

Migrating an Ad Hoc Instance



Version 11
Last Updated: March 2014

Migrating an Ad Hoc Instance

NOTE: In version 10.3.1, backup/restore functionality was introduced. This would be the preferred method to migrate an Ad Hoc instance to a new destination. Using backup/restore, the only issues for a migration are 1) the installation of a suitable Management Console in the target environment and 2) license considerations if moving to a different server.

This document is intended to assist with the migration of Ad Hoc instances prior to version 10.3.1.

Overview

This paper is intended to guide the System Administrator that has the need to move an Ad Hoc instance, either to a different drive on the same server or to a new server. The complexity of the migration depends largely on the complexity of the configuration.

There is no “right” approach to accomplish the goal of re-establishing an Ad Hoc instance in a new location. In some cases creating a new instance and copying requisite files to the new instance is the most expeditious approach. In other cases replicating the existing Ad Hoc folder structure in a new location and getting all of the internal structures realigned is a realistic approach.

In both cases the goal is to get a physical Ad Hoc instance folder, associated virtual directory, folder/file permissions, license (when necessary), and support structures (metadata, report and dashboard repositories, logging, schedules, etc) aligned so that the end result is a fully functioning web application that mirrors the original application.

Note: Some of the guidance in this document is tailored specifically to Ad Hoc versions 9.2 and greater. The pertinent sections will be identified where appropriate.

Note: The instructions related to IIS may be different for your version of IIS, however, the principles have not changed.

A “to-do” checklist of things that need to be addressed during the migration would include:

- Physical Ad Hoc folder
- Virtual directory
- Licensing
- Folder/File permissions
- Path Information
- Metadata
- Reporting Databases

- Preview Databases
- Reports
- Dashboards
- Archives
- Schedules
- Logging
- Cleanup
- OS Considerations
- Management Console
- Parent Application

Migrating from 32-bit to 64-bit

This is not specifically covered in this document. **In addition to all of the checklist items**, this type of migration has other issues that need to be considered. Following are brief descriptions of the higher priority issues that will need to be addressed.

Metadata

MS Access does not have 64-bit drivers. If the metadata is currently stored in Access, it is advised to convert the metadata to SQL Server, Oracle or MySQL prior to the migration and verifying that the conversion is complete. Of course the new metadata database would have to be accessible from the 64-bit server in the migrated instance. From version 9.2.40 of the Management Console forward, tools have been provided to assist in the conversion.

With Version 10, the default metadata database is Sql Server Compact Edition (SqlCE). The distributed drivers for SqlCE are different for 32-bit and 64-bit systems. The Management Console appropriate for the target environment should be used to repair the instance and acquire the appropriate SqlCE drivers.

Operating Mode

Aside from the absence of drivers, there may be other compelling reason to operate in 32-bit mode on the 64-bit machine. If that is the case, the following article may prove useful:

<http://www.microsoft.com/technet/prodtechnol/WindowsServer2003/Library/IIS/13f991a5-45eb-496c-8618-2179c3753bb0.mspx?mfr=true>

It is our recommendation to run Ad Hoc in true 64-bit mode.

Acquire the 64-bit version

To operate successfully in a true 64-bit environment, the 64-bit version of the Ad Hoc Management Console will be necessary. Contact Customer Service to acquire the download link. It is recommended that the instructions for a “New Server Migration” be used to complete the migration. The key instruction is to establish a new instance of Ad Hoc on the new server (Steps 4 and 5 below).

Checklist Items

Following are brief paragraphs regarding the checklist. If the current instance has not been configured to take advantage of any of these features, then they can be ignored in the checklist.

This list may not be exhaustive. It is important for the System Administrator to fully understand the architecture of their existing instance and points of interaction so that they may be replicated in the migrated instance.

Physical Ad Hoc Folder

This is the folder that the virtual directory points to. It is not the folder for the Management Console. The folder structure contains several sub-folders that need to retain their permissions for the application to behave properly.

Virtual Directory

The web server (IIS in Windows) implements many of the services through a virtual directory. The virtual directory needs to know the physical folder, permissions to be applied, an application pool to be configured along with existing configurations that need to be replicated (e.g. timeouts, security, session information).

Licensing

Licensing is on a CPU basis. If the application is moved to a different server, a license will have to be established on that server. In addition, if the server is of a different configuration than the original server (e.g. single cpu to dual/quad), a new license key will need to be obtained from Customer Service.

Folder/File Permissions

In a Windows environment, several folders in the Ad Hoc instance require full control by NETWORK SERVICE and machine/ASPNET accounts. A simple copy of folders will not retain the existing permissions. The XCopy command has command line parameters to preserve folder permissions. When the Management Console creates an Ad Hoc instance, it sets the permissions.

Path Information

In the **root\Definitions\Settings.lgx** file there are several references to path information that must be adjusted to reflect the new location of the Ad Hoc instance.

Metadata

Ad Hoc must retain its connection to the metadata database. If the new Ad Hoc location is a different server, the metadata must be accessible from the new server. In addition, the migration should be planned so that users are not using/updating the metadata during the migration.

Report Databases

Ad Hoc must retain connection to the reporting databases. If the new Ad Hoc location is a different server, the databases must be accessible from the new server.

Preview Databases

Ad Hoc can be configured so that preview functions are directed to an alternative data source so that production databases are not impacted by report development. These databases must be accessible from the new location.

Reports

Report definitions are typically stored in the **root\Definitions\Reports** folder; however, they may be stored in a database or in an alternate folder. The migrated instance of Ad Hoc must be able to access the reports in any of these cases.

Dashboards

Dashboard preferences are typically stored in the **root\ahSavedDashboards** folder; however, they may be stored in an alternative folder. The migrated instance of Ad Hoc must be able to access the dashboard preferences.

Archives

Archives have their own folder structure and virtual directory. Although the archives do not need to migrate along with the Ad Hoc instance, the instance must retain connectivity to the Archives.

Schedules

One of the problematic areas in a migration used to be report schedules. If the Windows Task Scheduler was used, the scheduler and task files retained path information for the existing instance.

With version 9.2.40 of Ad Hoc, we have provided an alternative to the Windows Task Scheduler called the Logi Scheduler. All of the schedule settings are maintained in the metadata. If the instance being migrated has scheduling enabled, it is advised to use the Management Console to change the scheduler to the Logi Scheduler. After the migration the scheduler may be set back to the Windows Task Scheduler and the schedules will be re-established. Instructions are provided below.

Logging

If event logging is enabled, the data is stored in a logging table. The migrated instance of Ad Hoc needs to retain connectivity to the logging database.

Cleanup

Many customers have either created their own processes or configured the Cleanup utility to manage temporary files created by Ad Hoc. These should be re-established in the migrated instance.

OS Considerations

Every Ad Hoc instance relies upon support software considered to be part of the operating environment. A partial list would include MDAC 3.5, .Net 2.0/3.5, Java Runtime Environment, Flash, IIS/Application Pools, and Microsoft Office tools.

Management Console

The Management Console retains pointers to the existing instance. After migration, it may be necessary to clean up the old information and direct the Management Console to the new instance. Instructions are provided below.

Parent Application

If there is a parent application that has Ad Hoc embedded in it, the parent application may need to be adjusted to launch the migrated instance of Ad Hoc.

How Do I Migrate My Ad Hoc Instance

As was noted earlier, there is no *correct* approach toward migration. There is only the goal of trying to replicate the existing instance. Two approaches are described below for the two basic migration scenarios and our best recommendation for each.

Same Server Migration

A typical “same server” migration might be to move from the C: drive to the D: drive due to space considerations. In this case, we may ignore quite a few of the checklist items since the instance has already been established on the server. Following are the typical instructions to complete this type of migration.

- 1) Make sure the user community is not accessing the application
- 2) Take a backup of the existing instance for insurance
- 3) If scheduling is enabled and the Ad Hoc version is 9.2.40 or later and the current scheduler is the Windows Task Scheduler (all three conditions must be met), use the Management Console to set the scheduler to “Logi Scheduler” if it has been installed. Documentation on installing the Logi Scheduler can be found at <http://devnet.logixml.com/rdPage.aspx?rdReport=Article&dnDocID=1150&rdShowModes=NL>

Setting the Scheduler Option

To change the scheduler setting to assist in the migration of an Ad Hoc instance:

- 1) Launch the Management Console
- 2) Click **File/Manage an Instance** to select the instance of Ad Hoc
- 3) Click **Tools / Database Administration** to launch the utility
- 4) On the **Scheduling Service** tab, select the scheduler (Windows or Logi Scheduling Service)
- 5) Click on **Save**

- 4) Migrate the physical folder to the new location. Our recommendation is to use the XCopy command to complete this step.

XCopy Instructions

- 1) Click **Start / Programs / Accessories / Command Prompt** to open a new window with a prompt
- 2) Change to the directory where the application is installed (the default used to be *C:\Program Files\LogiXML Ad Hoc Report Builder*)
- 3) Enter `Xcopy /e /i /x . << new_path >>`

The `/e` parameter copies sub-folders

The `/i` parameter indicated that the target is a directory

The `/x` parameter retains the folder permissions

The period indicates "from the current folder"

`<< new_path >>` is the target folder

- a. **If the XCopy option is not used**, copy the entire physical folder structure to the new location and reset the folder permissions.

Setting Folder Permissions

- 1) The simplest method for resetting the folder permissions is to Right-Click on the root folder of the new Ad Hoc instance and select **Properties**
- 2) Click on the **Security** tab
- 3) Give **machine/ASPNET** or **NETWORK SERVICE** Full permission. This will be propagated to the sub-folders.

Note: The list of files and folders actually needing Full access rights are:

- *Database*
- *rdDataCache*
- *rdDownload*
- *ahScheduler*
- *_Definitions_Settings.lgx*
- *_Definitions_Reports*
- *_Definitions_Processes*
- *_Definitions_Templates*
- *_DataXMLs*
- *_Images*
- *_InchHTMLs*
- *_Plugins*
- *_Scripts*
- *_StyleSheets*
- *_Templates*
- *ahSavedDashboards*
- *ahWebStudio_Temporary Studio Files*
- *rdErrorLog*

- 5) Configure the virtual directory to point to the new location

Resetting the Virtual Directory

- 1) Click on **Start / Settings / Control Panel**
- 2) Double-Click on **Administrative Tools**
- 3) Double-Click on **Internet Information Services**
- 4) Find the existing virtual directory in the list of web sites
- 5) Right-Click and select **Properties** on the existing virtual directory
- 6) Click on the **Browse** button and locate the new physical folder
- 7) Click on **OK** to save the settings

- 6) Modify the path information in the `_Settings.lgx` file to reflect the new location.

Modify Path Information

The `root_Definitions_Settings.lgx` file is the key configuration file for an Ad Hoc instance. It contains path information to access various files and folders. The path information must be changed to reflect the new location.

In the current scenario, all references to C: should be changed to D: and the file should be saved. If warning messages are issued when trying to save the file, it is likely that the “read-only” flag is set for the file. You must Right-Click on the file (in Windows Explorer), select properties, and manually turn off the “read-only” flag.

- 7) If the scheduling option was exercised in Step 3, use the Management Console to reset the scheduler for the new instance back to the Windows Task Scheduler.

Setting the Scheduler Option

To change the scheduler setting to assist in the migration of an Ad Hoc instance:

- 1) Launch the Management Console
- 2) Click **File/Manage an Instance** to select the instance of Ad Hoc
- 3) Click **Tools / Database Administration** to launch the utility
- 4) On the **Scheduling Service** tab, select the scheduler (Windows or Logi Scheduling Service)
- 5) Click on **Save**

8) Verify the new instance

- a. Login
- b. If there is a parent application, is it able to launch Ad Hoc in the new instance
- c. Run the Upgrade Manager in the Management Console to verify that everything ported properly
- d. Run the Diagnostic Tool from the Management Console and review the results

New Server Migration

A migration to a new server is very different from a “same server” migration. The goal is the same but you have licensing, virtual directory creation, and connectivity issues to address in addition to all of the processes that were necessary in the “same server” scenario.

The following advice makes use of the Management Console to accomplish part of the migration. For versions prior to 9.2 of Ad Hoc, install Ad Hoc on the new server just as you did initially. If you need a new key for the server, please contact Customer Service. The goal is to get a working instance on the new server. This eliminates issues with folders, files, licensing, and virtual directories.

The instructions below are designed to “populate” the new instance with information from the existing instance.

- 1) Make sure the user community is not accessing the application
- 2) Take a backup of the existing instance for insurance
- 9) If scheduling is enabled and the Ad Hoc version is 9.2.40 or later and the current scheduler is the Windows Task Scheduler (all three conditions must be met), use the Management Console to set the scheduler to “Logi Scheduler” if it has been installed. Documentation on installing the Logi Scheduler can be found at

<http://devnet.logixml.com/rdPage.aspx?rdReport=Article&dnDocID=1150&rdShowModes=NL>

3)

Setting the Scheduler Option

To change the scheduler setting to assist in the migration of an Ad Hoc instance:

- 1) Launch the Management Console
- 2) Click **File/Manage an Instance** to select the instance of Ad Hoc
- 3) Click **Tools / Database Administration** to launch the utility
- 4) On the **Scheduling Service** tab, select the scheduler (Windows or Logi Scheduling Service)
- 5) Click on **Save**

- 4) If the Management Console has not been installed on the new server, install it. You will be asked for the license key. If the new server configuration is the same as the existing server, you may use your existing key.
- 5) Create a new instance of Ad Hoc on the server. This may be accomplished via the Management Console in versions greater than 9.2 or by installing Ad Hoc on the new server for versions prior to 9.2. If you are installing Ad Hoc, you will be asked for a license key.
- 6) Copy the following files from the existing Ad Hoc instance to the newly created instance. **Do not copy folders because you will lose the folder permissions.** Copy only the files. The source and destination folders must be identical.
 - a. `_Setting.lgx` from the `root_Definitions` folder
 - b. `*.lgx` from the `root_Definitions_Reports` folder
 - c. `*.lgx` from the `root\ahSavedDashboards` folder
 - d. If you are using the default database for the metadata, then the database from the `root\Database` folder. For Version 9, the default database is `ahData.mdb` (Access). For Version 10, the default database is `ahData.sdf` (SqlCe).
- 7) Edit the `_Settings.lgx` file in the new instance

Modify Path Information

The `root_Definitions_Settings.lgx` file is the key configuration file for an Ad Hoc instance. It contains path information to access various files and folders. The path information must be changed to reflect the new location.

- 8) If you modified the scheduler in Step 3, use the Management Console to reset the scheduler back to the Windows Task Scheduler
- 9) Copy any customized files to the new instance. If they have path references, correct the references to point to the new location if necessary. If the version is 9.2.40 or higher, the Diagnostic Tool in the Management Console could be used to determine which files are missing or changed from the distributed files.
- 10) Verify the new instance
 - a. Login
 - b. If there is a parent application, is it able to launch Ad Hoc in the new instance
 - c. Run the Upgrade Manager in the Management Console to verify that everything ported properly

- d. Run the Diagnostic Tool from the Management Console and review the results
- 11) Disable the old instance. Removing the instance and the virtual directory may be accomplished manually or through the Management Console. **If the Management Console is used, be sure it is directed to manage the old instance.** Click on the **Remove** button from the **Manage an Instance** dialog.

Review the checklist. The instructions above will handle the typical configurations. Licensing, virtual directories and core configuration elements were handled by installing or creating an Ad Hoc instance on the new server. The reports and settings were handled by the copy step and editing the `_Settings.lgx` file. The metadata was handled by copying the Access database to the new instance.

Additional issues related to migrating to the new server are typically related to connectivity issues between the new server and various databases and any parent application to the new Ad Hoc instance.

Migration and Scheduling

If it is not possible to upgrade to a version of Ad Hoc that supports the Logi Scheduler, scheduled reports are going to be an issue.

For each schedule, the Windows Task Scheduler (WTS) maintains the path information to the old instance. In addition, there are task files created in the `ahScheduler` folder that contain a reference to the old URL. These would have to be manually adjusted to reflect the new path and URL.

In the “Same Server” scenario, once the manual adjustments are made to all of the schedules in the WTS and the task files, the schedules should be working properly.

In the “New Server” scenario all of the schedules have to be re-established with that server’s WTS. Although we provide a tool to synchronize schedules between two Ad Hoc instances, only the schedules are re-established. All of the subscriber information would be lost. Consequently, for this scenario, our best advice is to

- 1) record the information about schedules and subscribers in the old instance
- 2) remove all of the schedules from the old instance before migration
- 3) verify that the `ahScheduler` and the child Log folder have been cleaned up as well as all of the related entries in the WTS
- 4) perform the migration to the new server
- 5) recreate the schedules and subscribers in the new instance via ad Hoc

It is due to this level of manual effort that we recommend strongly to switch the scheduler to the Logi Scheduler, even if it is temporary. When the scheduler is switched from WTS to the Logi Scheduler, all of the scheduling information is stored in the metadata database. After the Ad Hoc instance has been migrated, the switch back to the WTS will automatically establish all of the entries in WTS and the *ahScheduler* folder.

- 1) Of course, the option to simply use the Logi Scheduler for running and distributing reports is available. There is no compelling reason to switch back. Documentation on installing the Logi Scheduler can be found at

<http://devnet.logixml.com/rdPage.aspx?rdReport=Article&dnDocID=1150&rdShowModes=NL>