IP1 Web Enablement 1 Prerequisites and Planning

Iptor IP1

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Revision Summary

Version	Version notes	Version by	Date
1.0	Initial version	FR	11/10/2008
1.1	Revised version	LM	26/02/2009
1.2	Changes to document structure	VM	11/03/2010
1.3	Add support for WebSphere Application	YUL	28/07/2011
1.4	Add support for WebSphere Application	YUL	11/07/2012
1.5	Rename from IBE Prerequisites and planning include 1 in document name	MC	29/08/2012
1.6	Revised – specified latest versions of software removed suggested configurations which were for Ecommerce rather than web services	MC	20/10/2017

Introduction

As part of IP1 Web Enablement, Iptor provides Web Services. Web Services is delivered in an EAR file and is composed of services. Each service calls a program in IP1 to perform functions such as add an item to a shopping cart or return a list of items matching selection criteria. The customer can develop their own website using these services to allow users perform tasks such as order entry.

The following defines the prerequisites for the Iptor IP1 Web Enablement application. It includes hardware and software requirements, describes common installation scenarios and is intended for Iptor Consultants to advise customers planning to develop a website which interacts with IP1.

This development requires

- An application server (hardware)
  - running IBM WebSphere (software) to manage
  - IP1 web services (software supplied by Iptor as a component of IP1)
  - IBM i Access previously known as Client Access for iSeries
    - Allows iSeries to RUNRMTCMD to stop and restart web services on the application server
  - SOAPUI to allow Iptor to test web services work correctly.
- A web server (hardware)
  - Running a web site (software designed and developed by IP1customer/third party)

The web user accesses the website

- Accesses the web site on the web server
- Web server sends request to applications server
- On Application server WebSphere determines environment (live/test etc.) and routes request to appropriate IP1 web service
- Web services calls IP1 program running on the iSeries
- IP1 program performs action and returns result to web service
- Web service passes result via WebSphere to web server
- Web server returns result to web user

What’s New

- All services can now be accessed using REST protocol, calls using SOAP protocol are unaffected and work as previously.
- Remaining direct program calls have been replaced with JDBC calls making configuration simpler
- Upgraded from EJB1 so Websphere can be configured to use the standard JDBC data source

Web Enablement

Web Enablement product is distributed as an Enterprise Archive file (EAR). This contains the web services module which is integrated with a backend IP1.

A distribution set is provided which contains:

- The EAR file
- Consultant guides and documentation
- Utilities

A current build of IP1 is required.

Server Requirements

Two servers are required

- Web server. The web site runs on the web server and communicates with the iseries via the application server.
- Application Server. Websphere and the Iptor supplied webservices run on the application server

Reference:

http://www-01.ibm.com/support/docview.wss?rs=180&uid=swg27006921

Web Server

The web site runs on the web server. The web site is developed by the customer or third party developer.

Iptor would expect the web server to be located within a DMZ, inside a firewall but outside the main firewall.

Specifications for hardware, software and security of the web server are the responsibility of the web developer and the customer. The following are hardware and software requirements for IBM Http Server 7.0/8.0. The corresponding Apache release that it is based on is Apache 2.1.58 or 2.2.

Please refer to the WebSphere Application Server IBM documentation for further details.

Reference:

http://www-306.ibm.com/software/webservers/httpservers/sysreq/index.html

Application Server

The application server should be inside the main firewall with the only external access from the web server in the DMZ. If the customer requires additional security such as HTTP plugins or SSL certicates between the web server and the application server or the applications server and the iseries this is the customers responsibity

Application Server Hardware Requirements

The following are the recommended minimum requirements.

The following is hardware requirements for WebSphere Application Server 7.0/8.0. Ensure the version of WebSphere Application Server software complies with the required hardware. **Please refer to the WebSphere Application Server IBM documentation for further details.**

- Hardware must meet requirements of the operating system being used
- Disk space requirements
    - Recommended Minimum 30 GB free disk space

      WAS V8.0: http://www- 01.ibm.com/support/docview.wss?uid=swg27021246
    - Each Web Enablement Application will be at least 30MB in size
        - At least 1 for live and 1 for test
- Minimum 2 GB physical memory.
        - Each active application uses a minimum 700MB
            - At least 1 for live and 1 for test

Reference:

http://www- 01.ibm.com/support/docview.wss?rs=180&uid=swg27006921

Application Server Software Requirements

- Application Server Software
    - One of the following depending on the customer requirements:
        - IBM WebSphere Application Server Express 8.5.5 or
        - IBM WebSphere Application Server 8.5.5 or
        - IBM WebSphere Application Server Network Deployment 8.5.5 or
        - IBM WebSphere Application Server 8.5.5
- Server Operating System (supported with 32-bit or 64-bit WebSphere Application Server)
    - Windows Server 2016
- Internet Explorer

- IBM System i Access for Windows
    - IP1 utilises the Windows Remote Command service for the remote stopping and starting of WebSphere Application Server.

Networking Requirements

Domain Name

An external domain name needs to be available and registered to access the Web server.

SSL Certificate

If required An SSL certificate will need to be arranged through a Certified Authority (CA) such as Verisign or Thawte to name just a few. This SSL certificate will be used between the end user's browser and the web server so secured requests can be made to IBE. e.g. user login and credit card payments.

Backup and Recovery Strategy for all computers

Backup and recovery of IBE is the responsibility of the customer and the method used to perform backups depends on the requirements.

Planning to install Web Enablement

- Firewall between Web server and application server
  - This firewall requires internal http ports to be open which are typically:
    - Live = 9080 and 9443 (secured)
    - Test = 9081 and 9444 (secured)

- Optional Firewall Between Application server and iseries
  - As a minimum it will requires the following ports to be open (for added security restrict these ports by IP address so that only the web server can send requests to the application server) :
    - 512 (Remote Process Execution TCP/IP for automatic stopping and starting of Application Servers via IP1 ERP)
    - 449 (as-svrmap) (Program Call & JDBC)
    - 8470(as-central)
    - 8471 (as-database)
    - 8475 (as-rmtcmd) (Program Call)
    - 8476 (as-signon) (Program Call & JDBC) The firewall must cater for permanent connections

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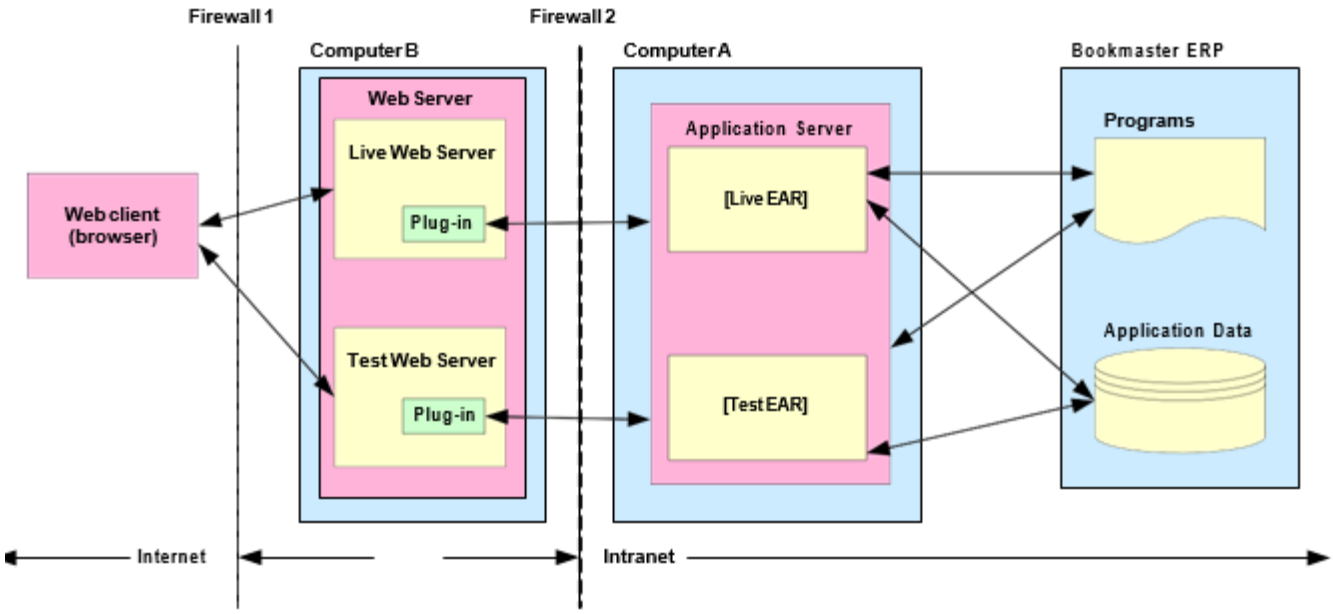


Multi Sites

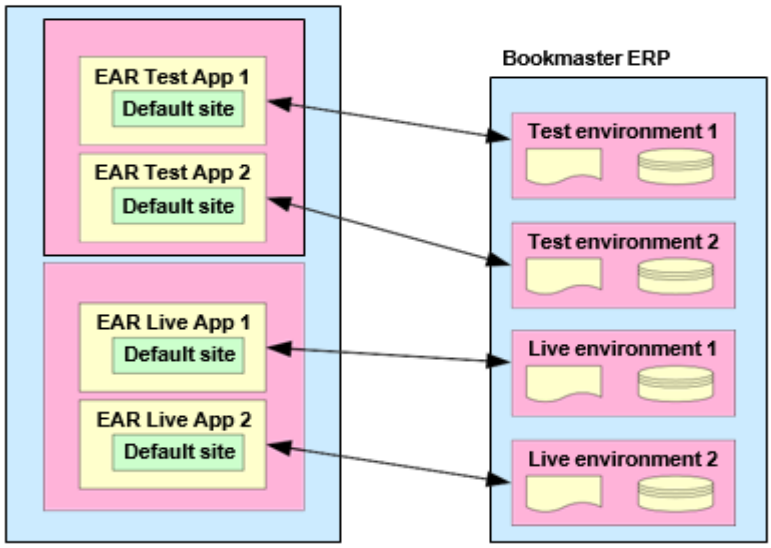
Depending on the requirements each site can have its own dedicated domain name or all the sites can share a single domain name.

If a single domain name is required the sites will be distinguished by the context root appended to the domain name.

Note If multiple domain names are required special consideration will need to be taken when purchasing and configuring SSL certificates.

Multi-site Scenario : Multiple applications each with its own default site

This scenario involves configuring and deploying separate EAR files for each site, each EAR having its own default site.



Remote Access of WebSphere Application Server

Our support team will require remote access to all computers used in the Web Enablement solution. This should allow them to login and perform normal duties as if they were local.

Some of the ways of providing this access are (a combination of the following may be required):

- Direct connection form the Iptor network into the customers network (WAN to WAN VPN tunnel)
- VPN – the use of the Point-To-Point Tunnelling Protocol (PPTP) is preferred
- Enable Terminal Services and Remote Desktop Connection on computers
- Meeting software:
  - 0 Used to provide remote training, remote assistance when the customer's participation is required.