

Chapter 1: Publishing Access Applications

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Access Services is a new feature that comes with SharePoint Server 2010 Enterprise Edition, bringing the power and agility of Access applications into the flexible, scalable, and easily reachable SharePoint environment. When Access Services is up and running in your organization, here's what you get:

- ◆ You can extend the reach of your Access database applications to the Web by publishing them to SharePoint Server 2010.
- ◆ Integrating the Access client application with SharePoint's Access Services architecture means a single click gets Access up and running in SharePoint — providing all your users with a centrally managed, Web-accessible version of Access.
- ◆ Publishing your Access application to SharePoint means that you have only one instance of the application to manage — gone are the days of distributing multiple copies of your database software throughout your organization.
- ◆ When a user adds, removes, or modifies data, those changes are automatically accessible to all other users.
- ◆ You can easily control the roles and access permissions on your database application by using standard SharePoint permissions.
- ◆ Any functional or schematic updates you make to the database application can be seamlessly synchronized with SharePoint, ensuring that your users are always working with the most up-to-date version of your application.

In Book III, Chapter 1, we look at the architecture behind Access Services, and examine the settings that can help keep both your Access applications and your SharePoint environment running smoothly. In this chapter, we hop on board the Access Services train again to show you how easy it is to publish your Access applications to SharePoint Server 2010.

Designing SharePoint-Compatible Access Databases

Access 2007 provided the capability to publish an Access list into a SharePoint list — you could manage and control your data directly from SharePoint’s browser interface. With the Access 2010 integration features, you can publish your entire database application into SharePoint — including all the forms, queries, and reports associated with your application.

Before you can publish your Access 2010 database application to SharePoint, it must be *compatible* (able to work seamlessly and play nice) with Access Services. Fortunately, Access 2010 provides a lineup of tools to help you ensure that compatibility:

- ◆ **Access 2010 Web Database client template:** When you create a new Access database, Access 2010 presents you with a list of templates you can use as the foundation of your database application. Selecting the Blank Web Database template creates an Access 2010 Web database application — which is compatible with Access Services by default (let’s hear it for good software design!) and may be published to SharePoint.



All menu options in the Access client application are filtered automatically; the only options enabled are compatible with SharePoint — which helps keep your database application compatible. That way you’re less likely to run into problems during the publishing process.

If you create your Access database application using another template (such as the Blank Database template), you can still convert that application to a Web database if it’s compatible with Access Services: Simply publish it to SharePoint. If the database application publishes successfully, it becomes an Access Web database application automatically.

- ◆ **Web Compatibility Checker:** You can use this feature to check your database application before you publish it to SharePoint so you can make sure that all the objects, forms, reports, and code are compatible and translatable to Access Services. The Compatibility Checker identifies any issues that may prevent you from publishing your application successfully. Armed with this knowledge, you can troubleshoot the offending items before publishing to SharePoint. The idea is to keep that experience clean and simple.

Creating an Access Web database

Here's how to create an Access Web database from the Access 2010 client that can be published to Access Services:

1. **Launch the Access 2010 client.**
2. **From the File menu, click New.**
A list of the available Access templates appears.
3. **From the list of available templates, select Blank Web Database and then click Create.**

Figure 1-1 shows the list of available Access templates that appear in the Access 2010 client.

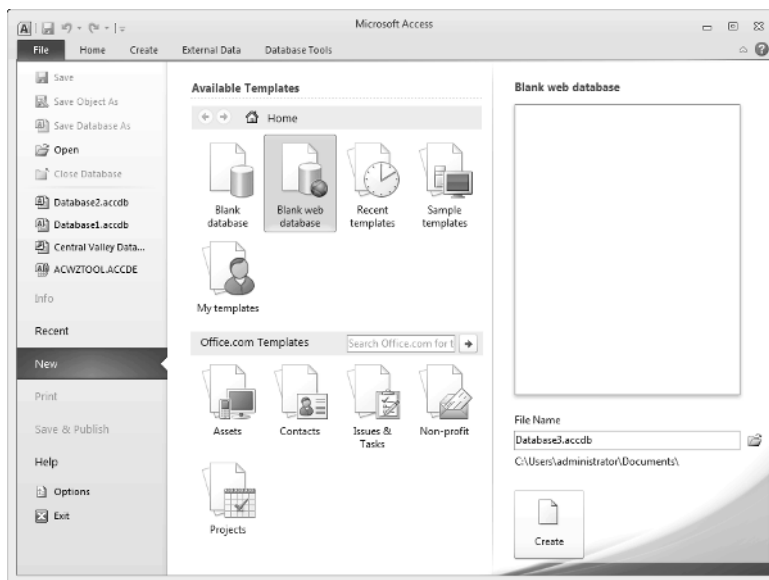


Figure 1-1: Creating an Access Web database application.

When you click the Create button, the Access client opens and filters the menu options to present you with only Access Services-compatible commands. You're now ready to create your Access Web database application.

Creating an Access Web database from SharePoint

SharePoint 2010 provides a list of available Access Web database site templates from which you can create your SharePoint site. When you create a

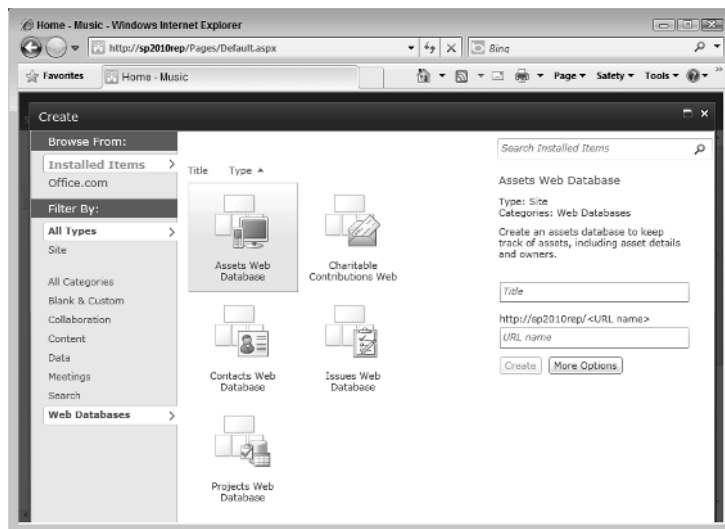
SharePoint site based on one of these templates, you can publish, edit, customize, and synchronize your changes by using controls that appear in the Access 2010 client application.



Access Services is a new feature that comes with SharePoint Server 2010 Enterprise Edition. If you don't have an Enterprise license, the Access Web Database site templates won't appear in your SharePoint Gallery.

Figure 1-2 shows you a list of the templates available with SharePoint 2010.

Figure 1-2:
You can create your Access Web database from SharePoint.



You have a range of Access Web database templates available:

- ◆ **Assets Web Database:** Use this database site template to create a database to keep track of assets. The information stored includes asset details and owners.
- ◆ **Charitable Contributions Web Database:** Use this site template to create a Web database to track information about fundraising campaigns — including donations made by contributors, campaign-related events, and pending tasks.
- ◆ **Contacts Web Database:** Use this site template to create a Web database for managing information about the people you and your team collaborate with, such as customers and business partners.
- ◆ **Issues Web Database:** Use this site template to create a Web database to help you manage a set of issues or problems, such as bug-tracking for

an application under development. You can assign, prioritize, and follow the progress of issues from start to finish.

- ◆ **Projects Web Database:** Use this site template to create a project-tracking Web database that you can use to follow the progress of multiple projects stage by stage, and assign tasks to members of your team.

In addition to the standard templates that come with SharePoint, you can find a plethora of Access Web database templates on the Internet — not only from Microsoft, but also from third-party vendors. For example, the Microsoft Web site provides you with a sample Web database application (starring the intrepid imaginary company Northwind Traders) that's a virtually painless introduction to the process of publishing and synchronizing content from the Access client application to Access Services.

You can customize these templates to suit your business needs — and then upload them to your Site Template Gallery for use in your SharePoint environment. Alternatively, you can simply publish the Web database application to SharePoint creating a SharePoint Web application.

Using a template to create your Web database application means you don't have to create your application from scratch, which saves time; you can get your applications up and running as quickly as possible.

Follow these steps to create an Access Web database application directly from SharePoint:

- 1. Using your browser, navigate to the home page of your SharePoint site.**
- 2. From the Site Actions menu, click New Site.**
The Create site page appears, displaying a list of the available SharePoint site templates sorted by category.
- 3. From the list of categories, click Web databases.**
The list of available Access Web database site templates appears.
- 4. Select the Web database template that you want to use as the basis of your site.**
- 5. In the Title field, enter the title for your site.**
- 6. In the URL field, enter the URL to your site.**
- 7. Click More Options.**
- 8. In the description field, enter a description for your site.**

9. Choose whether your new site will inherit permissions:

- *Use same permissions as parent site:* Choose this option if you want the new site to inherit the permission structure from its parent site.
- *Use unique permissions:* Choose this option if you want to specify permissions for the new site.

After the site is created, you can not only manage the site permissions through the browser interface, but also add and remove users and groups to suit your needs.

10. From the **Navigation Inheritance** section, accept the default setting of **No** so the new site won't inherit the top link bar from the parent site.



Regardless of whether you select Yes or No for this setting, the top link bar from the parent site doesn't appear onscreen. Excluding the top link bar from the Web database application pages reduces possible user confusion because it helps give navigation a close resemblance to the familiar navigational structure of the client application. (We're convinced that this behavior must be "a feature, not a bug!" It's just too convenient.) You can still use the Options⇨Navigate Up command to get back to the parent site.

11. Click **Create**.

Access Services creates the new Access Web database site ready for use.

After your Web database is created, you're free to start using the site as desired. If you want to customize the site or give it additional functionality, you can open it in the Access 2010 client locally. For example, you can add forms and reports, rename tables and fields, and change the navigational structure. When you've made your changes, simply save them and click the Synchronize button to apply them to your SharePoint site. (For more about the publishing and synchronization process, flip to the "Publishing to Access Services" section of this chapter.)

Access Web Database Objects

When you're creating a Web database application using the Access client, it helps to familiarize yourself with the various objects and tools at your disposal before you just start slinging electrons around. The creation of a typical Web database application includes one or more of the components we present in the following sections.

Tables and Fields

When you create your Access Web database, you're initially presented with the Table Designer from which you can design the first table in your Web database application.

Okay, we're not talking furniture here (but you knew that). In Access, a *table* is a database object that stores information about an entity. For example, an Employee table may store information relating to all the employees in your company. A table is a grid made up of *fields* — not grassy places for playing ball or growing corn, but smaller database objects that hold specific pieces of data — arranged in rows that represent the items that the fields describe. For example, an Employee table may contain multiple fields describing an employee — such as First Name, Last Name, Job Title, and Employee ID — and one row (containing all these fields) corresponds to one employee.

Fields are also commonly referred to as *attributes* or *columns* (because each one occurs at the same place in every row, and so stacks up as a column). Rows are also called *records* or (if you're being vague) *items*. At least one field in the table is used to uniquely identify an item or row. In our example, this unique field may be the Employee ID. For search purposes, this unique field is also known as the *primary key*.

Most database applications contain multiple tables, many of which have a relationship. For example, you may have a Jobs table that contains a list of all the jobs within your organization, including such information as the Job Title, Job Description, Job Classification, and Salary Range. The Employee table would contain a Job Title field that would retrieve the list of possible jobs from the Job table. In this case the Job Title field would be a lookup field with a relationship to the Jobs table.

Microsoft Access provides an intuitive designer to help you through the process of creating your database tables, and their associated fields and relationships.

Forms

When you create an application that requires users to enter data, you invariably need to create a form. The Forms Ribbon group, shown in Figure 1-3, provides a number of commands from which you can create your Web database forms.

Figure 1-3:
You can create many different form types in your Web database.



You can access the Forms Ribbon by clicking the Create tab in Access. The Form commands include these:

- ◆ **Form:** Creates a Web form that allows you to enter data one record at a time. Web forms can only be created for tables or Web queries.
- ◆ **Multiple Item:** Creates a Web form that shows multiple records at once. Continuous forms can only be created for table or Web queries.
- ◆ **Blank Form:** Creates a Web form that contains no controls or formatting. Blank forms can only be created for tables or Web queries.
- ◆ **Datasheet:** Creates a Web form that displays multiple records in a datasheet, with one record per row. Web datasheets can only be created for tables or Web queries.
- ◆ **Navigation:** Create a Web form that allows you to move between forms and reports in your database application.

Navigation

When you're creating a Web database application, you'll need to provide your users with a way to get around between the various forms and reports in your application. You can create your navigation system using Navigation Forms (as mentioned in the previous bullet list).

When you're creating a navigation form, Access provides you with a variety of navigation types, including these:

- ◆ **Horizontal Tabs:** Allows you to add a series of tabs horizontally across your Web page.
- ◆ **Vertical Tabs, Left:** Allows you to add a series of tabs vertically to the left of your Web page.
- ◆ **Vertical Tabs, Right:** Allows you to add a series of tabs vertically to the right of your Web page.
- ◆ **Horizontal Tabs, 2 Levels:** Allows you to add two levels of horizontal tabs across your Web page. Figure 1-4 shows an example of this type of navigation form.
- ◆ **Horizontal Tabs and Vertical Tabs, Left:** Allows you to add a series of tabs horizontally across your Web page, and a series of tabs vertically to the left of your Web page.
- ◆ **Horizontal Tabs and Vertical Tabs, Right:** Allows you to add a series of tabs horizontally across your Web page, and a series of tabs vertically to the right of your Web page.

Figure 1-4:
You can
create a
two-level
navigation
bar.

Customer Name	Contact	Phone Number	Address
Customer A	Anna Bedecs Owner	Mobile: Business: (123)555-0100 Home: Fax: (123)555-0101	123 1st Street Seattle, WA 98052 USA
Customer B	Antonio Gratacos Solsona Owner	Mobile: Business: (123)555-0100 Home: Fax: (123)555-0101	123 2nd Street Boston, MA 98112 USA

Macros

Access 2010 provides a new and improved Macro Builder — also referred to as the Macro Designer — to allow you to add logic to your database to automate repetitive tasks and create a more usable interface. Using the Macro Builder you can quickly define conditions and actions for your macros.

When you're creating Web macros, the Macro designer filters out actions and expressions that don't translate to Access Services, taking much of the guess work out of creating macros and ensuring that the publishing process is as easy and efficient as possible. The designer allows you to expand and collapse the macro data in much the same way you'd expand and collapse the elements of an XML file. When a macro appears in expanded view it looks very similar to viewing code. Figure 1-5 shows an example of the `zzzEraseOrders` macro from the Northwind Traders sample Access Web database from Microsoft. The macro is being viewed in design view using the Macro Builder. The Action Catalog appears on the right side from which you can drag and drop the conditional statements and corresponding actions as needed.

The In This Database node in the Action Catalog allows you to view all the macros you've already created in the current database, in addition to other objects in the database such as tables, forms, and reports. You can reuse the logic created from other macros by simply dragging and dropping them from this node onto your new macro.

Follow these steps to create a macro:

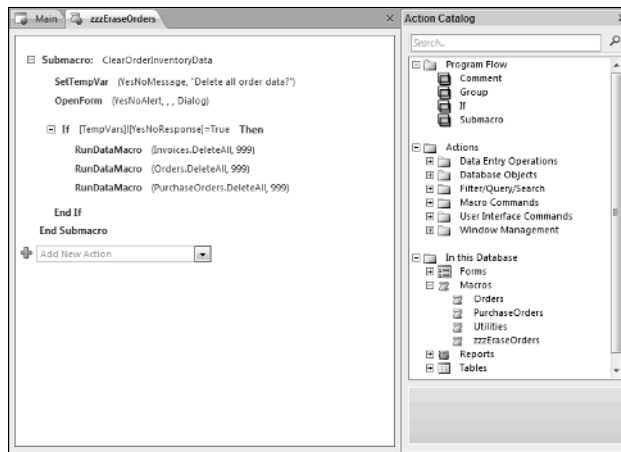
- 1. Open your Web database application in Access 2010.**
- 2. On the Create tab, in the Macros & Code group, click Macro.**

Clicking the Macro command launches the Macro Builder, which you can use to build your business logic.

3. Build your business logic using the Action Catalog.
4. On the File tab, click Save to save your macro.

The macros that you create appear under the Macros in the navigation tree.

Figure 1-5:
You can drag and drop conditions and actions from the Action Catalog.



Data macros

Data macros are new with Access 2010 and allow you to add logic that is triggered when specific events occur on a table — such as adding, updating, or deleting data.

Data macros don't appear under the Macros command in the Access navigation pane. Instead you can find them by selecting a table in your database and then clicking the Table tab from the Ribbon menu. The Table tab gives you access to a number of commands that allow you to create data macros:

- ◆ **Before Change:** Allows you to create logic that runs before a change is committed to the database. You can use this event to validate changes before saving them to the table.
- ◆ **Before Delete:** Allows you to create logic that runs before deleting a record. You can use this event to validate the delete function, or to cancel the deletion and raise an error.
- ◆ **After Insert:** Allows you to create logic that runs after a record has been added to the table.

- ◆ **After Update:** Allows you to create logic that runs after a record has been edited in the table.
- ◆ **After Delete:** Allows you to create logic that runs after a record has been deleted from the table.
- ◆ **Named Macro:** Allows you to create, edit, delete, or rename data macros that can be called from a macro or from event code.

Queries

Queries are the heart and soul of most database applications allowing you to extract and filter the information you need when you need it. You can use queries to extract data from a single table, or multiple tables, to perform calculations and to generate reports. Queries appear in the Access left navigation pane under the heading Queries. When you're working with Web database applications, the queries you create are called (with admirable clarity) *Web queries*.

Access provides a Query Designer that provides you with a visual representation of the tables in your query and their associated relationships. Using this feature, you can specify which fields will appear in your query results — as well as dictate the fields used to filter data and perform calculations on that data. Figure 1-6 shows the *SalesAnalysis* query from the Northwind Traders sample Web database application. The figure shows you all the relationships among the various tables that make up the query. When you add tables to a query, Access creates the relationship for you automatically in the Query Designer.

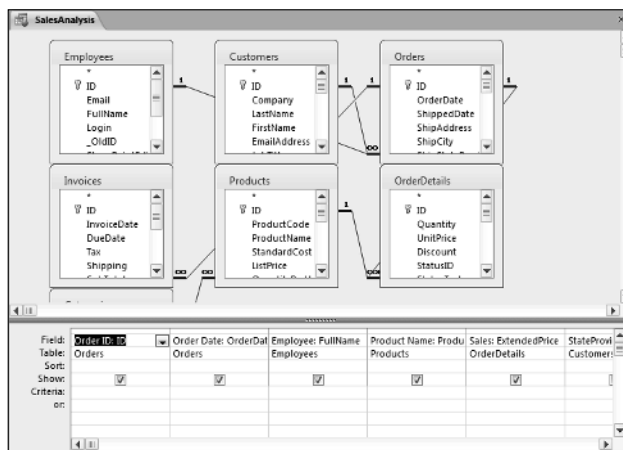


Figure 1-6: The Query Designer makes queries easy to create.

Reports

Reports help you present the data in your database visually — in the format your business users require. For example, you can create a report that makes use of charts and graphs if those get your point across best. Figure 1-7 shows an example of a Web report created for the Products table in the Northwind Traders sample Access Web database. (Impressive, isn't it?) Microsoft Access provides you with lots of tools to make sophisticated reports easy to create.

Figure 1-7:
Access
creates
a sample
layout when
you create a
report.

ID	Product Code	Product Name	Standard Cost	List Price	Quantity Per Unit
1	NWTFDN-7	Northwind Traders Dried Pears	\$22.50	\$30.00	12- 1 lb pkgs.
2	NWTS-8	Northwind Traders Curry Sauce	\$30.00	\$40.00	12- 12 oz jars
3	NWTFDN-14	Northwind Traders Walnuts	\$17.44	\$23.25	40- 100 g pkgs.
4	NWTCFV-17	Northwind Traders Fruit Cocktail	\$29.25	\$39.00	15,25 OZ
5	NWTBGM-19	Northwind Traders Chocolate Biscuits Mix	\$6.90	\$9.20	10 boxes x 12 pieces
6	NWTFB-1	Northwind Traders Chai	\$13.50	\$18.00	10 boxes x 20 bags
7	NWTCO-3	Northwind Traders Syrup	\$7.50	\$10.00	12- 550 ml bottles
8	NWTCO-4	Northwind Traders Cajun Seasoning	\$16.50	\$22.00	48- 6 oz jars
9	NWTO-5	Northwind Traders Olive Oil	\$16.01	\$21.35	36 boxes
10	NWTJP-6	Northwind Traders Boysenberry Spread	\$18.75	\$25.00	12- 8 oz jars
11	NWTJP-7	Northwind Traders Marmalade	\$60.75	\$81.00	30 gift boxes
12	NWTBGM-21	Northwind Traders Scones	\$7.50	\$10.00	24 pkgs. x 4 pieces
13	NWTFB-34	Northwind Traders Beer	\$10.50	\$14.00	24- 12 oz bottles
14	NWTCM-40	Northwind Traders Crab Meat	\$13.80	\$18.40	24- 4 oz tins
15	NWTSO-41	Northwind Traders Clam Chowder	\$7.24	\$9.65	12- 12 oz cans
16	NWTFB-43	Northwind Traders Coffee	\$34.50	\$46.00	16- 500 g tins

You can create a report very quickly (if not quite “yesterday”) by following these steps:

1. **Open your Web database application in Access 2010.**
2. **Click the Home tab to display the left navigation pane.**
3. **From the navigation pane, select the table or query you want to use to generate the report.**
4. **In the Reports group, on the Create tab, click Report to create a Web report.**

Access creates a report automatically, and gives it a standard look and feel. You can customize the report as needed, changing the layout, color scheme, and adding or removing fields.

Setting the default form

When you publish your Web database application to Access Services, SharePoint accepts your application as a SharePoint site. When you navigate

to that SharePoint site, you'll want to present your users with a form that acts as the launching pad for your application. The form should contain navigation components so your users can cruise easily from one form or report to another.

Here's how to set the default Web form that appears in your SharePoint site:

1. Using your browser, navigate to the SharePoint site that hosts your Web database application.

2. From the title bar, click Options ⇨ Open in Access.

A local copy (which is a fancy way of saying on your computer) of your Web database application opens in Access 2010 ready for editing. Any changes that you make won't show up in SharePoint until you synchronize the local copy back to SharePoint.

3. Click the File tab to present the Access Backstage View.

4. Click the Options command.

The Access Options dialog box appears.

5. Click Current Database.

The options for the current database appear.

6. In the Web Display Form drop-down list, select the form you want as the default form when users navigate to the SharePoint site.

7. Click OK.

8. Save your changes.

The changes are saved to the local copy of the Web database application, but won't show up in SharePoint until you synchronize them back to your SharePoint site.

9. Click the Info tab, and then click Sync All.

Your changes are synchronized back to your SharePoint site. If you refresh the home page of the SharePoint site that hosts your Web database application, the new default Web form displays.

Publishing to Access Services

Access 2007 provided the capability to publish your Access list into a SharePoint list. Suddenly you could manage and control your data directly from SharePoint's browser interface. With Access 2010, you can use the integration features to publish your entire database application into SharePoint — along with its associated forms, queries, and reports — as a SharePoint site.

Microsoft Access 2010 provides enough tools and wizards that you can easily create sophisticated Web database applications without writing a single line of code. Publishing your database applications to Access Services extends their reach, which makes Microsoft Access a powerful development platform for SharePoint. Business units can maintain, customize, manage, and deploy their own databases — freeing up the IT staff to focus on running a stable, high-performance infrastructure. (That’s the idea, anyway.)

Publishing Web applications to Access Services gives your users a common and familiar way to meet their business needs. For example, if your users are already taking advantage of SharePoint for collaboration and content management, you might as well give their productivity a boost by making their departmental Access database applications accessible in the same environment.

Mapping Access Objects to SharePoint Objects

When you publish your Access Web database application to SharePoint, Access Services kicks off a process that gives every Access object a corresponding object in SharePoint. Access Services enables your Access Web database applications to run the same way on both the server *and* the client machines. The conversion process also ensures that your users can get to and use your Access applications, regardless of which browsers they’re running. That’s because the conversion process steers clear of special ActiveX-type controls, using only standard Web HTML and JavaScript.

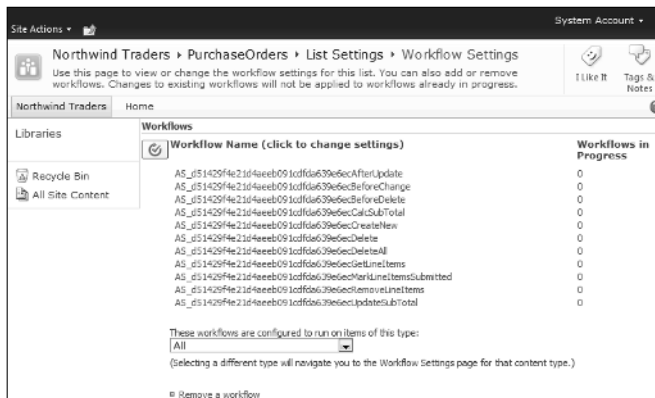
Here’s a list of the Access client objects and how they’re represented in SharePoint:

- ◆ **Access Web Database Application = SharePoint Site:** When you publish an Access Web database application to SharePoint, Access Services works behind the scenes to create a new SharePoint site for the Web database application.
- ◆ **Access Tables = SharePoint lists:** Tables in the Access Web database are implemented in SharePoint as SharePoint lists. The fields in an Access table are represented as columns in the SharePoint list, reflecting the appropriate data types. For example, if your Access Web database application contains an Employee table that has `First Name`, `Last Name` text fields and an `EmployeeID` integer field, each field becomes a column in the Employee list — with data types of Single Line of Text (for the text fields) and Integer (for the `EmployeeID` field).
- ◆ **Access Forms = ASPX pages:** Forms that you create in your Access Web database are implemented in SharePoint as standard `.ASPX` Web pages for rendering in the browser. If you need to modify any of your pages, you can implement the changes in the Access client application and synchronize ’em back to SharePoint as needed.

- ◆ **Access Reports = SQL Server Reporting Services Reports (.rdl):** Reports that you create in your Access database application are converted to RDL files (Report Definition Language — you can find out more about that in Book III, Chapter 1). Then they're presented using SQL Server Reporting Services; the Report Viewer Web Part renders the reports in the browser.
- ◆ **Access User Interface Macros = JavaScript:** Macros attached to user interface objects (such as buttons, text boxes, forms, and reports) are known as *UI macros*. Data macros (see the next item in this list) are associated with tables. Use UI macros to automate a series of actions, such as opening a report when you click a navigation tab. UI macros in SharePoint use JavaScript that is attached to your Web pages.
- ◆ **Access Data Macros = SharePoint Workflows:** *Data macros* use and apply business-level Access macros at the level of individual tables. For example, if you want to update the content of a field in a table when the content of another field in another table changes, then you can easily achieve this using Data Macros. When you publish your application to SharePoint, the data macros you've defined in your application are converted to SharePoint workflows on the list.

Figure 1-8 shows you how SharePoint turns the data macros associated with the PurchaseOrders table in the Northwind Traders Web database application into workflows.

Figure 1-8:
Data macros are converted into SharePoint workflows.



- ◆ **Access Queries = System table:** If your Access database application contains queries, SharePoint puts them in the System table (that is, the MSysASO SharePoint list) in the SharePoint site, where the Access Services query processor renders the queries.

Checking Web compatibility

Your Access Web database applications can be shared across your organization by being published to Access Services. If your database contains items and settings that aren't compatible with Access Services, your application won't publish correctly.

Use the Compatibility Checker that Access provides to check your database before you publish it to SharePoint. If compatibility problems turn up, they land in a table called Web Compatibility Issues.



Most errors that the Checker identifies usually happen because some gremlin in the works tried to apply *client-only* features or settings (the ones that are supposed to be disabled when an Access database becomes a SharePoint site) to your database. You can avoid many of these errors entirely by selecting the Web database template when you initially create your database. Doing so filters out many of the client-only features preventing you from applying them to your database.

Follow these steps to check your Access database to see whether it's compatible with the Access Services:

- 1. Open your Web database application in Access 2010.**
- 2. Click the File tab to present the Access Backstage View.**
- 3. Click the Save & Publish tab.**

The save and publishing options appear.

- 4. In the Publish section, click Publish to Access Services.**

The Compatibility Checker option appears on the right.

- 5. Click Run Compatibility Checker to check to see whether your Access Web database is Web-compatible.**

If you have any objects open in your database, a dialog box appears and asks whether you want to close those objects. If you've saved all those objects, click Yes to have Access close them.

The Compatibility Checker presents a dialog box that shows the progress as Access processes every object in the database to check for compatibility issues.

If your database is compatible with the Web, the Compatibility Checker displays a message to tell you so — and the Web Compatibility Issues button is disabled.

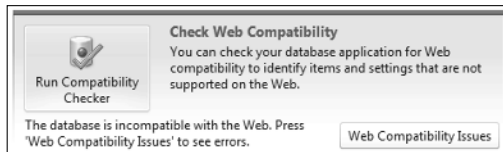
If your database is *incompatible* (oh, the shame!), the Compatibility Checker shows the following attributes:

- ◆ The Compatibility Checker is highlighted in red to indicate that errors turned up. (It's not embarrassed; it just looks that way.)
- ◆ This status message appears:

The database is incompatible with the Web. Press Web Compatibility Issues to see errors.
- ◆ The Web Compatibility Issues button is enabled.

Figure 1-9 shows the Compatibility Checker for a database that isn't Web-compatible.

Figure 1-9: Access lets you know if your application isn't Web-compatible.



When you click the Web Compatibility Issues button, Access displays a list of all Web-compatibility problems the Checker found, along with a description of each error (complete with Issue Type ID and a link to a Microsoft article that provides more information on the error and a possible resolution). Figure 1-10 shows an example of the compatibility error found in a database that uses on OLE data type for a field in one of its tables. Figure 1-11 shows details of the error as they appear on the Microsoft site.

Publishing your Access Web database

When you've made sure that your database application is Web-compatible, you're ready to publish the Web database application to Access Services (that is, SharePoint).

Figure 1-10: Access provides a list of compatibility issues.

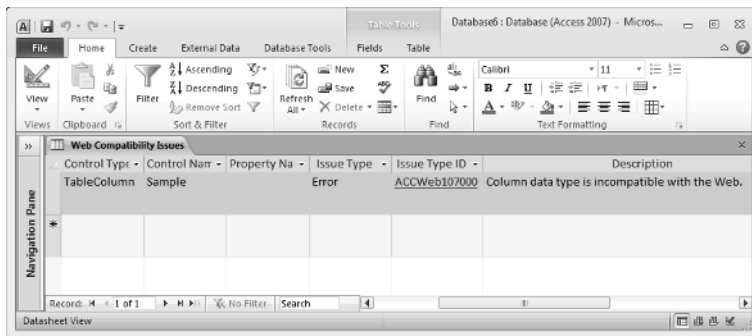


Figure 1-11:
OLE Object
data types
aren't
compatible
with
publishing
to the Web.
Oops.



The first time you publish your application to Access Services, you use the Publish to Access command to deploy your application. Follow these steps to publish your application:

- 1. Open your Web database application in Access 2010.**
- 2. Click the File tab to present the Access Backstage View.**
- 3. Click the Save & Publish tab.**

The save and publishing options appear.

- 4. In the Publish section, click Publish to Access Services.**

If this is your first time publishing the Web database application to Access Services, a Publish to Access Services section (complete with appropriate button) appears just below the Compatibility Checker option, as shown in Figure 1-12.

- 5. In the Server URL field, enter the URL to the server running Access Services.**
- 6. In the Site Name field, enter the name you want to give to the new SharePoint site that will represent your Access Web database application.**
- 7. Click the Publish to Access Services button.**

The Synchronizing Web Application dialog box appears, showing you a status bar while the conversion process runs. If the publishing process is successful, you receive a success message, along with a link to the new SharePoint site. If the publishing process is unsuccessful, you'll see a message similar to the one in Figure 1-13. (Oh, well, the world hasn't ended yet. Try again.)

Figure 1-12: The Publish command appears under the Compatibility Checker.

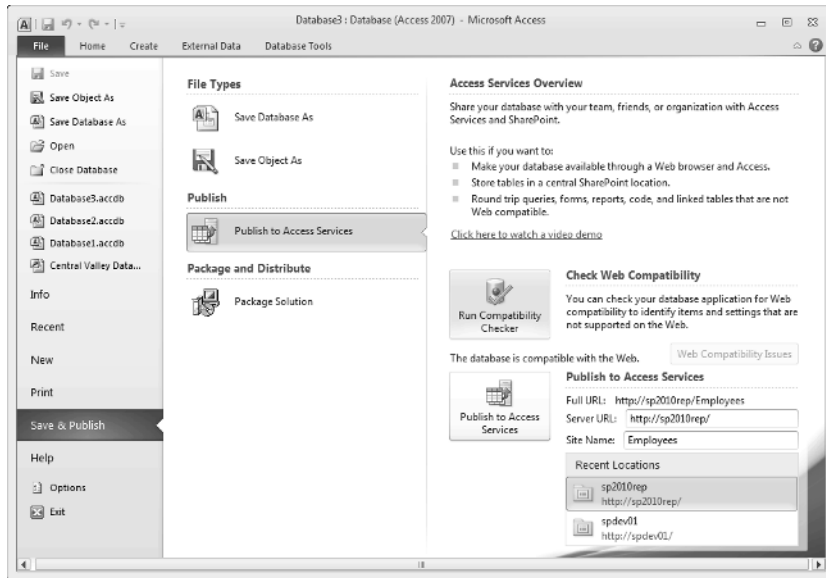
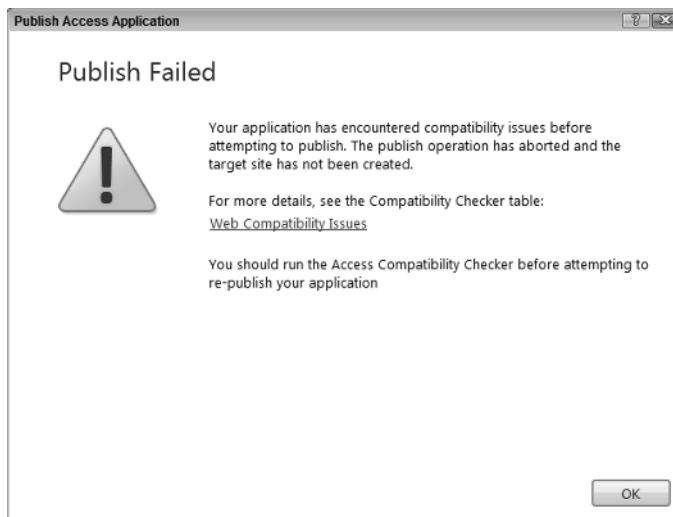


Figure 1-13: Access notifies you if the publishing process fails.



When your database application is published, the Publish to Access command is no longer available. The command that replaces it is the Sync All — which synchronizes your changes with the SharePoint server. If you want to tinker some more with your changes in Access and then synchronize those changes back to SharePoint, we have just the place to look for instructions — yes, the “Synchronizing your changes with SharePoint” section of this very chapter.



Before you can publish your Access Web database application, you must have Designer permissions in the SharePoint site to which you want to publish.

Viewing the Application Log

In addition to the Compatibility Checker table, you can check for error notifications in the Application log (`USysApplicationLog`) for any server-side errors that may have occurred during the publishing process.

Follow these steps to view the Application log:

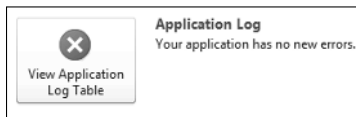
1. **Open your Web database application in Access 2010.**
2. **Click the File tab to present the Access Backstage View.**
3. **Click the Info tab.**

General options relating to your application appear, including the application log options.

4. **In the Application log section, click View Application Log Table.**

The application log table (`USysApplicationLog`) appears. Figure 1-14 shows the View Application Log Table command as it appears in the Microsoft Access Backstage View.

Figure 1-14: Server-side publishing errors show up in the Application Log Table.



Opening your Access Web database application

When you successfully publish your Access Web database application to Access Services, a SharePoint site is created, sporting the name you supplied during the publishing process. When you navigate to the site, the Web Access application appears, looking the way you specified as the site's default *Web display form*. If you haven't yet defined a default Web display form for the site, that's a minor gaffe, and see the Site Setting page below.

The publishing process stores the entire Access Web database application in SharePoint. Thus you can use SharePoint as your launching point for editing your application *in Access*. Even if you lose all the local copies of your database application, you can still open the application from SharePoint — which downloads a new copy of the application to you, linked to the server.



When you open your Access Web database application from SharePoint, you are (in effect) opening an offline copy of your database application. But not to worry: Any changes you make while offline can be synchronized back to the server.

Opening the database from the Site Settings page

Here's how to open your published Web database application in Access:

1. **Using your browser, navigate to your SharePoint Web database site.**
2. **From the Options menu, click Settings to display the site settings page.**



If you haven't defined a default Web display form for your site, you'll be staring at the Site Settings page (which will have appeared in Step 1) until you specify the pesky Web display form. Humor the machine and move on.

3. **Click the Modify this Web database, add new fields, customize forms and reports link.**

The File Download dialog box appears.

4. **Click Open.**

The Web database application opens in Access 2010. You can customize the database as needed. When you're ready to push your changes up to the server, flip ahead to the "Synchronizing your changes with SharePoint" section of this chapter and follow the instructions we left there.

Opening your database from the Options menu

You can use the following instructions to open your published Web database application in Access:

1. **Using your browser, navigate to your SharePoint Web database site.**
2. **From the Options menu, click Open in Access.**

The File Download dialog box appears.

3. **Click Open.**

The Web database application opens in Access 2010. You can customize the database as needed. When you're ready to synchronize your changes with the server, follow the steps in the "Synchronizing your changes with SharePoint" section of this chapter.



You can't use SharePoint Designer to open a Web-database SharePoint site. Instead, you have to use Access — just as you do if you're going to change or customize your database application.

Synchronizing your changes with SharePoint

After you've initially published your Access Web database to Access Services, the way you synchronize all subsequent database modifications and customizations with SharePoint is to use the Sync All command in the Access client application.

Here's how to synchronize your database application changes to SharePoint:

- 1. Open your Web database application in Access 2010.**
- 2. Click the File tab to present the Access Backstage View.**
- 3. Click the Info tab.**

General options relating to your application appear, including the synchronize options.

- 4. Click the Sync All command to synchronize all your changes with the server and reconnect all the tables.**

The Synchronizing Web Application dialog box appears, showing you a status bar so you can keep track of the conversion process.

Saving your Web Database as a Site Template

The integration between Microsoft Access 2010 and Access Services makes it easy to create an Access Web database template and implement it as a site template in SharePoint. SharePoint Server 2010 implements site templates as *solution files* (.wsp). If you haven't created a solution file yet, don't despair; there's an easy way . . .



With Access 2010 handy, you don't have to figure out how to package your database as a SharePoint solution file. Instead, you wave your magic wand (well, almost): You simply save your Web database as a regular Access template file (.accdt) and upload it to the SharePoint Solution Gallery. When you upload an Access database template to the SharePoint Solution Gallery, Access Services kicks into gear and wraps the template in a SharePoint solution file — automatically. (Gotta love it.)

Here's the process that deploys your Access Web database as a SharePoint site template:

- 1. Open your Web database in Access 2010.**
- 2. Click the File tab to present the Access Backstage View.**
- 3. Click Save & Publish, and then click Save Database As.**

A list of database file types appears on the right, under the Save Database As section.

4. From the list of file types, click **Template (*.accdb)**.

The Create New Template from This Database dialog box appears.

5. Enter a Name and Description for your template.
6. Select an Icon that you'd like to use for your template.
7. In the Instantiation Form field, select the form you want to appear as the default display form.
8. If you want to include the data in the current database as part of the template, select **Include Data in Template**, otherwise leave the setting clear.
9. Click **OK**.

Note the location where your template is saved.

10. Using your browser, navigate to the home page of the SharePoint site to which you want to deploy the template.
11. From the Site Actions menu, click **Site Settings**.
12. From the Galleries section, click **Solutions**.

The Solutions Gallery appears.

13. Click the **Solutions Gallery** page to activate the **Gallery Ribbon** menu.
14. From the **New Ribbon** group, click **Upload Solution**.

The Solution Gallery Upload Solution dialog box appears.

15. Browse to the **Access Web** database template file that you saved in Step 9.

16. Click **OK** to upload the file.

Access Services gets busy and wraps the template file in a SharePoint solution file (.wsp).

17. Select the newly uploaded solution file and click the down arrow next to the file.

A shortcut menu appears.

18. From the shortcut menu, click **Activate**.

The template now appears under the **Web Databases** category as a site template that you can select when you create a new site.

When you create a site based on your new Access site template, Access Services extracts the solution file and converts what's in it to a SharePoint site.

