BMC Remedy AR System change ID utility

The BMC Remedy AR System change ID utility enables you to change the IDs of certain objects. This document explains the purpose and usage of the utility.

**Note**
The BMC Remedy AR System change ID utility is not supported for BMC Remedy AR System 7.7.00.

**archgid introduction**

The BMC Remedy AR System change ID utility (commonly called archgid) enables you to change the ID of a form, field, view, or group. It serves the following purposes:

- To synchronize IDs for the same form across multiple servers
- To control the ID if needed for direct SQL access.
- To change IDs of objects that are within BMC reserved ID ranges before converting your pre-7.6.04 extensions and customizations to overlays and custom objects
  In most cases, you would need to change view IDs and field IDs. See [Preserving customizations with overlays and custom objects](#).

**Note**
BMC recommends not to use the archgid utility to change the field IDs of forms that BMC Remedy AR System recognizes as "System forms". For example, forms like User, Group, Role, AR System Server Group Operation Ranking etc. (For a complete list of system forms, see [BMC Remedy AR System installed forms](#).) Since the functionality of these forms is dependent upon the field IDs, changing the IDs impact the BMC Remedy AR System server functionality. In such cases, you must restart the BMC Remedy AR System server to recover these forms.

**archgid file name, version, and location**

The utility file is located at \ARSystemServerInstallDir\ARSystem, and is named as follows:

- Windows — archgid.exe
- UNIX — archgid
archgid compatibility

The **archgid** utility performs direct SQL database updates at a fundamental level with the data dictionary. Before performing any updates the utility checks whether the BMC Remedy AR System database version is compatible. If the database version is incompatible, it displays an error message.

The **archgid** utility is compatible with the following BMC Remedy AR System databases:

- BMC Remedy AR System server 5.x releases — 5.0, 5.0.xx, 5.1, and 5.1.xx
- BMC Remedy AR System server 6.x releases — 6.0, 6.0.01, and 6.3
- BMC Remedy AR System server 7.x releases — 7.0, 7.0.01, 7.1, 7.5, 7.6.02, 7.6.03, and 7.6.04

archgid execution modes

You can execute the **archgid** utility in any the following modes or a combination of these:

- **Prompt-driven mode** — To execute the utility in this mode, enter **archgid** at the command line and press Enter. The utility displays the available options sequentially, and prompts you for input until it has gathered all the required information.

  **Tip**
  Do not use this mode when fixing numerous non-permitted customizations on field IDs and view IDs.

- **Command-line mode** — To execute the utility in this mode, enter **archgid** followed by the required parameters and their values at the command line and press Enter. If you forget to provide a required parameter or its value, the utility prompts you for that input.

archgid updates to database, references, or associated objects

For each type of object ID that the **archgid** utility changes, it performs the following updates to the database or the BMC Remedy AR System object definitions:
<table>
<thead>
<tr>
<th>Object type</th>
<th>Corresponding updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form</td>
<td>The following items are updated:</td>
</tr>
<tr>
<td></td>
<td>- ID in all data dictionary tables, including those in which the form is used in join forms and object relationship references</td>
</tr>
<tr>
<td></td>
<td>- Name of the data tables for the form</td>
</tr>
<tr>
<td></td>
<td>All database views are rebuilt on the new table names.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td>When changing form ID references in workflow, the workflow object is considered connected only to the primary form referenced in shared workflow definitions. The utility changes only the primary form's ID, because that is considered to be the template or master form for the shared definition.</td>
</tr>
<tr>
<td>View</td>
<td>The following items are updated:</td>
</tr>
<tr>
<td></td>
<td>- ID in all data dictionary tables</td>
</tr>
<tr>
<td></td>
<td>- ID in all HTML/JSP web page definitions</td>
</tr>
<tr>
<td>Field</td>
<td>- The name of the data columns for the field (if there is a database table or view) is updated, and all database views are rebuilt on the new column names.</td>
</tr>
<tr>
<td></td>
<td>- The following instances of the old ID are updated:</td>
</tr>
<tr>
<td></td>
<td>- ID in all data dictionary tables, including those in which the field is referenced in join forms, table or column references, query style menus, page fields, and object relationship references</td>
</tr>
<tr>
<td></td>
<td>- ID in deployable application data form qualifications</td>
</tr>
<tr>
<td></td>
<td>- ID in linked Archive forms and the qualification for those forms</td>
</tr>
<tr>
<td></td>
<td>- ID in all HTML and JSP web page definitions</td>
</tr>
<tr>
<td></td>
<td>- ID in all active link, filter, and escalation definitions, including references in special Run Process commands</td>
</tr>
<tr>
<td></td>
<td>- ID in the BMC Remedy AR System Message Catalog form if there is localized Help Text</td>
</tr>
<tr>
<td></td>
<td>- ID in Distributed Mapping definitions, including DSO qualification, mapping, and return mapping</td>
</tr>
<tr>
<td></td>
<td>- ID in flashboards variable definitions</td>
</tr>
<tr>
<td></td>
<td>- The following references to the old ID are updated:</td>
</tr>
</tbody>
</table>
|             |   - References in menus to the current form are noted as warnings of possible issues but are not changed, because the reference may or may not be to the field because a menu definition is not
associated with a form.
  o References in macros embedded in active links are noted as warnings of possible issues but are not changed, because it is difficult to determine which form the ID is associated with.

  • The following items are not updated:
    o Some references in web services as mentioned earlier
    o References to the ID as data in a qualification (not a common occurrence)
    o References to the ID stored as data in any form, except as mentioned earlier
      These might include subsystems in applications that store qualifications or similar data that can contain references to field IDs. For example, BMC Remedy Approval Server, BMC Remedy Assignment Engine, BMC Remedy AR System reports, BMC Service Level Agreement, and Crisis Response.

  [Note]
  (Oracle only) Due to limitations in the Oracle 9i Release 2 and earlier databases, data for an Attachment field cannot be preserved when changing its ID. To preserve the attachment data, export the entry ID and attachment to a file, execute archgid, and reimport the data to the new ID by using the import-in-place option.

  [Note]
  Menus reference fields by using field IDs, not form IDs. Therefore the archgid utility does not know whether to update those references. You must check the updated form definition and if required, change the reference manually.

Group
  • The permission definitions of all workflow objects that reference this group are updated.
  • The following instances of the old ID are updated:
    o ID of the group in the Group form
    o ID in the Computed Group Definition field of the Group form
    o ID in the Group List field of the User form
    o ID in the Computed Group List field of the User form
    o ID in the mapped group fields of the Roles (role mapping) form
  • The references in active links and filters that use the special Run Process command Application-Confirm-Group are updated:
    o ID in Flashboards Data Source definitions
    o (optional) ID in field 112 in any form that contains field 112
    o (optional) ID in any of the additional dynamic group fields
  • The following items are not updated:
|   | Any references to the ID as data in a qualification statement that is used to search a field for a specific group ID   | Role IDs   |

**Warning**

- During execution, the utility signals the AR System server to reset the cache so that it refers to the recently updated database structure and data definitions. If you access the system during this time, you might receive inconsistent responses. You should also restart AR System clients so that they refer to these changes.

- If you execute this utility on a production server, the performance might be impacted. Depending on the operation requested, the impact could be severe. The changes being made to the data dictionary and database structures could lead to runtime errors. Users who access BMC Remedy AR System while the server is being restarted to reflect the recent changes may receive inconsistent responses.

- When identifying and updating field ID references, the utility does not consider the server name. If the form name matches, it is assumed to be the correct form regardless of the server on which it is located. If you have cross-server references and different forms with the same ID exist across different servers, this utility might update the wrong IDs and references.

- For Web Services or Filter Set Fields that reference Web Services, the field ID change will work only for simple web services documents. If you have a complex web service document, changing the ID will not work correctly.

- In general, after the change, the system will be up and fully functional with all references to the ID updated and ready to go. However, there may be situations where the ID is used in a way that we cannot correct. These cases are unusual, but they can occur. There is the possibility that some final, manual cleanup is required.
archgid syntax

This section describes the syntax of the `archgid` command, and uses the following conventions:

- Required parameters and their values are not enclosed in brackets.
- Optional parameters and their values are enclosed in square brackets.
- Braces indicate that you must specify only one of the enclosed parameters or values at a time.

The syntax of `archgid` is as follows:

```
archgid -c commandCode [-i newID] [-g] [-o]
([-s formName] | {-s formName -f {fieldName | fieldID}} |
{-s formName -v {viewName | viewID}} |
{-g { groupName | groupID} [-y]})
[(-F count~ oldID ~ newID ~ formName ~ | -F fileContainingIDsToChange}]
-u adminUser -p adminPassword [-a adminAuthenticationString]
-x serverName [-t TCPPort] [-r RPCNum]
```

The following table lists the parameters of the `archgid` utility and the data types of the corresponding input values, and describes their usage.

<table>
<thead>
<tr>
<th>archgid parameters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter</td>
<td>Value type</td>
</tr>
<tr>
<td>c</td>
<td>Integer</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additionally, use the following command codes to update only field IDs or view IDs in bulk mode:

- **10002** — To change the specified field IDs (useful when changing a few field IDs). Specify multiple triplets of form, old field ID, and new field ID, separated by spaces and tilde characters (~) as follows:

```
<count> ~ <oldID> ~ <newID> ~ <formName>
```

The ~oldID~ ~newID~ ~formName~ string is repeated for every form, for example: oldID ~newID~ ~formName~

```
archgid -c 10002 2~536871168~303549600~EMP:Contact
~536870913~303549300~EMP:Work Record -u Admin -p "" -x EmpMngtAppSvr
```

- **10003** — To change field IDs listed in a file (useful when changing numerous field IDs). Specify the file name that contains triplets of form, old field ID, and new field ID, as follows:

```
archgid -c 10003 -F fileName -u Admin -p "" -x EmpMngtAppSvr
```

See description of the -F parameter in this table below.

- **10012** — To change the specified view IDs (useful when changing a few view IDs). The input format is the same as that for field IDs.

- **10013** — To change view IDs listed in a file (useful when changing numerous view IDs). The file format is the same as that for field IDs.

**Note**
If you use a bulk mode command code (10002, 10003, 10012, 10013), the -s, -f, and -n parameters are ignored. If the utility encounters a problem (like an invalid form name or a nonexistent object), it issues a warning, skips the corresponding object, and continues processing.

<table>
<thead>
<tr>
<th>i</th>
<th>Integer</th>
<th>New ID that you want to assign to the specified object.</th>
</tr>
</thead>
<tbody>
<tr>
<td>q</td>
<td>None</td>
<td>Indicates whether to display the objects and the related database structures being processed by the utility:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (Default) In the absence of this parameter, the utility displays processing information on the screen. To record this information, redirect this output to a file.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• To execute the utility in Silent mode, specify this parameter. No processing is displayed or written to a log.</td>
</tr>
<tr>
<td>o</td>
<td>None</td>
<td>Indicates whether to display the confirmation prompt before running the utility:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• (Default) In the absence of this parameter, the utility displays...</td>
</tr>
</tbody>
</table>
a confirmation prompt before performing the updates.
- To skip the confirmation prompt, specify this parameter.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>s</td>
<td>String</td>
<td>Name of the form whose ID you want to change, or whose field ID or view ID you want to change.</td>
</tr>
<tr>
<td>f</td>
<td>Integer</td>
<td>Name or ID of the field whose ID you want to change.</td>
</tr>
<tr>
<td>v</td>
<td>Integer</td>
<td>Name or ID of the view whose ID you want to change.</td>
</tr>
<tr>
<td>g</td>
<td>Integer</td>
<td>Name or ID of the group whose ID you want to change.</td>
</tr>
<tr>
<td>S</td>
<td>String</td>
<td>(Optional) One or more field IDs separated by spaces, tabs, colons, semicolons, forward slash characters, or backslash characters that uniquely identify a form. The IDs must identify a single form. If multiple forms match, the utility returns an error and displays the matching forms. <strong>Note</strong> This parameter is ignored if you specify the -s parameter.</td>
</tr>
<tr>
<td>y</td>
<td>None</td>
<td>Flag used when changing a group ID to indicate whether the utility should update related data fields.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- (Default) In the absence of this parameter, the utility does not update the related data fields.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- To update the group ID in all row-level security data fields of all forms with the new ID, specify this parameter.</td>
</tr>
<tr>
<td>F</td>
<td>String</td>
<td>Name of the file that contains data for changing field IDs and view IDs. The data is in the form of triplets of old ID, new ID, and form name. The IDs and form names are separated by spaces or tabs, and the triplets are separated by new line characters. For example: 536871168 303549600 EMP:Contact Info 536870913 303549300 EMP:Work Record 536870913 303549200 EMP:Insurance Info 536870915 303548700 EMP:DataLoadConsole <strong>Note</strong> This option should be used in conjunction with command codes 10002, 10003, 10012, and 10013. <strong>Note</strong> If you use this parameter to specify multiple objects at the command line or in a file, the utility updates all of their IDs in a single run. <strong>Note</strong> If you use this parameter, the utility ignores the -s, -f, and -n parameters.</td>
</tr>
<tr>
<td>u</td>
<td>String</td>
<td>Name of the administrator user who executes the utility.</td>
</tr>
<tr>
<td>Parameter</td>
<td>Type</td>
<td>Description</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>p</td>
<td>String</td>
<td>Password of the specified administrator user.</td>
</tr>
</tbody>
</table>
| Z         | None  | Indicates that the archgid utility should not use the special system call. This system call is used to mask the password, which in turn imposes the following restrictions on the utility:
|           |       | - It only accepts passwords up to eight characters.  
|           |       | - It does not allow you to redirect input from a file. |
|           |       | To overcome these restrictions, you can specify the -Z parameter. This prevents the use of the special system call. |
|           |       | **Note** If you specify this parameter, the password value that you enter is *not* masked. |
|           |       | Use this parameter only if your password is longer than eight characters or if you want to run some reports with the redirected input. |
| a         | String| (optional) Authentication string for the specified administrator user. For Windows, where the NT domain is required for login, this is the domain name. |
|           |       | **Note** If omitted from the command line, you are prompted to provide this value only if the user name is required. |
| x         | String| Name of the AR System server on which the object exists. |
| t         | Integer| TCP port that the AR System server uses for communication. This parameter is optional *if* the AR System server is registered with the portmapper. |
|           |       | **Note** If omitted from the command line, you are prompted to provide this value only if the server name is required. |
| r         | Integer| (optional) RPC number of the AR System server. |

If any parameter values of the String type contain spaces, enclose them in double quotation marks (for example, "EMP:Contact Info Form").
archgid syntax scenarios

The following examples depict how to use the archgid utility to change IDs of various objects:

- **Changing form ID**
  ```shell
  archgid -c 1 -i 5626368972 -s "EMP:Contact Info" -u Admin -p "" -x EmpDataAppSvr -t 9999
  ```

- **Changing view ID**
  ```shell
  archgid -c 3 -i 5402 -s "EMP:Contact Info" -v "Employee View" -u Admin -p "" -x EmpDataAppSvr
  ```

- **Changing field ID**
  ```shell
  archgid -c 2 -i 8282564391 -s "EMP:Contact Info" -f EmpName -u Admin -p "" -x EmpDataAppSvr -t 9999 -r 16002
  ```

**Using archgid in prompt-driven mode**

In the prompt-driven mode, the archgid utility allows you to enter values for all the required parameters in a sequence. It displays the list of available input options on the screen and prompts you to specify a choice.

**Note**

When the list input options is significantly large, you might not be able to scroll up and view all the items.

The utility only prompts you to provide input for **required** parameters. To use the following **optional** parameters, you must specify them at the command line before pressing Enter:

- `-q`
- `-o`
- `-y`
- `-Z`

See archgid syntax on page 6.
To execute archgid in prompt-driven mode

1. Back up your database.
   The utility makes fundamental changes to the AR System database structure and data definitions. If you encounter any problems during the execution of archgid, you might need to restore the database to its earlier working condition.
2. At the command prompt, navigate to the folder where the archgid utility is located, type archgid and press Enter.
3. The utility prompts you sequentially for the user name, password, and authentication string.
   o The user must be an BMC Remedy AR System administrator user.
4. By default, the utility displays a list of servers that it retrieves from the /etc/ar file (UNIX) or the registry key HKEY_LOCAL_MACHINE\SOFTWARE\ARSystem\ARServer\CurrentVersion\ServerList (Windows).
   o If multiple servers are listed in the file or the registry key, the utility displays a numbered list of their names, and prompts you for a choice as follows:

   1- serverName1  2- serverName2  3- serverName3  4- serverName4
   Enter id of server:

   Enter the number that corresponds to the server on which you want to change object IDs. You can only specify one server — the utility only executes on one server at a time.

   - If only one server is listed in the file or the registry key, the utility selects that server and displays a message as follows:

     Connecting to only server identified --- serverName

   To override this list of servers, specify the -x parameter followed by the appropriate server name.

1. If the utility prompted for a server name and you provided a valid one, it prompts for the TCP port to be used.
   o If required, specify the TCP port number. Otherwise press Enter to proceed.
   o If you specified the -x parameter and the server name as its value and if a TCP port is required, you must use the -t parameter to specify the TCP port value. The utility does not separately prompt for the TCP port.
2. The utility displays a numbered list of object types (whose ID you can change), and prompts you for a choice as follows:

   Type of ID to change (1 - form, 2 - field, 3 - VUI, 4 - group):
Specify the number that corresponds to the object type for which you want to change the ID.

- If you specify 1 (form), the utility displays a numbered list of all the forms on a server and prompts you to choose one.
- If you specify 2 (field), the utility displays a numbered list of all the forms on a server, and prompts you to specify the one that contains the field whose ID you want to change. After you specify the form, it displays a numbered list of all the fields on that form and prompts you to choose one.
- If you specify 3 (view), the utility displays a numbered list of all the forms on a server, and prompts you to specify the one that contains the view whose ID you want to change. After you specify the form, it displays a numbered list of all the views on that form and prompts you to choose one.
- If you specify 4 (group), the utility displays a numbered list of all the groups on a server and prompts you to choose one. After you specify the group, it prompts you to choose whether to update entries that have row-level security fields. If you specify Y, the utility also updates the related data in the database.

3. After you specify the object type, the utility prompts you for the new ID.
   - If the new ID is not unique, the utility reports that it conflicts with an existing ID and exits.
   - If the new ID is unique, the utility accepts the input and proceeds further.

4. If you did not specify the -o parameter, the utility displays the choices you specified so far and prompts you for confirmation.
   1. Verify whether the displayed information is accurate.
   2. Confirm whether the utility should continue with the processing or not.

5. If you specify Y, the utility performs the necessary updates.
   - If you specify N, the operation is cancelled and no updates are made.
     If you did not specify the -q parameter, information about the operations performed and the tables updated is written to the log file.

Using archgid in bulk mode

In bulk mode, the archgid utility updates the IDs of all the specified objects together in a single run. It consolidates performance and network-intensive updates (like those for active links, filters, and escalations) into a single batch. It retrieves the required definitions from the server, performs all updates for all forms, and returns the updated data in a single pass. To further speed processing, the utility updates the data dictionary for multiple items without resynchronizing the running cache.
To execute archgid in bulk mode

1. Back up your database.
   The utility makes fundamental changes to the AR System database structure and data definitions. If you encounter any problems during the execution of `archgid`, you might need to restore the database to its earlier working condition.
2. At the command prompt, navigate to the folder where the `archgid` utility is located.
3. Type `archgid -c commandCode`.
   Only the following command codes indicate bulk mode:
   - 10002
   - 10012
   - 10003
   - 10013

Tip
You cannot use these command codes in the prompt-driven mode. You can provide the arguments associated with these codes only in the command-line mode.

Note
When using these codes, if you do not specify the required parameters (for example, server and user information), the utility prompts you for their values.