

Federated Portal - Overview

Applies to:

SAP NetWeaver 2004 SPS15/ SAP Enterprise Portal 6.0 or higher.

Summary

Federated Portals is a new concept through which, users can interact with remote portlets which are part of different Enterprise Portals. In a nut shell Federated Portals can be treated as a Portal of Portals, which can drastically cut short the maintenance of complex enterprise portals. This article throws light on the concept of Federated Portals.

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Table of Contents

What is a Federated Portal?	3
What is wrong with Enterprise portals?	3
How can Federated Portals solve the problem?.....	4
Implementation Considerations	5
A Sample Implementation.....	6
Related Content.....	7
Disclaimer and Liability Notice.....	8

What is a Federated Portal?

Before defining federated portal in our own words, it will be beneficial to review a few experts opinion, listed below

Gartner defines federated portals as decentralized networks of portals working together

BEA Systems defines Federated portal as a consumers which includes Remote resources, portlets which are brought together at runtime. This definition is more or less in terms of an SOA approach which says that Services needs to be reused to the maximum.

Reviewing the above definitions, we can conclude that might it be an SOA pitched definition or not a Federated Portals are decentralized network of portals which contains Portlets from different Enterprise Portals.

What is wrong with Enterprise portals?

When the concept of federated portals was introduced, this question popped out from almost each and every one of the Enterprise Portal community, including developers, analyst's etc.

Absolutely nothing is wrong with the Enterprise Portals, except for the fact that Enterprise Portals become too large to manage and maintain at some point of time. This is due to the fact that Enterprise Portals can grow incrementally as more and more composite applications are introduced. This can be clearly visualized from the diagram given below. Assume a condition in which the Portal is overloaded with wide variety of Portlets as shown below, in such a scenario the maintenance will become extremely difficult.

Another problem with the Enterprise Portals is their Data centric Architecture. In a single line data centric approach can be defined as the approach to extract data from different corporate data sources and present to a wide variety of users. It can be better understood from the diagram given below

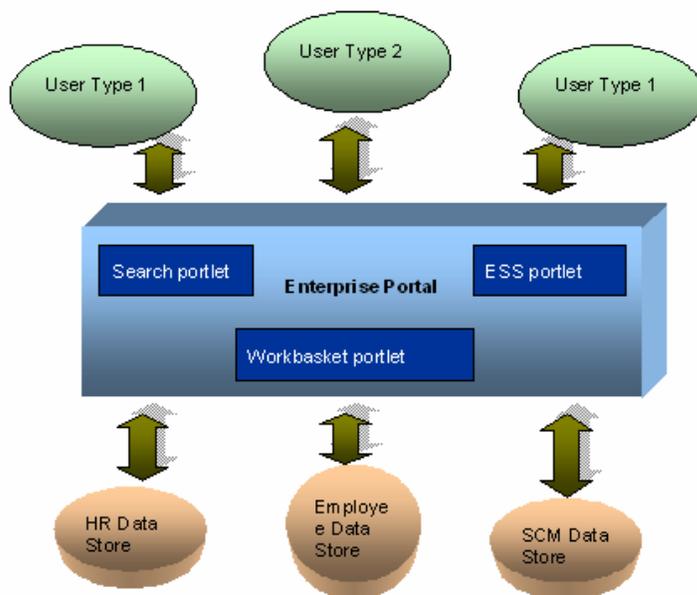


Fig 1 Data centric Architecture for Enterprise Portals

The data centric approach poses the following problems

1. As the data sources grow in number the collection, restructuring and presentation of data becomes costly.
2. If number of users grows beyond the capacity of the server, it needs to be mirrored and hence forth disturbing the content management and collaboration features
3. Portal performance decreases in terms of GUI rendering as it gets over loaded by portlets.

How can Federated Portals solve the problem?

As mentioned previously Federated portals follows a different approach. Federated portals too has the capacity to grow on demand .But if we take the architecture of Federated portals in to consideration, it can be noted that the growth rate will be substantially on the lower side compared to Enterprise Portals. This is due to the fact that Federated Portals can accommodate remote Portlets or IViews as they are known in the SAP world.

Federated portals follow a Distributed Architecture. Distributed architecture when compared to the Data centric architecture has the following benefits

1. Low rate of Expansion
2. Capability of Processing Remote Portlets
3. Highly Scalable
4. Allows Incremental Development

Distributed architecture can be better understood from the diagram given below

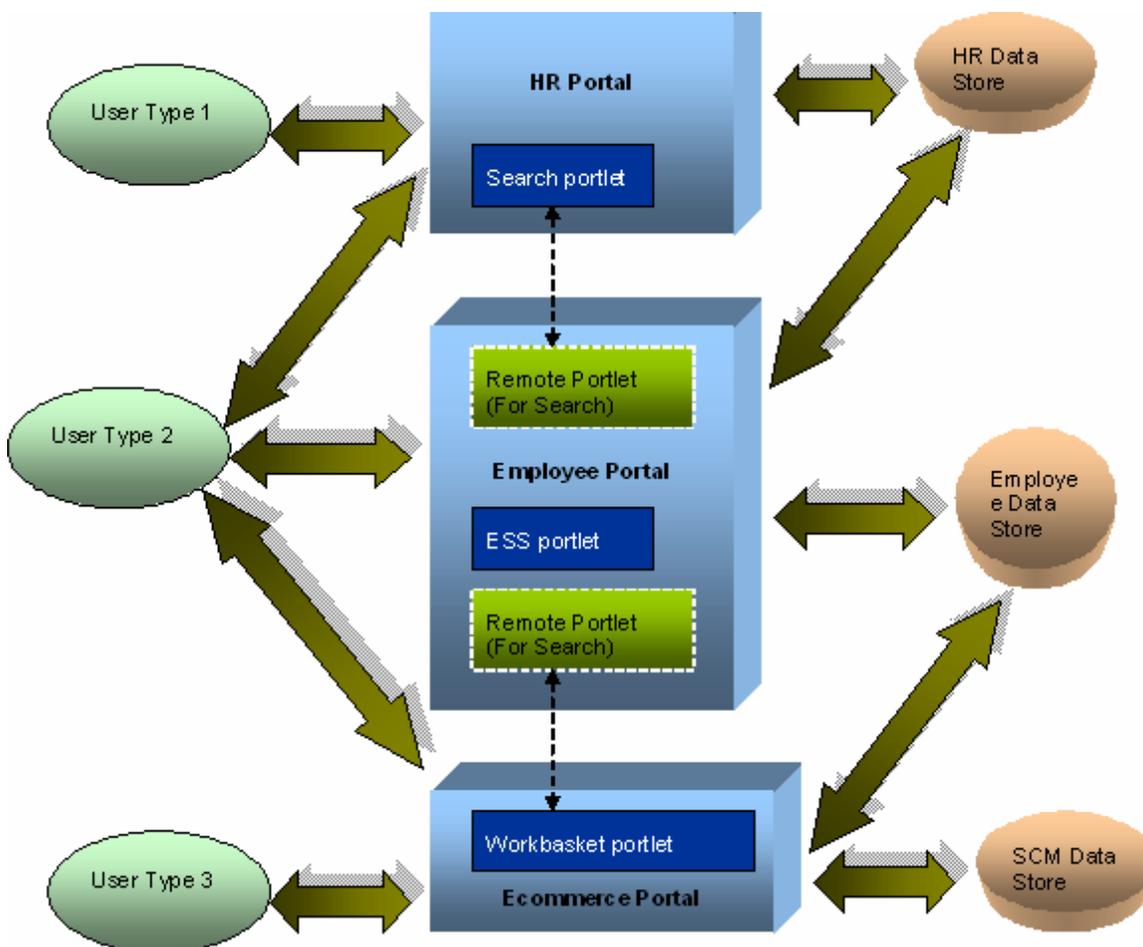


Fig 2 Distributed Architecture for Enterprise Portals

Implementation Considerations

Implementing a Federated Portal Networks may not be as easy as it sounds. A few parameters came into my mind, once I thought of the implementation. These parameters may be vital in some cases, but not important in particular implementation scenarios. Jolted below are few factors which needs to be considered while implementing federated portal networks.

- 1) **Organizing the Resources:** Federated Portal Network extremely relies on the distributed resources, so extreme care should be taken while organizing the resources. Resources need to be organized in such a fashion that there is no direct coupling of the portal and the portlets.
- 2) **User Management:** For content sharing in a Federated Portal environment the users in the UME of the consumer portal must also exist in the UME of the Producer portal. If this condition is left unsatisfied the runtime authorization of the resource fails. So User management needs to be addressed carefully while implementing a Federated Portal Network.
- 3) **Well Maintained Shared Resource Repository:** For a successful Federated Portal Network, efficient resource sharing plays an important role. Federated Portals make use of a common knowledge framework which is nothing but a shared knowledge repository. This knowledge repository maintains information about all shared resources which is accessible for the entire user community. So it is very important that this repository is well organized and efficiently maintained.
- 4) **Single Sign On:** As in Enterprise Portal Networks SSO Federated Portal Networks also relies a lot on SSO. But the SSO implementations for a Federated Portal Network can be broadly divided as follows
 - a. **SSO between the Producer and the Consumer Portals:** In SAP EP this is possible via SAP Logon Tickets with a limitation that both the consumer and the produces must be in the same domain.
 - b. **SSO to the backend Systems**
- 5) **Error Handling:** Error Handling needs to be addressed properly. This is because in a Federated Portal Environment we do have more than one Interacting Portals, and hence the Error handling becomes a bit complex if not addressed properly. System must be able to handle error messages both from the producer and consumer sides. Error messages from the producer must be thrown in a user friendly format at the consumer end.
- 6) **Caching:** As mentioned above Federated Portal Networks involves more than one portal. Hence appropriate caching of the shared resources will be of an added advantage. Portal implementation should take caching feature into consideration as this can drastically improve the performance of a Federated Portal Network. Efficient Object caching and retrieval can boost the Performance.
- 7) **Portlet Dependency:** Portlets in a Federated Portal Environment should have minimum inter portlet dependency because this will make the portlets hard to decouple and makes maintenance difficult. More over it spoils the entire intention of setting up a Federated Portal Network which is to have a decoupled set of portlets, which can be shared and accessed remotely.
- 8) **Monitoring and Logging WSRP sessions:** WSRP (Web Service For Remote Portlets) sessions needs to be tracked and monitored periodically for an efficient Federated Portal Network. The implementation should also take this point into consideration as this is very much important in the maintenance of Federated Portal Networks.
- 9) **Limitations of the Vendors:** Any successful implementation requires thorough knowledge on the pros & cons of the implementation, so is the Federated Portal Network implementation. Knowing the limitation of the Portal vendor is very important as we know before hand that what the Portal can do for us and what it cannot. Thus knowing the cons the implementation and development can be pitched in a direction to neutralize the cons of the vendor

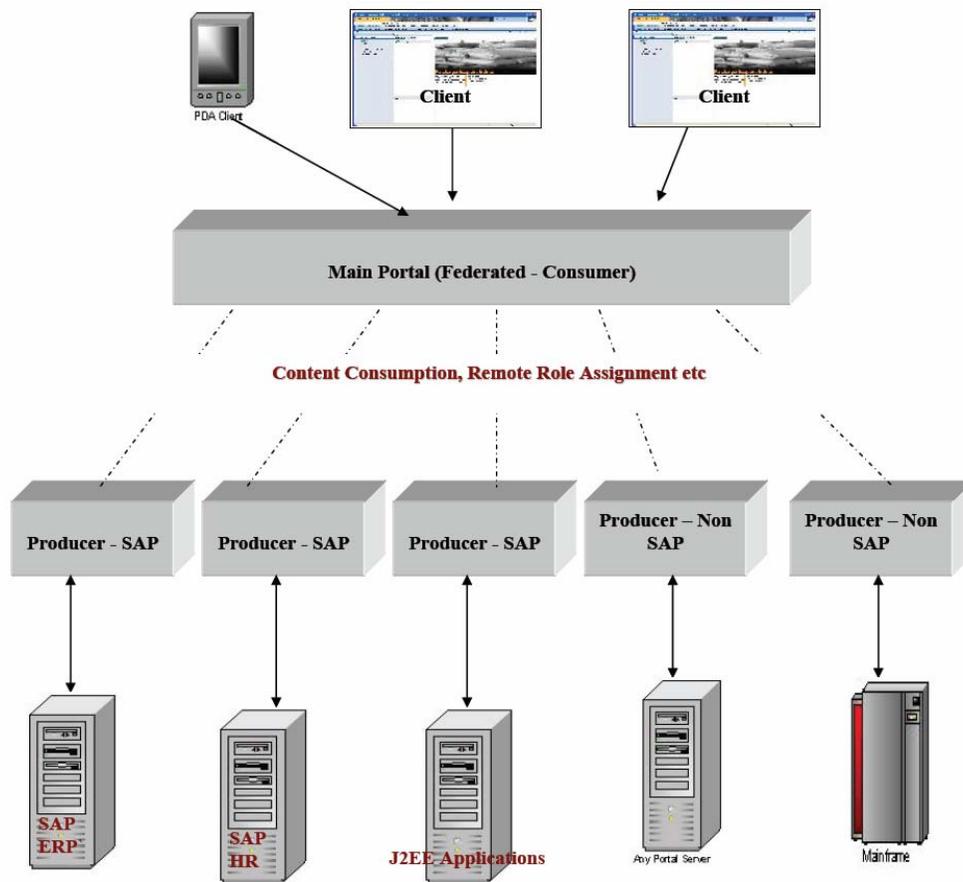
A Sample Implementation

Business Requirement:

The client requirement is to have a centralized portal which functions as a logon portal for all users. The client also has a set of portals build on top of different SAP and non SAP applications which can act as the content producers for the centralized portal which is a consumer.

Solution Implementation

The diagram below depicts sample landscape for the solution implementation of the above mentioned business requirement.



Related Content

[Architecture For Federated Portals](#)

[BEA- WebLogic Federated Portals](#)

[Setting Up a Federated portal Network](#)

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