Federated Portal Network – An Inside Look: Part I

Applies to:

SAP Enterprise Portal 7.0

Summary

The article tries to analysis the essence of Federated Portal Network concept and its key features.

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Portals and Portlets

According to the **JSR 268**: Portlet Specification (Java Portlet Specification, Version 2.0)

"*A portal is a web based application that –commonly- provides personalization, authentication, and content aggregation from different sources and hosts the presentation layer of information systems. Aggregation is the action of integrating content from different sources within a web page. A portal may have sophisticated personalization features to provide customized content to users. Portal pages may have different set of portlets creating content for different users.*"

"*A portlet is an application that provides a specific piece of content (information or service) to be included as part of a portal page. It is managed by a portlet container that processes requests and generates dynamic content. Portlets are used by portals as pluggable user interface components that provide a presentation layer to information systems.*"

The portlet counterpart for SAP Enterprise Portal is our very own iViews.

What is Federated Portal Network?

Most Organizations today have multiple portals exposed, not necessarily SAP alone but even non–SAP. The challenge that is faced is how to provide for a single access point for the user to its various resources, information, services and applications distributed on portals throughout the entire organizational network. A federated portal network (FPN), thus allows this task of sharing content between the portals.

A federated portal provides for a global portal that includes remotely distributed resources that are collected and brought together at runtime to a portal application called a consumer, which presents the federated portal to end users.

Key Concept of Federated Portal Network
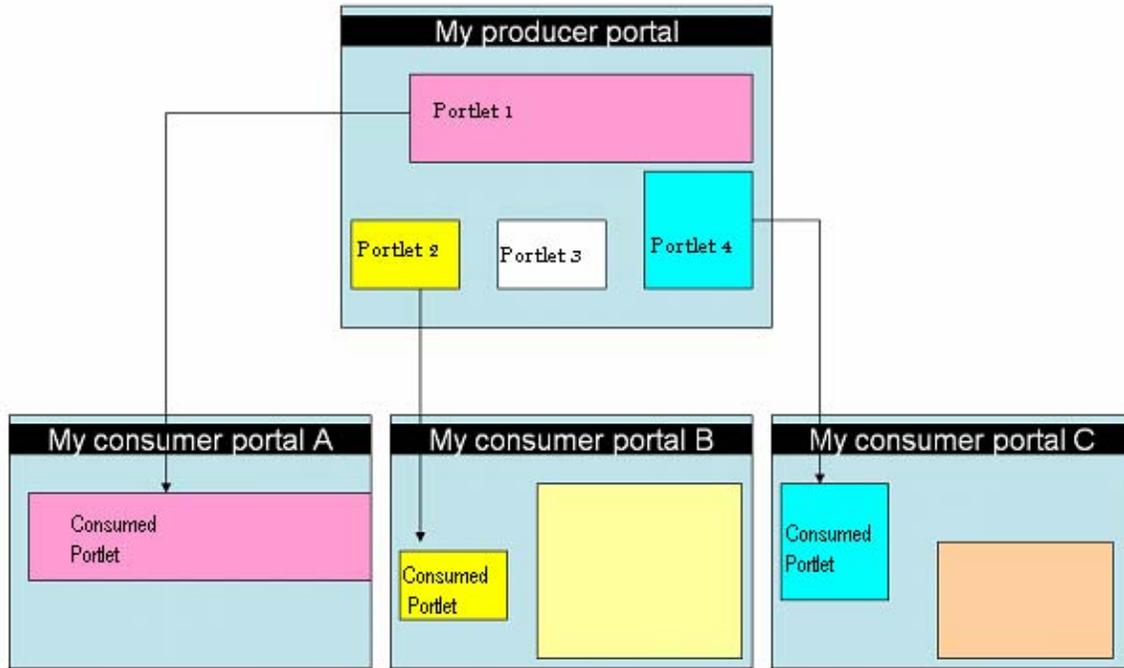
THE FEDERATED PORTAL NETWORK CONCEPT

The above figure tries to illustrate the basic components of a federated portal: producers and consumers. A producer is the portal offering remote portlets to other portals termed consumers. Both producers and consumers implement a web services layer that enables them to communicate. This web services layer allows producers to offer portlets to consumers on remote systems. Consumers bring these remote, distributed portlets together at runtime.

Key Features of Federated Portal Network

Federated Portal Network has the following key features.

They are,

- **Distributed** - Portlets are deployed on remote systems across the enterprise.

- **Dissociated** - A major advantage of a FPN is the facility to maintain, update, and release the individual remote parts of a federated portal independently without redeploying the consumer portal in which they are surfaced. If one remote portlet on a producer is changed, other portlets within a consumer that consumes the updated portlet are not typically affected.

- **Personalization of Look and Feel**: The look and feel of a remote portlet can be made consistent with the federated portal in which is resides making them indistinguishable from local ones.

- **Collaborative** - Remote portlets can communicate and share data.

- **Plug-and-Play** – Locating and consuming of remote portlets is considerably easy considering the requirement of minimal or no programming.

- **Standards based** – SAP Enterprise federated portals are stacked upon open standards, such as WSRP and WSDL.

Life Before and After Federated Portal Network

Traditional Portals (or lets term them as non-Federated portal) has the stringent problem of maintenance. As the Portal grows in size and content with more parts and codes, consequently there is a proportional rise in maintenance effort in terms of testing, bug fixing, development co-ordination and shifting the portal from development to production environment.

Now let us see how life became easier after Federated Portal Network came into picture.

- Federate portal with its feature to allow developers to be independent of each other while developing, updating or testing their portlets, irrespective of geographical location and with the added advantage of not having to redeploy the whole of portal for every single change in the producer portal has been able to bring down this cost of maintenance and cost of deployment significantly.

- Federated Portal has also reduce the cost of Portal Testing and has promoted the reuse of portal components, as a portlet exposed by the producer can be consumed by multiple consumers without the overhead of integration, deployment, configuration, and testing that would be required otherwise.

- Another key advantage of the Federated Portal Network is its support for remote role assignment providing an easy way to support the need for role synchronization between the different portals in the federation.

- Interoperability is also supported by means of WSRP between third parties (SAP or non-SAP) and our Federated Portal.

The Concept of Remote iViews

A remote iView is an iView residing on a remote content provider (which is typically another portal). A remote content provider though may be at a different place from the portal consuming it, is typically situated in the same geographical location as the back-end system or application (the information source) on which the iView is based.

At run time, the data for display is rendered by the remote iView which directly interfaces with the information source, retrieving the necessary data. The rendered data is then transferred as markup to the iView on the consumer portal, to be delivered to portal end users.

Rendering a remote iView – A Diagrammatical approach to understand it
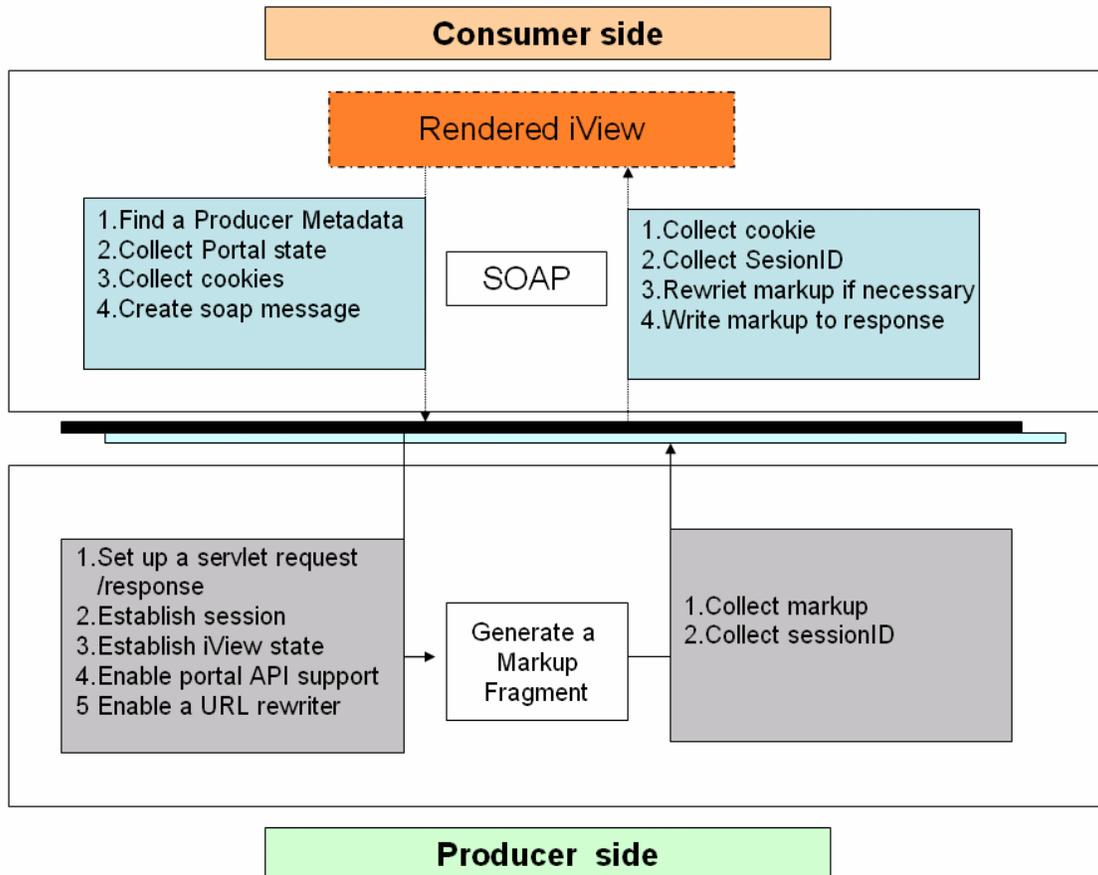
Content sharing in Federated Portal Network

The dataflow between the consumer and the producer mainly happens in either of the two ways.

- with Remote Role Assignment and Remote Delta Link/Copy :

  Logon tickets and trust configurations the seamless flow of data between the client's browser, the consumer portal, and the producer portal at runtime.

- with WSRP (Web Service for Remote Portlets) Application Sharing :

  The client's browser never accesses the producer portal directly in this. It allows the sharing of WSRP-supported applications between WSRP-compliant portals within the network, including SAP NetWeaver and non-SAP vendors.

The detailed discussion about content sharing and WSRP support will be continued in my next article.

To sum up, Federated Portal is a breakthrough in providing the organizations a distributed portal environment abstract to the end user, with a single login point of entry while separating application execution and rendering from the main portal server.

Related Content

Please include at least three references to SDN documents or web pages.

- Implementing a Federated Portal Network
  https://www.sdn.sap.com/irj/sdn/go/portal/prtroot/docs/library/uuid/3eea14b9-0a01-0010-06b9-8410ab7675f6

- http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp

- Web Services for Remote Portlets 1.0 Primer

  http://www.oasis-open.org/committees/download.php/21178/wsrp-primer-1.0.html

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