Introduction to WCF 4.0 Updates

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Outline

- **WCF Configuration Model Updates**
- **Updates to REST**
- **Discovery Services**
- **Routing**

Configuration Updates

- **New features:**
  - Default Endpoints
  - Default Bindings
  - Default Behaviors
  - Standard Endpoints
  - File-less Activation

REST Updates

- **Automatic Help**
- **HTTP Caching**
- **Message Format Selection**
- **WebFaultException**
- **Integration with ASP.NET Routes**
- **New Project Templates**

Service Discovery

- **Service discovery makes it possible to "discover" endpoints dynamically**
  - Good for scenarios where services come and go at runtime (e.g. devices)
  - The ideas have been around for a while but are now formalizing (OASIS)
- **WCF 4.0 provides two types of service discovery**

Ad-hoc	Managed
Clients can discover services on a local subnet (UDP-based)	Clients can discover services on a larger "managed" network (beyond the local subnet) through a discovery proxy

Message Routing

- **What is routing?**
  - Based on properties of a message, send to appropriate destination through intermediary

- **What properties to route on?**
  - Action header
  - Receive address
  - Address prefix
  - Message header contents

- **WS-* messaging allows for transport neutral messaging**
  - Security, transactions, addressing all in headers

Use Cases for Routing

- Deploy server in DMZ, route to infrastructure within enterprise.
- Bridge protocols (ex. http→net.tcp)
- Well known public face for services. Abstract deployment of other services.
- Load balancing of service calls.
- Handle failover.
- Multicast one-way messages to well known receivers

Summary

- Lots of new features added in WCF 4
- Configuration easier to use
- REST enhanced, better tie in with MVC routes– can use to add SOAP and REST endpoints
- Discovery allows for dynamic configuration of services.
- Routing provides for protocol bridging, failover, DMZ
- Check out the full details in the other modules