CHAPTER
39

The ADMIN Procedure

Introduction

After you have started the DOMAIN server, the ADMIN procedure can be used to perform

☐ general DOMAIN administration, such as:

    ☐ stopping the server

    ☐ quiescing the server.

☐ queue administration, such as:

    ☐ displaying queue information

    ☐ defining queues

    ☐ altering queue attributes

    ☐ deleting queues.

With the use of PROC ADMIN, you can perform queue administration while the DOMAIN server is executing. Within the DOMAIN *registry*, you can also set administrator privileges, thereby controlling which users can issue specific operations. See Chapter 38, "The DOMAIN Server," on page 411 and *Communications Access Methods for SAS/CONNECT and SAS/SHARE Software* for more information about the DOMAIN server.

Syntax for the ADMIN Procedure

PROC ADMIN DOMAINID|DOMAIN|ID='*domainid*';
  SHUTDOWN;
  QUIESCE;
  SET *resource-type resource-value*;
  DISPLAY *resource-type* <*options*>;

    DEFINE *resource-type < options>*;
    ALTER *resource-type < options>*;
    DELETE *resource-type < options>*;

The ADMIN procedure is an interactive procedure; that is, its statements are executed as they are encountered. The ADMIN procedure executes until it is terminated by a QUIT statement or another PROC statement.

Statement Details

PROC ADMIN DOMAINID|DOMAIN|ID='*domainid*';

where *domainid* specifies the DOMAIN connection identification.

SHUTDOWN | SHUT | STOP;
   shutdown or stop the DOMAIN server (created by using PROC DOMAIN) immediately.

QUIESCE | QUI | Q;
   shutdown or stop the DOMAIN server (created by using PROC DOMAIN) gradually by waiting for all active queues to be closed.

SET *resource-type resource-value*;
   set a resource type to a default value.

DISPLAY | DIS *resource-type<options>*;

      □ display *queue* information in one of two contexts: queue or user.

      □ display *agent* information in one of two contexts: agent or user.

DEFINE | DEF *resource-type<options>*;
   define a queue in a particular collection at the DOMAIN server.

ALTER | ALT *resource-type<options>*;
   alter a queue's attributes in a particular collection at the DOMAIN server.

DELETE | DEL *resource-type<options>*;
   delete a queue from a collection at the DOMAIN server. This operation causes an active queue to become inaccessible as well as deletes any persistent objects (messages) that pertain to it.

Statement Arguments

resource-type
   specifies the resource type to be acted upon. Using the SET command, you can specify default values for the COLLECTION|C and/or QUEUE|Q and/or AGENT|A resource types. All commands require a *resource-type* of QUEUE|Q with the exception of DISPLAY, which can also have a *resource-type* of USER|U or AGENT|A.

resource-value
   specifies the default value that will be assigned to the resource type.

options
   specifies options that can be used with some commands.

      DISPLAY options
         To display information about a queue, you can specify a queue name and/or collection name if resource types have not been assigned default values by

means of the SET command or if you wish to override those values. These positional options are

```
DISPLAY QUEUE|Q (queue_name)
   COLLECTION|C (collection_name);
```

To display information in user context (that is, display information about the queues that a particular user currently has open), you must specify a resource type of USER along with the user's name as follows:

```
DISPLAY USER|U user_name;
```

In this context, *user_name* is not really an optional parameter because it is required when displaying information in user context mode.

To display information about an agent, you can specify an agent name and/ or collection if

☐ resource types have not been assigned default values by means of the SET command.

☐ you wish to override those values.

These positional options are

```
DISPLAY AGENT|A (agent_name)
   COLLECTION|C (collection_name);
```

To display information in user context (that is, display information about the queues that a particular user currently has open), you must specify a *resource-type* of USER along with the name of the user as follows:

```
DISPLAY AGENT|A (agent_name)
   USER|U user_name;
```

or

```
DISPLAY AGENT|A (agent_name)
   COLLECTION|C (collection_name)
   USER|U user_name;
```

The *user_name* parameter is optional when displaying agent information.

DEFINE options

To define a queue you can specify queue and/or collection positional parameters if resource types have not been assigned default values by means of the SET command or if you wish to override those values. In addition, you may specify the following nonpositional parameters: message persistence, message delivery mode, maximum queue depth, maximum message length, and operational privileges. The syntax for these parameters follows:

```
DEFINE QUEUE|Q (queue_name)
      COLLECTION|C (collection_name)
      MSGPSIST (yes|no)
      MSGDLVMODE (notice|default)
      MAXDEPTH (x)
      MAXMSGL (y)
      PRIVILEGES (userid1=permission1
            ... useridx=permissionx);
```

where

YES
  signifies that messages will persist across queue open and close
  boundaries as well as DOMAIN server start and stop boundaries.

NO
  signifies that messages will not persist. This is the default.

NOTICE
  signifies that this queue will operate in notice delivery mode.

DEFAULT
  signifies that this queue will operate in fetch mode. This is the default.

X

  is an integer value that signifies a maximum of *x* messages for this
  queue. Valid values are in the range -1<=*x*<=*maxint*. The value **−1**
  represents unlimited depth. This is the default.

Y

  is an integer value that signifies a maximum of *y* bytes in length for
  messages in this queue. Valid values are in the range -1<=*y*<=*maxint*
  where **−1** represents unlimited message length. This is the default.
    This maximum length must account for additional messages.
  Attachment lengths are not taken into consideration; only the length of
  the actual message should be included.

USERID
  is the user identification that will be verified for connecting users. A
  special designation of ANONYMOUS may be used to assign general
  permissions to all connecting users.

PERMISSION
  is the operational permission that will be assigned to the corresponding
  user. Acceptable permission values and their meanings are as follows:

    BROWSE|B
      Browse privileges.

    DELIVER|D
      Deliver privileges.

    FETCH|F
      Fetch privileges.

    GETPROP|GP
      Get properties privileges.

    GETSEC|GS
      Get security privileges.

    SETPROP|SP
      Set properties privileges.

    SETSEC|SS
      Set security privileges.

    ALL
      Full privileges.
    To specify a combination of the above permission types, use a plus
  sign (+) or a comma (,) to separate the values. For example, to grant a
  user DELIVER and BROWSE privileges, specify the following:

DELIVER,BROWSE or D+B

Specifying userid and permission privilege pairs signifies that this queue is to maintain an access control list that designates the operations that specific users can perform on the queue. These privileges are enforced only when the DOMAIN server is executing in a secured environment.

ALTER options
These options are the same as the DEFINE options, with the exception of MSGPSIST. You are not allowed to alter the message persistence attribute of a queue. If you want this altered, you must delete and re-define the queue. Also, you may specify an additional permission value which is used to re-set the privileges of the user.

NONE|N
No privileges.

DELETE options
These options are the same as DISPLAY options for queue context.

In the DISPLAY and DELETE commands, a wildcard queue name, collection name, and/or user name can be specified to display or delete multiple resources. Only one wildcard designator per name is allowed, and its symbol is an asterisk (*). This wildcard can be a prefix (*name) or a suffix (name*), or the full name itself may be a wildcard (*).

Examples

These steps show development of a program that uses the ADMIN procedure.

1 Start a PROC ADMIN Execution.

```
PROC ADMIN ID='tcp//host/service';
```

2 Define Queue Attributes.

Define two queues in a single collection named TEST. The first queue, EXAMPLE1, will contain the following attributes:

☐ nonpersistent messages

☐ maximum depth of 20

☐ maximum message length of 2k.

The second queue, EXAMPLE2, will contain the following attributes:

☐ persistent messages

☐ unlimited depth

☐ unlimited message length

☐ user privileges (USER1 can DELIVER, FETCH, and BROWSE messages, and everyone else can only DELIVER and BROWSE messages).

```
SET C test;

DEF Q (example1)
   MAXDEPTH(20)
   MAXMSGL(2048);

DEF Q (example2)
   MSGPSIST(yes)
```

```
        PRIVILEGES(user1=d+f+b anonymous=d+b);
```

Display all queues in the TEST collection.

```
DIS Q (*);
```

Output from the DISPLAY command.

```
    -----------------------------------------
    Queue:          EXAMPLE1
    Collection:     TEST
    Creation Time:  13FEB97:10:34:51
    Status:         Inactive
    Type:           Permanent
    Definition:     Administrator Predefined
    Msg Persistence: No
    Delivery Mode:  Default
    Depth:          0
    MaxDepth:       20
    MaxMsgl:        2048
    User Access Rights:
        None defined
    -----------------------------------------
    Queue:          EXAMPLE2
    Collection:     TEST
    Creation Time:  13FEB97:10:35:36
    Status:         Inactive
    Type:           Permanent
    Definition:     Administrator Predefined
    Msg Persistence: Yes
    Delivery Mode:  Default
    Depth:          0
    MaxDepth:       -1
    MaxMsgl:        -1
    User Access Rights:
        USER1 = Deliver+Fetch+Browse
        ANONYMOUS = Deliver+Browse
    -----------------------------------------
```

3 Quiesce the DOMAIN Server.

Quiesce the DOMAIN server for gradual termination.

```
Q;
```

4 Quit PROC ADMIN.

Quit the procedure.

```
QUIT;
```

This example shows the use of the ADMIN procedure to obtain agent information. Specifically, it displays information about the agent PAYROLL that exists in any collection.

```
SET AGENT PAYROLL;

DIS A (C*);


    -----------------------------------------
```

```
Agent:                  PAYROLL
Collection:             MONTHLY
Owner:                  sasuser4
Current Scheduled Date  26MAR1998
Current Scheduled Time  23:59:00
Description:            Payroll agent used
                        for montly processing.
Run Location:           tcp//host1/shr7
Completion Queue:       CARY
Schedule Definition:
    Run Hour            23
    Run Minute          59
    Run Day-of-Week      5
----------------------------------------
```

Setting Administrator Privileges

To control which users can issue DOMAIN administration commands, administrator privileges must be registered. These privileges are registered in the DOMAIN registry file, which also contains the queue registry information. By registering administrator privileges, you have the ability to give selected operational permissions to specific users. The DOMAIN server must be executing in a secured environment for these permissions to be enforced. If the DOMAIN server is not executing in a secure environment, all connecting users will be able to issue any administrator command. Also, if no administrator privileges have been registered, all connecting users will be able to issue any administrator command. Refer to "Queue Management" on page 412 for details about registering administrator privileges in the DOMAIN registry file.

SAS/CONNECT User's Guide, Version 8

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