Making Java™/.Net Technology-Based Web Services Interoperability Real

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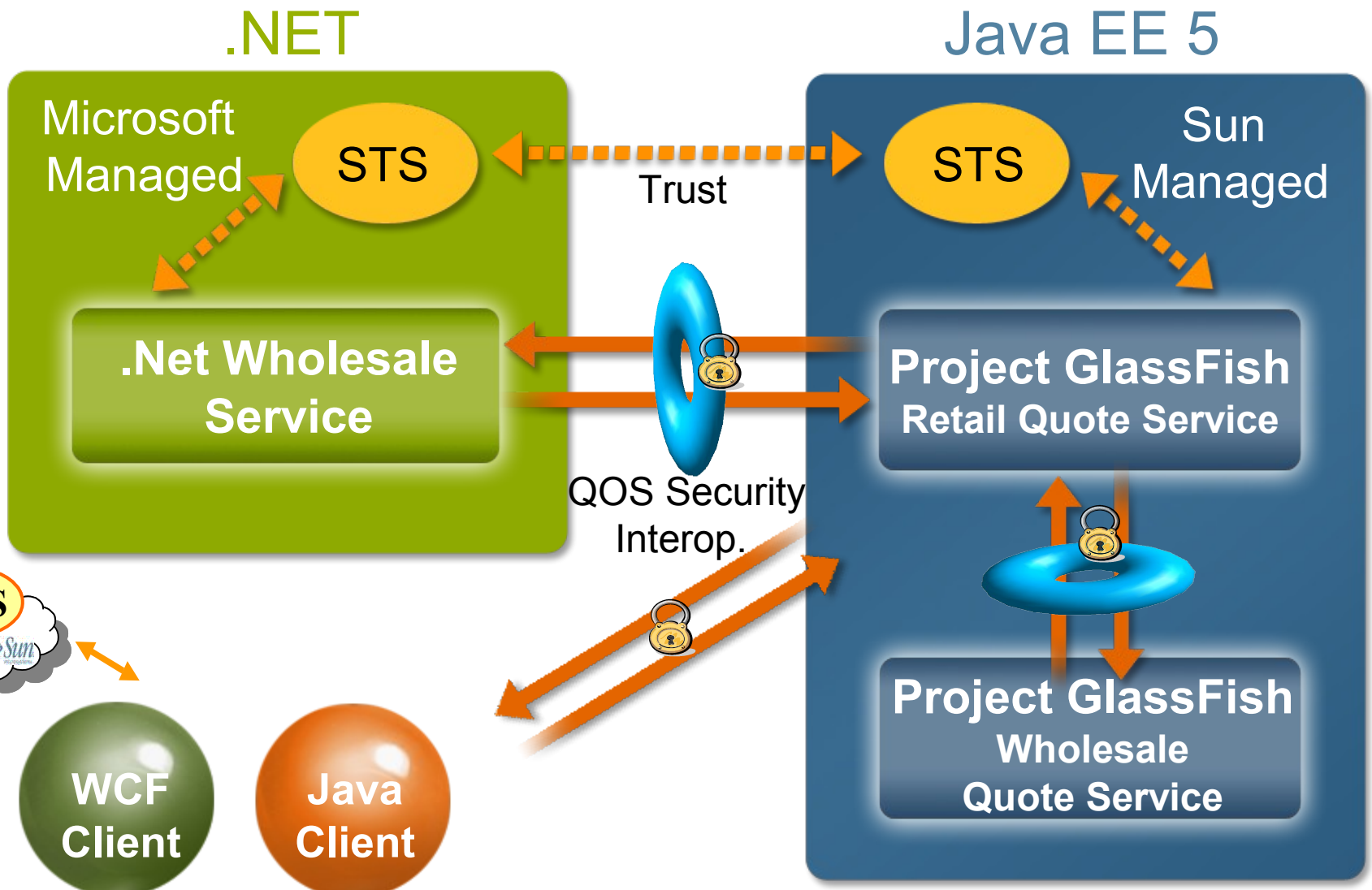
TS-5540

Enterprise Web Services ARE Real

- Web Services enable enterprise integration scenarios within and across business boundaries
- Web Services are well adopted on both Java™ and .Net platforms
- Windows Communication Foundation and Project GlassFish℠ community project make Interoperability a Reality

Service Composition



Making Java/.Net Technology-Based Web Services Interoperability Real

Integrating Consumers

- Data Interoperability
- Binary Data Transfer Using Web Services

Integrating Businesses

- Secure Reliable Web Services
- Brokered Trust

Roadmap

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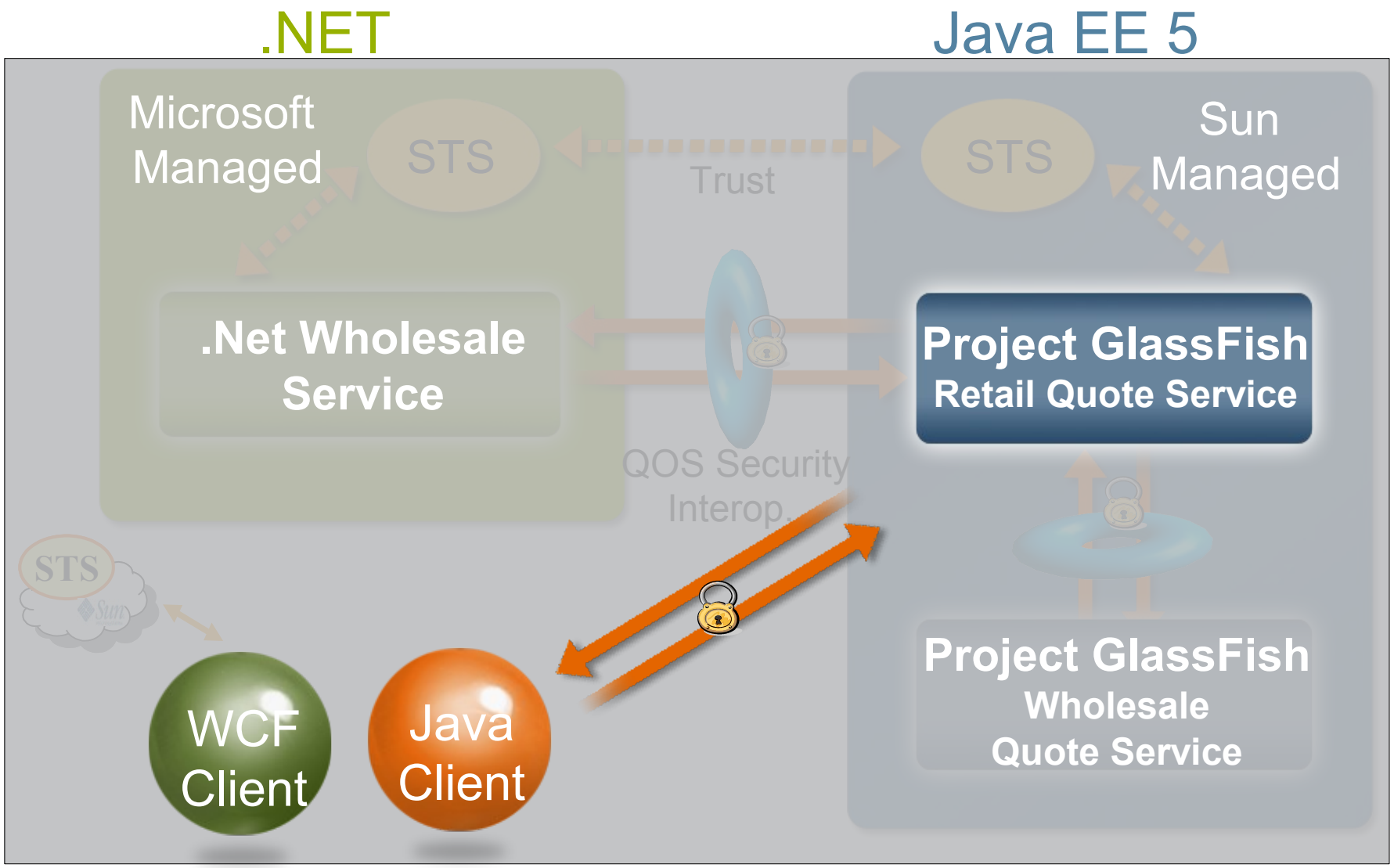
Roadmap

Data Interoperability



Practical XML Schema Interoperability

For Web Services

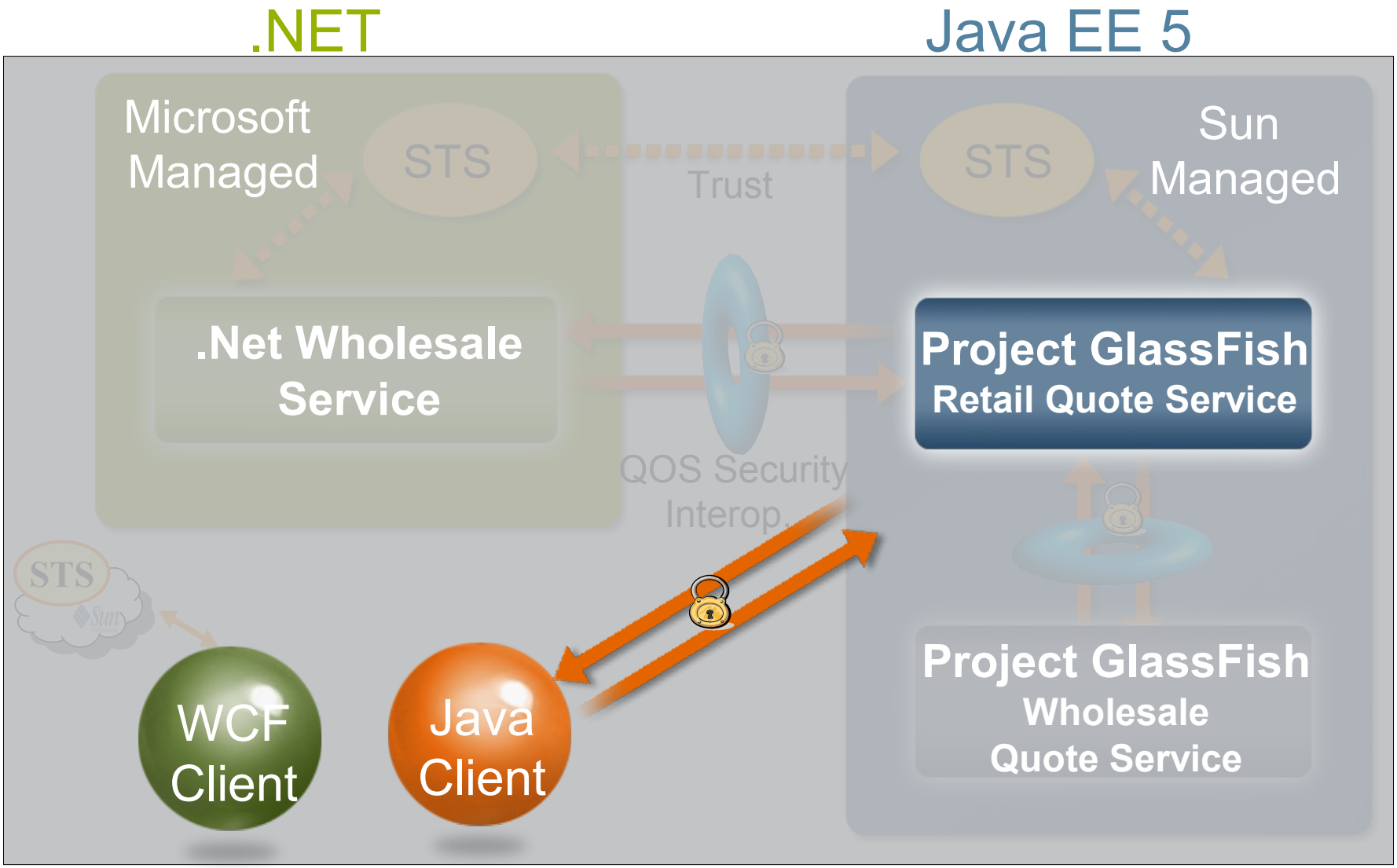
- KISS—Keep Interoperable Schemas Simple
  - Use de-facto profile: xs:sequence, xs:element, wrapped arrays, etc.
  - Use schemas as a data type description, not a validation mechanism

Practical XML Schema Interoperability

For Web Services

- KISS—Keep Interoperable Schemas Simple
  - Use de-facto profile: xs:sequence, xs:element, wrapped arrays, etc.
  - Use schemas as a data type description, not a validation mechanism
- Avoid Complexity Unless Required
  - Avoid schemas constructs that do not map well to programming languages
  - e.g., substitution groups, xs:choice

Data Interoperability

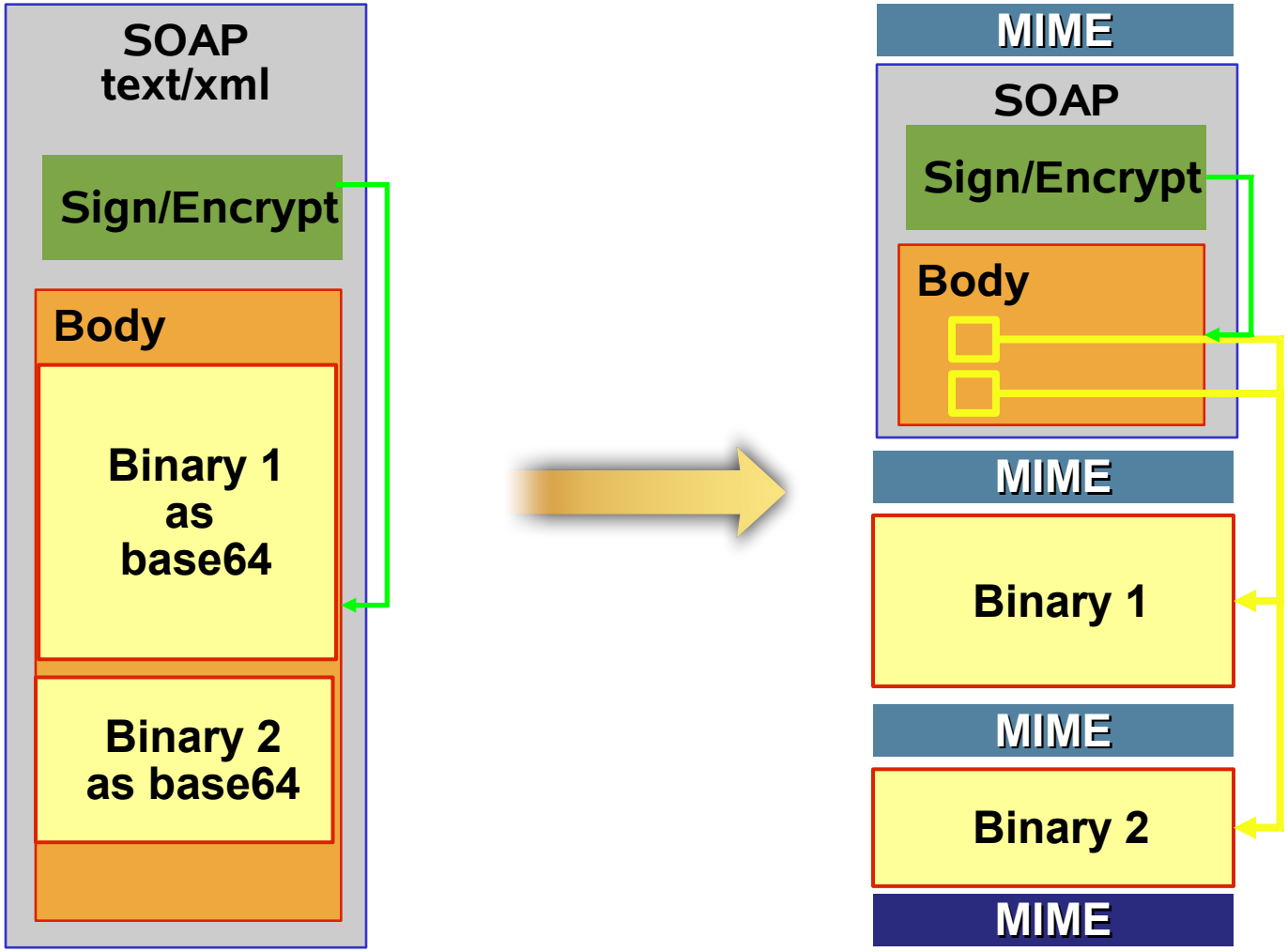


Binary Attachments

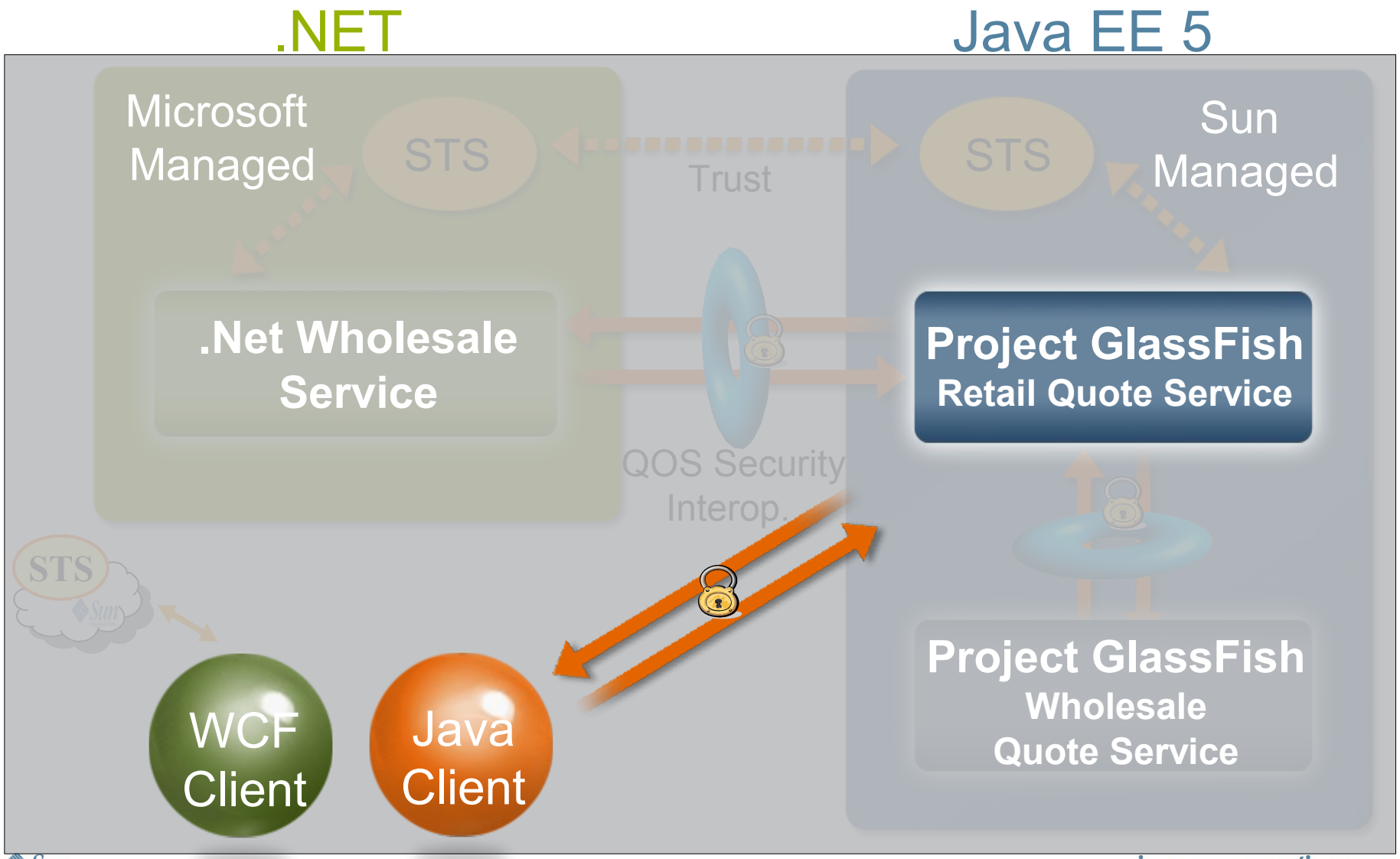
- xs:base64Binary
  - Interoperable, but high processing cost
  - 30% extra message size
- SwA (SOAP with Attachments)
  - Low interoperability, attachments outside SOAP Body
  - Lack of Composition with other Web Services Protocols
- DIME (Direct Internet Message Encapsulation)
  - Low interoperability, attachments outside SOAP Body
  - Lack of Composition with other Web Services Protocols

MTOM to the Rescue

Message Transmission Optimization Mechanism



Data Interoperability



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Data Interoperability

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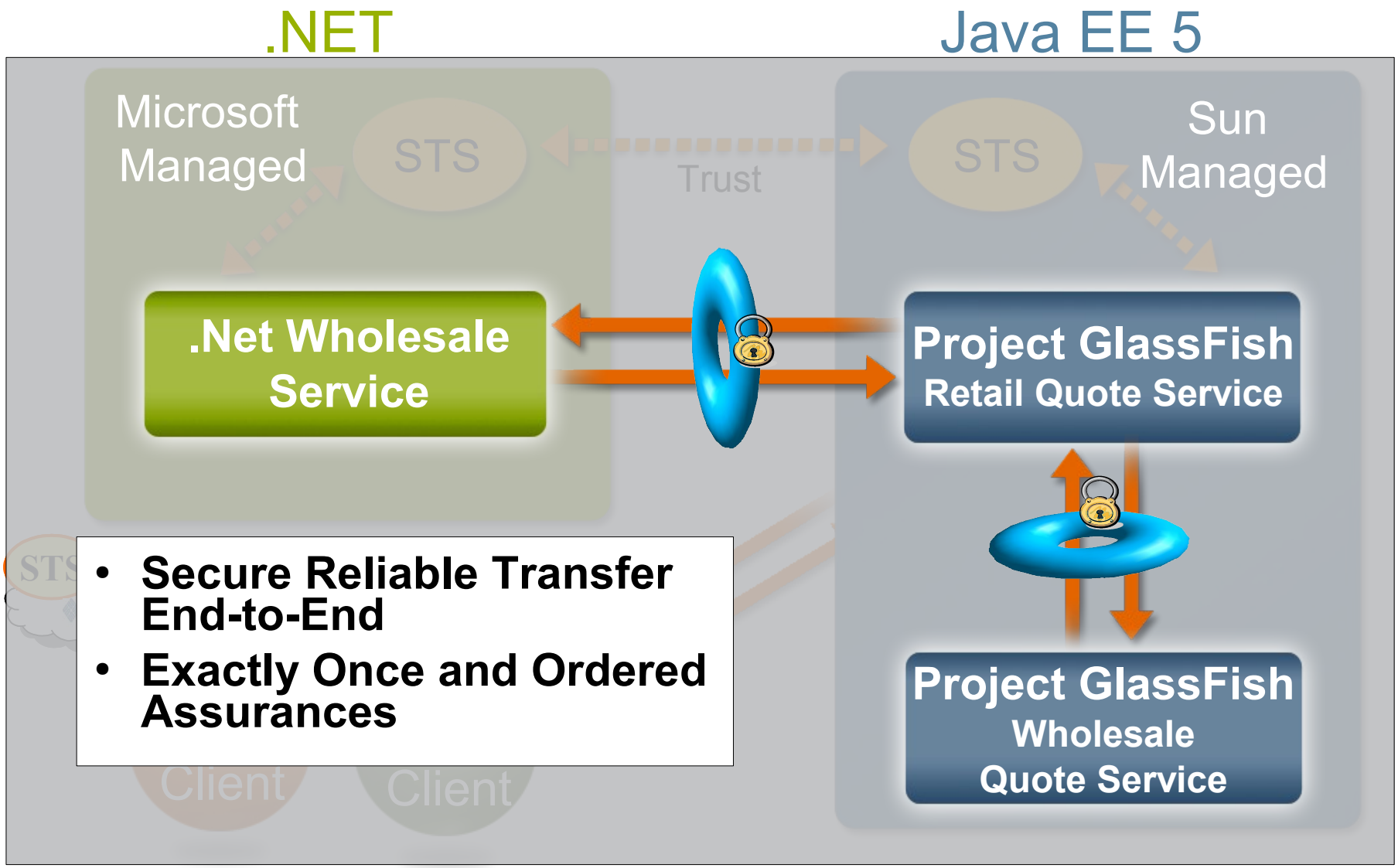
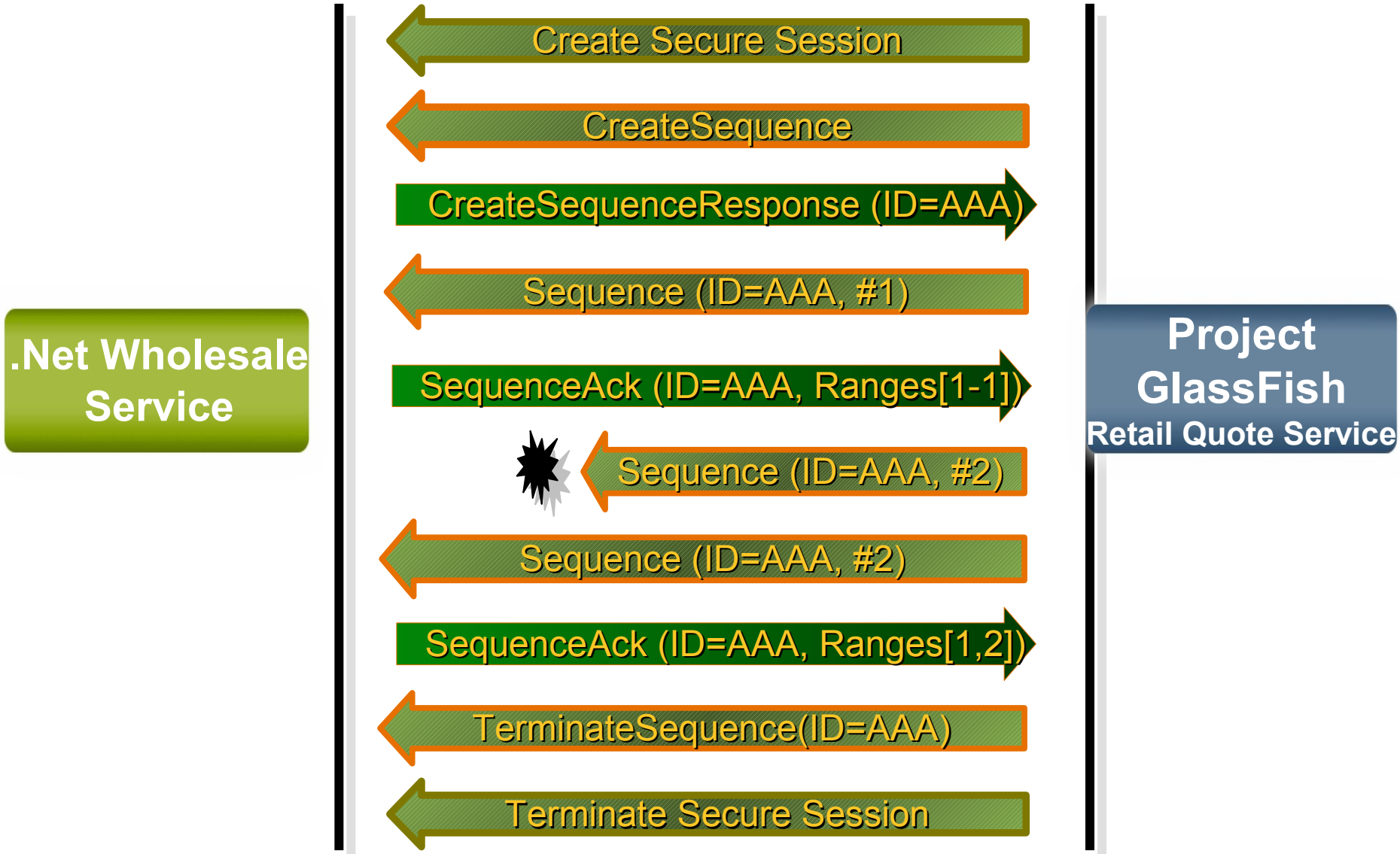
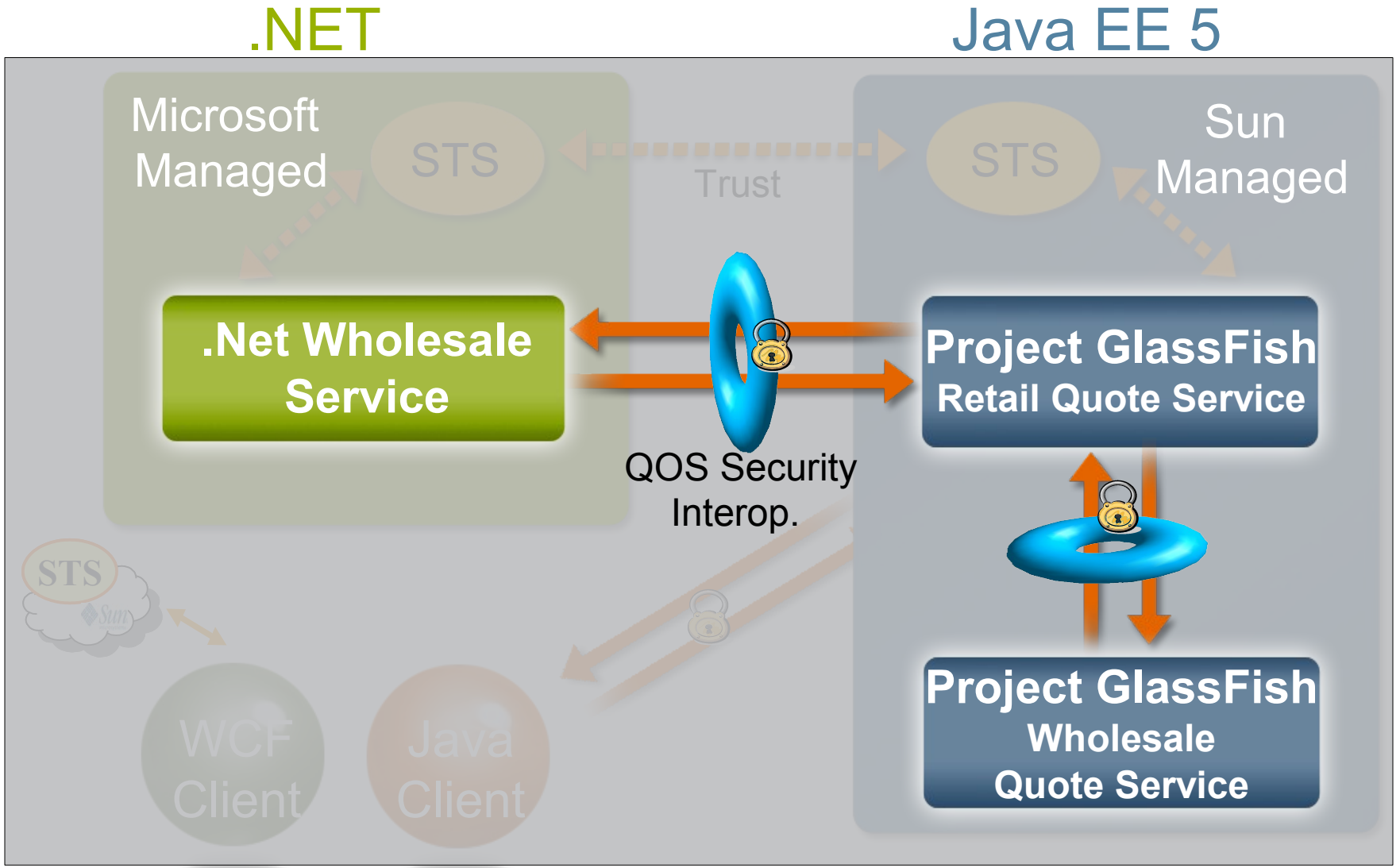
Integrating Businesses



WS-ReliableMessaging



Integrating Businesses



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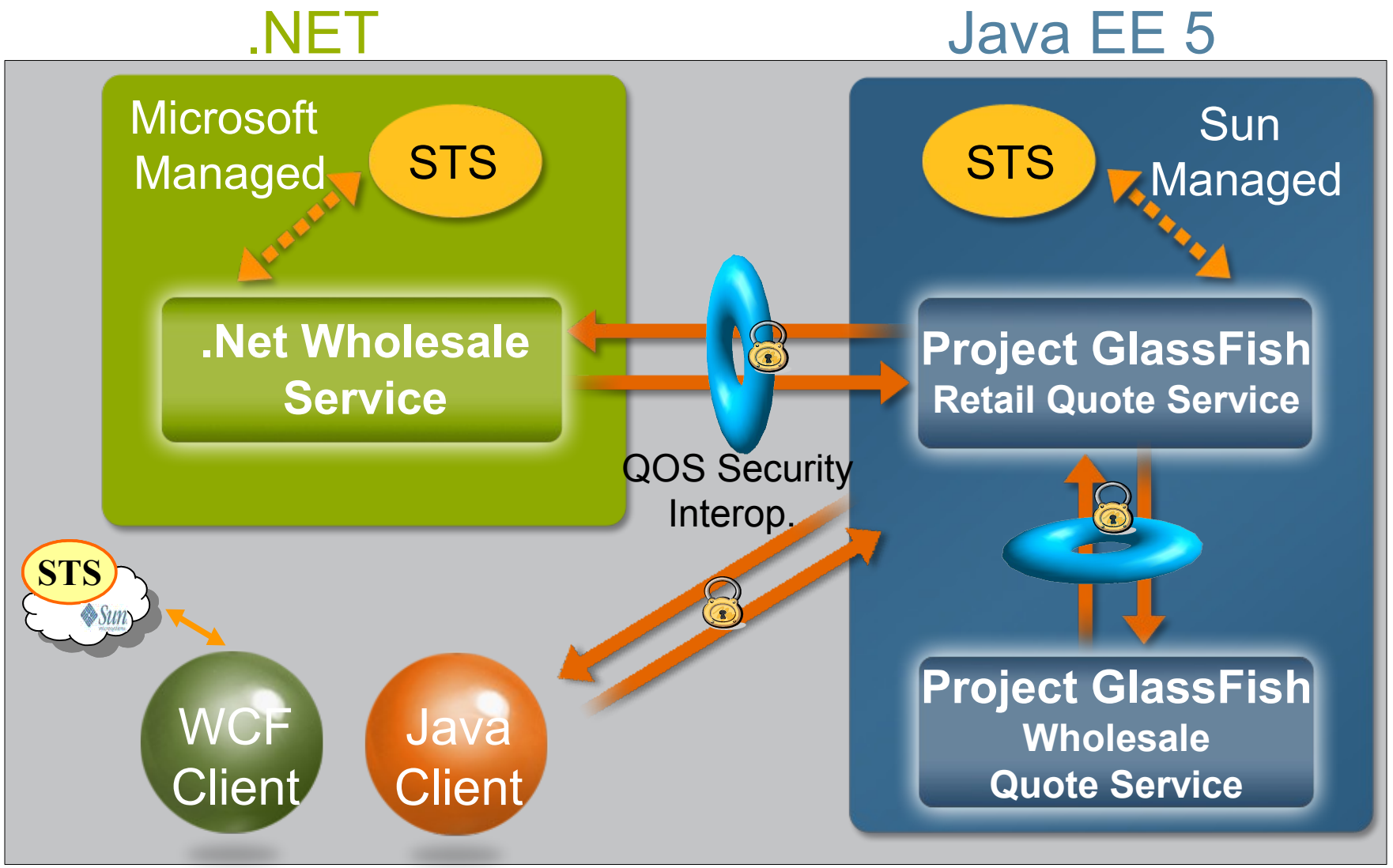
Reliable Messaging

Integrating Businesses

Brokered Trust



DOL
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VISITOR
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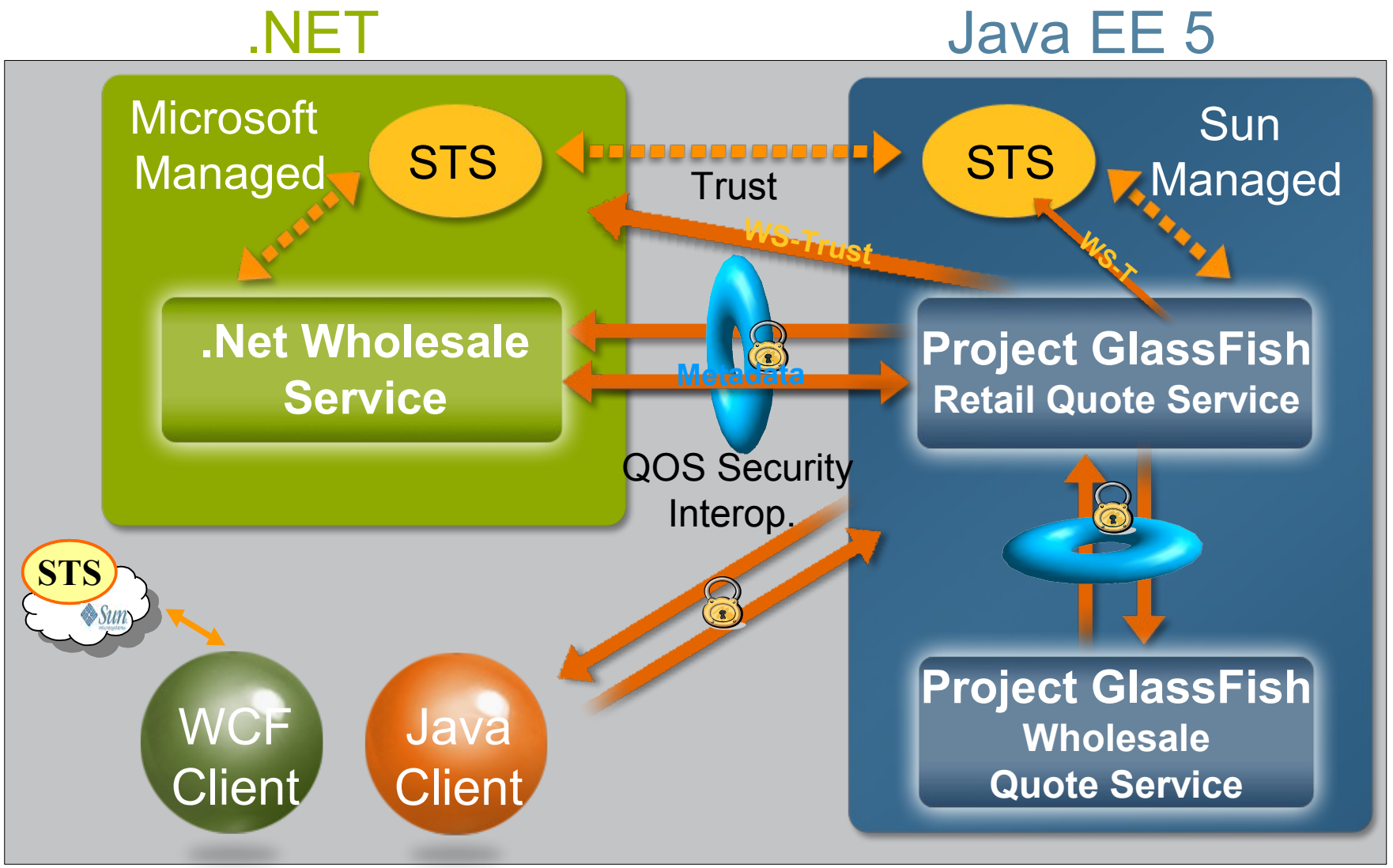
FedEx

Integrating Businesses

Brokered Trust



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Brokered Trust

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Windows Vista Web Services

Windows Communication Foundation ("WCF")

Runtime for building distributed applications

"InfoCards"

Visualized user's digital identity

Active Directory Federation Services

Infrastructure for identity and access

Windows Remote Management

Interoperable system management

Web Services For Devices

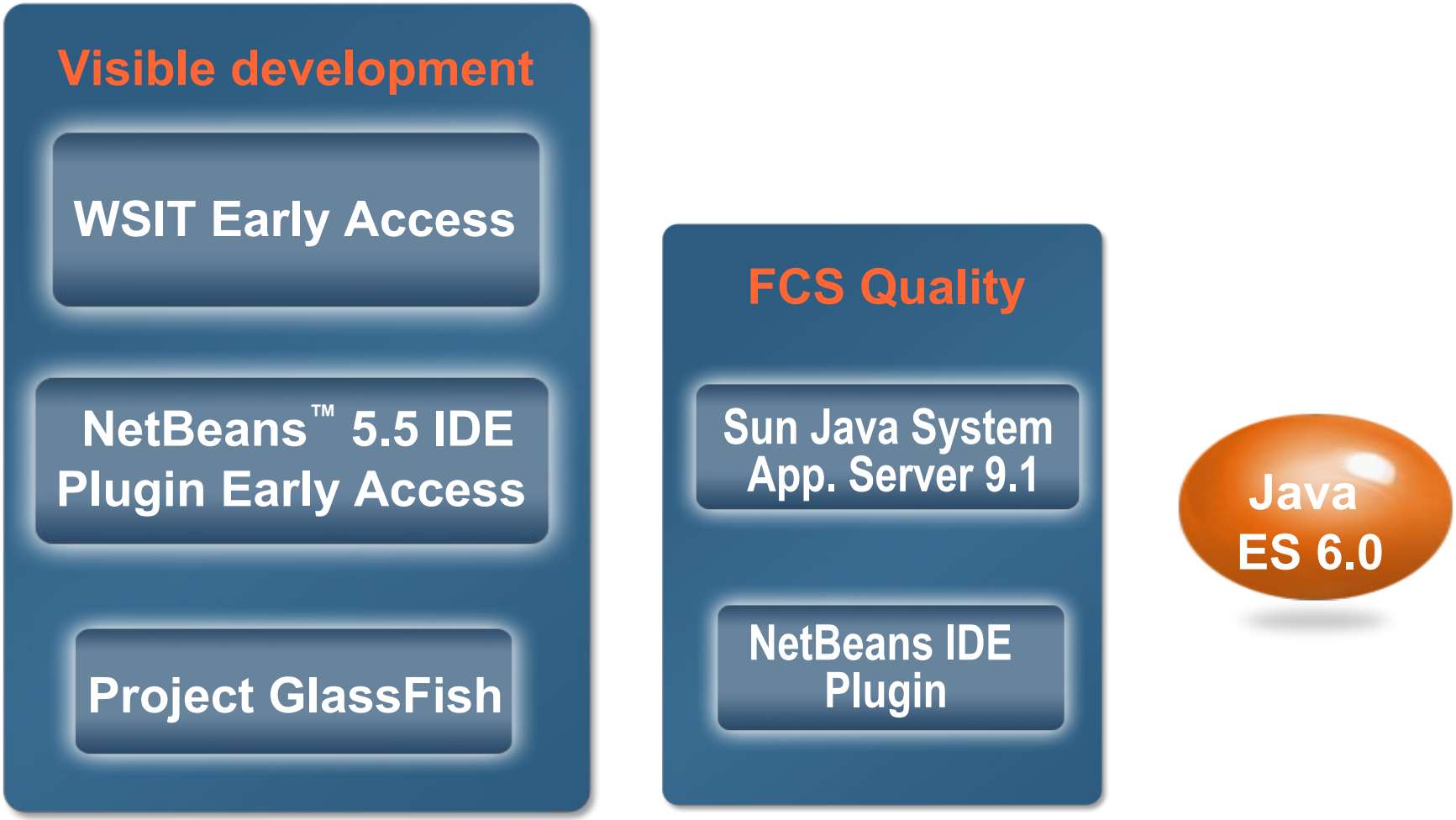
Web Services-based devices interaction

End-Users
"InfoCard"

Developers
"Indigo"

Active Directory
IT Organizations

Technology and Product Delivery Plans



Enterprise Web Services ARE Real
Summary

- Web Services enable enterprise integration scenarios within and across business boundaries
- Web Services are well adopted on both Java and .Net platforms
- Windows Communication Foundation and Project GlassFish community project can be used TODAY to achieve interoperability

Project GlassFish Community Project

Building a Java EE 5 open source application server

java.sun.com/javaee/GlassFish

Simplifying Java application development with **Java EE 5 technologies**

Includes Java WSDP, EJB™ 3.0, JavaServer™ Faces 1.2, JAX-WS, and JAXB 2.0

Supports > **20** frameworks and apps

Open source CDDL license

Basis for the **Sun Java System Application Server PE 9**

Free to download and **free** to deploy

Over **1,200** members and **200,000** downloads

Source: Sun 2/06—See website for latest stats

For More Information

- Windows Communication Foundation (a.k.a. Indigo)
  - http://msdn.microsoft.com/webservices/indigo/
- Project GlassFish and WSIT Community
  - http://glassfish.dev.java.net/
  - http://wsit.dev.java.net
- Web Services Interoperability Portals
  - http://java.sun.com/webservices/interop
  - http://msdn.microsoft.com/webservices/building/interop
  - http://mssoapinterop.org/ws/
- Web Services Interoperability Blogs
  - http://pluralsight.com/blogs/kirillg/
  - http://blogs.msdn.com/dotnetinterop/
  - http://www.simonguest.com
  - http://weblogs.java.net/blog/arungupta/
  - http://weblogs.java.net/blog/haroldcarr/

Related Talks

- **TS 4661**: Composable Web Services Using Interoperable Technologies From Sun's "Project Tango" (Today, 2:00pm)
- **TS 1603**: Reliable and Transacted Web Services Between Java™ Technology-Based Project Tango and Microsoft Indigo (Wed, 2:45pm)
- **TS 3473**: Building Secure and Trusted Web Services Using Project Tango (Wed, 12:15pm)
- **BOF 2477**: Interoperability Using XML Web Services Security 3.0 (Tonight, 9:30pm)
- **LAB 4335**: Developing Interoperable Next Generation Web Services With Project GlassFish℠, NetBeans™ IDE and WSIT (Wed, 11:30am, Wed, 7:20pm)

Call To Action

- Test Drive Web Services Interoperability
  - java.sun.com/webservices/interop
- WSIT (whiz-it): Download! Contribute!
  - wsit.dev.java.net
- Get the FREE Project GlassFish Open Source App Server
  - java.sun.com/javaee/glassfish
- Download NetBeans IDE Module
  - websvc.netbeans.org/wsit
- Visit “The Aquarium”—Virtual watercooler for WSIT and Project GlassFish
  - Blogs.sun.com/theaquarium

Q&A

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