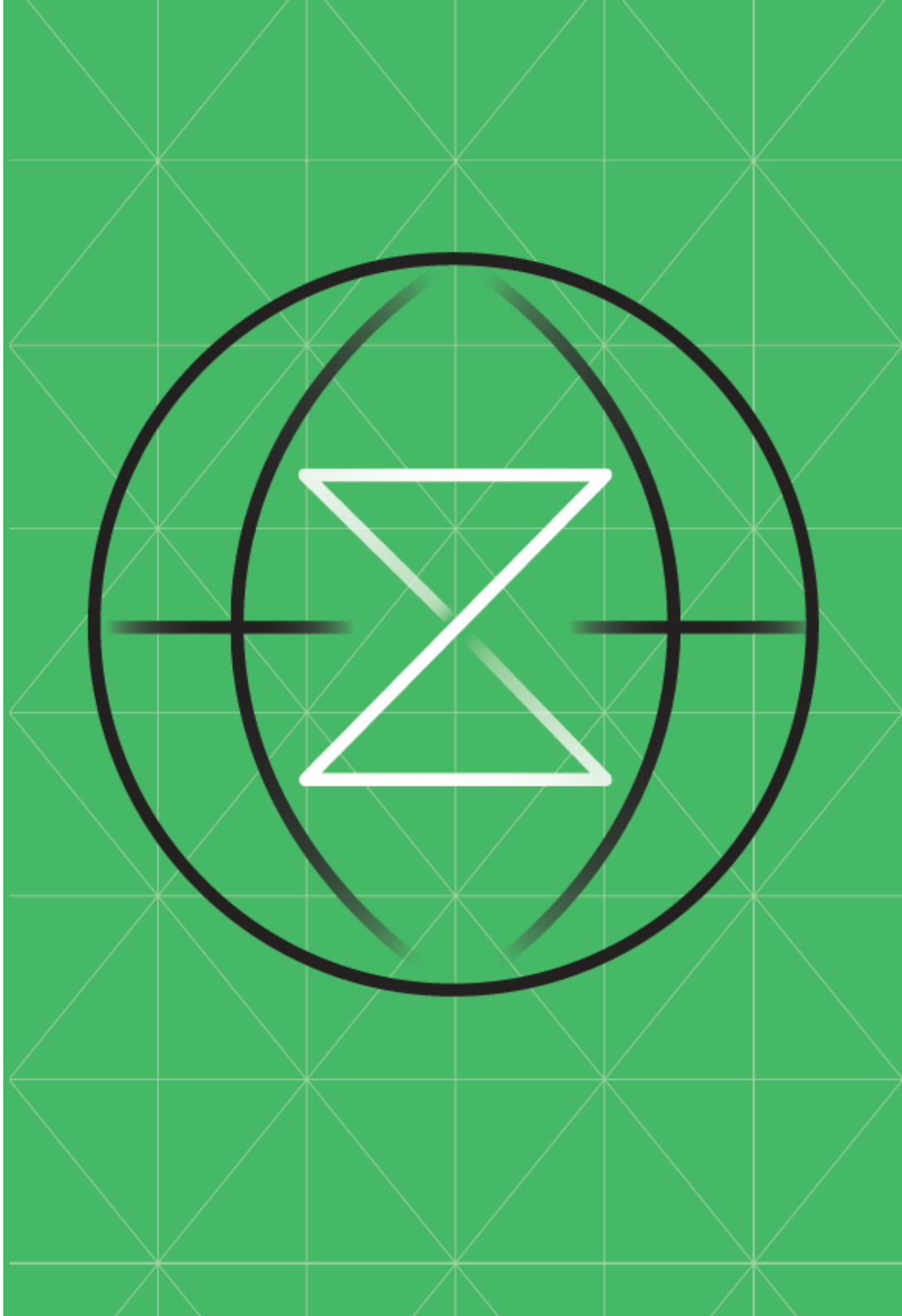
Extended

240516-2211

RACF2

Dive deeper into z/OS security



Z Xplore

CONTINUED JOURNEY ON RACF

Building off the fundamentals learned in RACF1 and diving deeper into the journey of becoming a RACF administrator.

THE CHALLENGE

In this challenge, you will continue to develop your knowledge in RACF while introducing you to new terms like **groups** and ICH408I errors.

BEFORE YOU BEGIN

Make sure you have completed RACF1. You will also be using a 3270 terminal for this challenge and Db2. If you have not completed the TSO or Db2 challenges, please complete those first.

INVESTMENT

Steps	Duration
06	90 minutes

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1 RACF ADMINISTRATION

In the last challenge, you learned about subjects vs. objects and how to set up profiles for datasets and users.

The goal for these RACF challenges is to introduce you to a lot of what RACF encompasses, and learn something of what a RACF administrator does.

While we can’t offer you full access to be your own RACF administrator on this IBM zSystem, we hope to provide you that access in the future with more RACF challenges.

Until then …

You are going to build upon what you have learned in the first challenge while providing new information on RACF.

Let’s get you started!

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2 LET’S GO ON A SCAVENGER HUNT

In this challenge, you are going to put together a lot of the things you have learned in the previous RACF challenge as well as other challenges like TSO and Db2.

For this scavenger hunt, we will use two famous cartoon characters - Mr. Peabody & Sherman.

Here are your overall steps for the challenge:

Steps	Description
1	Use RACF to discover which groups you are a part of and which objects you have access to
2	Figure out why you can’t access certain data sets and learn how to gain access rights through RACF
3	Finish the scavenger hunt and submit your **CHKRACF2** job

3 PART 1: FIGURE OUT ACCESS FAILURE REASONING

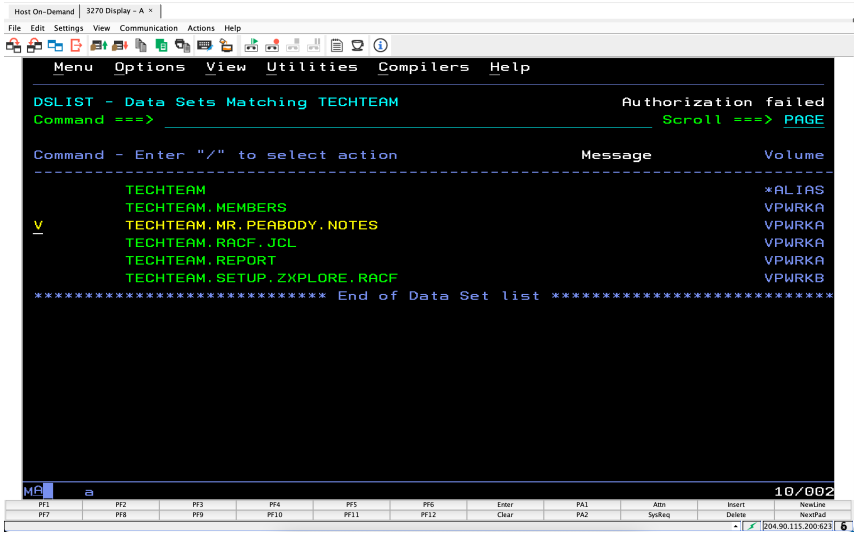
Mr. Peabody is the senior RACF administrator.

Sherman (you), is an early career hire and is being mentored by Mr. Peabody to be a RACF administrator.

3.1 [TAKE ACTION]

To begin your training, Mr. Peabody tells you to view his notes that can be found in `TECHTEAM.MR.PEABODY.NOTES`.

You will find you might not be able to view these notes … why?



Your first step is to look in the **SDSF** log to discover what your error was and why.

*Hint: You will be working the message identifier **ICH408I** Once you gain access into Mr. Peabody's notes, you will learn more about ICH408I and its importance in RACF.*

Your Tasks:

1. View system log
2. Type `bottom` then `f 'ICH408I' prev`
3. Find your Z-userid with the ICH408I message (RACF violation) and read about it (hint: use PF5 to repeat find)
4. Observe the value for `ACCESS ALLOWED` for your Z-userid

4 PART 2: USE RACF GROUP PERMISSIONS TO GAIN ACCESS

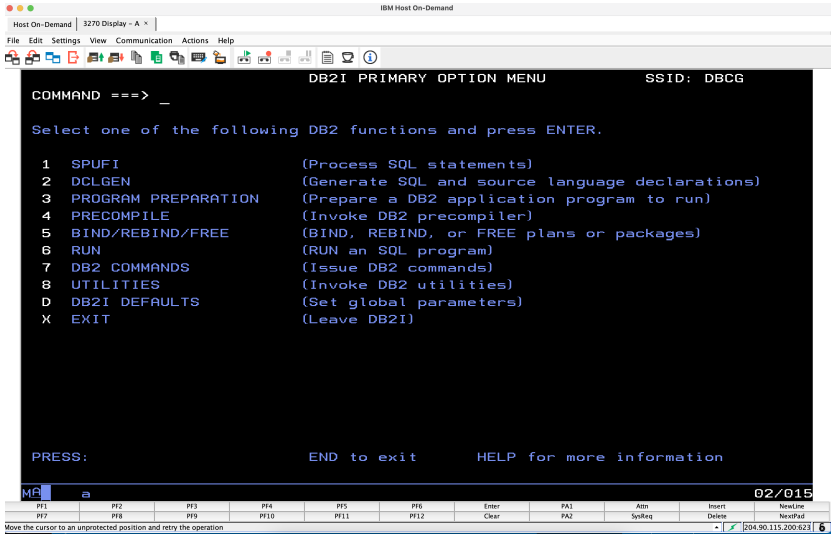
Even though you have discovered why you couldn't access Mr. Peabody's notes, it doesn't change the fact that you still need to view his notes to learn and complete the challenge!

How will you do this?

You are going to use Db2 and SQL through ISPF.

Your Tasks:

- Type `=d2` on the ISPF command line. This will take you to the Db2 Primary Option Menu. You've worked with Db2 in VS Code; here is a different view with ISPF.
- Look at your SSID in top right. This is your DB2 name. You need this it to say **DBCG**. Change it to say DBCG in the global parameters, if required.
    1. Type `D` for default
    2. Find `DB2 Name`
    3. Change accordingly



- Process a SQL statement using **SPUFI** so you gain access to Mr. Peabody's data sets

  In DB2 Primary Option Menu, type which number will bring you to SPUFI. Then type the following into each respective section:

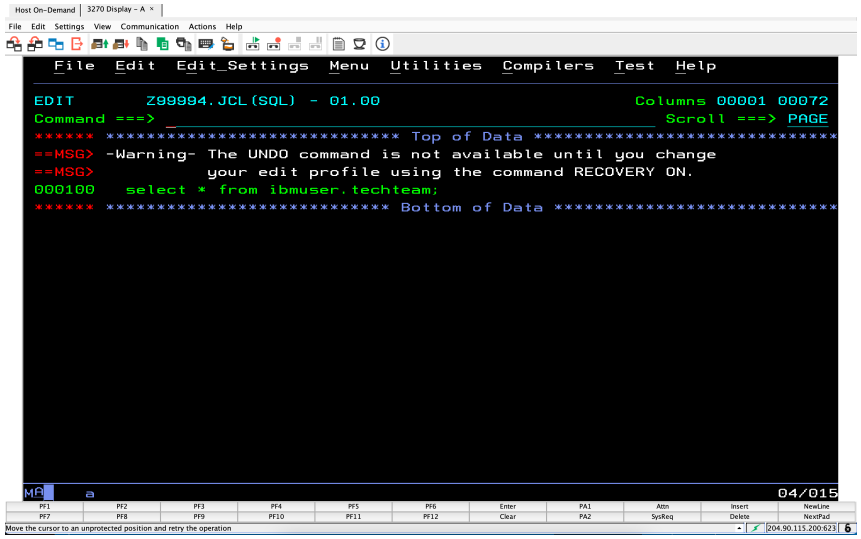
  1. Data Set Name Input = JCL(SQL)
  2. Data Set Name Output = DB2OUT
  3. Change Defaults = NO

  Press Enter twice

- You have now created a new member in your JCL data set.

  Edit this data set by adding in two lines:

```
set current schema ibmuser;
select * from techteam;
```



TECHTIP:

In the screenshot above, you can see a slightly different command that returns the same results that you see.

The schema name is a short SQL identifier used as a qualifier in the name of DB2 objects and creates a logical grouping of these objects.
You are setting your schema to IBMUSER so that any future SQL commands you run will know that is where you want to find tables, views, etc.

If you do not set the schema, you will have to qualify any object you reference in your SQL commands.

Otherwise, not setting the schema and saying `select * from techteam` will result in querying from a table Z######.TECHTEAM - which does not exist!

- Save and follow the steps at the bottom of your 3270 terminal screen to run the SQL statement.
- View the instructions produced by the SQL statement. These instructions will tell you how to complete the rest of the scavenger hunt and successfully complete RACF2 challenge.

NOTES:

- The result of your SQL query will be a new command to run. All you have to do is type in the correct statement.
- **Since your security rights will be updated by the command, you should LOGOFF, and LOGON again now to access your new privileges.**
- Data Set Name Input: This is where the input SQL statement will be stored. The JCL library is used because every user should have a JCL dataset (i.e. every user is allocated a Z######.JCL dataset). Once you execute the SQL statement, you will find a member named **SQL** inside JCL data set.

  Remember: JCL(SQL) format is Dataset(member)

- Data Set Name Output: This is where you are going to store the output of your SQL statements. If at any time, you want to view the output again (the instructions to successfully complete the scavenger hunt), you can go to Z######.DB2OUT to see it again.

5 IF YOU GET STUCK:

- Go back to `Z######.DB2OUT` to view the instructions again.
- If you cannot view Mr. Peabody's data sets (in 3.4), make sure you executed the command `tso techteam` and answered the question correctly. If all is OK, you may need to **LOGOFF and LOGON again** to allow your new access rights to become available
- Read Lessons 1 & 2 in Mr. Peabody's notes.

  Lesson 1: A review of what you learned in RACF1

  Lesson 2: Tells you about the message ICH408I and its importance/meaning in RACF.
- For the final quiz, Lesson 1 and 2 will provide you with everything you need to know.
- To deepen your knowledge on RACF, look around at the other data sets within Mr. Peabody's Notes.

Looking towards the future:

- IBM Z XPlore Admin are working on providing a system were you can be a RACF administrator, and define security settings from scratch yourself.
- In `TECHTEAM.SETUP`, you will view a lot of different things on how IBM Z Xplore security is set up. This includes everything required to meet IBM production standards so you can use this IBM Z system.

  Example: You can see how your IBM Z userid was created in the MAKEZID member

Nice job - let's recap	**Next up …**
You have dived deeper into RACF and have learned about one of the most commons authorization errors, ICH408I.	Complete more Extended and Advanced challenges and stay tuned for more opportunities to learn about RACF.