Hewlett Packard Enterprise

HPE IDOL Data Admin

Software Version: 11.4

Installation Guide

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Chapter 1: Introduction

HPE IDOL Data Admin (formerly HPE IDOL Search Optimizer) allows you to manage the contents of data indexed in HPE IDOL servers to optimize the search experience for your end users. You can create and modify promotions or keywords to predefine the results that are returned to users, and control how users view them. You can also view statistical information to help you refine the rules that you created and make them more effective.

Key features include:

- **Promotions**. Display a document or a set of documents to the user based on specified criteria. Additionally, you can increase the relevance of a document or pin it to a fixed position in the results list.
- **Blacklist management**. Set up and manage a list of terms to exclude automatically from any query.
- **Synonyms**. Create a list of synonyms so that when users search for particular words, the results also include synonyms of their search terms.
- **Statistics**. View various statistics about the business rules you defined, such as top and bottom promotions, or terms that do not return any results.
- **Test search results**. Test actions to understand why a search returns a particular set of results.
- **Answer Bank**. Set up and maintain a store of reference questions and answers in a dynamic FAQ, to provide concise answers to natural language questions.

Chapter 2: Set Up HPE IDOL Data Admin

This section describes the supported platforms and software requirements for HPE IDOL Data Admin.

Prerequisites

HPE IDOL Data Admin supports the following operating systems:

- Windows Server 2008, 2008 R2, 2012, or 2012 R2
- Ubuntu 14.04 LTS
- RHEL/CentOS 6.4 and higher

HPE IDOL Data Admin supports the following web browsers:

- Chrome (latest version)
- Firefox (latest version)
- Internet Explorer 11 or higher
- Edge

External Requirements

Before you install HPE IDOL Data Admin, you must install and configure the following components and software:

HPE IDOL Components

HPE IDOL Data Admin requires access to the service and ACI ports of various HPE IDOL components. The HPE IDOL Data Admin web application requires TCP network access to these components. The HPE IDOL components do not need to be installed on the same host as the HPE IDOL Data Admin web application.

The following HPE IDOL components are required:

- HPE IDOL Community 11.4

  > **NOTE:**
  > HPE IDOL Community requires an HPE IDOL Agentstore subcomponent. However, you do
  > not need to configure the details of the HPE IDOL Community Agentstore component in
  > HPE IDOL Data Admin.

- HPE IDOL Content 11.4

  You can run HPE IDOL Content as a stand-alone component, or in a distributed setup. If you use a
  distributed setup, HPE IDOL Data Admin requires access to the service and ACI ports of the HPE
  Distributed Action Handler (HPE DAH) and HPE Distributed Index Handler (HPE DIH).

- HPE IDOL View Server 11.4

Search Optimizer Components

The following HPE IDOL components are required for the Search Optimizer part of the HPE IDOL Data
Admin application. You do not need to configure these components if you want to use Answer Bank
only.

- HPE IDOL QMS 11.4

- HPE IDOL QMS Agentstore 11.4

  > **NOTE:**
  > As well as the service and ACI ports, HPE IDOL Data Admin also requires access to the
  > index port of the QMS Agentstore component.

- HPE IDOL Statistics Server 11.4

Answer Bank Components

The following HPE IDOL component is required for the Answer Bank part of the HPE IDOL Data Admin
application. You do not need to configure this component if you want to use Search Optimizer only.

- HPE IDOL Answer Server 11.4 (requires access to the service and ACI ports).

  This option is required only if you want to use the Answer Bank functionality.

Third Party Software

- Java 1.8

HPE IDOL Data Admin Home Directory

You must specify the HPE IDOL Data Admin home directory as a Java system property, either in a
startup script or within the appropriate application server configuration, depending on how the
application is being deployed.

The home directory contains the HPE IDOL Data Admin configuration file (`config.json`). If this file is
not found, HPE IDOL Data Admin generates a default configuration file when the application starts.

You can edit the configuration file either from the Settings page in the application (recommended), or manually in a text editor. If you manually edit the file, you must restart HPE IDOL Data Admin for any configuration changes to take effect.

By default, the home directory also contains the HPE IDOL Data Admin log file (`dataadmin.log`). This file records details of application events (for example, sending statistics updates to connected clients), login events (for example, when a specific user logs in successfully), and user actions (for example, when a specific user deletes a promotion). It also records application error messages where applicable.

You can change the log file location by setting the new path on the Java run command. See Configure the Log File Locations, on page 21.

> **TIP:**
> If you ever need to contact HPE support, include a zip of this log file when you send your query to make it easier for Support to diagnose your problem.

Chapter 3: User Roles

The HPE IDOL Data Admin application has four user roles with different permission sets.

- **Search Optimizer**. A user of the HPE IDOL Data Admin system with access to the Search Optimizer and Search sections. Users with this role have access to non-administrative functionality for Search Optimizer (that is, they can use Search Optimizer, but cannot configure it).

- **Answer Bank**. A user of the HPE IDOL Data Admin system with access to the Answer Bank and Search sections. Users with this role have access to non-administrative functionality for Answer Bank (that is, they can use Answer Bank, but cannot configure it).

- **Data Admin**. A user of the HPE IDOL Data Admin system with access to the Search Optimizer, Search, and Answer Bank sections. Users with this role have access to the same functionality as the **Search Optimizer** and **Answer Bank** roles.

- **Administrator**. An administrative user of the HPE IDOL Data Admin system. Administrative users have access to the User Management and Settings pages to manage users and application configuration settings. These users also have the privileges of the **Data Admin** role.

HPE IDOL Data Admin automatically creates the appropriate roles in the IDOL Community component for these user roles.

> **NOTE:**
> The roles in the IDOL Community component have different names to the role names that the application displays.
>
> For backwards compatibility with earlier versions of HPE IDOL Data Admin (IDOL Search Optimizer), the **Search Optimizer** and **Administrator** are called `ISOUser` and `ISOAdmin`, respectively, in the IDOL Community component.
>
> The **Answer Bank** and **Data Admin** roles are called `AnswerBankUser` and `IDAUser` respectively.

Chapter 4: Install HPE IDOL Data Admin

HPE IDOL Data Admin is available as an interactive installer.

> **NOTE:**
> To upgrade to HPE IDOL Data Admin 11.4 from an earlier version, you must delete your existing configuration file before you install the new version. Note that earlier versions of HPE IDOL Data Admin were called HPE IDOL Search Optimizer. See Upgrade HPE IDOL Data Admin, on page 15.

Use the Interactive Installer (Recommended)

You can install HPE IDOL Data Admin by using the interactive installer. This process creates all required directories, and sets up HPE IDOL Data Admin to run as a service. During installation, you are prompted to specify the home directory and the paths for installation.

Use the following procedure to install HPE IDOL Data Admin on Windows or Linux by using the interactive installer.

To install HPE IDOL Data Admin

- Run the installer as an Administrator user, and then follow the instructions, supplying the correct information when prompted.

HPE IDOL Data Admin is installed to the location that you specified.

Use the Zip Package

The zip package contains a `.jar` file, and an `install` directory that contains the individual installation files.

To install HPE IDOL Data Admin on Ubuntu Linux

1. Ensure that all the software listed in External Requirements, on page 7 is installed, running, and available.
2. Create a user and group to run HPE IDOL Data Admin as. HPE recommends that you use `dataadmin` as both the user name and the group name:

   `$ useradd dataadmin`
3. Create a directory in which to install HPE IDOL Data Admin. HPE recommends that you use

`/opt/dataadmin` as the installation directory.

```
$ mkdir /opt/dataadmin
```

4. Create a directory to serve as the home directory for HPE IDOL Data Admin. HPE recommends that you use `/opt/dataadmin/home` as the home directory.

```
$ mkdir /opt/dataadmin/home
```

5. Copy the HPE IDOL Data Admin `dataadmin.jar` file into the installation directory:

```
$ cp dataadmin.jar /opt/dataadmin/
```

6. Recursively change the ownership of the installation directory:

```
$ chown -R dataadmin:dataadmin /opt/dataadmin
```

7. Deploy the startup script.

- **System V:**

```
$ cp install/linux/sysv/dataadmin.sh /etc/init.d/dataadmin
$ chmod +x /etc/init.d/dataadmin
$ update-rc.d dataadmin defaults 99
```

- **Upstart:**

```
$ cp install/linux/upstart/dataadmin.conf /etc/init/
$ chmod +x /etc/init/dataadmin.conf
```

8. If you have used any non-default paths and so on during installation, edit the startup script to contain the values that you used.

9. Start the application.

- **System V:**

```
$ sudo /etc/init.d/dataadmin start
```

- **Upstart:**

```
$ sudo service dataadmin start
```

To install HPE IDOL Data Admin Installation Guide as a Windows Service

1. Download a copy of the Windows service wrapper from https://github.com/hpe-idol/winsw, and change the name of the `winsw.exe` executable file to `dataadmin.exe`.

2. The `install` directory in the HPE IDOL Data Admin installation zip package includes a `Windows` folder. This folder contains a `winsw` folder, which in turn contains a `dataadmin.xml` file. Move the `dataadmin.exe` file into this folder.

3. Ensure that the HPE IDOL Data Admin home directory and port are correctly configured in the `dataadmin.xml` configuration file. You must also ensure that `dataadmin.exe`, `dataadmin.xml`, and `dataadmin.war` are all in the same directory.

4. Run the following command from the Windows command line to install HPE IDOL Data Admin as a service:

```
dataadmin.exe install
```

> **NOTE:**
> You can also use the following commands with `dataadmin.exe`:

- `uninstall`
- `start`
- `stop`
- `status`

For more information, see https://github.com/hpe-idol/winsw.

Before you start HPE IDOL Data Admin, follow the steps in Configure HPE IDOL Data Admin, on page 17, and ensure that you have set up the required user roles in HPE IDOL Community. A user must be a member of one of these roles to log into HPE IDOL Data Admin. See User Roles, on page 11 for more information.

Upgrade HPE IDOL Data Admin

You can upgrade HPE IDOL Data Admin to the latest version by installing the new version in the existing directory. The installer updates the installed files.

> **NOTE:**
> Earlier versions of HPE IDOL Data Admin were called HPE IDOL Search Optimizer.

Before you run the new installer, HPE strongly recommends that you move or delete the `config.json` file from your home directory.

If you attempt to run HPE IDOL Data Admin with a version of `config.json` from an earlier version, it might have unexpected results.

When you start the new version of HPE IDOL Data Admin, you must run the configuration wizard. See Edit Configuration Settings, on page 17.

Chapter 5: Edit Configuration Settings

This section describes how to configure HPE IDOL Data Admin, Statistics Server, View Server, and Answer Server. It also includes information on how to configure language support.

> **NOTE:**
> If you upgrade to HPE IDOL Data Admin 11.4 from an earlier version, you must delete your existing configuration file and run the configuration wizard again. See Upgrade HPE IDOL Data Admin, on page 15.

Configure HPE IDOL Data Admin

Use the following procedure to configure HPE IDOL Data Admin.

To configure HPE IDOL Data Admin

1. Run HPE IDOL Data Admin once without a `config.json` file in your HPE IDOL Data Admin home directory. When it runs the first time, HPE IDOL Data Admin generates a default configuration file.

   > **NOTE:**
   > By default, the installer stores the HPE IDA home directory in the `ProgramData` folder, which might be hidden by default in Windows.

2. Open the generated `config.json` file in a text editor and find the generated default user name and password (`login.defaultLogin.username` and `login.defaultLogin.password`).

3. In your web browser, go to `http://Hostname:Port`, where `Hostname` is the IP address or name of the machine on which HPE IDOL Data Admin is installed, and `Port` is the port that you have installed HPE IDOL Data Admin on (for example, `8080`).

> **NOTE:**
> For details of web browsers that are supported by HPE IDOL Data Admin Installation
> Guide, see Prerequisites, on page 7.

4. Log in using the default user name and password from the configuration file.

   The Settings page opens.

5. Fill in the details of your backend HPE IDOL components. Click **Test Connection** for each server
   to confirm that a connection can be established from the HPE IDOL Data Admin server.

   You might need different components depending on whether you want to set up and use Search
   Optimizer, Answer Bank, or both. For the list of required components, see HPE
   IDOL Components, on page 7.

6. (Optional) In the Search Engine section, set a URL to use to send queries to an external search
   engine. This search engine is used by the Answer Bank user interface when a user uses the
   Search Web options.

7. Click **Save Changes**.

8. In the setup wizard, click **Next**. The User Management page opens.

9. Add your users, and then use the credentials for one of those users to log into the application. See
   User Roles, on page 11.

HPE IDOL Data Admin is now ready for use.

Change Application Configuration Settings

Users with the **Administrator** role can use the User Management and Settings pages to change the
application configuration settings.

To open the User Management page

1. In the toolbar on the top right of the page, click ⚙.

2. In the list, click **Users**.

   The User Management page opens.

To open the Settings page

1. In the toolbar on the top right of the page, click ⚙.

2. In the list, click **Settings**.

   The Settings page opens.

Configure HPE Statistics Server

HPE IDOL Data Admin uses HPE Statistics Server to store statistics for Search Optimizer. Use the
following procedures to configure HPE Statistics Server and send statistics to the server.

> **NOTE:**
> The `install` folder is located in the installation zip package.

To configure HPE Statistics Server

1. Open `install/statsserver/cfg/statsserver-required-config.cfg`. This file contains the statistics definitions that the HPE Statistics Server requires. Copy the definitions from `statsserver-required-config.cfg` to your HPE Statistics Server configuration file.

   > **NOTE:**
   > If you want to include extra statistics definitions that are not included in `statsserver-required-config.cfg`, those extra statistics must have an HPE IDOL name in order for the server to start.

2. Restart HPE Statistics Server.

For information on how to send statistics to HPE Statistics Server, see the *HPE Query Manipulation Server Administration Guide.* For your convenience, a modified version of the Perl script described in the *HPE Query Manipulation Server Administration Guide* is included in `install/statsserver/script/stats.pl`.

Configure HPE IDOL Language Support

You must configure UTF-8 encoding in HPE IDOL for each language that your users want to use with HPE IDOL Data Admin. For more information, see the *HPE IDOL Server Administration Guide.*

Configure HPE View Server

HPE View Server converts original documents into HTML format for viewing in a Web browser. It can also highlight search terms in the document, when displaying a search results. HPE IDOL Data Admin uses HPE View Server to create the document previews in searches.

There are two viewing modes. The appropriate one to use depends on how you index your documents:

- **Reference Field**. In this mode, HPE IDOL Data Admin requests documents from View Server by using a document reference field, which you can configure. In this case, the reference must be sufficient to identify the original location of the document, such as a URL or file path (if you configure HPE View Server to view local files).

- **Connector**. In this mode, HPE IDOL Data Admin uses a connector to retrieve the original document. The connector can retrieve the original document from the source repository, which simplifies the storage and retrieval. You must provide the host and port of the connector to use. HPE IDOL Data Admin uses the `AUTN_IDENTIFIER` document field and connector group to request the original document.

   You can use any connector that supports the View action. If you want to retrieve documents from multiple repositories, you can use the Distributed Connector. For more information about the HPE IDOL configuration for this set up, refer to *IDOL Expert*.

   > **NOTE:**
   > If a document does not have the required reference field or connector group and identifier, IDOL Data Admin renders the title and document content from the Content index in the document previews. In this case, it uses the `DRETITLE` and `DRECONTENT` document fields to

> populate the title and content, respectively.

Users with the **Administrator** role can use the Settings pages to configure the HPE View Server.

To configure HPE View Server

1. In the toolbar on the top right of the page, click .
2. In the list, click **Settings**.
   The Settings page opens.
3. Find the **View** section, and specify the host and ACI port of your HPE View Server.
4. From the **Viewing Mode** list, select the mode to use. Depending on the mode that you use, further options are required:
   - In **Reference Field** mode, specify the HPE IDOL reference field to use to identify your documents in HPE View Server.
   - In **Connector** mode, specify the host name and ACI port of the connector to use to retrieve documents.
5. Click **Save Changes**.

Configure HPE Answer Server

The HPE IDOL Data Admin Answer Bank allows you to set up and maintain a store of reference questions and answers in HPE Answer Server.

HPE IDOL Answer Server provides several systems for natural language question answering. The Answer Bank system allows you to create and maintain a dynamic FAQ. When a user asks a question, Answer Server attempts to match it to any existing questions in the Answer Bank store, and provides the appropriate stored answer.

The HPE Answer Server configuration can contain multiple systems, each of which retrieves answers from a different source. You must configure HPE IDOL Data Admin to connect to the appropriate Answer Bank system.

Users with the **Administrator** role can use the Settings pages to configure the HPE Answer Server system.

To configure HPE Answer Server

1. In the toolbar on the top right of the page, click .
2. In the list, click **Settings**.
   The Settings page opens.
3. In the **Answer Server** section, select the appropriate Answer Bank system from the list.
4. Click **Save Changes**.

Configure the Log File Locations

By default, HPE IDOL Data Admin creates log files under the home directory. You can configure HPE IDOL Data Admin to store these log files in a different location by setting the `logging.path` property in the java run command.

To change the location of the log files

1. At the command line, send the java run command with the `logging.path` argument set to the location where you want to store your log files. For example:

   ```
   java -Dlogging.path=[log file directory] -Dhpe.dataadmin.home=[home directory]
   -Dserver.port=[port] -jar dataadmin.war
   ```

2. Restart HPE IDOL Data Admin to apply your configuration changes.

HPE IDOL Data Admin creates the specified directory if it does not exist, as long as the service has the appropriate permissions. It creates the logs directly in the specified directory.

If you run HPE IDOL Data Admin as a service on Windows, you can also add the `logging.path` property to the `dataadmin.xml` file.

If you run HPE IDOL Data Admin as a service on Linux, you can modify the `IDA_LOGGING_DIR` variable in the start scripts (`dataadmin.sh` for SystemV, or `dataadmin.conf` for Upstart).

Configure the Java Heap Size

You can configure the Java heap size for HPE IDOL Data Admin by setting the size in the Java run command.

To configure the Java heap size

1. At the command line, send the java run command with the `Xmx"[HeapSize]"m` argument set. For example:

   ```
   java -Xmx2048m -Dhpe.dataadmin.home=[home directory] -Dserver.port=[port] -jar
   dataadmin.war
   ```

   The default value is 1024.

2. Restart HPE IDOL Data Admin to apply your configuration changes.

If you run HPE IDOL Data Admin as a service on Windows, you can also add the `Xmx` property to the `dataadmin.xml` file.

If you run HPE IDOL Data Admin as a service on Linux, you can modify the `JAVA_MAX_HEAP_SIZE` variable in the start scripts (`dataadmin.sh` for SystemV, or `dataadmin.conf` for Upstart).

Configure HPE IDOL Data Admin to Use SSL

By default, HPE IDOL Data Admin runs in plain HTTP mode. You can configure it to use SSL communications, by setting the appropriate system properties in the Java run command.

> **NOTE:**
> If you enable SSL, you cannot use plain HTTP with HPE IDOL Data Admin.

To configure HPE IDOL Data Admin to use SSL

- Start HPE IDOL Data Admin with the Java run command, and include the following arguments:

```
-Dserver.ssl.key-store=path_to_keystore
-Dserver.ssl.key-store-password=keystore_password
-Dserver.ssl.key-password=key_password
-Dserver.port=server_port
```

where,

path_to_ keystore	is the path to a keystore. You must create a keystore and import your certificates into it. By default, HPE IDOL Data Admin expects this keystore to be in JKS format. For more information on JKS keystore creation, see https://docs.oracle.com/cd/E19509-01/820-3503/ggfen/index.html. > **NOTE:** > If you want to use a keystore in a different format, you must also set the `-Dserver.ssl.key-store-type` argument to the type of keystore that you want to use. For example: > ``` > -Dserver.ssl.key-store-type=pkcs12 > ```
keystore_ password	is the password for the keystore.
key_ password	is the password for the key inside the keystore.
server_ port	is the port to user for HPE IDOL Data Admin. To use SSL, you must change this value from the default port (that is, you must not use port 8080). Typically you use port 8443, but you can use any valid port value.

For example:

```
java -Dserver.ssl.key-store=/etc/ssl/private/keystore.jks -Dserver.ssl.key-store-
password=MyPassword -Dserver.ssl.key-password=KeyPassword -Dhp.dataadmin.home=
[home directory] -Dserver.port=8443 -jar dataadmin.war -uriEncoding utf-8
```

If you run HPE IDOL Data Admin as a service on Windows, you can also add the same arguments to the `dataadmin.xml` file.

If you run HPE IDOL Data Admin as a service on Linux, you can add the argument to the existing arguments variable in `dataadmin.sh` for SysV, or `dataadmin.conf` for Upstart.

When you modify the HPE IDOL Data Admin configuration by modifying the XML file or start scripts, you must restart HPE IDOL Data Admin to apply your configuration changes.

For more information on installing and running HPE IDOL Data Admin as a service on Windows or Linux, see Install HPE IDOL Data Admin, on page 13.

Configure a Reverse Proxy

You can use HPE IDOL Data Admin with an Apache JServ Protocol (AJP) reverse proxy.

With a reverse proxy, you manage authentication for your users, and the reverse proxy allows users to access the HPE IDOL Data Admin application with a default set of user roles, which you can define.

> **NOTE:**
> You cannot configure the reverse proxy to assign an administrator user role. Your administrators must have access to the HPE IDOL Data Admin application by another route.

The following sections describe how to configure the Apache server with remote authentication, and how to configure HPE IDOL Data Admin to use the reverse proxy.

Configure the Reverse Proxy

The following configuration example shows how to set up a reverse proxy with remote authentication for HPE IDOL Data Admin in Apache 2.

```
<Location /dataadmin/>
    AuthType YOUR_AUTH_MODULE
    require valid-user
    CASScope /dataadmin/

    ProxyPass ajp://dataadmin.example.com:8009/
    ProxyPassReverse /

    RewriteEngine on
    RewriteCond %{HTTP:UPGRADE} ^WebSocket$ [NC]
    RewriteCond %{HTTP:CONNECTION} Upgrade$ [NC]
    RewriteRule /api/(.*) ws://dataadmin.example.com:8080/api/$1 [P]
</Location>
```

This configuration uses both the AJP (8009) and HTTP (8080) ports.

Configure HPE IDOL Data Admin to Use the Reverse Proxy

You configure HPE IDOL Data Admin to use the reverse proxy by setting the `server.reverseproxy` argument in the Java run command.

To configure HPE IDOL Data Admin to use a reverse proxy

1. At the command line, send the java run command with the `server.reverseproxy` argument set to **true**. For example:

   ```
   java -Dserver.reverseproxy=true -Dhpe.dataadmin.home=[home directory] -
   Dserver.port=[port] -jar dataadmin.war
   ```

   By default, this option opens an AJP port on port 8009. To use a different port, set the `server.ajp.port` argument to the correct port number.

   You can also specify the roles to assign to your users by setting the `ida.reverse-proxy.pre-authenticated-roles` system property to a comma-separated list of HPE IDOL Data Admin Community role names (see User Roles, on page 11). The default value for this property is `IDAUser`.

   > **NOTE:**
   > This setting does not assign any roles in the Community component. It gives all users that use the reverse proxy the same permissions to access HPE IDOL Data Admin.

2. Restart HPE IDOL Data Admin to apply your configuration changes.

If you run HPE IDOL Data Admin as a service on Windows, you can also add the `server.reverseproxy` property to the `dataadmin.xml` file.

If you run HPE IDOL Data Admin as a service on Linux, you can add the arguments to the existing arguments variable in the start scripts (`dataadmin.sh` for SystemV, or `dataadmin.conf` for Upstart).

Chapter 6: Clustering

HPE IDOL Data Admin 11.4 does not support clustering of the web application.

Send documentation feedback

If you have comments about this document, you can contact the documentation team by email. If an email client is configured on this system, click the link above and an email window opens with the following information in the subject line:

Feedback on Installation Guide (HPE IDOL Data Admin 11.4)

Add your feedback to the email and click **Send**.

If no email client is available, copy the information above to a new message in a web mail client, and send your feedback to AutonomyTPFeedback@hpe.com.

We appreciate your feedback!