Change is Coming: Motivation and Considerations for Migrating from SMTPD/Sendmail to CSSMTP

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SMTPD

- **SMTPD NJE Mail Gateway –** provides both SMTP client and server roles
  - Heavily used application by batch jobs (limited TSO usage
  - Gateway role – reads spool datasets and uses SMTP client capability to send mail from z/OS
  - Provides SMTP server (listener) role to receive mail from SMTP clients for delivery to TSO users or for forwarding
  - No support for IPv6 or TLS/SLL
  - Does not scale well

Sendmail

- **Sendmail –** provides both SMTP client and server roles
  - Provides SMTP server (listener) role to receive mail from SMTP clients for deliver to Unix mail boxes or for forwarding
  - Not heavily used on z/OS
  - Limited usage by tooling and applications to send mail from z/OS

Out with the old, in with the new

- V2R2 announcement includes an SOD (Statement of Direction) that V2R2 will be the last z/OS release to include SMTPD and Sendmail

- CSSMTP NJE mail gateway is the strategic z/OS SMTP transport
  - Introduced in z/OS V1R11 to address the aging SMTPD NJE Gateway.

CSSMTP

- Provides the NJE mail gateway role
  - Sends mail from spool using SMTP (*outbound email focus*)
  - Many customers have already migrated
- Advantages over SMTPD NJE Gateway
  - Performance and scalability is significantly better
    - CSSMTP was 4.5 times faster sending 4000 emails while using half the CPU of SMTPD in IBM benchmarks
  - Support newer mail standards
  - Support for IPV6 and AT-TLS
  - Uses system translation services

CSSMTP continued

- There are some limitations
  - Does not provide an SMTP listener capability
    - No inbound email support
    - No delivery of mail to TSO users
  - Stricter enforcement of SMTP standards
    - Some emails that were accepted by SMTPD NJE get rejected by CSSMTP
    - Several restrictions have already been addressed via APAR
      - Allows CSSMTP to accept and process these emails

Mail Migration Strategy: Sendmail

- IBM will provide a replacement sendmail command that will perform as a “thin gateway SMTP client” for sending mail
  - Will stage the mail message to spool for CSSMTP to send outbound
  - Applications using the sendmail client could function seamlessly
  - Will require some administrative changes to migrate to CSSMTP
  - Will only provide functional support for message formats that CSSMTP already supports
    - CSSMTP will not be enhanced to support functions that sendmail provides that it does not already support
      - e.g. 8BITMIME (RFC 6152)
      - A more complete list of supported and unsupported functions will be made available at a later time

Sendmail Alternative: Postfix

- Sendmail has been deprecated in RHEL and SUSE
- The community replacement is Postfix
  - Postfix includes interfaces that are compatible with sendmail and is a full sendmail replacement
    - Can send, receive, forward, etc.
    - More info: www.postfix.org
  - IBM has no plans to provide Postfix in z/OS Communications Server
- Postfix is planned to be available on z/OS through third party alternatives
  - Rocket Software ported tools for z/OS
    - A beta build for their port is at: http://www.rocketsoftware.com/rocket-ported-tools-download-request
  - Other third party solutions may become available

Mail Migration Strategy: SMTPD

- CSSMTP has stricter standards than SMTP
  - How to verify that CSSMTP will process your existing mail messages
- V2R2 function: CSSMTP test mode
  - A new configuration parameter that causes CSSMTP to run in Test Mode
    - CSSMTP will perform its normal email processing, except it will not actually send emails
    - It will report email failures and discard successful emails
    - You can address incompatible emails before migrating to CSSMTP
  - SMTPD continues to process your mail messages
    - Production emails are unaffected during the test
  - EZBMCOPY
    - Utility program provided by IBM to copy JES email messages to two destinations, SMTPD and CSSMTP

Test Mode/EZBMCOPY architecture