

IBM Education Assistant (IEA) for z/OS V2R3

JES2: Support for notification via email
JES2: Email address as logon (userid)

Agenda

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Trademarks

- See url <http://www.ibm.com/legal/copytrade.shtml> for a list of trademarks.
- Additional Trademarks:
 - None

Session Objectives

- In this session we will introduce new email related enhancements implemented in JES2 V2R3
 - Specify user identifier associated with a job or job group as an email address rather than a user name
 - Support authentication of a user identifier associated with a job or a job group via password phrase rather than a traditional password
 - Send notification about job or job group termination via an email message rather than a traditional TSO message
 - Provide enhancement to Notify user message service (SSI 75) to send message via email rather than a traditional TSO message

Overview

- Problem Statement / Need Addressed
 - Many modern applications use email address for user identification
- Solution
 - JES2 will accept email address instead of a user name in JCL for jobs and job groups.
- Benefit / Value
 - Modern look and feel
 - z/OS jobs may use the same identification scheme as external applications

Overview

- Problem Statement / Need Addressed
 - Many z/OS environments allow password phrase for user authentication, however it could not be used for batch jobs
- Solution
 - JES2 will accept password phrase for user authentication in JCL for jobs and job groups
- Benefit / Value
 - The same identification scheme can be used for batch jobs and other z/OS interfaces

Overview

- Problem Statement / Need Addressed
 - JES2 communicates with users and operators via WTOs and TSO SEND messages. In today's world, people rely more on other electronic methods for communications.
- Solution
 - JES2 will allow email as additional delivery method for job notification messages and messages sent via Notify user message service (SSI 75)
- Benefit / Value
 - JES2 messages can be delivered directly to user's inbox

Usage & Invocation – EMAIL keyword

- Email address is accepted as an alternative to a user name on JOB and JOBGROUP JCL statements:

```
//XYZ JOB EMAIL=<email-address>
```
- The *<email-address>* can be from 3 to 246 characters. If it contains special characters it must be enclosed in apostrophes.
- The *<email-address>* is passed to the security product to extract a local user identifier associated with that address. Extracted user identifier is used for authorization checks.
- The specified *<email-address>* is assigned to new JCL symbol &SYSEMAIL. &SYSEMAIL symbol can be used for substitution during JCL processing. Also &SYSEMAIL symbol can be used on EMAIL= keyword of new NOTIFY JCL statement.

Usage & Invocation – password phrase

- The PASSWORD= keyword on the JOB and JOBGROUP JCL statements was enhanced to accept password phrases in addition to passwords. There is no change to syntax.
- If the value passed is greater than 8 characters, then it is treated as a password phrase. Password phrases can be 9 to 100 characters long.
 - Values that need to be continued to a second card and values with blanks or special characters must be enclosed in apostrophes.
- Both an old and a new values can be specified on PASSWORD=. However, both values must be either passwords or password phrases.
 - Combination of a password and a password phrase is not supported.
- JES2 processes the PASSWORD= value during input phase processing and strips out the value specified.
 - As a result, password value does not appear in a job log or other JES2 data sets.

Usage & Invocation – NOTIFY statement

- New NOTIFY JCL statement requests a completion message (HASP165) to be sent after job or job group completes processing.
 - It is not mutually exclusive with NOTIFY= keyword on the JOB statement (which has other uses).
- There can be up to 8 NOTIFY statements in a job or a job group.
 - The NOTIFY statements must be after the JOB or JOBGROUP statement and must be before the first EXEC statement in a job.
- The syntax of the NOTIFY statement:

```
//name NOTIFY EMAIL=address,USER=userid,TYPE=EMAIL|MSG,  
                WHEN=expression
```
- Each NOTIFY statement must have a unique ***name***
- Either EMAIL= or USER= must be specified but not both

Usage & Invocation – NOTIFY statement (2)

- Optional TYPE= keyword specifies delivery method.
- Use of EMAIL= implies TYPE=EMAIL. Use of USER= implies TYPE=MSG. However, TYPE= keyword can be used to choose a different method, e.g.

USER=SMITH, TYPE=EMAIL

will send a message to email address associated with user name SMITH

- WHEN= keyword describes the conditions under which the notification will be generated.
 - The syntax for the *expression* is the same as for WHEN= parameter on the BEFORE and AFTER JOBGROUP JCL statements.
 - Some examples of WHEN= keyword usage:

WHEN=ABEND

WHEN= ' (RC>4 OR ABEND) '

WHEN= ' (RUN & !ABEND) '

Usage & Invocation – NOTIFY keyword on JOBGROUP statement

- NOTIFY keyword is now allowed on a JOBGROUP JCL statement
- The keyword has the same function as NOTIFY keyword on a JOB JCL statement and was added for compatibility

Usage & Invocation – SSI 75

- Notify user message service (SSI 75) was enhanced to allow sending message to one or more email address and to allow more flexible definition of a message
- SSI 75 accepts new version of a parameter structure (SSOB extension)
- New fields added to define additional attributes of a message:
 - SSNUADDR – pointer to a list of one or more email addresses
 - SSNUBODY – pointer to a list of character strings that represent a message body
 - SSNUSUBJ – pointer to a subject string for an email message
 - SSNUFROM – pointer to a “from” string for an email message
 - Some flags to control delivery of email messages
- For the details see macro IAZSSNU

Usage & Invocation – NFY_SUBJECT

- JES2 generates default subject line for the email messages sent as a result of processing of the NOTIFY JCL statements
- If necessary, installation can customize the subject line using \$TJOBDEF command:

```
$TJOBDEF,NFY_SUBJECT='string'
```
- JES2 will use the specified **string** as a subject line for all notification email messages
- The NFY_SUBJECT setting has JES2 member scope
- NFY_SUBJECT can be set via JES2 command or JES2 initialization statement

Interactions & Dependencies

- Software Dependencies
 - To be able to map between user identifier and its associated email address (or vice versa), email address attribute must be added to respective user identifiers in the security product database
 - JES2 uses z/OSMF server to deliver email messages.
 - z/OSMF must be configured and active on a system for JES2 email notification support to work.
 - Installation and configuration of z/OSMF is documented in z/OSMF publications.
 - Additional configuration steps required for JES2 exploitation of z/OSMF are documented in JES2 Tuning and Initialization Guide.
- Hardware Dependencies
 - None
- Exploiters
 - None

Migration & Coexistence Considerations

- When NOTIFY JCL statement is used in a job, this job becomes ineligible for processing on down-level members of the MAS
- Compatibility APAR OA48299 and OA53537 must be installed on down-level members of the MAS

Installation

- JES2 uses z/OSMF server to deliver email messages.
 - z/OSMF must be configured and active on a system for JES2 email notification support to work.
 - Installation and configuration of z/OSMF is documented in z/OSMF publications.
 - Additional configuration steps required for JES2 exploitation of z/OSMF are documented in JES2 Tuning and Initialization Guide.
- In order to deliver email messages, the following functions must be active:
 - z/OS Unix environment (OMVS)
 - TCP/IP
 - z/OSMF server
- If one or more of these functions are not available, JES2 will accept email messages, but will not be able to deliver them
- When all functions are configured and active, JES2 will deliver all accumulated email messages

Session Summary

- In this session we discussed the following JES2 enhancements:
 - Ability to identify job user via email address
 - Ability to authenticate user via password phrase
 - NOTIFY JCL statement to send enhanced notifications about job termination, including notification via email
 - Enhancement to Notify user message service (SSI 75) to send messages via email

Appendix

- Publications
 - z/OS V2R3 MVS JCL Reference
 - z/OS V2R3 MVS Using the Subsystem Interface
 - z/OS V2R3 JES2 Commands
 - z/OS V2R3 JES2 Tuning and Initialization Guide