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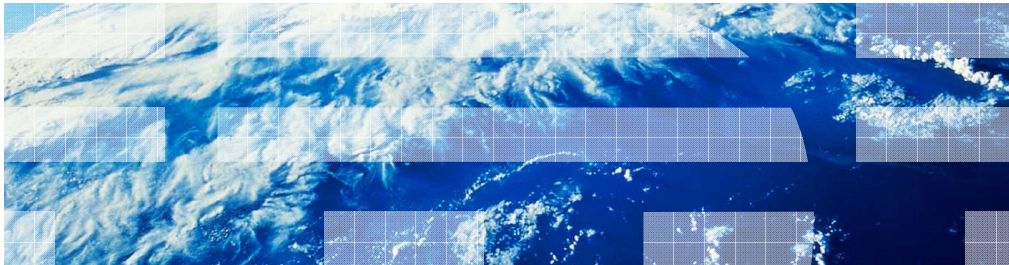# z/OS Communications Server – TN3270E enhancements

This presentation describes the updates to telnet in z/OS® V1R13 Communications Server. These updates are support for password phrases, display telnet status enhancements, and support for large inbound data.

Password phrases: background

- Password
  - One to eight characters
  - Limited range of characters allowed (for example, no blanks in the password)
- Password phrase
  - Nine to one hundred characters
  - Can contain any characters allowed in the EBCDIC 1047 code page
  - Must contain at least two alphabetic characters (case sensitive)
  - Must contain at least two non-alphabetic characters (numeric, punctuation, special, blank)
  - Cannot have more than two consecutive identical characters or NUL character
  - Every user ID with a password phrase also has a password

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By V1R10, z/OS RACF® had introduced and improved support for password phrases. A password phrase is optional when defining a user ID. Any user ID that is assigned a password phrase also has a password. Some elements of z/OS support the use of either a password phrase or a password.

A traditional password is limited to eight characters, but a password phrase can contain up to one hundred characters. It can also include spaces, punctuation marks, and is always case sensitive, even if RACF is configured for NOMIXEDCASE. Several additional rules for password phrases are listed on this slide.

TN3270E background

- RestrictAppl statement requires user ID and password
- Used by the server to allow or block session initiation
- A solicitor panel is presented

```
Enter Your Userid:
Password:                        New password:
Application:
Application Required. No Installation Default
```

- This is not used as the session user ID or password:
  The application might provide its own login screens

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The TN3270E server RestrictAppl statement requires user verification before the server allows access to SNA applications. If RestrictAppl is configured, the server will send a solicitor screen to you asking for user ID, password, and the target application. If you supply a valid user ID, password, and target application combination the server will continue with session initiation with the target application. If your user ID and password are not valid, the server will not allow session initiation.

Note that, after you pass the server validity check and session initiation begins, the application might send its own log on screen. Your user ID and password required by the application are different from what you entered earlier during the server validity check.

TN3270E server solicitor panel

- Password phrase can be up to 100 characters
- Enter eight characters or less and password is assumed

```
Enter Your Userid:
Passphrase:

New passphrase:

Application:
Application Required. No Installation Default
```

- New password or new password phrase confirmation required
- Supports both 80 column and 132 column displays

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The TN3270E telnet server has been enhanced to optionally send a solicitor screen that allows a password phrase up to 100 characters. This new screen also accepts passwords. If the length is eight or less, the entry is considered to be a password. If the length is between nine and 100, the entry is considered to be a password phrase. Additionally, if you change your password or password phrase, you are prompted to retype your new password or password phrase to confirm the change. The old solicitor panel does not ask for confirmation, which can lead to a lock-out if you mistype your new password or password phrase. Confirmation of a new password has not been added to the old solicitor screen in case automation has been set up and certain screen sequences are assumed.

Like the old solicitor screen, the new screen supports both 80 character and 132 character wide display formats.

TN3270E function externals

Configure at all levels

- TelnetGlobals – All ports for the server
- TelnetParms – A single port
- ParmsGroup – Specific connections

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A new statement, PASSWORDPHRASE, must be specified if you want to receive the new format solicitor screen and have the server ask for confirmation of a new password or password phrase. PASSWORDPHRASE can be specified in the TELNETGLOBALS block to affect all ports for the server, or specified in the TELNETPARMS block to affect a single port. If you want to send the new solicitor screen to a specific set of users based on IP address, host name, or SSL certificate user ID, you should use the PARMSGROUP statement within the BEGINVTAM block.

Diagnosis

- If the password phrase is not accepted
    1. Ensure your SAF product supports password phrases
    2. Check that you entered the correct case
    3. Try an alternate means of login
- For TN3270E, turn on Telnet Debug for SAF return code data

TN3270E enhancements

If you have a password phrase you can't log in with but which you think is correct, you should perform these steps. First, ensure that your SAF product supports password phrases and be aware of your SAF product's password phrase restrictions. For example, RACF only allows password phrases between nine and thirteen characters, and has additional restrictions on characters that must be included and how many repeated characters are allowed. Second, check that you entered the correct case; password phrases are always case sensitive. Finally, try an alternate means of login to verify your password phrase, such as TSO.

For TN3270, if there is a problem, you can turn on Debug detail in the server configuration to see the SAF return code and reason code for the login attempt.

Things to think about

- New solicitor panel format requires password change confirmation
- New solicitor panel format might affect automation

TN3270E enhancements

For TN3270E, the new solicitor panel format has the advantage of requiring confirmation for password changes. This reduces the likelihood of typing errors. However, you should take care to investigate how using the new solicitor panel format might affect any screen-scraping or automation that you are using.

Display telnet status

```
D TCPIP,TELNET
EZAOP60I TELNET STATUS REPORT
TELNET NAME   VERSION    STATUS
-----------   --------   --------------------------------
TNSRV1        CS V1R13   ACTIVE
TNSRV2        CS V1R13   ACTIVE
TNSRV3        CS V1R13   TERMINATING (STOP CMD)
TNSRV4        CS V1R13   INACTIVE (STOP CMD)
*** END TELNET STATUS REPORT ***
```

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z/OS V1R13 Communications Server adds a new display command to display the status of all TN3270E servers.

The D TCPIP,TELNET command shows the TN3270E telnet server name, version, and status. The status values are the same as they are for the TCP/IP display: the server is either active, terminating, or inactive. If the server is terminating or inactive because of the stop command, that is noted as part of the status.

If no TN3270E server has been started, message EZAOP47I is issued instead.

Large inbound data support

- TN3270E process
  - Receive 90 bytes, then
  - Receive any remaining data
- This optimizes
  - Larger screens
  - Data transfers

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z/OS V1R13 Communications Server enhances the TN3270E server to more efficiently process inbound data. TN3270E first receives up to 90 bytes of data. Beginning in V1R13, it now recognizes that there is more data remaining and creates a buffer to receive all remaining data in a single operation. This change allows the TN3270E server to more efficiently process large screens or data transfers.

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mailto:iea@us.ibm.com?subject=Feedback_about_TN3270E.ppt

This module is also available in PDF format at: ../TN3270E.pdf

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