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## APIs by Example: Check Object Authority

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In this installment of APIs by Example, Carsten presents a CHKOBJAUT (Check Object Authority) command.

This utility allows you to search a library for objects created after a given date that do not meet a particular criteria in their authority settings.

For example, you can use this utility to find all programs created in the past week that do not adopt authority, or you can find all files in a library that have not granted \*USE authority to \*PUBLIC.

Here's a screen shot that shows what the CHKOBJAUT command looks like when you prompt it:

```

-----
                        Check Object Authority (CHKOBJAUT)
Type choices, press Enter.

Object library . . . . . > MYLIB      Name
Object type   . . . . .  *ALL        *DTAF, *NONDTAF, *ALL
Objects changed after:

Reference date . . . . .  *WEEKBACK  Date, *WEEKBACK, *CURRENT
Reference time . . . . .           Time, *BEGIN, *CURRENT
Data file authority setting:

Owner . . . . .  *NOCHK      Name, *NOCHK
Authorization list . . .  *NOCHK      Name, *NOCHK, *NONE
Public authority . . . .  *NOCHK      *NOCHK, *ALL, *CHANGE...
Object authority setting:

Owner . . . . .  *NOCHK      Name, *NOCHK
Authorization list . . .  *NOCHK      Name, *NOCHK, *NONE
Public authority . . . .  *NOCHK      *NOCHK, *ALL, *CHANGE...
Program adoption setting:

User profile . . . . .  *NOCHK      *NOCHK, *USER, *OWNER
Use adopted authority .  *NOCHK      *NOCHK, *YES, *NO
Private authority allowed *YES        *YES, *NO
-----

```

It's important to note that the command lists objects that DO NOT fit the security criteria. Therefore, the following command lists all non- data files created in the past week that ARE NOT adopting authority from the owner:

```
CHKOBJAUT  LIBRARY (MYLIB)  OBJTYPE (*NONDTAF)
           CHGREF (*WEEKBACK) PGMADP (*OWNER)
```

The utility comes with help panels. Once you've compiled it, you can prompt the command and press Help to get full details on how to use it.

To compile this utility, download the source code, install it on your iSeries, and type the following commands:

```
CrtPnlGrp PnlGrp(CBX119H) SrcFile(QPNLSRC) SrcMbr(*PNLGRP)

CrtPrtF File(CBX119P) DevType(*SCS) SrcFile(QDDSSRC)
      PageSize(51 132) OvrFlw(50)
CrtRpgMod Module(CBX119) DbgView(*LIST)
CrtPgm Pgm(CBX119) Module(CBX119) ActGrp(QILE)

CrtCmd Cmd(CHKOBJAUT) Pgm(CBX119) SrcMbr(CBX119X)
      HlpPnlGrp(CBX119H) HlpId(*CMD)
```

The Check Object Authority utility is intended primarily to demonstrate the QusMaterializeContext API.

When an iSeries programmer who works with the Machine Interface (MI) programming language refers to a "context," he's referring to what the rest of us think of as a "library." When he says that he wants to "materialize a context," it means that he wants to list the contents of a library.

This utility uses the MI built-in RSLVSP2 MI built-in function to get a system pointer that points to the library you specify. It then calls the QusMaterializeContext API twice. The first time it asks the API how much memory is needed to materialize the entire context. It then allocates the right amount of memory and then calls the API again to load the list of objects.

The utility then uses pointer math to read through the list of returned objects and checks each one in turn to see whether it meets the security criteria that you've supplied. If it doesn't, the object is printed to the print file.

The Check Object Authority utility demonstrates the following APIs:

Retrieve User Information (QSYRUSRI)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qsyrusri.htm>

Retrieve Users Authorized to an Object (QSYRTVUA)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qsyrtvua.htm>

Retrieve Program Information (QCLRPGMI)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qclrpghi.htm>

Retrieve Service Program Information (QBNRSPGM)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qbnrspgm.htm>

Convert Date and Time Format (QWCCVTDT)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qwccvtdt.htm>

Send Program Message (QMHSNDPM)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/QMHSNDPM.htm>

Convert Object Type (QLICVTTP)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qlicvttp.htm>

Retrieve Object Description (QUSROBJD)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qusrobsd.htm>

Materialize Context (QusMaterializeContext)

<http://publib.boulder.ibm.com/iserics/v5r2/ic2924/info/apis/qmatctx.htm>

You can download the source code for this article from

<http://www2.systeminetwork.com/noderesources/code/clubtechcode/ChkObjAut.zip> .

The above source code was written by Carsten Flensburg. For questions regarding this tip, contact Carsten at <mailto:flensburg@novasol.dk> .

**Source URL:** <http://iprodeveloper.com/rpg-programming/apis-example-check-object-authority>