

IBM Software

Impact2010

Comes to You

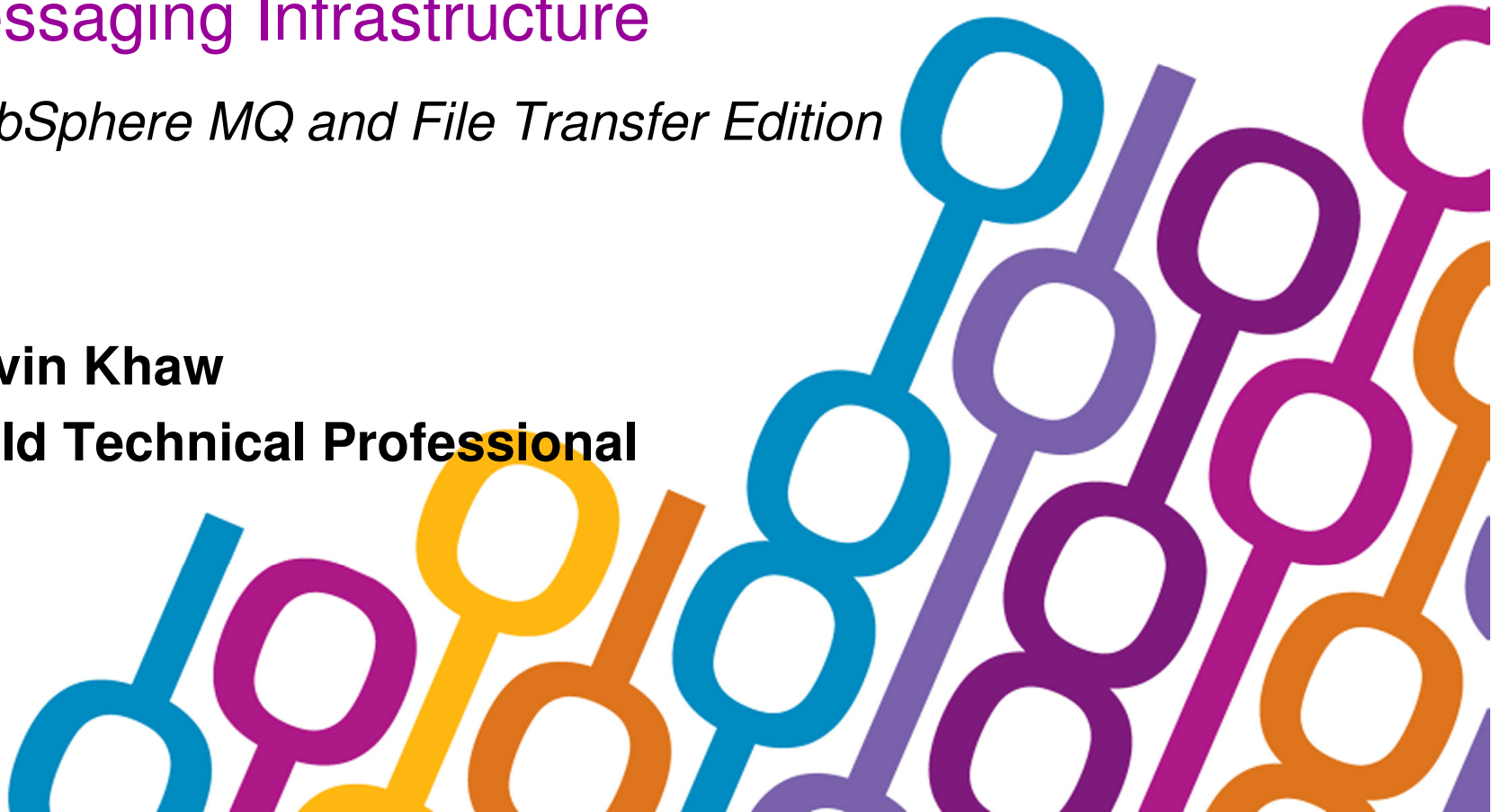


Managing, Deploying and Securing the
Messaging Infrastructure

WebSphere MQ and File Transfer Edition

Kevin Khaw

Field Technical Professional



What is the most important application in the world?



Smarter Connectivity

- Point to Point
- Many to Many
- File Transfers

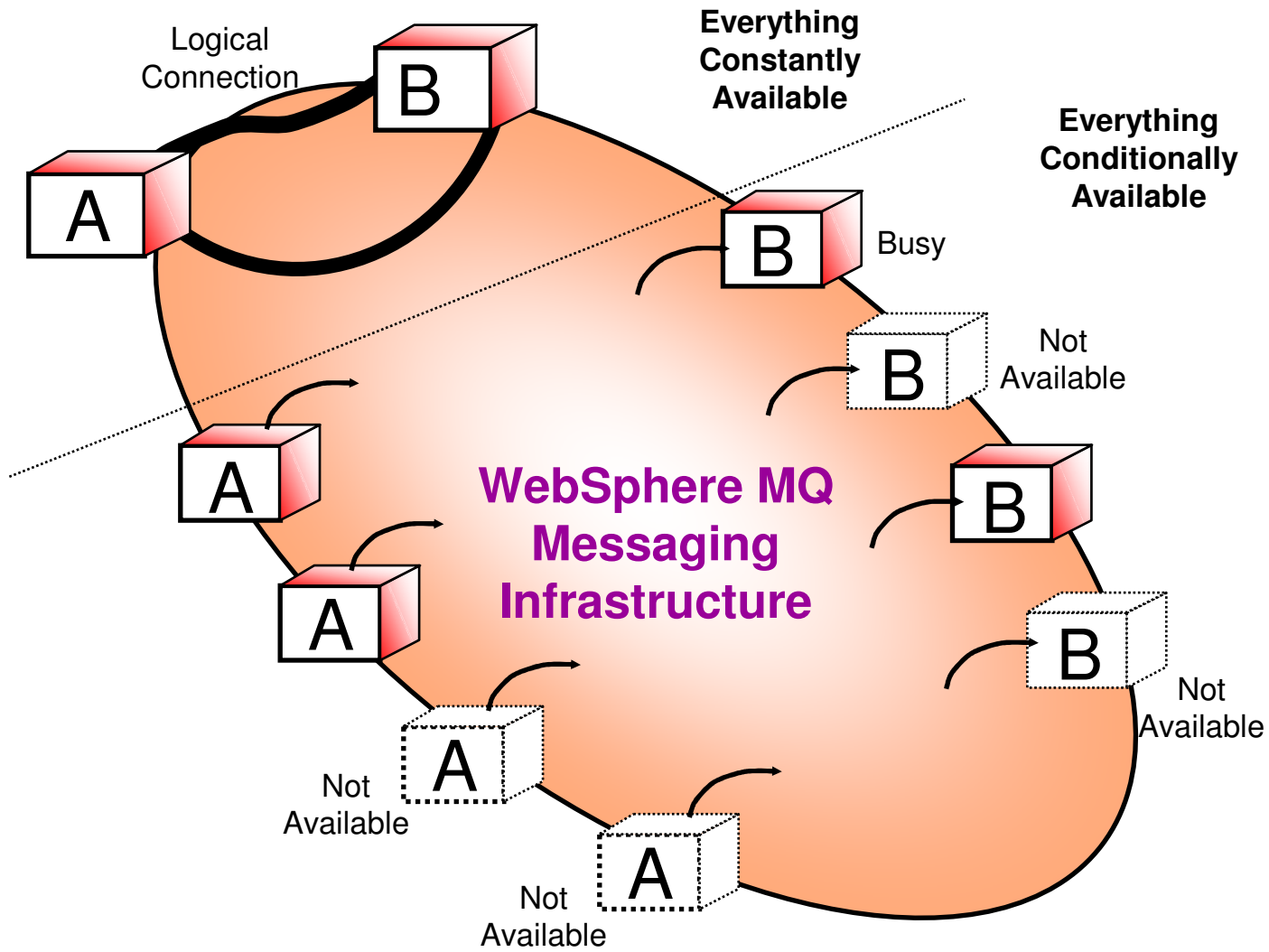


Point-Point Application Connectivity challenges

- Availability of application
- Reliability and capacity of network
- Platform and Language compatibility
- Security

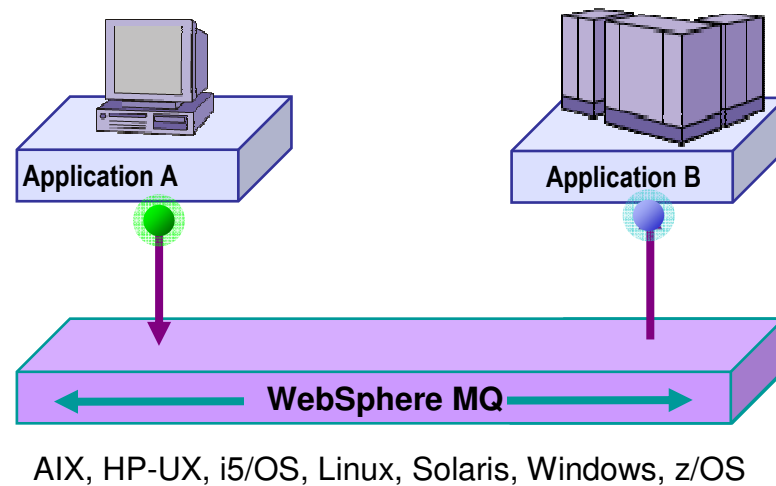


The Value of Loose Coupling



What does WebSphere MQ do?

- Provides **messaging services** to applications and Web services that need to exchange data and events with:
 - Proven reliability
 - Transactional integrity
 - Consistency
 - Time independence
 - Ease and Speed
 - Flexibility
 - High-performance
 - Security
 - Scalability
 - Auditability



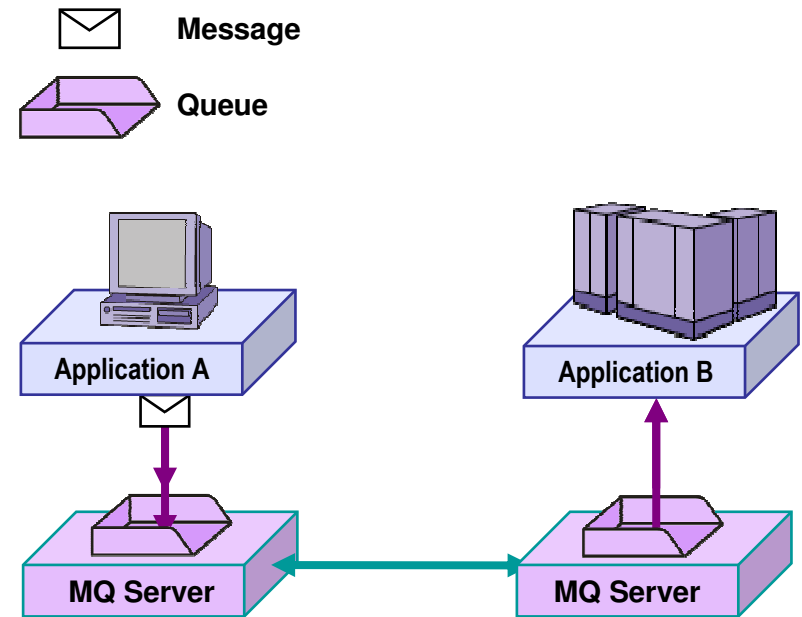
***WebSphere MQ is like email for SOA applications
...but email that is reliable***

Once and only once message delivery



How does WebSphere MQ work?

- Messaging services are based on **Queues** that store and forward data based on simple programming commands
- Uses the proven database technique of two-phase commit **transactions** to ensure messages are not lost or duplicated
- Uses **publish/subscribe** to route messages dynamically based on keywords or “topics”
- Uses multi-processor threading and **clustering** to accelerate throughput of messages



Once and only once message delivery



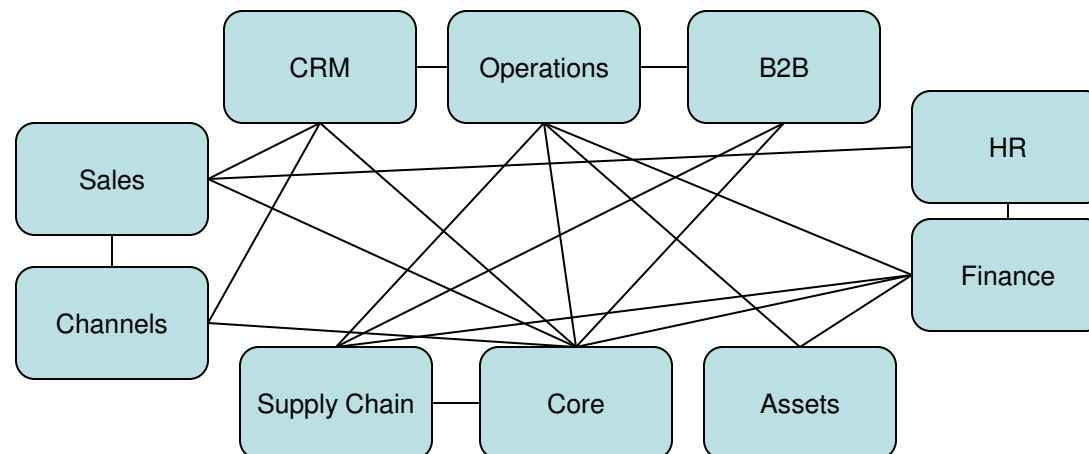
Smarter Connectivity

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Many-Many Application Connectivity Challenges

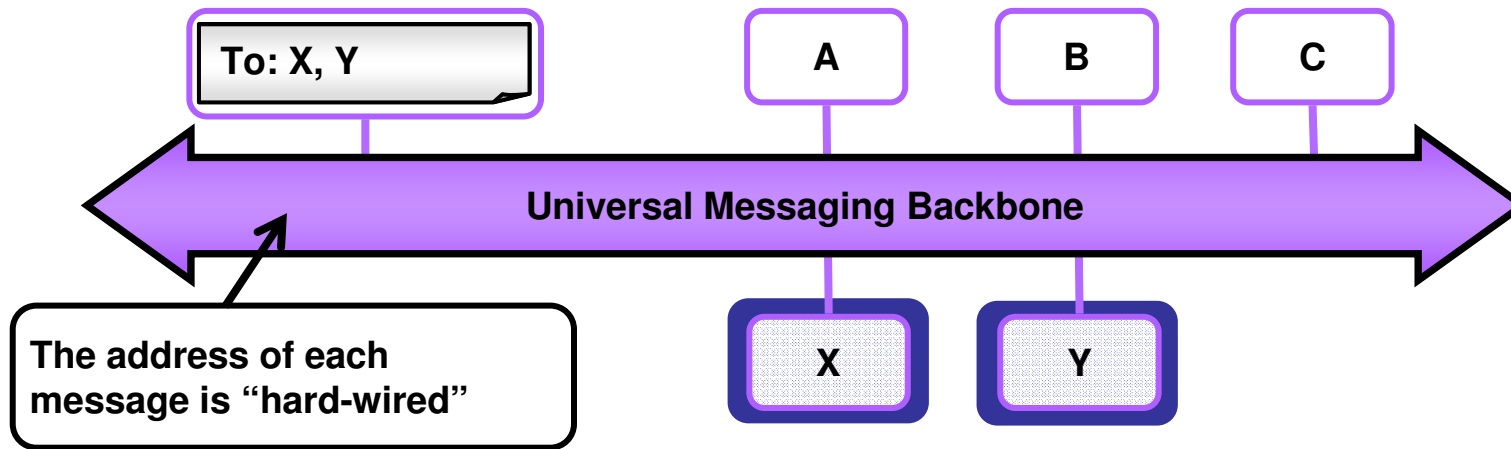
- Availability of application
- Reliability and capacity of network
- Platform and Language compatibility
- Security
- Need to know and maintain the connectivity details of corresponding applications



Enabling Flexible Delivery on IBM's Universal Messaging Backbone

Publish-and-Subscribe with WebSphere MQ

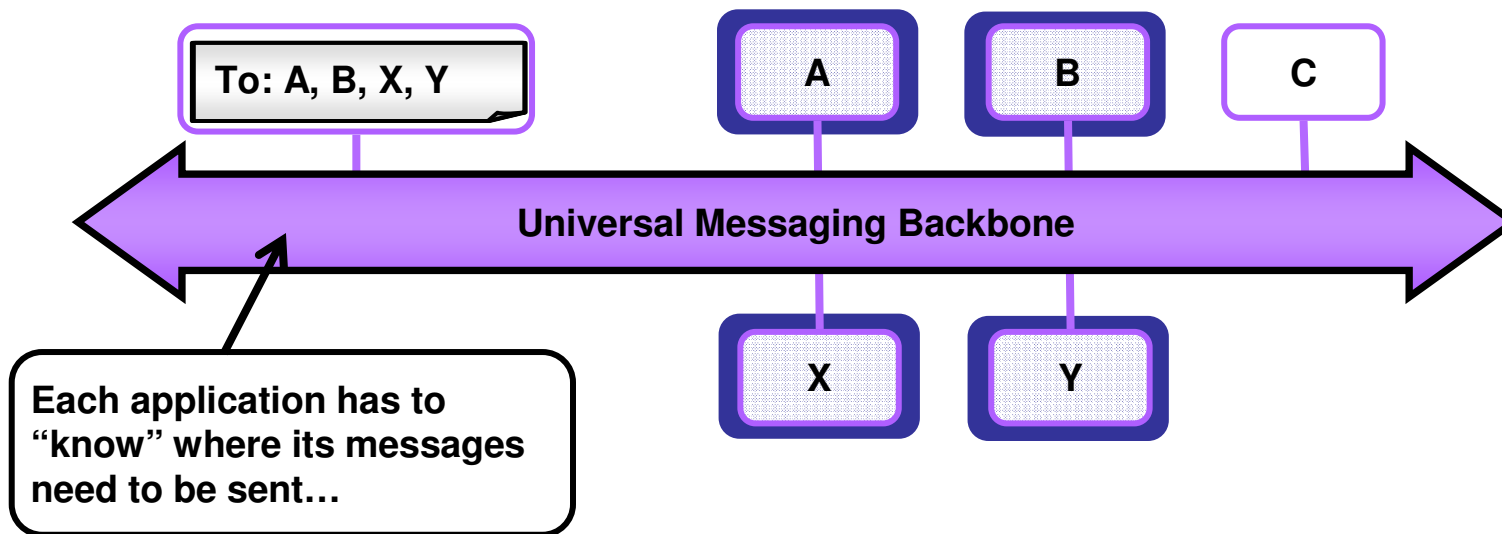
- Dynamic and flexible way of determining where messages are sent
- Helps reduce the cost, time and skills involved when changes are required
- Helps define new paths of information flow in an ad hoc manner



Enabling Flexible Delivery on IBM's Universal Messaging Backbone

Publish-and-Subscribe with WebSphere MQ

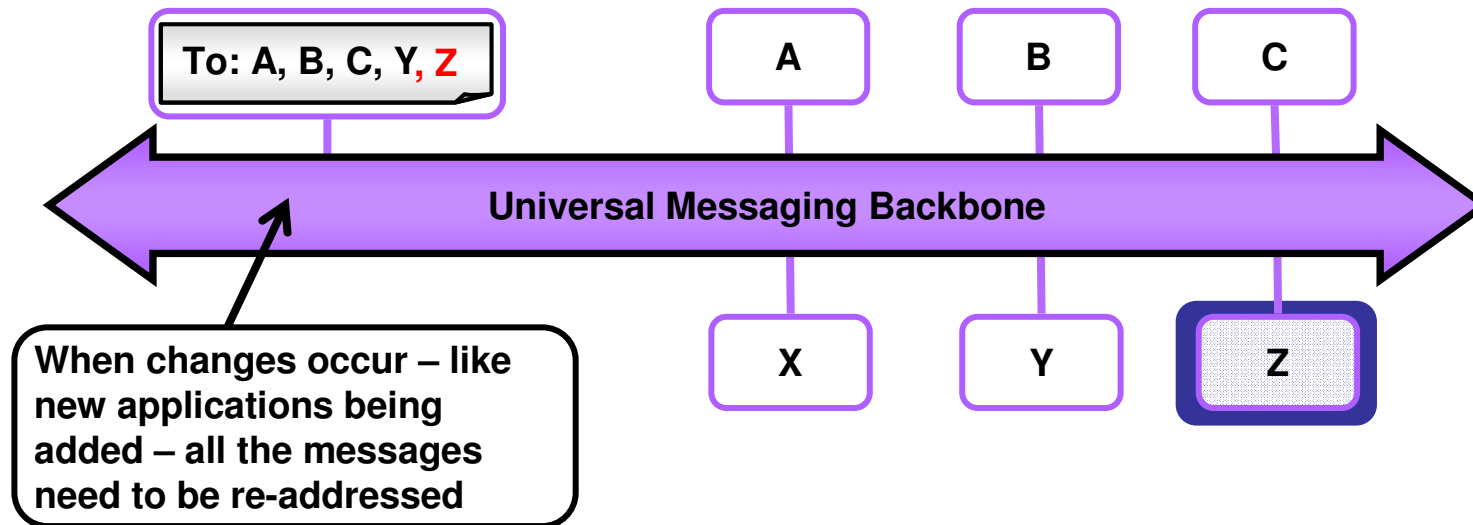
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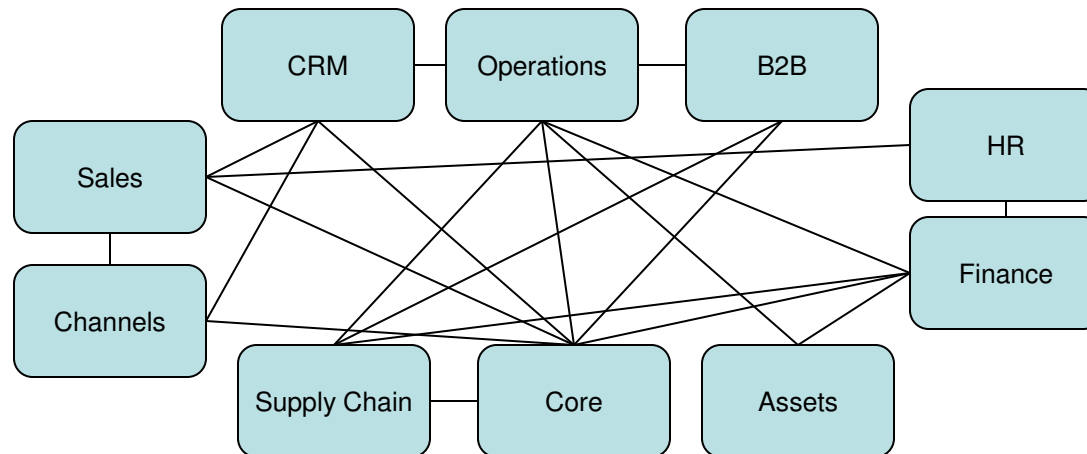
Smarter Connectivity

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Traditional File Transfer Challenges

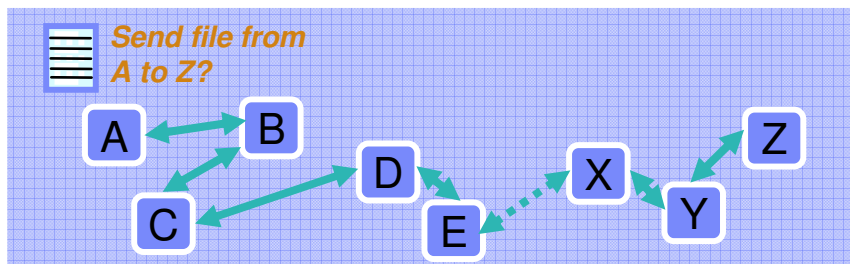
- Limited reliability
- Limited visibility and traceability
- Limited flexibility
- Limited management
- Custom coding and scripting



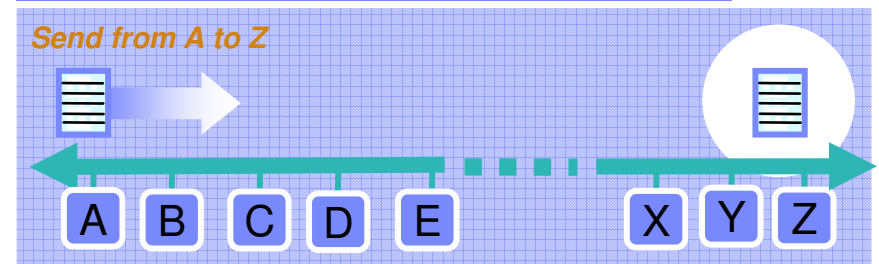
Robust File Transfer Backbone based on WebSphere MQ

- **WebSphere MQ File Transfer Edition** will provide a file transfer *backbone*
 - ▶ Source and target systems do not need to be directly connected
 - ▶ Backbone determines path across network between Source and Target
 - ▶ Utilizes this built-in characteristic of WebSphere MQ transport
 - ▶ Time-independent, reliable and secure file transfers
- Simplifies transfer configuration, administration & auditing
 - ▶ Transfer files from any point on the Backbone to any other point
 - ▶ Enables multi-hops across Backbone – as opposed to coordinating a series of single-hops
 - ▶ Control, monitor from any point – even via intermediate points
 - ▶ Audit log of transfers at actual, logical Source and Target
 - Rather than having to piece audit trail together from a series of disconnected transfers

FTP-based Transfers

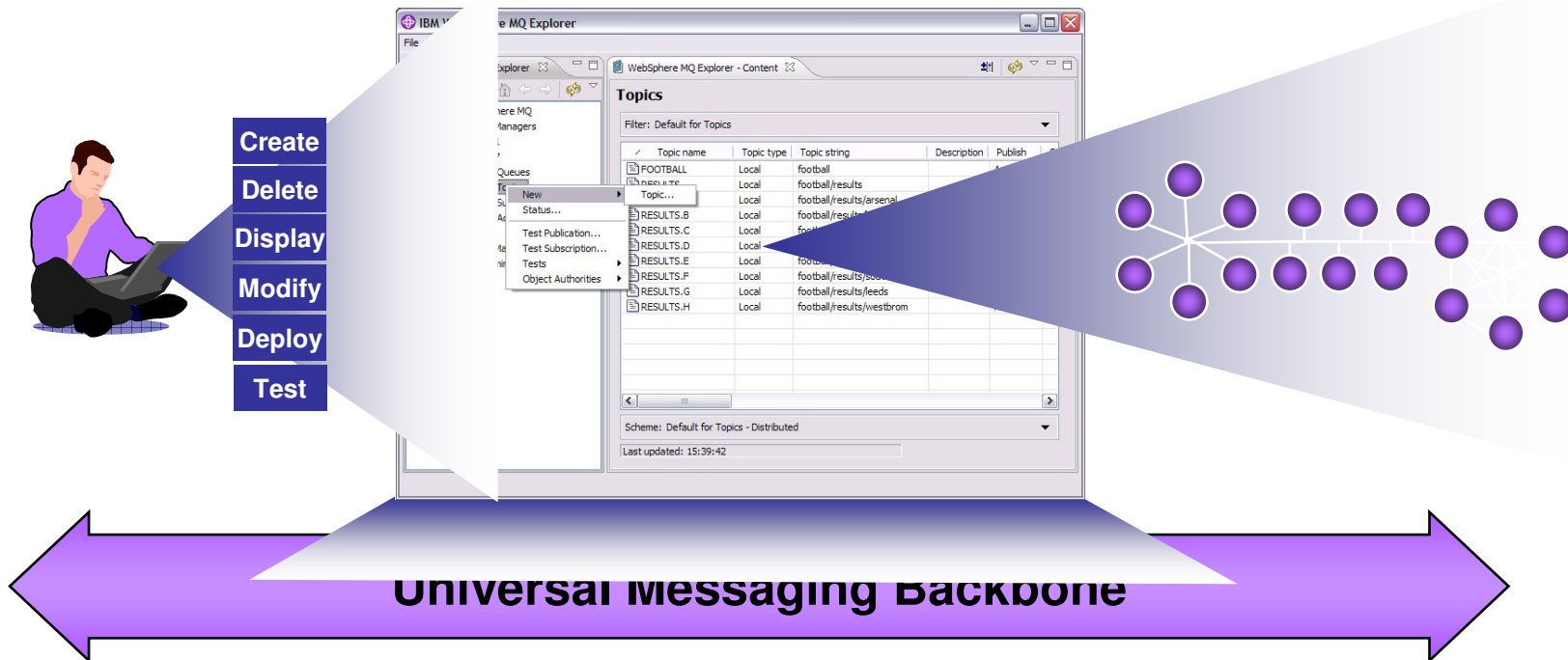


Managed File Transfer Backbone



Centralized Configuration & Administration

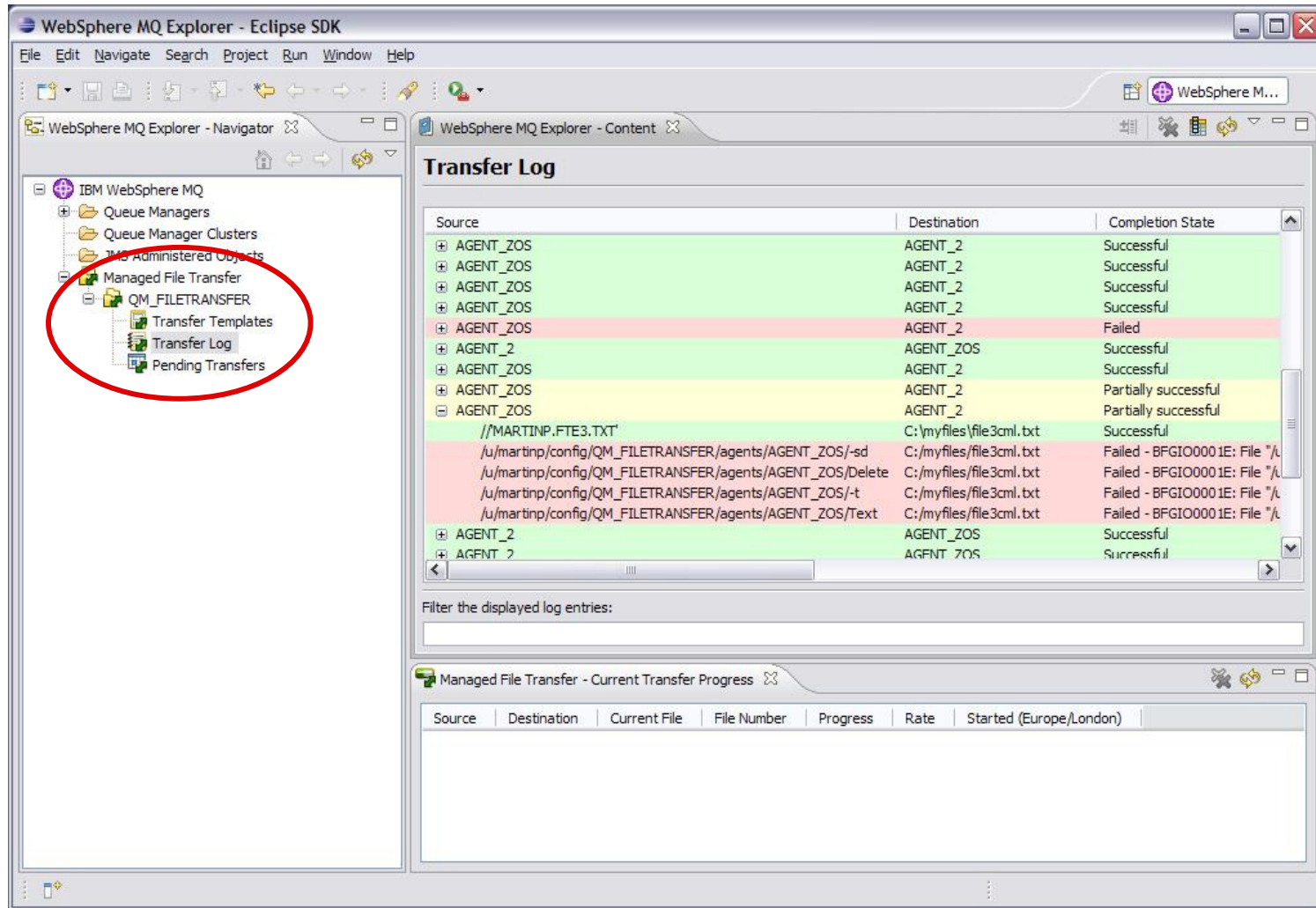
- Logically centralized configuration of remote, distributed backbone
- Remotely view & configure entire backbone – Windows, UNIX, i5/OS, z/OS



- Visual display at a glance
- Eclipse-based environment
- Extensible and customizable
- Remote connection from Linux x86 and Windows
- SSL secured connections
- Granular permissions



Centralized Configuration via MQ Explorer



Creating File Transfers

Create New Managed File Transfer

New Transfer
Enter source agent, destination agent, and all files to create a transfer.

Basic | Advanced

From:

Agent: AGENT1 (dhcp-9-20-96-178.hursley.ibm.com.)
File: C:/files/files2send/FTE.pdf
 Include subdirectories

To:

Agent: AGENT4 (9.146.209.200)
Directory: C:/files/files2get/
File name: FTE.pdf
Append:

Basic Settings

Mode:
 Text transfer (ASCII/EBCDIC & CR/LF automated)
 Binary transfer (no conversion)

List of sources and targets is built automatically
Specify directory and file name

Choose advanced options

Choose mode (Binary or Text with automatic conversion)
Add each individual transfer to a group of transfers

Deploy file transfer to network

Create New Managed File Transfer

New Transfer
Optionally configure advanced options for the transfer.

Basic | **Advanced**

A failure of any file in a group means that the group has failed

On fail, write error to audit stream and leave transferred files on target
 On fail, write error to audit stream and remove transferred files from target

Overwrite files on the target file system that have the same name
 Append source file content to file of same name on target

Lock all files in a group at the start of the group transfer
 Keep source file's attributes (owner, group, timestamp, permission)
 Remove source files after completion

Successful completion of whole group
 Successful completion of each file

Transfer Priority: Highest
Additional Overridden (limited by ":")

Choose priority of transfer



Scheduling & Triggering File Transfers

Create New Managed File Transfer

New Transfer
Enter schedule and event settings.

Schedule Triggers

Start: 09/10/2008 15:00:00

Repeat:

Every: 1 week(s)

Until: 08 week(s)

For: 8 repetition(s)

Forever

< Back Next > Finish Cancel

Choose when to start the scheduled transfer

Choose advanced options

Choose when to repeat the scheduled transfer and how often

Deploy file transfer to network

Create New Managed File Transfer

New Transfer
Enter schedule and event settings.

Schedule Triggers

Trigger: File Trigger

File:

Agent: AGENT2 (9.146.209.200)

File: C://filestotrigger/FILE.txt

Trigger Attribute

Trigger when file...

appears

disappears

exceeds

unlocks

< Back Next > Finish Cancel

Choose the trigger for the transfer



Auditing & Monitoring File Transfers

View or cancel transfers that will run by schedule and/or are triggered

Name	Source	Destination	Scheduled Start (Europe/London)	Repeat Every	Repeat Type	Repeat Until
2	AGENT_2	AGENT_ZOS	2008-10-23 12:52 BST	1	weeks	
3	AGENT_2	AGENT_ZOS	2008-12-10 17:00 GMT	6	hours	2009-12-07T11:00+0

View audit log of all transfers and groups of transfers

Source	Destination	Completion State
AGENT_ZOS	AGENT_2	Successful
AGENT_ZOS	AGENT_2	Successful
AGENT_ZOS	AGENT_2	Successful
AGENT_ZOS	AGENT_2	Successful
AGENT_ZOS	AGENT_2	Failed
AGENT_2	AGENT_ZOS	Successful
AGENT_ZOS	AGENT_2	Successful
AGENT_ZOS	AGENT_2	Partially successful
AGENT_ZOS	AGENT_2	Partially successful
//MARTINP.FTE3.TXT	C:/myfiles/file3cm1.txt	Successful
/u/martinp/config/QM_FILETRANSFER/agents/AGENT_ZOS/-sd	C:/myfiles/file3cm1.txt	Failed - BFGIO0001E: File */
/u/martinp/config/QM_FILETRANSFER/agents/AGENT_ZOS/Delete	C:/myfiles/file3cm1.txt	Failed - BFGIO0001E: File */
/u/martinp/config/QM_FILETRANSFER/agents/AGENT_ZOS/-t	C:/myfiles/file3cm1.txt	Failed - BFGIO0001E: File */
/u/martinp/config/QM_FILETRANSFER/agents/AGENT_ZOS/Text	C:/myfiles/file3cm1.txt	Failed - BFGIO0001E: File */
AGENT_2	AGENT_ZOS	Successful
AGENT_2	AGENT_ZOS	Successful

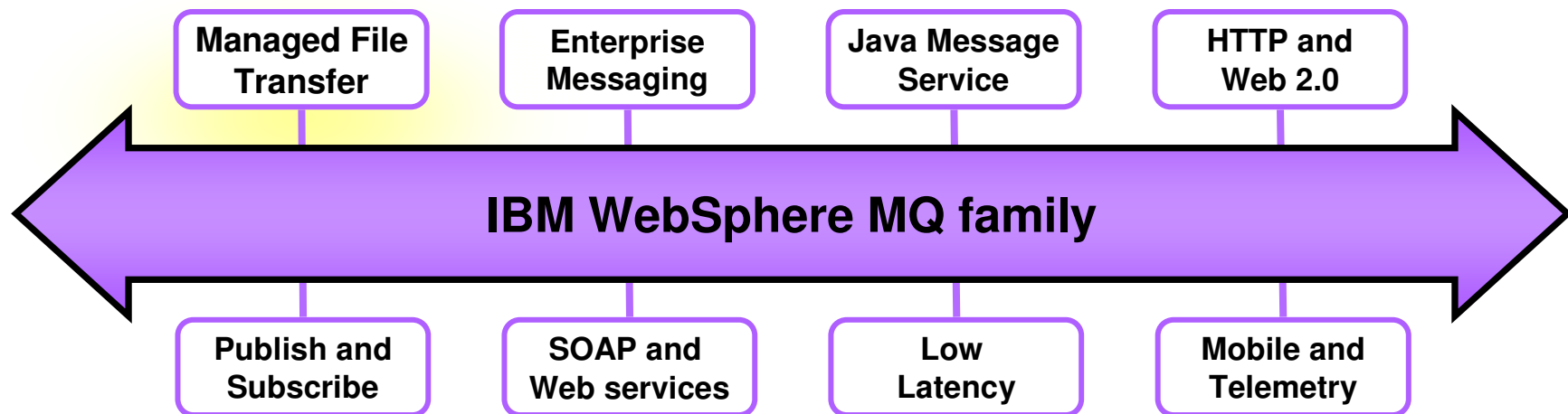
Destination	Current File	File Number	Progress	Rate	Started (Europe/London)
AGENT_2	fte.txt - (12KB / 12KB)	1 / 1	100%	53 KIB/s	2008-12-01 10:24:01 G
AGENT_2	wmq fte.zip - (487MB / 706MB)	1 / 1	69%	5714 KIB/s	2008-12-01 10:27:00 G

View progress of all transfers currently taking place



Consolidated Transport Backbone with WebSphere MQ

- Combined solution for transferring messages and files via a single consolidated infrastructure
 - ▶ Supports point-point, many-many and multi-platform application connectivity
 - ▶ Unified administration GUI tool i.e. WebSphere MQ Explorer
 - ▶ Reducing operational costs through synergies and lowering skills requirements
- WebSphere MQ messaging infrastructure that can be leveraged in SOA
 - ▶ A one-two punch – Solve today's file/message problems while building a foundation for the future
 - ▶ Single Universal Connectivity solution bringing together file- message- service- and event-oriented applications and Web 2.0 traffic
 - ▶ Add ESB capabilities to file or message data – transformation, mediation, content-based routing



Terima Kasih & Thank You

