CA MICS® Resource Management Q&R Workstation

Administration Guide

Release 12.9.00

ca technologies

CA Technologies Product References

This document references the following CA product:

- CA MICS® Resource Management
- CAI CCI-PC
- CAICCI
- CAIENF

Contact CA Technologies

Contact CA Support

For your convenience, CA Technologies provides one site where you can access the information that you need for your Home Office, Small Business, and Enterprise CA Technologies products. At http://ca.com/support, you can access the following resources:

- Online and telephone contact information for technical assistance and customer services
- Information about user communities and forums
- Product and documentation downloads
- CA Support policies and guidelines
- Other helpful resources appropriate for your product

Providing Feedback About Product Documentation

If you have comments or questions about CA Technologies product documentation, you can send a message to techpubs@ca.com.

To provide feedback about CA Technologies product documentation, complete our short customer survey which is available on the CA Support website at http://ca.com/docs.

Contents

Chapter 1: Introduction

The CA MICS Resource Management Query and Reporting Workstation (Q&R Workstation) provides easy access and flexible reporting facilities on your PC workstation for use with CA MICS Resource Management (CA MICS) or any Statistical Analysis System (SAS) database on the mainframe. Q&R Web Reporting provides the ability to automate query runs and publish the results on the intranet.

This guide discusses the administrative facilities, functions, and utilities that are provided to administer the following:

- Q&R Mainframe Server
- Q&R Distributed Server
- Q&R Web Reporting

Audience

This guide is written for the administrator responsible for maintaining the administrative facilities of the Q&R Workstation. This person is referred to as the Q&R Administrator.

Chapter 2: Q&R Mainframe Server

The Q&R Mainframe Server provides the Q&R Workstation access to mainframe resources. The Q&R Mainframe Server runs on the mainframe to process queries submitted by the Q&R Distributed Server and returns the results to the Q&R Distributed Server. This provides a way of accessing CA MICS and other Statistical Analysis System (SAS) database files stored on the mainframe system. The Q&R Mainframe Server also provides access to meta database information and element definitions stored in a CA MICS complex.

This section contains the following topics:

Set Up the Q&R Mainframe Server

Depending on your environment, the Q&R Mainframe Server can be set up to run either as a batch job or a started task. In either case, the Q&R Mainframe Server waits for requests from the Q&R Distributed Server running on the PC. CA Common Communications Interface (CAICCI) is used as the communication link between the Q&R Mainframe Server and the Q&R Distributed Server. When the Q&R Mainframe Server receives a query request from the Q&R Distributed Server, a batch job is created that uses the credentials that are specified for that user or server depending on the security settings.

When a query has completed, the Q&R Mainframe Server sends the query output, including SASLOG, SASLIST, CSV-formatted files and profiles, to the Q&R Distributed Server. After the query output is transferred to the Q&R Distributed Server, the copy of the query output is deleted from the Q&R Mainframe Server. When the query output becomes available on the Q&R Distributed Server, you can retrieve the output using the Q&R Query application.

The Q&R Mainframe Server is delivered and installed through the standard CA MICS PSP installation and maintenance processes and resides within the CA MICS Complex.

Notes:

- Special security settings are required for the Q&R Mainframe Server program MQRHOST. See IBM's documentation for the section in *z/OS UNIX System Services Planning*, GA22-7800 on defining BPX.SERVER or run the server with UID=0 or the equivalent. See your mainframe security administrator for more information.

- Before you run the Q&R Mainframe Server, verify that the CA Common Services for z/OS (CAS9) Load Library is link-listed. The default name for this library is XXX.CAIPDSE where XXX is your environment's high-level qualifier for CA-Common Services.

For more information, see *CA MICS Planning, Installation, Operation and Maintenance Guide* and *CA Common Services* documentation.

Q&R Mainframe Server Quick-Start Configuration Checklist

The following checklist describes how to implement the Q&R Mainframe Server in single-user security mode. Install CA MICS system modifications provided with the Q&R Mainframe Server:

1. Follow either the MICS PIOM install checklist or MICS checklist system modification steps in the PC TEXT to run *sharedprefix*.MICS.CNTL(JCLGENUC) to generate the items required for implementing the updated MQRHOST. This will replace the existing MQRHOST and MICSSVR sharedprefix.MICS.CNTL generated members.
2. Execute *sharedprefix*.MICS.CNTL(PROCJOB1) JCL to copy the mainframe server procedure *sharedprefix*.MICS.CNTL(MICSSVR) into your procedure library. This will replace the existing sharedprefix.MICS.PROCLIB(MICSSVR) member.
3. Execute *sharedprefix*.MICS.CNTL(JCLGEN3) JCL to generate the Q&R Mainframe Server templates.
4. Execute the generated job *sharedprefix*.MICS.CNTL(TMPLTJOB) to copy these MICS-generated JCL templates into the *sharedprefix*.MQR.TEMPLATE data set. The default templates supplied are designed to run without modification, but can be modified depending on your site requirements, using MICS-standard *sharedprefix*.MICS.PROTOLIB /JCLGEN tailoring techniques.
5. Determine which user ID will be assigned to the MQRHOST batch job or started task. This will be the Q&R Mainframe Server User ID used later in configuration steps. This User ID need to have security access to facilities listed in section "Mainframe User Security Configuration (see page 22) ", under "Server User ID (see page 23)".
6. Determine a high-level qualifier and a storage class for the temporary datasets used by the Q&R Mainframe Server and the spawned batch jobs it creates. The Q&R Mainframe Server User ID requires CREATE access to these temp datasets. The recommended retention period for the temporary datasets is 3 days.
7. Edit the Q&R Mainframe Server parameter file in *sharedprefix*.MICS.PARMS(MQRPARMS). Set the Mainframe Server name and the following parameters:

   MQRMSN=mainframeservername

   MQRSEC=N

MQRCOMP126= Y (This must be Y if any Q&R Distributed Servers on the MQRDISRV list are r12.6 or have Q&R Workstation Clients (Q&R Query Users) that are running Q&R Workstation r12.6.

MQRJOBNAMECHAR = N (Change to A if your site does not allow numeric characters in a job name.)

MQRDISRV=distributedserverhostname (One entry for the name of each Windows system that is running a Q&R Distributed Server authorized to access this Q&R Mainframe Server).

More information about parameter setting can be found in "Q&R Mainframe Server Parameters (see page 14)" section.

8. Edit the Q&R Mainframe Server user file, MQRUTAB in *sharedprefix*.MICS.PARMS. A single entry is required for the Q&R Mainframe Server User ID.

   a. You can select the JOBNAME according to your site's standards. We recommend having at least two '?' characters in the JOBNAME parameter. These characters are replaced by a generated sequential value (alpha or numeric based on your MQRJOBNAMECHAR= parameter) on batch job execution.

   b. The DSNPRFX and STORCLAS are to be set to the high-level qualifier and storage class for temporary datasets.

   More information about the user file is in the "Q&R Mainframe Server User File (see page 18)" section.

9. Verify that the CA ENF and CCITCP started tasks are running in your environment.

   Note: For more information about setting up CA ENF and CAICCI, see the CA Common Services for z/OS Installation Guide.

10. Start the Q&R Mainframe Server.

You should now be able to run a Q&R Meta Build (Build/Refresh Meta Database) in Q&R Distributed Server Administration.

More Information

Run the Q&R Mainframe Server in Batch (see page 25)
Run the Q&R Mainframe Server as a Started Task (see page 24)

Q&R Mainframe Server Parameters

The Q&R Mainframe Server configuration is defined using statements in the MQRPARMS member of the *sharedprefix*.MICS.PARMS data set. Edit the MQRPARMS member based on the following instructions:

- Configuration settings are defined in the MQRPARMS member using parameter keyword statements and keyword values.
- The equal sign (=) is used to separate keyword statements and keyword values. The general syntax is:

  ```
  KEYWORD=VALUE.
  ```

- Each keyword statement and its keyword value must be defined on a single line of the MQRPARMS member; statement continuation is not allowed.
- Only one keyword statement and its keyword value can be specified on a single line of the MQRPARMS member. A separate line is used for each keyword statement and keyword value pair.
- Comments can be added to the MQRPARMS member for documentation purposes. The Q&R Mainframe Server treats any line of the MQRPARMS member that starts with an asterisk (*) as a comment and ignores it.
- Comments can be included on the same line with a keyword statement and keyword value pair. Comments appearing on these lines must start with an asterisk (*) and must be preceded by one or more blanks after the keyword value.

MQRMSN—Q&R Mainframe Server Name

Defines an application name for the Q&R Mainframe Server that it uses to register with the CA Common Communications Interface (CAICCI). The Q&R Distributed Server then accesses the Q&R Mainframe Server through CAICCI based on that name.

Note: The name used to register each CAICCI enabled application must be unique within your environment so that CAICCI can locate and send messages to the appropriate destination.

Syntax: MQRMSN=value

Default: MQRHOST

Limits: 1 - 12 alphanumeric characters

MQRDISRV—Q&R Distributed Server Name

Enables access to the Q&R Mainframe Server from a Q&R Distributed Server. Set this parameter to the Windows computer name of the system running the Q&R Distributed Server (system network name without domain suffix). You can specify up to 100 Q&R Distributed Servers to the MQRHOST using the MQRDISRV parameter.

Syntax: MQRDISRV=value

MQRDIAG—Q&R Mainframe Server Diagnostics

Activates or deactivates detailed messaging in the Q&R Mainframe Server log. If you want detailed messaging enabled, set this parameter to Y.

Syntax: MQRDIAG=value

Default: N

MQRSEC—Q&R Security

Activates or deactivates Q&R security allowing queries to run with the authorization of the user submitting the query. When set to Y the mainframe user ID and Password must be entered in Q&R Query when you run a query. A batch job will be submitted using those credentials and the query will be run with that authorization. When set to N, the batch job will run with the authorization of the Q&R Mainframe Server.

Syntax: MQRSEC=value

Default: N

MQRCOMP126—Q&R Compatibility for 12.6 Distributed Servers

Activates or deactivates support for previous versions of the Q&R Distributed Server and Q&R Query Workstation.

Set this parameter to Y if any Q&R Distributed Servers on the MQRDISRV list are r12.6 or have Q&R Workstation Clients (Q&R Query Users) that are running Q&R Workstation r12.6.

Syntax: MQRCOMP126=value

Default: N

Note: MQRCOMP126=Y is not compatible with MQRSEC=Y.

MQRJOBNAMECHAR—JOBNAME Substitution type

Determines the character substitution type used to replace the "?" character(s) in the JOBNAME parameter in the Q&R Mainframe Server User File (MQRUTAB). Set this parameter to N to generate a numeric value or use A to generate alpha values.

Note: If your organization does not allow job names that contain numbers, then use A.

Syntax: MQRJOBNAMECHAR =N

Default: N

MQRPARMS Member Example

The following is an example of the *sharedprefix*.MICS.PARMS (MQRPARMS) member for defining these parameters:

```
* ------- Q&R Mainframe Server Configuration Parameters -------
*
* Q&R Mainframe Server Name
  MQRMSN=MQRHOST    * MAINFRAME SERVER NAME
*
* Authorized Q&R Distributed Servers
  MQRDISRV=DISTRUBUTED-SERVER1
  MQRDISRV=DISTRIBUTED-SERVER2
*
* Q&R Mainframe Server Diagnostic Settings
  MQRDIAG=N         * N = DEACTIVATE DIAGNOSTICS
                    * Y = ACTIVATE DIAGNOSTICS NO DUMPS
                    * D = ACTIVATE DIAGNOSTICS WITH DUMPS
*
* Q&R Security Option
  MQRSEC=Y          * Y = SECURITY ACTIVE USER CREDENTIALS USED
                    * N = SECURITY NOT ACTIVE JOBS RUN WITH
                    *     MAINFRAME SERVER CREDENTIALS
*
* 12.6 Server Compatibility
  MQRCOMP126=N      * N = 12.7 SUPPORT ONLY
                    * Y = 12.6 COMPATIBILITY MODE
* JOBNAME Substitution type
  MQRJOBNAMECHAR=N  * N = USE NUMERIC JOBNAME SUFFIX
                    * A = USE ALPHABETIC JOBNAME SUFFIX
```

More information:

Q&R Security Configuration (see page 22)

Q&R Mainframe Server Templates

The Q&R Mainframe Server templates, used to submit Q&R queries, are defined using statements in the *sharedprefix*.MICS.MQR.TEMPLATE data set. These templates define the JCL used to execute a Q&R Query. A default RunQuery template, QRDFLT1 has been generated using the MICS Administrator definitions specified in *sharedprefix*.MICS.PARMS(JCLDEFC). This template can be customized using CA MICS standard JCL generation methods. If the standard JCLDEFC parameters do not meet your requirements, you must make any local modifications to the *sharedprefix*.MICS.PROTOLIB member QRDFLT1, otherwise any modifications will be lost when the template is regenerated.

Alternatively, the QRDFLT1 template can be copied, or locally modified (using MICS-standard *sharedprefix*.MICS.PROTOLIB/JCLGEN tailoring) so it can be maintained under another name within the *sharedprefix* MICS.MQR.TEMPLATE library. Refer to MICS PIOM Guide section 2.3.3.3 for information on JCLGEN Parameters for Special Requirements. Contact CA MICS Support for additional guidance.

For example, you may want to create a custom template that allocates a larger amount of work space to use when running large queries. There is no limit to the number of templates that can be created, or used. However, to avoid naming conflicts when creating your own templates, do not create template names that begin with QR because this prefix is used for CA provided templates. Use standard CA MICS JCLGEN tailoring methods described in PIOM section 2.3.3.3.

To make a template available to the Q&R user community, the following statements must exist at the top of the template:

- !DISPLAY: Acceptable values are Y and N. Y indicates that this template will be displayed in the Q&R Query template dropdown list. N indicates that this template should not be visible to the Q&R community. Templates typically set to !DISPLAY: N are for internal use by the Q&R Mainframe Server, or for a template that is still under construction.
- !INFO: This statement contains a short description of the template. For example, “Normal Query Execution”. This is displayed in the Q&R Query template dropdown list as a part of the template name.
- !DESC: This statement defines the long description of the use of this template.
- !TYPE: This statement defines the template type and should be set to RunQuery.

Q&R provides several templates which reside in the *sharedprefix*.MICS.MQR.TEMPLATE data set that are used internally. These templates should not be renamed or deleted. These include:

- QRDFLT1 – Default template provided for query submission. If the r12.6 compatibility option is used, this template will be used for queries from older clients.
- QRCANCEL – Used by the Q&R Mainframe Server to cancel a query.
- QRMETA – Used by the Meta Build process.
- QRPUTPDS – Used by the Q&R Mainframe Server to save the query code from a Q&R composed query to a PDS on the mainframe.

When modifying a template, it may be useful to see the output that is being sent to internal reader when the job is submitted. This can be done in two ways:

- If a special parameter ‘MQRDIAG=INTRDR’ is added to the Q&R Mainframe Server parameters, the server will mirror all the internal reader writes to the Q&R Mainframe Server log.

- If a DD name QRDBGRDR is defined in for the Q&R Mainframe Server JCL, it will attempt to save the JCL for the current job being submitted to this data set.

Note: The Q&R Mainframe Server can only monitor jobs that execute on the same system as the server itself. Therefore, the job templates are setup with the appropriate JES control statement to enforce this.

Q&R Mainframe Server User File

The Q&R Mainframe Server user table is defined using statements in the MQRUTAB member of the *sharedprefix*.MICS.PARMS data set. Edit the MQRUTAB member using the following instructions:

- The configuration settings are defined in the MQRUTAB member using parameter keyword statements and keyword values.
- The user ID is specified on a line by itself with no keyword statement and must begin in column 1.
- The equal sign (=) is used to separate keyword statements and keyword values. The general syntax is:

  KEYWORD=VALUE
- The keyword statements and keyword values are separated by a single space and can be entered on the same line or a separate line and cannot begin in column 1.
- Keyword values are substituted into JCL and should be in uppercase.
- When MQRSEC=Y in MQRPARMS there should be 1 entry for every user that submits Q&R Queries to the mainframe.
- JOBNAME and DSNPRFX are required keywords for each user that is defined in this table who will execute queries. Any additional parameter that has been encapsulated with percent signs (% %) within the template, must also be defined for each user.

  STORCLAS, UNIT or VOLUME can be specified to control the allocation of job input and output files. The default templates delivered with Q&R use STORCLAS; if you decide you want to use UNIT or VOLUME, change the template accordingly. See the "File Allocation Considerations"section that follows.
- An entry must be available for the user ID that the Q&R Mainframe Server is executing under. For single-user security and compatibility mode, this user is used to run queries; in all modes, this user is used to run the metabuild.
- You can omit a keyword from an entry entirely. In that case, if the global entry is defined, the value from the global entry is used, or if the value was not supplied, it is set to nothing (empty string).
- A special global entry with user ID "+GLOBAL+" can be used to define keyword values common to all users IDs. If any User ID entry omits a keyword, it will have the common value coming from the global entry.

- The "+GLOBAL+" user ID must be the first User ID in the MQRUTAB table.
- "+GLOBAL+" values can be overridden by specifying the keyword on the User ID statement.
- You can define the keyword value to nothing explicitly by writing "KEYWORD= ".
- The final values of the user table are listed in the server logon startup, MQRDIAG=Y is specified in MQRPARMS.

User File Keywords

The following is a list of the keyword values and descriptions. These values can be used in the Q&R Mainframe Server user table. Required keywords are identified.

USER ID

Specifies the user ID the batch job will execute with. This is specified on a line by itself with no keyword.

Required: When executing a Q&R Query

JOBNAME – Name of job to be used by subtask.

Defines the batch job name to use on the jobcard when the query is submitted. The ? mark is a placeholder that will be replaced by a generated sequence of characters (alpha or numeric depending on the value of MQRJOBNAMECHAR parameter in MQRPARMS) to create a unique job name. This enables concurrent query execution. Multiple question marks can be entered to provide a greater range of concurrent queries per user. For example, if the MQRJOBNAMECHAR=N, the use of one question mark would generate queries batch job names in the range of jobname 0-9.

Note: We recommend using 2 question marks but 1 can be used depending on site job naming requirements.

Required: When executing a Q&R Query

DSNPRFX – Data Set Name Prefix

Defines the name of the prefix to be used for temporary datasets in the templates when the sub task is started. The prefix must follow the data set naming conventions and can be up to 26 characters.

Required: When executing a Q&R Query

STORCLAS – Storage Class

Defines the storage class to be used for dataset allocation

Required: When executing using the default JCL templates

UNIT – Device Unit

Defines the device unit used for the data set allocation. To use this parameter you must modify the default JCL templates, for example, by adding "UNIT=%UNIT%" into the JCL where the output files are defined.

Required: No.

VOLUME – Device Volume

Defines the device volume used for the data set allocation. To use this parameter you must modify the default JCL templates, for example, by adding "VOL=SER=%VOLUME%" into the JCL where the output files are defined.

Required: No

MQRUTAB Member Example 1: (MQRSEC=N – Single User Security)

```
CAMICSQ
     JOBNAME=CAMICQ? DSNPRFX=PUBLIC.MICSUSR STORCLAS=WORK
```

Note: In this example, using Single User Security, CAMICSQ is the USERID that the MQRHOST job is submitted under. This user ID must be defined in the MQRUTAB. This is the ID that all MQRMeta and Q&R Query jobs will be run under. The JOBNAME is the name of the jobs that will be submitted by the MQRHOST to run Q&R Queries and MQRMetas. In this example the two ??'s will be replaced by two generated sequential values as jobs are submitted.

Note: If MQRHOST is being submitted by a user and does not have a USER= parameter on the jobcard, the user ID of the person submitting the MQRHOST job must be entered in the MQRUTAB table.

MQRUTAB Member Example 2: (MQRSEC=Y – Full Security)

```
     CAMICSQ
      JOBNAME=CAMICQ?? DSNPRFX=PUBLIC.MICSUSR STORCLAS=WORK
USER2
      JOBNAME=USER2?? DSNPRFX=USER2.TMP STORCLAS=WORK
```

Note: In this example, using Full Security, CAMICSQ is the USERID that the MQRHOST job is submitted under (that is, the jobcard in the server JCL contains USER=CAMICSQ). The user ID CAMICSQ must be defined in the MQRUTAB because this user ID is required for MQRMeta. In addition, all Q&R users must be uniquely defined in the MQRUTAB as shown in the example. The JOBNAME in the full security model should be unique by user ID allowing for maximum concurrent executions. In this example the two ??'s will be replaced by two generated sequential values as jobs are submitted. MQRMetas will still be run under the CAMICSQ user ID using the CAMICQ?? job. All other Q&R Queries will run under the individual user's entry in the MQRUTAB.

Note: If MQRHOST is being submitted by a user and does not have a USER= parameter on the jobcard, the default user would be the user ID of the person submitting the MQRHOST job.

MQRUTAB Member Example 3: (MQRSEC=Y – Full Security)

```
+GLOBAL+
     STORCLAS=WORK
CAMICSQ
      JOBNAME=CAMICQ?? DSNPRFX=PUBLIC.MICSUSR
USER2
      JOBNAME=USER2?? DSNPRFX=USER2.TMP
```

Note: This is the same configuration as in example 2 shown previously, however, a global entry is used. The STORCLAS now takes value of "WORK" for both users CAMICSQ and USER2.

Adding Parameters

To allow more parameters to be substituted by user, for example, the job accounting code, each user definition would contain an additional keyword/value pair UACCT=value. The template would need to be modified to change the currently defined job accounting code with %UACCT% to trigger the substitution from the MQRUTAB table. As you can see, any parameter can be substituted in the user definition, as long as the corresponding parameter is encapsulated with the % signs and the keyword defined in MQRUTAB.

To avoid conflicts we recommend that user defined parameters begin with the letter U.

Note: Once a parameter has been defined in the template with the percent signs, indicating it will require substitution from the MQRUTAB user definition, the parameter must be defined for every user in the MQRUTAB table.

File Allocation Considerations

The Q&R Mainframe Server exchanges data with the submitted queries (batch jobs) by means of temporary data sets (note that the word temporary is used in the general meaning, that is, short-lived, not in the usual JCL meaning).

The input file (with the SAS source) is allocated by the server, while the output files (for example, SASLOG, output CSV) are allocated according to the batch job template. For input file allocation, the STORCLAS parameter from the user table is used (or, if STORCLAS is not specified, the UNIT and VOLUME is used). The output files use whatever kind of allocation is specified in the template, which by default is %STORCLAS%.

Note: If your site uses UNIT/VOLUME instead of STORCLAS, and only specify those parameters in the user table, you have to modify the templates in *sharedprefix*.MICS.PROTOLIB (and regenerate *sharedprefix*.MICS.MQR.TEMPLATE members with JCLGENUC) accordingly to use these user table parameters.

Q&R Security Configuration

Q&R supports the following basic security configurations within the MQRPARMS definition:

- 12.6 Compatibility – Provides compatibility with the 12.6 Q&R Distributed Server. This allows the Q&R Mainframe Server to be upgraded before the Q&R Distributed Server is upgraded. In this scenario you must define the user ID of the Q&R Mainframe Server in the Q&R Mainframe Server User File (MQRUTAB).

  MQRSEC=N

  MQRCOMP126=Y

- Single User Security – All requests run under the authority of the user ID of the Q&R Mainframe Server. In this scenario you must define the user ID of the Q&R Mainframe Server in the Q&R Mainframe Server User File (MQRUTAB).

  Note: In this mode the User Id and password fields do not display in Q&R Query.

  MQRSEC=N

  MQRCOMP126=N

- Full Security – Each user must have a mainframe user ID that allows them to access the MICS complex and unit files necessary to run queries. This option allows users to be restricted from complexes/units as required.

  Note: All Q&R Query users must be defined in the Q&R Mainframe Server User File MQRUTAB. The user ID/Password fields display in Q&R Query and must be entered to execute a query. Once submitted each user's query runs with their privileges.

  MQRSEC=Y

  MQRCOMP126=N

Mainframe User Security Configuration

This section outlines security configuration requirements for the Q&R Mainframe Server and for individual user jobs that are submitted by the Q&R Mainframe Server. Additional information is provided for specific platform considerations where it is required.

Server User ID

The Q&R Mainframe Server requires a server user ID with the following authorizations.

- USS segment.
- READ access to FACILITY(BATCH).
- READ access to JESINPUT(INTRDR).
- READ access to JESJOBS(SUBMIT).
- CREATE access to input/output temporary data sets defined in templates.
- WRITE access to sharedprefix.MICS.MQR.PUTPDS. For users with multiple complexes, WRITE access is required to sharedprefix.MICS.MQR.PUTPDS for all complexes that are used for saving queries using the Q&R Query "Move Query to Production" feature.
- READ access to *sharedprefix*.MICS.PARMS and *sharedprefix*.MICS.MQR.TEMPLATES.
- READ access to BPX.SERVER (Only when specifying the MQRSEC=Y option).

  Note: When specifying BPX.SERVER, MQRHOST must be run from a controlled library. This can be accomplished by including the library containing MQRHOST in one of the following: LPA list, LNKLIST, or APF authorized library list.

Regular User ID

These are individual users that queries are run under when they are submitted with a user ID and /password.

This user requires the following access:

- USS segment.
- READ access to FACILITY(BATCH).
- READ access to JESINPUT(INTRDR).
- READ access to JESJOBS(SUBMIT).
- CREATE access to temporary data sets defined in templates.
- Any additional access rights to data required to run a query for this user.
- WRITE access to sharedprefix.MICS.MQR.PUTPDS. For users with multiple complexes, WRITE access is required to sharedprefix.MICS.MQR.PUTPDS for all complexes that are used for saving queries using the Q&R Query "Move Query to Production" feature..
- READ access to *sharedprefix*.MICS.PARMS and *sharedprefix*.MICS.MQR.TEMPLATES. You should restrict modify access to these data sets.

HFS Access

The Q&R Mainframe Server User ID requires read/write/create access to the TMPDIR system variable on your Unix file system. This is usually the /tmp directory.

ACF2 Considerations

When you set up the Q&R Mainframe Server User ID in ACF2, be aware that the Q&R Mainframe Server must be able to submit batch jobs with User ID's the same as its own.

Under ACF2, an STC cannot do this. To allow the Q&R Mainframe Server User ID to perform this function, have the ACF2 Security Administrator perform the following steps when setting up the User ID for your MQRHOST.

```
CHANGE serveruserid NOSTC
    Only if STC attribute was previously assigned
SET CONTROL(GSO)
INSERT STC.procname STCID(procname) LOGONID(serveruserid)
    Will set the GSO STC record for procname to point to serveruserid
F ACF2,REFRESH(STC)
```

How to generate the Q&R Mainframe Server JCL

Follow these steps to generate the Q&R Mainframe Server JCL. The MQRHOST JCL executes the MICSSVR PROC.

1. Edit *sharedprefix*.MICS.PARMS(JCLGENUC) to include MQRHOST and MICSSVR.
2. Submit the job in *sharedprefix*.MICS.CNTL(JCLGENUC).
3. Ensure that the following conditions are met:
   - The MICSLOG or SYSTSPRT contains no error messages.
   - The MICSLOG contains the normal termination message: BAS10999I.
   - The job completes with a condition code of zero.
4. Submit the job in *sharedprefix*.MICS.CNTL(PROCJOB1).

Run the Q&R Mainframe Server as a Started Task

The Q&R Mainframe Server can alternatively be run as a started task. The generated MICSSVR proc in your PROCLIB library can be used as a model to build your started task. The Q&R Mainframe Server is intended to run continuously but might need termination in certain situations. You can manually terminate the Q&R Mainframe Server by issuing the operating system STOP command for the started task.

Run the Q&R Mainframe Server in Batch

The Q&R Mainframe Server can be run as a long-running batch job. The MQRHOST member in the *sharedprefix*.MICS.CNTL library provides you with the JCL for this purpose. The Q&R Mainframe Server is intended to run continuously but may need termination in certain situations. You can manually terminate the Q&R Mainframe Server by canceling the batch job or by issuing the operating system STOP command.

Q&R Mainframe Server Communications Interface

CA Common Communications Interface (CAICCI) is the link for all communications between the Q&R Distributed Server and Q&R Mainframe Server.

The Q&R Distributed Server and Q&R Mainframe Server use CAICCI to support query run requests issued by Q&R Query. If the link is not active, the query will not process. If a user reports that the first Query Status Icon is red rather than green (indicating that the query did not arrive at the Q&R Mainframe Server), it might mean that the CAICCI connection between the two servers is severed. Check the following items:

1. On the mainframe, ensure that the Q&R Mainframe Server is running.
2. Ensure that the CA Common Service™ tasks, CAICCI, CCITCP Gateway, and CAIENF are running on the mainframe.
3. If Q&R Mainframe Server, CAICCI,CCITCP Gateway, and CAIENF are running on the mainframe, the problem may be the result of an earlier system outage, during which the connection was severed. In this case, restart the Q&R Distributed Server. This also requires stopping and starting any Q&R Clients that are connected.

Note: If these steps do not resolve your issue, you may be asked for a CCI trace. This trace is created using a utility that is named CCI Trace documents CAICCI processing, including communication requests and actual transmission data buffer contents. You activate the CCI Trace from the CAICCI Configuration program.

Interface to CA OPS/MVS

If you are using CA OPS/MVS, the Q&R Mainframe Server implements change of state and heartbeats of CA OPS Generic Event API, so it's possible to set up CA OPS to monitor the running, starting and stopping of the Q&R Mainframe Server. The Q&R Mainframe Server announces itself in the events under product name "MQRHOST".

Note: For more information about integrating these events with CA OPS/MVS, see the AOF Rules User Guide for CA OPS/MVS.

Chapter 3: Q&R Distributed Server

The Q&R Distributed Server provides the services required to support all intercommunication among and functions of the Q&R Mainframe Server, Q&R Query, and Q&R Web Reporting. It coordinates the submission of on demand queries from Q&R Query and manages the output returned by the Q&R Mainframe Server. Additionally, it stores Meta Database information, query results, and data dictionary entries for quick access by Q&R Query users.

The Q&R Distributed Server communicates with Q&R Query using TCP/IP. It also communicates with the Q&R Mainframe Server through CAICCI.

The Q&R Distributed Server provides the following:

- Query Management—Manages query requests and output. Once a query is submitted, Q&R Query users can track the status of the query and access the output when the query completes. While queries are processing, the user can use other Q&R Query functions such as building ad hoc queries and generating graphics using data that is already stored on the Q&R Distributed Server.
- Output Retrieval Services—Satisfies data requests from the Q&R Query application for output data, SASLOG, and SASLIST. The Q&R Distributed Server communicates with the Q&R Mainframe Server and the Q&R Query application at various phases when a query is running, and lets the user to track query status. Additionally, the Q&R Distributed Server automatically downloads the query output files when the query run is completed.
- Web Publishing Services—Publishes Q&R Query output and MICF output for use with Q&R Web Reporting.
- Data Dictionary Services—Provides desktop access to the data dictionary definitions for all active elements in the CA MICS database.
- Security Services—Enforces security rules defined through Q&R Distributed Server Administration.
- Q&R Meta Database Services—Provides access to a database on the Q&R Distributed Server known as the Q&R Meta Database, which contains structural definitions for CA MICS complexes and SAS databases. Information in the Q&R Meta Database is used by Q&R Query to compose and validate queries.

- Log Services—Provides a detailed log showing the Q&R Distributed Server activities. A daily log file is produced and available for viewing through the Q&R Distributed Server icon or the Q&R Distributed Server Administration application. A log contains user logon and logoff, query transmission, and other Q&R Distributed Server activity information useful for debugging purposes.

This section contains the following topics:

Access Q&R Distributed Server Functions

You can access the Q&R Distributed Server by clicking the Q&R Distributed Server icon in the Microsoft Windows system tray that is located on the taskbar or from the Q&R Distributed Server Administration application.

Note: When you move your mouse pointer over the icon in the Microsoft Windows system tray, the status of the Q&R Distributed Server is shown in a tooltip. The icon changes its appearance to indicate the status.

When you click this icon, a pop-up menu appears that you can use to do the following:

- Start, restart, and stop the server.
- View the Q&R Distributed Server log files.
- Start the Q&R Distributed Server Administration program.
- View product version information.

Note: Q&R Distributed Server logs more than ten days old are automatically deleted.

When you view the current day's log you will not see any new messages that are generated after you opened that log. Close and reselect the log from the menu to get an updated copy.

Set Up MICF Inquiries

On demand queries that are built using Q&R Query can be set up as MICS Information Center Facility (MICF) inquiries and scheduled on a regular basis. The reports from MICF inquiries are downloaded using Q&R Distributed Server Administration or the RMWSLOAD utility, and are available for viewing through Q&R Web Reporting or Q&R Query.

When you are satisfied with the results of the Q&R on demand query, you can set up MICF inquiries.

To schedule Q&R queries to run under MICF

Follow these steps:

1. Using the Q&R Workstation Q&R Query client, open the Query that you wish to schedule under MICF. To insure that the view definitions are properly associated with the MICF output, it is important to use the Q&R Distributed Server that is used to execute the Publish Output to Q&R Web Reporting Process (RMWSLoad).

   Note: If your RMWSload process runs using a different Q&R Distributed Server than you typically use for Q&R Query, you can connect to the correct Q&R Distributed Server from your current workstation by selecting Options, Connect to a Q&R Distributed Server from the Q&R Query menu. To complete the connection, you must know the IP Address and Port number of the server you wish to connect with and you must be an authorized user of that Q&R Distributed Server.

2. Select the Move Query to Production item from the toolbar.
3. Select the MICS Complex Des*criptive Nam*e that is associated with the Complex where the query is to be saved.
4. To append the suffix to the member name, enter a suffix.
5. Verify that the location displayed in the Mainframe Data Set Name(member) box is correct.

   The dataset name is shareprefix.MICS.MQR.PUTPDS and the member name is Query Name + suffix .
6. Check the Replace Member checkbox if it is ok to replace the query with the new one.
7. To submit the save request, click OK.
8. To leave the panel, click Cancel.
9. To verify that the query was saved successfully view the MICSLOG, using the Query Status window.
10. Log on to the mainframe to complete the process as described in the next paragraph.

You can use MWF option Automatic Inquiry Generation(2;6) to convert the query to a MICF structured inquiry. This conversion facilitates promotion to the shared inquiry catalog, which is required to include the queries in a production reporting job stream. You can also use the User Reporting Jobstream facility (MWF; 2.5) to automatically generate an executable job stream *and* convert the Q&R Query into a MICF Inquiry. Using a MICF reporting jobstream lets you schedule multiple queries in one jobstep.

More information:

Publish Output to Q&R Web Reporting (see page 44)

Create a MICF Inquiry Manually

Perform the following procedure to create a MICF inquiry manually.

Follow these steps:

1. Select Option 2.6 within MICS Workstation Facility (MWF).

   The Inquiry Generation - Define Source Data Sets panel appears.

2. The first data set name defaults to the sharedprefix.MICS.MQR.PUTPDS data set associated with this complex. The second data set defaults to the data set previously defined in the panel. This data set provides compatibility with the 12.8 query library.

3. Select or enter the default catalog group (Category) and title to use for the generated MICF inquiries.

4. Press End to process the input data sets.

5. From the Inquiry Generation - Source Member Selection panel, select the members from your PDS to convert to MICF inquiries.

   You can overtype the Query Name column to change it if necessary. If you want to replace an existing MICF inquiry, you can also set the replace option to Yes.

   Note: Execute From PDS?: Defaults to N. This field lets you control the way the MICF inquiry is generated.

   - When “Execute from PDS?” is Yes, MICF inserts an independent SAS step in the inquiry that contains an %INCLUDE statement to the library and member that contains the code (or Q&R query), and an External File Allocation step to allocate the data set.

     The use of the SAS %INCLUDE statement allows flexibility for those users inexperienced in MICF. Using this method eliminates the need to revisit MICF in order to modify the inquiry (source code), as it is read at execution time from the external PDS directly.

   - When “Execute from PDS?” is No, MICF embeds the code within MICF. This method is the default. Each line of the source code is written to an ISPF table stored within MICF as an Independent Source step.

     To replace the existing MICF inquiry, set the Replace Existing Inquiry option to Y (YES) on the MICF Inquiry Generation Source Member Generation panel.

6. Press the Enter key to validate your selections.

7. After the members have been validated successfully, enter END to generate the MICF inquiries.

Set up a MICF Inquiry in a User Reporting Jobstream

To convert your Q&R queries into MICF inquiries automatically, define a User Reporting Jobstream.

Follow these steps:

1. Select Option 2.5 within MWF.

   If you have not previously defined a User Reporting Job Stream, you will automatically be placed in the insert mode to define a job stream. The job stream name must be one through eight characters long.

2. Provide a fully qualified data set name to use for the job stream catalog.

   Note: For more information, see the *CA MICS MICF User Guide 2.7.3* or view the help panel.

3. Enter Y in Specify Inquiries for Reporting Jobstream and press the Enter key.

   The Inquiry Selection Options panel appears.

4. Select Option 3 and press the Enter key.

   Refer to the previous check list, To Create a MICF Inquiry Manually, starting with Step 2.

5. Complete the Execution Options panel that is associated with this job stream to enable automatic notification to the Distributed Server that this job stream has completed.

   Q&R Mainframe Svr (MQRMSN) – The application name of the CA MICS Q&R Mainframe server. This name is automatically extracted from the Q&R Mainframe Server parameter file (sharedprefix.MICS.PARMS(MQRPARMS) MQRMSN parameter if not already defined in the panel, or specified in your MICF options.

   Note: If you enter the MQRMSN parameter value in your MICF foreground options, it automatically populates on the execution options panel for every new job stream.

   This server is the Q&R Mainframe Server that is notified when the job stream completes.

   Initial RMWSLoad – Specify Y (Yes) to notify the Q&R Mainframe Server when the job stream has completed in order to execute the related RMWSLoad job.

   RMWSLoad Job Name – The Job Name defined in Q&R Distributed Server Administration that corresponds to the job stream output you wish to publish.

   For more information, see the *MICF User Guide*.

Use the generate line command (G) for this job stream to generate the execution JCL. You can run the jobstream either on demand or schedule it to run on a regular basis.

Note: The User Reporting Job Streams are not shared. To share your output, you must download the output either using Q&R Web Publishing in Q&R Distributed Server Administration (the RMWSLoad utility). Alternatively, if you are the MICS Administrator, you can set up a Production Reporting Job Stream which makes the job stream available to other MICS users. Use MWF option 2;4;3 to create a Production Reporting Job Stream.

Copying View Definitions Manually to the Distributed Server

Copy your view definitions to the Q&R Distributed Server, to associate views with your Query Output. If this association is not done, output publishes with default charts instead of customized charts. This action only needs to be done once and only in the following situations:

- Publishing to Web Reporting using a different server than what was used when you moved queries to the Mainframe
- Queries were saved to the mainframe using save Macros

Follow these steps:

1. Run you Query in Q&R Query, verify that the views are correct.
2. Run your initial Publish Output to Q&R Web Reporting (RMWSLoad) Job. Uncheck Publish to Web Reporting on the Web Reporting tab. This action prevents the creation of the website.
3. On the Q&R Distributed Server, locate the adhoc directory with your initial run query output. The view definitions are located by default in this directory. The format for this direction is: *C:\ProgramData\CA\MICS Workstation\Server\mainframeservername\Adhoc\userid\queryname\.*
4. Copy the files that are named *.vdf.
5. On the Q&R Distributed Server, locate the directory where the RMWSLoad job output created your initial directories. The format for the default directory is: *C:\ProgramData\CA\MICS Workstation\Server\mainframeservername\micfcatagory\category\queryname\.*
6. Paste the *.vdf files in this directory.
7. Delete the \yyyy-mm-dd directory that was created by your RMWSLoad run.
8. Run Publish Output to Q&R Web Reporting again, this time with Publish to Web Reporting on the Web Reporting tab checked.

Start Q&R Distributed Server Administration

Q&R Distributed Server Administration provides the following features for managing the Q&R Distributed Server:

- Configuration settings to customize the Q&R Distributed Server to suit your installation needs.
- Task Manager to view running Q&R tasks and manage them the Q&R task manager. The task manager is a concise console that lets you manage the Q&R active environment.
- Security settings to control user access to Q&R Query and Q&R Distributed Server Administration.
- Utilities to publish output to Q&R Web Reporting, remove output, and build, refresh, and maintain the Q&R Meta Database.
- Utility to maintain the Treename Database for the Q&R Distributed Servers output retrieval tree.
- Q&R Distributed Server Log Viewer to view a log file from a list of available log files.

  Note: When you view the log for the current day, any new messages generated after you open the log are not displayed. Close and reselect the log from the menu to get an updated copy.
- Q&R Distributed Server Management functions to start, stop and restart the Q&R Distributed Server .
- Active Mainframe Server Viewer to display the available Q&R Mainframe Servers. The Viewer also displays the current CCI settings for the distributed server computer.

To start Q&R Distributed Server Administration, double-click the Q&R Distributed Server icon in the system tray or Double-click the Q&R Distributed Server Administration icon on the Desktop.

Note: Only one instance of the Q&R Distributed Server Administration can be used at a time. You cannot start Q&R Distributed Server Administration if another instance is already running. This applies across multiple remote desktop sessions running on the same server.

How to Navigate through Q&R Distributed Server Administration

When using Q&R Distributed Server Administration, you can use the pull-down menus or the toolbar buttons for most functions.

Toolbar Buttons

The toolbar buttons are mapped as follows:

Security Administration

Create new users and groups.

Configuration Manager

Manage the Q&R Distributed Server environment.

Q&R Task Manager

View and manage active Q&R tasks.

Q&R Options Editor

Launch the Q&R Options Editor to manage the Q&R environment.

Display Utility Status

Display the status of utilities which have been run by the Q&R Distributed Server as a result of MICF Q&R Workstation Integration.

Publish Output to Q&R Web Reporting

Manage Q&R Web Reporting jobs and publish output to Q&R Web Reporting.

Remove Output

Manage Q&R Remove output jobs and remove output from Q&R Web Reporting or Q&R Output Retrieval tree.

Build/Refresh Meta Database

Manage Q&R Meta Build jobs and build the Meta Database for use by Q&R Query.

Maintain Q&R Meta Database

Manage Q&R Maintain Meta Database jobs and remove entries from the Q&R Meta database.

Maintain Q&R Treename Database

Maintain the output retrieval locations stored in the Q&R Treename Database.

Start/Stop Q&R Distributed Server

Display and manage the state of the Q&R Distributed Server. This button changes appearance according to the state of the Q&R Distributed server:

- A green circle with a check mark is displayed when the Q&R Distributed server is available.
- A red circle with a slash is displayed when the server is down.

Help

Displays the Q&R Distributed Server Administration help.

Menu Options

You can use toolbar buttons to perform most of the menu functions. Additional functions that do not have toolbar equivalents are described in the following list:

- File, System Information – Starts the Q&R System Information Application.
- View, Active Mainframe Servers – Displays a list of all active Q&R Mainframe Servers and the CCI Configuration settings for the distributed server. Allows viewing of the selected mainframe server log.
- View, Distributed Server Logs – Displays a list of available distributed server logs.
- View, Mainframe Server Logs – Displays a list of available mainframe server logs for the active Q&R Mainframe Servers on your mainframe. Only Q&R r12.9 and higher Q&R Mainframe Servers support this functionality.
- Server, Restart Service – Stops all Q&R Distributed Server active tasks immediately and then restarts the Q&R Distributed Server Service.
- Server, Stop Service in 60 sec – A warning message is issued to all active Q&R users that the service is going to stop in 60 seconds.

  All Q&R Distributed Server active tasks and the service stop after a 60-second interval.

View Q&R Distributed Server Log

To view the Q&R Distributed Server log click View and select Server Logs. Select a log to display from the list of available log files.

View Active Q&R Mainframe Servers

To view a list of the active Q&R Mainframe Servers click View and select Active Mainframe Servers. The window contains a list of active Q&R Mainframe Servers and the current CCI parameters for the Q&R Distributed Server. To view the log for an active Q&R Mainframe Server, select the Q&R Mainframe server in the list box window and then click the View Log button.

Note: The View Log feature is not backward compatible and Q&R Mainframe Servers before release r12.9 do not support this functionality.

View Q&R Task Manager

To view the Q&R Distributed Server Task Manager, click File and select Q&R Task Manager. The top half of the display shows general information about the processor running the distributed server and also the percent of the CPU busy. The bottom half of the display shows currently active Q&R Tasks including MQRServerSrvc, MQRServerMon, MQRQuery and any utilities that are running. The display is periodically refreshed automatically. You can click the refresh button to refresh the display immediately.

A task, such as RMWSLoad can be canceled by clicking the Process ID in the “End Task” column. A message box prompts the user to verify this action. Use this feature with caution; canceling a task can cause unpredictable results.

Note: The Q&R Task Manager contains a subset of information and functionality that is available in Windows Task Manager. For full functionality use Windows Task Manager.

Display Utility Status

To view the status of tasks that the Q&R Distributed Server started through the MQRNOTIF command on z/OS, use the View Utility Status. This window presents a list of all tasks that the Q&R Distributed Server runs. You can set the number of days (see page 38) that are maintained in the list in the Q&R Distributed Server Configuration. You can sort the data by any of the displayed columns, and you can filter by Return Code (RC), Job Name, Job Type, and Job Status.

Additionally, the log file for each utility displays, and you can open the log file once the utility completes. Right-click the row and select Open Log File. If the log file is no longer available, the name is grayed out, and the option to open the log file is also grayed out.

Other options to delete individual records, records based on date range, or all records are provided on the right-click context menu. Also, options to export the data to Excel or a CSV file are provided to allow further analysis of utility performance.

Start, Restart, and Stop the Server

To start, restart, or stop the Server click Server and then select the action that you want to take. Only valid actions are available.

Default Values in Q&R Distributed Server Administration

Default values for many of the utility options are set according to the values set in the Q&R Options Editor. In this document the default values given are the CA supplied default values. Your defaults could be different if changed by the Q&R Administrator in the Q&R Options Editor.

Configure the Q&R Distributed Server

You can set or change the Q&R Distributed Server configuration parameters to suit the needs of your installation environment.

To access the Q&R Distributed Server configuration parameters, click Configuration on the Q&R Distributed Server Welcome panel.

The Q&R Distributed Server Administration Configuration panel appears. You can now modify the following parameters:

Socket Port

Specifies the socket port number that Q&R Distributed Server uses to communicate with clients.

Default: 20368

Limits: Port numbers 1024-32767

Trace

Specifies how to enable the diagnostic messaging option. When set to Yes, the Q&R Distributed Server log, displays extra diagnostic messages.

Default: No (trace off)

Debug Level

Specifies the level of debug messages the Q&R Distributed Server produces.

Default: 0

Limits: 0-5

Location of the Adhoc Query Tree

Specifies that on demand queries and their results are stored using this directory path.

Default: [commonAppDataFolder]\CA\CA MICS Workstation\Server

Query Retry Interval

Specifies the wait time allotted to the Q&R Distributed Server before resending a query to the Q&R Mainframe Server. Valid wait times range from 1 to 60 minutes.

Default: 5 minutes

Limits: 1-60 minutes

Q&R Mainframe Server Response Wait Time

Specifies the amount of time for the Q&R Distributed Server to wait for a response from the Q&R Mainframe Server before it times out.

Default: 60 minutes

Limits: 1-1440 minutes

Note: Q&R Mainframe Server response wait time limits the amount of clock time a query is allowed to run on the Q&R Mainframe Server. For other conversations between the Q&R Mainframe Server and the Q&R Distributed Server, the wait time is 2 minutes before the Q&R Distributed Server times out.

Log Viewer

Specifies the utility used to display log files created by the Q&R Distributed Server Administration utilities. Select a utility that is available in your environment.

Default: Notepad

Limits: WordPad, Notepad, Word, Textpad, Internet Explorer, and Notepad++

Job Status Retention

Specifies in days how long to retain the job status information that the Q&R Distributed Server created.

Default: 60 Days

Limits: 0 – 364 Days

Logging Debug Message Level

Specifies at what level the Q&R Distributed Server Administration Application logs debug messages.

Default: 0

Limits: 0 – 3

Log Retention in Days

Specifies the number of days to retain the Q&R Distributed Server Administration log.

Default: 10

Limits: 0 – 31 Days

Allow unauthenticated access from this machine

Provides access to Q&R Query and Q&R Distributed Server Administration to all users from the computer running the Q&R Distributed Server. This setting is provided for initial access to the software. It must be unchecked after the addition of the User Id of the Administrator in the Q&R Distributed Server Administration Security panel.

Default: Checked

Q&R Distributed Server Security Administration

The Q&R Distributed Server Security Administration feature maintains a list of users who are authorized to access Q&R features. It allows the administrator to control user access to the information stored on the Q&R Distributed Server. Only authorized users can use the Q&R Query application to run on demand queries and view output stored on the Q&R Distributed Server.

You can assign access to output for a single user or a group of users. When you define the access for a group, all users who are assigned to the group inherit that access. Defining group access can reduce administrative work when you have a large number of users.

By default, each user can access all files created by queries run under their user ID, whether or not the user belongs to a group.

You can vary the level of access for each user or group by restricting access to specific file directories on the Q&R Distributed Server. This is accomplished by defining access rights based on the first four levels of the directories under which the query output is organized and stored.

The four levels of group access rights are shown in the following table:

Levels	Description
Q&R Mainframe Server	The name of the Q&R Mainframe Server as set in the MQRMSN parameter in the MQRHOST job.
Query Group	For production queries, the user-defined name assigned to the -n parameter in the batch file used to run the RMWSLOAD utility. When a query is manually run in Q&R Query, the query is assigned to the adhoc query group.
User/Job	The user ID or job name under which the query was run.
Query	The query name.

When you assign access rights, use a single asterisk (*) to permit access to all output directories.

A prefix can be used for grouping selections; for example, if you want to select all Q&R Mainframe Servers starting with PROD, then specify PROD, not PROD*.

Access Q&R Distributed Server Security Administration

To access the Q&R Distributed Server Security Administration, click File and Security in Q&R Distributed Server Administration or click the Security icon on the toolbar. The Q&R Distributed Server Administration Security panel appears.

Grant Access to Q&R Query

Granting security access is achieved through how you define the groups and assign users to those groups.

More information:

(Optional) Define and Maintain a Group (see page 41)
Define and Maintain a User (see page 43)

(Optional) Define and Maintain a Group

A group is a quick method for assigning the same access rights to multiple users. You must first define a group before you add a user.

When you define or add a group, provide the following information:

- Group name
- Group description
- Group access rights - the type of access that is allowed for this group based on the four levels of the directory tree structure

The Administrator group and the Power Users group are sample groups shipped with the product. After a user is assigned to a group, the user has the same access rights assigned to the group.

To define a group

1. Click Groups in the left pane.

   The Q&R Distributed Server Administration Security panel displays a new group entry panel in the right pane where you define the group.

2. Specify a Group Name and Description of the group.

   #### Group Access Rights

   Lets you specify access rights for the group. Specify that the group can have access to one or more of the areas shown on the panel: Mainframe Server, Query Group, User/Job, Query. Within each area, you can define the group's access to the output in Output Retrieval in Q&R Query. Values entered are considered to be a prefix and matched with any values beginning with the same character string. To specify all values, use an asterisk (*).

To remove a group

1. Click the group you want to remove, the group is displayed in the right pane.
2. Click Delete.
3. Click Yes in the message box to confirm the deletion.

The group is removed. The association between the users and the group is also removed.

To maintain a group

1. Select a group from the tree in the left pane.
2. Make the appropriate changes in the right pane and click Update to accept the changes.

   Your group has been modified.

Define and Maintain a User

Before a user logs on to the Q&R Query application, you must first define that user to Q&R Workstation.

When you define or add a user, provide the following information:

- User name and Domain that is the same as the values used to log into Windows.
- Group membership. Add the user to the Administrator group if this person will be running the Q&R Distributed Server Administration program. Add the user to any other groups that define applicable access privileges.
- Additional access rights. Use this feature to define access special rights for a user. For example, your environment has a Capacity group and an Accounting group where the Capacity group has access to all Capacity reports and the Accounting group has access to all Accounting reports. In addition, you have a user that belongs to the Capacity Group, but would require access to few (but not all) Accounting reports. This access can be defined by adding the necessary account reports in the user's additional access rights.

To define a user

1. Select Users in the left pane and click.

   The Q&R Distributed Server Administration Security panel displays a new user entry panel in the right pane.

2. Complete the fields in the Q&R Distributed Server Administration Security panel to define the user.

   Notes:

   - A Q&R Security record must be added for each domain from which a user will access Q&R. The domain can be the Windows network domain or the workstation id for the local domain.
   - Selecting *Allow unauthenticated access from this machine* on the Configuration panel allows unauthenticated access to Q&R Query and Q&R Distributed Server Administration from the machine that the Q&R Distributed Server is running on. You can deselect the allow unauthenticated access from this machine option after defining at least one user in the Administrator group.

   The user can now run the Q&R Query application from the machine.

To remove a user

1. Select a user in the tree.
2. Select Delete in the right pane.
3. Click Yes in the message box to confirm the delete.

   The user is removed. The association between the user and groups is also removed.

To maintain a user

1. Select a user from the tree in the left pane.
2. Make the changes you want in the right pane and click Update to accept the changes.

   The user's information has been modified.

Publish Output to Q&R Web Reporting

You can publish output to Q&R Web Reporting using Q&R Distributed Server Administration.

To publish output to Q&R Web Reporting

1. Click File and Publish Output to Q&R Web Reporting.

   The Publish Output to Q&R Web Reporting panel appears. The left pane lists the web publishing definitions previously specified.
2. Click a web publishing definition and review the specifications, or create another publishing definition by typing a new name in the Job Name field.

   Your entries appear on the right pane.
3. Click Add to save the definition, after you finish providing specifications. To run the selection, click Run on the bottom of the right panel.

   When the web publishing definition runs, the output is published to Q&R Web Reporting and a log file is generated. When the job completes, a completion message appears.
4. Click Log on the bottom of the right panel to check the log to verify that it completed successfully. The default name of the log file for this utility is RMWSLoad-jobname.log.

   You can view the log any time during the run of the utility to check the status of the job.

   You have verified that you published output to Q&R Web Reporting.
5. Click Cancel to stop the run for any reason during the execution of the RMWSLoad utility.

   The utility stops executing immediately.

By default, Publish Output to Q&R Web Reporting creates a 2D Bar chart for your initial view of the output data. You can change this by using the Q&R Options Editor and changing the “Default Chart Type” setting. Change the value from “2-D Bar” to “2-D Line” to produce line charts. Change the value to “None” if you always want the initial display of the output to be a data view only. In addition, for MICF csv output, entering K0 in the Output Control Cell causes Q&R Charting to display data only. Once csv output has been downloaded from the mainframe, use Q&R Charting to add or modify view definitions. Once a view definition is stored for an output, it is applied to subsequent downloads.

The Q&R Options Editor "Max Charts Per View" setting lets you limit the maximum number of charts created for each view. By default this parameter is set to 2000, but you can set it lower or higher if necessary. This parameter limits the number of .png files generated so that unexpected .CSV output caused by a malformed or inadequately summarized query does not process without limits.

More information:

Create a Publishing Definition (see page 46)
How to Publish Output to Q&R Web Reporting (see page 86)

Publish Output to Q&R Web Reporting—Return Code Processing

The Publish Output to Q&R Web Reporting utility provides a completion Return Code (RC) which can be used in a .bat file for conditional processing.

0

The job completed with no errors.

4

The job completed with warnings. This code can mean the unavailability of some data reports or charts in Q&R Web Reporting. Review the log for messages and take appropriate action.

8

The job completed with errors. Either the job did not start due to invalid parameters, or a serious error occurred that may have left the Q&R Web Reporting site in an unstable condition. Review the log for messages and take appropriate action.

16

The job completed with time out errors that will cause subsequent RMWSLoad jobs to fail. The job timed out due to a CCI timeout condition, dataset recall or other serious wait condition.

Other Options in Publish Output to Q&R Reporting

The following list describes some of the interface features of the Publish Output to Q&R Reporting panel:

- Use the Add and Delete buttons to add or delete web publishing and download specification entries.
- To specify the directory into which the log file is saved, and the message detail level used for log entries and make changes at the bottom of the right-hand panel.

  Click the binoculars icon to browse for a new folder. Click on the folder icon to open the current path in Windows Explorer.

  Use the default filename for the log file, or change it as desired. When the utility runs, the log file will be overwritten. When the utility completes, the log file is copied to a new log file automatically with a time stamp appended to the end of the name. This time stamp addition lets you access the log files from previous runs.

  Click the message detail drop-down list box to specify the level of logging detail. If a job does not complete successfully and the log does not provide the required information to resolve the problem, set the message detail level to 3 and rerun the job. When the job completes view the log and try to identify the error, or contact CA Technical Support.
- To export the utility specifications to a batch file for scheduling in a Windows scheduler, select the utilities you want to export in the left pane and click Export. You can select a single utility, or multiple utilities as necessary to build your batch job.
- To run a group of utilities, select the utilities you want in the left pane and click Run. The selected items are run.

Create a Publishing Definition

To create a publishing definition, define the parameters for Q&R Web Reporting and publishing in the Publish Output to the Q&R Web Reporting panel.

This section describes each tab and field of the Publish Output to the Q&R Web Reporting panel.

More information:

Publish Output to Q&R Web Reporting—Source Tab (see page 47)
(Optional) Publish Output to Q&R Web Reporting—Filter Tab (see page 48)
Publish Output to Q&R Web Reporting—Web Reporting Tab (see page 49)

Publish Output to Q&R Web Reporting—Job Definition Information

This information allows you to define a job for Web Reporting and consists of a Job Name, Description and the Type of the Publish Job.

Job Name

Specifies the unique name that identifies this publish job. This field is defined by the user. The name can be up to 50 characters long.

Note: The following special characters are not permitted in the Job Name field, ?><"*|#%{}^;?=@&+$/\:-,.

Description

Lets you describe the contents of the publish job. This field can be 65,536 characters long. This is an optional field.

Type

Identifies the Type of Publish to be performed and filters the jobs to be displayed. This setting also configures the tabs on the right panel for the selected job type.

Values

Mainframe: Publish from a Mainframe DTF Index

Distributed: Publish from Distributed Server Output

SingleCSV: A template to publish a single output from Q&R Charting

All: Provides a list of all jobs in a combined view

Note: When All is selected, the tabs displayed of the right pane remain Mainframe, Distributed or SingleCSV depending on the last displayed selection.

Publish Output to Q&R Web Reporting—Source Tab

The source tab is used to specify information that identifies the output files you want to publish for Q&R Web Reporting, depending on the type of publish being performed, Mainframe or Distributed.

To download and publish from a mainframe server source, select the Q&R Mainframe Server option in the Publish Type drop down and provide the following information:

Q&R Mainframe Server Name

Specifies the name of the Q&R Mainframe Server.

DTF Index Dataset Name

Specifies the name of the query output directory on the mainframe.

Append MICF Query Name

Specifies whether or not the MICF Query name will be appended to the MICF Inquiry Title.

If you are publishing output data from a distributed source, for example, Q&R on demand query output, select the Q&R Distributed Server option in the Publish Type drop down and then provide the following information:

Q&R Distributed Server

Specifies the location for the distributed source output file.

Example:

C:\Documents and Settings\All Users\Application Data\CA\MICS Workstation\Server\CASamples.

Q&R Compatible Directory Structure

Lets you publish output generated from MICF where the MICF Reporting Job Stream Execution Option "*Use Q&R Compatible Directory Structure"* is set to Y. Select the box if you want to use this option.

Note: If this box is checked, Category on the Web Reporting tab is not required.

If you are publishing Web Reporting Data directly from Q&R Query Charting Output you must first define a Single CSV output definition. Then provide the necessary information on the Web Reporting tab and Image Properties tab as defined below.

(Optional) Publish Output to Q&R Web Reporting—Filter Tab

When publish type is mainframe, you can use the Filter tab to specify information that selects or rejects output files. The controls on this tab are active only if you are downloading from a mainframe server source.

The fields for the Filter tab include the following:

Earliest Output to Download

Specifies the age (in days) of the earliest output to download. Output older than the number of days specified cannot be downloaded.

User (Select)

Specifies a string for selecting output files based on user ID.

Query (Select)

Specifies a string for selecting output files based on query prefixes.

User (Reject)

Specifies a string for rejecting output files based on user ID.

Query (Reject)

Specifies a string for rejecting output files based on query prefixes.

Publish Output to Q&R Web Reporting—Web Reporting Tab

Use the Web Reporting tab to specify the location and additional attributes for publishing content to the web server.

The fields for the Web Reporting tab include the following:

Publish to Web Reporting

Check to publish the selected output to Q&R Web Reporting. This option is not available if a Q&R Distributed Server Source is used, but it can be left blank if a Q&R Mainframe Server Source is used. When this check box is not selected, output can be downloaded from the Mainframe and viewed in Q&R Query but not in Q&R Web Reporting.

Path

Specifies the location for the distributed source output files.

Required

Category

Specifies the user-defined category for publishing. This name is used to organize published output. The requirements for this field depend on the selected publish type as specified below:

Publish Type Mainframe: Leaving this field blank causes MICF inquiries to be used for content publishing and output is retrieved from all available MICF group names.

Publish Type Distributed: The Q&R Compatible Directory Structure checkbox is selected, leaving this field blank causes Web Reporting to use the User/Job level of the directory structure to create the category.

Publish Type SingleCSV: Category is optional, but if provided this is the default category that will be used when publishing the report from Q&R Query.

Index Page Name

Specifies the name of the HTML page for Q&R Web Reporting.

Default: index.htm

Publish Output to Q&R Web Reporting – Scheduling Tab

Use the Scheduling Tab to coordinate RMWSLoad jobs you want to automatically run when the MICS nightly job cycle is complete.

RMWSLoad Job Name:

Type the value used in the RMWSLoad Jobname field of the MICF Reporting Job Stream Execution Options panel.

Automatically Run when Job Stream Completes

Select to automatically publish when the Job Stream completes.

Note: This option is active only if the MICF Reporting Job Stream Execution Option "Initiate RMWSLoad" is set to Y.

Publish Output to Q&R Web Reporting—Image Properties Tab

Image Size

Specifies the size of the chart images. Image sizes are defined in twips, but it can alternatively be specified in pixels. Translation between twip and pixel values occurs when values are changed.

Note: To insure quality of the background image in published output, the publish process does not stretch or shrink the size of the background when it is applied. If the view definition of the output has a background type of image, the size of the image used should be the same as the image size of the publish job used for publishing.

Note: Pixels do not convert directly to twips so while 7000 twips converts to 467 pixels 467 pixels does not convert back to 7000 twips.

Default: 12000 X 7000 twips

(Optional) Publish Output to Q&R Web Reporting—Maintenance Tab

This tab lets you associate a predefined Remove Output job (RMWSPare) with a Publish Output (RMWSLoad) job, so that you can maintain the Q&R Web Reporting output automatically as a part of your RMWSLoad processing.

Run Remove Output Jobs

Specifies whether to run the selected Remove Output job as a part of the Publish Output process. If you select this option, RMWSPares runs when RMWSLoad executes. Otherwise, the RMWSPares option remains selected, but does not run. This option provides the flexibility to turn off RMWSPare processing without losing your selections.

Refresh

After the Publish Output window opens, environment changes, such as new Remove Output job definitions, or changes to the RMWSLoad Web Reporting Path which would affect the list of Remove Output jobs available for selection. You can refresh the list of Remove Output jobs after you make these types of changes.

Remove Output Jobs List

Specifies the Remove Output jobs that you can associate with this Publish Output job. The listed RMWSPare jobs may not be the jobs that you want to use because there is no way to identify exactly which RMWSPare jobs are associated with which RMWSLoad jobs. However, an algorithm identifies which RMWSPare jobs provide the best fit for a particular RMWSLoad job. Then, the user can decide to further qualify which job they want to select based on the information in the detail window that follows.

Remove Output Job Detail Window

Provides detailed information about the selected RMWSPare job in the previous list. Use this information to select the correct RMWSPare job to be associated with the RMWSLoad job.

Name: The name of the selected Remove Output job

Type: The Remove Output job type

Web Reporting Path: The Web Reporting Path of the selected RMWSLoad job

Remove Output Path: The Output Path in the selected RMWSPare job; the starting root path that the Remove Output job uses to search for files to remove.

Date Selection Range: The date range specified in the selected RMWSPare job

Note: You cannot match the RMWSPare jobs with the RMWSLoad jobs exactly. The Q&R MICS Administrator must evaluate the jobs presented, and must ensure that the chosen jobs to be associated are correct, and that the data being removed and time ranges being removed are correct for that Publish Output job.

Remove Output Files and Directories

To optimize space usage, the Remove Output function removes older Q&R Output files and directories. Run this utility on a regular basis.

To remove output

1. Start Q&R Distributed Server Administration.
2. Click File.
3. Click Remove Output.

   The Remove Output panel appears. The left pane lists all the output removal specifications. The right pane lets you define the output removal criteria.
4. Provide your specifications.
5. Click Add to save the definition.
6. To run Remove Output, click Run at the bottom of the right panel.

The appropriate files are deleted and a log file is generated. A completion message appears when the job is finished.

To check the log to make sure that the job completed successfully and the output was removed, click View Log at the bottom of the right panel.

Default: RMWSPare jobname log.

Note: You can view the log at any time to check the status of the job.

Canceling the Remove Output Utility

To stop the run for any reason during the execution of the Remove Output utility, click Cancel. The utility stops executing immediately.

Important! If a Remove Output utility is canceled, it can leave the Q&R Web Reporting structure corrupted so use this option with caution. If you do perform a cancel against the Q&R Web Reporting output, it may be necessary to run the RMWSLoad utility with the –K parameter to rebuild the index structure.

More information:

Q&R Distributed Server Utilities (see page 93)

Remove Output—Return Code Processing

The remove output utility provides a completion Return Code (RC) which can be used in a .bat file for conditional processing.

0

The job completed with no errors

4

The job completed with warnings. This code can mean the unavailability of some data reports or charts in Q&R Web Reporting. Review the log for messages and take appropriate action.

8

The job completed with Errors. Either the job did not start due to invalid parameters, or a serious error occurred that may have left the Q&R Web Reporting site or Output Retrieval tree in an unstable condition. Review the log for messages and take appropriate action.

Remove Output —Job Definition Information

Supply the information to define a job for Remove Output including a Job Name, Description and the Type of the Remove Output Job.

Job Name

This is the unique name that identifies this remove output job. Defined by the user. The name can be up to 50 characters long.

Note: The following characters are not permitted in the Job Name field:

, ?><"*|#%{}^;?=@&+$/\:-,.

Description

This is an optional field that can be used to describe the contents of the remove output job. This field can be 65,536 characters long.

Remove Type

Identifies the Type of remove output to be performed

Values:

Query Output: Distributed Server Output

Web Reporting Output: Q&R Web Reporting content

AllAll: Provides a list of all jobs in a combined view

Note: All only applies to the listing of what is displayed in the left pane of the Remove Output window.

By default the Left pane is context sensitive to the type of Job listed in the Type dropdown so if Query Output is selected, only Query Output Jobs are listed.

A type of All lists all Jobs defined in your database. To define a new job, you must select a valid type of either Query Output or Web Reporting Output.

Remove Output —Source Tab

Use the source tab to provide information that identifies the output files you want to remove, depending on the type of Pare being performed--Web Reporting Output or Query Output.

Output Path

Specifies the directory from which the files are deleted.

All Dates

Specifies that all dates for the selected output path are to be deleted.

Note: For backward compatibility with previous releases of the utility –d:0 is coded in the batch job, but this is no longer necessary. The –d parameter is optional and when it is not coded, All dates is assumed.

Remove Output older than or equal to

Specifies the age criteria (in days) for deletion. The program removes output older than or equal to the number of days you specify. For example: 0 deletes all output; 1 deletes everything except today's output; 30 deletes all output 30 days old or older.

A date picker can be used to help you select the relative number of days based on today's actual date. But when the utility runs, it uses the relative number of days specified in the field to the left. If you pick today's date it chooses a relative number of days of 0. When you reload the utility the next day, the number of days will still be 0 and the date will be the next day.

Date Range

Specifies a date range (in days) for the deletion. The program removes output greater than or equal to the first number specified and older than or equal to the second number specified. For example 2, 1 would delete two days of data starting from yesterday going back to the day before that. The from date can never be greater than the to date.

A date picker can be used to help choose the relative number of days based on today's actual date. But when the utility runs it uses the relative number of days specified in the field to the left. If you pick today's date it chooses a relative number of days of 0. When you reload the utility the next day, the number of days will still be 0 and the date will be the next day.

Remove Output – Output Retrieval Tab

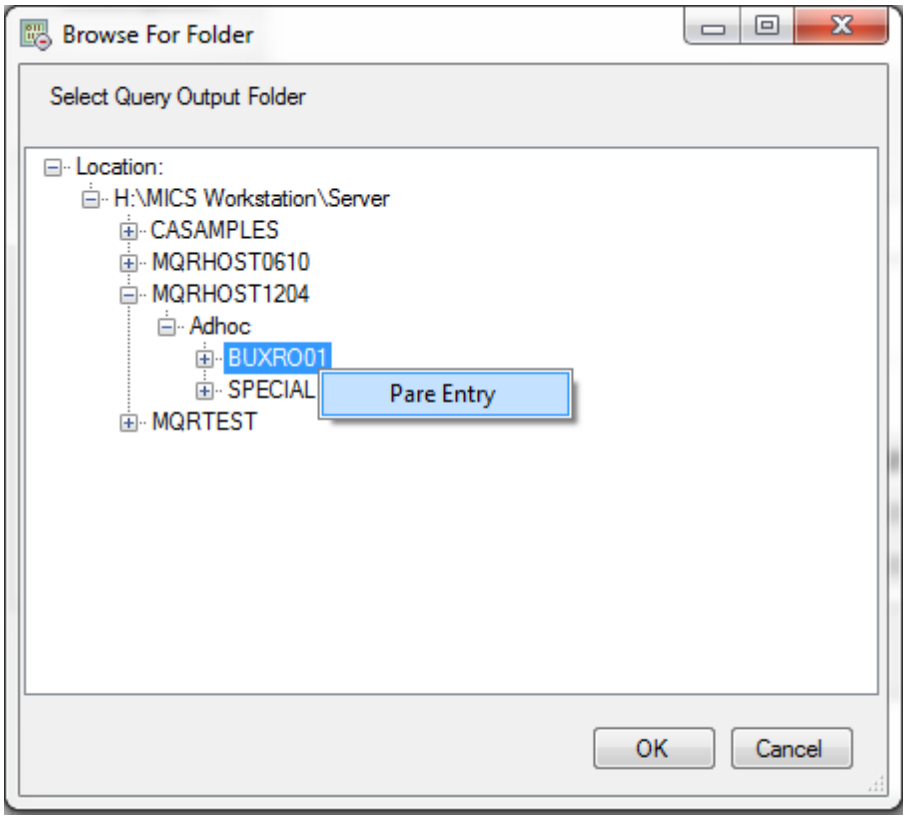
Use the Output Retrieval tab to set specific remove options for the Query Output Remove Type. All options on this tab are mutually exclusive.

You can automatically populate the Remove by User and Remove by Query Name fields from the Browse for Folder selection dialog on the Source tab.

Follow these steps:

1. Select the User or Query you want to Pare.
2. Right click to bring up the context menu.
3. Select "Pare Entry".

The Output Path field on the Source tab and the appropriate related field on the Output Retrieval tab are correctly filled in.



None

No data filters are applied to the Query Output remove type. The pare runs against the Output Tree specified on the Source tab based on date.

Remove by Return Code

Provides the capability to remove output based on the return codes of query output in the output retrieval tree. It can be specified at any level in the output tree. Including the \Server level allowing you to remove all queries with bad return codes from your entire environment. Conditional operators are "EQ", "GT", and "GE". These can be combined with any integer return code. By default we have provided 4, 8, 998 and 999. The interface does allow for user input of custom return codes. It is strongly recommended that you do not Pare on 4 as this can still return valid query results.

This option can take a considerable amount of time to run because it is necessary to scan every entry at the bottom level of the Output Retrieval tree. Be sure to take this into consideration when you select your Output Tree.

Remove by User

This option allows the Remove Output utility to remove an entire user.

Note: The Source Output Path must be specified no lower than theAdhoc level.

The advantage of using this option as opposed to selecting a User in the Source Output Path is that it allows a User to be removed across Hosts by selecting the Source Output Path at the Server level. Therefore, a user is removed across multiple hosts in a single run.

Remove by Query Name

This option allows the Remove Output utility to remove an entire Query.

Note: The Source Output Path must be specified no lower than the User level.

The advantage of using this option as opposed to selecting a Query in the Source Output Path is that it allows a Query to be moved across Users and Hosts by selecting the Source Output Path at the Adhoc or Server level.

This can be a very powerful option and should be used with care when removing output at the Server or Adhoc level, when All Dates is selected.

Other Options in Remove Output

The following list describes the interface features of this panel:

- Use the Add and Delete buttons to add or delete web publishing and download specification entries.
- To specify the directory into which the log file is saved and the message detail level used for log entries make changes at the bottom of the right-hand panel.

  Click the binoculars icon to browse for a new folder. Click on the folder icon to open the current path in Windows Explorer.

  Use the default filename for the log file or change it as desired. When the utility runs, the log file will be overwritten. When the utility completes, the log file is copied to a new log file automatically with a time stamp appended to the end of the name. This time stamp addition lets you access the log files from previous runs. Click the message detail drop-down list box to specify the level of logging detail. If a job does not complete successfully, and the log does not provide the required information to resolve the problem, set the message detail level to 3 and rerun the job. When the job completes, view the log and try to identify the error or contact CA Technical Support.
- To export the utility specifications to a batch file for scheduling in a Windows scheduler, select the utilities you want to export in the left pane and click Export. You can select a single utility, or multiple utilities as necessary to build your batch job.
- To run a group of utilities, select the utilities you want in the left pane and click Run. The selected items are run.

Build/Refresh Meta Database

The Q&R Distributed Server provides file structure and content information to the Q&R Query application through a centralized database on the Q&R Distributed Server known as the Q&R Meta Database. This database is similar in structure to the CA MICS Meta Database on the CA MICS complex. However, the Q&R Meta Database is smaller in scale and may contain information from multiple CA MICS complexes, and non-CA MICS SAS databases.

Notes:

- For non-CA MICS SAS databases, the Meta Database structure supports SAS element names up to 32 characters long.
- For information about how to implement the meta database interface between the Capacity Planner and CA MICS Q&R Workstation and how to process CA MICS Capacity Planner shared capacity databases, see Appendix C of the *CA MICS Capacity Planner Option Guide*.

The Q&R Meta Database contains the following types of information:

- CA MICS complex structure, including active units and files
- CA MICS file content including keys, data elements, and active timespans
- CA MICS file and element labels and types
- SAS file content including keys and data element names, formats, and labels

Build/Refresh Meta Database – Return Code Processing

The Build/Refresh Meta Database utility provides a completion Return Code (RC) which can be used in a .bat file for conditional processing.

0

The job completed with no errors

4

The job completed with warnings. This code is associated with the -k parameter and indicates that meta database does not contain any entries that match the requested entries to remove. Review the log for messages and take appropriate action.

8

The job completed with errors. Either the job did not start due to invalid parameters, or a serious error occurred that may have left the Q&R Meta Database in an unstable condition. Review the log for messages and take appropriate action.

16

The job completed with time out errors that will cause subsequent Build/Refresh Meta Build jobs to fail. The job timed out due to a CCI timeout condition, dataset recall or other serious wait condition.

To build or refresh your Q&R Meta Database

Important! Verify that the Q&R Distributed Server and the Q&R Mainframe Server are started before running the Build/Refresh Meta Database utility. The Build/Refresh Meta Database must be repeated when changes are made to the structure of your CA MICS complex.

1. Start Q&R Distributed Server Administration.
2. Click File.
3. Click Build/Refresh Meta Database.

   The Build/Refresh Meta Database panel appears. The left pane lists the Meta Database definitions. There is one entry for each CA MICS complex or non-CA MICS SAS databases that Q&R will access depending on the type specified in the Type drop down list box. The fields to define this parameter are the following:

   Job Name

   This is the unique name that identifies this meta job. Defined by the user. The name can be up to 50 characters long.

   Note: The following characters are not permitted in the Job Name field:

   , ?><"*|#%{}^;?=@&+$/\:-,.

Description

This is an optional field that can be used to describe the contents of the meta job. This field can be 65,536 characters long.

Type

Identifies the Type of meta to be performed

Values:

MICS: A MICS database

SAS: A non-MICS SAS database

All: Provides a list of all jobs in a combined view

Note: All only applies to the listing of what is displayed in the left pane of the Build Meta window. By default the left pane is context sensitive to the type of Job listed in the Type dropdown so if MICS is selected only MICS Jobs are listed. A type of all will list all Jobs defined in your database. To define a new job a valid type of either MICS or SAS must be selected.

MICS

Indicates whether the definition is for a CA MICS source or for a non-CA MICS SAS data set.

Q&R Mainframe Server Name

Specifies the name of the Q&R Mainframe Server used to access the complex or non-CA MICS SAS data set. The name configured in JCLDEFC for the MQRMSN parameter is a user-specified descriptive name associated with the complex.

Note: The default name is MQRHOST. It is set in the MQRMSN in the Q&R Mainframe Server's job. This must match the MQRMSN parameter you specified in the JCL for this Q&R Mainframe Server.

The following fields are displayed when you build or refresh the Q&R Meta Database from a MICS complex:

Q&R Descriptive Name

Specifies a descriptive name for the complex within the meta database. This name is used to identify the complex in Q&R Query.

sp.MICS.MCOLIB

Specifies the data set name of the CA MICS complex meta database on the mainframe. This is usually *sharedprefix*.MICS.MCOLIB.

The following fields are displayed when you build or refresh a Q&R Meta Database from a non-CA MICS database:

Q&R Descriptive Name

Specifies a user-specified name to identify the SAS mainframe DSN within the meta database. This name is used to identify the data set in Q&R Query.

SAS Data Set Name

Specifies the data set name of the SAS data set on the mainframe.

Group Name

Specifies the category of the data set in Q&R Query.

Subgroup Name

Specifies the category of the data set under the group that you have specified.

4. After you complete the specifications, click Add to save the definition. To run, click Run on the bottom of the right panel.

   When it runs, the Meta Database is built or refreshed and a log file is generated.

   When the job completes, a completion message appears.

5. Click View Log on the bottom of the right panel to check the log to make sure it completed successfully.

   Default: MQRMeta.*jobname*.log.

   You can view the log at any time to check the status of the job.

   You have verified that the Meta Database was built or refreshed.

6. If for any reason during the execution of the Build/Refresh Meta Database utility you must stop the run, click Cancel. The utility stops executing immediately.

Other Options in Build/Refresh Meta Database

The following list describes the interface features of this panel:

- Use the Add and Delete buttons to add or delete web publishing and download specification entries.
- To specify the directory into which the log file is saved and the message detail level used for log entries make changes at the bottom of the right-hand panel.

  Click the binoculars icon to browse for a new folder. Click on the folder icon to open the current path in Windows Explorer.

  Use the default filename for the log file or change it as desired. When the utility runs, the log file will be overwritten. When the utility completes, the log file is copied to a new log file automatically with a time stamp appended to the end of the name. This time stamp addition lets you access the log files from previous runs. Click the message detail drop-down list box to specify the level of logging detail. If a job does not complete successfully, and the log does not provide the required information to resolve the problem, set the message detail level to 3 and rerun the job. When the job completes, view the log and try to identify the error or contact CA Technical Support.
- To export the utility specifications to a batch file for scheduling in a Windows scheduler, select the utilities you want to export in the left pane and click Export. You can select a single utility, or multiple utilities as necessary to build your batch job.
- To run a group of utilities, select the utilities you want in the left pane and click Run. The selected items are run.

(Optional) Remove Meta Database Entries

After you create the Q&R Meta Database, you can remove entries from the Q&R Meta Database using the Maintain Meta Database panel. Entries removed are no longer known to the Q&R Distributed Server or accessible by Q&R Query until a build/refresh is performed.

Maintain Meta jobs can be saved and exported to be used in conjunction with the Build/Maintain Meta jobs to remove specific database entries that you do not want to appear in Q&R Query.

You can remove specific entries at any of the following levels: Server, Descriptive Name (Complex), and component level. For example, you can remove the Accounting component from the Q&R Meta Database complex; however, you cannot remove individual files within a component.

To remove Q&R Meta Database entries

1. Access the Q&R Distributed Server Data Administration
2. Click File
3. Click Maintain Meta Database.

   The Maintain Meta Database panel appears.

   Using the Q&R Query application, you cannot access a CA MICS complex or SAS database removed from the Q&R Meta Database. You cannot undo the delete. To add entries back, use the Build/Refresh Meta Database application. The fields defined for Maintain Meta Database are described next:

   Job Name

   This is the unique name that identifies this maintain meta job. Defined by the user. The name can be up to 50 characters long.

   Note: The follow characters are not permitted in the Job Name field, ?><"*|#%{}^;?=@&+$/\:-,.

   Description

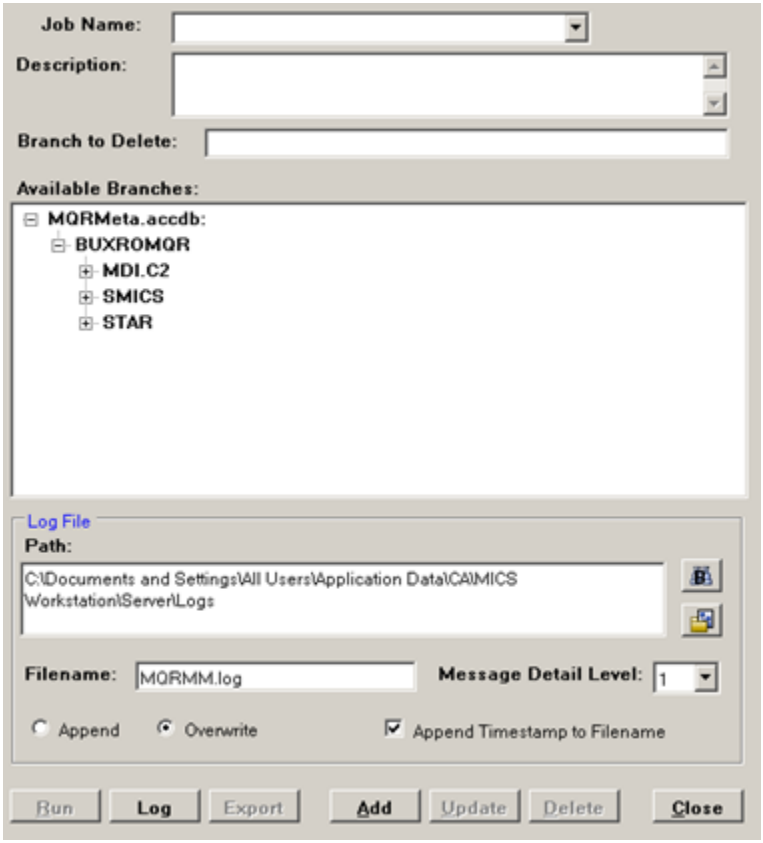
   This is an optional field that can be used to describe the contents of the meta job. This field can be 65,536 characters long.

   Branch to Delete

   This identifies the branch to delete for this job. If the job has already been run and the branch has been deleted and it can no longer be displayed in the Available Branches field the name will still be displayed here.

Available Branches

This displays a tree view of the available structures in your meta database that can be removed. Selecting branches builds the Branch to Delete definition for your maintain meta job. Once the maintain meta job has been run the branch will no longer be displayed in this view.



4. After you complete the specifications, click Add to save the definition. To run click Run on the bottom of the right panel.

   When it runs, the Meta Database entries are removed and a log file is generated. When the job completes, a completion message appears.

5. Click View Log on the bottom of the right panel to check the log to make sure that it is completed successfully.

   Default: MQRMaintainMeta.log.

   You can view the log at any time to check the status of the job.

   You have verified that the Maintain Meta Database was completed.

6. If for any reason during the execution of the Maintain Meta Database utility you must stop the run, click Cancel The utility to stop execution immediately.

Other Options in Maintain Meta Database

The following list describes the interface features of this panel:

- Use the Add and Delete buttons to add or delete web publishing and download specification entries.
- To specify the directory into which the log file is saved and the message detail level used for log entries make changes at the bottom of the right-hand panel.

  Click the binoculars icon to browse for a new folder. Click on the folder icon to open the current path in Windows Explorer.

  Use the default filename for the log file or change it as desired. When the utility runs, the log file will be overwritten. When the utility completes, the log file is copied to a new log file automatically with a time stamp appended to the end of the name. This time stamp addition lets you access the log files from previous runs. Click the message detail drop-down list box to specify the level of logging detail. If a job does not complete successfully and the log does not provide the required information to resolve the problem, set the message detail level to 3 and rerun the job. When the job completes, view the log and try to identify the error or contact CA Technical Support.
- To export the utility specifications to a batch file for scheduling in a Windows scheduler, select the utilities you want to export in the left pane and click Export. You can select a single utility, or multiple utilities as necessary to build your batch job.
- To run a group of utilities, select the utilities you want in the left pane and click Run. The selected items are run.

(Optional) Maintain Treename Database

Q&R Workstation now supports adding and maintaining ZFS directories in the Treename Database. You can also maintain the existing structure without the need to directly edit the database.

The tree name is made up of two parts: the location or path name of the MQRHOST server and the name of the directory. For example on a Windows 2008 computer with Q&R installed in the default directory and a Q&R Mainframe Server named MQRHOST, the entries for Q&R Query output are as follows:

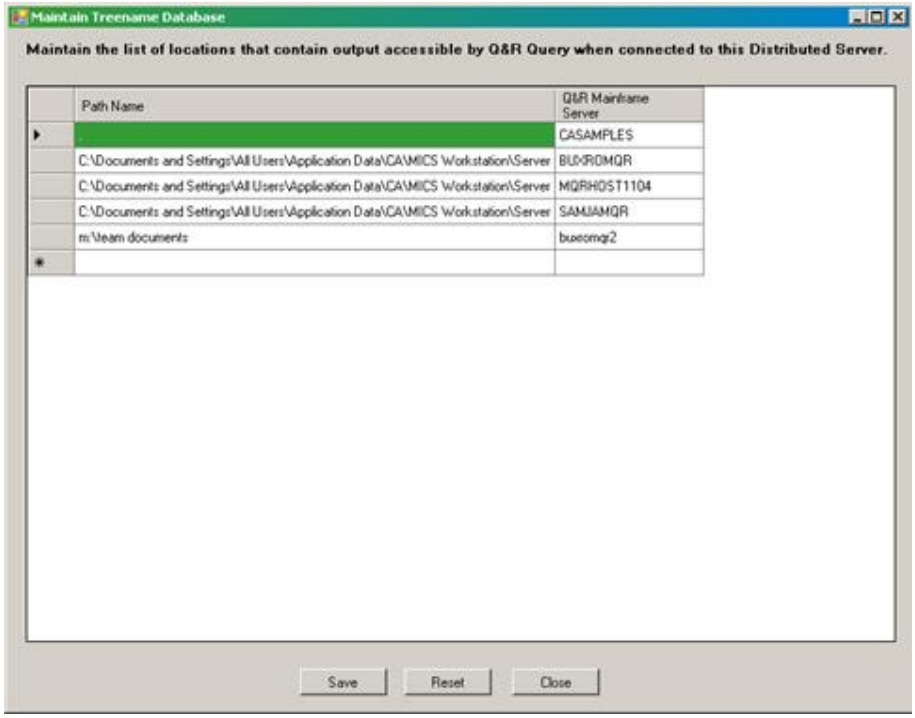
Location: C:\ProgramData\CA\MICS Workstation\Server

Host: MQRHOST

Entries can be inserted for new ZFS directories, updated, or deleted.

Important! Exercise caution when you delete or update the entries. If you delete inadvertently or make an error in updates, the previous data will not be available in Q&R Query Output Retrieval or in Q&R Distributed Server Publish to Web Reporting panels.

Note: Do not edit or delete locations that contain only a ".". These are for internal CA use.



To Insert a Row

1. Scroll to the bottom of the table and enter data as necessary.

   The values can be pasted directly from Windows Explorer to reduce the chance of typographical errors or copied from one of the previous rows in the table.

2. If you do not want to make the changes, click Reset before clicking Save.

   The table is reloaded to its original state.

3. After your updates are complete, click Save to save the changes to the treename database.

To Update a Row

1. Select the row and column you want to change.

   Overtype the value.

2. Click Reset before clicking Save, if you do not want to make the change.

   The table is reloaded to its original state.

3. Click Save after your updates are complete, to save your changes to the treename database.

To Delete a Row

1. Right click on the row header to select the entire row.
2. Click Delete rows.

   To delete multiple rows use the Ctrl + Shift key combination with the left click to select the rows.

3. Press the Delete key after you select the rows you want to delete..

   If you do not want to make the change, click Reset before clicking Save. The table is reloaded to its original state.

4. Click Save after your updates are complete, to save your changes to the treename database.

Chapter 4: Q&R Distributed Server Common Publishing Scenarios

This chapter discusses the Q&R Distributed Server common publishing scenarios using the RMWSLoad utility and the Q&R Distributed Server Administration interface to configure those utilities.

This section contains the following topics:

Mainframe Publish Using DTF Index

A MICF report or Q&R Query is run through production reporting, generating a CSV or SASLIST in a DTF index. RMWSLoad is then run to retrieve the DTF index and produce a series of charts based on this data.

How to Create a Mainframe Publish Using a DTF Index

1. Run Q&R Distributed Server Administration
2. File->Publish Output to Q&R Web Reporting
3. Enter Job Name
4. Source Tab
    a. Publish Type: Mainframe
    b. Choose appropriate Q&R Mainframe Server
    c. Enter Correct DTF Index Name
    d. Append MICF Query Name–Optional.
5. Log File Information
    a. Path–Allow to default or modify to site requirements.
    b. Filename–RMWSLoad-jobname.log
    c. Message Detail Level–defaults to 1

6. Filter Tab–Optional
    a. Select the Earliest date to start downloading data.
    b. Select–Optional
    c. Reject–Optional.
7. Web Reporting Tab
    a. Check Publish to Web Reporting
    b. Enter Web Reporting Path. This is the path to which the web pages are published.
    c. Enter a Category–Optional. This is a grouping under which the reports are stored on the web page. When blank the Category is set to the MICF group name associated with the output.
    d. Index Page Name–Default index.htm
8. Scheduling–Not Required

    Note: For information on scheduling, see the section, How to Create a Scheduled Mainframe Publish Using a DTF Index.
9. Image Properties
    a. Width–12000
    b. Height–7000
10. Click Add
11. Click Run
12. As the job runs, a message appears in the status bar every 30 seconds indicating the progress of the job.
13. When the job is complete a dialog appears to indicate the job is complete.
14. Click the log button to view the log to verify that the job ran successfully.
15. On the Web Reporting Tab click on the Folder Icon to open the Web Reporting Path Directory folder to view your Web Reporting Output

Scheduled Mainframe Publish Using DTF Index

RMWSLoad jobs can be scheduled to run based on the completion of the MICS job stream.

How to Create a Scheduled Mainframe Publish Using a DTF Index

To create a scheduled Mainframe Publish using a DTF Index requires that definitions be completed both in Q&R Distributed Server Administration and in MICF to allow the scheduling to take place.

Defining a Scheduled Job in MICF

See MICF Documentation on reporting job stream Execution Options panel for details on set up requirements in MICF.

Defining a Scheduled Job in Q&R Distributed Server Administration

1. Run Q&R Distributed Server Administration
2. File->Publish Output to Q&R Web Reporting
3. Enter Job Name
4. Source Tab
    a. Publish Type: Mainframe
    b. Choose appropriate Q&R Mainframe Server
    c. Enter Correct DTF Index Name
    d. Append MICF Query Name–Optional.
5. Log File Information
    a. Path–Allow to default or modify to site requirements.
    b. Filename–RMWSLoad-jobname.log
    c. Message Detail Level–defaults to 1
6. Filter Tab–Optional
    a. Select the Earliest date to start downloading data.
    b. Select–Optional
    c. Reject–Optional
7. Web Reporting Tab
    a. Check Publish to Web Reporting
    b. Enter Web Reporting Path. This is the path to which the web pages are published.
    c. Enter a Category–Optional. This is a grouping under which the reports are stored on the web page. When blank the Category is set to the MICF group name associated with the output.
    d. Index Page Name–Default index.htm

8. Scheduling–Required to Schedule
    a. Enter RMWSLoad Job Name. This corresponds to the RMWSLoad Job Name in the MICF Reporting Job Stream Execution Options panel.
    b. Check Automatically run when the job stream completes.
9. Image Properties
    a. Width–12000
    b. Height–7000
10. Click Add
11. This job will run when the associated MICS processing completes.

Distributed Publish

A Distributed Publish allows you to publish data that has been generated by an adhoc Q&R Query or previously downloaded by a Mainframe Publish using a DTF Index.

How to Create a Distributed Publish

1. Run Q&R Distributed Server Administration
2. File->Publish Output to Q&R Web Reporting
3. Enter Job Name
4. Source Tab
    a. Publish Type: Distributed
    b. Click the Binocular Icon and choose the path of the directory to publish.
5. Log File Information
    a. Path–Allow to default or modify to site requirements.
    b. Filename–RMWSLoad-jobname.log
    c. Message Detail Level–defaults to 1
6. Web Reporting Tab
    a. Check Publish to Web Reporting
    b. Enter Web Reporting Path. This is the path to which the web pages are published.
    c. Enter a Category. (Required) This is a grouping under which the reports are stored on the web page.
    d. Index Page Name–Default index.htm

7. Scheduling–Not Required
8. Image Properties
    a. Width–12000
    b. Height–7000
9. Click Add
10. Click Run
11. As the job runs a message will appear in the status bar every 30 seconds indicating the progress of the job.
12. When the job is complete a dialog appears to indicate that the job is complete.
13. Click the log button to view the log to verify that the job ran successfully.
14. On the Web Reporting Tab click on the Folder Icon to open the Web Reporting Path Directory folder to view your Web Reporting Output.

Distributed Publish Using a ZFS Directory

Mainframe data can be directly published to ZFS directory structures and accessed from Q&R Query. This information can also be directly published from RMWSLoad using the Distributed Publish option.

See MICF Documentation on publishing directly to HFS/zFS directories.

How to Create a Mainframe Publish HFS/zFS directory

See MICF Documentation on publishing directly to HFS/zFS directories.

How to Create a Distributed Publish Using a HFS/zFS Directory

This is run as a distributed publish job type.

1. Run Q&R Distributed Server Administration
2. File->Publish Output to Q&R Web Reporting
3. Enter Job Name
4. Source Tab
    a. Publish Type: Distributed
    b. Click the Binocular Icon and choose the path of the directory to publish
    c. Check, Q&R Compatible Directory Structure.

5. Log File Information
    a. Path–Allow to default or modify to site requirements
    b. Filename–RMWSLoad-jobname.log
    c. Message Detail Level–defaults to 1
6. Web Reporting Tab
    a. Check Publish to Web Reporting
    b. Enter Web Reporting Path. This is the path to which the web pages are published.
    c. Enter a Category. This is a grouping under which the reports are stored on the web page.
    d. Index Page Name–Default index.htm
7. Scheduling–Not Required
8. Image Properties
    a. Width–12000
    b. Height–7000
9. Click Add
10. Click Run
11. As the job runs, a message appears in the status bar every 30 seconds indicating the progress of the job.
12. When the job is complete a dialog appears to indicate that the job is complete.
13. Click the log button to view the log to verify that the job ran successfully.
14. On the Web Reporting Tab click on the Folder Icon to open the Web Reporting Path Directory folder to view your Web Reporting Output.

SingleCSV Publish from Q&R Query

Web Reporting output can be generated directly from Q&R Charting. A SingleCSV job template must be defined in Q&R Distributed Server Administrator before it can be used by Q&R Query.

Defining a SingleCSV Template

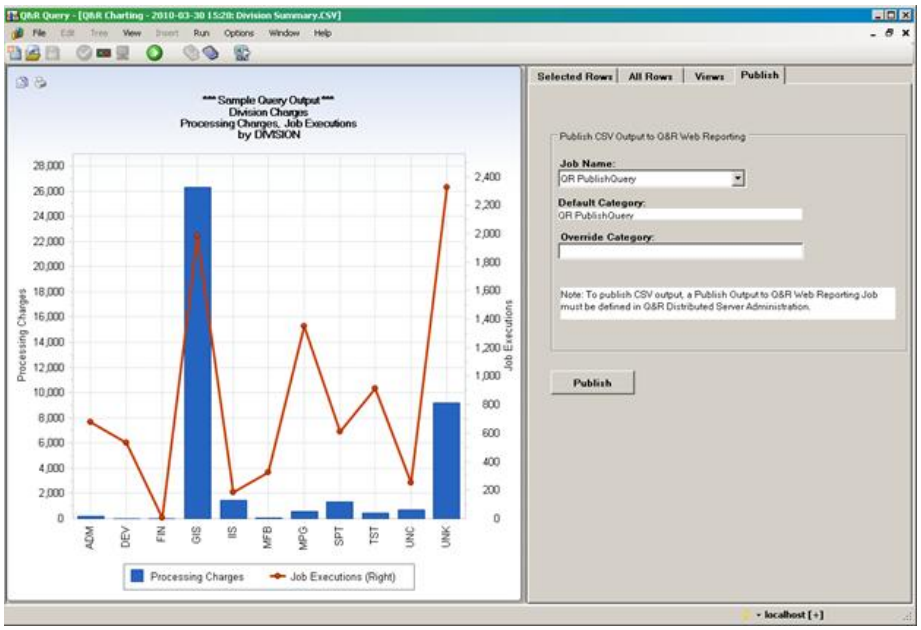
1. Run Q&R Distributed Server Administration
2. File->Publish Output to Q&R Web Reporting
3. Enter Job Name

4. Source Tab
    a. Publish Type: SingleCSV
5. Log File Information
    a. Path – Allow to default or modify to site requirements
    b. Filename – RMWSLoad-jobname.log
    c. Message Detail Level – defaults to 1
6. Web Reporting Tab
    a. Check Publish to Web Reporting
    b. Enter Web Reporting Path. This is the path the web pages will be published to.
    c. Enter a Category. This is a grouping that the reports will be stored under on the web page. Not required, this can be entered in Q&R Query, but if entered will be used as a default for future SingleCSV publishes.
    d. Index Page Name – Default index.htm
7. Image Properties
    a. Width – 12000
    b. Height – 7000
8. Click Add

Publishing in Q&R Query Using a SingleCSV Job

1. Open Output Retrieval
2. Open a Chart you want you publish
3. Choose the Publish Tab in the right hand pane
4. Select a Job Name
5. If a Category was provided in the SingleCSV Template it gets populated in the Default Category field
6. If you want to override or provide a Category type the category in the Override Category field.

7. Click Publish



The selected SingleCSV publish job is invoked.

8. When the report has completed, it can be viewed at the location defined in the Web Reporting Path defined in the SingleCSV Job.

Chapter 5: Using the Q&R Distributed Server Administration Utility Interface

The process of creating and maintaining utilities such as Publish Output to Web Reporting, Remove Output, Build/Refresh Meta Database and Maintain Meta database provides robust features to manage your Q&R Distributed Server Administration Utilities.

From the utility panels, you can create new utilities, update existing utilities, interactively run single utilities or groups of utilities and export utility definitions to .bat files for future execution or use in scheduled job streams in a Windows scheduler.

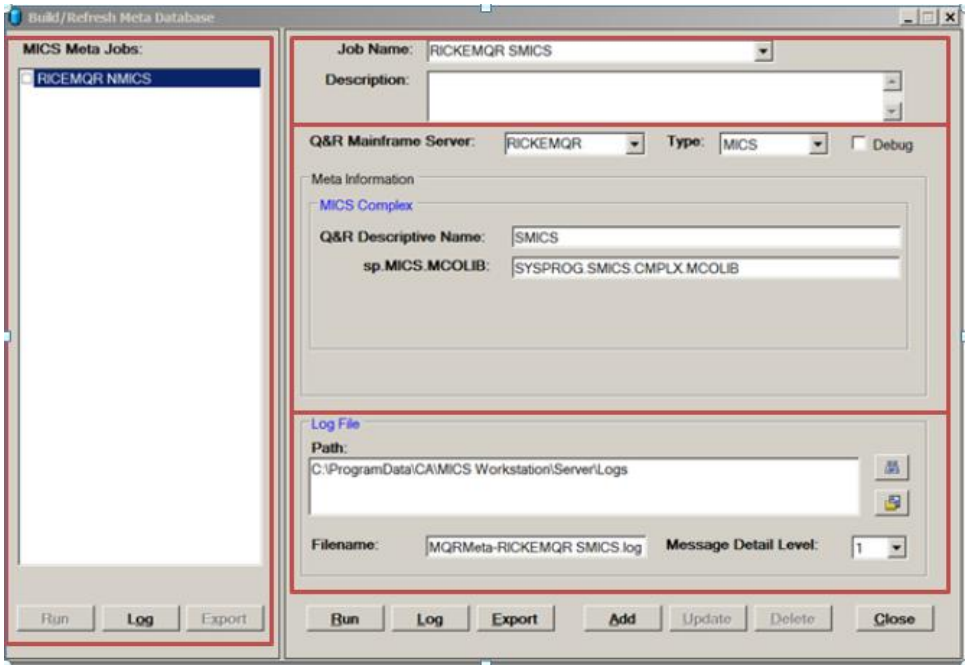
The user interface for the Q&R Distributed Server Administration utilities is now common across all of the administration utilities and many features of the user interface are shared.

As Build/Refresh Meta Database is the first utility that the administrator is required to run, it is used as an example here; however all panels share identical features.

This section contains the following topics:

Interface Overview

The panels are broken into the following functional areas as outlined below:



The left pane is common to all utilities and serves several purposes. It lists saved utility jobs and allows you to select them for editing or to run individually in the right pane. It also allows you to select multiple jobs by checking them first, and then clicking Run to run as a group. Finally, it allows multiple checked jobs to be exported to a .bat file for later execution by clicking the Export button. Clicking the Log button in the left pane shows the log for the most recently executed multi-execution job.

The top section of the right pane is where the Job Name and Job Description of individual utility jobs are defined. This section is common to all utilities. When creating a new utility job type a name to define the Job. The description field is optional, but can be useful if you have a large number of jobs defined. The job name field can also be used to select an existing job to edit. Click the dropdown arrow next to the field to display a list of all available jobs.

The middle section of the right pane is where utility parameters are defined. This section of the panel is different for each of the four utilities and requires customization.

The bottom section of the right pane controls logging of the utilities and is common to all utilities. By default, logs are saved in your Server Data directory in a "\Logs" subfolder. The Log File name is a combination of Utility-JobName (ex. MQRMeta-RICKEMQR SMICS.log). Message Detail Level controls the level of detail written to the log.

Note: When a utility completes, the log file is copied to a new file of the same name with a timestamp appended to the end of the filename. For example Utilitytype-JobName-yyyymmdd-hhmmssss.log.

Creating a New Meta Job Example

1. Start by clicking File, Build/Refresh Meta Database
2. Enter a Job Name to identify the Meta Job.

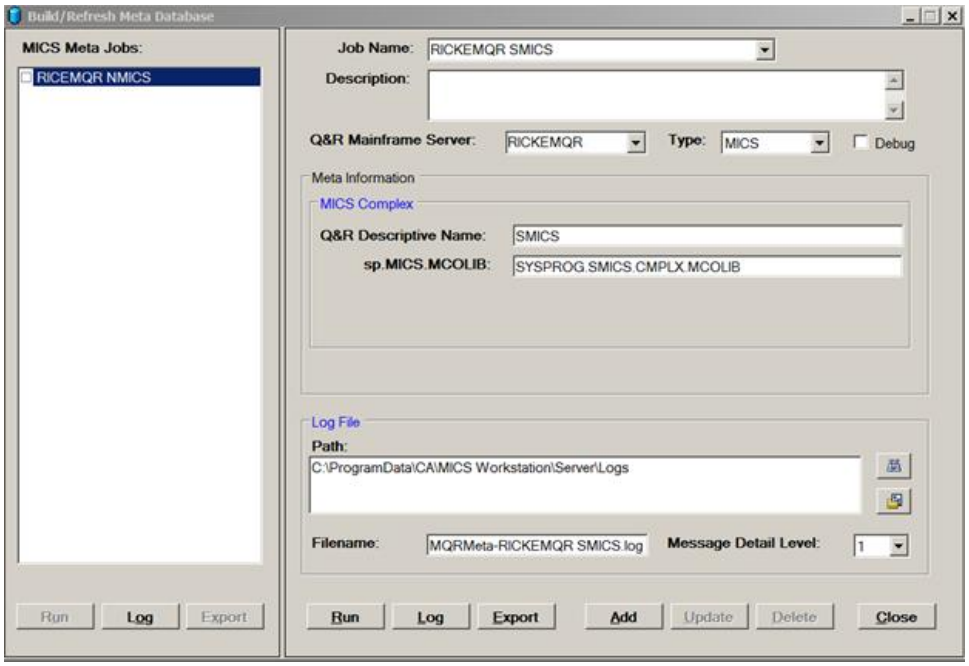
   Note: Consider using a naming convention when creating Jobs. For example, use the name of the Q&R Mainframe Server and the Q&R Descriptive Name combined as your Job Name when creating Meta Build jobs.
3. Enter a description of the Job.
4. Select the correct Q&R Mainframe Server
5. Select Type "MICS"
6. Enter Q&R Descriptive Name

   Note: This is the name that appears in Q&R Query when selecting a complex.

7. Enter the sp.MICS.MCOLIB name.

   In most cases, log setting can be left at the defaults unless you have specific requirements.

8. Click Add to save your Build/Refresh Meta Job.



At this point the Build/Refresh Job is saved and ready to be run. By clicking Run in the right pane the Build/Refresh Job begins execution immediately. Once execution begins, all buttons on the panel are disabled excluding the log button. The log can be viewed at any point during execution.

Executing Multiple Jobs

To execute multiple jobs in a single execution, use the left pane to select the jobs that you want to execute. To do this, click the check box next to the Jobs that you want to execute. After the desired jobs have been selected, there are two options, Export, or Run immediately.

Click the Export button to create a .bat file with only the selected Jobs contained in it. This is useful when building scheduled nightly jobs that can be executed using Windows scheduling package.

Click the Run button to execute all selected jobs immediately.

Click the log button on the left pane to view the log for a multiple job execution.

Note: When running multiple jobs the log file is always saved to the Server Data directory “\Logs\utilitytype-Multi.log”. When exporting the –l: parameter always specifies the Server Data Directory “\Logs\utilitytype-Multi.log”, but you can modify this to meet site requirements.

The –a: parameter is also modified when running multiple jobs. The first job is always assigned –a:n and subsequent jobs are assigned –a:A so that the logs are appended to a single log file.

The –a:A if specified on the first log file are not appended to the base utilitytype-Muti.log or utilitytype.log file when the –ts: parameter is specified. These files are generated after the utility is completed and cannot be appended.

When using the –ts: parameter the timestamp is the same for the entire job and is based off the beginning log file. All RMWSLoad jobs are appended to the log file with this timestamp. We do not recommend modifying the –ts: parameter in a multiple job stream, modification can result in unpredictable log output.

Chapter 6: Using the Q&R System Information Utility

The ability to gather and report information about your operating environment can be critical when you are reporting issues to CA Technical Support. The Q&R System Information Utility provides powerful assistance when you are gathering the necessary information.

Not only can this utility be useful when you are working with support, it is useful in your own environment when you want to locate files, diagnose common communication issues or to better understand your Q&R Workstation environment.

The user interface for the Q&R System Information Utility displays report sections in separate tabs to make finding information easy. A search feature lets you search for information within a tab. Print, copy, email, ping and NFS lookup capabilities are also provided to aid in debugging communication issues.

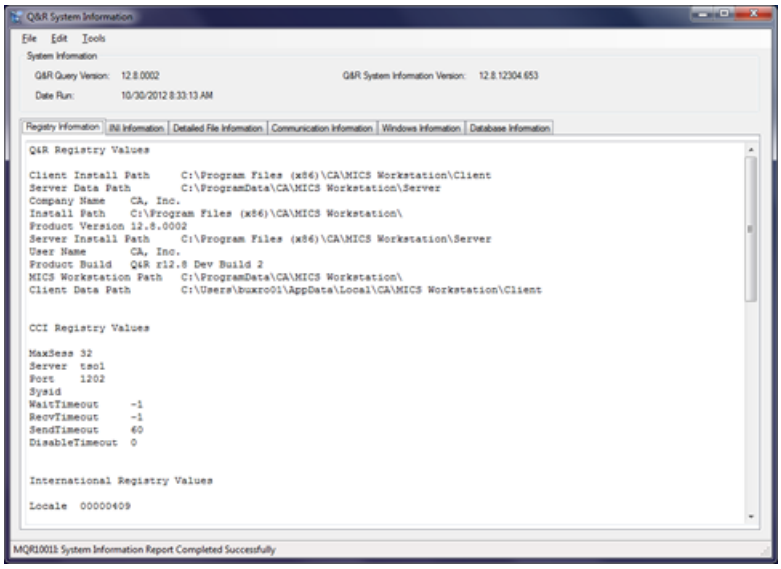
This section contains the following topics:

Interface Overview

The main window is divided into two primary areas.

- The top area provides key information about the installed Q&R Workstation release, the version of the Q&R System Information that ran the report and the time that the report was run.

- The next area displays the report contents with detailed tabs that are based on the report content. Each tab contains specific detailed subject matter.



Data Sources

The data in each tab comes from a unique data source; the data is grouped according to that data source on the following tabs:

- Registry Information -- This tab displays general information about your install environment including:
  - Registry information about Q&R Workstation
  - CA-CAICCI PC
  - International Registry Values for your Windows Workstation
- This information can be used to identify where Q&R Workstation is installed; it also includes the working directory locations. The information allows for easy identification of CA-CAICCIPC resources and International settings when you are working in a non-English environment.
- INI Information -- This tab returns information from INI sources. The path and name of the INI file are returned and the key and the data value for each entry in the ini file.

  Some ini files have been deprecated in favor of the MQRUtility.accdb. In those cases, the values from the database are displayed instead. The files that are displayed are: MICSQR.ini, MQRQuery.ini, and Utility.Ini (MQRUtility.accdb).

  This information allows you to quickly identify values stored in your INI files without the need to physically locate them on your hard drive.

- Detailed File Information -- This tab lists each file that is delivered on the installation media. The version of the file is included and a comparison is made with the files found on your system and the location where those files are found. Information is provided if the versions do not match or a file is not found.
- Communication Information -- This tab identifies the Query Client Settings for a Q&R Client machine and the Q&R Server Settings for a Q&R Distributed Server Machine. The Key information that is identified is: the IP Address, Port Number, and Q&R Distributed Server version number.
- Windows Information -- This tab provides information about the Windows operating system that the Q&R Query Workstation release is running on. This information includes: the Windows Operating System Name, version, special path names, path directories, the allocated memory, and the utilized and physical processor configuration. This information can be critical when you are debugging problems.
- Database Information -- This tab displays the locations of the .accdb files that are used by the Q&R Distributed Server. This information includes: the Meta, Treename, Options, Security, and Utility databases; it is critical when you want to install the product in different locations.

Other Features

Support for the following features has been added:

- Microsoft Outlook email

  Q&R System Information supports Outlook email. You can create an email report, attach it to an issue, and send it directly to CA Technical Support.

  Select Email Report from the File menu, and enter the issue number in the nnnnnnnn-n area on the subject line. The issue is sent automatically to CA Technical Support when you click Send. You can also add other people in the To and CC fields to customize your email.

- Ping Severs

  The ability to test ping your Q&R Distributed Server or Q&R Mainframe Server is directly built into the product. This feature is useful in diagnosing communications problems by allowing you to ping your servers and identify if you have connectivity to them.

  From the Tools menu, select Ping Severs.

  - For the Q&R Distributed Server, a list of available Q&R Distributed Servers is displayed for the machine you are logged onto.
  - For the Q&R Mainframe Server, a text box is displayed where you can enter the IP Address or DNS Name.

- NSLookup

  This option will perform an NSLookup command against the Distributed Server IP Address. When Q&R System Information is running on the Q&R Distributed Server machine it will return values from both the MICSQR.ini and the MQRQuery.ini and perform the lookup against both addresses. When run on a Q&R Query only machine it will only Query the MQRQuery.ini.

  NSLookup will return the domain name and IP address of the distributed server for your Q&R Query environment. This is useful in identifying and diagnosing potential communications problems.

  You can perform this task directly from the tools menu.

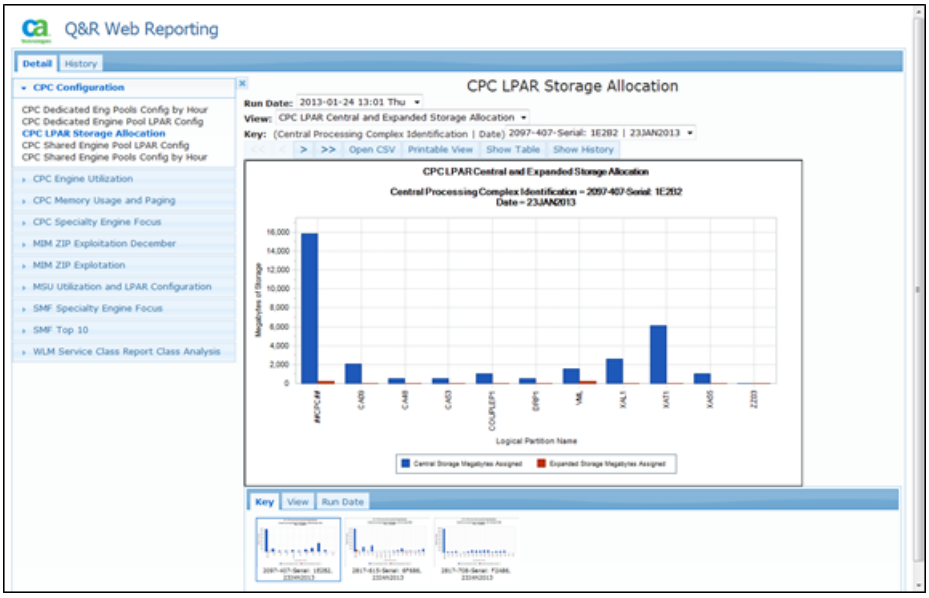
  Select Tools, NSLookup.

Chapter 7: Q&R Web Reporting Administration

Q&R Web Reporting is the feature of Q&R Workstation that lets your internal customers and information consumers view the Q&R Query and SAS report output on the Web. Reports are displayed in graphical or tabular form according to the visualization settings defined by the query authors.

Users who view the query output on the Web do not need any Q&R Workstation software installed; they only need a web browser and access to the location where the query content is published. This feature helps you to make meaningful information available to those who need it.

This chapter describes the tools the Q&R Administrator uses to publish new content and remove old content from the website.



This section contains the following topics:

Q&R Web Reporting Data Sources (see page 85)

Q&R Web Reporting Data Sources

Q&R Web Reporting has two valid sources for report output: MICF and Q&R Distributed Server. Report output from either source can be published and distributed in Q&R Web Reporting.

How to Publish Output to Q&R Web Reporting

The following steps walk you through the publishing process:

1. Open Q&R Distributed Server Administration.
2. Click File.
3. Click Publish Output to Q&R Web Reporting.
4. Select the Publish type, either Mainframe Server or Distributed Server. Fill in appropriate data source information. If you selected Mainframe, provide location criteria appropriate to the selected data source. When publishing output generated from MICF where the MICF Reporting Job Stream Execution Option “Use Q&R Compatible Directory Structure” is set to Y, use the Distributed Publish type and enter the UNC path of the ZFS directory associated with the MICF output.
5. (Optional) Click the Filter tab to define, select, or reject filter criteria.
6. Click the Web Reporting tab to define the directory. The directory for web publishing is typically c:\inetpub\wwwroot or a subdirectory of wwwroot.
7. Click the Image Properties tab to define the size of the images that will be generated by Q&R Web Reporting.
8. Click Run to publish interactively, or select reports in the left panel and click Export to create a .bat file that can be scheduled to run on a regular basis.

More information:

Publish Output to Q&R Web Reporting (see page 44)
Create a Publishing Definition (see page 46)
Q&R Distributed Server Common Publishing Scenarios (see page 67)

Remove Output from Q&R Web Reporting

Eventually you will need to eliminate old output that no longer has any technical currency with your audience.

To remove output, use the Data Administration Remove Output function.

More information:

Remove Output Files and Directories (see page 51)

Optimize Web Performance

To achieve optimal performance from your web site, we recommend that you enable dynamic content compression and static content compression on your IIS server. Content compression allows the content to be compressed before it is transmitted to the client.

For other web servers, refer to your web server documentation.

Chapter 8: Q&R Options Editor

Q&R Options Editor is the feature of Q&R Workstation that lets your administrator easily configure many global aspects of the Q&R Workstation environment. The Q&R Options Editor allows configuration of utility default settings, charting default settings and color mapping for Stacked by Key charts to be performed in a single place. The Q&R Options Editor unifies site administration of many parameters and eliminates the need for individual configuration files.

The Q&R Options Editor can be started from Start->All Programs->CA->MICS Workstation->Q&R Option's editor, or from the Q&R Distributed Server Administration application File Menu under Q&R Options Editor.

Options changed in the Q&R Options Editor are applied globally to all Q&R users accessing the same Q&R Distributed Server. This makes it easy to make site wide changes and apply site standards to your installation.

This section contains the following topics:

How to Navigate through the Options Editor (see page 89)

How to Navigate through the Options Editor

The options editor has two functional areas, the left pane displays a list of option categories you can select and the right pane displays the option names and values.

By selecting an options category on the left you will be presented with a grid of options on the right. Utilities and charting options are handled similarly, while color mapping has a separate interface.

Utilities and Charting Settings

The utilities and charting settings are presented in a 3 column grid, starting with the option name, followed by the CA delivered default and the site Global Value column. The CA delivered default values cannot be modified.

Changes to the Global Value column will be displayed in bold font. Editing of values is enforced through the interface. Prior to changing values refer to the documentation on the associated parameters

Utilities settings control the default values that appear in Q&R Distributed Server Administration when you create a new utility job.

Charting settings control the default values that appear in Q&R Charting when you create a new view definition.

To modify a value, click on the Global Value column for the setting you want to change and enter a new value. After completing your changes press Apply to save.

Utilities and Charting Interface

Find

Lets you to search through larger list of options for a specific value or option.

Apply

Saves changes.

Display

Shows the Default Options. When selected displays the CA provided default values.

Reset

Indicates that all site values, in the selected category can be reset back to the delivered CA values by choosing Reset->Reset Global Values. After choosing this option this grid is reset to the default values. When you are sure you want to save these values press Apply. To cancel the change choose another category or exit the Q&R Options Editor.

Color Mapping

Color Mapping is used to allow consistent mapping of colors to specified element values on Stacked by Key charts. This feature is used by both Q&R Charting and Q&R Web Reporting to ensure a consistent look for all Stacked by Key charts.

Color Mapping Interface

Color mapping is presented in two grids. The primary grid allows you to enter an Element Name, Element Value, Color or RGB value. The second, allows you to assign an aliases to a particular Element Name (element long name or label). The element name or Alias must match the column heading in the CSV.

Find

Lets you to search through larger list of options for a specific value or option.

Apply

Saves changes

Right Click Menu

Provides a context menu to Insert Row Above, Insert Row Below, or Delete a row when you Right click on the Row header.

Data Filter

Filters the data when you click on the funnel icon in the Element Name column header to restrict the display to a single element name.

Assigning Colors

You will need to assign colors if you want your Stacked by Key charts to always use the same colors for specified element names and values. This list will be checked whenever Q&R Charting or Q&R Web Reporting produces a 2D-Bar Stacked by Key chart. When the CSV Column Name on the View Definition's Axis Definitions tab is set to Stack and the stack element name and value are in the Options Editor color mapping list, the associated color is assigned to the chart. If the element name and value are not on the list, a default color from the selected palette is applied. Note: Color consistency between charts is not guaranteed unless it is defined in the color map list.

For example: if you have determined that every time you produce a 2D-Bar Stacked by Key chart where System Identifier has been selected as the stack column and you always want SYS1 to be blue and SYS2 to be red and SYS3 to be green do the following procedure.

Follow these Steps:

1. Select Color Mapping

   If this is the first time you are entering color mapping you will be presented with a blank row. If not you can right click on the row header and choose Insert Row After, which will pre-populate the row with the Element name of the element above the row you are inserting.

   Enter the Element Name – "System Identifier"

   Enter the Element Value – "SYS1"

2. Click in the Color column and use the color selector to choose red.
3. Right click on the row header and select Insert Row After and repeat the process for SYS2 and SYS3 selecting blue and green.
4. Click Apply.

In the future any time you produce a 2D-Bar Stacked by Key chart, where System Identifier is the stack column, the values will be charted in the selected colors.

Assigning Aliases

When the same element is used in CSV output by different column names you can add an alias to map to the values and colors without having to redefine them separately.

For example if you have color mappings defined by System Identifier and you want those colors to be used when charting output where the CSV column name is SYSID you can accomplish this by adding an alias “SYSID” for “System Identifier”. To add the alias select ”System Identifier” in the top grid, and then enter “SYSID” in the “Aliases for System Identifier” grid at the bottom of the screen. To add additional aliases you can right click on the row header and choose Insert Row Above or Insert Row After. To delete an alias click on the row header and select Delete. After you have completed your updates, click Apply to save your changes.

Appendix A: Q&R Distributed Server Utilities

This appendix describes the Q&R Distributed Server utilities used by Q&R Distributed Server Data Administration. This information provides a low-level reference to the .bat files that are created using the export file function of Q&R Distributed Server Data Administration. We recommend that you use Q&R Distributed Server Administration to create the .bat files.

These Q&R Distributed Server utilities are equivalent to the Q&R Distributed Server Data Administration functions shown in the following list:

Q&R Distributed Server Data Administration Functions	Q&R Distributed Server Utility	Sample .bat File
Build/Refresh Meta Database Maintain Meta Database	MQRMETA utility	MQRMETA.BAT
Publish Output to Q&R Web Reporting	RMWSLOAD utility	RMWSLOAD.BAT
Remove Output	RMWSPARE utility	RMWSPARE.BAT

Notes:

- Q&R Distributed Server Administration has an export feature that creates .bat files. We recommend that you use this feature to create batch files.
- This appendix provides information that lets you manually:
  - Alter an existing .bat file that was generated using the export feature
  - Create a .bat file
  - Combine .bat files into a single job.
- After a .bat file is created, it can be scheduled to run in the background using the Windows Control panel or equivalent software. To run the .bat file successfully in Windows 7 as a scheduled task, select the “Run with Highest Privileges“ checkbox in the task properties, Security Options section.

This section contains the following topics:

More information:

Q&R Distributed Server (see page 27)

MQRMETA Utility

The MQRMETA utility populates the Q&R Meta Database and deletes Q&R Meta Database entries. It resides on the Q&R Distributed Server under the Q&R Distributed Server directory.

Before running the MQRMETA utility, ensure that both the Q&R Distributed Server and the Q&R Mainframe Server are running.

Note: MQRMETA.BAT, a sample .bat file, contains both required and optional parameters. Due to the margin limitations in this guide, the syntax of the MQRMETA command is shown in two lines. The following rules apply:

- Do *not* code multiple lines. Continuation lines are not permitted.
- Spaces are not permitted between a parameter and its value.
  For example: -x:y.
- If any of the parameters contain one or more spaces in its value, the value must be enclosed in double quotes. For example:

  ```
  -n:"DEV2014 COMPLEX"
  ```

How to Build a Meta Database Using the MQRMETA Utility

Q&R Distributed Server Administration automatically generates .bat files that can be scheduled to run utilities on a regular basis. This is the easiest way to create a bat file. Once the bat file is created, you can customize it for your needs.

To generate a MQRMETA utility batch job for building Meta database

1. Use Q&R Distributed Server Administration and click the Build/Refresh Meta Database toolbar icon.

   The Build/Refresh Meat Database panel appears.

2. Add or select an existing Build/Refresh Meta Database job for the Meta Information to be added.
3. Click the Export Button and save the settings to a batch file.

   The save dialog appears.
4. Enter a filename and click Save.

   A batch file is generated to execute the job using the settings on the right hand pane.
5. If necessary, use Notepad or another text editor to edit the batch file and change the parameters. Use the information below to code valid parameter settings.
6. To select multiple jobs for export, click the check boxes on the left hand pane, then click the export button in the left pane and save the settings to a batch file.

   A batch file is generated to execute the selected bath jobs in sequence and append all of the output to a single log file with a timestamp. Other job parameters will be set according to the values assigned to the individual job.

Note: Existing Batch Jobs can be edited directly using Notepad or another text editor.

Note: When executing multiple jobs through Q&R Distributed Server Administration, the timestamp is automatically appended to the log file and the log files are appended for all jobs in the batch job.

Optionally, you can manually create a batch job to specify MQRMETA utility parameters for building Meta database.

To manually create a batch job

1. Open the sample batch file, MQRMETA.BAT using Notepad or another text editor

   The sample batch file information appears
2. For each CA MICS complex, specify the following string:

   ```
   MQRMETA -m:mainframe-server-name -n:idname -s:saslib -x:micsflag -l:logname
   -a:logmode
   MQRMETA -m:mainframe-server-name -n:idname -s:saslib -x:micsflag -g:group -b:
   subgroup -l:logname -a:logmode
   ```

   Running the MQRMETA utility builds the Meta database.

Required Parameters

The required parameters are listed in the following table:

Parameter	Description
MQRMETA	Application name. This must be present at the beginning of the command string.
-m:	The Q&R Mainframe Server identified in JCLDEFC. This parameter must match the MQRMSN parameter you specified in the JCL for the Q&R Mainframe Server.
-n:	User-defined name identifying the CA MICS complex or non - CA MICS SAS database associated with this run. For example: -n:"MICS production" Q&R Query uses this name to categorize SAS files stored in the Meta Database. It is used in place of the actual CA MICS complex or SAS database data set names. Note: Do not assign the same name for the CA MICS database and the stand-alone SAS database when they are located on the same mainframe.
-s:	If you are running MQRMETA to retrieve information about a CA MICS complex, specify the name of the data set that contains the CA MICS Meta Database on the mainframe. Typically, this is given as follows: *sharedprefix*.MICS.MCOLIB where *sharedprefix* is your CA MICS complex sharedprefix. To retrieve file content information about SAS databases for access with Q&R Query, specify the data set name of the SAS database on the mainframe.
-x:	Flag indicating whether you are running MQRMETA against a CA MICS complex or a non-CA MICS SAS database. Specify y if it is CA MICS. Specify n if it is SAS database.

Additional Required Parameters for non-CA MICS SAS Processing Only

Parameter	Description
-g:	Name of a user-defined group with which the non - CA MICS SAS database is associated. This is required when processing non - CA MICS data sets (-x:n). You can consider a group as a category or a complex of non - CA MICS SAS libraries. For example, all non - CA MICS SAS databases that contain accounting files can be added under the group Accounting.
-b:	Name of a user-defined subgroup with which the non-CA MICS SAS database is associated. This is required when processing non-CA MICS data sets (-x:n). You can consider subgroup a sub-category or a unit within a complex. For example, all non-CA MICS SAS databases containing detail accounting journal files can be added under the subgroup Journal.

Optional Parameters

The optional parameters are listed in the following table:

Parameter	Description
-l:	Name of the log file produced when the MQRMETA utility is run. This file contains messages about previously processed items. Default: MQRMETA.LOG.
-h:	Log Message Detail level. This parameter sets the level of detail for messages produced in the log file specified by the -l parameter. The levels can be 1, 2 or 3, where 1 is normal, 2 is above normal and 3 is high detail. Use of levels 2 and 3 is recommended only if a problem cannot be resolved without additional messaging. Default: 1. Use for normal processing.
-a:	Logmode. If logmode A, log messages will be appended to the log file. Default: N. The log file is replaced each time you run the MQRMETA application.
-d:	Debug mode. To display extra diagnostic messages in the SASlog, set this parameter to Y. The debug mode is automatically set to Y when -h is greater than 1. Default: N. Extra diagnostic messages are not added to the SASLog.

Parameter	Description
-ts:	Automatically generates a timestamp on the end of the logfile in the format yyyymmdd-hhmmssss. This parameter can be set to Y, N or a timestamp value. In addition, you can create a -ts value with any text that would be allowed in a Microsoft Windows filename. (For example: -ts:Monday). The value that you choose will be appended to the log file name when the batch file is executed. In this case you would be responsible for writing any code necessary to generate variable values that would be used when the job executes. Default: N. No timestamp appended to the filename. ■ "Y": Allows the utility to generate a timestamp when the batch job executes. Use this only for .bat files that run a single job or when the log output is not appended. ■ "value"yyyymmdd-hhmmssss: A timestamp value of the default format generated by the Q&R Distributed Server administration program. The batch file initializes the timestamp value and passes it to the utility program so output from multiple jobs can be appended to the same log file.

Examples:

The following MQRMETA command string loads a CA MICS complex:

```
MQRMETA -m:MQRHOST -n:"TSO1 complex" -s:TSO1.MICS.MCOLIB
```

The following MQRMETA command string loads a non - CA MICS SAS database. The string must be coded on a single line:

```
MQRMETA -m:MQRHOST -n:"SAS DB1" -s:PROD.SAS.CPE.DB -x:n -g:SASAccounting -b:UNIT1
```

How to Delete Meta Database Entries Using the MQRMETA Utility

To remove Meta Database entries, run the MQRMETA utility with the parameters shown in the following tables.

Required Parameters

The required parameters are listed in the following table:

Parameter	Description
MQRMETA	Application name. Must be present at the beginning of the command string.
	A string defining the table entries to delete. The string must be in one of the following formats:
	-k:"*mainframe-server-name*" Deletes all tables associated with the specified Q&R Mainframe Server.
	-k:"*mainframe-server-name*|*idname*" Deletes all tables associated with the specified Q&R Mainframe Server or idname (CA MICS complex or non - CA MICS SAS database identifier).
	-k:"*mainframe-server-name*|*idname*|*group*" Deletes all tables associated with the specified Q&R Mainframe Server or idname, and group. This applies only to entries associated with a non-CA MICS SAS database.
	-k:"*mainframe-server-name*|*idname*|*group*|*subgroup*" Deletes all tables associated with the specified Q&R Mainframe Server or idname and group or subgroup. This applies only to entries associated with non-CA MICS SAS database.
	where: *mainframe-server-name* Q&R Mainframe Server name. This must match the MQRMETA -m: parameter specified when the corresponding Meta Database tables were built.
	idname Identifier used in the MQRMETA -n: parameter when the corresponding database was built.
	group Name of a user-defined group with which the SAS database is associated. This must match the MQRMETA -g: parameter used when the corresponding entries were built.
	subgroup Name of a user-defined subgroup with which the SAS database is associated. This was used in the MQRMETA -b: parameter when the corresponding entries were built.

Parameter	Description
	Example: The following example deletes all table entries associated with Q&R Mainframe Server MQRHOST and the CA MICS complex named TESTCOMPLEX. MQRMETA -k:"MQRHOST|TESTCOMPLEX"

Optional Parameters

The optional parameters are listed in the following table:

Parameter	Description
-l:	Name of the log file produced when the MQRMETA utility is run. This file contains messages about previously processed items. Default: MQRMETA.LOG.
-h:	Log Message Detail level. This parameter sets the level of detail for messages produced in the log file specified by the -l parameter. The levels can be 1, 2 or 3, where 1 is normal, 2 is above normal and 3 is high detail. Use of levels 2 and 3 is recommended only if a problem cannot be resolved without additional messaging. Default: 1. Use for normal processing.
-a:	Logmode. If logmode A, log messages will be appended to the log file. Default: N. The log file is replaced each time you run the MQRMETA application.
-d:	Debug mode. To display extra diagnostic messages in the SASlog, set this parameter to Y. The debug mode is automatically set to Y when -h is greater than 1. Default: N. Extra diagnostic messages are not added to the SASLog.

Parameter	Description
-ts:	Automatically generates a timestamp on the end of the logfile in the format yyyymmdd-hhmmssss. This parameter can be set to Y, N or a timestamp value. In addition, you can create a –ts value with any text that would be allowed in a Microsoft Windows filename. (For example: –ts:Monday). The value that you choose will be appended to the log file name when the batch file is executed. In this case you would be responsible for writing any code necessary to generate variable values that would be used when the job executes. Default: N. No timestamp is appended to the filename ■ "Y": Allows the utility to generate a timestamp when the batch job executes. Use this only for .bat files that run a single job or when the log output is not appended. ■ "value" yyyymmdd-hhmmssss: A timestamp value of the default format generated by the Q&R Distributed Server administration program. The batch file initializes the timestamp value and passes it to the utility program so that output from multiple jobs can be appended to the same log file.

RMWSLOAD Utility

The RMWSLOAD utility is used to publish query results on the Q&R Distributed Server. Depending on the settings specified, it can download results for access by the Q&R Web Reporting feature or for viewing by Q&R Query.

The RMWSLOAD utility performs the following functions:

- Downloads output files from the mainframe to the Q&R Distributed Server
- Optionally, publishes the downloaded output file and creates .PNG graphics files for use by Q&R Web Reporting

Specify Parameters for Q&R Web Reporting

Q&R Distributed Server Administration automatically generates .bat files that can be scheduled to run utilities on a regular basis. This is the easiest way to create a bat file. Once the bat file is created, you can customize it for your needs.

To generate a RMWSLoad utility batch job for building a Q&R Web Reporting Job

1. Use Q&R Distributed Server Administration and click the Q&R Web Reporting toolbar icon.

   The Q&R Web Reporting panel appears.

2. Add or select an existing Q&R Web Reporting job for the Web Reporting Information to be added.

3. Click the Export Button and save the settings to a batch file.

   The save dialog appears.

4. Enter a filename and click Save.

   A batch file is generated to execute the job using the settings on the right hand pane.

5. If necessary, use Notepad or other text editor to edit the batch file and change the parameters. Use the information below to code valid parameter settings.

6. To select multiple jobs for export, click the check boxes on the left hand pane, then click the export button in the left pane and save the settings to a batch file.

   A batch file is generated to execute the selected bath jobs in sequence and append all of the output to a single log file with a timestamp. Other job parameters will be set according to the values assigned to the individual job.

Notes:

- Existing batch jobs can be edited directly using Notepad or another text editor.
- When executing multiple jobs through Q&R Distributed Server Administration the timestamp is automatically appended to the log file and the log files are appended for all jobs in the batch job.

Before you run RMWSLOAD.BAT, specify the required parameters. Optionally you can manually create a batch job to specify RMWSLOAD utility parameters for Q&R Web Reporting.

To manually create a batch job

1. Edit the RMWSLOAD.BAT file in the Q&R Distributed Server application's directory using Notepad or a text editor.

2. Specify the following command string:

```
RMWSLOAD -m:mainframe-server-name -i:prefix.DTF.INDEX
   -g:download area -l:logfilename -n:download category
   -j:distributed-server-source -d:csv-age-in-days -c:image-height
   -f:image-width -y:htmlindex -o:download type -a:logmode
```

Note: Due to margin limitations, the indented lines actually contain the trailing characters from the preceding line. Continuation lines are *not* permitted.

If any of the parameters contain one or more spaces in its value, the value must be enclosed in double quotes. For example:

```
RMWSLOAD -n:"PRODUCTION REPORTS"
```

Required Parameters

The required parameters are listed in the following table:

Parameter	Description
RMWSLOAD	Application name. This must be present at the beginning of the command string.
-o:	Designation indicating whether Q&R Web Reporting is publishing output files from either a mainframe (-o: MAINFRAME) or Q&R Distributed Server (-o: DISTRIBUTED) source.
-m:	The Q&R Mainframe Server name. This parameter must match the MQRMSN parameter you specified in the JCL for the Q&R Mainframe Server.
-i:	Name of the DTF index file on the mainframe. Use when publishing from the mainframe.
-j:	Location for distributed source output file downloads. For example, C:\Program Files\CA\CA MICS Workstation\Server\DS Output. Use when publishing from the Q&R Distributed Server.
-g:	User-defined download target directory for the output files on the PC. For example: C:\inetpub\wwwroot\CA MICS reports.
-n:	User-defined category for the download. This name becomes the subdirectory below the download target path.

Optional Parameters

The optional parameters are listed in the following table:

Parameter	Description
-w:	Publish to Web Reporting. This parameter may be set to N when the -o parameter is set to MAINFRAME. When this parameter is N, output is downloaded and accessible from Q&R Query, but is not published to a target directory. Default: Y
-d:	Age of earliest output files to download, in days. Files older than this number of days are not downloaded. Default: No date selected
-s:	Selection string indicating user and inquiry prefixes. For example: -s:JANE,CPU or -s:WRKNUM,RMF downloads only output files created by JANE (or JANE1, and so on) from queries beginning with the characters CPU .or output files created by job WRKNUM from queries beginning with the characters RMF. Note: For MICF-generated CSV data, the MICF inquiry name (represented by the “U” record or the “J” record if present in the MICF DTF INDEX file) are used as the USERID filter criteria.
-r:	Rejection string. See -s: for the format. Note: Selection is always applied before testing the rejection string.
-y:	Name of the default HTML page for Q&R Web Reporting. Default: INDEX.HTM.
-l:	Name of the log file produced when the application is run. This file contains messages about the success or failure of the application. Default: RMWSLOADWR.LOG
-h:	Log Message Detail level. This parameter sets the level of detail for messages produced in the log file specified by the -l parameter. The levels can be 1, 2 or 3, where 1 is normal, 2 is above normal and 3 is high detail. Use of levels 2 and 3 is recommended only if a problem cannot be resolved without additional messaging. Default: 1. Use for normal processing.

Parameter	Description
-a:	Logmode. If logmode A, log messages are appended to the log file. Otherwise, logmode is N and the log file is replaced. Default: N
-c:	Height of the image, in twips, that Q&R Web Reporting generates. Default: 7000
-f:	Width of the image, in twips, that Q&R Web Reporting generates. Default: 12200
-e:	When used on the command line, it specifies the maximum number of charts to generate per view. Default: Value of the “QR Charting MaxChartsPerView” setting in the "QR Charting Settings" section of MICSQR.INI. If the entry is missing from the .ini file or set to 32767, the number of charts is not limited.
-v	When set to “Y” to build the report name in Q&R Web Reporting as MICF Inquiry Title (MICF Inquiry Name). Default: Value of the “AppendQName" setting in the “Server” section of MICSQR.INI. If the entry is missing from the .ini file it defaults to “N”.

Parameter	Description
-ts:	Automatically generates a timestamp on the end of the logfile in the format yyyymmdd-hhmmssss. This parameter can be set to Y, N or a timestamp value. In addition, you can create a –ts value with any text that would be allowed in a Microsoft Windows filename. (For example: –ts:Monday). The value that you choose will be appended to the log file name when the batch file is executed. In this case you would be responsible for writing any code necessary to generate variable values that would be used when the job executes. Default: N No timestamp is appended to the filename "Y": Allows the utility to generate a timestamp when the batch job executes. Use this only for .bat files that run a single job or when the log output is not appended. "value" yyyymmdd-hhmmssss: A timestamp value of the default format generated by the Q&R Distributed Server administration program. The batch file initializes the timestamp value and passes it to the utility program so that the output from multiple jobs can be appended to the same log file.

Examples

- This example shows a RMWSLOAD.BAT file that publishes an output file from a mainframe server for Q&R Web Reporting:

  RMWSLOAD -m:MQRHOST -i:TSO1.DTF.INDEX -g:"C:\Program Files\CA\CA MICS" -n:"Daily Reports"-y:"Index.htm" -o:MAINFRAME

- This example shows a RMWSLOAD.BAT file that publishes an output file from a distributed server for Q&R Web Reporting:

  RMWSLOAD -g:"C:\pub\Reports" -j:"C:\Program Files\CA\CA MICS" -n:"System Reports" -y:"Index.htm" -o:DISTRIBUTED

  Note: Be sure to code the command string on a single line. Continuation is not supported.

Special Condition:

Under certain circumstances, you might find this parameter useful:

Parameter	Description
-k:	Activates the recovery mode to rebuild damaged output data and indexes for Q&R Web Reporting. It is activated with a Y value and deactivated with an N value. Default: N

RMWSLoad Return Code Notes

- When RMWSLoad completes, it passes a return code back to indicate the success or failure of the utility.

  Under normal conditions RMWSLoad issues this message at the end of the log file:

  MQR2013I: Processing completed with RC=0

  The message provides the actual return code if it is a value other than "0".

  Since an actual Exit Code is provided, it can be used in the batch job and tested. Use the batch command ERRORLEVEL to control the batch processing if you want to terminate processing of future RMWSLoad jobs because of a timeout condition.

- To cause Q&R Distributed Server Administration to generate the necessary control statements automatically in your batch jobs, select the Return Code Processing check box when you are exporting multiple RMWSLoad jobs.

- When you are exporting a single RMWSLoad job from the right side of the Publish Output to the Q&R Web Reporting panel, the additional control statements are not added because they are not necessary. This action prevents the additional steps in the job from executing when a return code 16 is encountered; this is useful since a CCI failure the most likely cause of the return code 16.

  Be aware that this return code can be for other reasons such as a failed data set recall; therefore you might want to turn this feature off.

Example

```
RMWSLOAD -g:"C:\pub\Reports" -j:" C:\ProgramData\CA\MICS
Workstation\Server\CASamples\CA Sample Reports\USER1\CAQ001 - Division Summary
" -n:"System Reports" -y:"Index.htm" -o:DISTRIBUTED

IF %ERRORLEVEL% EQU 16 GOTO TimoutCond

RMWSLOAD -g:"C:\pub\Reports" -j:" C:\ProgramData\CA\MICS
Workstation\Server\CASamples\CA Sample Reports\USER1\CAQ002 - Division Detail"
-n:"System Reports" -y:"Index.htm" -o:DISTRIBUTED
```

```
IF %ERRORLEVEL% EQU 16 GOTO TimoutCond

IF %ERRORLEVEL% EQU 0 GOTO Exit

:TimeoutCond

ECHO Timeout occurred, ERRORLEVEL=%ERRORLEVEL%

ECHO OFF

:Exit

IF %ERRORLEVEL% EQU 0 ECHO RMWSLoad completed successfully,
ERRORLEVEL=%ERRORLEVEL%
```

Notice that after the last RMWSLoad statement, there is a second "If statement" that tests for an ERRORLEVEL EQU 0. This statement prevents the code from falling into the TimeoutCond routine and it is required.

RMWSPARE Utility

The RMWSPARE utility removes output files and directories.

Specify Parameters for Remove Output

Q&R Distributed Server Administration automatically generates .bat files that can be scheduled to run utilities on a regular basis. This is the easiest way to create a bat file. Once the bat file is created, you can customize it for your needs.

To generate a RMWSPare utility batch job for building a Q&R Remove Output Job

1. Use Q&R Distributed Server Administration and click the Remove Output toolbar icon.

   The Remove Output panel appears.

2. Add or select an existing Remove Output job for the Web Reporting Information to be added.

3. Click on the Export Button and save the settings to a batch file.

   The save dialog appears.

4. Enter a filename and click Save.

   A batch file is generated to execute the job using the settings on the right hand pane.

5. If necessary, use Notepad or other text editor to edit the batch file and change the parameters. Use the information below to code valid parameter settings.
6. To select multiple jobs for export, click the check boxes on the left hand pane, then click the export button in the left pane and save the settings to a batch file.

   A batch file is generated to execute the selected bath jobs in sequence and append all of the output to a single log file with a timestamp. Other job parameters will be set according to the values assigned to the individual job.

Notes:

- Existing batch jobs can be edited directly using Notepad or another text editor.
- When executing multiple jobs through Q&R Distributed Server Administration the timestamp is automatically appended to the log file and the log files are appended for all jobs in the batch job.

The RMWSPARE utility removes output files and directories.

The RMWSPARE.BAT file contains the following command string:

```
RMWSPARE -t:tree -d:pare-age -l:logfilename -a:logmode
```

Example: Removes output directory tree of all output files

The following command removes the output directory tree of all output files created more than a month ago:

```
RMWSPARE -t:C:\tree2 -d:30
```

Note: If any of the parameters contain one or more spaces in its value, the value must be enclosed in double quotes. For example:

```
RMWSPARE -t:"C:\tree 2" -d:30
```

Required Parameters

Parameter	Description
RMWSPARE	Application name. This name must be present at the beginning of the command string.
-pt	Pare Type specifies whether this is a Web Reporting or an Output Retrieval Pare Type; this is required to take advantage of any of the new features. Valid values:"W" for Web Reporting or "O" for Output Retrieval Default: 12.7 Compatibility Mode--new features are not available for use.

Parameter	Description
-t	Q&R Web Reporting or output retrieval path. Required for Q&R Web Reporting. Optional for output retrieval; however, if it is not specified, all directories available in output retrieval are scanned.

Optional Parameters

Parameter	Description
-d	The age criteria (in days) for deletion. The program removes output older than or equal to the number of days you specify. For example: Use 0 to delete all output. Use 1 to delete everything except today's output. Use 30 to delete all output 30 days old or older. Default: 0 Current day
-df	The age From criteria (in Days) for deletion to limit the pare range. This value must: ■ Be specified with the –d parameter and cannot be specified alone. ■ Always be larger than the –d parameter (further back in time). To delete everything for the last 30 days specify –df:30 –d:0, this deletes everything between the current date and 30 days ago.
-c	The conditional operator used in conjunction with the the –rc parameter. Be aware that this parameter: ■ Can only be used with a –pt:o Pare Type. ■ Requires the -rc parameter. If you code this parameter, the –rc parameter must be present. ■ Cannot be coded with the –u or – q. Valid Values: EQ, GT, GE Default: None

Parameter	Description
-rc	This is the return code value to be tested for in the pare operation. This parameter: ■ Can only be used with a –pt:O Pare Type and if it is coded, the –c parameter must be present. ■ Must be an integer value. ■ Cannot be coded with the –u or – q. The return code parameter evaluates each STATUS.LOG file in the Output Path specified comparing the EOX-nnn statement using the condition statement in the –c parameter and the return code specified in the –rc statement. Example: "-pt:o–t:…\Adhoc -c:EQ –rc:8" This statement would scan every STATUS.LOG file found in every directory under the …\Adhoc tree looking for any that contain an EOX-nnn statement where nnn is equal to 8. Warning: Specifying –c:GE -rc:0 will delete all output in your output retrieval tree. Use caution when using this command.
-u	The User ID to be removed from the Output Retrieval tree. Be aware of the following: ■ When specifying –u, the Output Path cannot be specified any lower than the \Adhoc level or no items will be found to pare. ■ This parameter must be specified with the –pt:O parameter. ■ If you specify the Output Path at the Server Level, the User ID will be pared across all Hosts in your environment for the dates specified. ■ If –d:0 is specified, the user and all query output will be removed. Default: None

Parameter	Description
-q	The Query Name to be removed from the output Retrieval tree. Be aware of the following: ■ When you specify –q, the Output Path cannot be specified any lower than the \User level or no items will be found to pare. ■ This parameter must be specified with the –pt:O parameter. ■ If you specify the Output Path at the Host level, the query will be removed from all Users under that Host in your environment for the dates specified. ■ If you specify the Output Path at the server level, the query will be removed from the entire environment for all Hosts for the date range specified. ■ If –d:0 is specified this will completely remove the query and all query output. Default: None
-l:	Name of the log file produced when the application is run. This file contains messages about the success or failure of the application. Default: RMWSPARE.LOG in the Q&R Distributed Server application directory.
-h:	Log Message Detail level. This parameter sets the level of detail for messages produced in the log file specified by the -l parameter: ■ The levels can be 1, 2 or 3, where 1 is normal, 2 is above normal and 3 is high detail. ■ Use of levels 2 and 3 is recommended only if a problem cannot be resolved without additional messaging. Default: 1. This setting should be used for normal processing.
-a:	Logmode. ■ If logmode is A, log messages are appended to the log file. ■ Otherwise, logmode is N and the log file is replaced. Default: N

Parameter	Description
-ts:	Automatically generates a timestamp on the end of the logfile in the format yyyymmdd-hhmmssss. This parameter can be set to Y, N or a timestamp value. In addition, you can create a –ts value with any text that would be allowed in a Microsoft Windows filename. (For example: –ts:Monday). The value that you choose will be appended to the log file name when the batch file is executed. In this case you are responsible for writing any code necessary to generate variable values that would be used when the job executes. Default: N. No timestamp is appended to the filename "Y": Allows the utility to generate a timestamp when the batch job executes. Use Y only for .bat files that run a single job or when the log output is not appended. "value" yyyymmdd-hhmmssss: A timestamp value of the default format generated by the Q&R Distributed Server administration program. The batch file initializes the timestamp value and passes it to the utility program so that the output from multiple jobs can be appended to the same log file.

Example:

The following example removes all output files older than 30 days from the C:\inetpub\wwwroot\webpubs directory on the C drive.

```
RMWSPARE -t:C:\inetpub\wwwroot\webpubs -d:30
```

Q&R Distributed Server Client Test Utility - Interface (MQRDSClient)

The Q&R Distributed Server Client Test Utility – Interface (MQRDSClient) utility tests connectivity to the Q&R Distributed Server. It can be run from either a client machine or from the Q&R Distributed Server machine. It produces a report that provides debugging support.

Note: If MQRDSClient does not work properly on your system, try using the DSClient (see page 115) utility, a command-line interface with the same function.

MQRDSClient performs the following functions:

- It connects to the server machine, passing a standard connection string.
- It performs a *netstat* command on the server machine to determine the port's availability and status.
- It pings the server machine to make sure it is connected to the network.

Test Connectivity Using the MQRDSClient Utility

To run the MQRDSClient utility from your start menu

1. Click Start on your personal computer.
2. Click All Programs.
3. Click CA.
4. Click MICS Workstation.
5. Click Tools.
6. Click MQRDSClient Test Utility.

   A window appears with the required parameters (see page 114) and default values.
7. Review the default values in the fields at the bottom of the screen and change them, if necessary.
8. Click Start.

   The test results (see page 115) appear in the output window. The results can be saved and sent to CA Technical Support for analysis or printed for further review.

Required Parameters

Field Name	Description
IP Address	The name or IP address of the Q&R Distributed Server. Specify the machine name or a standard IP address. If the utility is running on the same machine as the Q&R Distributed Server, leave the default value. Default Value: localhost
Port	The port number of the Q&R Distributed Server. The utility will read this from the MICSQR.ini file. If the utility is being run from a client machine against a remote distributed server, the correct port number must be provided. Default Value: 20368

Results

The output that appears on your screen provides the results of three tests:

- The server-connection test sends a standard connection string to the Q&R Distributed Server to test basic connectivity. It returns the basic release level of the Q&R Distributed Server.
- The netstat test issues a *netstat* command to determine the port's availability and status.
- The ping test sends a message to the server machine to make sure it is connected to the network.

Q&R Distributed Server Client Test Utility – Command Line (DSClient)

The Q&R Distributed Server Client Test Utility – Command Line (DSClient) utility tests connectivity to the Q&R Distributed Server. It is run from the command line and can be run from either a client machine or from the Q&R Distributed Server machine. It produces a report that provides debugging support.

Note: If you cannot run MQRDSClient (see page 113) as a Windows client, you can get the same results from this command-line interface.

DSClient performs the following functions:

- It connects to the server machine, passing a standard connection string.
- It performs a *netstat* command on the server machine to determine the port's availability and status.
- It pings the server machine to make sure that it is connected to the network.

Test Connectivity Using the DSClient Utility

To run the DSClient utility from the command line

1. Type DSClient on the command line.
2. Press Enter.

   You are connected to the utility.
3. Type the host name or IP address (see page 116) when prompted.
4. Press Enter.

5. Type the port number (see page 116) when prompted.
6. Press Enter.

   The test results (see page 115) appear on your screen. The results can be saved and sent to CA Technical Support for analysis or printed for further review.

Required Parameters

Parameter	Description
Host IP Address	The name or IP address of the Q&R Distributed Server. Specify the machine name or a standard IP address. If the utility is running on the same machine as the Q&R Distributed Server, specify localhost.
Port Number	The port number of the Q&R Distributed Server If the utility is running on the same machine as the Q&R Distributed Server, specify 20368.

Results

The output that appears on your screen provides the results of three tests:

- The server-connection test sends a standard connection string to the Q&R Distributed Server to test basic connectivity. It returns the basic release level of the Q&R Distributed Server.
- The netstat test issues a *netstat* command to determine the port's availability and status.
- The ping test sends a message to the server machine to make sure that it is connected to the network.

Appendix B: Q&R Mainframe Server Template Parameters

This appendix discusses the Q&R Mainframe Server template parameters.

The following table summarizes all the parameters used in the JCL templates which are maintained in *sharedprefix*.MICS.PROTOLIB members and are generated by JCLGEN3/JCLGENUC to *sharedprefix*.MICS.MQR.TEMPLATE:

Name	Description	Source	Example value
COUNTER	Internal job counter in the mainframe server (8 digits)	Mainframe server	00000121
DSNCSV	CSV data set name, one of the output files, created from DSNJOBPRFX by adding .CSV suffix	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK.CSV
DSNCSVINDEX	CSV index dataset name, one of the output files, created from DSNJOBPRFX by adding .CSVINDEX suffix	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK.CSVINDEX
DSNDDX	DDX data set name, the input file containing the query, created from DSNJOBPRFX by adding .DDX suffix	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK.DDX
DSNJOBPRFX	Prefix for temporary data sets for a single job, concatenation of DSNPRFX and TMPNAME	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK

Name	Description	Source	Example value
DSNMICSLOG	MICSLOG data set name, one of the output files, created from DSNJOBPRFX by adding .MICSLOG suffix	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK .MICSLOG
DSNPRFX	Prefix for all temporary data sets used by the server	User table	PUBLIC.MICSUSR
DSNSASLIST	SASLIST data set name, one of the output files, created from DSNJOBPRFX by adding .SASLIST suffix	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK .SASLIST
DSNSASLOG	SASLOG data set name, one of the output files, created from DSNJOBPRFX by adding .SASLOG suffix	Mainframe server	PUBLIC.MICSUSR.ASDFGHJK .SASLOG
JOBNAME	Name of the job to be submitted	User table, modified by the server to replace '?'	CAMICQ1
MSNAME	Mainframe server name	Mainframe server	MQRHOST
PRDPDS	Name of partitioned data set where the query will be stored Note: The PRDPDS keyword has been deprecated in r12.9 of Q&R, because Q&R now saves the queries into a standard location (sharedprefix.MICS. MQR.PUTPDS).	User table	PUBLIC.MICSUSR.PRDQ
PUTQYPDS	Name of partitioned data set where the query is stored	Q&R Query (Move Query to Production)	COMPLEX.MQR.PUTPDS

Name	Description	Source	Example value
PUTQYOPTS	Option for MQRPUTQY	Q&R Query (Move Query to Production)	R
QNAMESFX	Suffix to query name	Q&R Query (Move Query to Production)	JS
STORCLAS	Storage class for temporary data sets	User table	WORK
TEMPLATE	Name of the job template used	Q&R Query	QRDFLT1
TMPNAME	Temporary name, 8 random letters	Mainframe server	ASDFGHJK
UNIT	Device unit for temporary data sets	User table	SYSDA
USERID	User id under which the job is submitted	Q&R Query	MICSUSR
VOLUME	Volume for temporary data sets	User table	WORK01

Appendix C: Q&R Server Migration Path

This appendix discusses the migration path from Windows Server 2003 to Windows Server 2008 or Windows Server 2012. This procedure could also be applied for any server migration.

Migration of the Q&R Distributed Server

To migrate your Q&R Distributed server from one Windows platform to another, for example, migrating from Windows Server 2003 to Windows Server 2008 or Windows Server 2012. The following procedure outlines the steps necessary to perform this task.

To ensure that you have a complete understanding of this procedure, we recommend reading through this entire section and the checklist at the end.

Important! Do not skip or perform any of the steps out of order as it can compromise your new environment.

To migrate your server:

Follow these steps:

1. Verify Prerequisites
2. Identify Q&R Distributed Server Data Directories
3. Configure the New Environment
4. Backup Installed Database Files in New Environment
5. Prepare to Copy Files
6. Copy Server Directory Files
7. Final Customization
8. Verification
9. Post Server Implementation Changes

Once this process is complete, the Q&R Distributed Server is moved from one platform to another. The old platform can now be decommissioned.

The time that is required to complete the process depends on the amount of data that is stored in your Q&R Output Retrieval tree and how long it takes to transfer that data across the network. This process can be a time consuming, so plan accordingly. Start by setting aside several uninterrupted hours.

Verify Prerequisites

A network that is connected between two servers makes the migration easier. When the network connectivity is not available, provide a manual method to copy the data to the target server.

Follow these steps:

1. Define a share on the originating server. This share must be available for access to the user doing the migration.
2. Put both servers on the same release level of Q&R, because the software is dependent on the structures of the database files that you are migrating. If you are not at the same release of Q&R it is still possible to migrate, but your utility database definitions, security database definitions and meta databases are lost and must be recreated.
3. In all steps the instructions refer to the default Server Data directory default directories: *C:\ProgramData\CA\MICS Workstation\Server*. Both for the previous and target installation. To point to other than the default directories make the necessary adjustments.
4. We recommend running a Q&R System Information Report, and printing it on the Source system for reference. This provides the location of the Server Data Path if you are unsure of its actual location as well as the database locations (depending on the version of Q&R System Info).

   Follow these steps:

   1. Select the Start menu
   2. Select CA then CA MICS Workstation and then, Q&R System Info.

Identify Q&R Distributed Server Data DirectoriesDefault

Follow these steps:

1. Locate Q&R Distributed Server Data directory on the source machine.
2. Locate Q&R Distributed Server Data directory on the new machine.

   Notes:

   - On a Windows Server 2003 platform, the default directory is: *C:\Documents and Settings\All Users\Application Data\CA\MICS Workstation\Server*.
   - On Windows 7 and higher including Windows Server 2008 and Windows Server 2012 the default directory is: *C:\ProgramData\CA\MICS Workstation\Serve*r.

In future references in this document references to the Q&R Distributed Server data directories the defaults are implied. With Q&R r12.8 and higher the ability to install to a custom location was introduced. If you have chosen to install to a custom location, remember to replace the default directory location with your location where referenced.

Configure the New Environment

This step configures your new server environment and ensures that the Q&R Distributed Server is functioning correctly in that environment. This step can be performed at any time before your migration. For more information, see Installing Q&R Workstation in the Q&R Workstation Getting Started Guide.

Follow these steps:

1. Perform a Full install of Q&R Distributed Server and Q&R Query on the new Windows Server 2008 or Windows Server 2012 environment.
2. Configure CACCI-PC to run on the Server Machine after the installation of CACCI-PC is complete.
   a. Specify the Name or IP Address.
   b. Specify a System Name if desired or allow default value.
3. To verify CCI Connectivity, run the CCI Test.
4. After Q&R installation completes if CACCI-PC has never been installed on the Server, reboot the server.
5. Define the new Q&R Distributed server to your Q&R Mainframe Server sp.PARMS(MQRPARMS) MQRDISRV= parameter.
6. Remove the Old Q&R Distributed server from the Q&R Mainframe Server sp.PARMS(MQRPARMS) MQRDISRV = parameter.
7. Restart Q&R Mainframe Server.
8. Run Q&R Distributed Server Administration.
9. Run a test Build/Refresh Meta Database.

   Note: This meta build is discarded later, this build verifies connectivity with the host now. If you encounter errors, resolve them before continuing.
10. Stop the Q&R Distributed Server.

Backup Installed Database Files in New Environment

This step backs up the delivered database files on your new server. This step allows you to go back to the original install state because these files are replaced with files from your old server in a future step.

Follow these steps:

1. To back up the new Q&R Distributed Server Database files, create a temporary directory.
2. Copy the following files to the temporary directory you created in the previous step.
   - MQRMeta.accdb
   - MQROptions.accdb
   - MQRSecurity.accdb
   - MQRTreename.accdb
   - MQRUtility.accdb

Make a note of the directory you created and copied these files to,if these files need restoring later.

Prepare to Copy Files

This step allows you to map a network drive from your new server to your old server to copy the files. You are also directed to run Q&R Distributed Server Administration and identify the existing Q&R Mainframe Server directories that are to be migrated to your new Q&R Distributed Server.

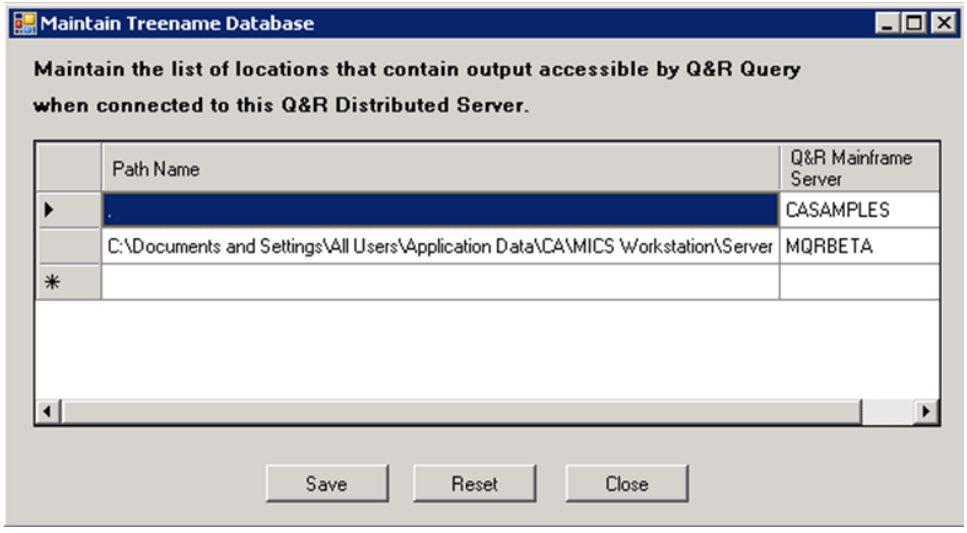
Follow these steps:

1. If you have not already done so, define a share to the Q&R Server Data directory on the source server. To prevent security errors, ensure that the user doing the migration has access to this share.
2. On the target server map a network drive to this share.
3. On the source server run Q&R Distributed Server Administration.
   a. Select File, then Maintain Treename Database.

      This step provides a list of the Q&R Mainframe Servers that are associated with this Q&R Distributed Server and have output on this Q&R Distributed Server.

   b. The column Q&R Mainframe Server is the subdirectory within the server data directory that is migrated. The CASAMPLES directory does not need to be migrated.

   c. Make a note of the directories in this column for use in the next step Copy Server Directory Files.



Copy Server Directory Files

This step migrates your data from the old server to your new server. This step can take considerable time depending on the volume of data that is contained in the Output Retrieval tree of your Q&R Distributed Server and the number of Q&R Mainframe Hosts your Q&R Distributed Server, so plan accordingly.

Follow these steps:

Stop your old Q&R Distributed Server before you start following the checklist. This procedure prevents further updates to that environment.

1. Copy your database files from the source server to the new server. The Q&R Distributes Server Administration, Q&R Distributed Server requires these files.
   - MQRMeta.accdb
   - MQROptions.accdb
   - MQRSecurity.accdb
   - MQRUtility.accdb

   Note: Do not copy MQRTreename.accdb, this file is updated manually latter.
2. Copy the Output Retrieval tree directories for your mainframe servers that were identified in the Prepare to Copy Files step.
   a. If you ran a Test meta in the Configure a New Environment step, it is possible that the Output Retrieval Tree directory for your Mainframe server ready exists. Copy your old tree over it and replace it.

      Note: This step can take a significant amount of time.
3. Repeat the previous Copy step until all Mainframe Server directories have been copied.
4. Optional: Copy the \Logs directory if you want to keep a history of your utility logs.
5. Optional: Copy the \Batch directory if you want to keep your generated batch utility jobs from Q&R Distributed Server Administration.

Final Customization

Data is now migrated to your new server and you are ready to make the final customization to the Q&R Distributed Server environment. You will start the Q&R Distributed Server in this step.

Note: Your data is now accessible.

Follow these steps:

1. Start the Q&R Distributed Server from the taskbar icon or from the Start Menu Icon, Q&R Distributed Server.
2. Open Q&R Distributed Server Administration.
   a. Select File, then Maintain Treename Database.
   b. Update the Treename database.

      This step ensures that there is an entry for each of your Output Retrieval tree directories representing each of your Mainframe Servers for this Q&R Distributed Server.
   c. The new path name is *C:\ProgramData\CA\MICS Workstation\Server.* If you have installed a non-standard location through InstallShield, you can customize this value.
   d. The Q&R Mainframe Server Name is the same as the values on the source server and the names of the directories you copied.
3. Type the new values in the line with the * and press enter. Click the Save.
4. Verify your Server Configuration Settings.
5. On the source server open Q&R Distributed Server Administration, select File, then Configuration.
6. On the target server open Q&R Distributed Server Administration, select File, then Configuration
7. Except for Location of the Adhoc Query Tree, all values should be the same. If there are discrepancies, make the necessary updates.
   a. Click Apply.
   b. Click OK.
8. If you have Publish output to Web Reporting utilities (RMWSLoad), Build/Refresh Meta Database utilities (MQRMeta) or Remove Output utilities (RMWSPare), in a scheduler, or scheduled in Windows task manager, the batch files may need to be updated if you were using Windows 2003 and are now migrating to a newer platform.
   a. Remove references to *C:\Documents and settings\All Users\Application Data\CA\MICS* Workstation and replace with *C:\ProgramData\CA\MICS Workstation*.

Verification

This step verifies that all of your databases and Output Retrieval data have been migrated correctly and are now available for use by your Q&R Query clients.

Verify Q&R Query on the Server

Verifying Output Availability

Follow these steps:

1. Run Q&R Query on the Server.
2. Open Output Retrieval.

   Note: If no data is returned for the default date range, select a data range that returns your data.
3. Verify that all output data is available.
4. Open Query Status and modify the date range to ensure that queries are displayed in the window.
5. Verify that Output is visible and can be selected.
6. Verifying the availability of the meta database and Q&R Distributed Server connectivity by executing a query.
   a. Select File, then CA MICS Query Library.
   b. Select RMF Component, Mainframe CPC Configuration, RMFCFG – CPC LPAR Engine Configuration, click Open.
   c. Follow the Smart Update process which verifies access to your meta database.
   d. Click Run, then select the QRDFLT1 template and click OK.
   e. Select Query Status.
   f. Verify the Query Completes OK.
   g. View the Output.
   h. View the Chart.
7. Verifying the availability of Q&R Distributed Server Administration Utilities.
   a. Run Q&R Distributed Server Administration
   b. Select File, then Publish Output to Q&R Web Reporting.

   Verify that any Publish to Web Reporting Jobs that were defined on the old server are available on the new server.
   c. Select File, then Build/Refresh Meta Database.

      Verify that any Meta Build jobs that were defined on the old server are available on the new server.

Post Server Implementation Changes

To ensure your Q&R Query clients are no longer accessing the old Q&R Distributed Server and to Run the Q&R verification scenario from a Q&R Query client.

Follow these steps:

1. To ensure that clients are no longer accessing the old Q&R Distributed server, shut down this server.
2. Update each of your Q&R Query clients to connect to the new Q&R Distributed Server.
   a. Select the Query Client, Options, then connect to a Q&R Distributed Server.
   b. Enter the Server name or IP Address of the new Q&R Distributed Server.
   c. Click Verify and then OK.
3. To ensure a full connectivity and functionality of your Q&R Distributed Server from a remote client, run the verification from a Q&R Query client.

Checklist

Item	Complete
	Configure the New Environment
1	Install Q&R on new Server
2	Configure CACCI-PC
3	Run CCI Test
4	Reboot Server if necessary (First time CCI Installed
5	Define new Q&R Distributed Server to Q&R Mainframe Server
6	Remove old Q&R Distributed Server from Q&R Mainframe Server
7	Restart the Q&R Mainframe Server
8	Run Q&R Distributed Server Administration
9	Build/Refresh Meta Database
10	Stop the Q&R Distributed Server
	Backup Installed Database files in New Environment
11	Create temporary directory for backups
12	Backup MQRMeta.accdb
13	Backup MQROptions.accdb

Item	Complete
14	Backup MQRSecurity.accdb
15	Backup MQRTreename.accdb
16	Backup MQRUtility.accdb
	Prepare to Copy Files
17	Define a share to the old Q&R Server
18	Map a network drive to the old Q&R Server
19	On source machine run Q&R Distributed Server Administration
20	Go to File->Maintain Treename Database
21	Make a note of the directories in the Q&R Mainframe Server column to copy
	Copy Server Directory Files
22	Verify the new Q&R Distributed Server is Stopped
23	Copy MQRMeta.accdb
24	Copy MQROptions.accdb
25	Copy MQRSecurity.accdb
26	Copy MQRUtility.accdb
27	Copy the Output Retrieval directories identified in *step 21*
28	Copy the \Logs directory if desired
29	Copy the \Batch directory if desired
	Final Customization
30	Start the New Q&R Distributed Server
31	Run Q&R Distributed Server Administration
32	Select to File, then Maintain Treename Database
33	Update the Treename database, with an entry for each Output Retrieval directory identified in *step 18*
34	Select to File, then Configuration verify these entries against the old server (Location of the Adhoc tree will be different)
35	Modify any scheduled batch utilities as required
	Installation Verification Procedure
36	Run Q&R Query on the Server Machine
37	Open Output Retrieval, verify availability of data

Item	Complete
38	Open Query Status, verify output is visible
39	Run a CA MICS Query Library Query
40	Select File, then CA MICS Query Library
41	Select RMF Component, Mainframe CPC Configuration, RMFCFG – CPC LPAR Engine Configuration, click Open
42	Smart Update Query
43	Click Run
44	Select Query Status
45	Verify query completes
46	View the output
47	View the chart
48	Run Q&R Distributed Server Administration
49	Select File, then Publish Output to Q&R Web Reporting, verify any defined Publish to Web Reporting jobs are available
50	Select File, then Build/Refresh Meta Database, verify any defined Build/Refresh Meta database jobs are available
	Post Server Implementation Changes
51	Shut down the old Q&R Distributed Server
52	Update each Q&R Query Client to connect to the new Q&R Distributed Server (Options->Connect to a Q&R Distributed Server)
53	Run steps 36 through 47 on client machine

Index

O

P

Q

R

S

T

U

W