

Chapter 2: Installation

Installing Microsoft Information Bridge Framework

The installation process for IBF contains several steps. This chapter contains a walkthrough of a typical IBF installation.

The first step is to download the necessary components. The main site for IBF is located at <http://msdn.microsoft.com/office/understanding/ibframework/default.aspx>. From there you need to download the "Microsoft Office Information Bridge Framework Service Pack 1.5". The files are listed in table 2-1.

File Name	Purpose
MOIBF1.0_Guides.exe	Documentation
MOIBF1.0_Server.exe	Server Components
MOIBF1.5_Client.exe	Client Components
MOIBF1.5_InstallUpgrade.exe	Upgrade
MOIBF1.5_MetadataDesigner.exe	Plug-in for Visual Studio.NET

Table 2-1. IBF Install files

I also highly recommend downloading the IBF Resource Kit. The files are listed in table 2-2.

File Name	Purpose
MOIBF1.5_ResKit_SampleSolution.exe	Includes a sample solution that demonstrates features included in Information Bridge Framework 1.5.
MOIBF1.5_ResKit_SolutionDevGuide.exe	Provides conceptual and procedural documentation that describes how to build a solution based on the sample solution.
MOIBF1.5_ResKit_MDPublisher.exe	Includes a tool used to publish or update production metadata from the command line and instruction document.
MOIBF1.5_ResKit_Templates.exe	Includes three template files (two XML files and an HTML file) used to create solutions.
MOIBF1.5_ResKit_Tools_GroupPolicy.exe	Includes a Group Policies .adm file and an instruction document that explains the properties within it.
MOIBF1.5_ResKit_VisioMDExplorer1.0.exe	Includes a Microsoft Visio add-in tool that enables you to view Information Bridge metadata, and an instruction document that explains how to use it.
MOIBF1.5_ResKit_WSE20Adapter1.0.exe	Includes an adapter for incorporating Web Services Enhancements (WSE) security models and installation instructions.
ProgRef.exe	Includes a .chm file that contains an Artifact Overview, Class Library, and a Metadata Reference

Table 2-2 IBF Resource Kit

Once you have the necessary files downloaded, it's time to begin installing IBF. Refer to the Introduction chapter for System Requirements and Pre-requisites.

This chapter is divided into 3 sections:

1. Installing the IBF Server Components
2. Installing the Metadata Designer Tools
3. Installing the IBF Client Components

Part I: Installing the Server

On the Windows 2003 server, extract the files found in MOIBF1.0_Server.exe and double click the Microsoft.InformationBridge.Framework.Server1.0.msi file. This will launch the installation process.

Figure 2-1 shows the components to install.

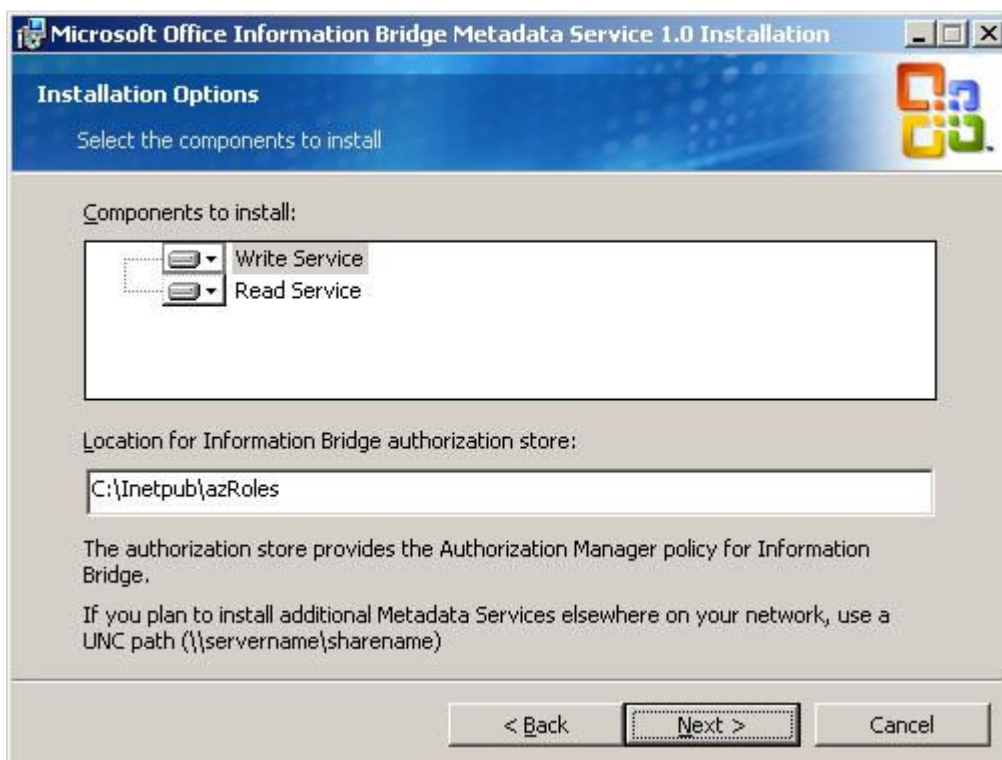


Figure 2-1: Installation Components

Write Service

Your designer tools call the Write Service to publish metadata into the IBF.

Read Service

The IBF client frequently calls the Read Service to find available metadata. When we install the IBF client we'll need to specify the URL to this read service.

Note:

At design time, the Metadata Designer communicates with the metadata service, which processes requests from the client to write metadata to the metadata database. The write port is

typically turned off for a production deployment, to prevent changes to the metadata at run time. Note that because a client can be connected to only one metadata store or cluster at a time, an organization cannot deploy disparate metadata service servers throughout the organization. In cases in which, for example, departments of an enterprise want to "own" their own metadata service servers, the enterprise must identify a single "Write" metadata service server or cluster for updating the metadata database. Each department would have a single or set of read-only metadata service servers and metadata database. After the write database has been updated, the departmental servers would be updated using SQL Server replication or other database copy mechanism.

Authorization Manager

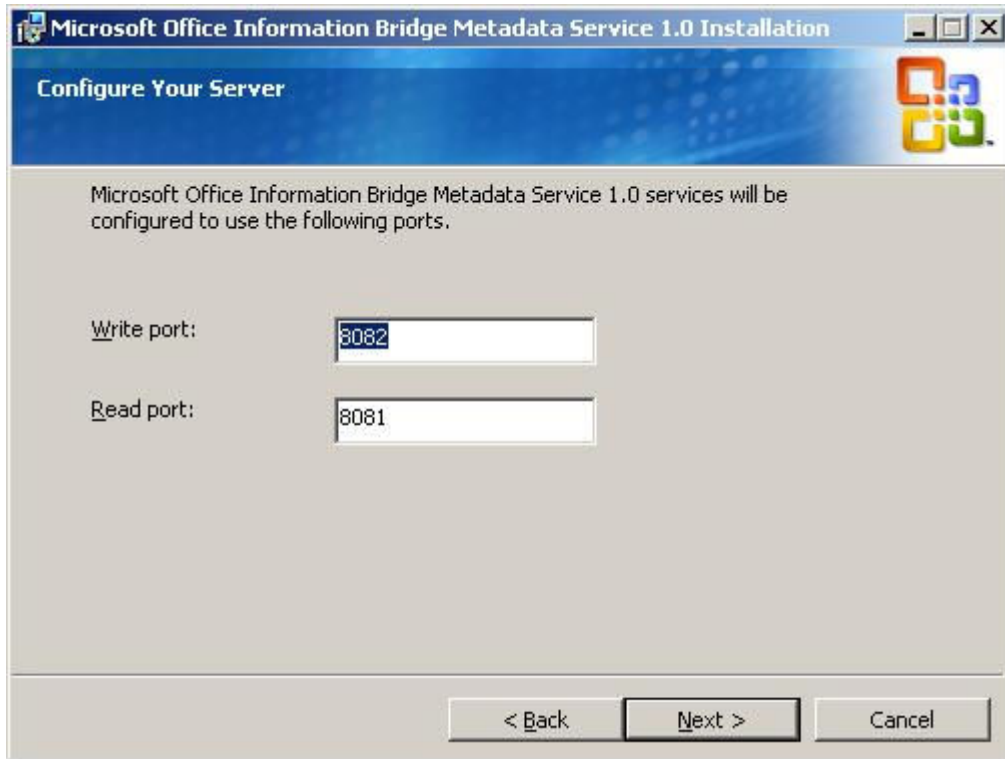
This page of the install wizard also to save the "Information Bridge Authorization Store". The Authorization Manager is a technology that is included with Windows Server 2003. You can access the mmc by running "azman.msc". It is used for application developers who want to expose operations and resources in such a way that administrators, and non-administrators, can assign roles for access. This authorization store can be stored in either the Active Directory, or a single xml file.

The Information Bridge creates a single Task labeled "Members have full access to read / update / delete metadata objects". As an administrator you could define separate roles, from your Active Directory, that have access to modify the metabase store.

As the wizard recommends, you should only have one Authorization Manager policy for your organization.

C:\inetpub\azRoles\Microsoft.InformationBridge.Roles.xml

```
<?xml version="1.0" encoding="utf-8"?>
<AzAdminManager MajorVersion="1" MinorVersion="0" Description="Information Bridge
Authorization Store">
  <AzApplication Guid="74cde6f3-3485-4c81-be81-18407705fa4c" Name="Microsoft
Information Bridge Framework Metadata Service" Description="Context action delivery and
management web service." ApplicationVersion="1.0.0.0">
    <AzOperation Guid="4be04946-a7ea-41a4-b4a2-53817afd6cf9"
Name="Administrator Access Operation" Description="Gives full access to geting / updating
the metadata."/>
    <AzTask Guid="47f5aed1-b724-4f9b-88d9-f481062de95c" Name="Administrators"
Description="Members have full access to read / update / delete metadata objects."
BizRuleImportedPath="" RoleDefinition="True">
      <OperationLink>4be04946-a7ea-41a4-b4a2-53817afd6cf9</OperationLink>
    </AzTask>
    <AzRole Guid="b790d452-66b5-45ac-8816-3a88f1656e19" Name="Administrators"
Description="Users can fully administer the metadata.">
      <TaskLink>47f5aed1-b724-4f9b-88d9-f481062de95c</TaskLink>
      <Member>S-1-5-32-544</Member>
    </AzRole>
  </AzApplication>
</AzAdminManager>
```



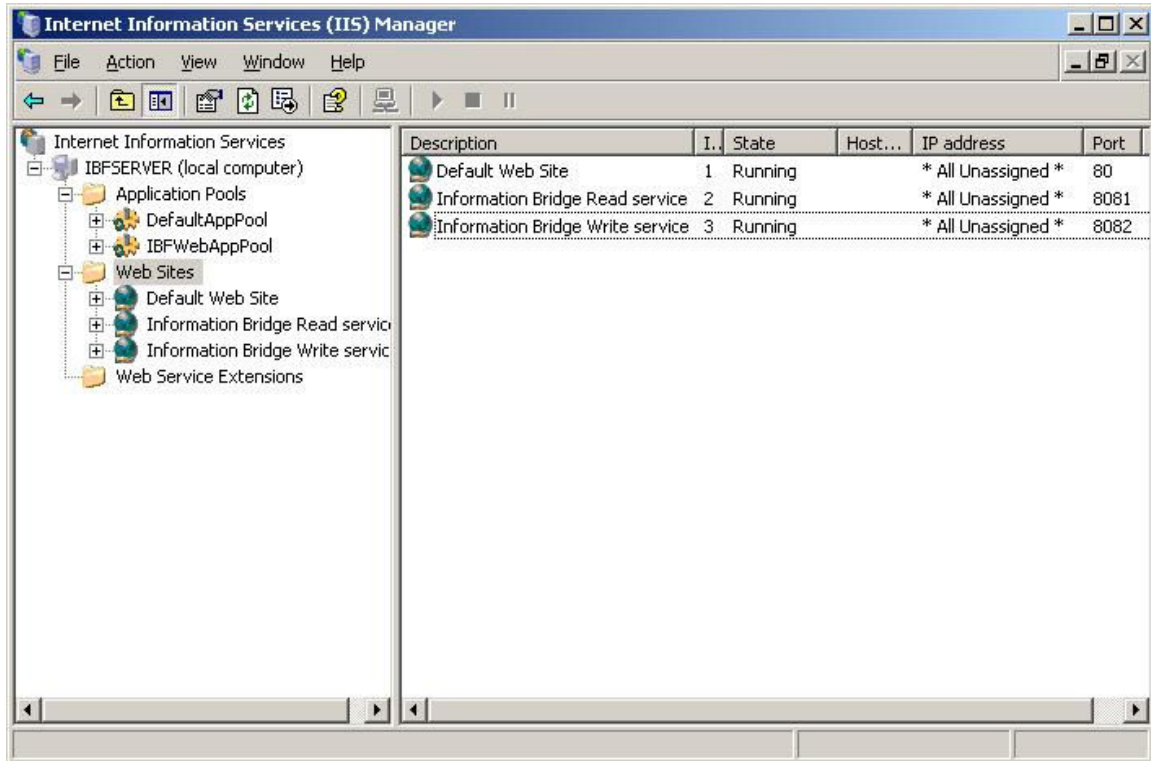
Note

I recommend keeping the default write and read ports for installation because it will make setup and deployment easier in the future.

Verifying the Installation

Start | Control Panel | Administrative Tools | "Internet Information Services (IIS) Manager"

Verify that two new virtual directories have been created under your default web site. Note the port # if you changed it during installation.



Accessing the Web Services through a browser.

1. Open "C:\inetpub\IBFReadService\web.config" and find the protocol nodes at the bottom of the file. Modify the web.config file so it appears as follows:

```
<webServices>
  <protocols>
    <remove name="Documentation"/>
  </protocols>
</webServices>
```

This will allow you to open a browser using <http://<server>:8081/IBFReadService.asmx>.

2. Save the web.config file

3. Open the Internet Information Services (IIS) Manager

4. Right click the local computer and select All Tasks | Restart IIS from the context menu. We must restart the IIS server because ASP.NET may not read the Web.config file until the server clears itself.

5. Once IIS restarts, navigate to the Read service in the browser. You should see the following operations available:

- GetMetadataScope
- GetMetadata
- GetMetadataTimestamps
- GetEntity
- GetMetadataScopeTimestamps

6. Repeat the same steps for the Write service

Other Files of Interest

File	Purpose
C:\inetpub\azRoles\Microsoft.InformationBridge.Roles.xml	Authorization Roles configuration
C:\inetpub\IBFReadService\bin*	IBF Read Service Runtime components
C:\inetpub\IBFReadService\EnterpriseInstrumentation.config	IBF Read Service configuration
C:\inetpub\IBFReadService\EnterpriseInstrumentation.config.backup	IBF Read Service configuration Backup
C:\inetpub\IBFReadService\IBFReadService.asmx	The ASP.NET web service file, which references the DLLs in the bin directory.
C:\inetpub\IBFReadService\Web.config	ASP.NET configuration for this web service. Includes authentication, authorization, tracing, and other settings. In particular, this file contains the SQL Server connection string used by IBF to access the metadata database.
C:\inetpub\IBFWriteService\bin*	IBF Write Service Runtime components.
C:\inetpub\IBFWriteService\EnterpriseInstrumentation.config	IBF Write Service configuration
C:\inetpub\IBFWriteService\EnterpriseInstrumentation.config.backup	IBF Write Service configuration backup
C:\inetpub\IBFWriteService\IBFWriteService.asmx	The ASP.NET web service file, which references the DLLs in the bin directory.
C:\inetpub\IBFWriteService\Web.config	ASP.NET configuration for this web service. Includes authentication, authorization, tracing, and other settings. In particular, this file contains the SQL Server connection string used by IBF to access the metadata database.
C:\Program Files\Microsoft Information	Contains global settings

Bridge\1.5\Framework\Microsoft.InformationBridge.Framework.Config	for the IBF server, including pointers to the metadata service, cache settings, and IBF Engine settings
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Part II: Installing the Metadata Designer Tools

Part III: Installing the Client Components