Services in SharePoint 2013 Preview

Microsoft® SharePoint®

SERVICES INFRASTRUCTURE

In Microsoft® SharePoint® 2013 Preview, the service architecture model provides a framework in which you deploy and manage services across a farm or across multiple farms. A service application represents a deployed instance of a service that you can configure and manage centrally and that many web applications can consume. You can configure individual services independently and third-party companies can add services to the platform.

Granular configuration of services

- You can deploy only the services that a farm needs. Deployed services are called *service applications*.
- You can configure web applications to use only the services that are needed instead of the entire set of deployed services. See the screen shot, right.
- You can deploy multiple instances of the same service in a farm and assign unique names to the resulting service applications (see Farms B and C below).
- You can share services across multiple web applications within the same farm.

Configure Service Application Associations

Edit the following group of connections: default

Name	Type
☑ Access Services 2010	Access Services 2010 Web Ser...
☑ Access Services	Access Services Web Ser...
☑ App Management Service	App Management Servic...
☑ Business Data Connectivity Service	Business Data Connecti...
☑ Excel Services Application	Excel Services Applica...
☑ Machine Translation Service	Machine Translation Ser...
☑ Managed Metadata Service	Managed Metadata Serv...
☑ PerformancePoint Service Application	PerformancePoint Serv...
☑ PowerPoint Conversion Service Application	PowerPoint Conversion S...
☑ Search Service Application	Search Service Applicat...
☑ Secure Store Service	Secure Store Service Pro...
☑ State Service	State Service Proxy
☑ Usage and Health data collection	Usage and Health Data C...
☑ User Profile Service Application	User Profile Service App...
☑ Visio Graphics Service	Visio Graphics Service ...
☑ Word Automation Services	Word Automation Service...

You can choose the service applications for a web application when you create the web application. You can also modify the services that are associated with a web application later.

Sharing services across farms

- You can share some services across server farms. Other services can be shared only within a single server farm. Services that support sharing across farms can be run in a central farm and consumed from other farms in the environment.
- Each web application can be configured to use services from different farms. For example, you can share the User Profile Service across web applications in several server farms while using some services, such as the Business Data Connectivity service, locally.
- In large environments, computing-intensive services can be run in a central farm to minimize administration overhead and to scale out easily and efficiently as requirements grow.
- Remote farms do not need direct permissions to the parent farm's configuration or services databases.

For more information about how to share services across farms, see the model Cross-farm services in SharePoint Products.

Logical architecture

- All service applications in a farm are deployed to the same IIS Web site.
- You can deploy service applications to different application pools to achieve process isolation. However, farm performance is optimized if services are contained within one application pool.
- To achieve physical isolation of services, create separate instances of service applications and place them in different application pools (see Farm B below).

Farm 1

IIS Web site—"SharePoint Web Services"
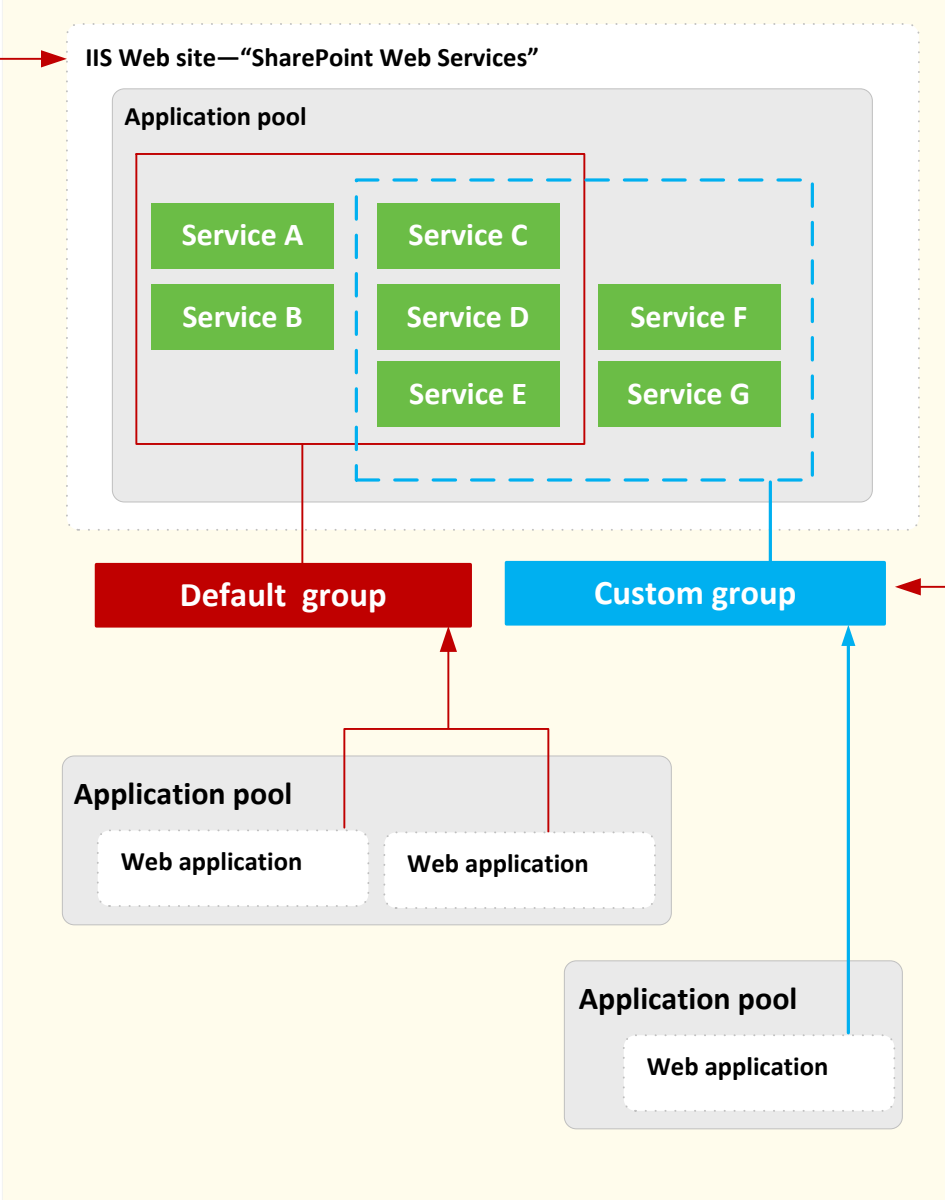
This diagram illustrates two different groupings of service applications: the default group and a custom group.

Service groups (proxy groups)

- A *service group*, also known as *proxy group*, is a group of service applications that are selected for use by a web application.
- By default, all service applications are included in the default group, unless you change this setting for a service application when you create it. You can add and remove service applications from the default group at any time.
- When you create a web application, you can select the default group, or you can create a custom group of services. You create a custom group of services by selecting only the service applications that you want the web application to use.
- Custom groups are not reusable across multiple web applications. Each time that you select "custom" when you create a web application, you are selecting services only for the web application that you are creating.

Deploying services

You deploy service applications within a farm by one of the following methods:

- Select services while running the Initial Configuration Wizard.
- Add services one by one on the Manage Service Applications page in the Central Administration site.
- Use Windows PowerShell.

For more information, see the following table.

Connecting service applications to web applications (proxies)

- When you create a service application, a *proxy* for the service application is created at the same time. A proxy is a virtual entity that connects web applications to service applications.
- Proxies are listed on the Manage Service Applications page in Central Administration.
- Proxies are automatically created if you use Central Administration or the Initial Configuration Wizard to create service applications. If you use Windows PowerShell to create service applications, proxies are not automatically created and must be created by using Windows PowerShell.
- Some proxies might include settings that can be modified. For example, if a web application is connected to multiple instances of the Managed Metadata service, you must indicate the proxies that are connected to the primary service application which hosts the corporate taxonomy.

Services administration

- Services are managed directly in Central Administration.
- Services can be monitored and managed remotely.
- Services can be managed and scripted by Windows PowerShell.

Options for deploying service applications

	Deploying service applications by using the Initial Configuration Wizard	Deploying service applications manually or by using Windows PowerShell
Application pool	All service applications are deployed to the same application pool.	You can deploy service applications to dedicated application pools, if desired.
Service accounts	The same account is used for all services. You can edit service accounts later.	You can apply different service accounts to service applications.
Databases	Database names are automatically generated, including GUIDs that are long and difficult to remember.	You can assign database names and implement a naming convention.
Service application settings	Default settings are applied to service applications. You can change these later.	You can implement custom settings when the service application is deployed.
Services on server	The corresponding services on the Services on Server page are started by the Wizard.	You must ensure that the corresponding services on the Services on Server page are started on the desired computers in the farm.

SERVICES

Service applications	Description	Stores data?	Cross-farm?	SharePoint Foundation 2013 Preview	SharePoint Server 2013 Preview Standard	SharePoint Server 2013 Preview Enterprise
Access Services	Allows creation of new Access Services applications using the Access 2013 Preview client. View, edit, and interact with Access Services databases in a browser.	App DBs				✓
Access Services 2010	Allows continued maintenance of SharePoint 2010 Access service applications by using Access 2010 clients and Access 2013 Preview clients. Does not allow users to create new applications.	Content DBs				✓
App Management Service	Allows you to install apps from the Internal App Catalog or the Public SharePoint Store.	DB	✓	✓	✓	✓
Business Data Connectivity	Access line-of-business data systems.	DB	✓	✓	✓	✓
Excel Services	Viewing and interact with Excel files in a browser.	Cache			✓	✓
Machine Translation Service	Performs automated machine translation.	DB	✓		✓	✓
Managed Metadata Service	Access managed taxonomy hierarchies, keywords, and social tagging infrastructure as well as Content Type publishing across site collections.	DB	✓		✓	✓
PerformancePoint	Provides the capabilities of PerformancePoint Services.	Cache				✓
PowerPoint Conversion	Converts PowerPoint presentations to various formats.				✓	✓
Search	Crawl and index content and serve search queries.	DB	✓	✓	✓	✓
Secure Store Service	Provides single sign-on authentication to access multiple applications or services.	DB	✓		✓	✓
State Service	Provides temporary storage of user session data for SharePoint Server components.	DB		✓	✓	✓
Usage and Health Data Collection	Collects site usage and health data and provides the ability to view various usage and health reports.	DB		✓	✓	✓
User Profile	Adds support for My Sites, Profiles pages, Social Tagging, and other social computing features.	DB	✓		✓	✓
Visio Graphics Service	Viewing and refresh of published Microsoft® Visio® diagrams in a Web browser.	Blob cache				✓
Word Automation Services	Performs automated bulk document conversions.	DB			✓	✓
Work Management	Provides task aggregation across work management systems, including Microsoft® SharePoint Products, Microsoft Exchange Server, and Microsoft Project Server.				✓	✓
Microsoft SharePoint Foundation Subscription Settings Service	Tracks subscription IDs and settings for services that are deployed in partitioned mode. Windows PowerShell only.	DB	✓	✓	✓	✓

* Office Web App Services is a separate server product and is no longer provided as a service application.

ARCHITECTURE EXAMPLES

SINGLE-FARM, SINGLE SERVICE GROUP

Description

- The default group of services is used for all web applications in a farm.
- All sites have access to all of the service applications that are deployed in the farm.

Advantages

- Simplest architecture.
- All services are available to all web applications.
- Most efficient use of farm resources.
- All services are managed centrally.

Disadvantages

- Does not allow isolation of service data.
- Individual departments or groups cannot manage service applications on their own.

Recommendations

This is the recommended configuration for most companies, at least initially. This configuration works well for hosting a large number of sites for a single company on the same farm.

Use this configuration if:

- You want to optimize the resources that are required to run services within a farm.
- You are sharing content and profile data across sites that otherwise require process isolation, for performance or security reasons.

Farm A

IIS Web Site—"SharePoint Web Services"
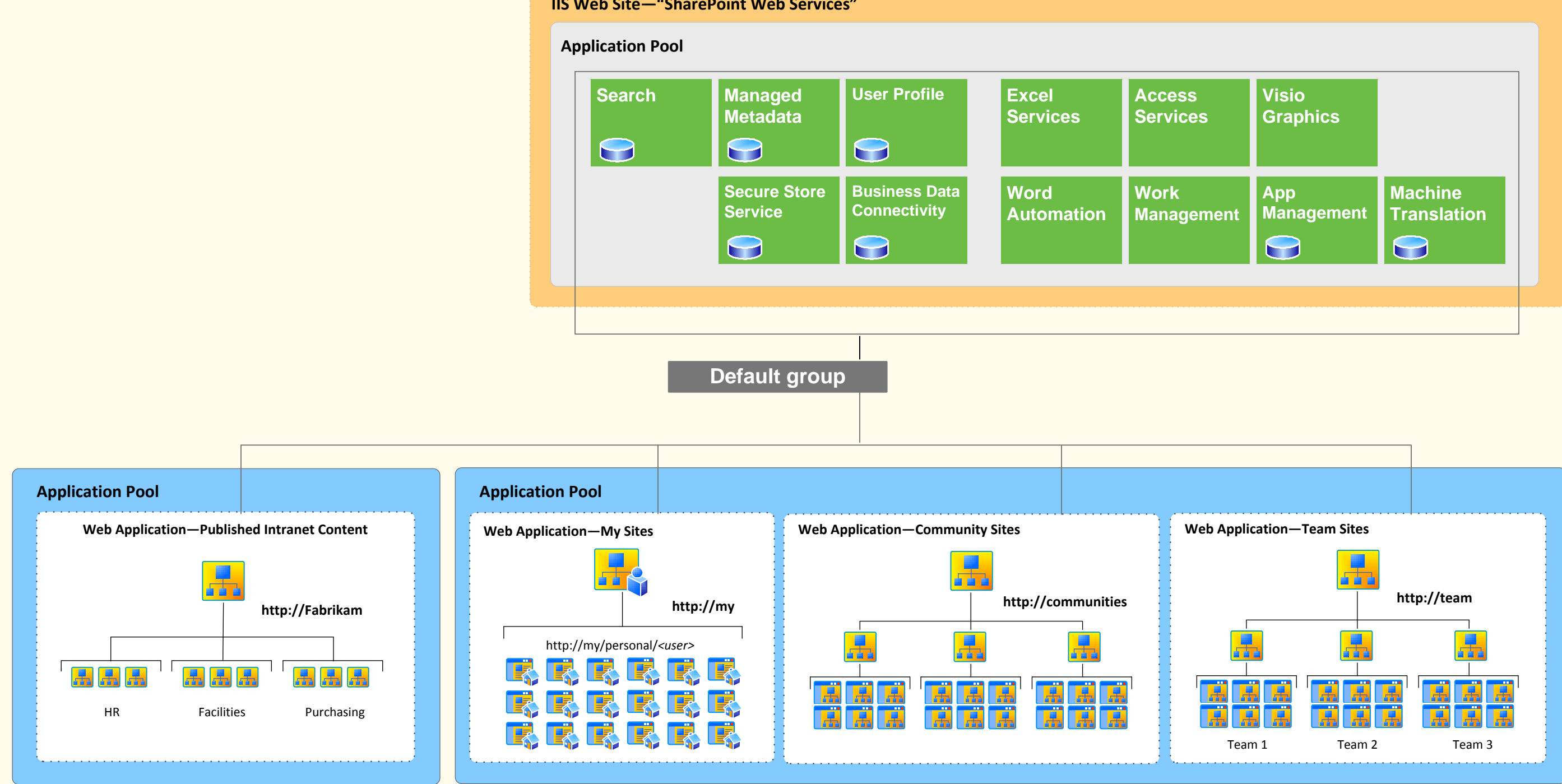
SINGLE-FARM, MULTIPLE SERVICE GROUPS

Description

- Targeted service applications are deployed for dedicated use by one or more groups within an organization. For example, in **Farm B** (right), an additional instance of Excel Services Application is deployed for the Finance group (bottom-right web application). Access Services is also deployed to this group.
- One or more web applications use a custom group of services. A SharePoint administrator selects the service applications to include in a custom group. In **Farm B**, the custom group includes the two dedicated service applications and most of the services that are deployed to the farm.
- You can create more than one custom group. In **Farm C** (below), dedicated service applications for the Business Data Connectivity and the Managed Metadata services are deployed to the farm for use by the HR department. The result is a second custom group (in addition to the dedicated services and group that are created for the Finance group).
- In some cases, a dedicated group of services is configured to narrow the list of services that a web application uses. For example, you can configure a partner collaboration site to consume a subset of the services that the farm offers.
- **Farm B** achieves process isolation for services that are deployed for the Finance group by placing these services in a dedicated application pool. **Farm C**, below, uses one application pool for all services, and consequently optimizes the deployment of services for performance instead.

Recommendations

This configuration works well for companies that have divisions or teams which require dedicated services or isolated service scope, or for sites that are set up with a narrower scope, such as partner collaboration.

Multiple groups of services allow teams and sites to consume services that are offered enterprise-wide, such as User Profile and Search services. At the same time, multiple groups of services isolate the use of targeted services for security or performance reasons.

Services commonly deployed for dedicated use by an individual team or department include the following:

- **Excel Services —** To optimize performance for a targeted group or to isolate sensitive data.
- **Managed Metadata —** To enable a team or department to manage its own taxonomy, hierarchies, keywords, and so on. Because SharePoint Server 2013 Preview combines the results of multiple instances of the Managed Metadata Web service, taxonomies, content types, and other elements can be shared across an organization.
- **Business Data Connectivity —** Individual teams or departments can integrate with their own line-of-business data systems and isolate data from the rest of the organization.

Advantages

- Accommodates multiple organizational goals on the same farm.
- Service data can be isolated.
- Allows individual teams or departments to manage the services that are dedicated for their groups.
- Sites can be configured to use a subset of services.

Disadvantages

- More complex to configure and manage.
- Farm resources support multiple instances of some services.

Farm B

IIS Web Site—"SharePoint Web Services"
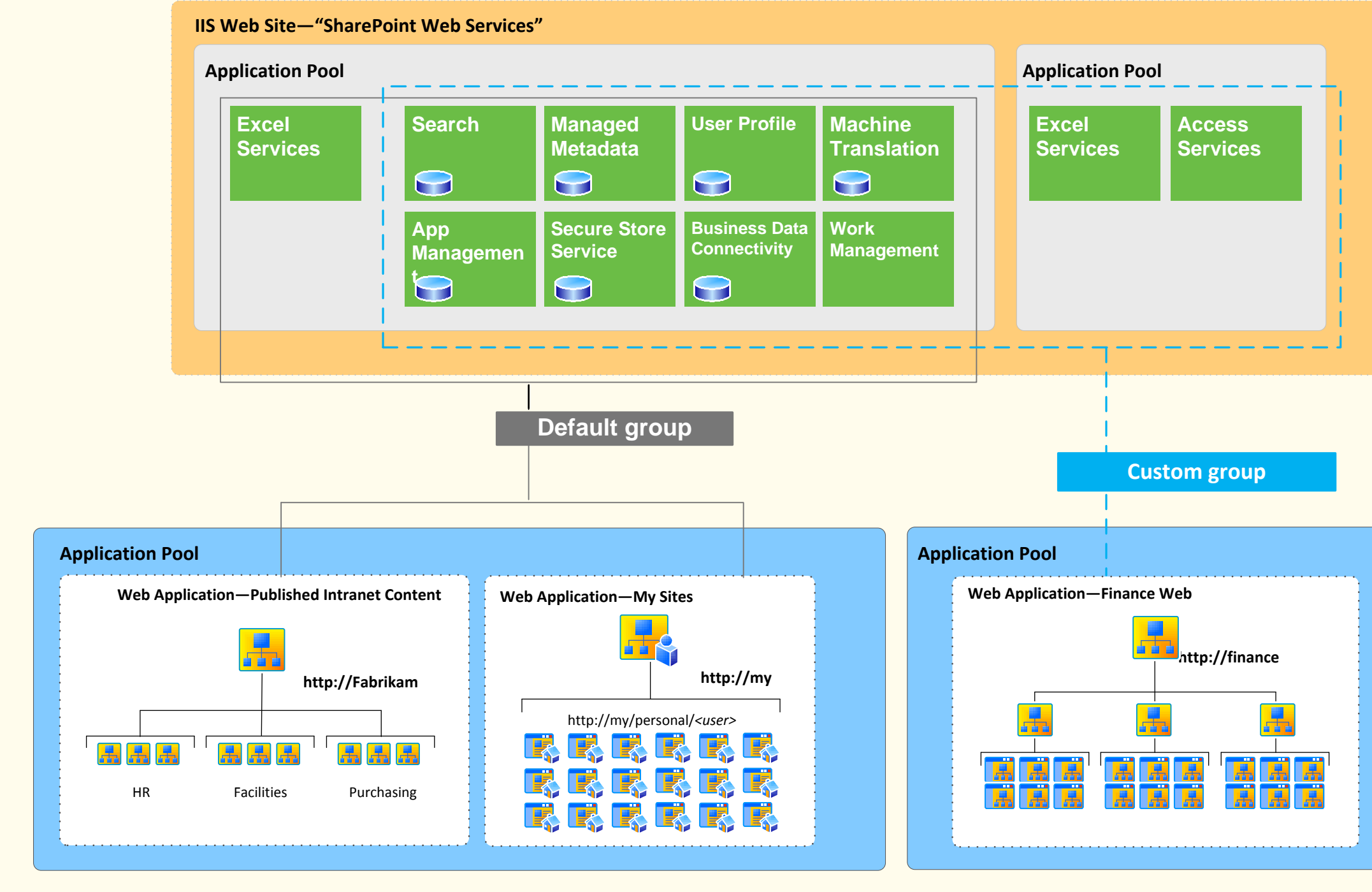
Manage Service Applications page

To add service applications, click New

Deployed service applications are listed

Service application proxies are also listed

A proxy is the logical element that connects a web application to a specific instance of a service. Some connections have settings that administrators can configure, for example, the Business Data Connectivity connection.

Service Application Associations

Manage the association of services to web applications

The grouping of services for a web application is configured when you first create a web application. Use this page in Central Administration to edit the associations.

On this page:

- Click a web application to edit the services within the group or to select the default group of service applications.
- Click an application proxy group to edit the services that are associated with the group.

The Application Proxy Group assignment is either the default group or a custom group. Custom service groups are not reusable across multiple web applications. When you select "custom," you create a new set of associations for the web application.

View which services are associated with a web application

Connecting to multiple instances of the Managed Metadata Service

- A grouping of services can include multiple instances of the Managed Metadata Service. For example, in the illustration (right), both of the custom groups include two instances of the Managed Metadata Service.
- In this scenario, the sites within the web applications display taxonomy, social tagging, and other features provided by this service from both of instances of the services.
- If there are multiple instances of this service, one of the instances must be designated as the primary service which hosts the corporate taxonomy. All other instances of this service are then secondary instances which provide additional data to the primary data.
- Unlike other cross-farm services, Web Parts by default include data from multiple instances of the Managed Metadata Service.

Farm C

IIS Web Site—"SharePoint Web Services"