Running Content in a Remote Portal

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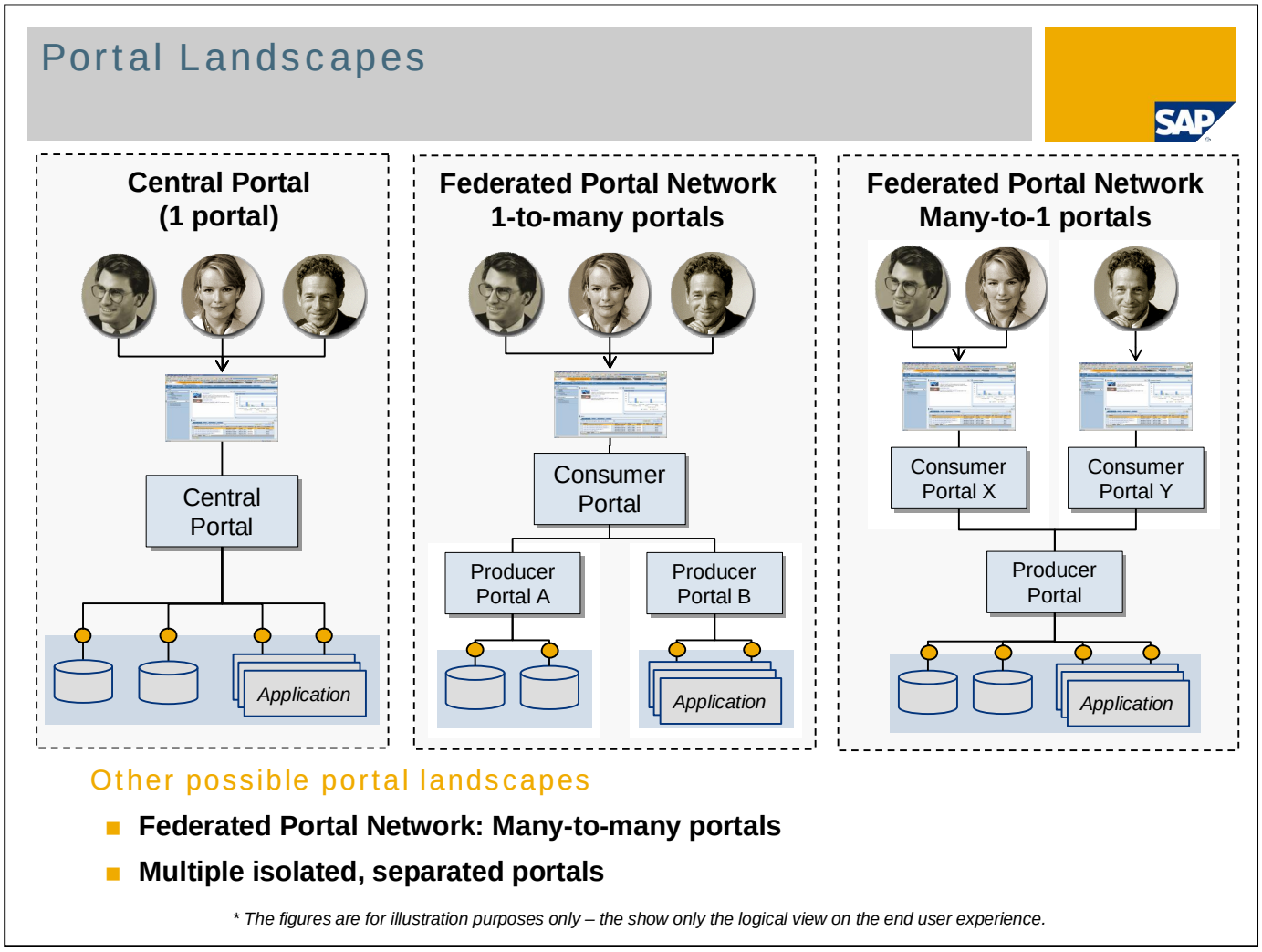


Within SAP NetWeaver 7.0 (2004s) SPS 10 and above FPN is available, which allows to set up different portal landscapes.

Like in previous releases an important landscape option is to create one central portal. All users connect to this portal and all content and connections to backend systems are available there. If this architecture is possible suiting the organizational and technical requirements, it offers a lean setup and central administration.

However, if this architecture does not serve the needs of the company, the federated portal network is a configuration option that allows to create more complex landscapes in which portals can share content:

The most common setup for a federation would be setting up one central consumer portal serving as the entry point for all end users in your organization. It can link to content residing on multiple producer portals - they might contain portal content, access to backend systems and be administered by different authorities.

You could set up multiple consumer portals as access points for different groups, e.g. if you have different autonomous subsidiaries in your cooperation. If some content should be provided centrally, e.g. by headquarters, you can set up one central producer portal providing content for various consumers. Thus you don‘t have to copy this content to individual portals due to organizational requirements, but provide it only once centrally.

In theory, you could of course define a full network of portals, that means multiple consumer portals interacting with multiple producer portals. However, it is recommended to keep the landscape as „light“ as possible, since the administrative effort will increase with increasing complexity of the federation.

Of course, if you have multiple isolated portals within your organization that don‘t need to be integrated for business reasons, there is no requirement to set up a federation. It is still a valid setup to run multiple portals without any connection between them.

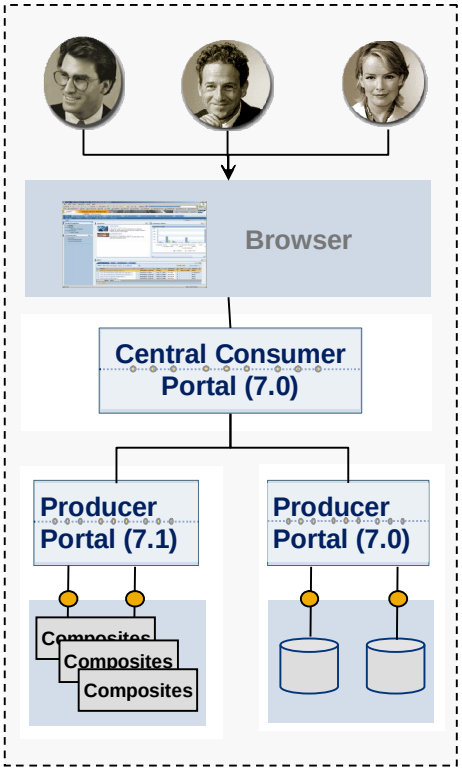
Something to mention here: Currently only direct producer – consumer relationships are supported. „Transitive content sharing“ or a multi-level federation such as: producer → consumer/producer → consumer is currently not working.

Federated Portal Network – Integrating CE

A federated portal network (FPN) allows organizations with multiple independent portals to share content between them.

- SAP NetWeaver 7.0 (2004s) can run on a stable version - the portal includes central content, like KMC and Business Packages. It is the central access point for end users.
- SAP NetWeaver 7.1 CE portal serves as the runtime for new composite applications.

Benefit: SAP NetWeaver CE can be updated independently. Its advanced applications can be integrated seamlessly for end users into the stable central corporate portal.



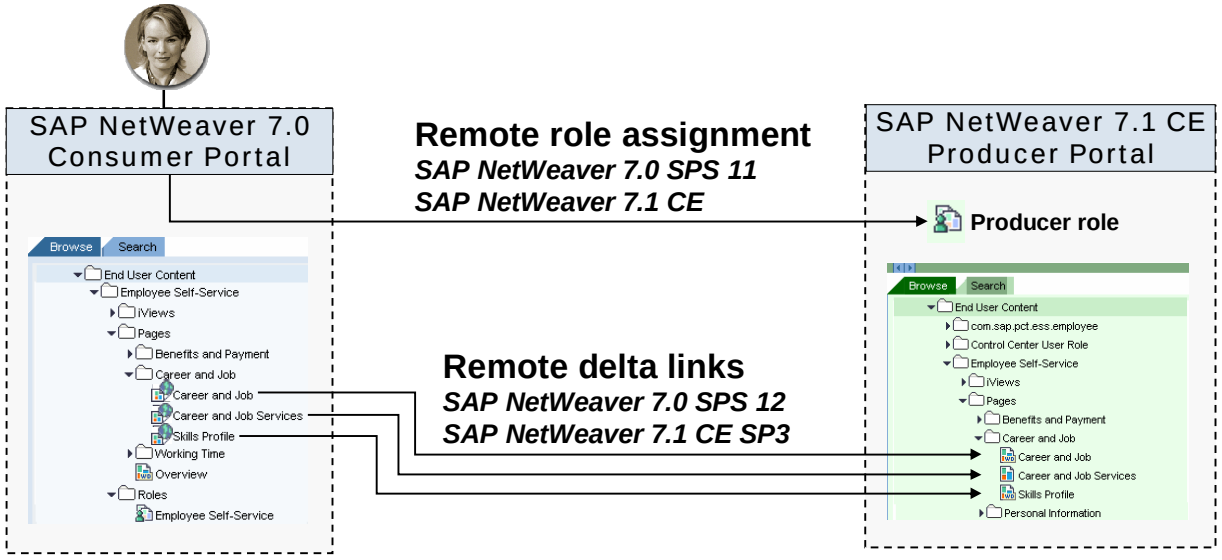
In the specific context of Composition Environment we can leverage the content sharing capabilities of FPN as well. You can operate 2 portals running on different codelines and share content between them.

The SAP NetWeaver 7.0 portal will usually operate as the leading portal in the landscape – the consumer portal. It includes most content like Business Packages (ESS, MSS or others) and Knowledge Management and Collaboration capabilities. It is the central access point for end user.

Nevertheless, the SAP NetWeaver 7.1 Composition Environment portal is necessary since it serves as the runtime for new composite applications. The CE portal will serve as the producer portal in a federation landscape and it‘s content can be integrated into the central content offering of the consumer portal. Thus the end user experience will be seemless although the content resides physically on different servers.

The SAP NetWeaver Composition Environment can be updated independent of the central consumer portal. On the producer portal you can run new composite applications (latest cutting edge technology on a frontrunner platform) and integrate them seemlessly for end users into the stable corporate portal.

Architecture: Content Usage Modes



Remote Role Assignment

Enables the SAP NetWeaver 7.0 administrator to assign complete roles offered by an SAP NetWeaver CE producer.

Remote Delta Links

Enables the SAP NetWeaver 7.0 consumer to embed remote portal content (iViews / Pages etc.) offered by an SAP NetWeaver CE producer into local content.

The Federated Portal Network supports 2 content sharing modes for the interaction between SAP NetWeaver 7.0 and SAP NetWeaver 7.1. Composition Environment:

Remote Role Assignment: All content creation and maintenance takes place on the producer portal – the CE portal. On the consumer portal the administrator would like to reuse the content as is without modifying it. With this content sharing mode, on the consumer portal you can assign remote roles to local users through standard user management user interfaces.

Remote Delta Links: Some content like iViews is residing on the CE portal. If you would like to integrate this content deeply into the content offering of the central SAP NetWeaver 7.0 consumer portal, Remote Delta Links offer options to do so. You can copy content (like iViews, pages …) from the remote CE producer portal and paste it as delta link into the portal content directory of the SAP NetWeaver 7.0 consumer portal.

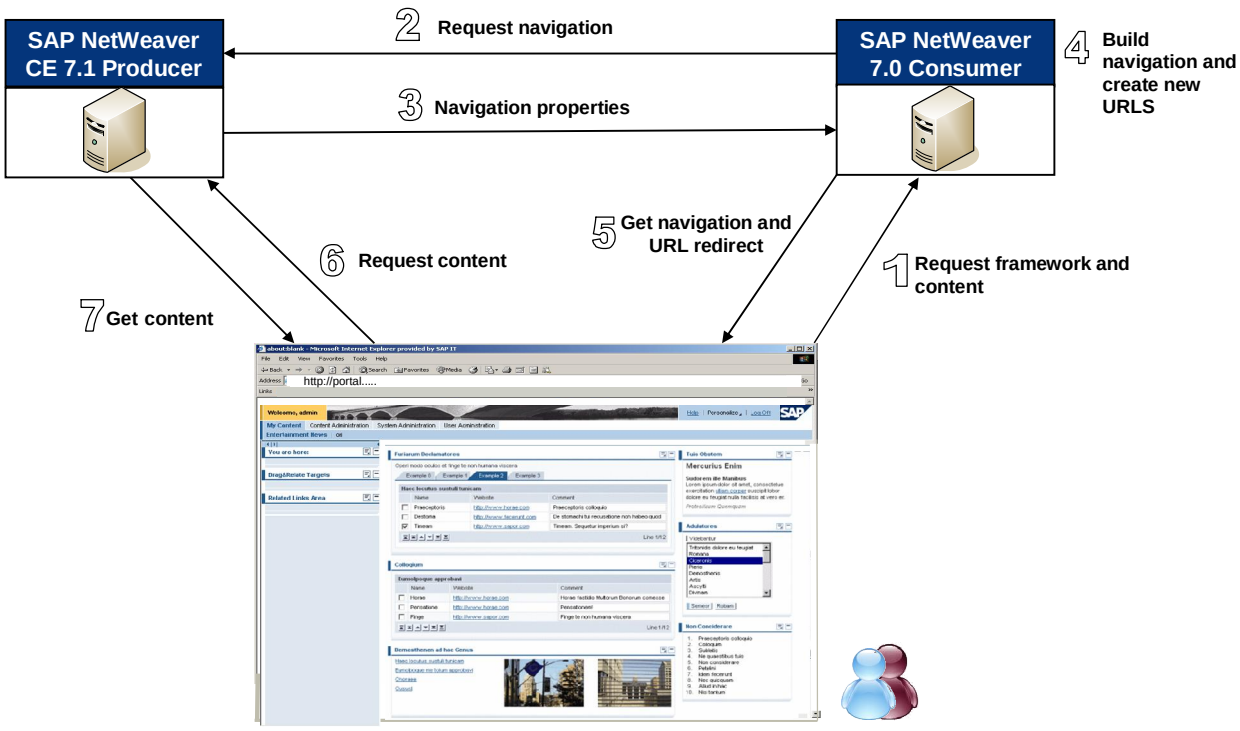
For the integration with CE the following SPS are applicable: Remote Role Assignment is working with SAP NetWeaver 7.0 SPS 11 and SAP NetWeaver 7.1 Composition Environment (SPS 0). Remote Delta Links are available with SAP NetWeaver 7.0 SPS 12 (patch #2) and SAP NetWeaver 7.1 Composition Environment SP3.

Remote Role Assignment – Facts

- **An SAP NetWeaver portal producer can offer complete roles to an SAP NetWeaver consumer.**
- **Role content is maintained on the producer.**
- **The navigation structure of the role is built on the consumer (top level navigation and detailed navigation) .**
- **Role content is executed on the producer.**
- **The remote roles are assigned to the consumer users using the standard Role Assignment tools.**
- **Remote Role Assignment is ideal in cases were no changes to the provided content are required.**
- **Merging Remote Roles is possible.**

With Remote Role Assignment you can integrate roles from the producer portal as is into a consumer portal. Thereby content is fully created and maintained on the producer portal. During runtime, the navigation structure will be built on the consumer portal – that comprehends both the top-level navigation as well as the detailed navigation. The major load is residing on the producer portal during runtime, since the portal content as well as the application are rendered and executed there. In order to integrate remote roles into the consumer portal, you can assign the roles to the consumer portal‘s user with the standard role assignment tools – the User Management UIs available in the portal. Usually, remote role assignment is ideal if you would like to use the content as is in the consumer portal and you don‘t require any changes locally. The only modification option is to merge remote roles for example with local roles. You can merge local only roles as well as remote roles – if you define a merge ID and the same title of the role, then the navigation will be merged into one common navigation point.

Remote Role Assignment – Runtime Technical Flow



Explanation of the runtime flow:

The end user opens the browser, enters the URL of the central consumer portal and requests some content

The requested role is located on a remote producer portal, thus the navigation is requested from this producer.

The navigation properties from the producer are sent back to the consumer.

On the consumer the navigation properties have to be rebuild, since those navigation nodes should point directly to the producer portal and an “enhanced URL redirect“ will be performed when clicking on it.

The navigation is displayed in the browser.

The content itself is requested from the producer portal directly via this URL redirect – there is no additional interaction taking place with the consumer.

The content is executed on the producer, sent back to the browser and displayed in the content area of the portal.

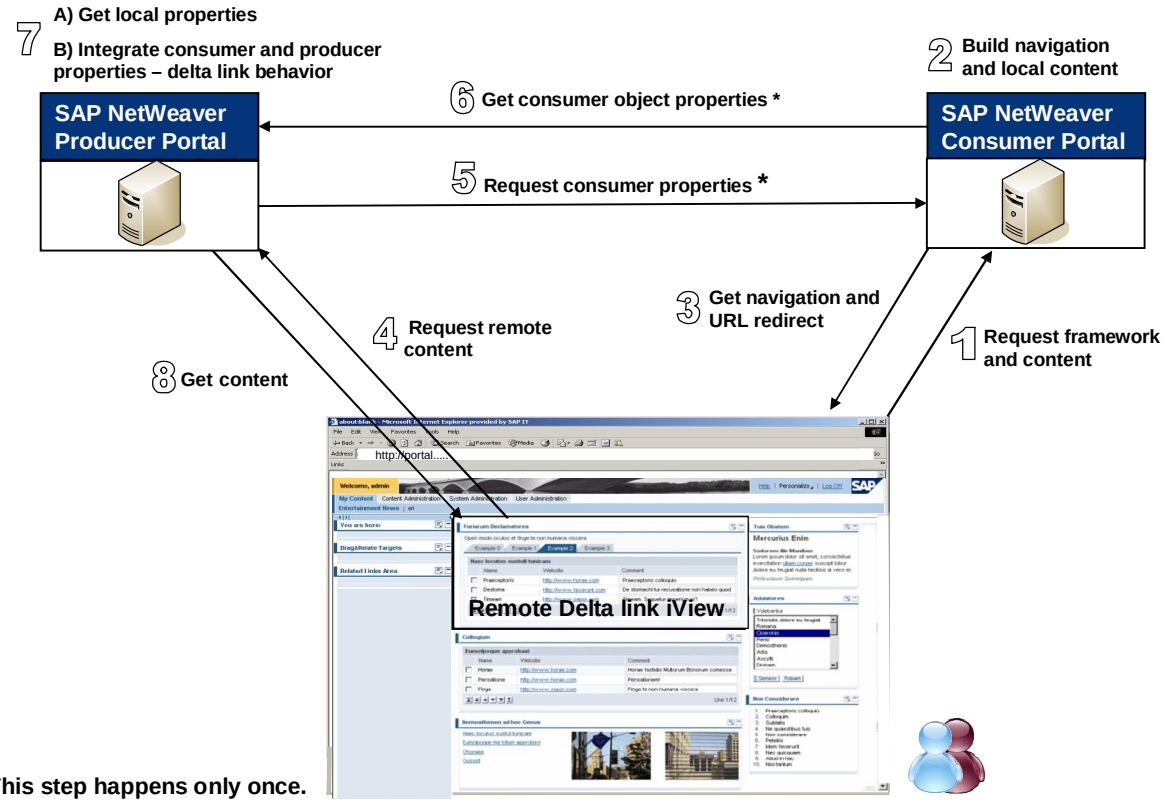
Remote Delta Links – Facts

- **An SAP NetWeaver portal producer can offer content from its location to be copied to a remote consumer.**
- **The consumer administrator can easily browse the PCD of the producer and copy required content to its local PCD.**
- **Copied content becomes local consumer content and can be reused, configured, and customized.**
- **It allows delta link synchronization of copied content. Any change on the producer object properties, which were not updated on the consumer, is synchronized and reflected during runtime.**
- **The is ideal for cases that require combination of local and remote content within one role.**

With Remote Delta Links, you can copy content from a producer portal into a consumer portal. In the consumer portal you can browse through the remote portal content directory and copy and paste the content as delta link into the local portal content directory. Then you can reuse, configure and customize the content on the consumer portal. Since the copied content is copied as a delta link, there remains a connection to the original object. Any changes on the original object will be reflected on the copied object on the consumer portal in case this property has not been modified there. Thus the changes are synchronized and then displayed during runtime of the content. Remote Delta Links are ideal in cases where local and remote content should be combined into one content offering such as one comprehensive role.

There is no copy & paste (without delta-link relationship) available in order to avoid inconsistencies between consumer and producer portals when some major changes on the producer portal take place – only copy and paste as delta link is available.

Remote Delta Links – Runtime Technical Flow



Explanation of the runtime flow:

The end user opens the browser, enters the URL of the central consumer portal and requests some content

Some of the content is available in the consumer, other content is coming from a remote producer portal. The navigation and the local content are build on the consumer.

The navigation, the content from the consumer and the URL redirect to the remote content are sent back to the browser.

The remote content is requested from the producer using the URL redirect.

Because the content might have been modified on the consumer portal, the producer requests the changed properties from the consumer (happens only once).

The properties from the consumer are send back to the producer.

On the producer, the consumer and producer properties are integrated / merged (comparable to usual delta link behaviour).

The result is sent back to the browser and integrated into the content from the consumer portal, thus providing a continuous experience for the end user.

Configuration Steps

SAP NetWeaver Producer Portal	SAP NetWeaver Consumer Portal
■ **Configuring Proxy Settings** (→ SDN: ***How To… Set up Federated Portal Network Scenarios with Reverse Proxies***)	■ **Configuring Proxy Settings**
■ **Setting Up Trust Between You and Consumers (exchange portal server certificate file)**	■ **Setting Up Trust Between You and Producers (exchange portal server certificate file)**
■ **Configuring Your Registration Password (for RRA and RDL)**	■ **Configuring Caching for your Consumer Portal**
	■ **Optimizing Your Consumer Profile (only for RRA)**

Some initial configuration steps have to be performed before the content sharing modes of the Federated Portal Network can be used. Details about activities for the producer portal can be found here: http://help.sap.com/saphelp_nw2004s/helpdata/en/43/23fdb2cad10d23e10000000a1553f7/content.htm , details about the activities for the consumer portal here: http://help.sap.com/saphelp_nw2004s/helpdata/en/43/22387b0b413fe1e10000000a11466f/content.htm .

A prepatory step on both portals is to configure proxy settings properly – usually this is a step that is performed anyway when setting up a portal independent of a portal federation. In case you have reverse proxies or load balancer located in between consumer and producer portal, there is a How-To-Guide existing in SDN, that explains more in detail what should be considered.

A crucial requirement for FPN is that trust is established between consumer and producer portal in order to facilitate the URL redirect taking place. Basically you exchange the portal certificates – SAP Logon Tickets - in order to set up trust (this is currently the only authentication mechanism that is supported by FPN).

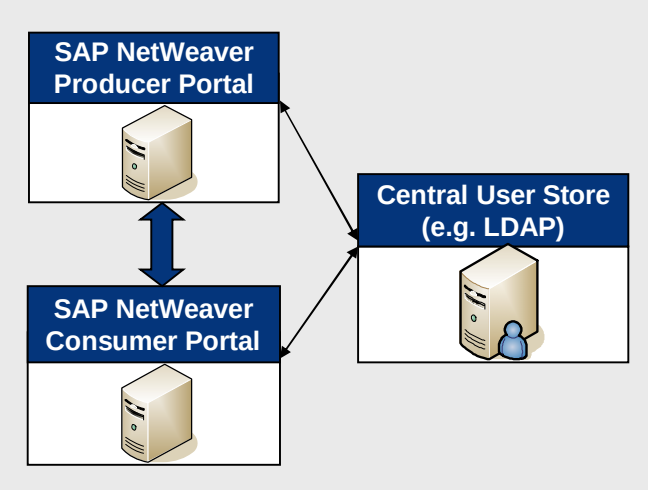
On the consumer portal, you should configure caching properly in order to have some interaction steps between consumer and producer portal done only once and thus tweak performance and reduce the amount of roundtrips required.

User Persistence

Users on the consumer portal must also exist in the user store utilized by the producer portal

Logon tickets used for authentication → **User IDs must be identical**

- Recommended: **Single user store serving all portal installations**
- Alternatively:
  - **Distributed user stores with exact duplication**
  - **Distributed user stores with partial duplication**



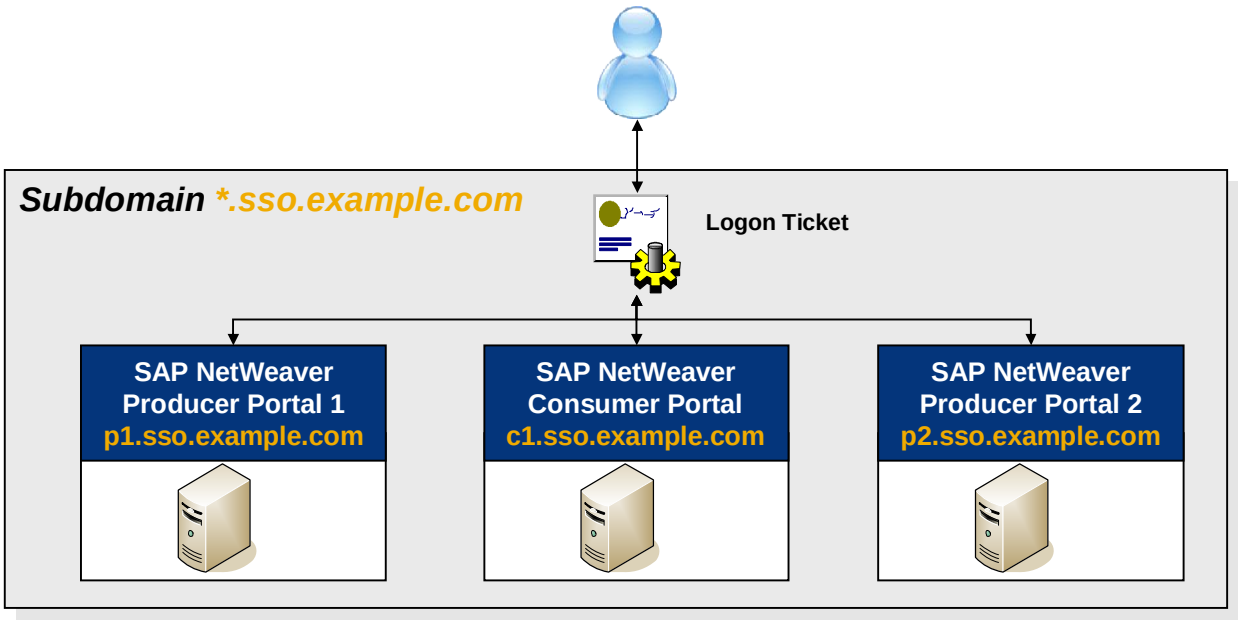
Because a URL redirect with logon ticket authentication takes place, the User IDs have to be the same in all portals.

It is recommended if possible to connect one user store to all portals in the federation and thus all portals are served with the same user and group identifiers.

In case you have to use distributed user stores, replication of user ids should be done. Please be aware that some restrictions exist, if different kinds of users stores are used (e.g. one portal uses user store LDAP, another portal user store ABAP) → see central FPN note 880482.

Single Sign-On / Logon Tickets

Recommended: **All federated portals into one DNS sub-domain**



The use of SAP Logon Tickets for authenticating the consumer portal with the producer portal has impacts on the user ids as well as the subdomain in which the portals are running. SAP Logon Tickets can be issued only for systems that can be addressed with the same subdomain – thus all portals in a federated portal network should reside within one subdomain.

Alternatively: Logon Tickets for multiple domains could be implemented with some restrictions regarding terminating sessions → see:
http://help.sap.com/saphelp_nw04s/helpdata/en/a0/88a340fa432b54e10000000a1550b0/frameset.htm (not recommended)

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