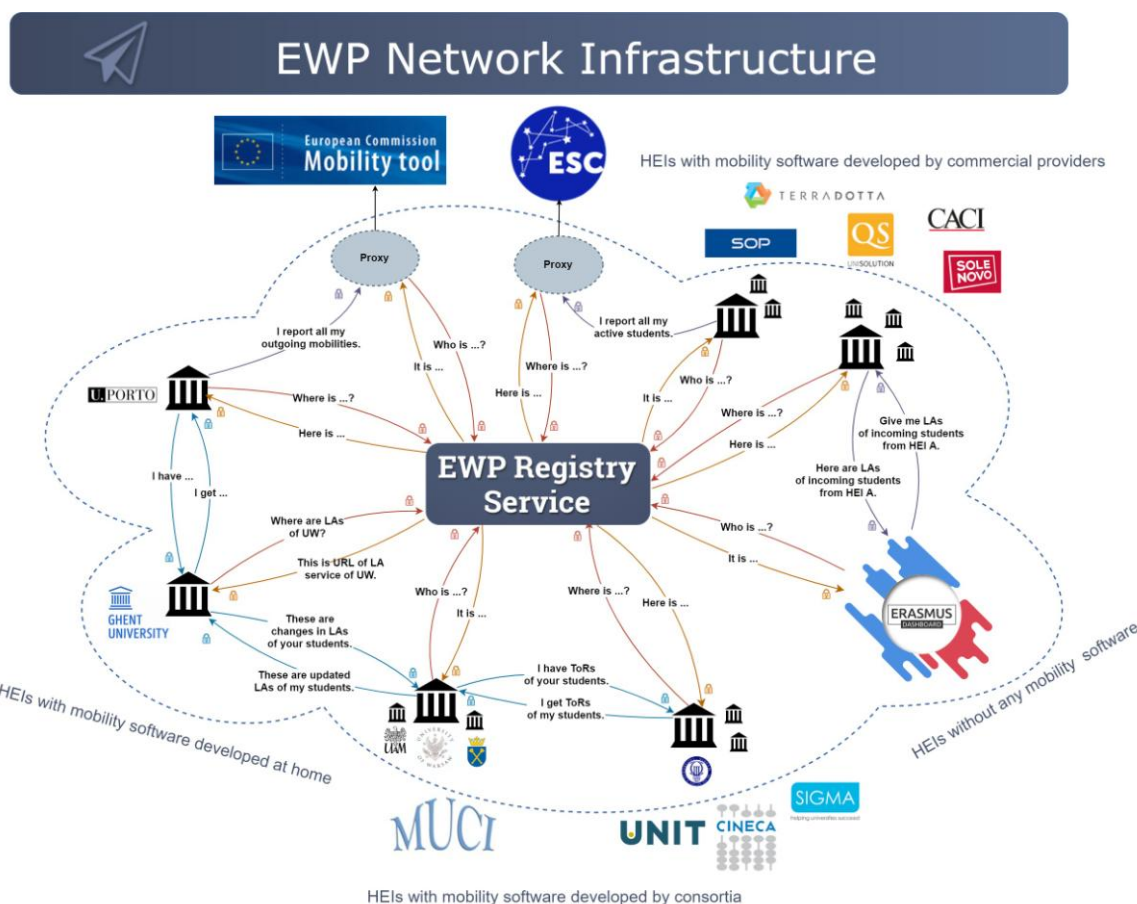


EMREX Registry in the EWP Network

University of Warsaw, UNIT

Architecture of the EMREX Network – current solution





Design

1. The main goals for the change are: to support one registry for the higher education community, to solve the problem of registered EMREX clients and expiring NCP certificates. Shortly speaking: to industrialise the registry.
2. The main assumption is to **minimize the necessary changes**, especially for SMP and NCP developers. In the proposed design only EMREX Registry (in short: EMREG) will have to change – static file will be replaced by the format converter (small application).
3. **Each NCP hosts its own manifest file** (see examples below). There is only one **<host>** element in the manifest, which describes one NCP (either central for the country – like in Norway, or local for the institution inside the country – like in Poland). There are two APIs served at this host: **discovery** and **emrex-ncp**.
4. Such approach is compliant with planned changes for the EWP Network (one host per manifest file).
5. Such approach makes **governance easier** – every country/institution is responsible for its manifest file with its own data.
6. The manifest file shall include a single **certificate**, which can be easily replaced since it is stored in a local file (in the previous solution it had to be sent to the EMREG administrator). However we have to remember that it may take 5-15 minutes before the EWP registry starts serving this new certificate in the EWP Network. During that time NCP will use the new certificate, but the clients will have the old one. We propose two solutions:

- a. At the time a connection is received from a client, the NCP checks what certificate is being served and tries to use that one to sign the XML document.
- b. NCP stops processing new requests at the NCP until the new certificate is made available in the Network; a message is shown to the user.

To allow for a better solution in the future, where the converter application will be phased out and the clients will need to be rewritten anyway, the manifest file does allow for multiple certificates for each NCP. If this is the case, the converter application will always choose the first one on the list, and that is the one the old clients will be using.

7. URLs of all these manifest files are stored in the EWP Registry so the EWP Registry can read data from them and add information about NCPs to the catalogue served upon requests of the EWP clients.
8. The **EMREX Registry** contacts the EWP Registry, gets the catalogue, reads <emrex-ncp> elements, creates the list of NCPs in the old JSON style, sends it in response to the request.
9. An **EMREX Client** sends requests to the EMREX Registry, as before.
10. Eventually the EMREX Registry will be removed and the EMREX clients will get data straight from the EWP Registry. For that to work a client software will have to change.

Implementation

1. The new EMREG, converting the data from the EWP catalogue to the EMREX JSON format will be developed by the University of Warsaw.
2. Clients (that we know of) will be notified of the address of the new EMREG.
3. The old EMREG will fetch data transparently from the new one, instead of a local file, until it is phased out.

Policy

1. EMREX EC has to solve the problem of accepting new NCPs to the EMREX Network according to the new rules planned for the EWP Registration Portal.

```

<?xml version="1.0" encoding="UTF-8"?>
<manifest
  xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-discovery/tree/stable-v4"
  xmlns:ewp="https://github.com/erasmus-without-paper/ewp-specs-architecture/... "
  xmlns:r="https://github.com/erasmus-without-paper/ewp-specs-api-registry/tree/stable-v1">
  <host>
    <ewp:admin-email>admin@uw.edu.pl</ewp:admin-email>
    <r:apis-implemented>
      <discovery
        xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-discovery/... "
        version="5.0.0">
          <url>https://usosweb.uw.edu.pl/manifest.xml</url>
        </discovery>
      <emrex-ncp
        xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-emrex-ncp/blob/... "
        version="1.0.0">
          <url>https://usosweb.uw.edu.pl/ncp_endpoint.php</url>
          <name> University of Warsaw</name>
          <country-code>PL</country-code>
          <institution> University of Warsaw</institution>
          <certificate>
            JRynTZSUFXZk .....
          </certificate>
        </emrex-ncp>
      </r:apis-implemented>
    </host>
  </manifest>

```

```

<?xml version="1.0" encoding="UTF-8"?>
<manifest
  xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-discovery/tree/stable-v4"
  xmlns:ewp="https://github.com/erasmus-without-paper/ewp-specs-architecture/blob/... "
  xmlns:r="https://github.com/erasmus-without-paper/ewp-specs-api-registry/tree/stable-v1">
  <host>
    <ewp:admin-email>admin@vitnemalsportalen.no</ewp:admin-email>
    <r:apis-implemented>
      <discovery
        xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-discovery/blob/... "
        version="5.0.0">
          <url>https://app.vitnemalsportalen.no/manifest.xml</url>
        </discovery>
      <emrex-ncp
        xmlns="https://github.com/erasmus-without-paper/ewp-specs-api-emrex-ncp/blob/... "
        version="1.0.0">
          <url>https://app.vitnemalsportalen.no/vp/init</url>
          <name> Norway registry</name>
          <country-code>NO</country-code>
          <certificate>
            NquXRM6jxU .....
          </certificate>
        </emrex-ncp>
      </r:apis-implemented>
    </host>
  </manifest>

```