



IBM Systems - iSeries
e-business and Web serving
IBM Survey Creator V1.0

Version 5 Release 4





IBM Systems - iSeries
e-business and Web serving
IBM Survey Creator V1.0

Version 5 Release 4

Note

Before using this information and the product it supports, read the information in “Notices,” on page 23.

Second Edition (February 2006)

This edition applies to version 5, release 4, modification 0 of IBM Business Solutions (product number 5722-BZ1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CISC models.

© Copyright International Business Machines Corporation 2004, 2006. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

Contents

IBM Survey Creator V1.0	1	Create a survey	11
What's new for Version V1.0	1	Types of survey questions	12
Printable PDF	2	Preview a survey	14
Overview of IBM Survey Creator V1.0.	3	Update a survey.	14
Interaction with WebSphere Application Server	4	Survey results	15
Interaction with HTTP Server for i5/OS	4	Remove a survey	16
Interaction with iSeries Directory Server (LDAP)	5	Define which users can or can not take a survey	16
Interaction with LDAP on Domino 6.0 for iSeries	6	Survey URL usage for survey takers	17
Interaction with a DB2 UDB for iSeries	6	Take a survey using IBM Survey Creator V1.0.	17
Survey authentication process	6	Troubleshoot IBM Survey Creator V1.0	18
Survey authorization process	7		
Install IBM Survey Creator V1.0	7	Appendix. Notices	23
IBM Survey Creator administrator pages	8	Programming Interface Information	25
Add survey owners	9	Trademarks	25
Remove survey owners	10	Terms and conditions	25
IBM Survey Creator V1.0 owner pages	10		

IBM Survey Creator V1.0

The IBM[®] Survey Creator V1.0 application is a part of the *IBM Business Solutions Version 1.0 (5722-BZ1)* product.

IBM Survey Creator is a Web-based application that provides the ability to create, configure, and manage surveys. This application provides you with a product that you can use to help create your own web based applications. IBM Survey Creator uses an LDAP directory server to retrieve survey information and can be used with a directory that is already set up for your existing applications. You can use an existing LDAP directory for IBM Survey Creator, or you can create a new directory with the Web administration graphical user interface (GUI) or the IBM Welcome Page V1.1 application.

Note: The IBM Welcome Page application (also part of the IBM Business Solutions product) must be installed and configured before you deploy the IBM Survey Creator application. All business solutions applications are dependent upon IBM Welcome Page as an entry point for installation.

IBM Survey Creator provides these functions:

- Ability to create new surveys as well as delete, update, and preview existing surveys.
- Search for users, create questions, and view survey results.
- Ability to create and maintain multiple surveys.

Related information

See the following topics for information about related IBM business solution applications:

IBM Welcome Page V1.1 View documentation for the IBM Welcome Page V1.1 application, which provides the installation and configuration interface for IBM Telephone Directory V5.2.

IBM Telephone Directory V5.2 View documentation for the IBM Telephone Directory V5.2 application. IBM Telephone Directory V5.2 is the latest release of the business application described in this topic and has the possibility to be preconfigured on certain OS/400[®] V5R3 servers.

IBM HTTP Server for i5/OS[™] View documentation for the IBM HTTP Server for i5/OS product, which includes information about the HTTP server Web-based administration interface.

IBM Business Solutions  (<http://www.ibm.com/servers/eserver/series/software/bizapps/>)

What's new for Version V1.0

See this topic to learn more about functional, graphical, and packaging enhancements made to IBM Survey Creator V1.0.

The IBM Survey Creator V1.0 application is packaged as part of *IBM Business Solutions Version 1.0 (5722-BZ1)*:

IBM Business Solutions

IBM Business Solutions provides a set of enterprise Web applications available for iSeries[™] servers. Each application represents a common business need that can work with your existing applications, server components, and enterprise data. The Web applications demonstrate the value of integrated e-business solutions.

Enterprise Web applications must be deployed into an application server run time before they can be used. Deployment of such applications can be complex, which is why deployment wizards for the applications provided by IBM Business Solutions have been added to the new IBM Web Administration for iSeries GUI, provided by IBM HTTP Server (5722-DG1). The new Web Administration GUI includes setup and deployment wizards that make the enterprise Web applications provided by IBM Business Solutions ready to use immediately. You can deploy the enterprise Web applications into application servers you may have already, or you can create new application servers.

IBM Survey Creator V1.0

IBM Survey Creator is a Web-based business application that provides the ability to create, configure, and manage survey information. Information is stored in a database (DB2[®] UDB for iSeries) and retrieves information through the lightweight directory access protocol (LDAP) server. For the LDAP server, the iSeries based IBM Directory Server (LDAP) or Lotus[®] Domino[®] (LDAP) Server products may be used. The business application deployment wizards within the Web Administration GUI configure the necessary information used in either of these LDAP directories. The wizards allow you to configure to an existing directory or create a new directory

IBM Survey Creator can be used with a directory you may have already set up for your existing applications. Optionally, you can use the Web Administration GUI (described previously) or the IBM Welcome Page application (described below) to set up a new directory.

IBM Welcome Page V1.1

IBM Welcome Page Version 1.1 is a Web-based business application with several purposes. It provides an entry point to the other business applications provided by IBM Business Solutions. It also provides administrative interfaces used for set up and configuration of the other business applications, including IBM Telephone Directory V5.2 and IBM Survey Creator V1.0


See IBM Welcome Page V1.1 in the IBM Welcome Page V1.1 topic for more information.

Note: IBM Welcome Page must first be installed and configured before deploying the IBM Survey Creator and Telephone Directory wizards. All business solutions applications are dependent upon IBM Welcome Page as an entry point for installation.



Printable PDF

See this topic to download the documentation in a printable PDF format.

You can view or download a PDF version of this topic:

Topic	PDF Download size
IBM Survey Creator V1.0 	312 KB

You can view or download a PDF version of these related topics:


Related Topics	PDF Download size
IBM Welcome Page V1.1 	371 KB
IBM Telephone Directory V5.2 	491 KB

Saving PDF files

To save a PDF on your workstation for viewing or printing:

1. Right-click the PDF in your browser (right-click the link above).
2. Click **Save Target As...**
3. Navigate to the directory in which you would like to save the PDF.
4. Click **Save**.

Downloading Adobe Acrobat Reader

If you need Adobe Acrobat Reader to view or print this PDF, you can download a copy from the Adobe Web site (www.adobe.com/products/acrobat/readstep.html). 

Overview of IBM Survey Creator V1.0

Provides an overview of the IBM Survey Creator application and how it interacts with different iSeries server components and various software components.

You can use IBM Survey Creator with other business applications to create and manage information. IBM Survey Creator stores information in a universal database (DB2 UDB for iSeries) and retrieves information through the lightweight directory access protocol (LDAP) server.

The two types of directory servers that are supported by the IBM Survey Creator application are:

- iSeries Directory Server (LDAP)
- LDAP on Domino 6.0 for iSeries (Domino Directory services).

The IBM Survey Creator application is installed on your iSeries server and can be deployed into the run time of the following editions of WebSphere® Application Server:

- WebSphere Application Server for iSeries V5
- WebSphere Application Server for iSeries V5.1
- WebSphere Application Server for OS/400 V6
- WebSphere Application Server Network Deployment for iSeries V5
- WebSphere Application Server Network Deployment for iSeries V5.1
- WebSphere Application Server Network Deployment for OS/400 V6
- WebSphere Application Server - Express for iSeries V5
- WebSphere Application Server - Express for iSeries V5.1
- WebSphere Application Server - Express for i5/OS V6

For detailed information about how the IBM Survey Creator application uses various iSeries server and software components, see these topics:

Interaction with WebSphere Application Server

Interaction with HTTP Server for i5/OS

Interaction with iSeries Directory Server (LDAP)

Interaction with LDAP on Domino 6.0 for iSeries

Interaction with DB2 UDB for iSeries

For detailed information about the IBM Survey Creator authentication and authorization processes, see these topics:

IBM Survey Creator authentication

IBM Survey Creator authorization

Interaction with WebSphere Application Server

See this topic for information about how IBM Survey Creator interacts with the WebSphere Application Server.


IBM Survey Creator contains a Web application packaged in an enterprise archive (.ear) file that is deployed into a WebSphere Application Server run time environment. After the application is deployed, it handles requests routed to it through the application server. The application server provides various access paths and has various security features enabled for the server as a whole or specifically for the application. Requests must pass through the server to be routed to and handled by the IBM Survey Creator application. Once requests reach the application, the application handles the required LDAP interactions.


WebSphere Application Server provides the runtime environment, including support for Java™ runtime APIs, for the application. The application uses these features of WebSphere Application Server:

- WebSphere Application Server V5 provides standard Java runtime environment APIs (J2SE version 1.3). J2SE 1.3 provides basic Java utility functions, context, and socket factories used to communicate with LDAP servers, and Java locale support for internationalization.
- WebSphere Application Server V5.1 and V6 provide standard Java runtime environment APIs (J2SE version 1.4). J2SE 1.4 provides basic Java utility functions, context, and socket factories used to communicate with LDAP servers, and Java locale support for internationalization.
- Enterprise application runtime environment APIs (J2EE version 1.3), which provide Web application support for HTTP servlets (HTTP Servlet Specification Level 2.3) and JavaServer Pages (JSP) files (JSP Specification Level 1.2).
- Web application deployment utilities (J2EE version 1.3), which provide deployment of the application using Enterprise Archive (.ear) files, Web Archive (.war) files, and Java Archive (.jar) files.

See the following Web sites for more details on the application deployment environment and Web application packaging tools and services:

WebSphere Application Server 
(<http://www.ibm.com/servers/eserver/series/software/websphere/wsappserver>).

WebSphere Application Server - Express V5.1 
(<http://www.ibm.com/servers/eserver/series/software/websphere/wsappserver/express/indexexp51.html>).

WebSphere Application Server - Express V5 
(<http://www.ibm.com/servers/eserver/series/software/websphere/wsappserver/express/indexexp50.html>).

Interaction with HTTP Server for i5/OS

See this topic for information about how IBM Survey Creator interacts with the HTTP Server for i5/OS.

To run IBM Survey Creator, you must install and configure IBM HTTP Server for i5/OS (5722-DG1). You cannot use the internal HTTP server that is provided with WebSphere Application Server. WebSphere Application Server's internal HTTP server is not intended for production use and does not provide the level of security, function, and performance required for production applications.

The IBM HTTP Server must be configured to use an IBM HTTP Server plugin module (for WebSphere) before it can route requests to the application. This plugin allows the application server to hook into IBM HTTP Server and benefit from any services IBM HTTP Server provides. Once this association is set up, you can send application requests to IBM HTTP Server. The plugin recognizes application requests and routes them to the application server, which routes them to the application. IBM HTTP Server must also be configured to use an IBM HTTP Server plugin module for LDAP (mod_ibm_ldap). This plugin module allows the requester to be authenticated before certain application requests are routed to the application server. LDAP authentication is performed by the plugin module and uses the same directory server as the application. The application server benefits from this association by having a production level HTTP server available to process requests and by having additional functionality provided by IBM HTTP Server. The IBM Survey Creator application takes advantage of the additional server function by using LDAP authentication services provided by the IBM HTTP server plugin for LDAP.

Note: It is recommended that you use the IBM Web Administration deployment wizard to set up required information. The wizard creates and updates the plug-in information and ensures that the relationship between the HTTP server and Application server are set. The wizard also updates all the necessary LDAP information in the HTTP server.

Interaction with iSeries Directory Server (LDAP)

See this topic for information about how IBM Survey Creator interacts with the LDAP directory server for iSeries.

An LDAP directory is a listing of information about objects arranged in a particular order that gives details about each object. These objects are referenced by a distinguished name (DN) attribute. An LDAP directory is a specialized database that has characteristics that set it apart from general purpose relational databases. For example, LDAP directories are accessed (read or searched) more often than they are updated (written).


The IBM Survey Creator application uses an LDAP directory server as an authentication mechanism to retrieve user information. The application can use an existing LDAP directory if you already have one, or you can set up a new directory. IBM Survey Creator searches the name values of users that are in the directory, retrieves the information, and uses it to authenticate the user attempting to access the application. By default, the LDAP server is automatically configured on your iSeries server, but you can choose which server you want to use if another server already exists in your network. The LDAP server is not required to reside on the same iSeries server as the application server. In addition, you can also use a Domino LDAP server with IBM Survey Creator.

The LDAP server is accessible through TCP/IP. You can perform most LDAP server setup and administration tasks with iSeries Navigator.

For more information about how the iSeries Directory Server (LDAP) uses the IBM Telephone Directory V5.2 and IBM Welcome Page V1.1, see these topics:

- Interaction with LDAP using IBM Telephone Directory
- Interaction with LDAP using IBM Welcome Page

For more information about iSeries Directory Server (LDAP), see these topics:

- Directory Server (LDAP)
- iSeries Directory Server (LDAP) 

(<http://www.ibm.com/servers/eserver/series/ldap>).

The **Articles and Publications** section has links to articles, redbooks and other related LDAP books.


Interaction with LDAP on Domino 6.0 for iSeries

See this topic for information about how IBM Survey Creator interacts with LDAP on Domino 6.0 for iSeries.

As an alternative to iSeries Directory Server (LDAP), you can use LDAP on Domino 6.0 for iSeries (Domino Directory services).

Existing directory entries may be searched if they are based on the standard `inetOrgPerson` object class. This object class is commonly used to represent and store information. This requirement is the same one imposed on LDAP servers provided by iSeries Directory Server (LDAP). Also, directory entries modified by the application have an `ibm-itdPerson` auxiliary object class added to them. For details on the `inetOrgPerson` and the `ibm-itdPerson` classes, see [Interaction with iSeries Directory Server \(LDAP\)](#).

The IBM Survey Creator application interacts with a Domino LDAP server the same way it interacts with an IBM directory server. IBM Survey Creator uses Domino as an authentication mechanism that retrieves user information. However, directory entries are set up and maintained differently using a Domino LDAP server. The difference involves Domino's use of the `dominoPerson` object class. In order for entries to be visible by all versions of Domino, entries must include the `dominoPerson` object class, otherwise Domino ignores them. The IBM Survey Creator application must be configured specifically to use a Domino LDAP server.

For detailed information on how to set up and use LDAP servers on Domino 6.0, see the Lotus Domino on iSeries Web site: <http://www.ibm.com/servers/eserver/series/domino>. 

Interaction with a DB2 UDB for iSeries

See this topic for information about how IBM Survey Creator interacts with DB2 UDB for iSeries.

The IBM Survey Creator uses a DB2 Universal Database to store configuration, content, and results information for each survey. Each IBM Survey Creator application that is installed in a WebSphere Application Server for iSeries run-time environment is configured to have its own unique database. The IBM Survey Creator application uses the stored information in the database to view and manage survey information.

IBM Survey Creator uses a predefined naming convention for the database. The naming convention follows the format of `SURVEYnnnn` where `nnnn` is the dynamic portion of the name value consisting of digits (0-9). The valid values of the database name ranges from `SURVEY0000` to `SURVEY9999`. This naming convention limits an iSeries server to a maximum of 10000 different application servers configured with the survey application.

For more detailed information about DB2 Universal Database for iSeries, see this topic:

- [DB2 Universal Database™ for iSeries](#)

Survey authentication process

See this topic for information about IBM Survey Creator's authentication process.

The IBM Survey Creator application uses the LDAP directory server to authenticate users. Authentication takes place through a verification process of searching the LDAP directory to check that the user has a valid LDAP entry. The IBM Survey Creator application requires user authentication before they have survey administrative or owner access. Individual surveys can also require that survey takers be authenticated through a login process before taking a survey.

IBM Survey Creator is designed to work in conjunction with the IBM Business Solution applications. The IBM Business Solution applications share the same LDAP directory server if you deploy and configure the applications within the same application server run-time environment on an iSeries server. If your business applications share the same application server run-time environment, you can add an entry in the IBM Telephone Directory V5.2 application to create a valid LDAP entry.

Survey authorization process

See this topic for information about IBM Survey Creator's authorization process.

IBM Survey Creator uses an authorization process to verify that users are allowed to either take or own a survey based on properties specified by survey administrators and owners. The survey authorization process works as follows:

Survey administrators

IBM Survey Creator does not perform special authorization for survey administrators attempting to enter the survey application. All users with a valid entry in the Administrator group of the LDAP server are automatically granted survey administrator authority after successful authentication.

Survey owners

IBM Survey Creator performs an authorization check to verify that the user is defined as having survey owner authority by the survey administrator. A user can have a valid LDAP entry and pass through the authentication phase, but not be defined as a user with survey owner privileges. A survey administrator must add a users to the Survey Owners box on the **Survey Creator Administration** page for that user to have survey owner authority.

Survey takers

IBM Survey Creator performs authorization checks based on properties defined by the survey owner. This application allows a survey owner to distinguish who has access to take a survey through the **Require participants to login before taking the survey** property. When a user attempts to take a survey that requires a login procedure, the application performs an authorization check to verify the user is not in the list of restricted users or is in the list of allowed users. Authorization verifies that the user has not already taken the survey before presenting the user with the survey form. If the **Require participants to login before taking the survey** property is not selected, authorization checks are not performed on survey takers and survey takers can take the survey multiple times.

Install IBM Survey Creator V1.0

This topic provides information on how to install the application on your server, deploy the application into an application server run time, and configure the application.

IBM Business Solutions provides a set of enterprise Web applications available for iSeries servers. Each application is a common business need that works with your existing applications, server components, and enterprise data. The Web applications demonstrate the value of integrated e-business solutions.

As part of IBM Business Solutions, the IBM Survey Creator V1.0 application is installed and configured with the IBM Welcome Page V1.1 application. Deploy both applications using the IBM HTTP Server for iSeries Web administration GUI. After installation and configuration, the IBM Survey Creator V1.0 application is deployed into an application server run time.

Note: Certain operating systems may have preinstallation and initial preconfiguration of the application already set up on new iSeries servers. Before you install the IBM Welcome Page V1.1, IBM

Telephone Directory V5.2, and IBM Survey Creator V1.0 applications, see verify the prerequisites in the *IBM Welcome Page* topic to verify that your iSeries software meets the minimum requirements.


IBM Welcome Page must be installed and configured to use the IBM Survey Creator V1.0 application. When you install IBM Survey Creator V1.0 using the Web Administration Deployment wizards, the IBM Welcome Page V1.1 application is automatically installed.

1. Install the application

Use the *IBM Business Solutions Version 1.0* CD-ROM to install the applications on your iSeries server.

2. Get the IBM Business Solutions PTF Group

The initial offering of the IBM Survey Creator V1.0 application is being delivered as a PTF. The Preventative Service Planning page includes fixes for i5/OS products. This page includes fixes for the IBM Business Solutions. To determine which PTF group you must obtain and install, see:

IBM Business Solutions PTFs and Support  (<http://www-1.ibm.com/servers/eserver/series/software/bizapps/ptfs.html>)

3. Get the HTTP Server PTF

The IBM HTTP Server for i5/OS group PTF gives you access to the deployment wizards. To determine which PTF group you must obtain and install, see:

HTTP Server: PTFs and Support  (<http://www-1.ibm.com/servers/eserver/series/software/http/services/service.htm>)

4. Configure the application

Use the HTTP server Web administration GUI to create a new application server and HTTP server (or use an existing application server and HTTP server, if you prefer) that will run IBM Survey Creator V1.0.

5. Deploy the application into the application server run time

Select the option on the Web administration GUI to deploy IBM Survey Creator V1.0 into the application server and HTTP server. When the application server and HTTP server are started, the application is automatically deployed into the application server run time environment.

See Install IBM Business Solutions in the *IBM Welcome Page V1.1* topic for detailed information on how to install, configure, and deploy the IBM Welcome Page V1.1, IBM Telephone Directory V5.2, and IBM Survey Creator V1.0 applications.

IBM Survey Creator administrator pages

See this topic if you are an administrator of the IBM Survey Creator application. Information includes how to administer application entries and application properties.

You can use IBM Survey Creator to manage which users can create and take surveys. Users are granted survey owner authority only through the use of the administrator pages. Users must have valid LDAP entries to obtain survey owner authority. A valid LDAP entry adds a user to list of authorized survey owners. The administrator can select users from a list of valid LDAP entries to authorize them as survey owners. The administrator pages also allow users to be removed from owning a survey.

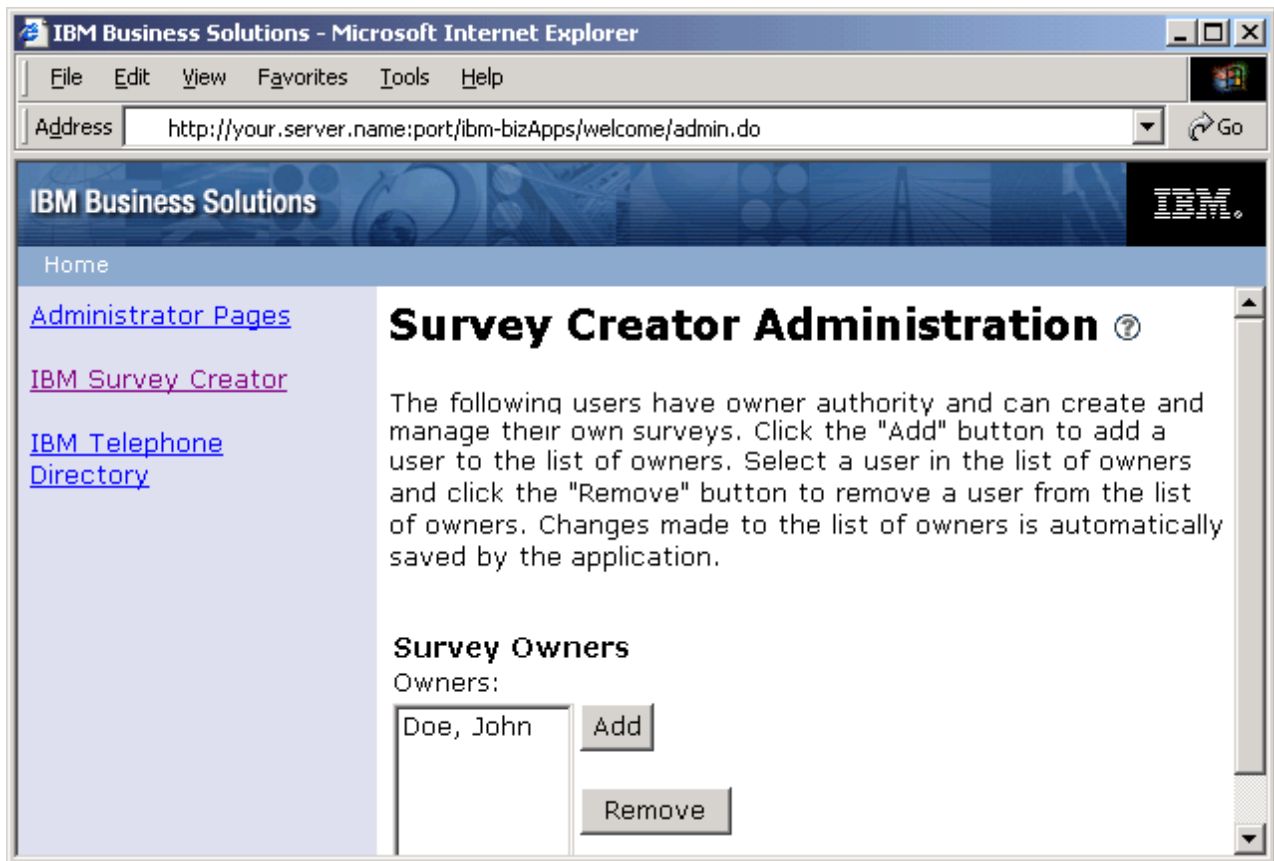
To access the IBM Survey Creator administrator pages, perform these steps:

1. Specify one of the following URLs in your Web browser:

- `http:// your.server.name:port/ibm-bizApps/welcome/admin.do`
- `http:// your.server.name:port/ibm-bizApps/survey/manage/admin`

where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application. The second URL is used if you want to access the IBM Survey Creator administrator pages without using the IBM Welcome Page application.

2. Click IBM Survey Creator.



For more information on authentication, authorization, and LDAP, see the following topics:

- Survey authentication
- Survey authorization
- Interaction with iSeries directory server LDAP

Note: The IBM Survey Creator administrator pages can only be accessed by authorized users. Users who attempt to access the administrator pages are prompted to login with a valid user name and password. The user name and password must be defined in the Administrator group of the LDAP Server.

Add survey owners

See this topic for information on how to give users survey owner authority using the administrator pages.

You can use the **Add** button to add users to the Survey Owners list through searching the directory. The Survey Owners list contains the names of authorized users with survey ownership authorization. Once a user has survey ownership authorization, the user can search, create, and manage surveys as well as save the results and information.

To add a user using the IBM Survey Creator administrator pages, perform these steps:

1. To access the IBM Survey Creator administrator pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome/admin.do`

where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number that was specified during installation.

2. Click **IBM Survey Creator**.
3. Click **Add**.
4. The **Add Survey Owners** page is displayed, which allow administrators to search the directory for users to add to the Survey Owners list.
5. Search for users by using one of the following methods:
 - Enter the name of the user in the format of *last name* or *last name, first name* in the text field.
 - Enter a single letter or a string of letters in the text field to search the entire directory for users. For example, type "A" in the text field to find every last name in the directory beginning with that letter.
6. From the search results, select the users that you want to add to the Survey Owner list and click **OK**. The **IBM Survey Creator Administration** page appears displaying the updated Survey Owners list.

Remove survey owners

See this topic for information on removing survey owners from having survey owner authority using the administrator pages.

You can use the **Remove** button to remove users from the Survey Owners list on the **Survey Creator Administration** page. The Survey Owners list contains the names of authorized users. Once a user has been removed from the Survey Owners list, the user is no longer authorized to create and manage surveys.

To remove a user using the IBM Survey Creator administrator pages, perform these steps:

1. To access the IBM Survey Creator administrator pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome/admin.do`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number that was specified during installation.
2. Click **IBM Survey Creator**.
3. Select the user you want to remove in the Survey Owners list.
4. Click **Remove**.

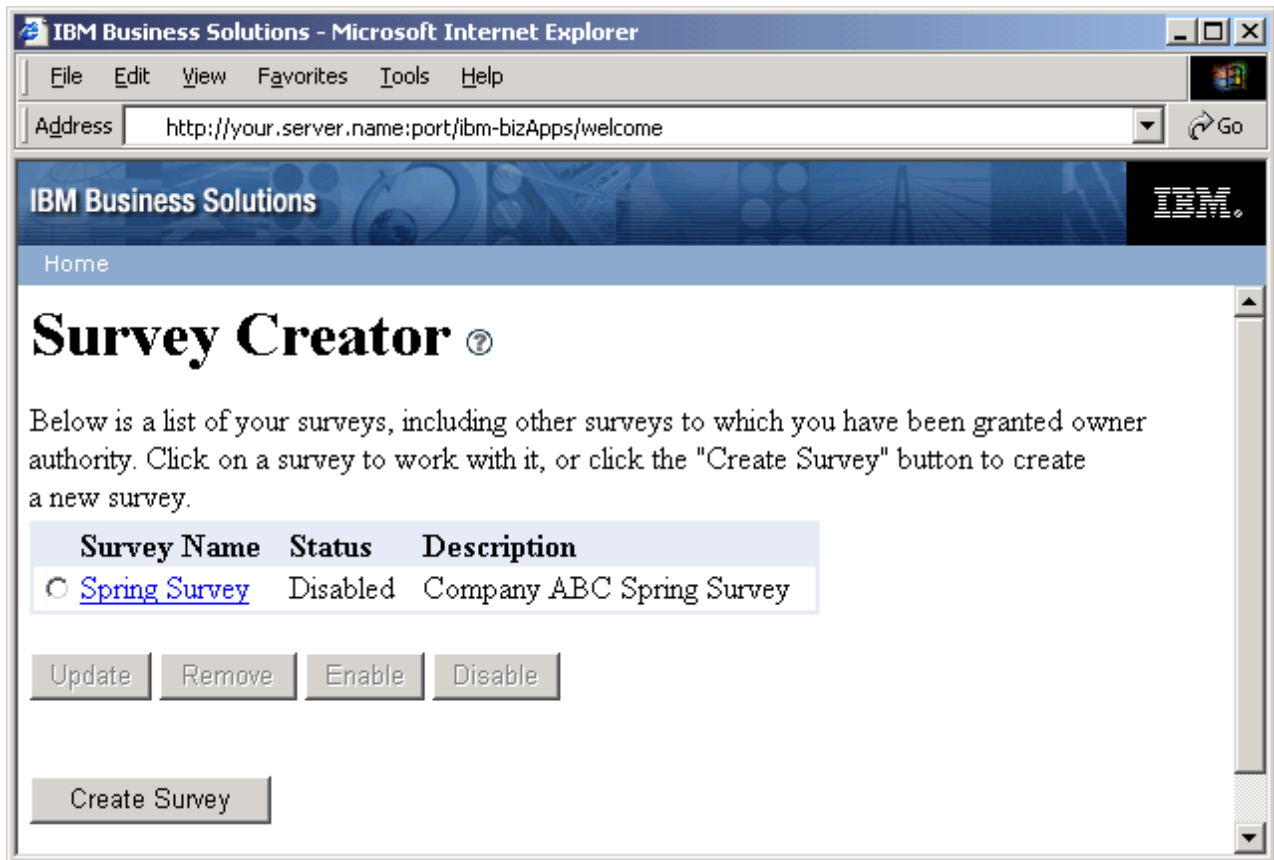
IBM Survey Creator V1.0 owner pages

See this topic if you are an owner of a survey using the IBM Survey Creator application. Survey owners have the ability to create, update, and manage surveys.

The IBM Survey Creator owner pages are used to create and manage surveys. You must be added to the Survey Owners box by a survey administrator in the Administrator pages for you to obtain survey owner authority.

To access the IBM Survey Creator owner pages, perform these steps:

- Specify one of the following URLs in your Web browser:
 - `http://your.server.name:port/ibm-bizApps/welcome`
 - `http://your.server.name:port/ibm-bizApps/survey/owner/secure`where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server. The second URL is used if you want to access the IBM Survey Creator owner pages without using the IBM Welcome Page application.



Many of the survey functions involve whether or not a survey is enabled or disabled. The functions of the **Enable** and **Disable** buttons are:

- Enable - Enabled surveys can not be removed or updated but can be taken by users
- Disable - Disabled surveys can be removed or updated but can not be taken by users

For information about creating and managing surveys, see these topics:

- Create a survey
- Update a survey
- Preview a survey
- Survey results
- Remove a survey
- Survey URL usage for survey takers
- Define which users can or can not take a survey

For information about using survey questions, see these topics:

- Types of survey questions
- Add a survey question
- Update a survey question
- Remove a survey question

Create a survey

See this topic for information on creating a new survey.

The **Create Survey** pages are used to create a personalized survey and save your information. You can specify who is and is not allowed to take a survey by requiring users to log in or you can also submit the survey anonymously (no login required). All fields marked with an * are required and must be answered.

To create a survey using IBM Survey Creator application, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. Click **Create Survey**.
4. On the **Create Survey** page, specify properties for your survey.
 - **Survey Element** fields:
 - **Hidden description** - This text describes the survey or provides general comments about the survey.
 - **Title** - This text is the name of the survey located at the top of the page.
 - **Introduction** - This text provides an introduction about the survey and appears under the survey title.
 - **Closing** - This text appears at the bottom of your survey after the last question.
 - **Destination URL upon survey completion** - The text for this field represents a URL value (`http://www.ibm.com`) that a user taking the survey is directed to upon the successful receipt of the survey. If this field is left blank, the IBM Survey Creator application presents a **Thank You** page and does not direct the survey taker to a Web site.
 - **Security** fields:
 - **Additional owners** - This field lists additional users who have survey owner authority for the survey.
 - **Require participant to login before taking a survey** - Select this property if you want to require survey users to login before taking the survey. Users that are required to login can only take the survey once. If the field is left unselected, survey takers do not login and can take the survey multiple times.
 - **Restricted participants** - This field lists the users restricted from taking or participating in a survey. To restrict users, click **Add** and search for users that you want to restrict. To remove users from this list, click **Remove**.
 - **Allowed Participants** - This field lists the users who can take a survey. You can search the directory to add people to the list by clicking **Add** or you can click **Remove** to remove a selected user.
5. Click **Create**.
6. Your survey is created. To complete your survey, you need to add questions.

For information about adding, updating, and removing questions, see these topics:

- Add a survey question
- Update a survey question
- Remove a survey question

For more information about defining who can and can not take your survey, see this topic:

- Define which users can or can not take a survey

Types of survey questions

You can use the IBM Survey Creator application to ask numerous questions in different formats. IBM Survey Creator allows you to add, remove, edit, and rearrange questions to a new or existing survey.

Here are the types of questions available for survey owners:

- **Select One (Vertical)** - This question consists of a list of choices in a vertical column.
- **Select One (Horizontal)** - This question consists of a list of choices in a horizontal row.
- **Select One (Menu)** - This question consists of a list of choices in a single drop down menu.
- **Select All (Vertical)** - This question consists of a list of choices in a vertical column that allow survey takers to choose multiple answers.
- **Select All (Horizontal)** - This question consists of a list of choices presented in a horizontal row that allow survey takers to select multiple answers.
- **Open-Ended Text (512 Characters Max)** - This question consists of an open field that allow survey takers to type an answer that cannot be more than 512 characters in length.
- **Open-Ended Text Area (1024 Characters Max)** - This question consists of an open field that allows survey takers to type an answer that cannot be more than 1024 characters in length. This question type is used for more lengthy answers.
- **Numeric Value** - This question consists of one open field for the survey taker to type in a numeric answer, such as a question prompting a person's age.
- **Data Block** - This question consists of multiple open fields, allowing survey takers to type in multiple answers without exceeding 512 characters in length per field. This question type is used for answers with multiple lines, such as an address.

For information about adding, updating, and removing questions, see these topics:

Add a question

Provides instruction for adding a survey question.

To add a question to a new survey using the IBM Survey Creator application, perform these steps:

1. Follow the instructions specified on the **Create Survey** page. The **Add Questions** page automatically appears.
2. Click **Add Question**.
3. Select the type of question you want to create and click **Next**.
4. Fill in the **Question Text** and **Answer(s)** fields on the **Add Questions** page as well as any of the other options available that you want.
5. Click **Finish**.

Add a question to an existing survey:

To add a question to an existing survey using the IBM Survey Creator application, perform these steps:

1. Select a survey and click **Update**.
2. Click the **Questions** tab.
3. Click **Add Question**.
4. Select the type of question you want to create and click **Next**.
5. Fill in the **Question Text** and **Answer(s)** fields on the **Add Questions** page as well as any of the other options available that you want.
6. Click **Finish**.

Other options available on the **Add Question** page include:

- **Include "Other" choice** - You can select **Yes** to make the last answer of the question be "other". The "other" answer allows users to type in an answer that is different from the existing answers.
- **Required question** - You can Select **Yes** to make this question required. Survey takers must answer this question to submit the survey. Questions marked with an * are required

- **Include "Comments" textbox** - You can Select **Yes** to create an additional textbox that is located under the list of selectable answers. This textbox allows survey takers to add additional information and comments to the question.
- **Passthrough HTML** - This field represents text that may include HTML tags. You can use this feature to allow survey takers to format their answers with HTML, such as bolding text or creating lists. This text is located above the question text on the survey.

Update a question

Provides instruction for updating an existing question.

To update an existing survey question using the IBM Survey Creator application, perform these steps:

1. Select an existing survey and click **Update**.
2. Click the **Questions** tab.
3. Select the question you wish to update and click **Edit**. You can also rearrange the order of survey questions by selecting an existing question and clicking either the **Move Up** or **Move Down** buttons.
4. Edit your question information.
5. Click **Save Changes**.

Remove a question

Provides instruction for removing a survey question.

To remove a survey question using IBM Survey Creator application, perform these steps:

1. Select an existing survey and click **Update**.
2. Click the **Questions** tab.
3. Select the survey question you want to remove.
4. Click **Remove**.

Preview a survey

See this topic for information on previewing a survey before users take it.

The **Preview** tab is used to preview a new or existing survey in the view seen by survey takers. You use the **Preview** tab to view the final survey before enabling it to be taken by users. A survey can be previewed in both a disabled or enabled status.

To preview a survey using the IBM Survey Creator application, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
 where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. To preview a disabled survey, select an existing survey and click **Update** or click the survey name hyperlink. To preview a enabled survey, click the survey name hyperlink.
4. Click the **Preview** tab.

Note: The **Submit Survey** and **Reset Form** buttons are not active because this is a replica view that is seen by survey takers. Survey owners cannot submit a survey through this page.

Update a survey

See this topic for information on updating an existing survey.

The **Update** button is used to update an existing survey and save your information. Survey owners can edit, view, and manage an existing survey, but only when the survey is disabled.

To update a survey using the IBM Survey Creator application, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. Select the survey you want to update from your list of existing surveys you own.
4. Click **Update**.
5. Edit your survey information in the **Properties** tab and click **Save Changes**.

For information about updating existing survey questions, see this topic:

- Update a question.

Survey results

See this topic for information on viewing submitted survey results and functions.

You can view survey results by clicking the **Results** tab. You can view results of submitted surveys regardless if a survey is enabled or disabled, but the survey must be disabled to clear or export the results. The total number of times an answer choice was selected or the total number of text responses entered is displayed to the left of each associated question.

To view the results of a survey using the IBM Survey Creator application, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. Click a survey name hyperlink from your list of existing surveys.
4. Click the **Results** tab. The submitted survey results are displayed.

Clear the results of a disabled survey

To clear the results of a disabled survey using the **Results** tab, perform these steps:

1. Click a survey name hyperlink from your list of existing surveys.
2. Click the **Results** tab.
3. Click **Clear Results**.

Export the results of a disabled survey

To export the results of a disabled survey in a table format using the **Results** tab, perform these steps:

1. Click a survey name hyperlink from your list of existing surveys.
2. Click the **Results** tab.
3. Click **Export Results**.
4. When prompted, either open up the *.csv* file using your desired application or save the file to a directory.

Note: A Comma Separated Value file (.csv) places the submitted survey results into a table format so it can be saved as input to another table-oriented application, such as a database or spreadsheet application.

Remove a survey

See this topic for information on removing an existing survey.

The **Remove** button is used to manage your information by deleting an outdated or unwanted survey. The remove button is only active when a survey is disabled.

To remove a survey using IBM Survey Creator application, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. Select the survey you wish to remove by clicking the radio button next to the survey name.
4. Click **Disable** if the status of the survey is enabled.
5. Click **Remove**.

Define which users can or can not take a survey

See this topic for information on how you can define which users can or can not take your survey.

You can specify which users can or can not take your survey by selecting the **Require participants to login before taking the survey** checkbox. You can also give users other than yourself survey owner authority to the survey you created.

To search for survey takers, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. Click **Create Survey** or select an existing survey and click **Update**.
4. In the **Security** section, define which users can take or own your survey by clicking **Add** on any of these optional choices:
 - **Additional Owners** - This field represents the list of users in addition to yourself that you want to have survey owner authority for your survey
 - **Restricted Participants** - This field represents the list of users restricted from taking a survey. The fields **Require participant to log in before taking the survey** and **Restrict the following participants from taking my survey** must be selected to activate this field
 - **Allowed Participants** - This field represents the list of users allowed to take a survey. The fields **Require participant to log in before taking the survey** and **Allow the following participants to take my survey** must be selected to activate this field
5. In the search field, specify the users name and click **Search**. Search for users by using one of the following methods:
 - Enter the name of the user in the format of last name or last name, first name in the text field.
 - Enter a single letter or a string of letters in the text field to search the entire directory for users. For example, type "A" in the text field to find every last name in the directory beginning with that letter.

6. Select a user and click **OK**. The user is added to the specified list box.

Survey URL usage for survey takers

See this topic for information on submitting your survey URL to survey takers.

You can send a URL for your new or existing survey to survey takers. When a survey is created, a specific URL path, file, and query string is generated, which allows survey takers to access the survey. This URL path, file, and query string is located in the **URL path and file name** field on the **Properties** tab. The survey must be enabled for users to take it.

To send a URL to survey takers using the IBM Survey Creator application, perform these steps:

1. To access the IBM Survey Creator owner pages, enter the following URL in your Web browser:
`http://your.server.name:port/ibm-bizApps/welcome`
where *your.server.name* is the name of the server where IBM Survey Creator is installed and *port* is the port number for this application server.
2. Click **IBM Survey Creator**.
3. Click the radio button next to the survey name you want to send to users and click **Enable**.
4. Click the survey name hyperlink.
5. On the **Properties** tab, the **URL path and file name** field specifies the address where survey takers can access your survey.

Note: A URL consists of a scheme, server name, path, file name, and query string. For example, `http://www.myhost.ibm.com:80/survey/taker/views/survey.jsp?id=100` contains the scheme `http://www.myhost.ibm.com:80` (where `www.myhost.ibm.com` is your server name and 80 represents a port number), the path `survey/taker/views/secure/`, the file name `survey.jsp`, and the query string `?id=100`. The scheme and server name values depend upon how your web server is set up in your network and how you want users to access your survey. For example, if your survey takers are required to use Secure Socket Layer (SSL) or access the survey through a firewall, their URL might be different than the URL you must use.

6. Place this address on a web page or send it through e-mail for survey takers to access this survey.

Take a survey using IBM Survey Creator V1.0

Provides information on how to take and submit a survey using the IBM Survey Creator application.

IBM Survey Creator allows users to take and submit surveys using forms created by survey owners. Each survey taken and submitted by a user has its results saved to a DB2 UDB for iSeries. Survey takers access the survey through a URL sent through e-mail or on a Web site by survey owners.

Before you can submit your survey answers, you must answer all of the required questions. Questions marked with an * are required.

To take a survey using the IBM Survey Creator application, perform these steps:

1. Click the link or paste in your Web browser the survey URL that was sent to you by the survey owner.
2. Login if prompted.
3. Answer the questions on the survey form.
4. Click **Submit**.
5. A successful confirmation page is displayed.

Troubleshoot IBM Survey Creator V1.0



Provides troubleshooting information on the IBM Survey Creator application.

Before you begin to troubleshoot problems with the IBM Survey Creator V1.0 application, answer the following questions to help solve some common problems when using the application:

- Are all of the product prerequisites installed? See *Verify the prerequisites in the IBM Welcome Page V1.1* topic for more information.
- Is your LDAP server started?
- Is your IBM Welcome Page application started?
- Is your IBM Survey Creator application started?
- Is your application server started?
- Is your HTTP server started?

Use the following information if you are still having problems with your application:

Troubleshoot setup

Problem	Cause	Solution
Your installation failed with the following message: ldap_search: Insufficient access	You entered the wrong LDAP server administrator password.	Obtain the correct password or reset the password.
Your setup script failed with the following messages: ldap_search: No such object Error 32 verifying LDAP settings	There might be a problem with the base DN not existing on the LDAP server.	There might be a problem with the base LDAP server configuration.
Product 5722-BZ1 is listed when the GO LICPGM command is run for a preinstalled and preconfigured iSeries server, but the option to install the IBM Survey Creator 1.0 application does not show up when creating a new WebSphere Application Server using the wizards of the Admin HTTP Server.	IBM Survey Creator V1.0 is not installed on your server.	<p>Install the IBM Survey Creator V1.0 application. The initial offering of the IBM Survey Creator V1.0 application is being delivered as a PTF. The HTTP Server for i5/OS group PTF includes fixes for HTTP Server and other i5/OS products such as IBM Telephone Directory V5.2 and IBM Welcome Page V1.1. To determine which group PTF you must obtain and install, see both:</p> <ul style="list-style-type: none">• HTTP Server: PTFs and Support  http://www.ibm.com/servers/eserver/series/software/http/services/service.htm• IBM Business Solutions PTFs and Support  http://www.ibm.com/servers/eserver/series/software/bizapps/ptfs.html

Troubleshoot authentication

Problem	Cause	Solution
Log in fails	In the application, user IDs and passwords must contain characters that map to the job CCSID that is used by the HTTP server. Otherwise, authentication fails.	Make sure that your characters map to the job CCSID that is used by the HTTP server. To determine the job CCSID for the HTTP server, enter WRKACTJOB on the CL command line and select Display job definition attributes . The HTTP server CCSID is determined by the HTTP server defaultFSCCSID directive. For more information, see Notices and limitations.
URL fails or the application does not appear	If you did not start the IBM Welcome Page application, the URL fails (<i>http://your.server.name:port/ibm-bizApps/welcome-home.do</i> or <i>http://your.server.name:port/ibm-bizApps/welcome-admin.do</i>). Problems also occur if you start the IBM Welcome Page application but do not start the IBM Survey Creator application. If the IBM Survey Creator application is not running, the Welcome Page application does not have links to it.	Start the IBM Welcome Page application and the IBM Survey Creator application.
Requests to the application fail	If you used the internal HTTP server included with WebSphere Application Server to reference the IBM Survey Creator V1.0 application, certain requests to the application fail.	You must use the associated IBM HTTP server to reference the application. Security directives for LDAP server authentication are set up and required by the IBM Survey Creator application during the creation of a new application server instance. WebSphere Application Server's internal HTTP server is not set up with the necessary security directives, and certain requests to the application fail if the internal HTTP server is used. See Interaction with IBM HTTP server for i5/OS for more information.

Troubleshoot usage

Problem	Cause	Solution
Missing link to the application	The URL <i>http://your.server.name:port/ibm-bizApps/welcome/home.do</i> takes you to the entry point for IBM Business Solutions, including the IBM Survey Creator V1.0 application.	If the link to the IBM Survey Creator V1.0 application is missing, check to ensure that both the IBM Welcome Page application and the IBM Survey Creator application are started.

Problem	Cause	Solution
Object not found error	If you receive a 404 - Object not found error in the IBM Survey Creator application, it might be because your plugin-cfg.xml file is corrupt.	<p>Perform the following steps to check this file and fix it, if necessary:</p> <ol style="list-style-type: none"> 1. Open the plugin-cfg.xml file, which is located at: /QIBM/UserData/.../config/cells/plugin-cfg.xml 2. Check to see if the following virtual host specifications are in your file (assuming a virtual host of <i>default_host</i> and a port of 80): <pre><VirtualHostGroup Name="default_host"> <VirtualHost Name="80"/></pre> 3. Check to see if the following URI affinity cookies are in your file: <pre><URI AffinityCookie="JSESSIONID" Name="/bizApps/*"/> <URI AffinityCookie="JSESSIONID" Name="/survey/*"></pre> 4. If these specifications are not in your file, open the WebSphere Application Server administration console. 5. Expand Environment. 6. Click Update WebServer plugin. 7. Click OK. 8. Stop and restart the application server. 9. Stop and restart the HTTP server.

Error logging and debugging

- **Error logs**

The application server has a variety of logs to which messages are written. For example, system message, which can be written by any application server component or application are written to general purpose logs such as the JAVA Virtual Machine (JVM) logs and the IBM Service logs. Other logs are very specific in nature and are scoped to a particular component or activity. For example, the HTTP Server plugin maintains a component-specific plugin log.

The general purpose logs, such as JVM and IBM Service, are used to monitor the health of the application server and assist in troubleshooting. Troubleshooting for specific components might require additional log analysis, such as component or product specific log files.

- **Trace statements**

Application trace statements can be enabled for the purpose of debugging problems. If problems persist, and you must call IBM Service for help, one of the first things they might ask you for is a copy of the application's trace output. Trace statements are enabled through the administrative console of the WebSphere Application Server by enabling the trace service.

The application does not need to be restarted after enabling the trace service. After enabling the trace service, recreate the problem. The trace statements should be written out to the trace log file. After

capturing trace information for the recreated problem, disable the tracing service to prevent unwanted or extraneous information from written to the trace log file.









- **LDAP and HTTP server trace**

See the following information for details on LDAP and HTTP server trace:

- Troubleshoot Directory Server
- Troubleshoot HTTP server

General troubleshooting information

These resources provide general troubleshooting assistance.

- For WebSphere Application Server - Express V5, see the associated Troubleshooting topic.
- For WebSphere Application Server - Express V5.1, see the associated Troubleshooting topic.
- For WebSphere Application Server - Express V6, see the associated Troubleshooting  topic.
- For WebSphere Application Server V5, see the associated Troubleshooting topic.
- For WebSphere Application Server V5.1, see the associated Troubleshooting topic.
- For WebSphere Application Server V6, see the associated Troubleshooting  topic.
- Read the WebSphere Application Server - Express V5 Release Notes 
- Read the WebSphere Application Server - Express V5.1 Release Notes 
- Read the WebSphere Application Server - Express V6 Release Notes 
- Read the WebSphere Application Server V5 Release Notes 
- Read the WebSphere Application Server V5.1 Release Notes 
- Read the WebSphere Application Server V6 Release Notes 

Appendix. Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation
Licensing
2-31 Roppongi 3-chome, Minato-ku
Tokyo 106-0032, Japan

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law: INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation

Software Interoperability Coordinator, Department YBWA
3605 Highway 52 N
Rochester, MN 55901
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

- | The licensed program described in this information and all licensed material available for it are provided
- | by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement,
- | IBM License Agreement for Machine Code, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© (your company name) (year). Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. _enter the year or years_. All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.

Programming Interface Information

This IBM Survey Creator V1.0 publication documents intended Programming Interfaces that allow the customer to write programs to obtain the services of IBM i5/OS.

Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

- | AIX
- | AIX 5L
- | e(logo)server
- | eServer
- | i5/OS
- | IBM
- | IBM (logo)
- | iSeries
- | pSeries
- | WebSphere
- | xSeries
- | zSeries

- | Intel, Intel Inside (logos), MMX, and Pentium are trademarks of Intel Corporation in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Java and all Java-based trademarks are trademarks of Sun Microsystems, Inc. in the United States, other countries, or both.

- | Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

Terms and conditions

Permissions for the use of these publications is granted subject to the following terms and conditions.

Personal Use: You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of these publications, or any portion thereof, without the express consent of IBM.

Commercial Use: You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.



Printed in USA