OBA Composition Reference Toolkit – Administrator's Guide

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About This Guide

Purpose of This Guide

This document is intended to serve as an administrator's guide/reference for the Microsoft OBA Composition Server.

Who Should Read This Guide?

The target audiences for this guide are IT administrators responsible for administering Microsoft SharePoint farms/servers.

Fundamental Concepts

Familiarity with the following fundamental concepts is required to understand the process of administering an OBA Composition Server using the administration capabilities described in this document.

Components

Components are the building blocks of Microsoft Office Business Applications (OBAs) composed using the OBA Composer. There are three types of components that can be registered in an OBA Composition Server and used to compose OBAs:

- **Presentation components**. These are used to generate the user interfaces of OBAs. Examples of presentation components include Microsoft Visual Studio Tools for Office (VSTO) add-ins for the Microsoft Office applications, SharePoint portal pages, Web parts, and reports.
- **Collaboration components**. These are used to model unstructured artifacts and enable unstructured information worker collaboration. Examples of collaboration components include SharePoint workflows, SharePoint document libraries/lists, and content types.
- **Domain model components**. These are used to model abstracted business data models used for line-of-business application integration and business intelligence. Examples of domain model components include Business Data Catalog (BDC) application definitions, Microsoft SQL Server Reporting Services Report Models, and SQL Server Analysis Services Unified Dimensional Models (UDMs).

Component Relationships

Component relationships are defined to establish semantic relationships between components registered in an OBA Composition Server. These relationships are used in the OBA Composer to prescriptively guide a user through navigating semantic relationships between components and selecting related components while composing an OBA. There are three types of component relationships that can be established between components:

- **Related**. This type of relationship is used when the components add functional value to each other but do not have a hard dependency on each other. An example of a related relationship is an Online Analytical Processing (OLAP) report that can present an aggregated business intelligence (BI) view of transactional data collected in a Microsoft Outlook form region.
- **Supporting**. This type of relationship is used to model hard dependencies between components. An example of a supporting relationship is a Web part that supports a Web part page.
- **Associated**. This type of a relationship is used when two components that do not have a hard dependency on each other need to be physically linked to enable additional composite functional value. An example of an associated relationship is a workflow that can be associated to a document library.

Relationships between components can be explicitly defined using the component management administration module described in this document. The OBA Composer will also detect and present implicit relationships between components based on common tags and LOB adapters.

Component Permissions

Component permissions govern the ability of a user to browse and use components when composing OBAs using the OBA Composer. Component permissions are configured by the administrator using the Component Management administration module; the permissions flow seamlessly to the OBA Composer to enable a prescriptively secure OBA composition user experience.

The following are the per user permissions that be configured for a component:

- **Browse**. This permission allows the user can view the component in search results and can view information about the component.
- **Compose**. This permission allows the user can view information about a component and use the component to compose OBAs.

LOB Adapters and Adapter Instances

Line-of-business (LOB) adapters are data source abstractions used to integrate line-of-business data and processes with OBA components. One or more LOB adapter instances materialize an LOB adapter to enable integrating with specific semantically compliant instances of an adapter. For example, a customer relationship management (CRM) LOB adapter can establish a common semantic interface for integrating customer relationship data and can have Microsoft Dynamics CRM and Siebel CRM adapter instances to enable integrating physical CRM data from two different CRM systems that implement the common semantic interfaces.

This is a powerful concept because it enables reusing components against multiple LOB data sources that are semantically similar.

The following types of LOB adapters are supported in this release:

- Relational databases: SQL Server 2005 and Microsoft Office Access 2007
- ASMX Web Services
- OLAP data sources: SQL Server Analysis Services databases and .cub files

LOB Adapter/Adapter Instance Permissions

LOB adapter and adapter instance permissions govern the rights that a user has to read/write LOB data using an LOB adapter/adapter instance. The following user permissions can be configured for an LOB adapter/adapter instance:

- **Read**. This permission allows a user to read LOB data using the LOB adapter/adapter instance.
- **Write**. This permission allows a user to write LOB data using the LOB adapter/adapter instance.

These are “high granularity” permissions and do not encompass lower-level granular permissions that control the subsets of LOB entities and attributes that a user can or cannot access. The lower-level permissions are assumed to be configured at the level of a physical LOB adapter instance. These “high granularity” permissions are used to define at a high level the access rights that a user has to an LOB system/system instance registered in an OBA Composition Server using an LOB adapter/adapter instance.

A user does not directly interface with an LOB adapter/adapter instance. User access to LOB adapters/adapter instances are mediated by components that the user selects and uses to compose an OBA using the OBA Composer. LOB adapter/adapter instance usage permissions can also be configured at the level of a component and an aggregation of the permissions at the component and user levels are used to integrate additional and derived prescriptive security in the OBA composition user experience enabled by the OBA Composer. For example, a user who has only "read" access to an LOB adapter will not be able to use a component that requires "write" access to the adapter.

Semantic Tags

Tags can be used to mark up components and OBAs to facilitate user searching and discovery. Tags are grouped into categories known as tag types. An example of a tag type is Industry. Examples of tags added to Industry tag type include Manufacturing, Financial Services, and Health & Life Sciences.

The OBA Composition Reference Toolkit's metadata can be extended and customized to incorporate custom tag types and tags.

Provisioning

Provisioning is the process of deploying an OBA composed using the OBA Composer to a SharePoint farm. Provisioning an OBA results in the creation of a SharePoint site for the application. A SharePoint site is the epicenter of OBA—it is composed and deployed using the OBA Composer. It serves as the container for all the OBA components of pertinence to an OBA (including VSTO add-ins for Office applications).

User

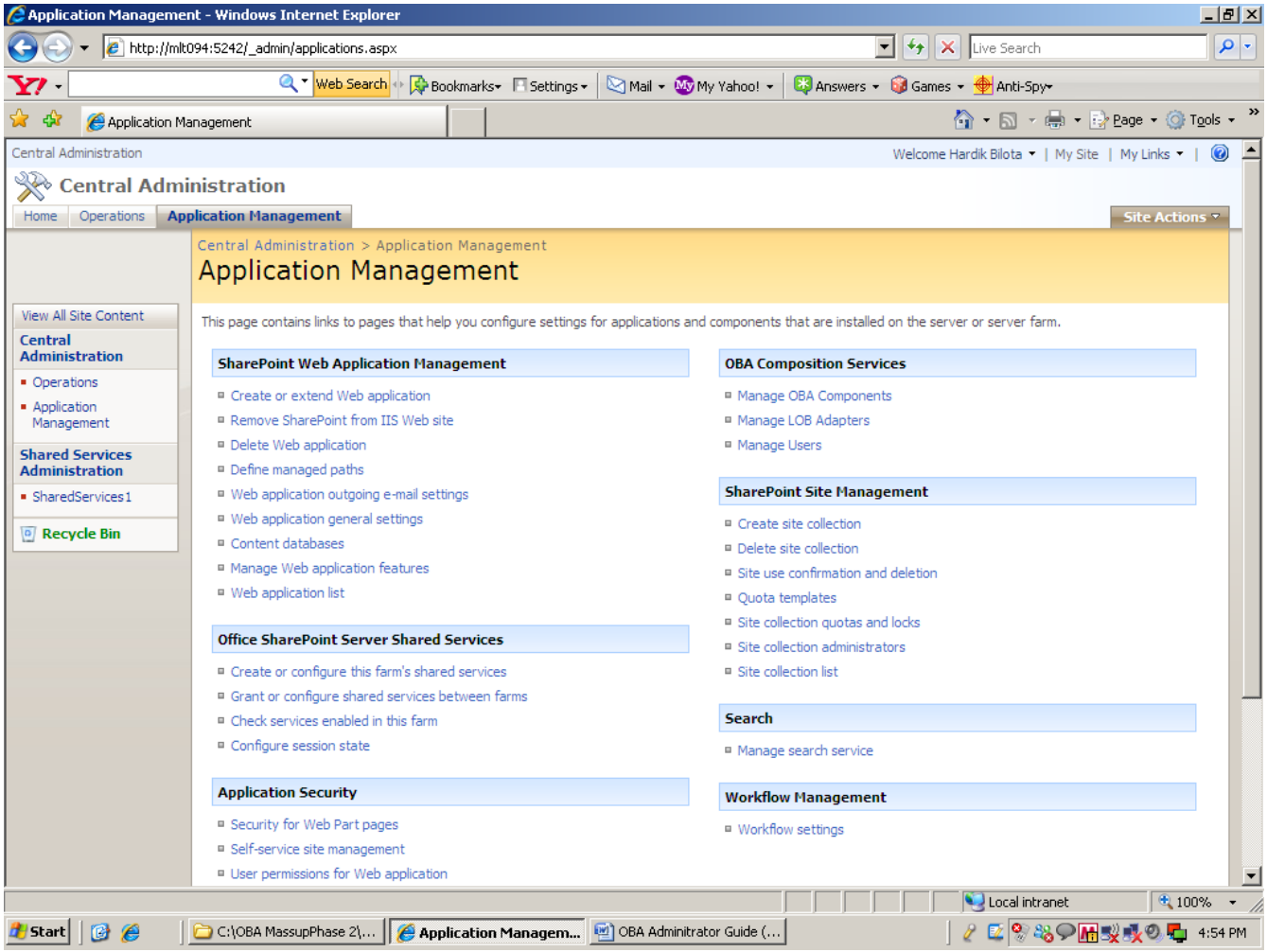
A Windows Active Directory directory service user registered in the OBA Composition Server as a user with permissions to compose and deploy OBAs using the services and tools enabled by the OBA Composition Reference Toolkit. Component and LOB adapter permissions can be configured for individual users to govern their OBA composition capabilities.

OBA Composition Server Administration

Administering an OBA Composition Server entails the following three categories of activities:

- Managing OBA components.
- Managing LOB adapters.
- Managing users.

The administration capabilities for the OBA Composition Server are integrated into the SharePoint Central Administration site. You will find an **OBA Composition Services** section in the application management portal. This section contains links that you can use to access the administration pages for managing and administering OBA components, LOB adapters, and users. The following screen shot illustrates the Application Management page.

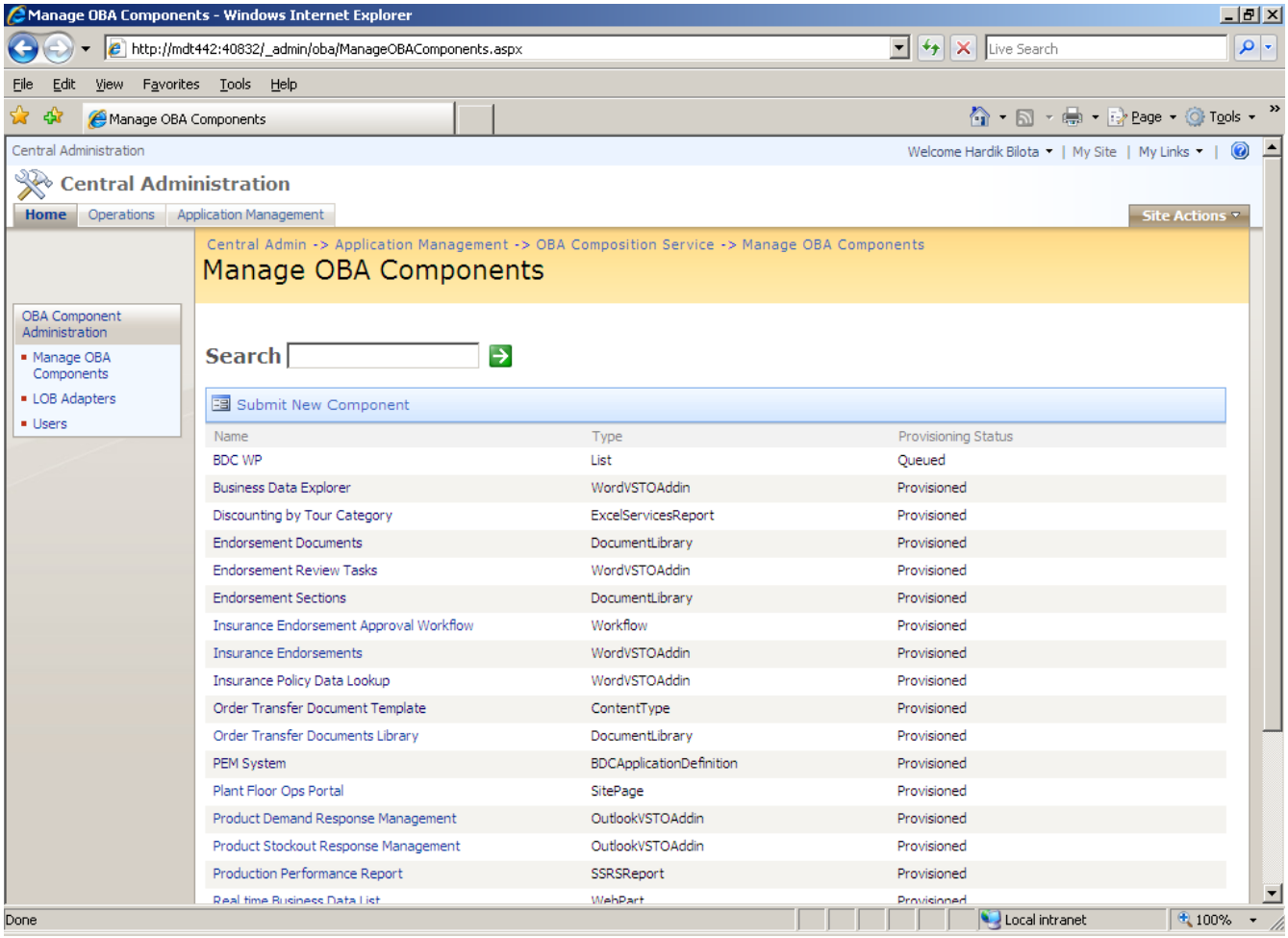


Manage OBA Components

This section describes the administration pages that enable the administration of OBA components.

Manage OBA Components Page

The Manage OBA Components page displays a list of the OBA components that are registered in the OBA Composition Server. To view this page, click **Manage OBA Components** in the OBA Composition Services section of the Application Management page. The following screen shot illustrates the Manage OBA Components page.



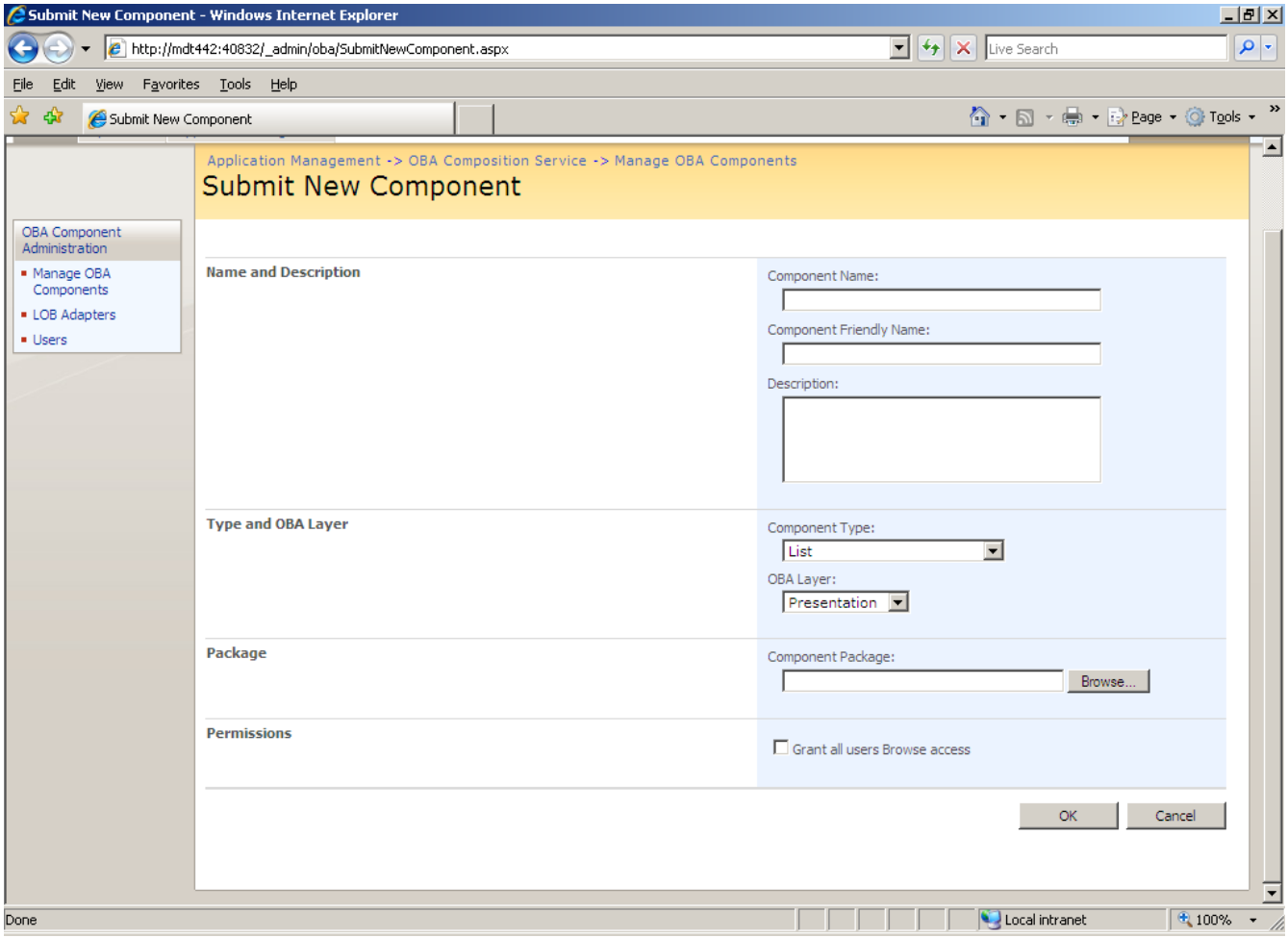
This page lists each OBA components with its name, type, and provisioning status.

On this page, you can do the following:

- Register new components in the OBA Composition Server.
- Search the catalog of registered OBA components.
- Navigate to a component's Component Information Page.

Submit New Component Page

The Submit New Component page can be used to submit and register new components in the OBA Composition Server. To view this page, click **Submit New Component** above the list of components on the Manage OBA Components page. The following screen shot illustrates the Submit New Component page.



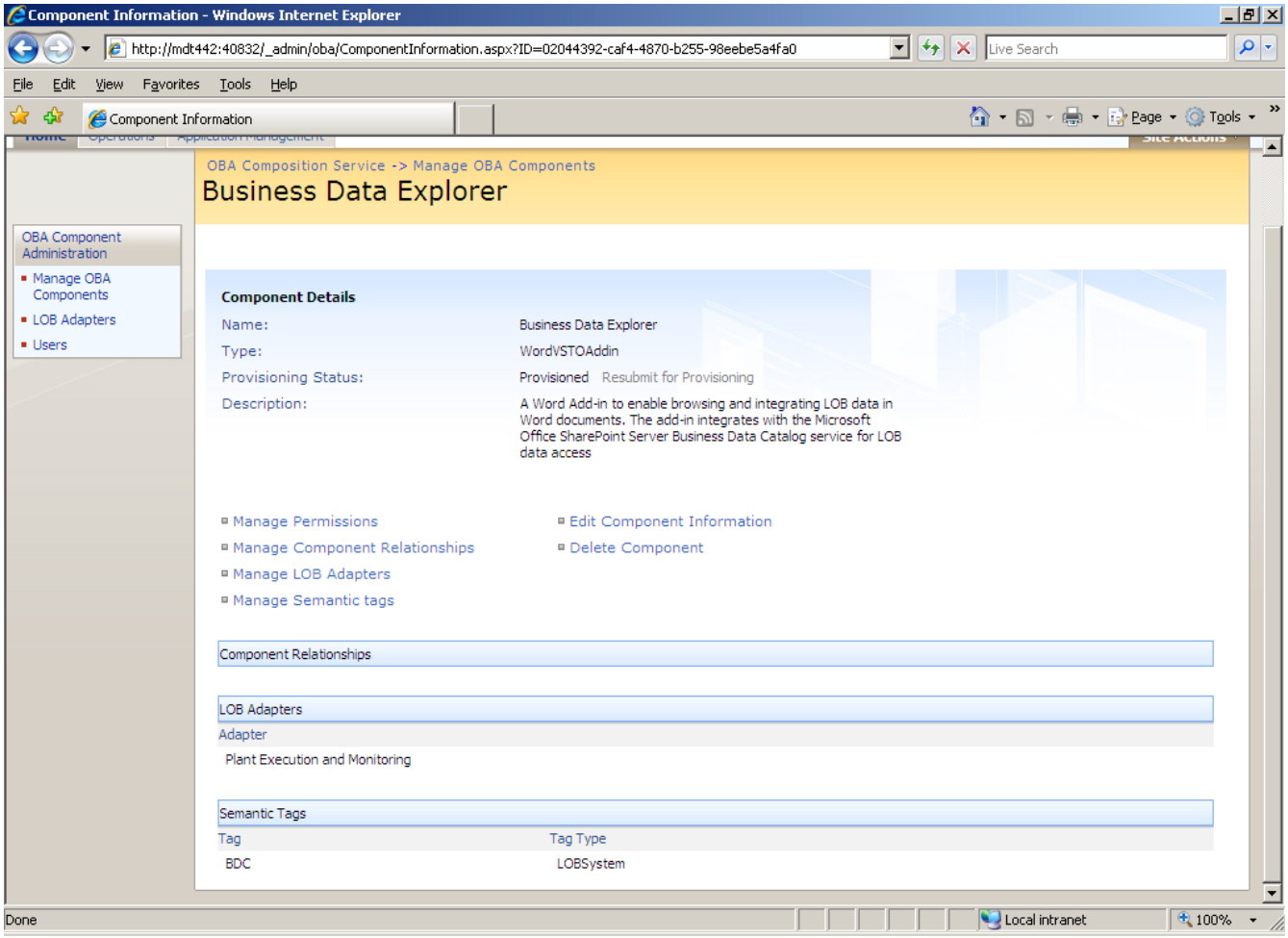
On this page, you can submit/register a new component by supplying the following information:

- Name and description of the component
- Type and OBA layer for the component (the OBA layer for a component will be auto set based on the selected type)
- A zipped component package file (for more information about packaging components for the OBA Composition Server, see the *Component Design and Packaging Guide*)

Additionally, you can also selecting the option to enable Browse access to the component for all the users registered in the OBA Composition Server.

Component Information Page

The Component Information page displays information about a selected component. To view this page, click the component you want information about on the Manage OBA Components page. This page includes basic information about the component (name, type, description, and provisioning status) and additional information such as the list of related components, the LOB adapters used by the component, and the associated semantic tags. The following screen shot illustrates the Component Information page for the Business Data Explorer component.

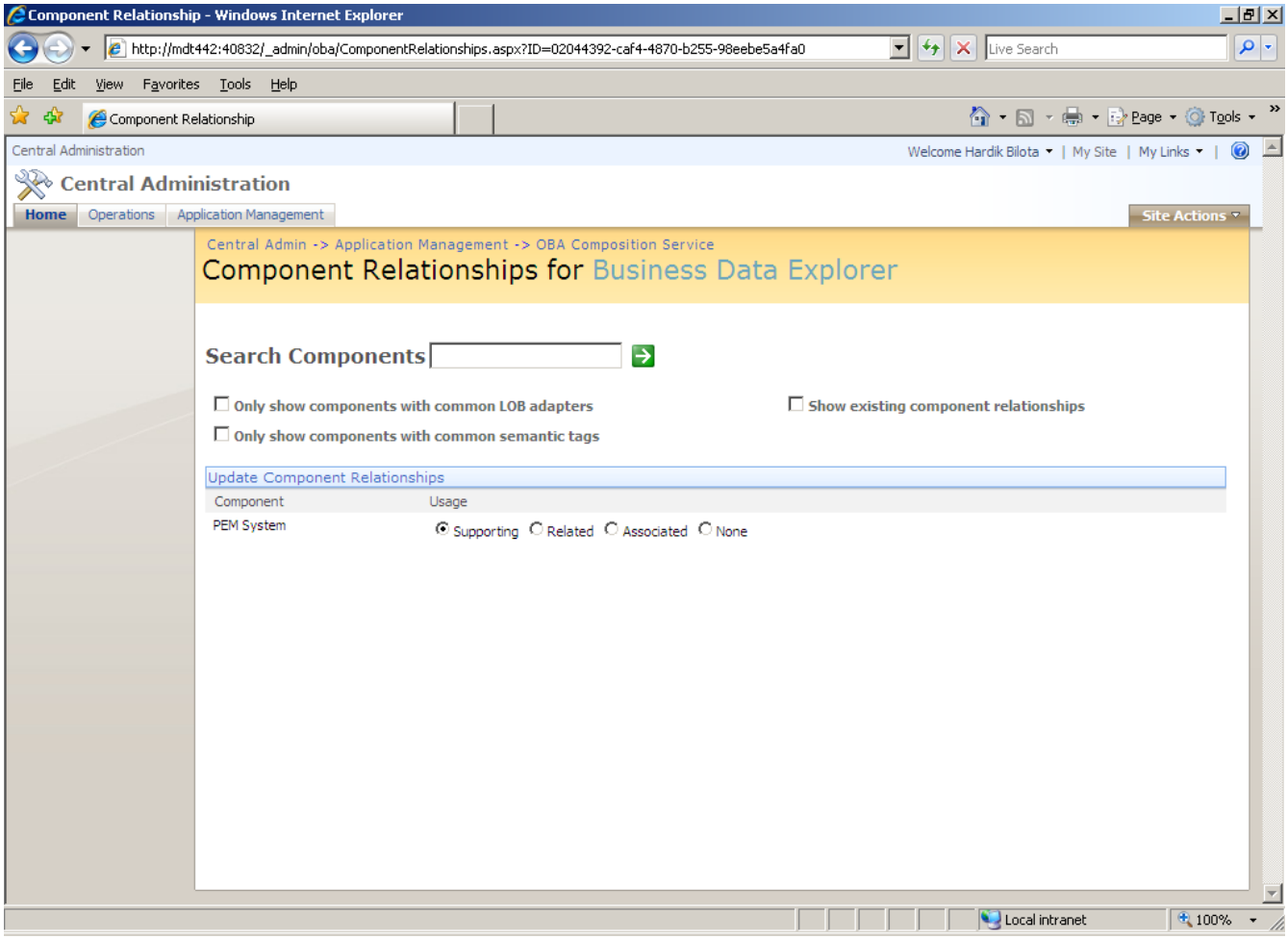


On this page, you can do the following:

- Resubmit a component for provisioning if its provisioning status is shown as **Failed**. (Note: The Windows Event Viewer can be used to locate an application event log entry generated by the component provisioning service when the provisioning process for a component fails. The log entry will contain an exception stack that can be used to identify and address the cause of a failed provisioning attempt prior to resubmitting the component for provisioning.)
- Manage a component's user permissions.
- Manage a component's relationships to other components registered in the Composition Server.
- Manage the LOB adapter dependencies for a component.
- Manage a component's semantic tags.
- Edit a component's information.
- Delete a component.

Component Relationship Page

The Component Relationship page can be used to view and add component relationships for a component. To view this page, click **Manage Component Relationships** on the Component Information page. The following screen shot illustrates the Component Relationship page for the Business Data Explorer component.

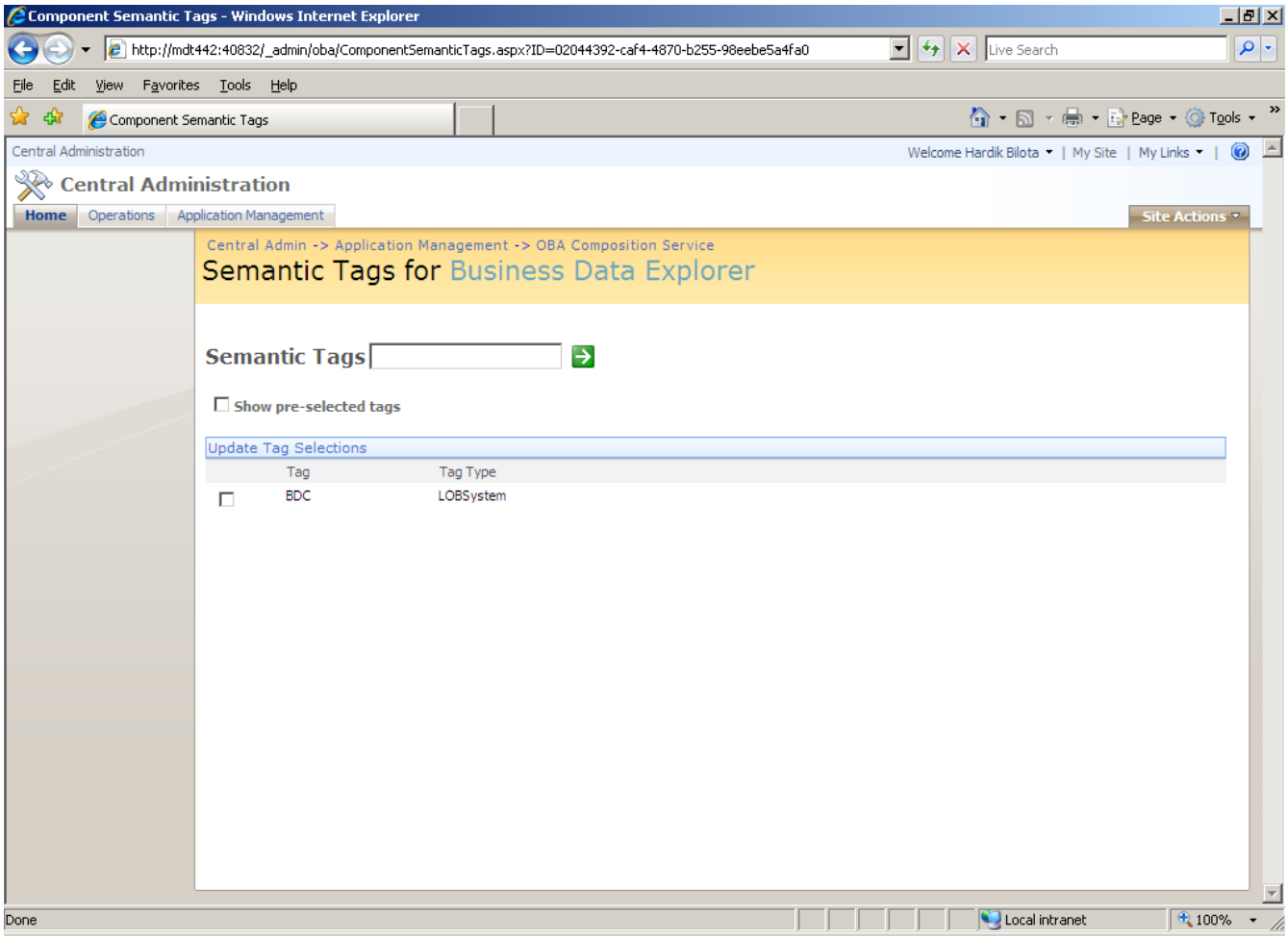


On this page, you can do the following:

- Search the catalog of registered OBA components to locate related components and define component relationships. The search options provided to facilitate the definition of new relationships include the ability to filter and view only components with common LOB adapters and/or semantic tags. You can also choose to only view and update existing component relationships.
- Select and update the relationship type that defines the semantics of a component relationship.

Component Semantic Tags Page

The Component Semantic Tags page can be used to manage semantic tags for a component. To view this page, click **Manage Semantic Tags** on the Component Information page. The following screen shot illustrates the Component Semantic Tags page for the Business Data Explorer component.

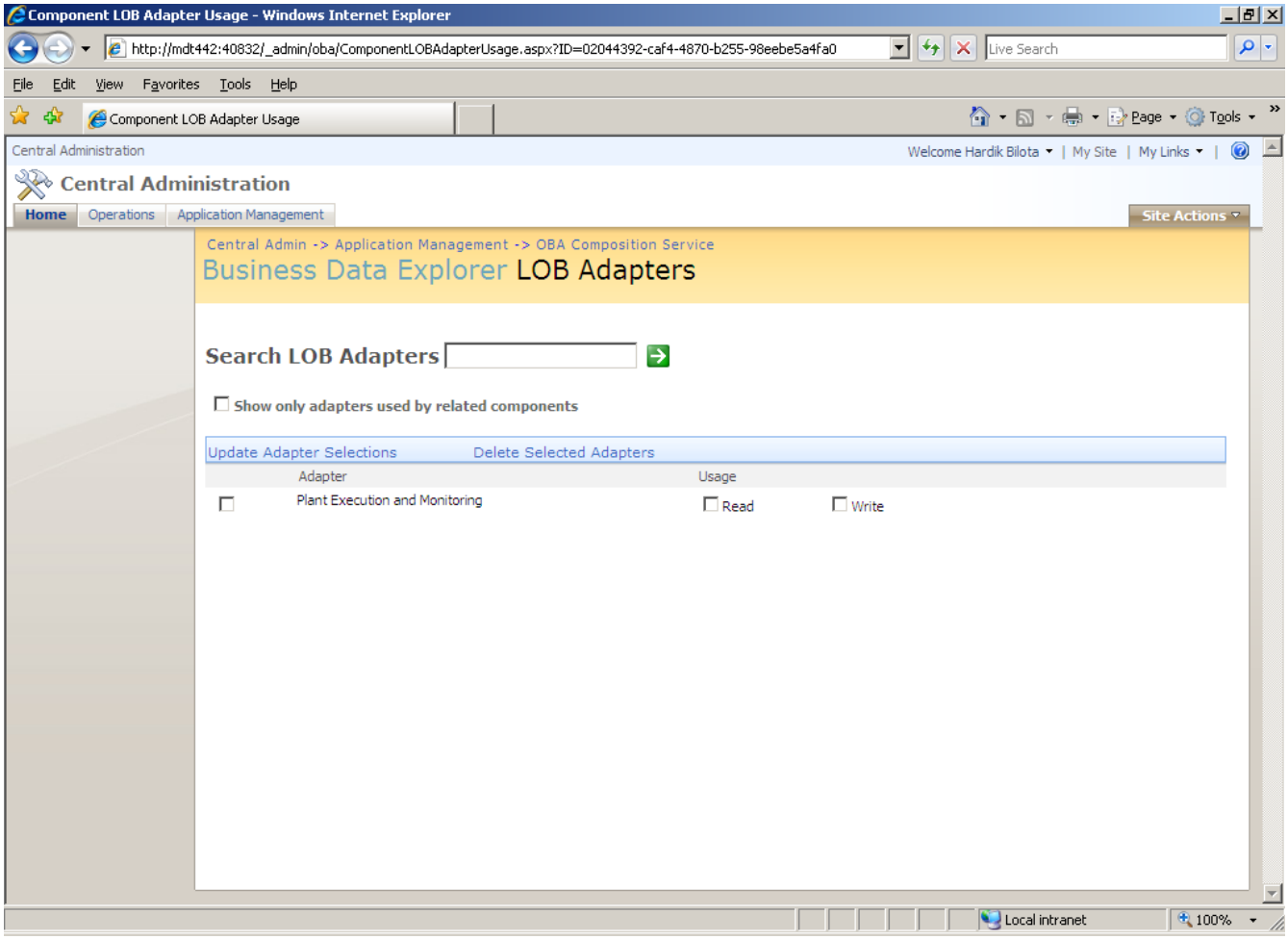


On this page, you can do the following:

- Search the catalog of semantic tags and add new tags for a component.
- Update the tag selections for a component.

Component LOB Adapter Usage Page

The Component LOB Adapter Usage page can be used to manage the LOB adapters that are used by a component. To view this page, click **Manage LOB Adapters** on the Component Information page. The following screen shot illustrates the Component LOB Adapter Usage page for the Business Data Explorer component.



On this page, you can do the following:

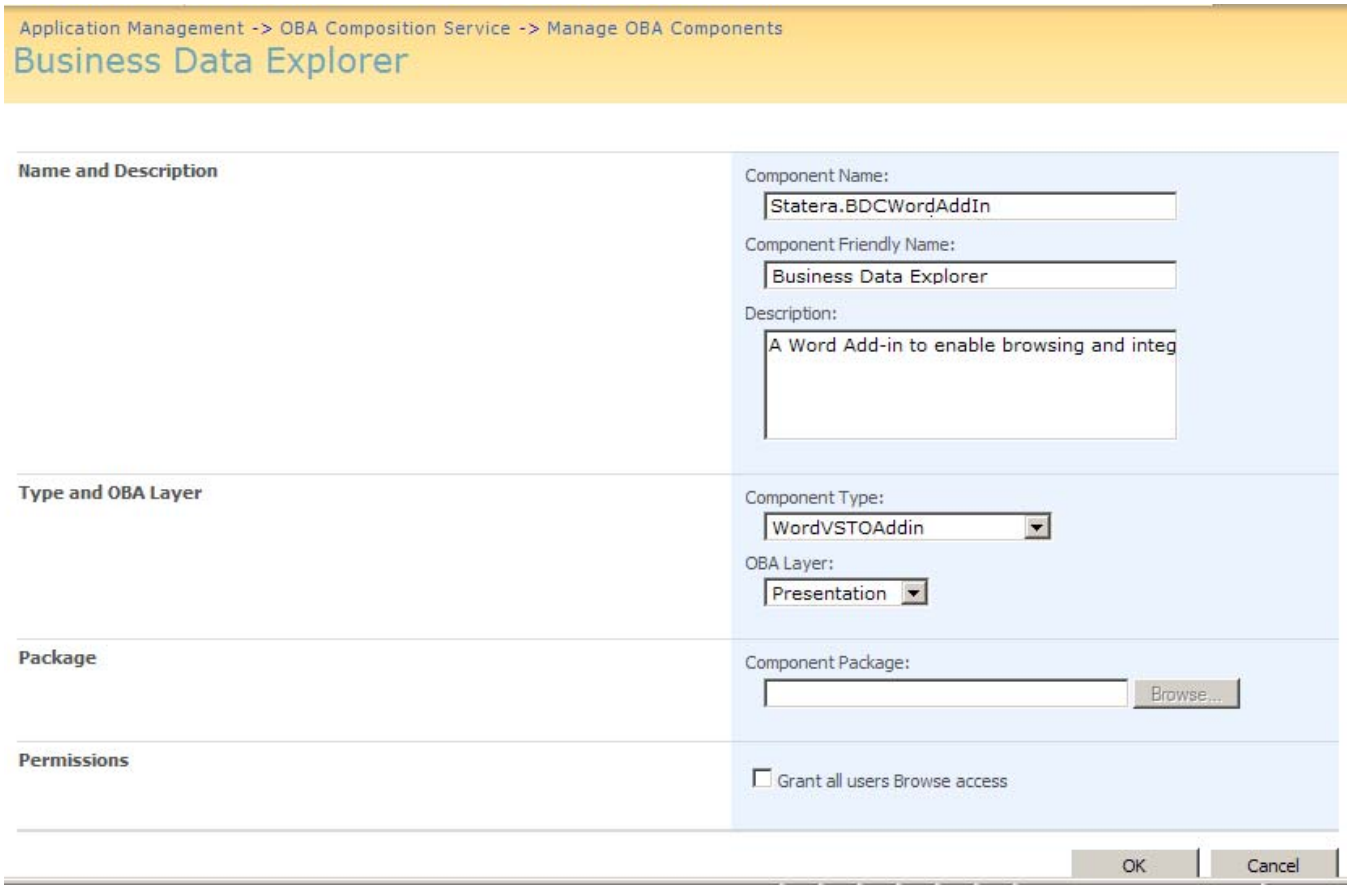
- Search the catalog of registered LOB adapters.
- Add/update adapter dependencies for a component.
- Specify adapter usage permissions for a component.
- Remove an adapter dependency.

Edit Component Information Page

The Edit Component Information page can be used to:

- Edit the descriptive metadata of a component
- Resubmit a component's package for provisioning
- Grant all users Browse access to a component

To view this page, click **Edit Component Information** on the Component Information page. The following screen shot illustrates the Edit Component Information page for the Business Data Explorer component.

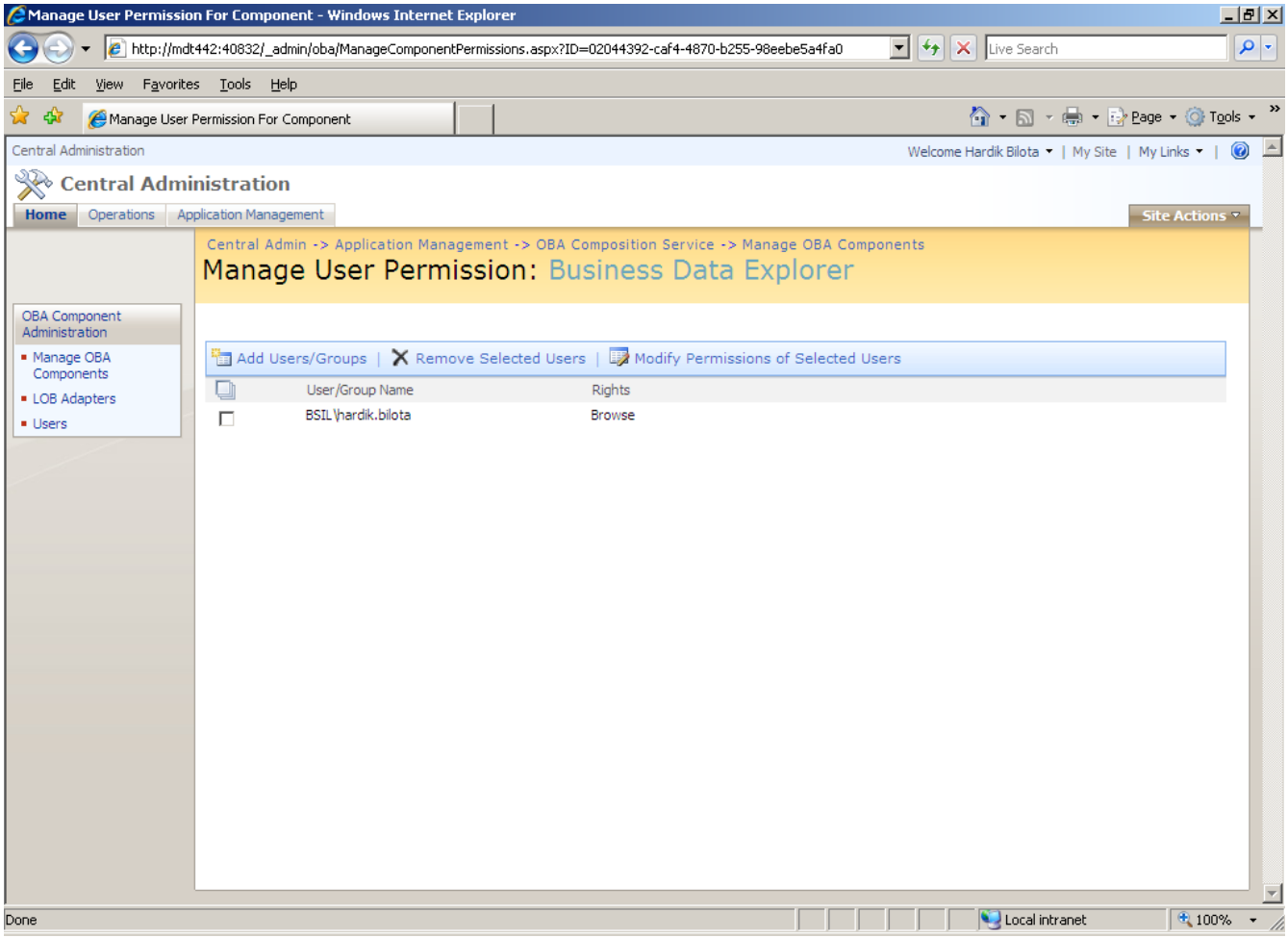


On this page, you can do the following:

- Update the friendly name and description of a component.
- Update the component type of a component.
- Resubmit a component package when the provisioning fails for a component.
- Grant all users Browse access to the component.

Manage User Permissions for Component Page

The Manage User Permissions For Component page can be used to set or change the user permissions for each component. To view this page, click **Manage Permissions** on the Component Information page. The following screen shot illustrates the Manage User Permissions For Components page for the Business Data Explorer component.



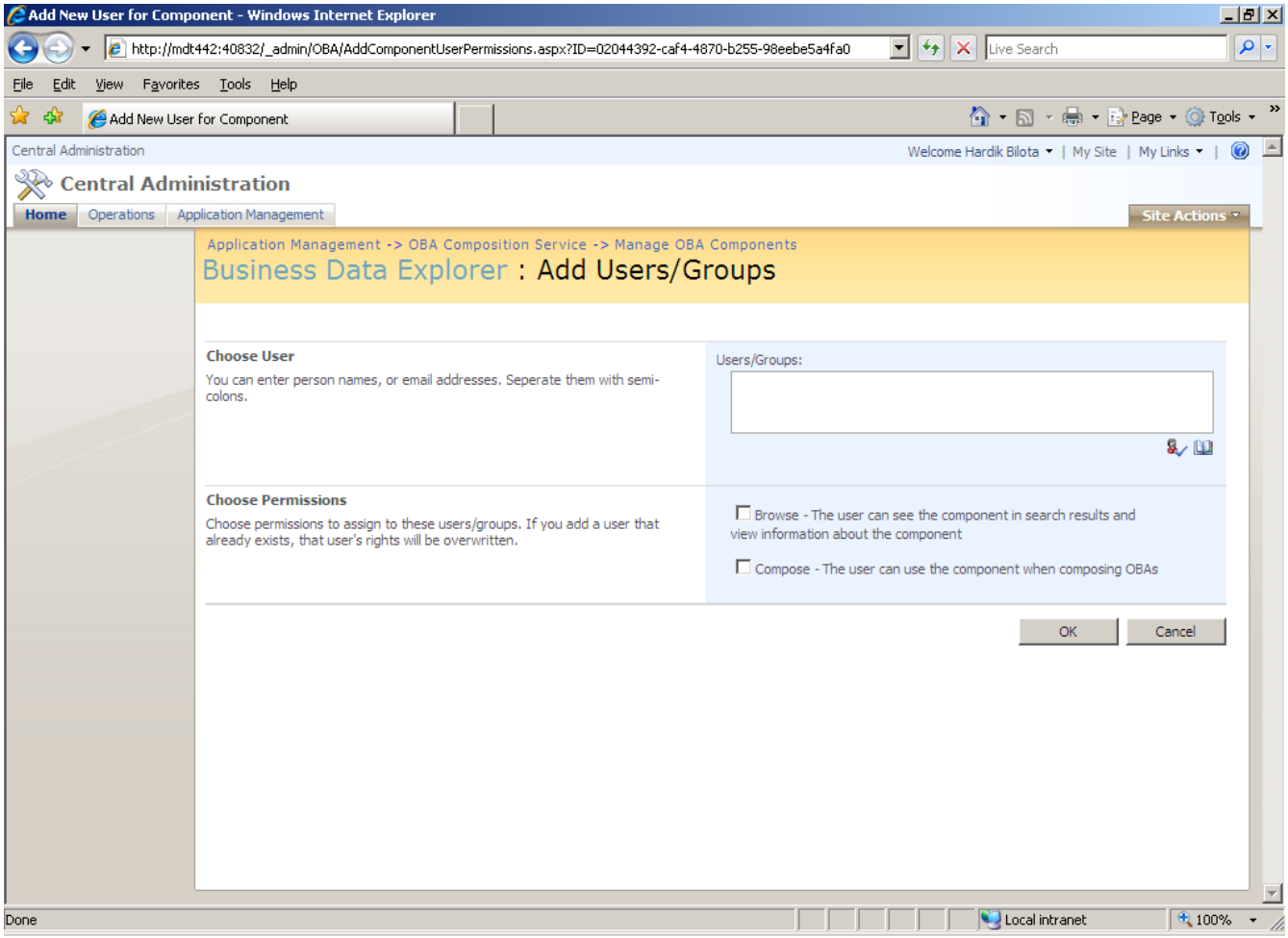
On this page, you can do the following:

- Add and grant users permissions to access a component.
- Remove users from a component's users list.
- Modify the component access permission for the selected user.

Add New User for Component Page

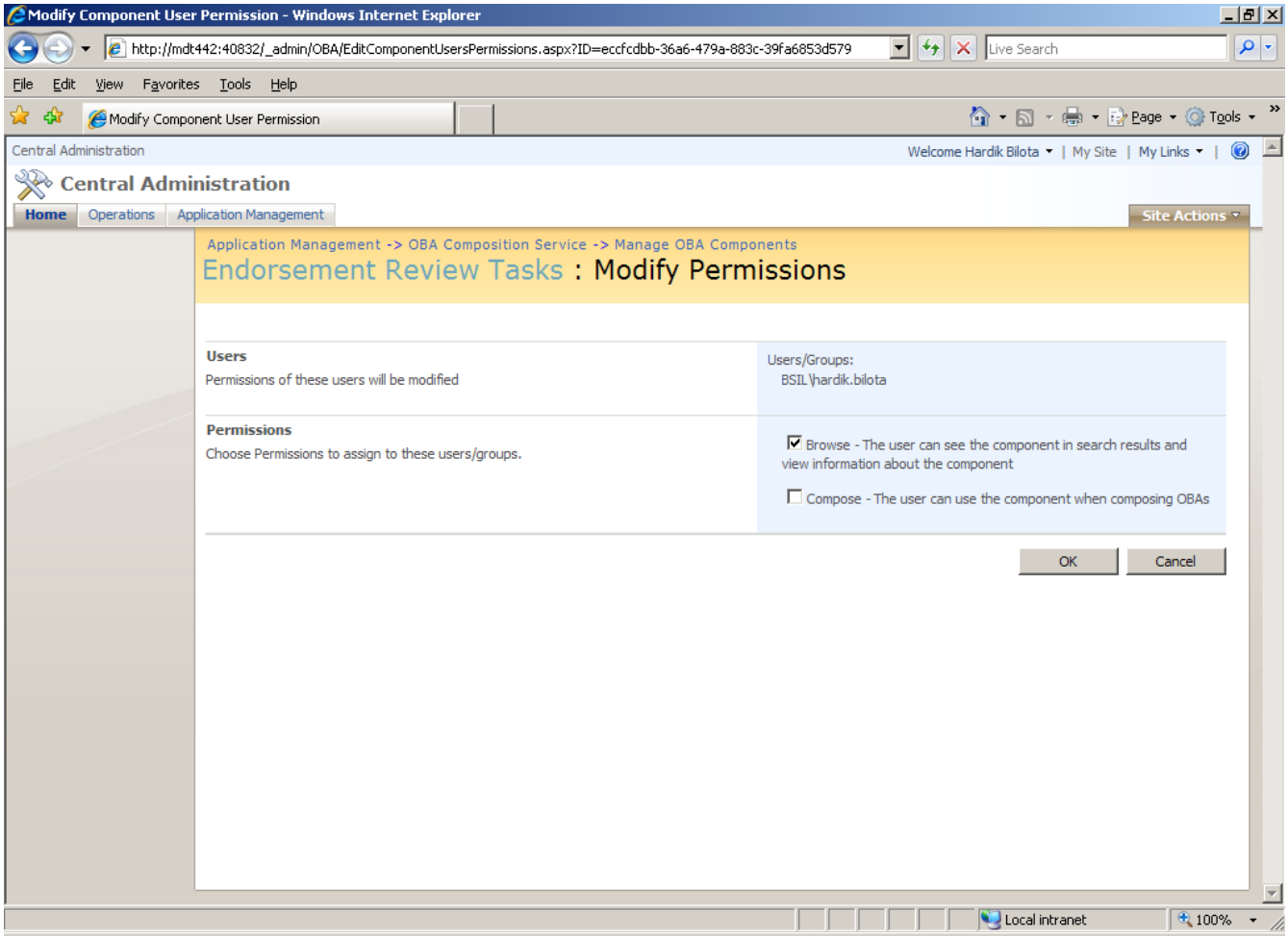
Note: Adding Active Directory user groups is not supported in the release.

The Add New User for Component page can be used to add and grant users accesspermissions to a component. To view this page, click **Add Users/Groups** on the Manage User Permissions For Component page. The following screen shot illustrates the Add New User for Component page for the Business Data Explorer component.



Modify Component User Permissions Page

The Modify Component User Permissions page can be used to modify the component permissions granted to users. To view this page, click **Modify Permissions of Selected Users** on the Manage User Permissions For Component page. The following screen shot illustrates the Modify Component User Permission page for a component.

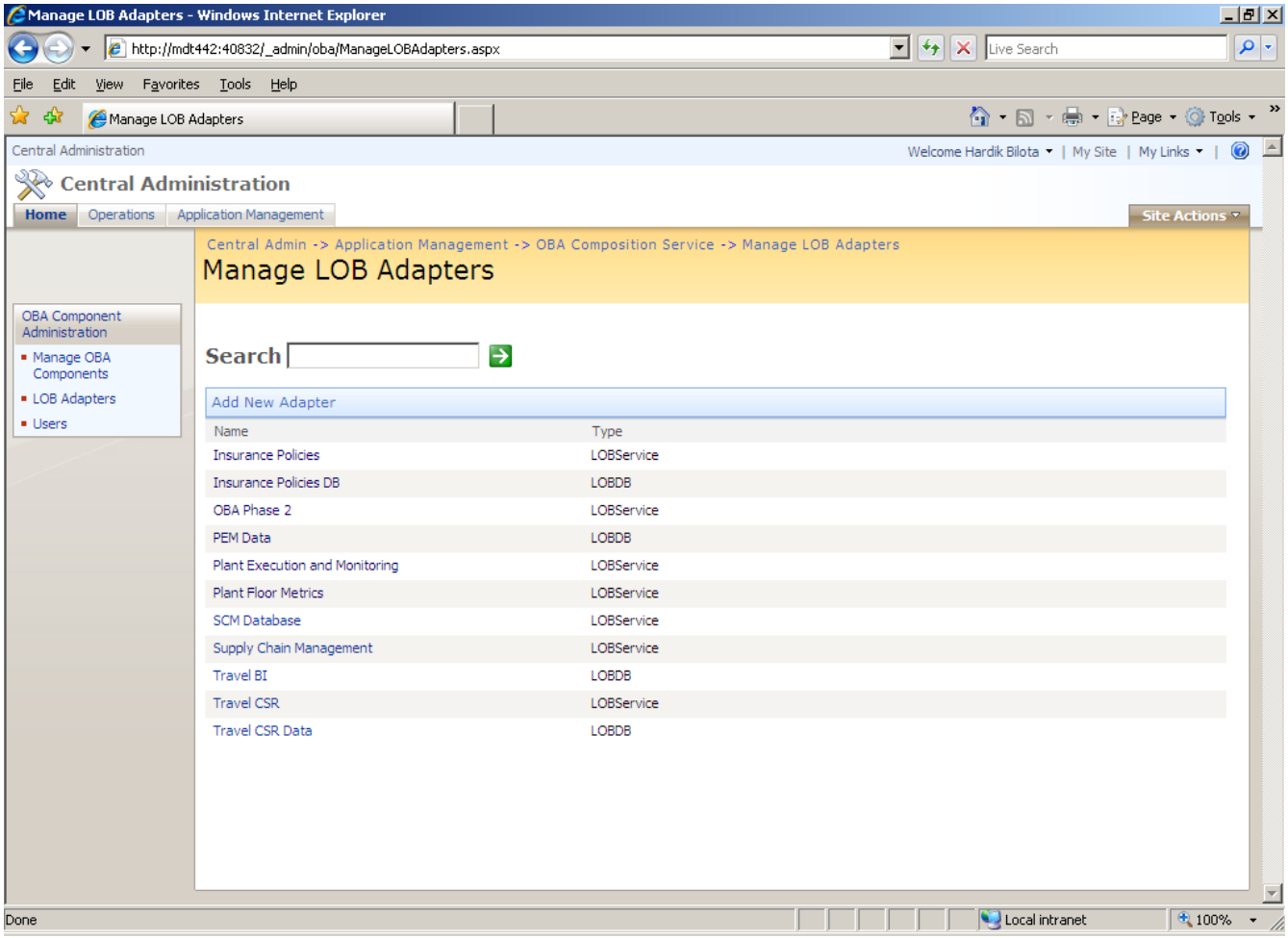


Manage LOB Adapters

This section describes the administration pages that enable the administration of LOB adapters.

Manage LOB Adapters Page

The Manage LOB Adapters page displays a list of the LOB adapters that are registered in the OBA Composition Server. To view this page, click **Manage LOB Adapters** under **OBA Composition Services** on the Application Management page. The following screen shot illustrates the Manage LOB Adapters page.



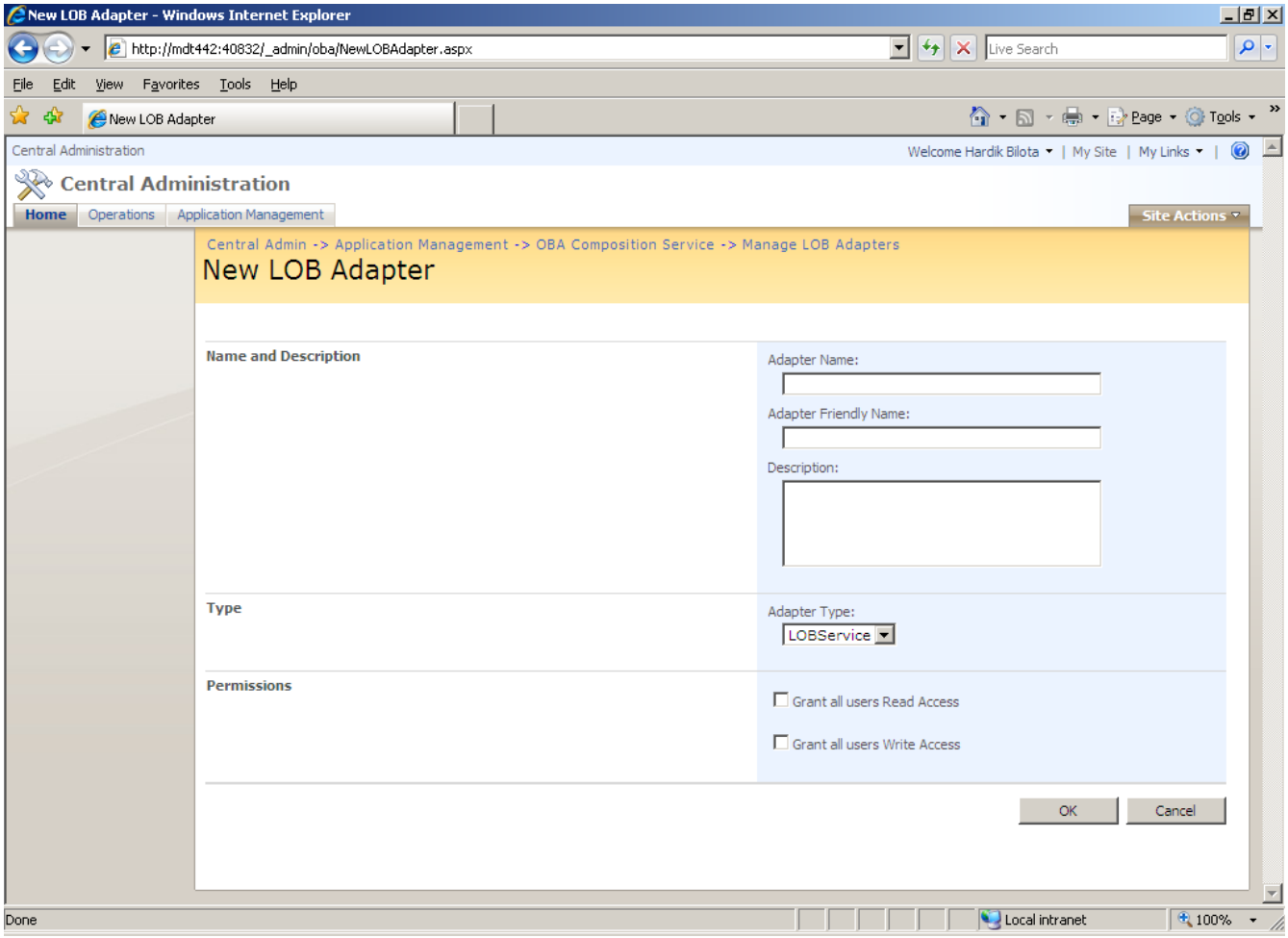
This page lists each LOB adapters with its name and type.

On this page, you can do the following:

- Add new LOB adapters in the OBA Composition Server.
- Search the catalog of registered LOB adapters.
- Navigate to the information page for an LOB adapter.

New LOB Adapter Page

The New LOB Adapter page can be used to submit or register a new LOB adapter. To view this page, click **Add New Adapter** on the Manage LOB Adapters page. The following screen shot illustrates the New LOB Adapter page.



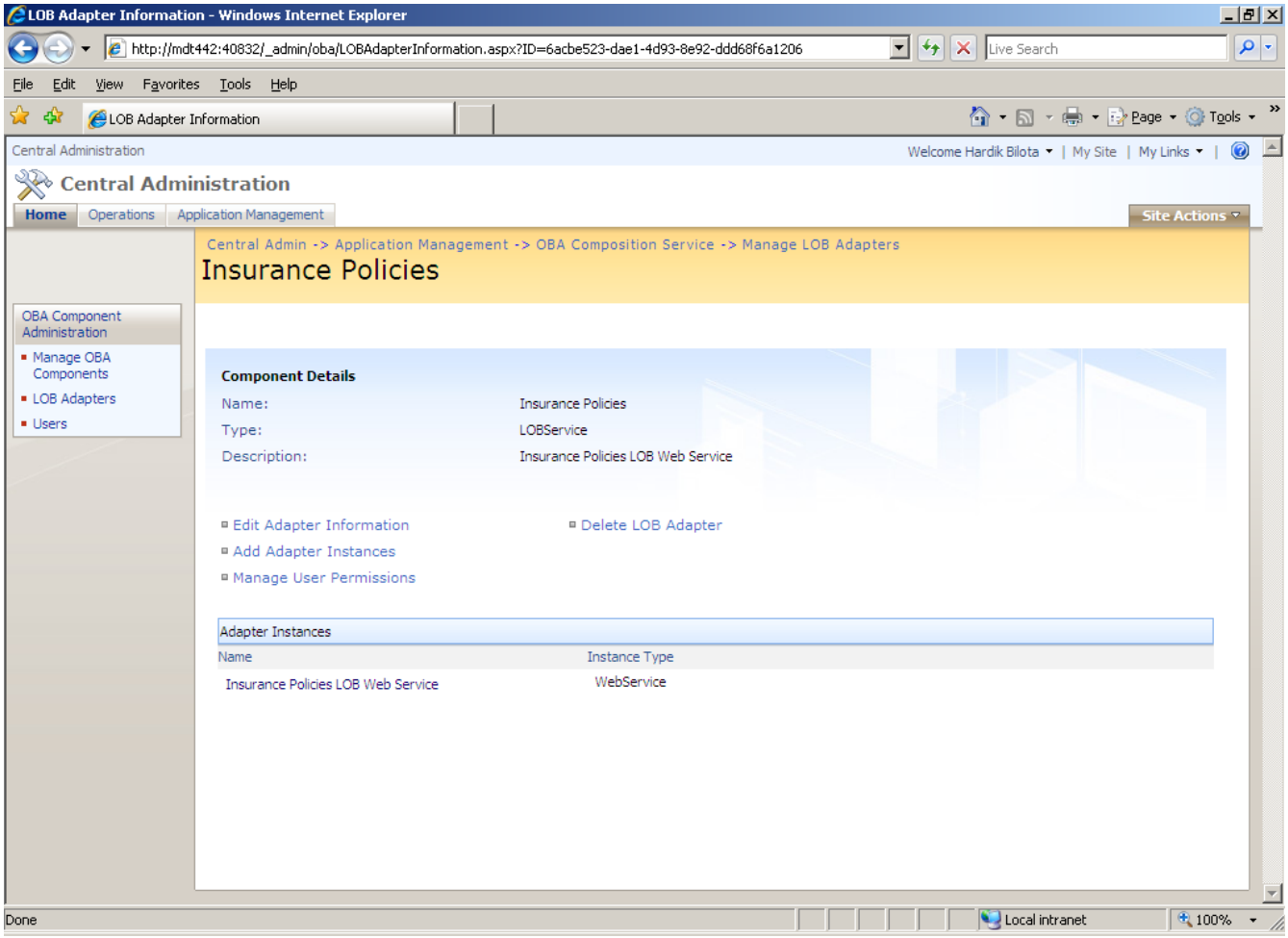
On this page, you can submit/register a new LOB adapter in the OBA Composition Server by providing the following details:

- Name and description of LOB adapter
- Adapter type

Additionally, you can select the options to grant all users read and/or write permissions to the adapter.

LOB Adapter Information Page

The LOB Adapter Information Page displays information about the selected LOB adapter. To view this page, click the LOB adapter you want to view information about Manage LOB Adapters page. The following screen shot illustrates the LOB Adapter Information page for the Insurance Policies adapter.

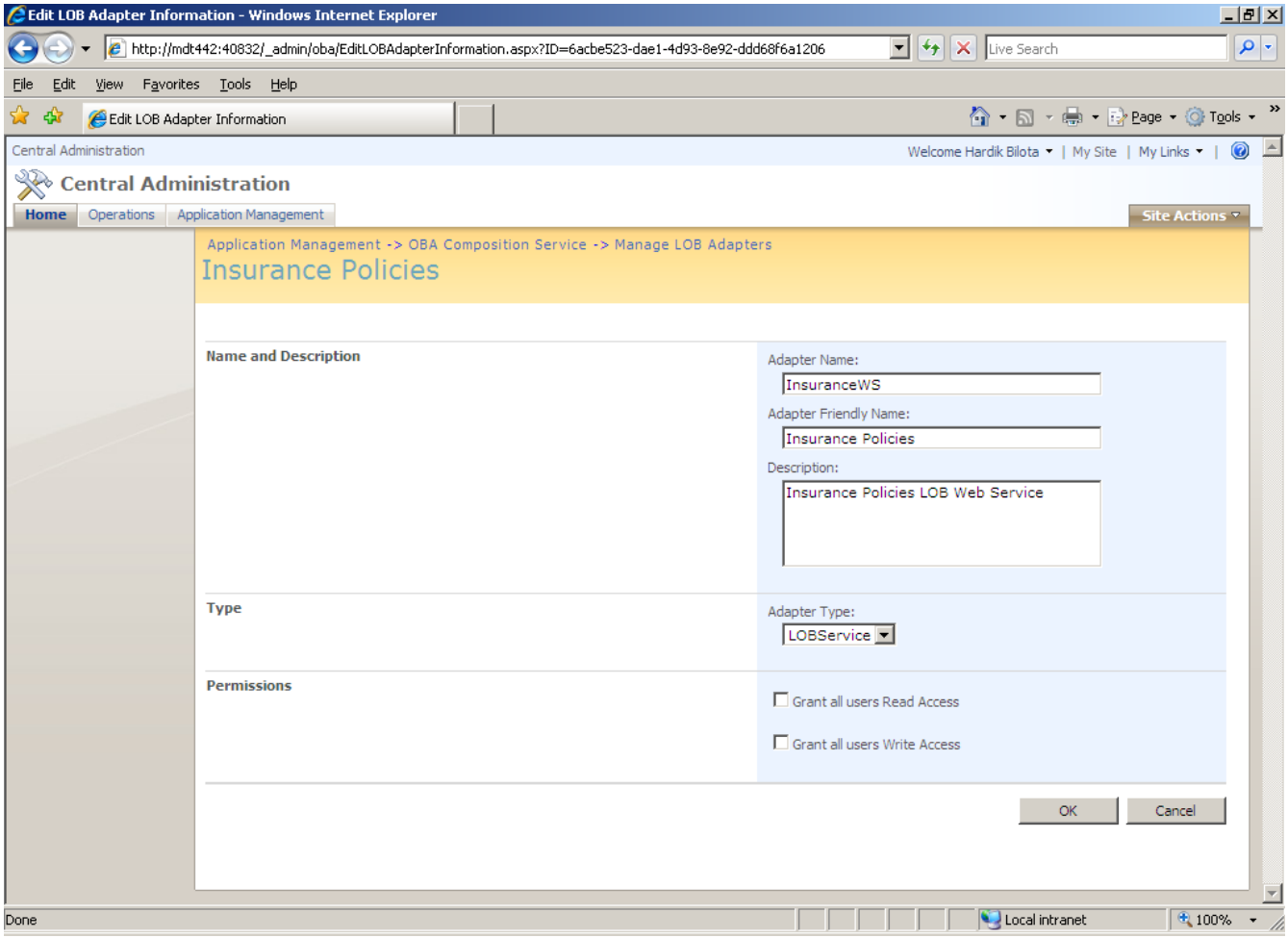


On this page, you can do the following:

- Edit information about an adapter that is stored in the OBA Composition Server.
- Add adapter instances for an adapter.
- Manage user permissions for an adapter.
- Navigate to the information page of a related adapter instance.
- Delete an adapter.

Edit LOB Adapter Information Page

The Edit LOB Adapter Information page can be used to edit information for a selected adapter. To view this page, click **Edit LOB Adapter Information** on the LOB Adapter Information page. The following screen shot illustrates the Edit LOB Adapter Information page for the Insurance Policies adapter.



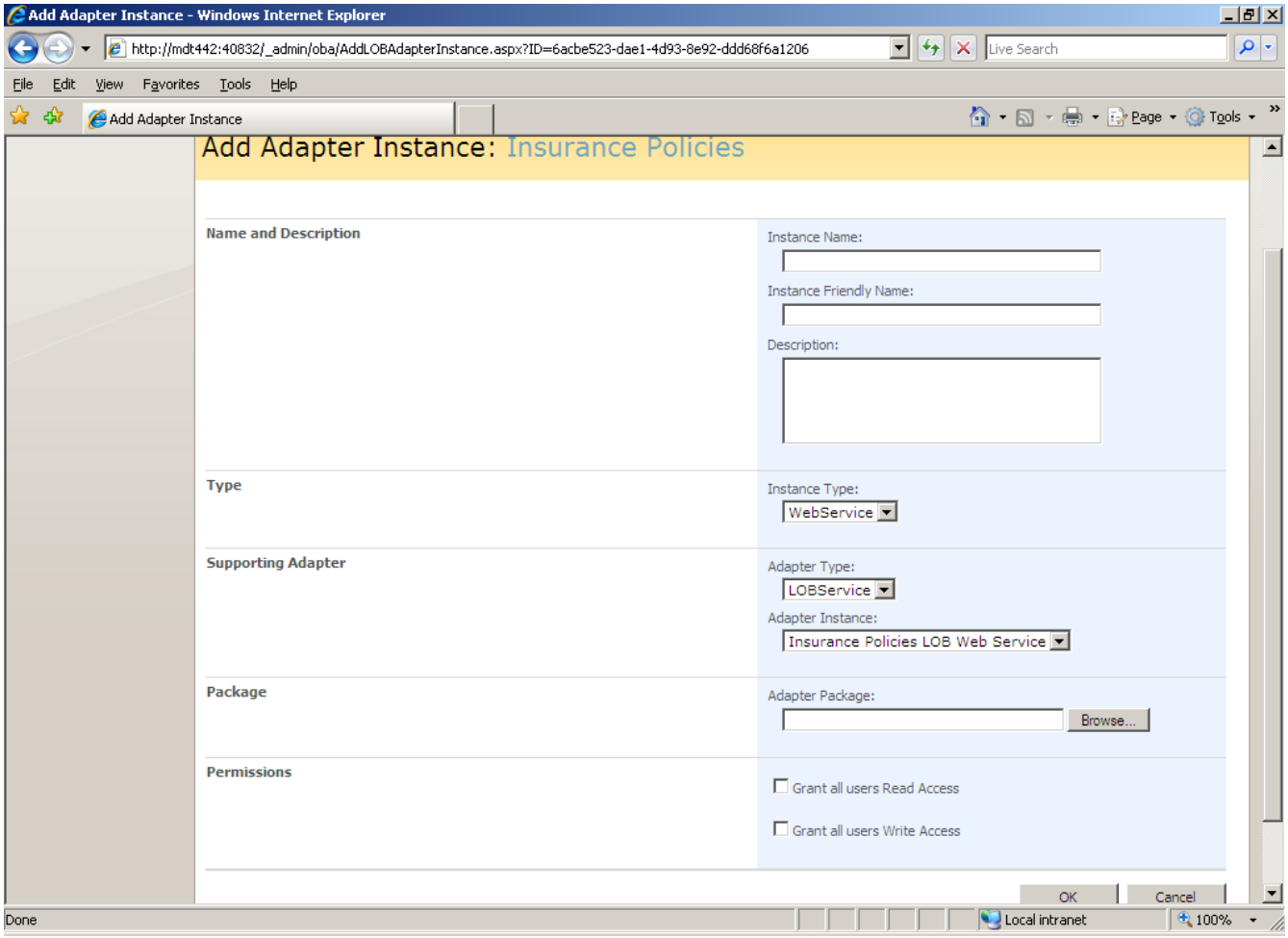
On this page, you can edit the following LOB adapter configuration properties:

- Name and description
- Type

Additionally, you can select the options to grant all users read and/or write permissions to the adapter.

Add Adapter Instance Page

The Add Adapter Instance page can be used to add an adapter instance for an LOB Adapter. To view this page, click **Add Adapter Instance** on the LOB Adapter Information page. The following screen shot illustrates the Add Adapter Instance page for the Insurance Policies adapter.



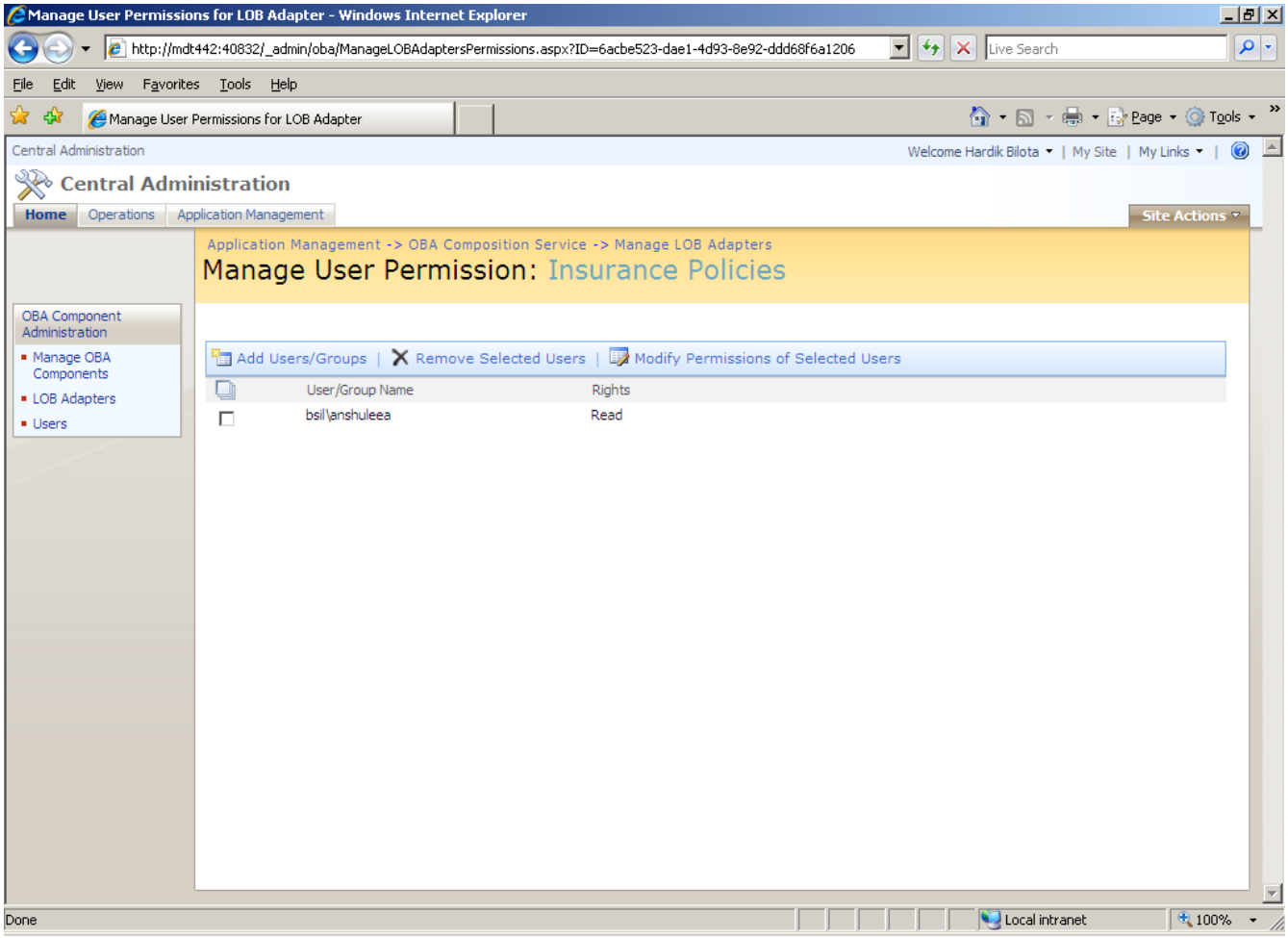
On this page, you can add a new adapter instance for an adapter by supplying the following information:

- Name and description
- Adapter instance type
- Supporting adapter instance (such as a Web service that is supported by a SQL Server database)
- Zipped adapter instance package file (for more information about packaging adapter instances, see the *Component Design and Packaging Guide*)

Additionally, you can select the options to grant all users read and/or write permissions to the adapter.

Manage User Permissions for LOB Adapter Page

The Manage User Permissions for LOB Adapter page can be used to manage user permissions for a selected adapter. To view this page, click **Manage User Permissions** on the LOB Adapter Information page. The following screen shot illustrates the Manage User Permissions for LOB Adapter page for the Insurance Policies adapter.

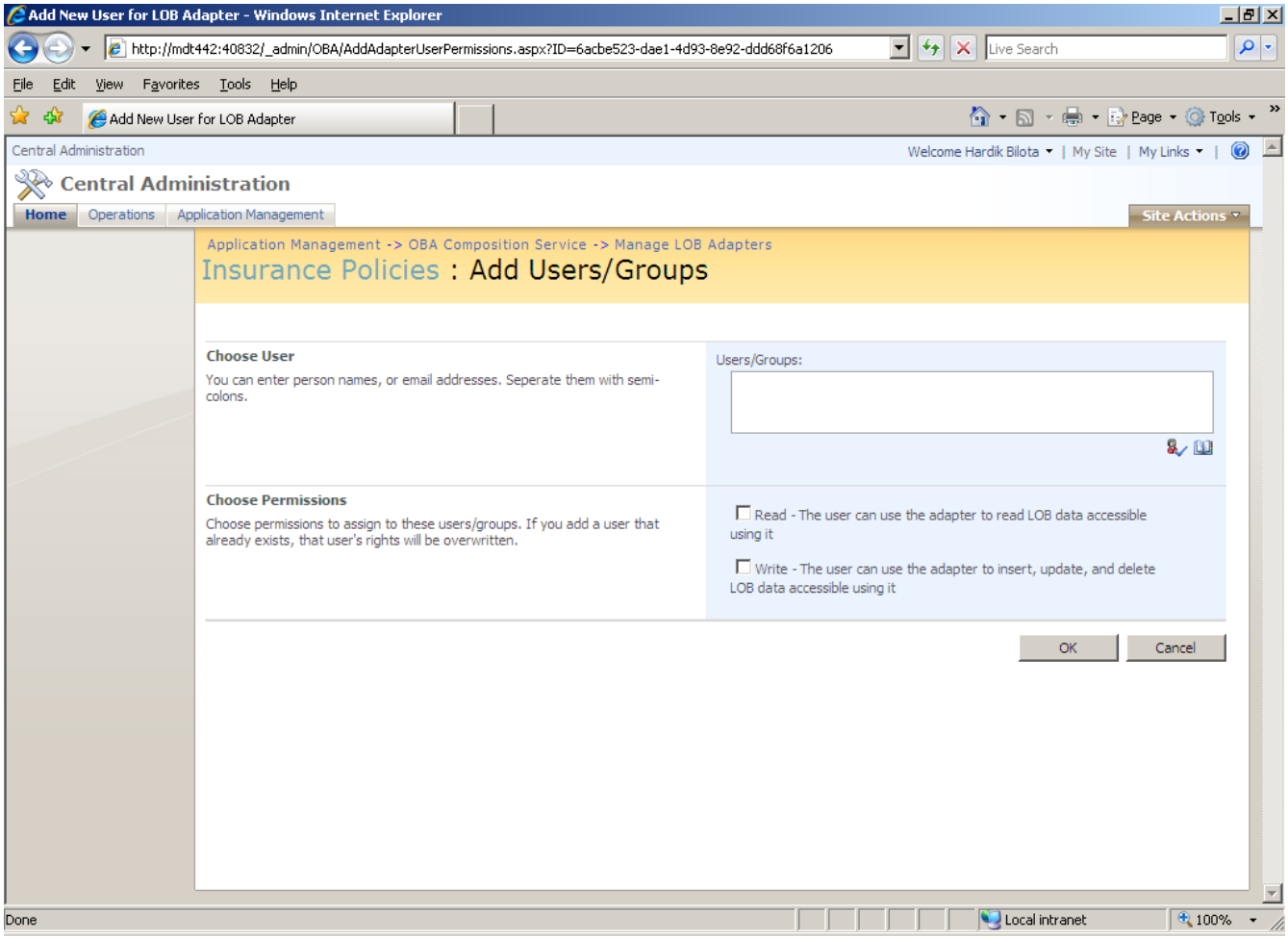


On this page, you can do the following:

- Add users to the list of LOB adapter users.
- Remove users.
- Modify permissions for selected LOB adapter users.

Add New User for LOB Adapter Page

The Add New User for LOB Adapter page can be used to select and add users and manage their permissions for the selected LOB adapter. To view this page, click **Add Users/Groups** on the Manage User Permissions for LOB Adapter page. The following screen shot illustrates the Add New User for LOB Adapter page for the Insurance Policies adapter.

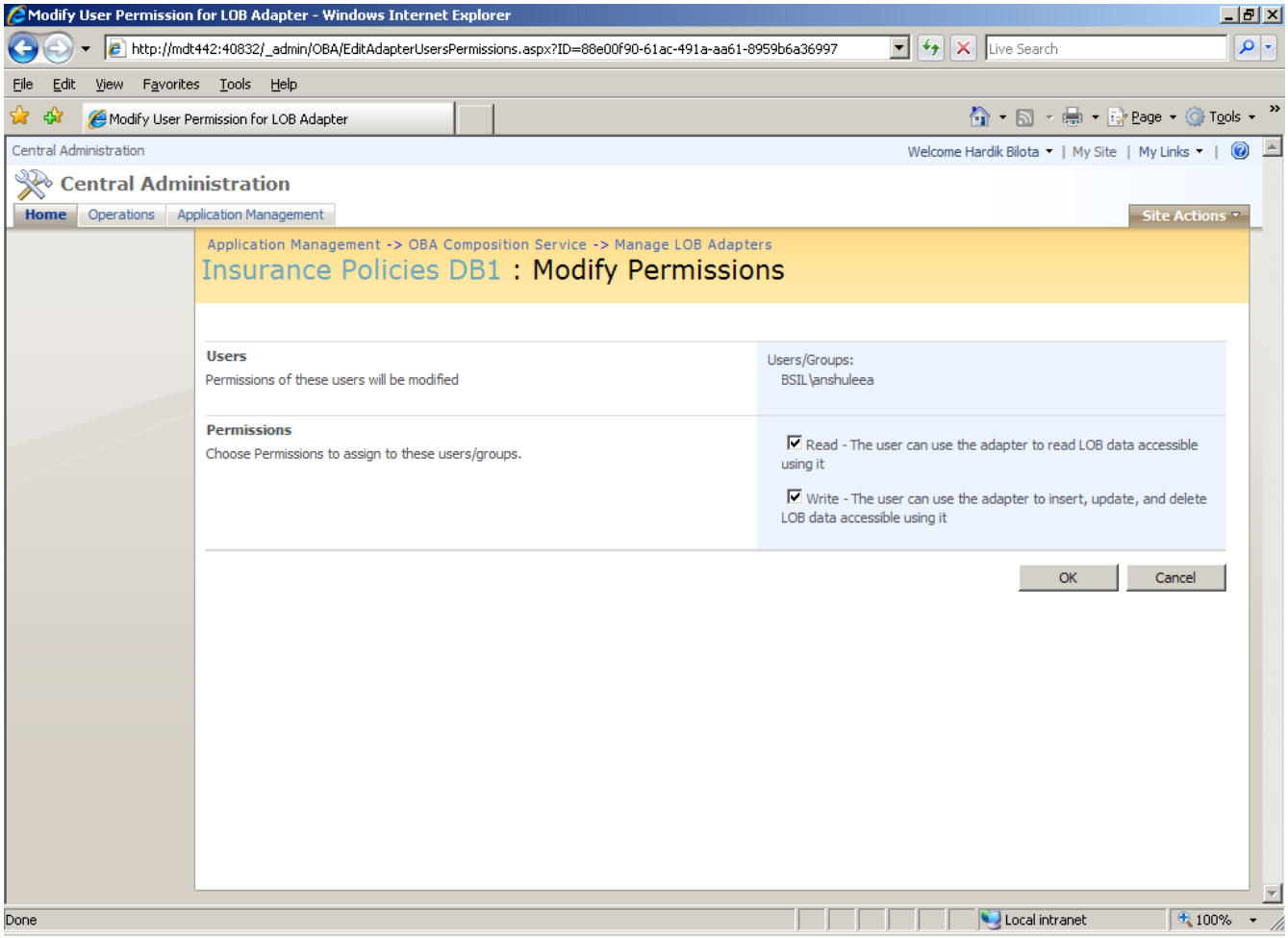


On this page, you can do the following:

- Select a user.
- Grant adapter access permissions for a user.

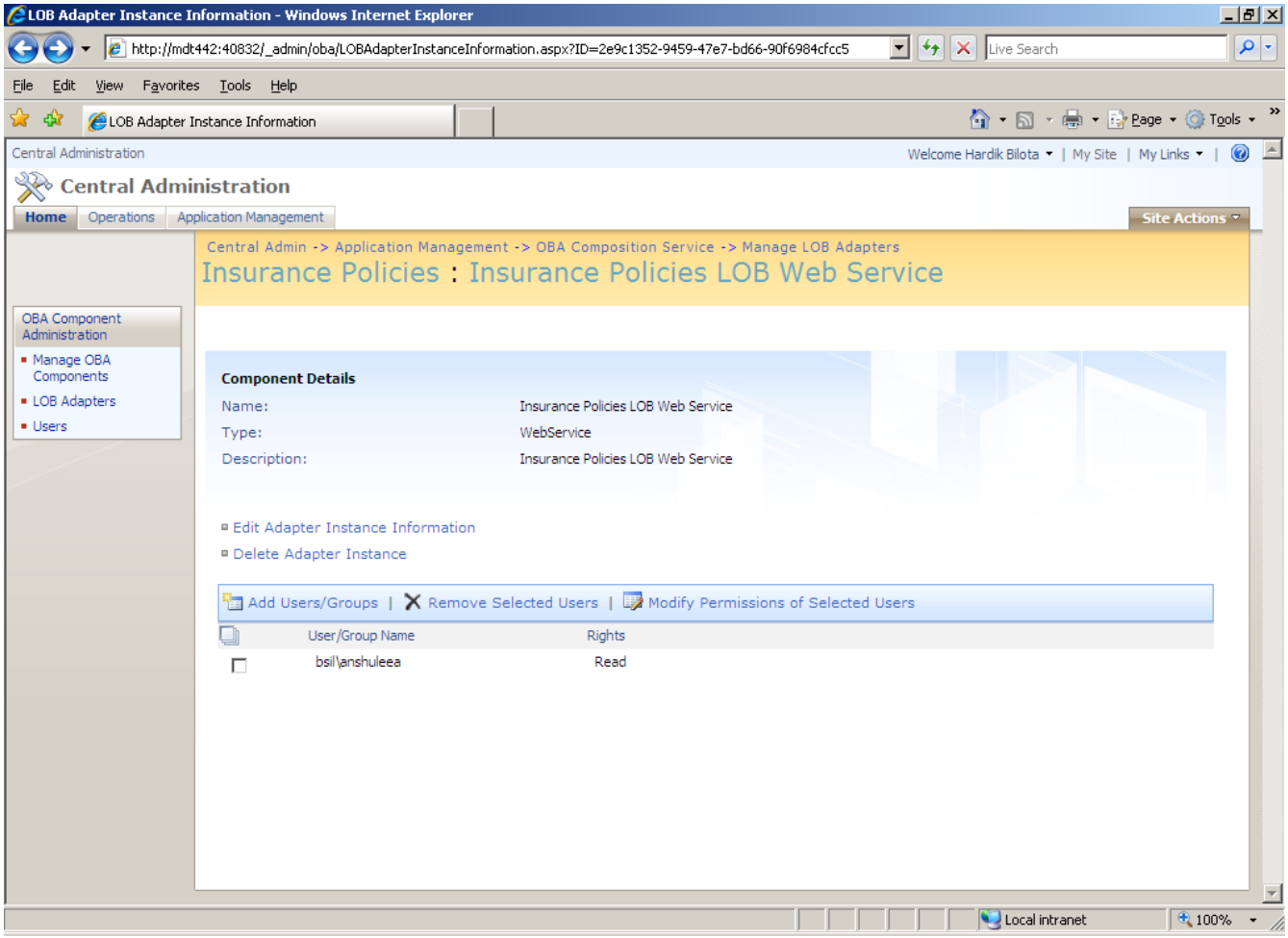
Modify User Permission for LOB Adapter Page

The Modify User Permission for LOB Adapter page can be used to modify user permissions for an LOB adapter. To view this page, click **Modify Permissions of Selected Users** on the Manage User Permissions for LOB Adapter page. The following screen shot illustrates the Modify User Permission for LOB Adapter page for the Insurance Policies adapter.



LOB Adapter Instance Information Page

The LOB Adapter Instance Information page can be used to display and manage information pertaining to an LOB adapter instance. To view this page, click an adapter instance on the LOB Adapter Information page. The following screen shot illustrates the LOB Adapter Instance Information page for the Insurance Policies adapter.

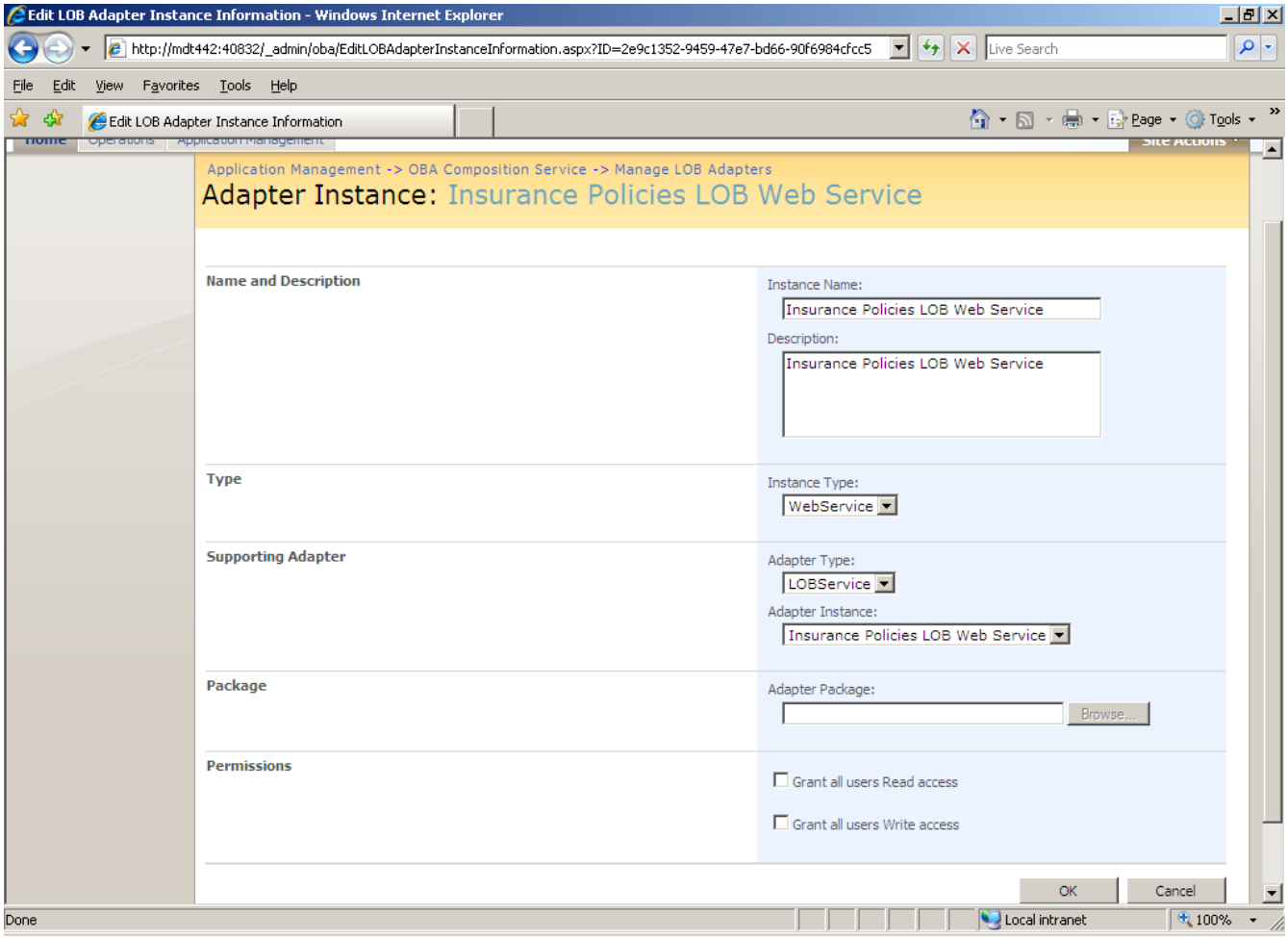


On this page, you can do the following:

- Edit information stored in the OBA Composition Server for an LOB adapter instance.
- Delete an adapter instance.
- Add and grant users permissions to use an adapter instance.
- Remove users from an adapter instance's users list.
- Modify user permissions.

Edit LOB Adapter Instance Information Page

The Edit LOB Adapter Instance Information page can be used to edit the information stored in the OBA Composition Server for an LOB adapter instance. To view this page, click **Edit Adapter Instance Information** on the LOB Adapter Instance Information page. The following screen shot illustrates the Edit LOB Adapter Instance Information page for the Insurance Policies adapter.



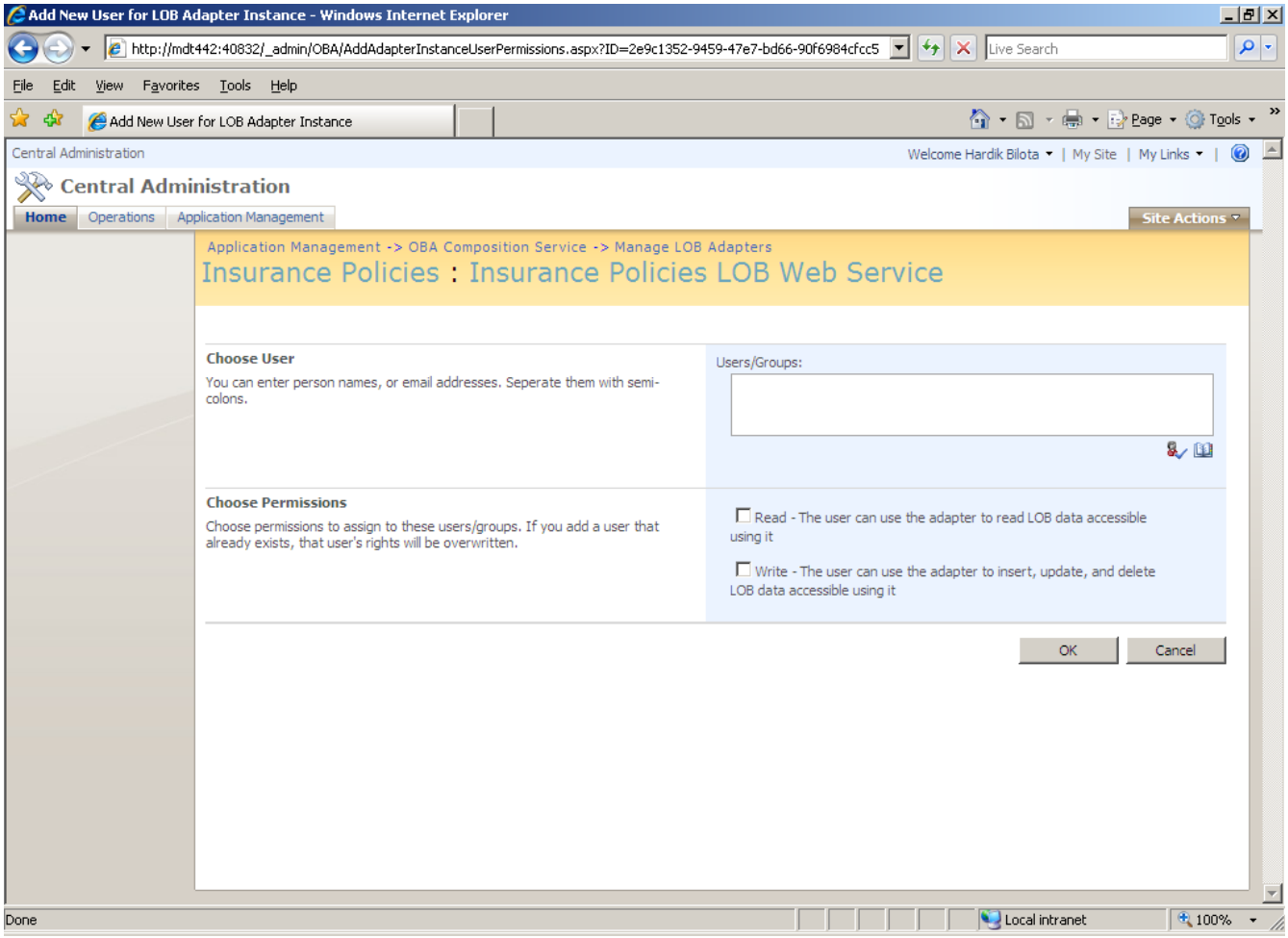
On this page, you can edit the following information:

- Name and description
- Instance type
- Supporting adapter

Additionally, you can select the options to grant all users read and/or write permissions to the adapter.

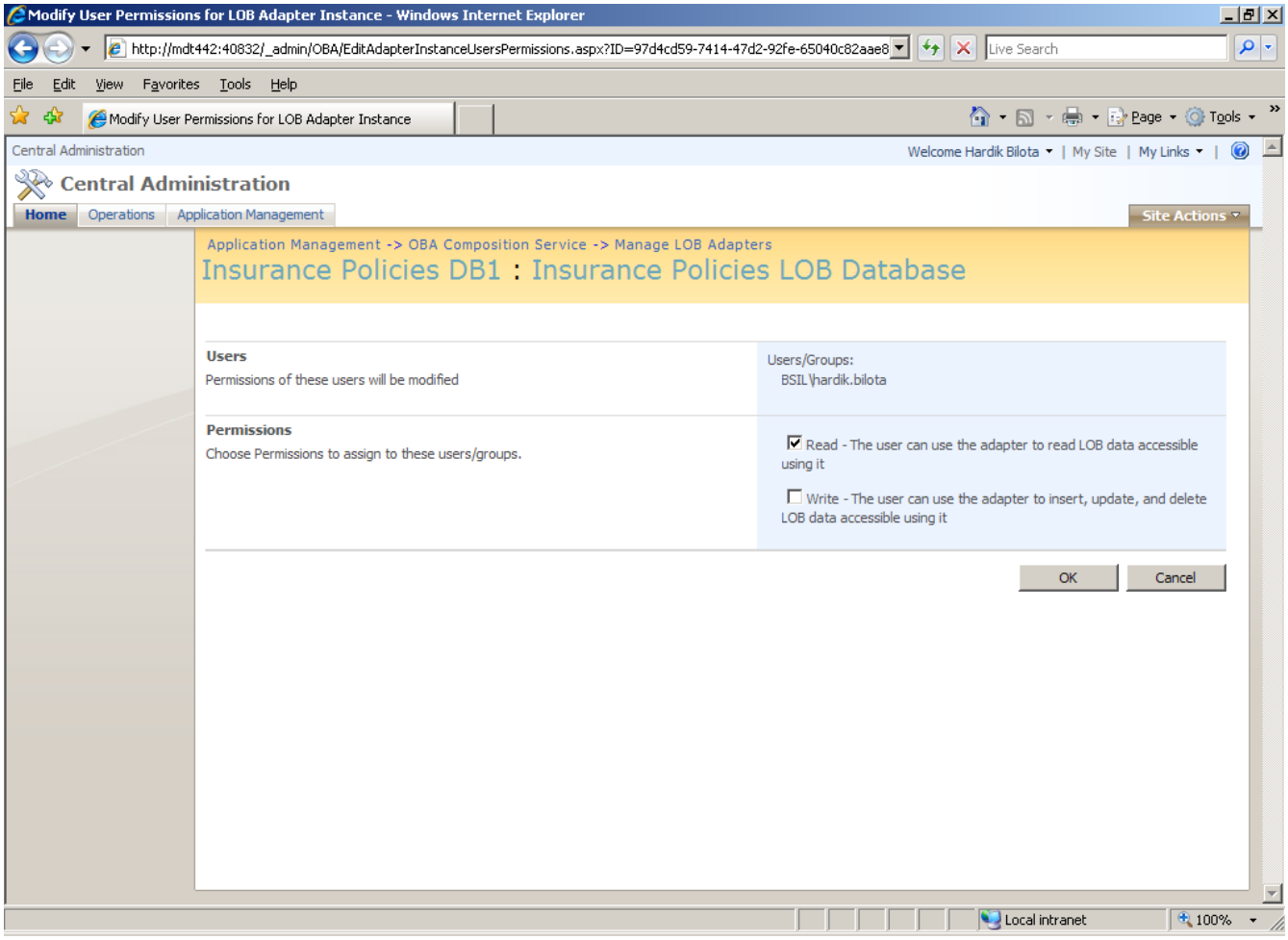
Add New User for LOB Adapter Instance Page

The Add New User for LOB Adapter Instance page can be used to add and grant new users permissions to use an adapter instance. To view this page, click **Add Users/Groups** on the LOB Adapter Instance Information page. The following screen shot illustrates the Add New User for LOB Adapter Instance page for the Insurance Policies adapter.



Modify User Permissions for LOB Adapter Instance Page

The Modify User Permissions for LOB Adapter Instance page can be used to modify the user permissions for an adapter instance. To view this page, select the check boxes for the users whose permissions you want to modify on the LOB Adapter Instance Information page, and then click **Modify Permissions of Selected Users**. The following screen shot illustrates the Modify User Permissions page for an LOB Adapter instance:



On this page, you can do the following:

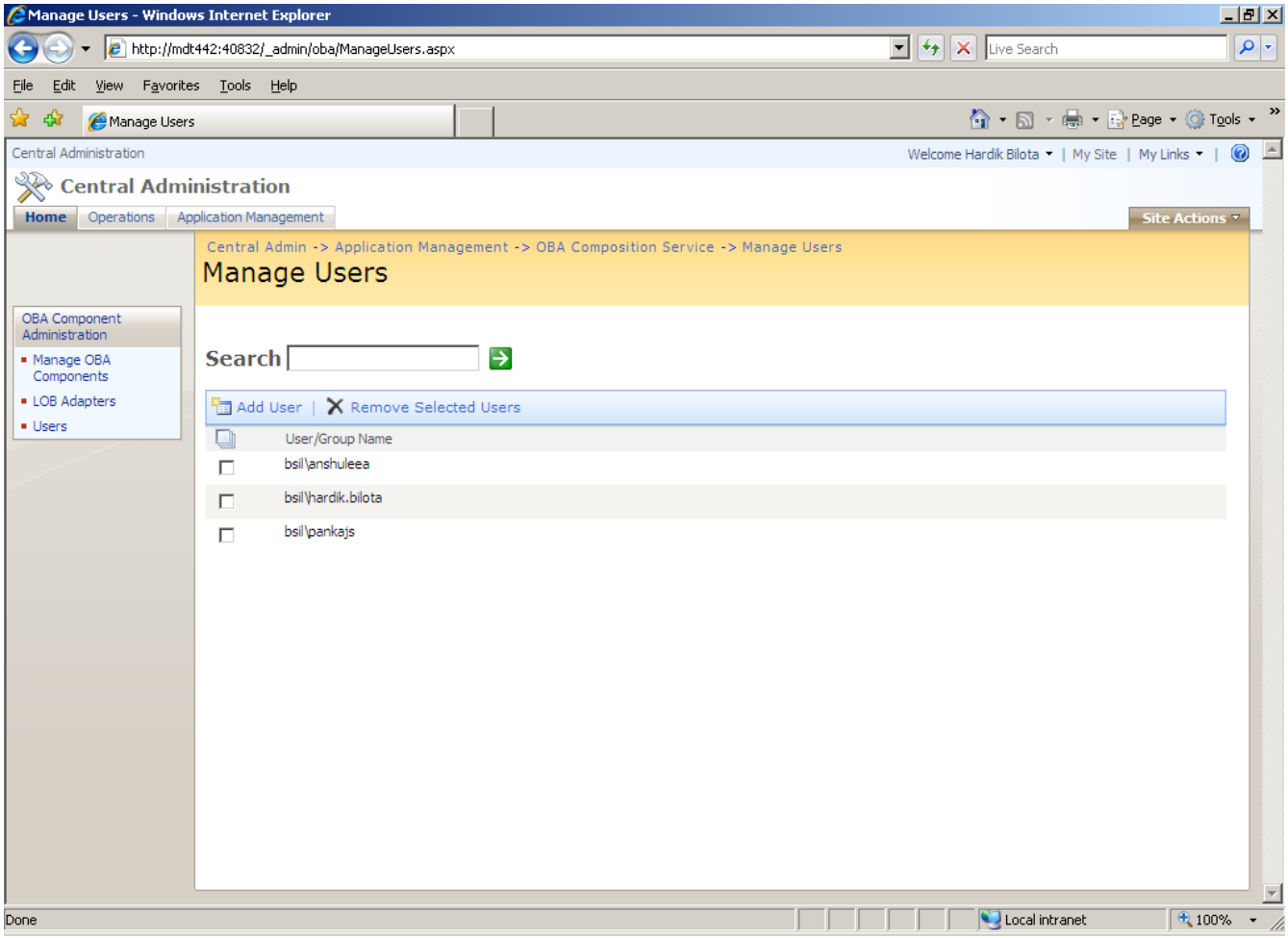
- Modify the adapter instance permissions granted to the selected user(s).

Manage Users

This section describes the administration pages that you can use to add or remove users to/from an OBA Composition Server.

Manage Users Page

The Manage Users page displays a list of the OBA Users registered in the OBA Composition Server. To view this page, click **Manage Users** under **OBA Composition Services** on the Application Management page. The following screen shot illustrates the Manage Users page.



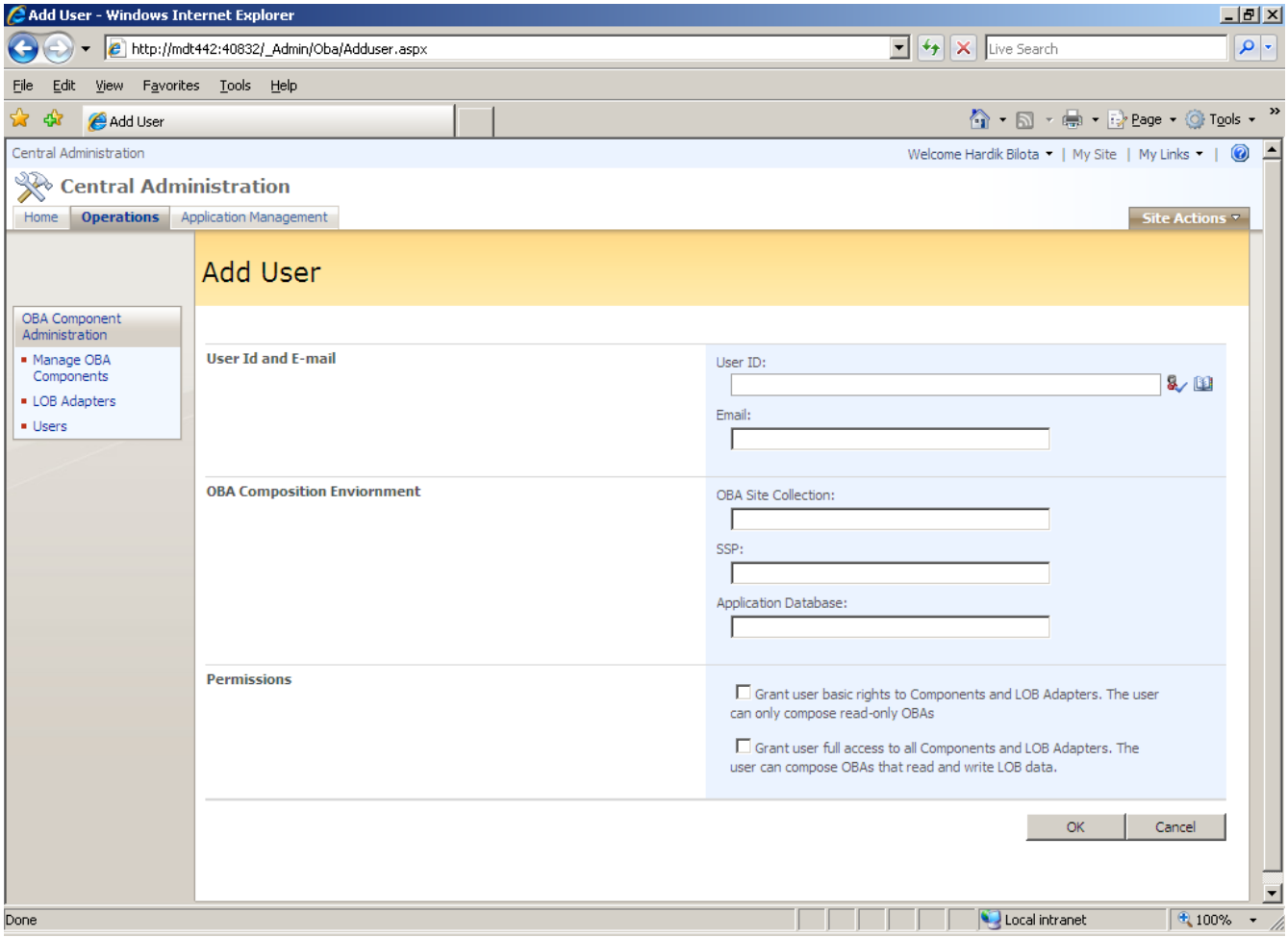
On this page, you can do the following:

- Register a new user in the OBA Composition Server.
- Search for users registered in the OBA Composition Server.
- Remove selected users from the OBA Composition Server.

Add User Page

The Add User page can be used to register a new user in the OBA Composition Server. Only Windows Active Directory users can be registered in this release as users in the OBA Composition Server.

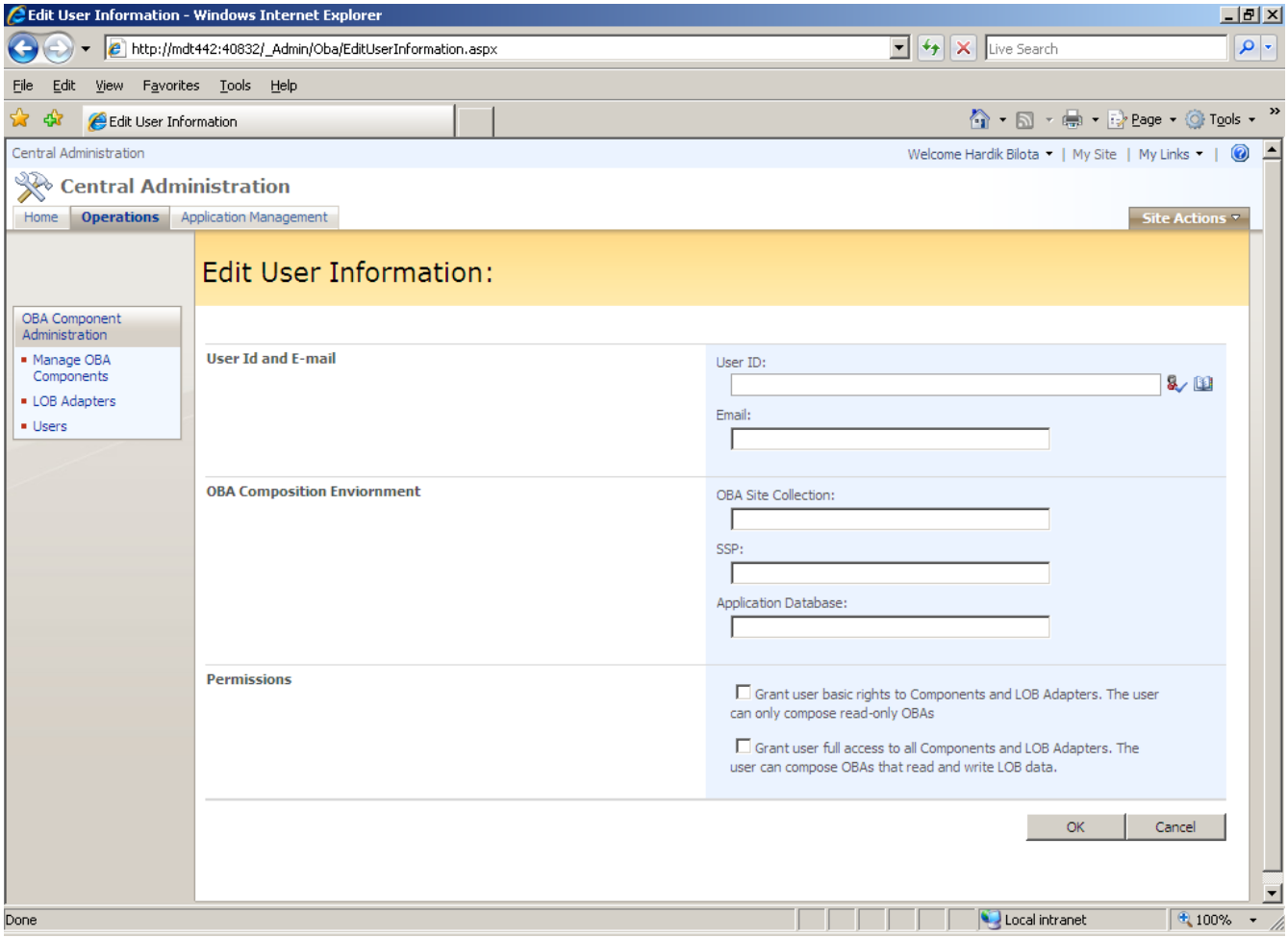
To view this page, click **Add User** on the Manage Users page. The following screen shot illustrates the Add User page.



On this page, the fields in the OBA Composition Server Environment section will be auto-populated by the system. Advanced administrators can modify the auto generated settings to custom configure the OBA Composition environment for a user.

Edit User Information Page

The Edit User Information page can be used to edit the configuration information for a user registered in the OBA Composition Server. This page can be viewed by selecting (clicking on) a user in the Manage Users user listing page.



On this page, you can do the following:

- Edit/change the user's e-mail address.
- Grant the user basic rights or full access to components and LOB adapters in the OBA Composition Server.

Summary

The administration user experience for an OBA Composition Server is integrated into the SharePoint Central Administration portal. The enabled capabilities can be used to manage/administer OBA components, LOB adapters, and users.

The source project\code for the Administration UI pages can be found in the **<OCRT Source Folder>\OBA Composition Server\Administration UI** folder.

The source project\code for the Administration Web Services can be found in the **<OCRT Source Folder>\OBA Composition Server\Web Services** folder.

The default location of the OCRT Source Folder is <drive>:\Program Files\CompRefToolkit.