**TxMQ MQ Services**

Custom Tools, Scripts and Accelerators from TxMQ’s Services Team


Presenters:
Miles Roty – VP of Services & Support
Rob Lee – MQ Architect
TxMQ’s Story

Founded in 1979

International footprint

Hundreds of successful client partnerships

Trusted ‘go to’ partner of record for dozens of large system integrators and software companies

Partnerships & Support for IBM, Oracle, VMWare, Microsoft, Red Hat, and more
At TxMQ, we embrace the balance of *People, Process and Technology* to ensure your projects are successful.
Our Background & Capabilities

- **Deep Expertise in IBM Middleware**
  - MQ & MQ Advanced (MFT/FTE, MQTT, AMS–Security)
  - IIB/App Connect
  - DataPower
  - API Connect

- **Strategic and Hands-on Technical Support**
  - Architecture
  - Administration
  - Troubleshooting & Production Support
  - Development Support
Middleware (IBM MQ) Team Tasks

- Build & Deploy
- Monitor & Manage
- Troubleshoot & Recover
- Discover & Document
- Evaluate & Test

* All these common tasks offer opportunity for automation
Middleware (IBM MQ) Automation

- **Build & Deploy** – Queue Manager Build & Deployment Scripts
  - Automation Scripts to create new Queue Managers
  - Deployment Scripts for QMGR’s in Prod and lower environments
  - AIX, Windows, z/OS, AS400, Linux
  - On-premise and Cloud
  - VM’s/Hypervisors and bare metal
  - Custom scripts and 3rd party/OpenSource automation & deployment tools
Middleware (IBM MQ) Automation

- **Monitor & Manage** – Tools to view and monitor MQ traffic and related system health
  - Is MQ Explorer sufficient?
  - Do we really *need* end-to-end transaction monitoring?
  - What are right tools for your environment?
  - Is it time for Tool Consolidation?
  - Custom Dashboards
  - Custom Administration Utilities
  - Log file management & queries
Middleware (IBM MQ) Automation

- **Troubleshoot & Recover** – Scripts to diagnose system issues, and for recovery of MQ Servers and messages
  - MQ is the problem…or is it?
  - Root cause analysis
  - Recovering Queue Managers
  - Recovering messages after outage
  - Log file recovery & review
Middleware (IBM MQ) Automation

- Discover & Document – Scripts to identify MQ Objects, utilities to capture statistics, and documentation
  - Objects
  - Queues
  - Queue Managers
  - Usage & Performance statistics
  - MQ Network Topology Diagrams, Graphs and other MQ Documentation
Middleware (IBM MQ) Automation

- Discover & Document – Scripts to identify MQ Objects, utilities to capture statistics, and documentation
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Middleware (IBM MQ) Automation

- **Evaluate & Test** – TxMQ’s QPacity™ and test scripts
  - QPacity™ enables administrators to measure usage and capacity of your MQ infrastructure
  - QPacity™ scripts support troubleshooting efforts to identify root cause of performance degradation and outages
  - TxMQ supports customers with development of custom test harnesses for new or poorly performing applications
Benefits from Automation

- Repeatability
- Expedites rollouts
- Ensures consistency
- Meets Standards
  - IBM Best Practices
  - Corporate/Industry
  - Security
- Supports DevOps
Custom Tools, Scripts and Accelerators

- BatchSudo
- buildMQ z/OS
- MQ Healthcheck Scorecard
Custom Tools, Scripts and Accelerators

BatchSudo:

This is a java program created as a result of not having access to Blade Logic or similar DevOps tools.

Using it, we can specify an xml structure containing a list of commands that need to be invoked on N-number of servers. It uses ssh/sftp under the covers to run commands as “root” and captures their stderr/stdout to a local file, named per server name. It’s also multi-threaded, and can chunk through a large list of servers efficiently.

Locally, the commands a placed in temp script file, this file is then sftp’d to targeted servers, it’s permission’s changed and made executable. In principle it’s similar to “Ansible”, but less complicated.
Custom Tools, Scripts and Accelerators

BatchSudo:
This is a simple illustration, in the following input XML, we issue three commands (whoami, df, dspmq) on two servers (*.137 and *.138):

```xml
<?xml version="1.0"?>
<Config>
  <sudoCmds>
    whoami
    df
  </sudoCmds>
  <servers>
    192.168.27.137
    192.168.27.138
  </servers>
</Config>
```
Custom Tools, Scripts and Accelerators

BatchSudo:
This would result in the following two log files:
Custom Tools, Scripts and Accelerators

**buildMQzOS:**

Utility to create Qmgrs on z/OS by processes a single parameter file, build jobs and procs, and submit them into FTP’s JES.

- Eliminates mis-typing of parms and debugging efforts involved
- Accurate, Efficient and Fast
- Could have easily been written in any number of languages or scripts.
- I chose vbscript to because it’s most non-native to MVS
Custom Tools, Scripts and Accelerators

**buildMQzOS:**

1. Customize INI Parm file
2. Run buildMQzOS script

buildMQzOS processes a sub-directory of template procs and jobs, substituting custom parms into a new set of procs/jobs and submits them in order.

**Jobs Created:**

- xxxxBSDS - Creates Bootstrap and log Data Sets
- xxxxTXMQPAGE - Allocate the page set data sets Defines you pagesets:
- xxxxDGDG - If Exist Delete Generation Data Group / Re-create
- xxxxZPRM - Assemble and link a new system parameter module
Custom Tools, Scripts and Accelerators

MQHealthcheck Scorecard:
This is a template (excel spreadsheet) organized and designed to help facilitate thorough evaluations of a client’s QMgr Systems.
Digital Business Transformation

We help companies evolve their technologies to meet the demands of the digital economy.

- Application Integration
- API Economy
- Business Process Management
- Automated Decision Management
- Robotic Process Automation
- Mobility
Decades of Experience

TxMQ’s deep experience in Enterprise Architecture provides the foundation for our solutions

- **Business Impact**
  - Improve efficiency
  - New revenue opportunities
  - Time to value

- **Enterprise Grade**
  - Security & Stability
  - Performance & Scalability
  - Integration
TxMQ Account & Services Team

Miles Roty
VP, Services and Support

Rob Lee
Middleware Specialist

Cindy Gregoire
Practice Manager, Middleware
Contact Us

TxMQ Inc.
501 John James Audubon Parkway, Suite 103
Amherst, NY 14228
http://txmq.com

Miles Roty – VP of Services & Support
p| 716-636-0070  x228
m| 415-535-3960
miles@txmq.com