Code page enhancements for CSSMTP

Version 2 Release 1
Note:

Links to related publications are from original documents and might not work. The links to publications are included for reference purposes only.
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Conventions and terminology that are used in this information

Commands in this information that can be used in both TSO and z/OS® UNIX environments use the following conventions:

- When describing how to use the command in a TSO environment, the command is presented in uppercase (for example, NETSTAT).
- When describing how to use the command in a z/OS UNIX environment, the command is presented in bold lowercase (for example, netstat).
- When referring to the command in a general way in text, the command is presented with an initial capital letter (for example, Netstat).

All the exit routines described in this information are installation-wide exit routines. The installation-wide exit routines also called installation-wide exits, exit routines, and exits throughout this information.

The TPF logon manager, although included with VTAM®, is an application program; therefore, the logon manager is documented separately from VTAM.

Samples used in this information might not be updated for each release. Evaluate a sample carefully before applying it to your system.

Note: In this information, you might see the following Shared Memory Communications over Remote Direct Memory Access (SMC-R) terminology:

- "RoCE Express®", which is a generic term representing both IBM® 10 GbE RoCE Express and IBM 10 GbE RoCE Express2 capability. When this term is used in this information, the processing being described applies to both features. If processing is applicable to only one feature, the full terminology, for instance, IBM 10 GbE RoCE Express will be used.
- RDMA network interface card (RNIC), which is used to refer to the IBM 10 GbE RoCE Express or 10 GbE RoCE Express2Express feature.
- Shared RoCE environment, which means that the "RoCE Express" feature can be used concurrently, or shared, by multiple operating system instances. The feature is considered to operate in a shared RoCE environment even if you use it with a single operating system instance.

Clarification of notes

Information traditionally qualified as Notes is further qualified as follows:

- Note Supplemental detail
- Tip Offers shortcuts or alternative ways of performing an action; a hint
- Guideline Customary way to perform a procedure
- Rule Something you must do; limitations on your actions
- Restriction Indicates certain conditions are not supported; limitations on a product or facility
Requirement
   Dependencies, prerequisites

Result  Indicates the outcome
Chapter 1. New Function Summary

Code page enhancements for CSSMTP

z/OS V2R1 Communications Server, with APAR PI93278, is enhanced to support multi-byte character sets with the Communications Server SMTP (CSSMTP) application. This enhancement allows migration from SMTPD to CSSMTP for customers that use multi-byte character set code pages, and provides improved code page support for characters in the mail subject line.

To enable multi-byte character set support, complete the appropriate tasks in Table 1.

Table 1. Task topics to enable multi-byte character set support

<table>
<thead>
<tr>
<th>Task</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configure CSSMTP to support multi-byte character sets. Set the MBCS statement to YES and set the TRANSLATE and MBCharset statements to multi-byte code pages.</td>
<td>Communications Server SMTP application in z/OS Communications Server: IP Configuration Reference</td>
</tr>
<tr>
<td>Display the values for the MBCS and MBCharset statements.</td>
<td>MODIFY command: Communications Server SMTP application (CSSMTP) in z/OS Communications Server: IP System Administrator's Commands</td>
</tr>
</tbody>
</table>

To find all related topics about code page enhancements for CSSMTP, see Table 2.

Table 2. All related topics about code page enhancements for CSSMTP

<table>
<thead>
<tr>
<th>Book name</th>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Configuration Guide</td>
<td>• Steps for creating mail on the JES spool data set for CSSMTP</td>
</tr>
<tr>
<td>IP Configuration Reference</td>
<td>• Communications Server SMTP application</td>
</tr>
<tr>
<td></td>
<td>- CSSMTP configuration statements</td>
</tr>
<tr>
<td></td>
<td>- MBCS statement</td>
</tr>
<tr>
<td></td>
<td>- TargetServer statement</td>
</tr>
<tr>
<td></td>
<td>- TRANSLATE statement</td>
</tr>
<tr>
<td>IP Diagnosis Guide</td>
<td>• Bad character translations</td>
</tr>
<tr>
<td>IP System Administrator's Commands</td>
<td>• MODIFY command: Communications Server SMTP application (CSSMTP)</td>
</tr>
</tbody>
</table>
Chapter 2. IP Configuration Guide

Steps for creating mail on the JES spool data set for CSSMTP

This topic provides the minimum information that you need to create mail that can be processed and forwarded by CSSMTP.

Before you begin

You need to know the external writer name of the CSSMTP application that you want to process your mail data set. If the external writer name is not configured for CSSMTP using the ExtWrtName statement, then the default is the job name.

For information about configuring the external writer name using the ExtWrtName statement, see z/OS Communications Server: IP Configuration Reference.

For more information about creating mail using CSSMTP commands, see z/OS Communications Server: IP User’s Guide and Commands.

Procedure

Perform the following steps to create mail on the JES spool data set for CSSMTP:

1. Set up JES so that CSSMTP can create, read, write, and purge data from the JES spool data set. See Steps for initial setup for CSSMTP.

2. Set up the mail to conform to the standardized syntax for text messages that are sent across networks. Mail messages have an envelope and contents. Envelopes contain all necessary information to accomplish transmission and delivery of the mail message content. The fields in the envelope are in a standard format.

3. Configure code page support.
   - If multi-byte character support is required, configure the MBCS YES statement.
   - Configure the code page of the input spool files with the TRANSLATE statement. The spool file must be written by using a code page that is supported by z/OS Unicode Services. The default TRANSLATE code page is IBM-1047. If MBCS YES is configured, the TRANSLATE code page must be a multi-byte character set code page.
   - Configure the code page used by the mail servers with the Charset parameter defined on the TargetServer statements. The default Charset code page is ISO8859-1.
   - If MBCS YES is configured, configure the code page used by the mail servers with the MBCharset parameter defined on the TargetServer statements. The MBCharset code page must be a multi-byte character set code page.

The spool file that contains the mail commands and body is recognized and translated by the Language Environment® iconv function to the following code pages:

- The mail commands are translated from the TRANSLATE code page to EBCDIC (IBM-1047) for inspection by CSSMTP and then from IBM-1047 to the Charset code page before sending to the target server.
• The mail headers are translated from the TRANSLATE code page to EBCDIC (IBM-1047) for inspection by CSSMTP and then from the TRANSLATE code page to the Charset or MBCharset code page before sending to the target server.

• The mail body is translated from the TRANSLATE code page to the Charset or MBCharset code page before sending to the target server.

For information about Unicode Services, see z/OS Unicode Services User’s Guide and Reference. For information about configuring the code page by using the MBCS statement, the Translate statement, and the Charset and MBCharset parameters on the TargetServer statement, see z/OS Communications Server: IP Configuration Reference.

4. Set up the mail in one of the following formats:

• A flat file generated using the sendmail bridge command that writes to the SYSOUT data set

For information about using the sendmail bridge command, see Sendmail to CSSMTP bridge in z/OS Communications Server: IP User’s Guide and Commands.

• A flat file generated using the IEBGENER utility or batch jobs that write to the SYSOUT data set

For information about using the IEBGENER utility to copy a mail file to a JES SYSOUT data set, see z/OS Communications Server: IP User’s Guide and Commands.

• Nettdata generated from SMTPNOTE or from TSO xmit

For information about using the SMTPNOTE command to compose a single mail message to one or more recipients and about using the TSO TRANSMIT (XMIT) command to send a mail file, see z/OS Communications Server: IP User’s Guide and Commands.

You must copy and customize the SMTPNOTE CLIST on every system where users can send mail with the SMTPNOTE command. For more information, see Steps for customizing the SMTPNOTE CLIST (optional).

Results

You know you are done when mail is on the JES spool data set ready to be processed by CSSMTP.
# Chapter 3. IP Configuration Reference

## CSSMTP configuration statements

Table 3 lists CSSMTP configuration file statements.

<table>
<thead>
<tr>
<th>Configuration file statement</th>
<th>Default</th>
<th>Required or optional</th>
<th>Update allowed by modify refresh</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>BadSpoolDisp</td>
<td>Hold</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the action to be taken when errors are encountered while the JES spool file is being processed.</td>
</tr>
<tr>
<td>ChkPointSizeLimit</td>
<td>64000</td>
<td>Optional</td>
<td>No</td>
<td>Specifies the number of concurrent mail messages for which checkpoint information is saved.</td>
</tr>
<tr>
<td>ExtendedRetry</td>
<td>• Age 5</td>
<td>Optional</td>
<td>Yes (except MailDirectory)</td>
<td>Specifies the limits that CSSMTP uses when it attempts to resend mail messages that are not immediately deliverable after RetryLimit processing.</td>
</tr>
<tr>
<td></td>
<td>• Interval 30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MailDirectory /var/cssmtp/ extwrtname/mail/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ExtWrtName</td>
<td>task job name</td>
<td>Optional</td>
<td>No</td>
<td>Specifies the external writer name that is used by CSSMTP for selection criteria when interfacing with the JES2 or JES3 subsystems.</td>
</tr>
<tr>
<td>Header</td>
<td>• Date Yes</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the action to be taken when creating RFC 2822 mail headers.</td>
</tr>
<tr>
<td></td>
<td>• UserInfo Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JESJobSize</td>
<td>0 (unlimited)</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the maximum data set size that is accepted from the JES spool file in thousands of bytes.</td>
</tr>
<tr>
<td>JESMsgSize</td>
<td>0 (unlimited)</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the maximum mail message size that is accepted from a JES spool file, in thousands of bytes.</td>
</tr>
</tbody>
</table>
Table 3. CSSMTP configuration statements (continued)

<table>
<thead>
<tr>
<th>Configuration file statement</th>
<th>Default</th>
<th>Required or optional</th>
<th>Update allowed by modify refresh</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>JESSyntaxErrLimit</td>
<td>5</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the maximum number of syntax errors that are acceptable in a JES spool file before the rest of the JES spool file processing is stopped.</td>
</tr>
<tr>
<td>LogLevel</td>
<td>7</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the level of logging and tracing.</td>
</tr>
<tr>
<td>MailAdministrator</td>
<td>No e-mail address is configured to send a report.</td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies an e-mail address to which CSSMTP delivers reports for certain errors. This statement can be specified up to four times in a configuration file to deliver reports to multiple administrators.</td>
</tr>
<tr>
<td>MBCS</td>
<td>No</td>
<td>Optional</td>
<td>No</td>
<td>Specifies whether or not CSSMTP supports multi-byte character sets.</td>
</tr>
</tbody>
</table>
| Options                     | • AtSign @  
• NullTrnc No  
• TestMode No  
• TLSEhlo No | Optional | Yes (except TestMode) | CSSMTP options |
| Report                      | Sysout  | Optional             | Yes                              | Specifies the action to be taken when problems are reported with JES spool files. |
| RetryLimit                  | Interval 1  
Count 5   | Optional             | Yes                              | Specifies the limits that CSSMTP uses when attempting to re-send mail messages that are not immediately deliverable. |
| SMF119                      | No SMF recording | Optional | Yes | Specifies the records to be written to SMF. |
### Table 3. CSSMTP configuration statements (continued)

<table>
<thead>
<tr>
<th>Configuration file statement</th>
<th>Default</th>
<th>Required or optional</th>
<th>Update allowed by</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>TargetServer</td>
<td></td>
<td>Required</td>
<td>Yes</td>
<td>Specify one or multiple TargetServer statements to define target servers (resolved or configured IP addresses) and their connection attributes to which CSSMTP connects for sending mail.</td>
</tr>
<tr>
<td></td>
<td>• Charset ISO8859-1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ConnectPort 25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ConnectLimit 5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MaxMsgSent 0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MBCharset (no default)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MessageSize 524288</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Secure No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>You must provide a value for TargetIP, TargetName, or TargetMx.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the timeout values, in seconds, for the interaction between CSSMTP and a target server.</td>
<td></td>
</tr>
<tr>
<td>Timeout</td>
<td>• AnyCmd 300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• ConnectRetry 120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• DataBlock 180</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• DATACmd 120</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Datagram 600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• InitialMsg 300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• MAILCmd 300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• RCPTCmd 300</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Translate</td>
<td>IBM-1047</td>
<td>Optional</td>
<td>No</td>
<td>Specifies the translation code page of the records read from the JES spool data set.</td>
</tr>
<tr>
<td>Undeliverable</td>
<td>ReturnToMailFrom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DeadLetterAction</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Store</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Optional</td>
<td>Yes</td>
<td>Specifies the method to use for handling undeliverable mail.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DeadLetterDirectory</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>/var/cssmtp/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>extwtname/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>deadletter/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UserExit</td>
<td>None</td>
<td>Optional</td>
<td>Yes</td>
<td>Controls whether this CSSMTP calls CSSMTP exit program provided by the customer to examine data being sent to CSSMTP from the JES spool data set.</td>
</tr>
</tbody>
</table>

#### MBCS statement

Use the MBCS statement to specify whether or not CSSMTP supports multi-byte character sets.
Syntax

Parameters

MBCS
Highlights whether CSSMTP supports multi-byte character sets.

- NO: Multi-byte character sets are not supported. This is the default value.
- YES: Multi-byte character sets are supported.

Results: If an update to the MBCS statement is detected during a dynamic refresh, CSSMTP continues to use the old MBCS value and a warning message is written to the log and the console.

Restrictions:
- If MBCS is specified as NO:
  - The TRANSLATE statement must specify a single byte code page.
  - The MBCharset statement, if specified, will be ignored.
- If MBCS is specified as YES:
  - The TRANSLATE statement must specify a multi-byte code page.
  - The MBCharset statement must be specified for each TargetServer, and it must be a multi-byte code page.

Usage notes: When migrating from the SMTP server, the following table contains suggestions for the TRANSLATE and MBCharset code pages that correspond to the SMTP server DBCS statement. The TRANSLATE code page must be the code page of the mail file on the JES spool, and the MBCharset code page must be the code page in which the TargetServer expects to receive the mail.

<table>
<thead>
<tr>
<th>SMTP DBCS value</th>
<th>TRANSLATE value</th>
<th>MBCharset value</th>
</tr>
</thead>
<tbody>
<tr>
<td>JIS78KJ ASCII</td>
<td>IBM-939</td>
<td>IBM-5055</td>
</tr>
<tr>
<td>JIS78KJ JISROMAN</td>
<td>IBM-930</td>
<td>IBM-5053</td>
</tr>
<tr>
<td>JIS83KJ ASCII</td>
<td>IBM-939</td>
<td>IBM-5054</td>
</tr>
<tr>
<td>JIS83KJ JISROMAN</td>
<td>IBM-930</td>
<td>IBM-5052</td>
</tr>
<tr>
<td>BIG5</td>
<td>IBM-937</td>
<td>IBM-950</td>
</tr>
<tr>
<td>EUCKANJI</td>
<td>IBM-930</td>
<td>IBM-eucJP</td>
</tr>
<tr>
<td>KSC5601</td>
<td>IBM-933</td>
<td>IBM-949</td>
</tr>
<tr>
<td>SCHINESE</td>
<td>IBM-935</td>
<td>IBM-1381</td>
</tr>
<tr>
<td>SJISKANJII</td>
<td>IBM-930</td>
<td>IBM-943</td>
</tr>
<tr>
<td>TCHINESE</td>
<td>IBM-937</td>
<td>IBM-948</td>
</tr>
</tbody>
</table>

Restriction: CSSMTP does not support the IBMKANJII value from the SMTP DBCS statement.
TargetServer statement

Use the TargetServer statement to specify one or more target servers (resolved or configured IP addresses) and their connection attributes. CSSMTP establishes connections to the target servers in order to send mail.

Rules:
• If you are configuring the TargetIP parameter, the TargetName parameter, or both, then you can configure multiple TargetServer statements.
• When you issue a MODIFY REFRESH command, if the order of the target servers changes, the configuration is updated.
• Each TargetIP or TargetName must be unique.

Results:
• Only the first four unique TargetIP values, TargetName values, or both values are used. If more than four values are configured, the application issues a console message and logs a warning. The four target servers that are selected are based on the configuration order in which the parameters were configured. CSSMTP only uses the first four IP addresses.
• If duplicate target server IP addresses are resolved from the configured TargetIP or from the TargetName IP addresses, CSSMTP issues a console message and logs a warning.
• If the TCP/IP stack supports only IPv4, any configured IPv6 addresses are ignored and the application issues a console message and logs a warning.

Restrictions:
• You must define at least one TargetServer statement, and it must contain at least one TargetIP, TargetName, or TargetMx parameter.
• Only four TargetServer statements or the first four TargetIP and TargetName parameters with TargetServer statements are used.
• If distinct target servers can be reached by way of a single IP address, the target servers must have the same capabilities. For example, if a dynamic VIPA (DVIPA) address is specified, the mail servers for that DVIPA address must have the same capabilities. In this example, all the servers must be ESMTPs or SMTPs, but not both, that have the same capabilities.
• You can configure only one TargetMx parameter.

Syntax

Put Braces and Parameters on Separate Lines:

| { TargetServer Parameters } | Put Braces and Parameters on Separate Lines |

TargetServer Parameters:
Parameters

Charset
Defines the code page that the target server expects to be used for mail messages when MBCS is specified as NO.

Result: If an update to the Charset value is detected during a dynamic refresh, CSSMTP must terminate all active connections to the target servers that are associated with this TargetServer statement to use the new Charset value.

Requirements:
- The code page must be defined to Unicode Systems Services.
- There must be a translation to and from the IBM-1047 code page to the Charset code page.
- There must be a translation from the TRANSLATE code page to the Charset code page.

The default code page is ISO8859-1.

ConnectPort
Defines the port that CSSMTP uses to connect to a target server.

Result: If an update to the port is detected during a dynamic refresh, then CSSMTP must terminate all the active connections to the target servers that are associated with this TargetServer statement in order to use the new port value.

Requirement: This port must match the listening port number used by the target server.

The valid range of port values is 1 - 65535. The default port is 25.

ConnectLimit
Limits the number of concurrent socket connections to the target server from CSSMTP. This might be useful if your server has a concurrent connection limit. One of the socket connections is used by CSSMTP to monitor the SMTP server.

The valid values are in the range 2 - 5. The default limit is 5 connections.

Result: If an update to the ConnectLimit value is detected during a dynamic refresh, CSSMTP must terminate all the active connections to the target servers that are associated with this TargetServer statement in order to use the new limit.
**MaxMsgSent**

Specifies the maximum number of mail messages that can be sent on a single connection. When the MaxMsgSent value is exceeded, CSSMTP closes the connection to the target server and reestablishes a new connection to the same target server. Mail messages continue to be sent over the new connection until the MaxMsgSent value is reached again.

The valid range is 0 - 2147483647. The default is 0, which means that an unlimited number of messages can be sent.

**MBCharset**

Defines the code page that the target server expects to be used for mail messages when MBCS is specified as YES.

**Result:** If an update to the MBCharset value is detected during a dynamic refresh, CSSMTP must terminate all active connections to the target servers that are associated with this TargetServer statement to use the new MBCharset value.

**Requirements:**

- The code page must be defined to Unicode Systems Services.
- There must be a translation to and from the IBM-1047 code page to the MBCharset code page.
- There must be a translation from the TRANSLATE code page to the MBCharset code page.

There is no default MBCharset code page.

**MessageSize**

Specifies the maximum size of a mail message that can be sent to target servers that do not support ESMTP size extensions.

Valid values are in the range 1000 - 2147483647. The default size is 524288 bytes (512 KB).

**Secure**

Indicates whether Transport Layer Security (TLS) is required between the client and a target server. TLS provides private, authenticated communication over the internet. See the steps for setting up security for CSSMTP in z/OS Communications Server: IP Configuration Guide.

**Result:** If an update to the secure value is detected during a dynamic refresh, CSSMTP must terminate all the active connections to the target servers that are associated with this TargetServer statement in order to use the new secure value.

**NO** TLS is not required between CSSMTP and a target server. However, if the STARTTLS SMTP command is used in the spool file, a TLS connection is attempted with this server.

**YES** TLS is required between CSSMTP application and a target server. If a TLS session cannot be established, then the server is not usable.

**TargetIP**

The IPv4 or IPv6 address of the target server to which CSSMTP connects.

**Restrictions:**

- IPv4-mapped IPv6 addresses and IPv6 addresses with the reserved prefix ::/96 are not valid.
- The IPv6 unspecified address (::0) and IPv4 unspecified address (0.0.0.0) are not allowed.
- Duplicate IP addresses are not allowed.

**TargetName**

The host name or fully qualified host name used for a resolver A or AAAA query. Valid values are 1 - 255 characters in length. If the host name is used, the resolver appends the domain information, which is obtained from the TCPIP.DATA data set.

The TargetName value is not case sensitive.

**Result:** CSSMTP only uses the first four configured or resolved IP addresses to send the mail message. If more than four target servers are found, this application issues a console message and logs a warning.

**Restriction:** Duplicate host names are not allowed.

**TargetMx**

The name or a fully-qualified domain name used for a resolver MX query. This name might resolve into multiple MX records that include a preference value. The lower the preference value is, the more likely that the record is used. Valid values are 1 - 255 characters in length.

The lower the value, the higher the preference.

The TargetMx value is not case sensitive.

**Results:**
- Only the first configured TargetMx value is used. If more than one value is configured, the application issues a console message and logs a warning.
- Only the first four target servers are saved for the configured TargetMx value. If more than four target servers are returned, CSSMTP issues a console message and logs a warning.
- The lower preference is honored by not sending mail messages to those IP addresses unless the higher preference target servers are unavailable.

**Restriction:** The TargetMx parameter is mutually exclusive with the TargetName parameter and the TargetIP parameter. If you want to use this statement, MX records for this TargetMx value must exist in the DNS database. If no MX records are found then this is handled as an error and console message EZD1815E is generated.

**TRANSLATE statement**

Use the TRANSLATE statement to define the supported code page to be used to translate data received from the JES spool data set to ASCII for sending mail messages. See the code set conversions supplied in z/OS Support for Unicode: Using Unicode Services for details about the supported code pages.

**Tip:** The following POSIX variant characters are converted to ASCII using `iconv` determined by the configured EBCDIC code page. The POSIX variant characters are:

```
\ [ ] { } ^ ~ ! # | $ @ ` 
```
Syntax

Translate IBM-1047

Translate code_page_identifier

Parameters

Translate

Specifies the code page to be used for translating the spool file records. If you do not specify this statement, the default code page is IBM-1047. See [Code pages known to work with CSSMTP under CSSMTP environment variables](#) for a list of supported single-byte code pages. See [Table 4 on page 8](#) under “MBCS statement” on page 7 for a list of supported multi-byte code pages.

Results:

- If an update to the Translate statement is detected during a dynamic refresh, CSSMTP continues to use the old translate value and a warning message is written to the log and the console.

Restrictions: The code page must have the following characteristics:

- Defined to Unicode System Services
- An EBCDIC code page
- If the MBCS statement specifies NO, TRANSLATE must specify a single byte code page
- If the MBCS statement specifies YES, TRANSLATE must specify a multi-byte code page
- A translation to and from the ASCII character set specified on the Charset parameter of the target server
- A translation to and from the ASCII character set specified on the MBCharset parameter of the target server when the MBCS statement specifies YES
- If user-defined conversion tables are not used, the environment variable _ICONV_TECHNIQUE should be left undefined or have the value of its default LMREC. If user-defined conversion tables are used, value should be preceded with the technique used to generate the table. For example, if the table was generated using technique 0, the value should be set to 0LMREC.
Chapter 4. IP Diagnosis Guide

Bad character translations

If a mail message is received with characters that are not being translated correctly, for example the Euro sign (€), one of the following code page configuration settings might be incorrect:

- The TRANSLATE code page might be incorrect for the sysout files being read by CSSMTP. If so, configure the TRANSLATE statement with the code page that is used for the sysout files.

- The Charset code page might not be compatible with the target server. Some mail servers might use ISO8859-15 or 1252 instead of the default ISO8859-1. Configure the Charset parameter on the TargetServer statement.

- The MBCharset code page might not be compatible with the target server. Configure a compatible code page in the MBCharset parameter on the TargetServer statement.
Chapter 5. IP System Administrator's Commands

MODIFY command: Communications Server SMTP application (CSSMTP)

Use the MODIFY command to control the Communications Server SMTP (CSSMTP) application from the operator console. For descriptions of terms that are used in this section, see the CSSMTP information in IBM Communications Server: IP Configuration Guide.

Format

```
MODIFY procname,
            Display, CONFig
            Display, IPlist
            Display, LOGlevel
            Display, SPoolstatus
            Display, TARgets
            Display, ADDR=ipAddress
            Display, FLUSHRetry, AGE=days
            Display, TKID=tkid
            Display, LOGlevel, LEVEL=LogLevel
            REFRESH
            REFRESHIPlist
            REFRESHTARgets
            RESume
            SUSpend
            USERexit, LEVEL=NONE
```

Parameters

`procname`

The member name of the cataloged procedure that is used to start the CSSMTP application.

`Display, CONFig`

Display the CSSMTP application configuration and global values that are used for processing mail.

`Display, IPlist`

Display all target server IP addresses and their preferences that are used by CSSMTP. A target server is the resolved or configured IP addresses from TargetServer statements. See the TargetServer statement information in IBM Communications Server: IP Configuration Reference for details about how the target server addresses are obtained.

`Display, LOGlevel`

Display CSSMTP active log levels.
**Display,SPOOLSTATUS**

Display summary information for all tasks that are processing spool files for CSSMTP. You can use this display to determine the number of mail messages that are pending or you can use it on the long-retry queue for each spool file that is being processed. The summary option is the default for the MODIFY DISPLAY,SPOOLSTATUS command.

**Tip:** Use this command to obtain the task ID to use on other modify commands that use task ID values as options.

**Display,SPOOLSTATUS,Detail**

Display detailed information for all tasks that are not idle. The ALL option is the default for the MODIFY DISPLAY,SPOOLSTATUS,DETAIL command.

**Display,SPOOLSTATUS,Detail,TKID=tkid**

Display detailed information for this specific task that processes spool files for CSSMTP.

**Tip:** You can use the MODIFY DISPLAY,SPOOLSTATUS command to obtain a valid TKID value.

**Display,TARGETS[,ADDR=ipAddress]**

Display global and specific information about target servers. If the ADDR parameter is not specified, all configured target servers are displayed. If the ADDR parameter is specified, then the IP address value must match the IP address of an existing target server that is in use by CSSMTP.

**Tip:** You can use the MODIFY DISPLAY IPLIST command to obtain IP addresses for the list of target servers that are being used by CSSMTP.

**FLUSHRetry,TKID=tkid**

Initiate a request for the CSSMTP application to remove mail messages from the long retry queue, and send those mail messages to the list of target servers. If CSSMTP cannot send a mail message, that mail message becomes subject to long-term retry processing; if any mail message is not defined, it becomes an undeliverable mail message. For more information about undeliverable mail see [z/OS Communications Server: IP Configuration Guide](https://www.ibm.com/support/knowledgecenter/en/SSLTBKD_21.5.0/com.ibm.zos.doc/itgipconfg.html).

A nonzero TKID (task ID) value requests that only the mail messages for the specified TKID value is flushed. A TKID value 0 requests that all mail messages in the long-retry queue be flushed.

**Tip:** You can use the MODIFY DISPLAY,SPOOLSTATUS command to obtain a valid TKID value.

**FLUSHRetry,AGE=days**

Initiate a request for the CSSMTP application to remove the mail messages that are older than days days from the extended retry queue, and send those mail messages to the list of target servers. If CSSMTP cannot send a mail message, that message becomes an undeliverable mail message. To make this command effective, the target servers must be available. For details, see the information about extended retry mail in [z/OS Communications Server: IP Configuration Reference](https://www.ibm.com/support/knowledgecenter/en/SSLTBKD_21.5.0/com.ibm.zos.doc/itgipconfgref.html) and the information about undeliverable mail in [z/OS Communications Server: IP Configuration Guide](https://www.ibm.com/support/knowledgecenter/en/SSLTBKD_21.5.0/com.ibm.zos.doc/itgipconfg.html).

A days value of 0 specifies that all messages in the extended retry list are to be processed.

**Tip:** You can use the command to monitor the number of the mail messages in the extended retry list and the state of the target servers used by CSSMTP.
**LOGlevel, LEVEL=** logLevel

Change the CSSMTP application log level. The logLevel value specifies the log level. If a logLevel value is not specified, then the current log level remains in effect. See the LogLevel statement information in z/OS Communications Server: IP Configuration Reference for details about defining the CSSMTP application log level.

**REFRESH**

Initiate a dynamic reconfiguration using the configuration file that is defined at initialization. If a configuration error is detected during a dynamic refresh, the entire refresh is rejected, the error message is written to the log and console, and the CSSMTP application continues to run with the old configuration values.

**Results:**

- While the new configuration file is being processed, the existing log level is used, regardless of how it was set (using the last configuration file or with the MODIFY LOGLEVEL command). After the new configuration file has been successfully processed, the value that is specified on the LogLevel statement of the new configuration file takes effect. If the LogLevel statement is not specified in the new configuration file, the log level defaults to level 7 (ERROR, WARNING, and EVENT). If the new configuration file contains errors that cause it to be rejected, the log level that was in effect prior to the dynamic reconfiguration is used.
- If an update to the ExtWrtName statement is detected during a dynamic refresh, then the CSSMTP application continues to run with the old external writer name and a warning message is written to the log and console.
- If an update to the Translate statement is detected during a dynamic refresh, then the CSSMTP application continues to run with the old translate value and a warning message is written to the log and console.
- If an update to the ChkPointSizeLimit statement is detected during a dynamic refresh, then the CSSMTP application continues to run with the old ChkPointSizeLimit value and a warning message is written to the log and console.
- While the new configuration file is being processed, the existing UserExit value is used, regardless of how it was set (using the last configuration file or with the MODIFY USEREXIT command). After the new configuration file has been successfully processed, the value that is specified on the UserExit statement of the new configuration file takes effect when the next JES spool file is opened. If the new configuration file contains errors that cause it to be rejected, the UserExit value that was in effect prior to the dynamic reconfiguration is used.
- An update to the TargetServer statement can force CSSMTP to stop and restart connections on the affected IP addresses. If CSSMTP is in the process of sending a mail message on the affected IP address, the mail message is retried at another IP address or placed in the long retry queue. For more information about the TargetServer statement, see the TargetServer statement information in z/OS Communications Server: IP Configuration Reference.

**REFRESHIPlist**

Initiates a dynamic DNS refresh of the target that is identified by the configured TargetName or TargetMx parameter value. This parameter does not cause the configuration file to be reprocessed.

**Result:** If a TargetServer statement has TargetName or TargetMx parameters configured, new IP addresses might be resolved. If the IP address list is
changed, CSSMTP might be forced to stop and restart connections on the affected IP addresses. If CSSMTP is in the process of sending a mail message on the affected IP address, the mail message is retried at another IP address or placed in the long retry queue.

**REFRESH**
Reinitiates a connection to all target servers. The CSSMTP application can learn about any capability changes from the target servers.

**Tip:** This command causes all active connections to all target servers to be stopped and restarted; therefore, use this command only when there is a change in the network topology and no work is being done by the CSSMTP application because the command interrupts all active connections.

**Result:** If you issue this command while CSSMTP is in the process of sending a mail message on the connection, the mail message is retried at another IP address or placed in the long retry queue.

**RESume**
Resumes processing of any JES spool files whose processing was suspended with the MODIFY SUSPEND operator command.

**SUSpend**
Suspends the reading of any new spool files immediately but completes reading any spool files that are already in process. To resume reading of spool files, issue the MODIFY RESUME operator command.

**USERexit,LEVEL=.userAgentValue**
Change the CSSMTP application user exit value. The USERexit keyword can be set to NONE, VERSION2, or VERSION3. If a userAgentValue parameter value is not specified, then the current user exit value remains in effect. See the USEREXIT statement information in z/OS Communications Server: IP Configuration Reference for details about how to define the CSSMTP application user exit value.

**Result:** The user exit value does not change until the next JES spool file is opened.

**Examples**

**Example 1:** The MODIFY DISPLAY,LOGLEVEL command displays the current logging level that is being used by CSSMTP.

```plaintext
F CSSMTP,DISPLAY,LOGLEVEL
EZD1828I CSSMTP DISPLAY LOGLEVEL = 15
```

**Example 2:** The MODIFY DISPLAY,CONFIG command displays the current configuration that is being used by CSSMTP.

```plaintext
F CSSMTP,DISPLAY,CONFIG
EZD1829I CSSMTP CONFIGURATION:
  CONFIGFILENAME     : /U/USER1/CSSMTP/CSSMTP.CONF
  LOGFILENAME        : /U/USER1/CSSMTP/CSSMTP.LOG0707S1
  CHKPOINTFILENAME   : 'USER1.CCSSMTP.CHKPOINT'
  PID                : 67108874
  LOGLEVEL           : 255  USEREXIT  : NONE
  CHKPOINTSIZELIMIT  : 64000  CHKPOINT  : WARM
```
CONFIG CODEPAGE : IBM-1047

TRANSLATE : IBM-930 MBCS : YES
START OPTION TCPNAME : N/A IPV6 ENABLED : YES
EXTWRITNAME : CSSMTP HOST NAME : VIC142
DOMAIN NAME : RALEIGH.IBM.COM
HEADER :
DATE : YES
USERINFO : YES
JESJOBSIZE : 0 JESMSGSIZE : 0
JESSYNTAXERRLIMIT : 5
BADSPOODISp : HOLD REPORT : SYSOUT
OPTIONS:
NULLTRNC : NO
TESTMODE : NO ATSIGN : 7C
TLSEHLO : NO
UNDELEIVERABLE:
RETURNOMAILFROM : YES DEADLETTERACTION: STORE
DEADLETERDIRECTORY : /var/cssmtp/myDir/
RETRYLIMIT:
COUNT : 5 INTERVAL : 1
EXTENDEDRETRY : ACTIVE
AGE : 100 INTERVAL : 30
MAILDIRECTORY : /var/cssmtp/CSSMTP/mail/
SMF119:
CONFIG : YES CONNECT : YES
MAIL : YES SPOOL : YES
STATS : YES
TARGETSERVER:
TARGETNAME : D03AV01.Boulder.IBM.COM
CONNECTPORT : 25 CONNECTLIMIT : 5
MAXMSGSENT : 1000 MESSAGESIZE : 524288
SECURE : NO CHARSET : ISO8859-1
MBCHARSET : IBM-5053
TARGETIP : 9.100.1.2
CONNECTPORT : 25 CONNECTLIMIT : 5
MAXMSGSENT : 1000 MESSAGESIZE : 524288
SECURE : NO CHARSET : ISO8859-1
MBCHARSET : IBM-5053
TIMEOUT:
ANYCMD : 300 CONNECTRETRY : 120
DATABLOCK : 180 DATAINIT : 120
DATATERM : 600 INITIALMSG : 300
MAILCMD : 300 RPCTCMD : 300
MAILADMINISTRATOR : USER1@US.IBM.COM
USER2@US.IBM.COM
USER3@US.IBM.COM
USER4@US.IBM.COM

For definitions of statements and parameters that are obtained from configuration file, see the [CSSMTP] information in [z/OS Communications Server: IP Configuration Reference].

CONFIGFILENAME
The configuration name from the CONFIG DD statement in the started procedure.

LOGFILENAME
The configured log file name from LOGFILE DD statement in the started procedure.

PID
The process ID.
LOGLEVEL
The logging level.

CHKPOINT
Indicates whether checkpointing is active.

WARM
Checkpointing was initiated using the CHKPOINT DD statement.

COLD
Checkpointing was initiated using the -f start option.

NONE
There was no CHKPOINT DD statement.

CONFIG CODEPAGE
The code page value specified on the CSSMTP_CODEPAGE_CONFIG statement or the default value.

TRANSLATE
The code page value that is configured on the Translate statement.

CHKPOINT FILENAME
The name of the configured checkpoint file, if a CHKPOINT DD statement is configured in the started procedure.

START OPTION TCPNAME
The TCP name that is passed on the -p start option or the value N/A if the -p start option is not used.

IPV6 ENABLED
Indicates whether IPV6 is supported.

EXTENDEDRETRY
Indicates whether extended retry processing is ACTIVE or INACTIVE.

ATSIGN
The hex value of the configured AtSign symbol.

Result: Code page IBM-1047 is always used for the CSSMTP display. The CSSMTP_CODEPAGE_CONFIG environment variable is not used for the display. The value displayed is the hex value that is defined in the IBM-1047 code page for the configured symbol.

The remaining values that are displayed are the values for the matching statement or parameter from the configuration file.

Example 3: The MODIFY DISPLAY,IPLIST command displays the IP address of the configured target servers from the TargetServer statement and TargetIp parameter, or it displays the resolved target server addresses from the TargetServer statement and TargetName parameter, that are being used by CSSMTP.

F CSSMTP.DISPLAY,IPLIST
EZD1830I CSSMTP Iplist:
| TARGETIP | 9.100.1.5 |
| CONNECTPORT | 25 |
| MAXMSGSENT | 1000 |
| SECURE | NO |
| MBCHARSET | IBM-5053 |
| TARGETIP | 9.56.231.69 |
| CONFIG TARGETNAME | RALVMS |
| CONNECTPORT | 25 |
| MAXMSGSENT | 2000 |
| SECURE | YES |

Code page enhancements for CSSMTP
TARGETIP
The IP address of the target server.

CONFIG TARGETNAME
The name that is used to resolve this target server address for a resolver A or AAAA query.

The remaining values that are displayed are the same values that are specified on the matching statement or parameter in the configuration file.

Example 4: The MODIFY DISPLAY,IPLIST command displays the resolved target servers from the TargetServer statement and TargetMx parameter that are being used by CSSMTP.

F CSSMTP,DISPLAY,IPLIST
EZD1830I USER1408 IPLIST:
TARGETIP : 9.56.231.69
CONFIG TARGETMX : mxName
PREFERENCE : 1
CONNECTPORT : 25 CONNECTLIMIT : 2
MAXMSGSENT : 2000 MESSAGESIZE : 524288
SECURE : YES CHARSET : ISO8859-1
MBCHARSET : IBM-5053
TARGETIP : 9.56.200.55
CONFIG TARGETMX : mxName
PREFERENCE : 1
CONNECTPORT : 25 CONNECTLIMIT : 2
MAXMSGSENT : 2000 MESSAGESIZE : 524288
SECURE : NO CHARSET : ISO8859-1
MBCHARSET : IBM-5053

Example 5: The MODIFY DISPLAY,SPOOLSTATUS command displays the summary information for all tasks that are processing JES spool files.

F CSSMTP,DISPLAY,SPOOLSTATUS
EZD1832I CSSMTP SPOOLSTATUS:
TKID JOBNAME STATE PEND LRT   TKID JOBNAME STATE PEND LRT
W 002 JOBNM25 ACTVE 15 5   D 003 JOBNM132 READ 5 0
W 004 JOBNM45 ACTVE 10 10  D 005 JOBNM232 READ 10 0
For definitions of terms that relate to this information, see the CSSMTP common terms information in z/OS Communications Server: IP Configuration Guide.

W A writer JES task, if the JES spool file was generated by the IEBGENER utility.

D A dest JES task, if the JES spool file was generated by the SMTPNOTE command or by the TSO Transmit (XMIT) command.

TKID
The task ID, which can be used to identify a specific task.

Tip: You can use the task ID in the MODIFY FLUSHRetry command and the MODIFY DISPLAY,SPOOLSTATUS,DETAIL,TKID=tkid command.

JOBNAME
The JES job name for this task. If the task is in the IDLE state, this is the name of the previous job.

STATE
This parameter can have one of the following values:

Waits
The task is waiting because virtual storage is constrained.

Read
The task is reading a spool file.

Idle
The task is waiting for a JES spool file to process.

Active
The task is actively waiting for all mail in the spool file to be processed.

Wait
The task is waiting because no target server is active to receive mail.

Supnd
The task was suspended by the MODIFY SUSPEND command.

Pend
The number of mail messages that are waiting to be sent to target server.

Lrt
The number of mail messages that are currently queued in the long-retry queue.

The MODIFY DISPLAY SPOOLSTATUS,DETAIL command displays detailed information for all tasks that are not in the IDLE state that are processing JES spool files.

F CSSMTP,DISPLAY,SPOOLSTATUS,DETAIL
EZD1833I CSSMTP SPOOLSTATUS:
  TASK ACTVE : WRITER   TKID : 2
  JOBNAME : JOBNM25   JOBID : STC00055
  PEND : 15   LRT : 5
  MAIL READ : 0   UNDELIVERABLE : 0
  TASK ACTVE : WRITER   TKID : 4

24 Code page enhancements for CSSMTP
The MODIFY DISPLAY SPOOLSTATUS,DETAIL command displays detailed information for all tasks that are not in the IDLE state that are processing JES spool files; in this example all state tasks are idle.

The MODIFY DISPLAY SPOOLSTATUS,DETAIL,TKID=11 command displays detailed information for a specific TKID 11 task that is processing a spool file for the CSSMTP application.

The MODIFY DISPLAY SPOOLSTATUS,DETAIL,TKID=3 command displays detailed information for a specific TKID 3 task that is currently idle.

The TASK parameter has the following fields:

**state**

Possible values are:

**WAITS**

The task is waiting because virtual storage is constrained.

**READ**

The task is reading a spool file.

**IDLE**

The task is waiting for a JES spool file to process.

**ACTIVE**

The task is actively waiting for all mail in the spool file to be processed.

**WAIT**

The task is waiting because no target server is active to receive mail.

**SUPND**

The task was suspended by the MODIFY SUSPEND command.
**type task**
Possible type task values are:

**WRITER**
This is a writer JES task if the JES spool file was generated by the IEBGENER utility.

**DEST**
This is a DEST JES task if the JES spool file was generated by the SMTPNOTE command or by the TSO Transmit (XMIT) command.

**TKID**
The task ID, which can be used to identify a specific task.

**Tips:**
- You can use the task ID in the MODIFY FLUSHRetry command and the MODIFY DISPLAY,SPOOLSTATUS,DETAIL,TKID=\$tkid command.
- You can use the task ID to identify log information that is in the log file. If the \$tkid value is 2, that TKID value is represented in the following example by the value 002.

```
08/01 07:10:20 CSSMTP DEBUG :002:message0: ... 
```

**JOBNAME**
The JES job name for this task. If the task is in the IDLE state, then this is the previous job name.

**JOBID**
This is the JES job ID for this task. If the task is in the IDLE state, then this is the previous job ID.

**PEND**
The number of mail messages that are waiting to be sent to a target server. If the task is in the IDLE state, then this value is always 0.

**LRT**
The number of mail messages that are currently in the long-retry queue. If the task is in the IDLE state, then this value is always 0.

**MAIL READ**
The total number of mail messages that have been read for the job. If the task is in the IDLE state, then this is the mail for the previous job.

**UNDELEVERABLE**
The total number of undeliverable mail messages for this job name. If the task is in IDLE state, then this value is the undeliverable count of the previous job.

**Example 6:** The MODIFY DISPLAY,TARGETS command displays the global and specific information that is related to sending email to target servers. For definitions of statements and parameters that are obtained from the configuration file, see the CSSMTP information in z/OS Communications Server: IP Configuration Reference.

```
F CSSMTP,DIS,TARGETS
EZD1831I CSSMTP TARGETS:
GLOBAL INFORMATION:
MAIL SENT : 0 TOTAL RETRY : 0
DEADLETTER: 0 CURRENT RETRY: 0
UNDELEVER : 0
EXTENDED RETRY:
CURRENT : 0 TOTAL : 0
TARGET SERVER 1.1.1.1
STATE : ACTIVE
ESMTP : YES MESSAGE SIZE : 20000000
```

Code page enhancements for CSSMTP
The following global target server information for this application is displayed:

MAIL SENT
Count of all mail messages that were processed successfully after all mail messages were sent.

TOTAL RETRY
Cumulative count of mail messages that have been in the long-retry state.

DEADLETTER
Cumulative count of all mail messages that were classified as dead letters.

CURRENT RETRY
Count of mail messages that are currently in the long-retry queue.

UNDELIVER
Count of all mail messages that were undeliverable.

EXTENDED RETRY

CURRENT
Count of mail messages currently in the extended retry directory while extended retry is active.

TOTAL
Cumulative count of mail messages that have been in the extended retry directory.

The following fields are displayed for each target server:

STATE
State of the target server.

ACTIVE
The target server is active.

NOT USABLE
This target server is not usable. For example, CSSMTP has lost connectivity to this target server.

UNKNOWN
This target server is new and its capabilities have not been learned at this time.

ESMTP
Type of target server. If the ESMTP value is YES, the target server type is ESMTP. If the ESMTP value is NO, the target server type is SMTP.

MESSAGE SIZE
The actual message size.

- For ESMTP this value was obtained from the SIZE extension when the connection was made. The value 0 indicates that there is no predefined message size limit.
• For SMTP, this value is the value that is configured for the MessageSize parameter of the TargetServer statement. For details, see the TargetServer statement information in z/OS Communications Server: IP Configuration Reference.

STARTTLS
Indicates that the target server has acknowledged that it is capable of establishing secure connections.

• For ESMTP see the information that describes using Transport Layer Security (TLS) in z/OS Communications Server: IP Configuration Guide for details.
• For SMTP this is always set to NO.

MAIL ATTEMPTS
The total number of mail messages that CSSMTP has sent or has attempted to send to the target server.

Tip: A single mail message operation can be attempted on multiple target servers.

MAIL SENT
The number of mail messages that were sent successfully for this target server.

Tip: A single mail message that contains multiple recipients can be sent successfully on multiple target servers.

CONNECT FAIL
Count of the number of SMTP connections that the application was unable to establish when it attempted to send mail to a target server.

Example 7: The MODIFY DISPLAY,TARGETS,ADDR=x.x.x.x command displays the global and specific information related to sending e-mail to a specific target server.

F CSSMTP,DIS,TARGETS,ADDR=1.1.1.1
EZD1831I CSSMTP TARGETS:
GLOBAL INFORMATION:
MAIL SENT : 24        LONG RETRY : 0
DEADLETTER:  0        UNDELIVERABLE:  0
TARGET SERVER 1.1.1.1
STATE : ACTIVE
ESMTP : YES          MESSAGE SIZE : 20000000
STARTTLS : NO        MAIL ATTEMPTS: 24
MAIL SENT : 24        CONNECT FAIL : 0

Example 8: The MODIFY LOGLEVEL,LEVEL=15 command requests the CSSMTP application to change the logging level to 15. The EZD1809I message indicates that the logging level was updated successfully.

F CSSMTP,LOGLEVEL,LEVEL=15
EZD1809I CSSMTP1 MODIFY LOGLEVEL COMMAND COMPLETED : UPDATED

Example 9: The MODIFY REFRESH command requests that the CSSMTP application reprocess the configuration file. The following messages indicate that the configuration was updated successfully with no errors.

F CSSMTP,REFRESH
EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
EZD1840I CSSMTP UPDATED CONFIGURATION
EZD1846I CSSMTP UPDATED TARGET SERVERS
EZD1848I CSSMTP MODIFY REFRESH COMMAND COMPLETED
Example 10: The MODIFY REFRESHIPLIST command requests that the CSSMTP application perform a dynamic DNS refresh of the TargetName or TargetMx field. The following messages indicate that the target server addresses were successfully updated.

**F CSSMTP,REFRESHIPLIST**
- EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
- EZD1845I CSSMTP UPDATED TARGET SERVERS
- EZD1842I CSSMTP MODIFY REFRESHIPLIST COMMAND COMPLETED

Example 11: The MODIFY FLUSHRETRY,TKID=0 command initiates a request to move all mail that is in the long-retry queue to the send queue.

The following messages indicate that all mail messages have been moved from the long-retry queue to the send queue.

**F CSSMTP,FLUSHRETRY,TKID=0**
- EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
- EZD1810I CSSMTP MODIFY FLUSHRETRY,TKID=0 COMMAND COMPLETED

Example 12: The MODIFY FLUSHRETRY command initiates a request to move all mail for TKID 2 from the long-retry queue to the send queue.

The following messages indicate that all mail messages for TKID 2 have been moved from the long-retry queue to the send queue.

**F CSSMTP,FLUSHRETRY,TKID=2**
- EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
- EZD1810I CSSMTP MODIFY FLUSHRETRY,TKID=2 COMMAND COMPLETED

Example 13: The MODIFY REFRESHTARGETS command reinitiates a connection to all target servers.

The following messages indicate that the CSSMTP application completed this request.

**F CSSMTP,REFRESHTARGETS**
- EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
- EZD1821I CSSMTP ABLE TO USE TARGET SERVER 9.1.1.1

Example 14: The MODIFY RESUME command resumes processing of any JES spool files when processing was suspended using the MODIFY SUSPEND operator command.

The following messages indicate that the CSSMTP application will start processing any JES spool files.

**F CSSMTP,RESUME**
- EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
- EZD1814I CSSMTP MODIFY RESUME COMMAND COMPLETED

Example 15: The MODIFY SUSPEND command suspends the reading of mail messages immediately for all JES spool files.

The following messages indicate that the CSSMTP application has suspended the processing of mail messages for all JES spool files.

**F CSSMTP,SUSPEND**
- EZD1834I CSSMTP MODIFY COMMAND ACCEPTED
- EZD1822I CSSMTP MODIFY SUSPEND IMMEDIATE COMMAND COMPLETED

Example 16: The MODIFY FLUSHRETRY,AGE=0 command initiates a request to move all the mails that are in the extended retry queue to the send queue.
The following messages indicate that all mail messages have been moved from the extended retry queue to the send queue.

**Example 17:** The MODIFY FLUSHRETRY,AGE=2 command initiates a request to move all mail messages that have been in the extended retry queue for more than two days from the extended retry queue to the send queue.

The following messages indicate that all the extended retry mail messages that are older than two days have been moved from the extended retry queue to the send queue.

**Example:** The MODIFY FLUSHRETRY,AGE=2 command initiates a request to move all mail messages that have been in the extended retry queue for more than two days from the extended retry queue to the send queue.

**Example:** The MODIFY FLUSHRETRY,AGE=2 command initiates a request to move all mail messages that have been in the extended retry queue for more than two days from the extended retry queue to the send queue.
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