

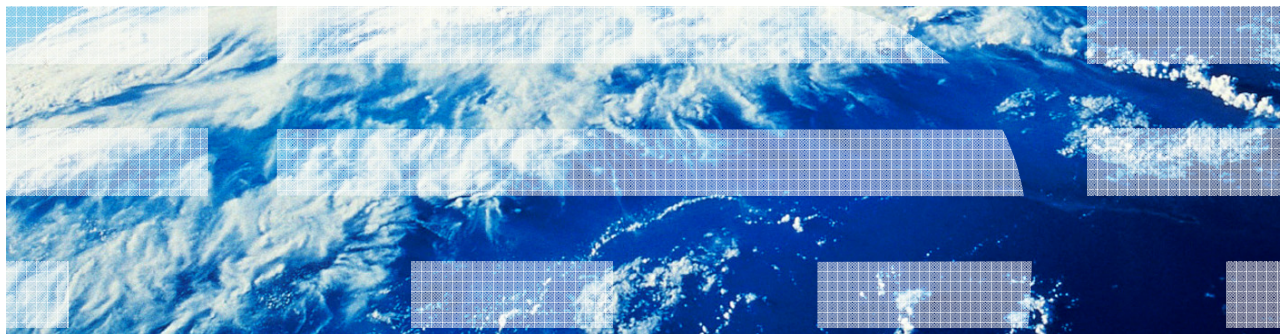


IBM zForum

1Q 2014

Messaging Just Got Better

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WMQ versions and optional features



- The WebSphere MQ product is still:
 - WebSphere MQ
 - Optional chargeable features on all supported platforms are:
 - WebSphere Managed File Transfer Service
 - WebSphere MQ Advanced Message Security
- MQ V7.1 latest available for z/OS
- MQ V7.5 latest available for distributed
 - Major change in way packaging of optional features done which was not applicable to z/OS
- Details at:
 - <http://www-01.ibm.com/software/websphere/subscriptionandsupport/wmq/versions.html>

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And now for the news...

- Updates since V7.1

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V7.1 SHA-2 Cipher Specs

V7.1


Dynamic Statistics

- Customers have ever more stringent security requirements. Particularly in Government and Banking sectors:
- z/OS platform has added support for SHA-2 Cipher Specs via a z/OS APAR on z/OS 1.13
- These are inter-operable with the new Cipher Specs added on distributed MQ in V7.5
- MQ APAR PM77341 enables MQ SSL channels to use these to protect the transmission of WMQ messages.
 - TLS_RSA_WITH_NULL_SHA256
 - TLS_RSA_WITH_AES_128_CBC_SHA256
 - TLS_RSA_WITH_AES_256_CBC_SHA256
 - ECDHE_ECDSA_AES_128_CBC_SHA256
 - ECDHE_ECDSA_AES_256_CBC_SHA384
 - ECDHE_RSA_AES_128_CBC_SHA256
 - ECDHE_RSA_AES_256_CBC_SHA384
- Investigation of performance issues requires collection of statistics and detailed thread level information.
- MQ configuration allows for stats and accounting traces to be enabled dynamically, but only picked up for new tasks started since the change.
- Often problems happen on long running tasks, eg MQ channels
- MQ APAR PM58798 allows new trace settings to be enabled for long running threads from next API request.

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Dynamic Right Sizing

- Many customers implementing DB2 Q Replication as part of their disaster recovery provisioning
- Part of GDPS Active/Active or Active/Query strategy.
- QREP transmits very large volumes of DB2 updates between sites over MQ with low latency requirement.
- MQ APARs PM63802 and PM81785 ship function to enhance QREP performance. For Example Read-Ahead of messages to improve MQGET response times.
- MQ is often used for transporting data across high band-width or high latency networks:
- QREP across continental distances
- Inter-continental file transfer
- IBM Comms Server TCP/IP has introduced Dynamic Rightsizing
- Protocol change to better exploit such networks.
- MQ APAR PM71966 allows DRS to be configured at MQ level instead of for entire TCPIP stack.

Accelerating the delivery of next generation applications

IBM WebSphere MQ Advanced for Developers – Free to download now!

New!

- **Designed for developers** to get access to the full WebSphere MQ Advanced package at **no cost** for developers to use on their own machines – at home or at work
- Boost developer skills with the most **flexible, complete and highly configurable** messaging environment
- **Faster access to all of WebSphere MQ Advanced capabilities** for developers to enhance applications with message security, managed file transfer and mobile access



What's new

- WebSphere MQ Advanced for Developers available for free
- Download today for development use
- Available without IBM Support
 - Join the discussion on the IBM MQ Messaging Community on developerWorks
- Get IBM Support with a per-user licensed copy of WebSphere MQ Advanced for developers

Organizations need to accelerate the delivery of applications with a highly configurable messaging environment

Available
October 4th 2013

Leading messaging platform engineered for z/OS IBM WebSphere MQ for z/OS Value Unit Edition

New!

- **Reduce cost and complexity** in your IT infrastructure with the leading messaging platform connecting your mainframe applications
- **Create and grow new application workloads** onto a new System z LPAR, allowing simplified system administration at a reduced cost
- **Handles the complexities** of communication protocols and dynamically distributes messaging workload across available resources



What's new

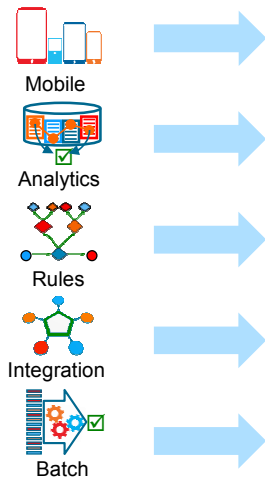
- One time charge (OTC) price metric instead of the usual monthly license charge
- Connect new workloads that are qualified to run on System z New Application License Charge (zNALC) logical partitions (LPARs).
- Includes the code and entitlement to use WebSphere MQ Client Attachment Feature, by allowing connections to WebSphere MQ Clients, which run on other platforms

*Secure, reliable and high performance
messaging layer purely for the z/OS platform*

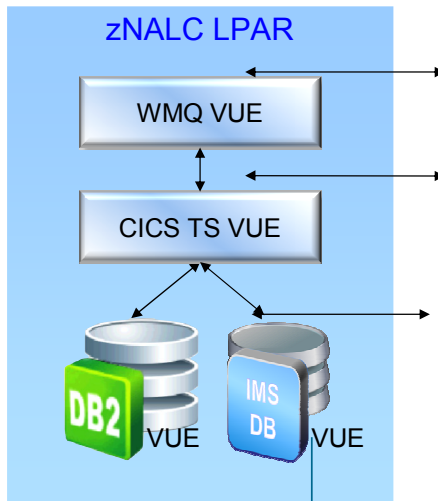


More flexibility when deploying new workloads onto System z

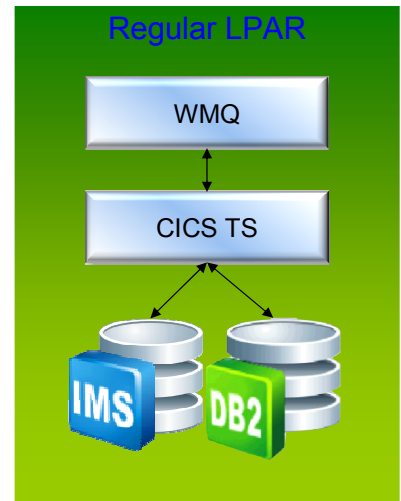
Deploy new qualified workload whilst balancing operational and capital expenditure



One Time Charge
Same skills
Same architecture
Separate LPAR



Monthly License Charge
Integrate VUE with existing workloads

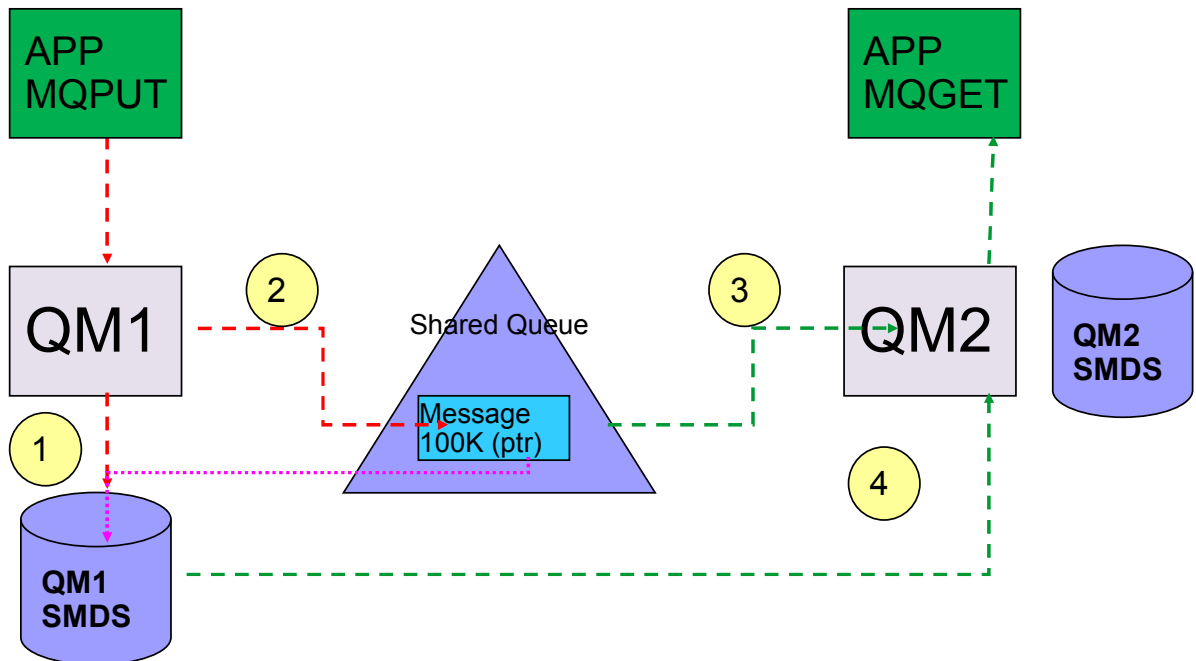


With VUE you can exploit the latest technology when deploying new workloads, without disrupting established business services

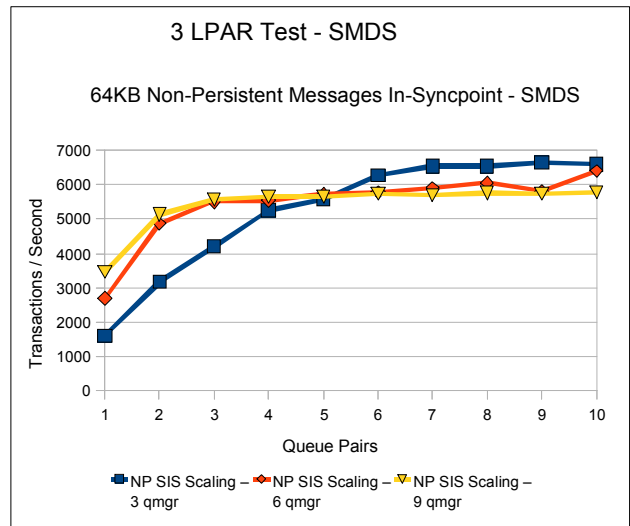
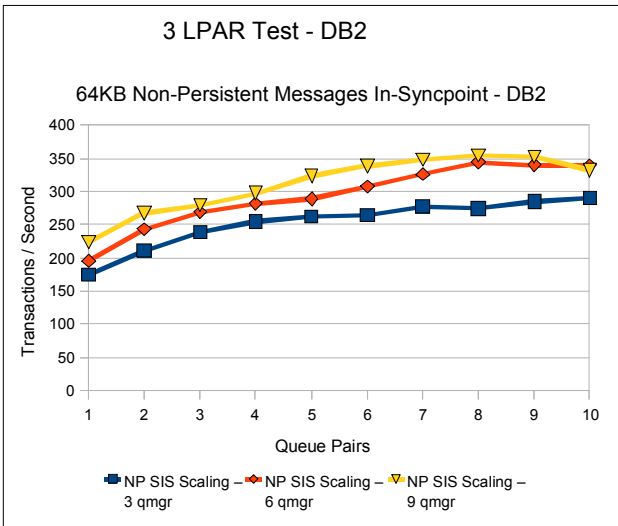
And in case you missed it...

- Some recent new news...

Large Shared Queue Messages: SMDS



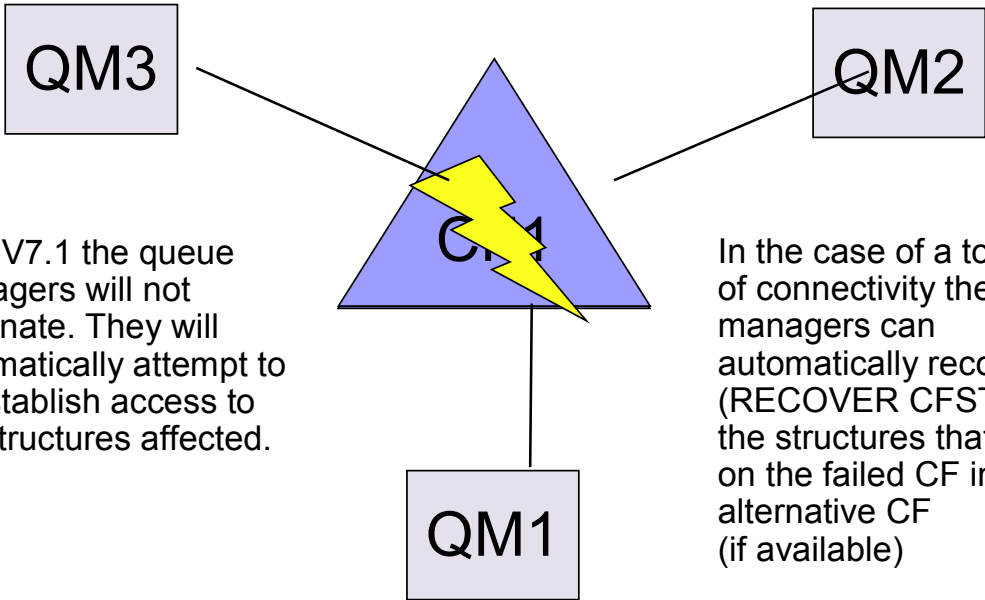
SMDS Performance Improvement



- Early Test Results on z196
- Tests show comparable CPU savings making SMDS a more usable feature for managing your CF storage
- SMDS per CF structure provides better scaling than DB2 BLOB storage

CSS:FS

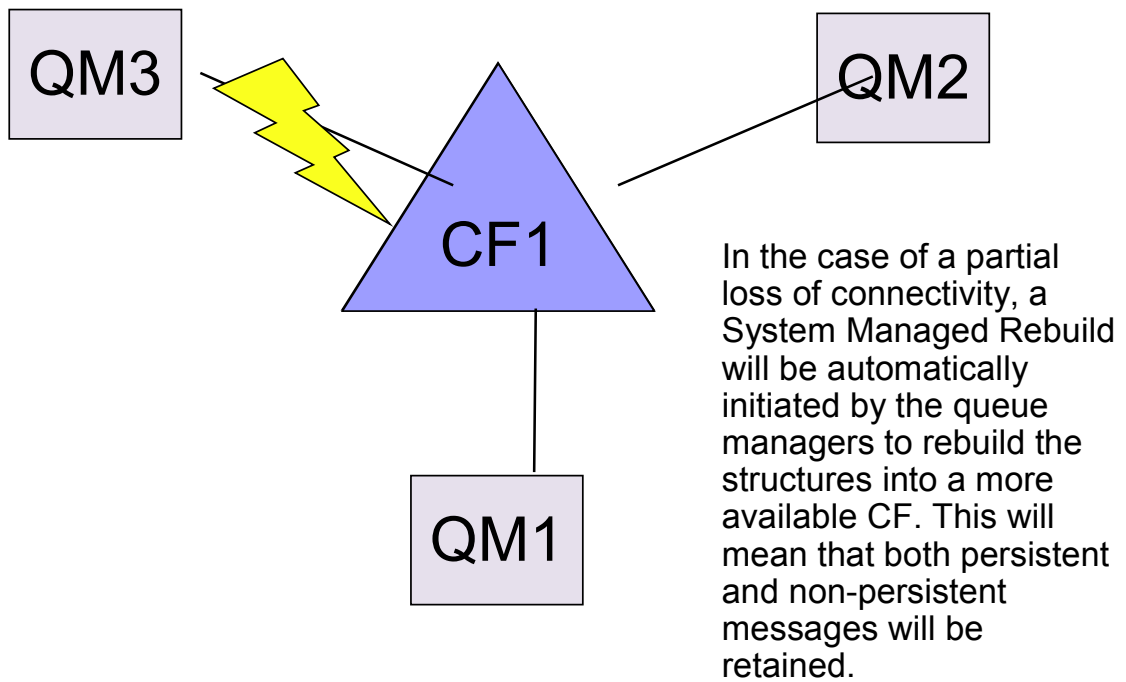
Total Loss of CF Connectivity: V7.1



With V7.1 the queue managers will not terminate. They will automatically attempt to re-establish access to the structures affected.

In the case of a total loss of connectivity the queue managers can automatically recover (RECOVER CFSTRUCT) the structures that were on the failed CF into an alternative CF (if available)

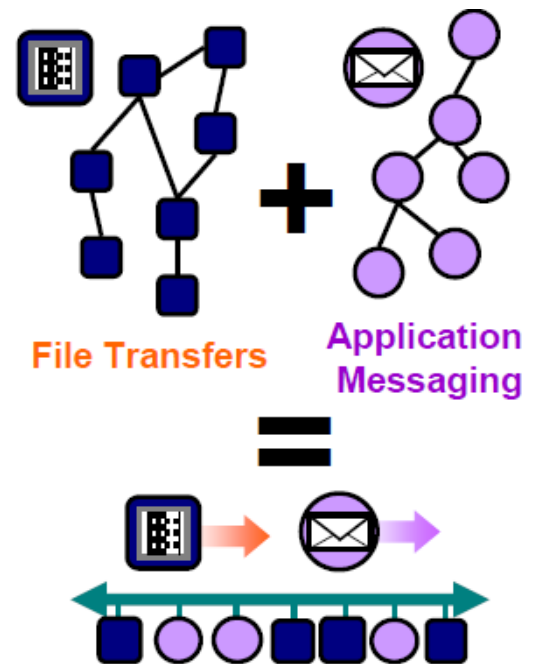
Partial Loss of CF Connectivity: V7.1



CSS.F

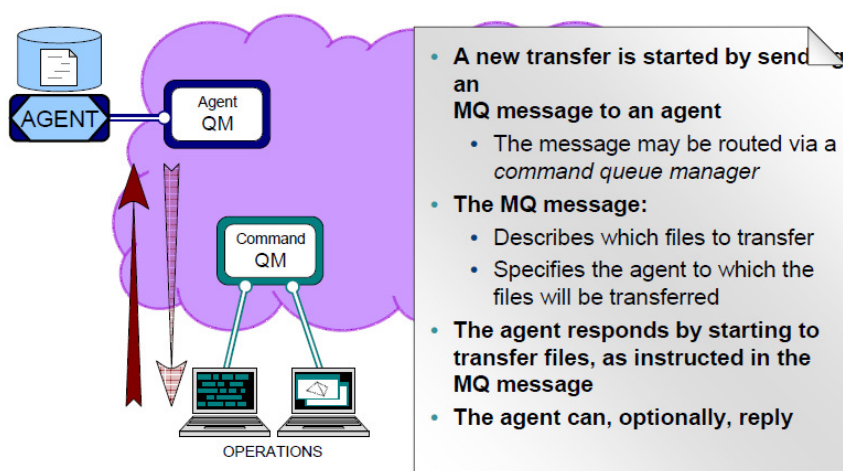
WebSphere Managed File Transfer Service

- **Traditional approaches to file transfer result in parallel infrastructures**
 - One for files – typically built on FTP
 - One for application messaging – based on WebSphere MQ, or similar
- **High degree of duplication in creating and maintaining the two infrastructures**
- **Consolidating messaging and file transports yields:**
 - Operational savings and simplification
 - Reduced administration effort
 - Reduced skills requirements and maintenance



Single Transport for Messages & Files

How it works



- **Agents transfer file data as MQ messages**
 - File data sent as MQ non-persistent messages
 - Allows prioritization with existing messaging workloads
 - Protocol used accounts for non-delivery and re-ordering
- **Transfers are paced**
 - This avoids a backlog of messages building up
- **Transfers automatically check-point:**
 - If any part of the infrastructure suffers an outage, transfers automatically re-start from the last check-point

WebSphere MQ Advanced Message Security

- Provides additional security services over and above base MQ
- Application to Application protection for messages
 - Well suited to point to point, publish/subscribe limited
 - Have to know your authorized parties ahead of operation
- Asymmetric cryptography used to protect each message
- Non-invasive
 - No changes required to applications
- Administrative interfaces for policy management
 - Command line
 - MQ Explorer Plug-In (GUI)

Why message security ?

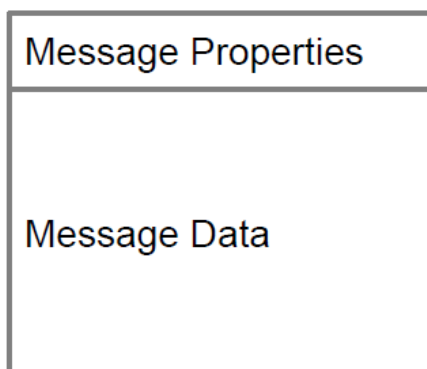
- Large MQ networks : difficult to prove security of messages
 - Against message injection / message modification / message viewing
- Data subject to standards compliance (PCI, HIPAA, etc)
 - Credit card data protected by PCI
 - Confidential government data
 - Personal information e.g. healthcare
 - Data at rest, administrative privileges, etc

MQ security vs Advanced Message Security

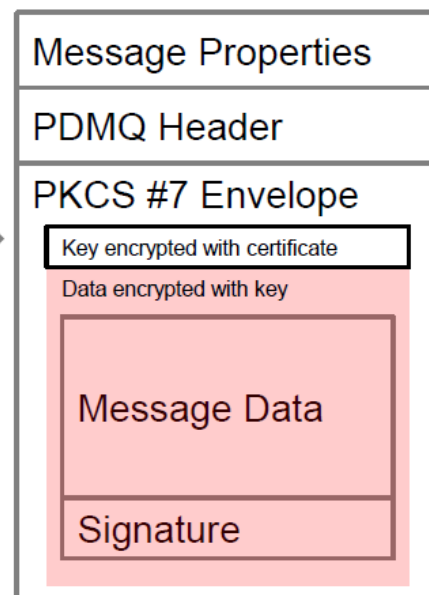
- AMS is an additional offering, not a replacement to WMQ security
- WebSphere MQ
 - Authentication (Local OS user id, SSL peer for clients)
 - Authorization (OAM on distributed, RACF on z/OS)
 - Integrity (SSL for channels)
 - Privacy (SSL for channels)
- WebSphere MQ Advanced Message Security
 - Integrity (Digital signing of messages)
 - Privacy (Message content encryption)

Content of an encrypted message

Original MQ Message



AMS Encrypted Message



Questions ?