

17-18 November 2025

Van der Valk, Tilburg, NL

Migrating BRMS from BR1 to BR2

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# Agenda

- History
- Licensing
- The Migration process
- The New GUI
- Wrap-up



### History

- Backup, Recovery & Media Services for i is the IBM strategic solution for planning and managing the backup of IBM i servers
- BRMS (Backup, Recovery & Media Services) is an IBM LPP (license program product) known as 5770-BR1
- Has been around for decades, since the introduction of the AS/400
- Used to have two GUI options:
  - 1. iSeries Navigator (part of IBM i Access for Windows V7R1M0) End of Service April 30, 2019
  - 2. Navigator for i Heritage Version IBM i components are affected by CVE-2021-4104 (log4j version 1.x)
- Extended/Sustained Support Complete 2025-09-30
   End of marketing and end of support for IBM Backup, Recovery and Media Services for i (non-expiring version)
- Available replacement is IBM Backup, Recovery and Media Services for i Subscription Term (5770-BR2)



#### Overview

IBM announced withdrawal of BRMS non-expiring offering (5770-BR1) and replaced it with a new product, BRMS Subscription (5770-BR2). August 27, 2024 Announcement Letter

- 5770-BR2 has license, support, and subscription encapsulated into one product, whereas 5770-BR1 was covered under IBM i Group SWMA.
- The reason for the change to a new product, PID, and model: IBM's direction is to continue to invest in this strategic product, and therefore, the direction includes charging for BRMS instead of continuing to give it at no extra charge under IBM i Group SWMA.
- The <u>August 27, 2024 Announcement Letter</u> announced the change in service level of 5770-BR1 under the current IBM i Group SWMA contract: as stated in the announcement, 5770-BR1 changes to usage and known-defect support starting October 1, 2025.
  - Note that this follows the standard policy for IBM to announce the withdrawal from service, in this case, change in service level, and give a minimum of one-year notice (13 months notice in this case).
  - IBM i has withdrawn many products and components from IBM i Group SWMA in this same manner.
- 5770-BR1 clients have a non-expiring license and can continue to use this stable product indefinitely. As for service: under active IBM i Group SWMA contracts, and extended IBM i Group SWMA contract for applicable releases, 5770-BR1 customers continue to get usage and known-defect coverage.
- If customers need defect support and/or any of the new enhancements being incorporated into 5770-BR2, then starting October 1, 2025, clients acquire 5770-BR2.



#### Why the change to BRMS licensing strategy?

- Change to IBM i Group SWMA strategy
  - Historical approach had a group of separately charged LPPs which were included in IBM i Group SWMA
  - Now the strategy and roadmap is to remove separately charged Licensed Program Products (LPPs) from IBM i Group SWMA
  - IBM i and the separately charged LPPs (BRMS, PowerHA SystemMirror, Db2 Mirror, Rational Development Studio)...
  - Will be offered as subscription: license & support incorporated into the license

#### BRMS Subscription Term (5770-BR2)...

- includes the base, advanced, and network features that were formerly separately acquired with 5770-BR1
- is provided at one price per core regardless of software tier
- includes all 5770-BR1 function. Future enhancements, including the UI, will be in 5770-BR2
- can coexist on the same serial number: in a given partition, a client can have 5770-BR1 or 5770-BR2 but cannot install and use both in one partition
- can coexist in the same network as 5770-BR1



#### **5770-BR2 Additional Information**

- Software Licensing
  - In a partition, license to the allocation of IBM i processor entitlements. 5770-BR2 is not licensed to the specific cores used by BRMS, but, instead, licensed for the IBM i workload which is being backed up.
    - E.g.: a partition has 4 IBM i entitlements.
      - License 5770-BR2 for quantity = 4, regardless of the number of cores which BRMS is using
- BRMS (5770-BR2) 7.5 license terms
- BRMS (5770-BR2) 7.4 license terms
- Migration from 5770-BR1 to 5770-BR2: see BRMS (5770-BR2) Installation
  - Migration steps, including saving the QUSRBRM library (the BRMS database) before deleting 5770-BR1

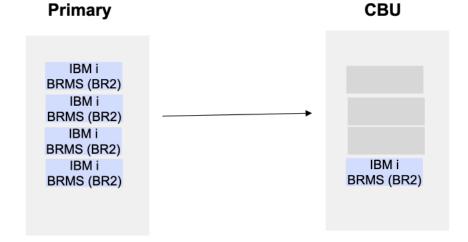


# Capacity Backup (CBU) for IBM i and BRMS (5770-BR2)



Example of a primary machine with one partition with 4 cores of IBM i and 5770-BR2

BRMS (5770-BR2) on the primary: licensed quantity = 4



BRMS (5770-BR2) on the CBU:

- Licensed quantity = 1
- CBU temp key quantity = 4

- The primary system is registered to a CBU server with one partition
- The CBU has a minimum of one IBM i processor entitlement licensed (more as required to support workload)
- The CBU has a minimum of one BRMS (5770-BR2) entitlement licensed
- Primary and CBU are owned by the same enterprise



For reference

PDF document

IBM Backup, Recovery and Media Services for i - Subscription Term (5770-BR2)

Wiki

The BRMS Product and Licensing



BRMS (5770-BR2) Installation

Information about the BRMS (5770-BR2) installation process.

IBM has withdrawn the marketing of the IBM Backup, Recovery and Media Services for i (5770-BR1) and is offering IBM Backup, Recovery and Media Services for i Subscription Term (5770-BR2) as the available replacement.

5770-BR2 is simplified to contain all functionality from 5770-BR1 under a single option. In addition, 5770-BR2 has several new enhancements that are not included in 5770-BR1, including the new BRMS web interface.

- It is recommended to apply BRMS 5770-BR1 PTFs 7.5 <u>SJ01879</u>, 7.4 <u>SJ01877</u> or the latest BRMS PTFs to improve the migration to 5770-BR2. It is recommended that BRMS PTFs should be applied immediate. The BRMS PTF exit program performs SQL operations which can cause unexpected delays and results if the BRMS PTF is applied delayed at the same time as DB related PTFs.
- 7.4 Warning: Prior to installing 5770-BR2, you must ensure that PTF SI82606 or the latest are applied on the system where 5770-BR2 is being installed. Related to What's new as of December 2022
- When 5770-BR2 is installed, saving QBRM on 7.4 or 7.5 will result in message CPF3906 being logged for objects Q1A0002 and Q1A0003. These are informational messages and can be ignored. This will not occur on 7.6 and later releases.

Users can migrate from 5770-BR1 to 5770-BR2 by either choosing to apply the latest PTFs (see the information above), saving the QUSRBRM library, deleting 5770-BR1, and install 5770-BR2, or they can choose to skip the latest PTFs, save the QUSRBRM library, migrate the BRMS Functional Usage information, delete 5770-BR1, and install 5770-BR2.



#### **Install steps with recommended PTFs**

- Follow these steps if you have applied 5770-BR1 PTFs 7.5 SJ01879, 7.4 SJ01877 (or later) to your system
  - Save the QUSRBRM library using the command:
    - SAVLIB LIB(QUSRBRM) DEV(tape\_device) The save of this library will protect you in the event you need to back off the installation.
  - It is important to ensure no user created dependencies exist on BRMS files in QUSRBRM before upgrading BRMS. Use Display Database Relations (DSPDBR) on all physical and logical files in QUSRBRM to ensure only IBM® BRMS files are listed. If any other non-IBM dependencies exits, they need to be removed before starting an upgrade.
  - Remove the BRMS SQL services to prevent file dependency issues in QUSRBRM using the following command: CALL QBRM/Q1A0LD PARM('INSTALL ' 'RMVSQLSERV' 'N' '00')

SQL can be used to potentially find user created files in QUSRBRM:

```
select * from table(qsys2.object_statistics('QUSRBRM', 'FILE')) x where OBJOWNER <>
'QBRMS'
```

- Delete product 5770-BR1
- ⚠ Product 5770-BR2 cannot be installed with product 5770-BR1 already installed. You must delete product 5770-BR1 and all its options using option 12 on the GO LICPGM menu or using the DLTLICPGM LICPGM(5770BR1) 0PTION(\*ALL) command.
- QUSRBRM is not removed when the product is deleted, do not delete library QUSRBRM.
- Install product 5770-BR2
- Apply the latest BRMS PTFs



#### Install steps without recommended PTFs

- Follow these steps if you have not applied the 5770-BR1 PTFs 7.5 SJ01879, 7.4 SJ01877 (or later) to your system
  - · Save the QUSRBRM library using the command:
    - SAVLIB LIB(QUSRBRM) DEV(tape\_device) The save of this library will protect you in the event you need to back off the installation.
  - Migrate BRMS <u>Functional Usage Information</u>. The usage information for an individual function is saved with the user profile's private authorities using the command:
    - SAVSECDTA DEV(tape\_device)
  - It is important to ensure no user created dependencies exist on BRMS files in QUSRBRM before upgrading BRMS. Use Display Database Relations (DSPDBR) on all physical and logical files in QUSRBRM to ensure only IBM® BRMS files are listed. If any other non-IBM dependencies exits, they need to be removed before starting an upgrade.
  - Remove the BRMS SQL services to prevent file dependency issues in QUSRBRM using the following command: CALL QBRM/Q1AOLD PARM('INSTALL ' 'RMVSQLSERV' 'N' '00')

SQL can be used to potentially find user created files in QUSRBRM:

select \* from table(qsys2.object\_statistics('QUSRBRM', 'FILE')) x where OBJOWNER <>
'OBRMS'

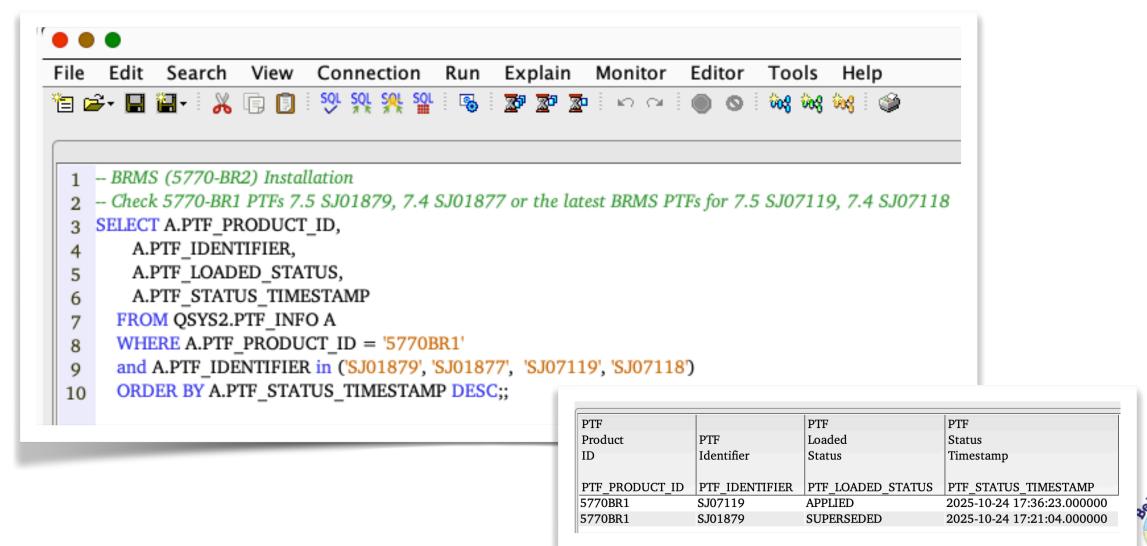
- Delete product 5770-BR1
- ▲ Product 5770-BR2 cannot be installed with product 5770-BR1 already installed. You must delete product 5770-BR1 and all its options using option 12 on the GO LICPGM menu or using the DLTLICPGM LICPGM(5770BR1) 0PTION(\*ALL) command.
- QUSRBRM is not removed when the product is deleted, do not delete library QUSRBRM.
- Install product 5770-BR2
- Restore the BRMS Functional Usage Information
  - RSTUSRPRF DEVICE(tape-device) USRPRF(\*ALL) Restore User Profiles (requires restricted state)
  - RSTAUT Restore Authority (RSTAUT)
- Apply the latest <u>BRMS PTFs</u>



# Install steps when 5770-BR1 was not previously installed

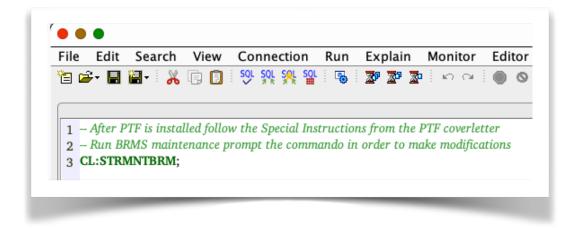
- Install product 5770-BR2
- Apply the latest <u>BRMS PTFs</u>





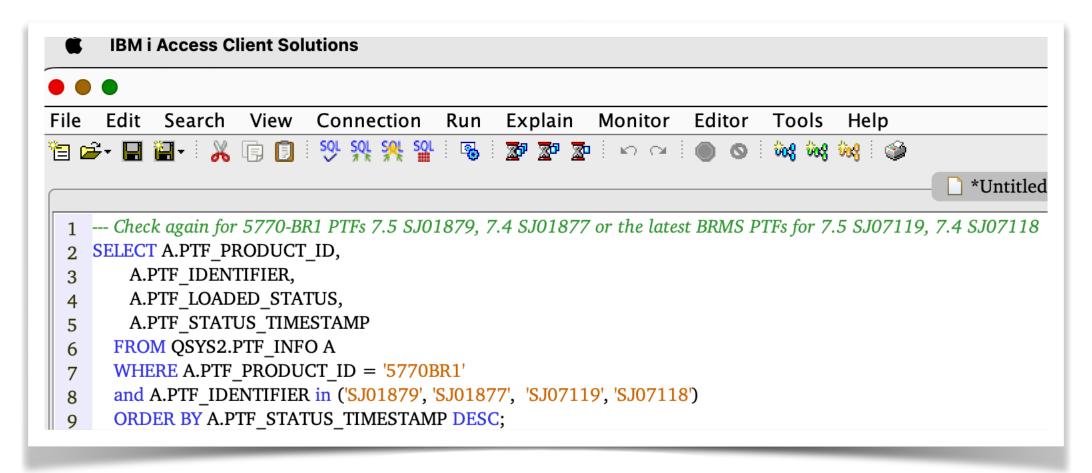
```
IBM i Access Client Solutions
File Edit Search View Connection
                                        Run Explain Monitor
                                                                  Editor
                                                                          Tools Help
 1 -- Just in case the recommended or latest PTF is not applied order and apply it
 2 BEGIN
      DECLARE PTFID V7R4 CHAR(7);
      DECLARE PTFID V7R5 CHAR(7);
      DECLARE PTFID CHAR(7);
      DECLARE IBM_i_Version CHAR(3);
      SET PTFID V7R5 = 'SJ07119';
      SET PTFID V7R4 = \frac{SJ07118}{};
 10
 11
      SET IBM i Version = (SELECT OS VERSION CONCAT '.' CONCAT OS RELEASE AS IBM i
 12
               FROM sysibmadm.env sys info
 13
               FETCH FIRST 1 ROW ONLY);
 14
 15
      IF (IBM i Version = 7.4) THEN
 16
        SET PTFID = PTFID_V7R4;
 17
 18
      END IF:
      IF (IBM i Version = 7.5) THEN
 19
        SET PTFID = PTFID V7R5;
      END IF;
      CALL qsys2.qcmdexc('SNDPTFORD PTFID(' CONCAT PTFID CONCAT ') CHKPTF(*YES)');
      CALL qsys2.qcmdexc("LODPTF LICPGM(5770SS1) SELECT(" CONCAT PTFID CONCAT")");
      CALL gsys2.qcmdexc('APYPTF LICPGM(5770SS1) SELECT(' CONCAT PTFID CONCAT ')');
 25 END; ;
```



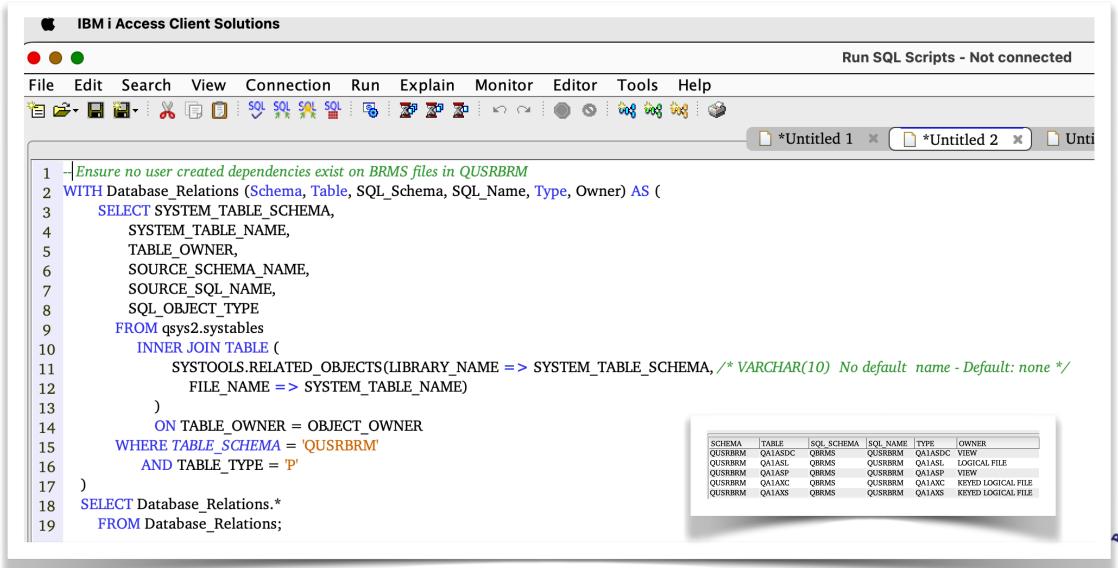


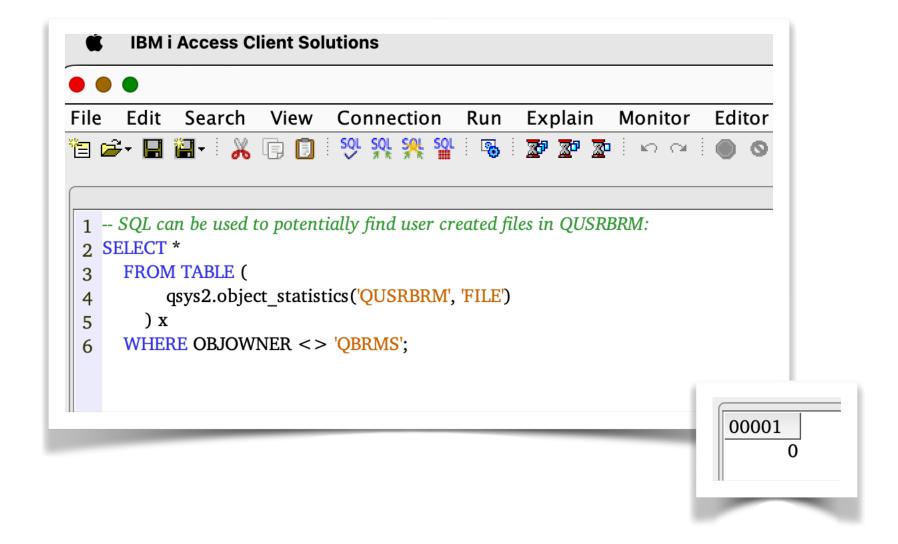
```
Statement ran successfully (72.774 ms = 1,21 min)
```



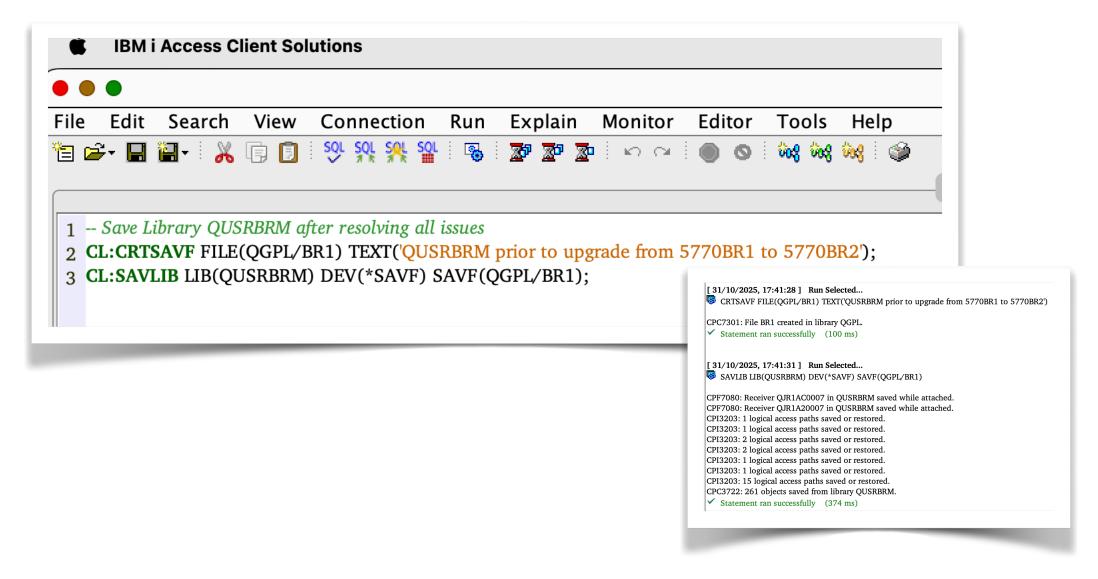






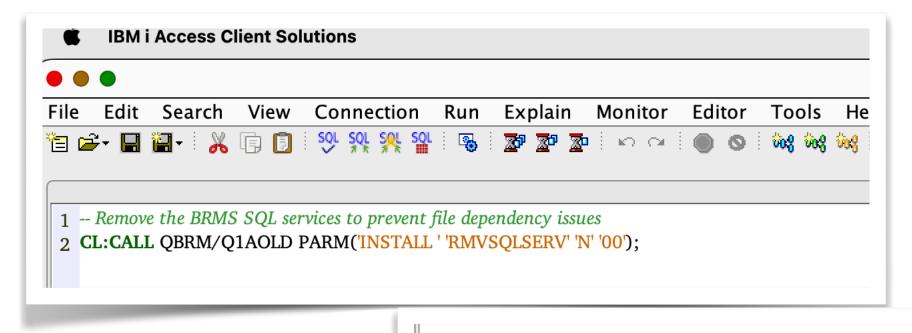








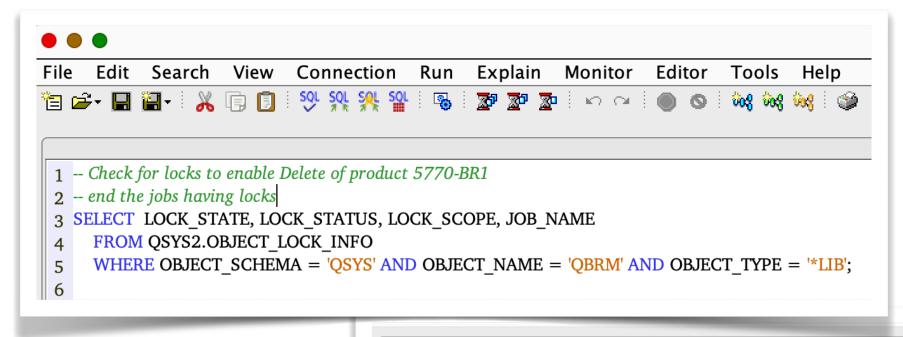
**Install steps with recommended PTFs** 



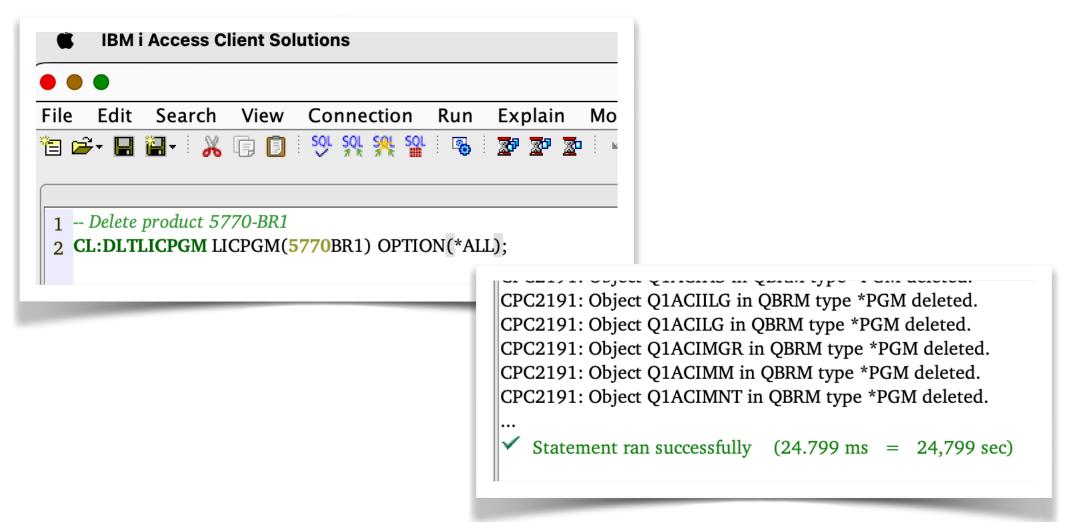
[ 31/10/2025, 17:45:41 ] Run Selected...

CALL QBRM/Q1AOLD PARM('INSTALL ' 'RMVSQLSERV' 'N' '00')

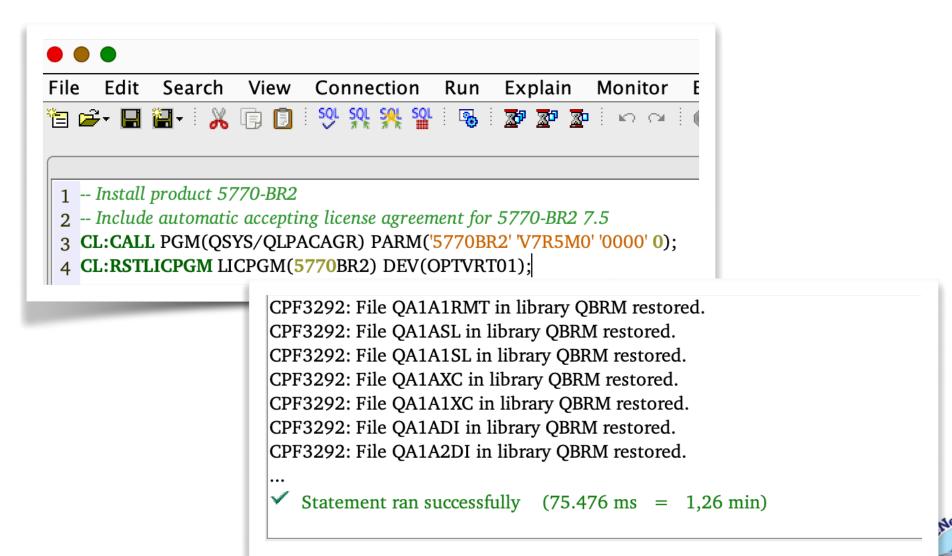
Statement ran successfully (31.786 ms = 31,786 sec)

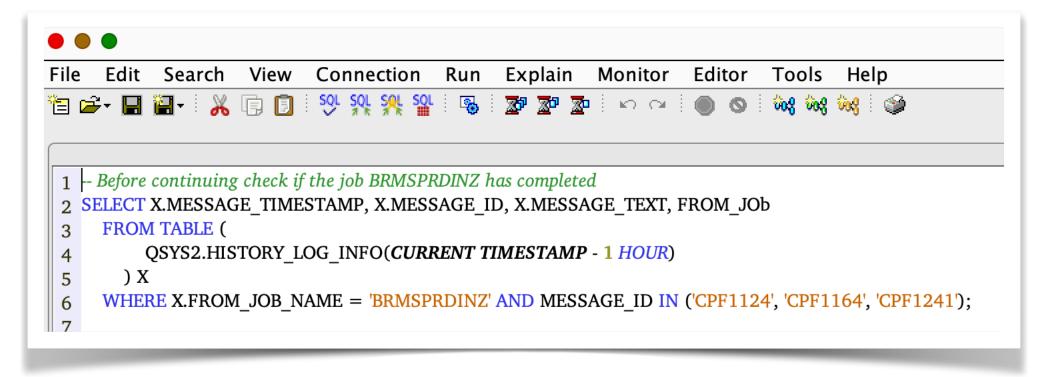


Lock	Lock	Lock	Job
State	Status	Scope	Name
LOCK_STATE	LOCK_STATUS	LOCK_SCOPE	JOB_NAME
*SHRRD	HELD	JOB	003597/RUDI/QPADEV0002
*SHRRD	HELD	JOB	003589/QUSER/QZRCSRVS









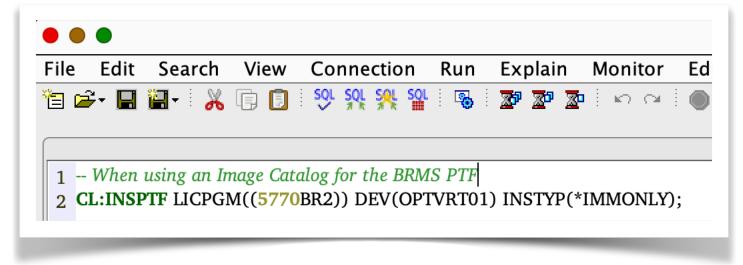
		•	
MESSAGE_TIMESTAMP	MESSAGE_ID	MESSAGE_TEXT	FROM_JOB
2025-10-31 17:39:58.439203	CPF1124	Job 003606/RUDI/BRMSPRDINZ started on 31/10/25 at 17:39:58 in subsystem QBATCH in QSYS. Job entered syste	003606/RUDI/BRMSPRDINZ
2025-10-31 17:40:55.029167	CPF1164	Job 003606/RUDI/BRMSPRDINZ ended on 31/10/25 at 17:40:55; 14.844 seconds used; end code 0 .	003606/RUDI/BRMSPRDINZ
2025-10-31 17:40:55.029611	CPF1241	Job 003606/RUDI/BRMSPRDINZ completed normally on 31/10/25 at 17:40:55.	003606/RUDI/BRMSPRDINZ



```
IBM i Access Client Solutions
File Edit Search View Connection Run Explain
                                                       Monitor
 1 -- Order the latest BRMS PTF
 2 -- => https://fortradocs.atlassian.net/wiki/spaces/IWT/pages/165642445/List+of+BRMS+Service+Packs
 3 -- This does require Internet Access
 4 BEGIN
      DECLARE PTFID_V7R4 CHAR(7);
      DECLARE PTFID V7R5 CHAR(7);
      DECLARE PTFID V7R6 CHAR(7);
 8
      DECLARE PTFID CHAR(7);
 9
 10
      DECLARE IBM i Version CHAR(3);
 11
 12
      SET PTFID_V7R6 = SJ07207;
 13
      SET PTFID_V7R5 = 'SJ07206';
 14
      SET PTFID_V7R4 = 'SJ07205';
 15
 16
      SET IBM i Version = (SELECT OS VERSION CONCAT '.' CONCAT OS RELEASE AS IBM i
 17
 18
               FROM sysibmadm.env_sys_info
               FETCH FIRST 1 ROW ONLY);
 19
 20
      IF (IBM_i Version = 7.4) THEN
 21
        SET PTFID = PTFID_V7R4;
 22
 23
      END IF;
      IF (IBM i Version = 7.5) THEN
 24
        SET PTFID = PTFID_V7R5;
 25
      END IF:
 26
      IF (IBM_i_Version = 7.6) THEN
 27
        SET PTFID = PTFID V7R6;
 28
      END IF:
 29
      CALL qsys2.qcmdexc('SNDPTFORD PTFID(' CONCAT PTFID CONCAT') CHKPTF(*YES)');
      CALL gsys2.qcmdexc('INSPTF LICPGM((5770BR2)) INSTYP(*IMMONLY)');
32 END;
```



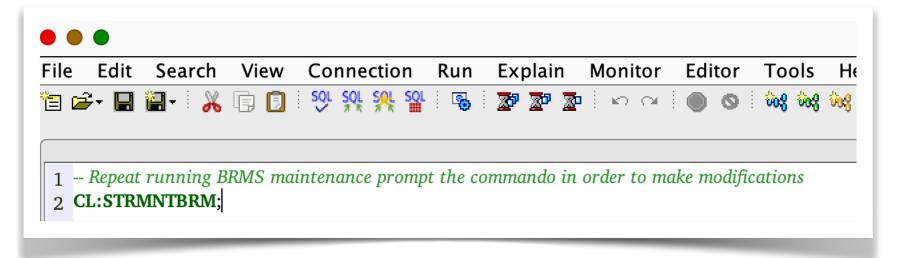
#### **Install steps with recommended PTFs**

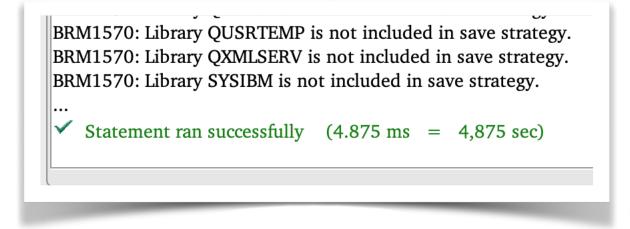


CPC2193: Object QPZR000043 in QSRV type \*SRVPGM moved to library QBRM. CPC2192: Object Q1ARMVCGE in QSRV type \*PGM renamed QPZR000044. CPC2193: Object QPZR000044 in QSRV type \*PGM moved to library QBRM. CPC2192: Object Q1ARMVCGEO in QSRV type \*PGM renamed QPZR000045. CPC2193: Object QPZR000045 in QSRV type \*PGM moved to library QBRM. ...

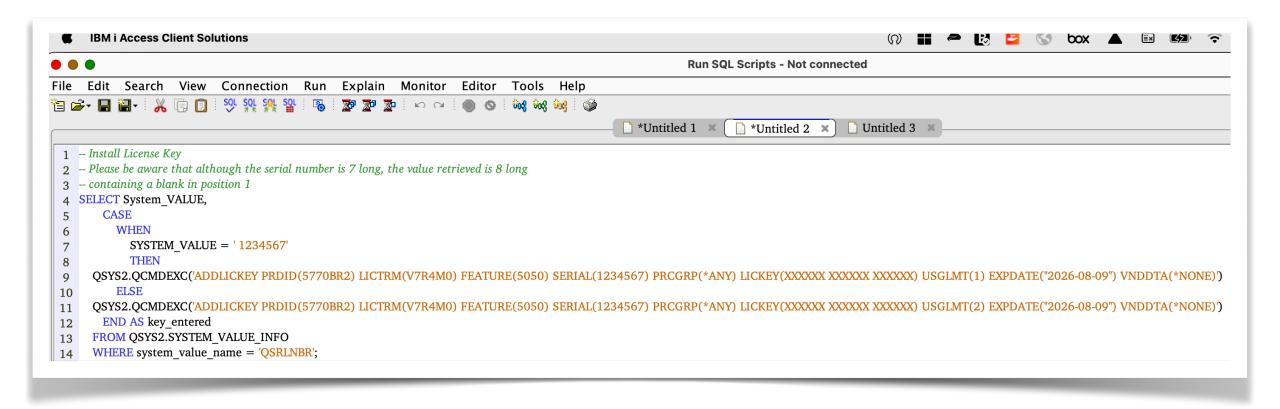
✓ Statement ran successfully (37.955 ms = 37,955 sec)



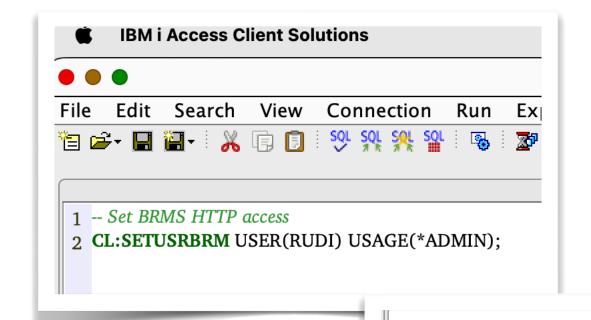


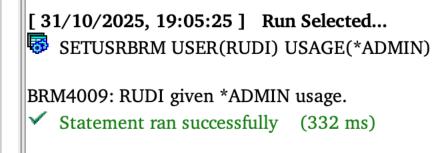








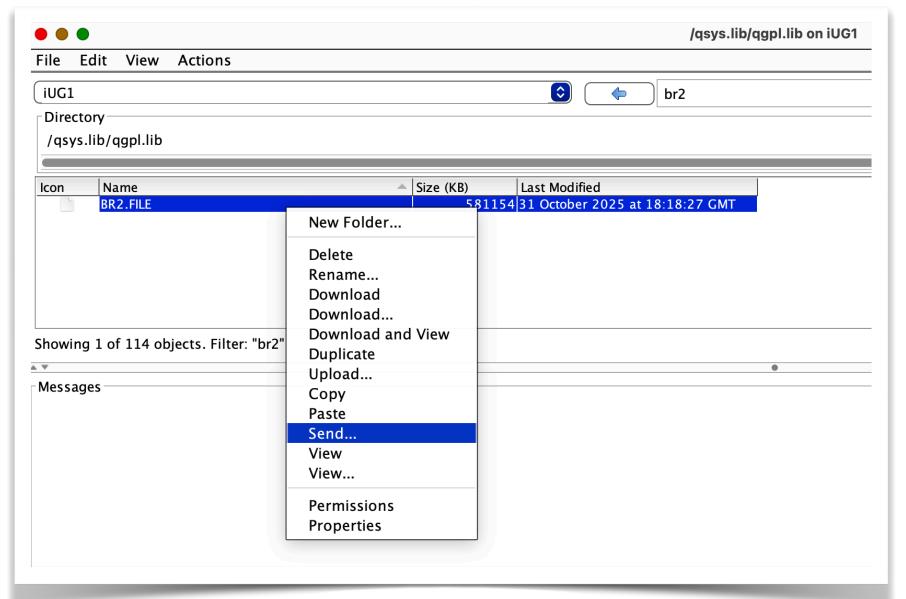






```
File Edit Search View Connection Run Explain
                                                         Monitor
                                                                    Editor
                                                                            Tools Help
                           Sor Sor Sor Sor
🛅 🚅 - 🔛 🖫 - 🐰 🗓 🗓
                                                                                               *Un
 1 -- When having to migrate an second LPAR
 2 -- Preparation for creating a savefile
 3 -- Check if the PTF was applied
 4 SELECT A.PTF_PRODUCT_ID,
        A.PTF IDENTIFIER,
      A.PTF LOADED STATUS,
      A.PTF STATUS TIMESTAMP
     FROM QSYS2.PTF_INFO A
      WHERE A.PTF PRODUCT ID = '5770BR2';
 10 stop;
 11 -- Create a savefile for saving the LPP 5770BR2
 12 -- Saving the LPP with all PTFs including will allow you to skip PTF handling after installing 5770-BR2 again
 13 CL:CRTSAVF FILE(QGPL/BR2) TEXT('LPP backup of 5770-BR2');
 14 CL:SAVLICPGM LICPGM(5770br2) DEV(*SAVF) SAVF(QGPL/BR2);
 15 stop;
 16
 17 -- Use Integrated File System to send the savefile to the other LPARs
 18
 19 -- Use on the other LPAR the command show below to restore 5770BR2
 20 CL:RSTLICPGM LICPGM(5770BR2) DEV(*SAVF) SAVF(QGPL/BR2);
```







```
- or use the Object Connect server when configured
-- =>https://www.ibm.com/docs/en/i/7.4.0?topic=function-setting-up-your-system-use-objectconnect

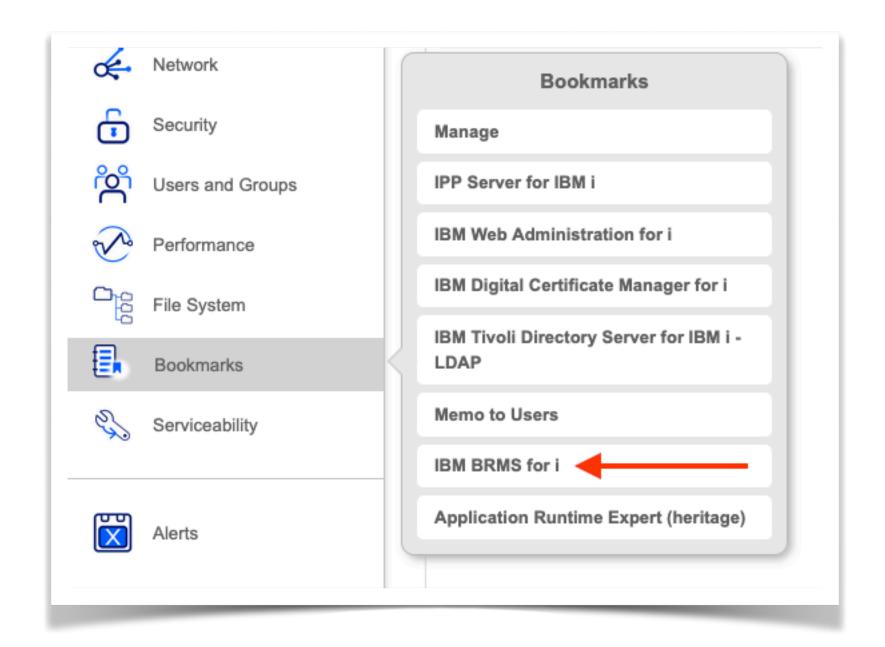
CL:SAVRSTOBJ OBJ(BR2) LIB(QGPL) RMTLOCNAME(SYSTEM1) CNNTYPE(*IP) RMTUSER(MYUSER) RMTPWD(MyPassword) OBJTYPE(*FILE);

CL:SAVRSTOBJ OBJ(BR2) LIB(QGPL) RMTLOCNAME(SYSTEM2) CNNTYPE(*IP) RMTUSER(MYUSER) RMTPWD(MyPassword) OBJTYPE(*FILE);

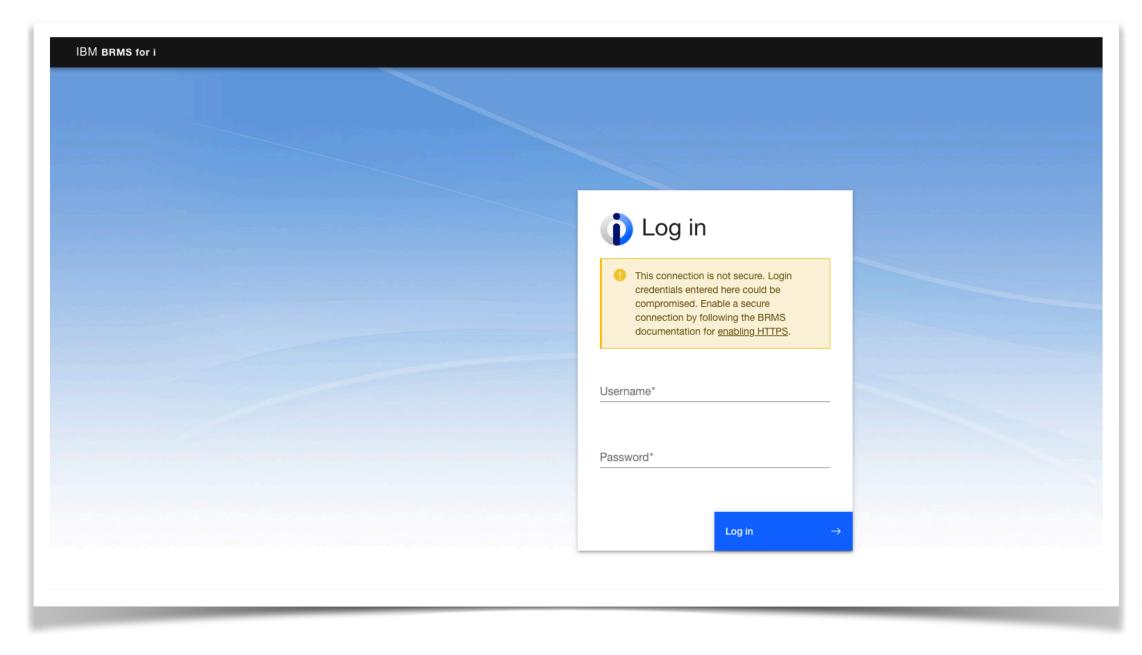
CL:SAVRSTOBJ OBJ(BR2) LIB(QGPL) RMTLOCNAME(SYSTEM3) CNNTYPE(*IP) RMTUSER(MYUSER) RMTPWD(MyPassword) OBJTYPE(*FILE);

CL:SAVRSTOBJ OBJ(BR2) LIB(QGPL) RMTLOCNAME(SYSTEM3) CNNTYPE(*IP) RMTUSER(MYUSER) RMTPWD(MyPassword) OBJTYPE(*FILE);
```











## **Enabling Secure HTTPS for the BRMS Web Interface**

Secure HTTPS traffic for the BRMS web interface requires a digital certificate. A digital certificate provides two functions:

- 1. Providing a way to encrypt communication between the web browser and the server
- 2. Verifying the identity of the server to prevent a man-in-the-middle attack.

Depending on the type of digital certificate you configure, the digital certificate will help with either encrypting communication or with both encrypting communication and verifying the identity of the server.

#### Before you begin

This step requires the following:

- IBM 5770SS1 Option 34 Digital Certificate Manager is installed
- The \*SYSTEM certificate store is created

To create the \*SYSTEM certificate store, use the following steps:

> Creating the \*SYSTEM certificate store

#### Procedure

After the \*SYSTEM certificate store is created, the procedure consists of the following steps:

- 1. Choose a type of certificate to use by following one of the following options
  - a. Creating a Self-Signed Certificate
  - b. Importing a Signed Certificate
- 2. Assigning the certificate to the BRMS Webserver
- 3. Enabling the secure HTTPS server
- 4. Restarting the BRMS Webserver

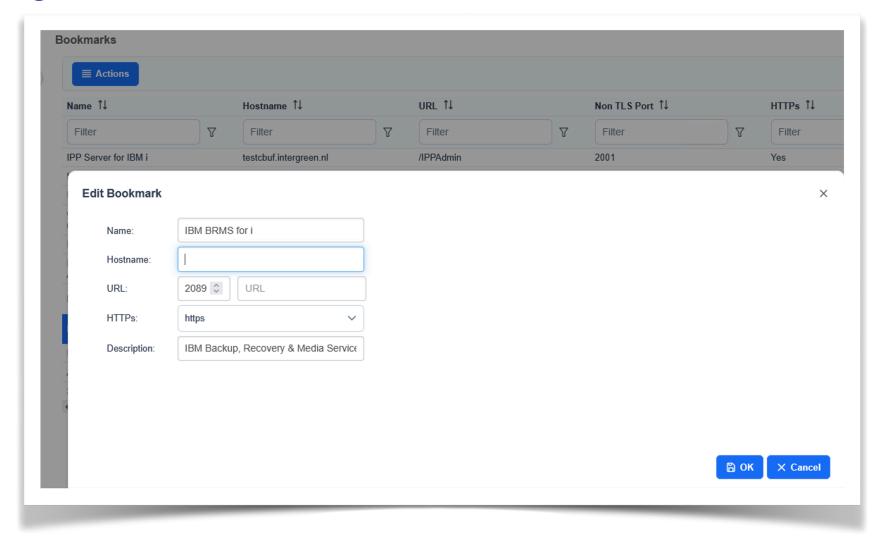


# **Enabling Secure HTTPS for the BRMS Web Interface**

```
1 -- category: System Management
2 -- description: Configure TLS for HTTP BRMS for i
   CL:CHGWEBBRM HTTP(*AUTO 2088) HTTPS(*ON 2089);
   CL:ENDTCPSVR SERVER(*HTTP) HTTPSVR(QBRMWEBSVR);
  CL:DLYJOB 15:
   CL:STRTCPSVR SERVER(*HTTP) HTTPSVR(QBRMWEBSVR);
  CL:DLYJOB 15;
9 -- Check if port 2088 & 2089 are active
10 SELECT JOB_NAME,
     LOCAL_PORT,
11
    LOCAL_ADDRESS,
12
     REMOTE PORT,
13
     REMOTE ADDRESS
14
    FROM QSYS2.NETSTAT JOB INFO
     WHERE LOCAL PORT IN (2088, 2089);
17 stop;
18 -- happy with testing?
19 -- Disable non-TLS port
20 CL:CHGWEBBRM HTTP(*OFF) HTTPS(*ON 2089) AUTOSTART(*YES);
21 stop;
22 CL:ENDTCPSVR SERVER(*HTTP) HTTPSVR(QBRMWEBSVR);
23 CL:DLYJOB 15;
24 CL:STRTCPSVR SERVER(*HTTP) HTTPSVR(QBRMWEBSVR);
```



# **Enabling Secure HTTPS for the BRMS Web Interface**





### Wrap-up

 HTTP server IBM BRMS for i Currently limited in functionality (view only)

Managing BRMS using 5250 emulation and <u>BRMS SQL Services</u>

• Using Run SQL Scripts to migrate BRMS will shorten the migration duration

• The good news: you can use 5770-BR2 in the same way as 5770BR1 BRMS Network feature & BRMS Advanced Functions feature



Questions?



i Thank you

