**What is message queuing?**

* Message queuing allows applications to communicate by sending messages to each other.
* The message queue provides a temporary message storage when the destination program is busy or not connected.
* A message queue provides an asynchronous communications protocol, a system that puts a message onto a message queue does not require an immediate response to continuing processing. Ex. Email

**IBM MQ**

* IBM MQ is one of the products which provides Message queuing.

**Let’s go through how the Queues are configured here.**

* Queues can be configured in IBM MQ using explorer or using Commands.
* Queue is a container for messages.

**Types of Queues:**

**Local Queue:**

* Queues defined in the system.

**Alias Queue:**

* Alias queues are not actually queues; they are additional definitions of existing queues.
* You create alias queue definitions that refer to actual local queues. For example, consider an alias queue which is an application queue which internally referred by local queue.
* Now any changes happen to the local queue will not affect application but just create an alias queue definition that points to the new local queue.

**Transmission Queue:**

* When the queue manager sends a message to a queue on a remote queue manager, the transmission queue stores the message locally until the queue on the remote queue manager is available

**Remote Queue:**

* It is the queue present in the Remote queue manager (other system).
* To send a message to a queue on a remote queue manager, the sender queue manager must have a remote definition of the target queue.

**How to create these queues. We can use explorer or command console.**

Example: Create a Queue manager called “NKP\_QMGR”

Creating a Queue manager

$crtmqm NKP\_QMGR

Deleting a Queue manager

$dltmqm NKP\_QMGR

Starting a Queue Manager

$strmqm NKP\_QMGR

Stop queue manager

$endmqm -w NKP\_QMGR

Stop queue manager immediately

$endmqm -i NKP\_QMGR

**Open IBM MQ CLI**

$runmqsc NKP\_QMGR

**You can now run following commands under NKP\_QMGR**

display queue(\*) - display all queues in the Queue manager

display queue(<Queue Name>) - specific queue name

dis q(<Queue Name>) - short hand for display queue

display qlocal(\*) - displays all local queues.

**How to establish a communication between Queue managers, that are hosted in Different systems.**

Example:

Host1 hosting Queue manager – NKP\_QM1

Host2 hosting Queue manager – NKP\_QM2

**Open IBM MQ CLI for NKP\_QM1**

$runmqsc NKP\_QM1

DEFINE QLOCAL(NKP\_QM2) DESCR('Transmission queue to NKP\_QM2) USAGE(XMITQ)

DEFINE QREMOTE(QUEUE.ON.NKP\_QM2) DESCR('Remote queue for NKP\_QM2) XMITQ(NKP\_QM2) RNAME(RECEIVEQUEUE) RQMNAME(NKP\_QM2)

**create sender channel**

DEFINE CHANNEL(TO.NKP\_QM2) CHLTYPE(SDR) CONNAME(' Host2(enter port) ') TRPTYPE(TCP) XMITQ(NKP\_QM2)

**Open IBM MQ CLI for NKP\_QM2**

$runmqsc NKP\_QM2

**Create local queue in NKPM\_QM2 which is remote queue for NKP\_QM1.**

DEFINE QLOCAL(RECEIVEQUEUE) DESCR('Local queue for NKP\_QM2) USAGE(NORMAL)

**create receiver channel**

DEFINE CHANNEL(TO.NKP\_QM2) CHLTYPE(RCVR) TRPTYPE(TCP)