

DEV371
 Visual Studio 2005 + WSE 3.0
 Web Services开发的强大平台

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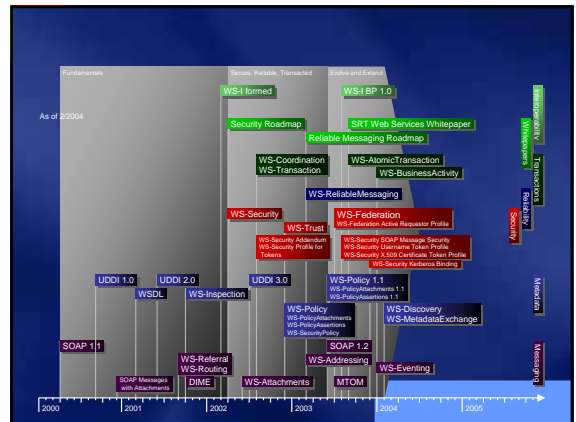
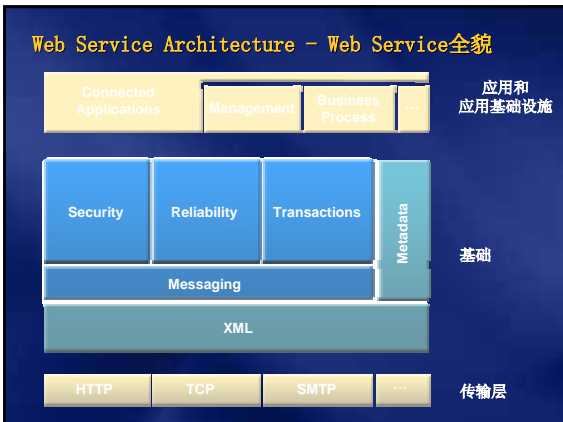


日程

- 人们所期望的Web Service
- .NET Framework 2.0 + WSE 3.0
 - 简便的开发安全的Web Service
 - 简化面向服务的应用的开发
 - 通向Indigo的必经之路
- Indigo, 天下归一

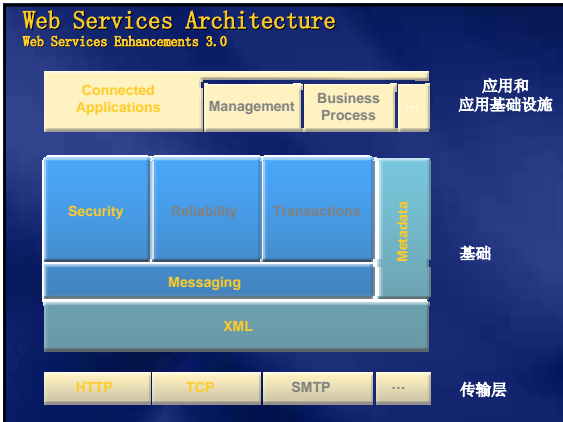
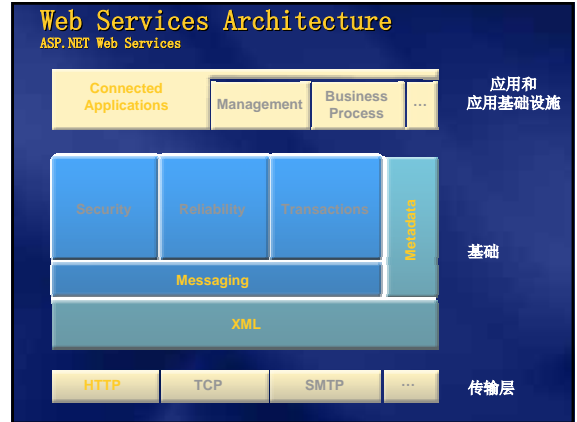
什么是 Web Services

- 一组为实现丰富和可互操作的通讯的协议和规范
 - 通常称作 WS-* 规范
- 规范由Microsoft和其他业界企业一起制定
 - 例如 IBM and BEA
- 与传输层无关
 - 可以使用 HTTP, TCP等等.
- 可组合性
 - 只使用和应用相关的协议和规范



.NET Web Services

- ASMX是 .NET Framework对基本Web Service的实现
 - 支持基本的Web Service
 - 没有实现 WS-* 规范
- WSE是对 .NET Framework的扩展
 - 可以扩展ASMX的行为
 - 支持部分WS-*规范
- Indigo是新一代的Web service的实现
 - 对WS-*, messaging, queuing, transactions提供统一的编程模型



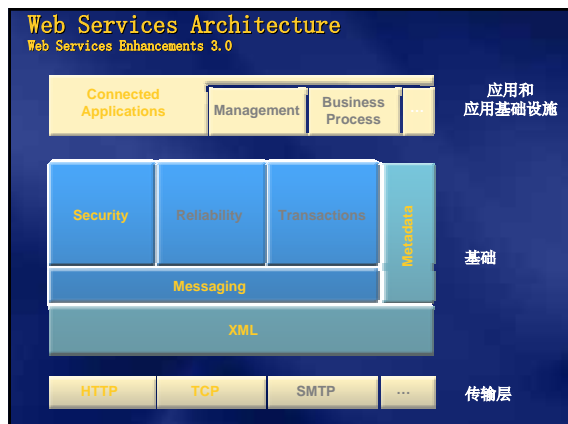
WSE 3.0和VS 2005的集成

- WSE3.0工具集成到Visual Studio 2005开发环境中
- 扩展了ASMX 的编程模型
 - Alternative transports e.g. TCP
 - Hosting environments e.g. Console apps
- Messaging APIs remain
 - SoapClient, SoapService

演示

VS2005 和 WSE 3.0集成





安全性是WSE的首要目标

- 支持如下WS-*规范
 - WS-Security
 - WS-Trust
 - WS-SecureConversation

安全的通讯

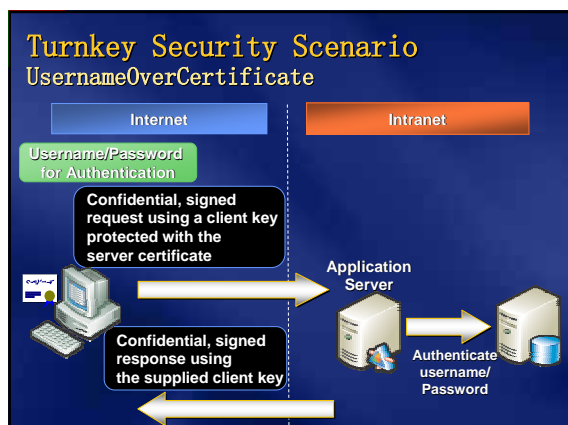
传输层的安全性

- 发送者必须信任中介
- 消息在中介处需要解密
- 整条信息加密
- 仅能使用有限的传输协议

安全的通讯

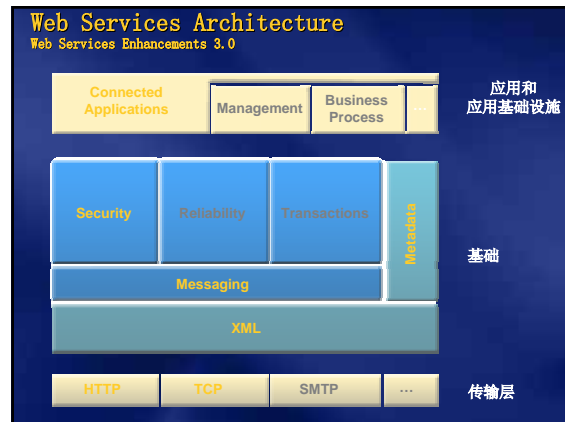
消息级别的安全性

- 与传输层无关的端到端的安全性
- 支持多种加密技术
- 可以加密消息的某一部分
- 发送者只需信任最终的接受者
- The signature is stored with the data



演示

Security with WSE 3.0



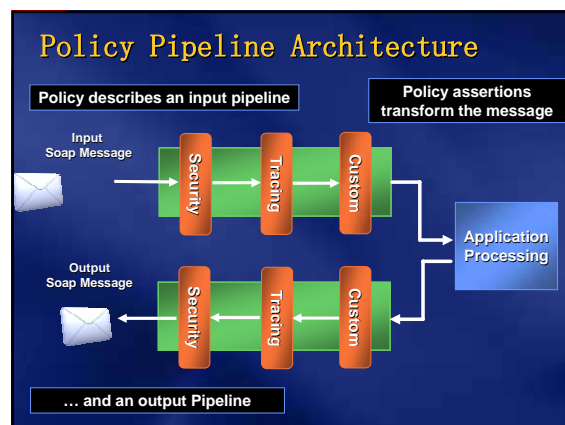
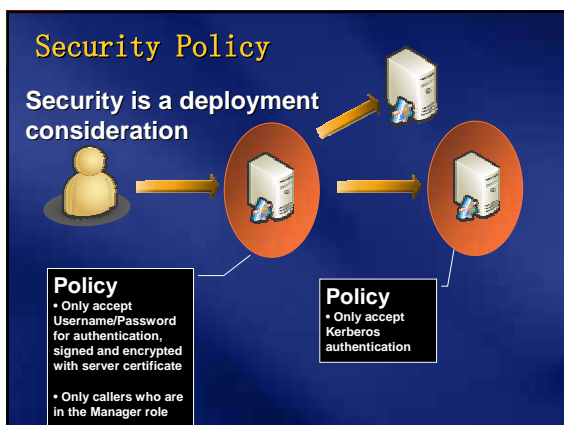
WSE 3.0支持WS-Policy

- Describes requirements for incoming and outgoing messages as policy assertions
- Limitations of Policy in WSE 2.0
 - Request and response messages secured separately
 - Made to think in low level terms
- Policy files are simplified
 - Simplifies security through the turnkey security assertions
- New object model for policy


```
// Set the ClientPolicy onto the proxy
serviceProxy.SetPolicy("ClientPolicy");
```

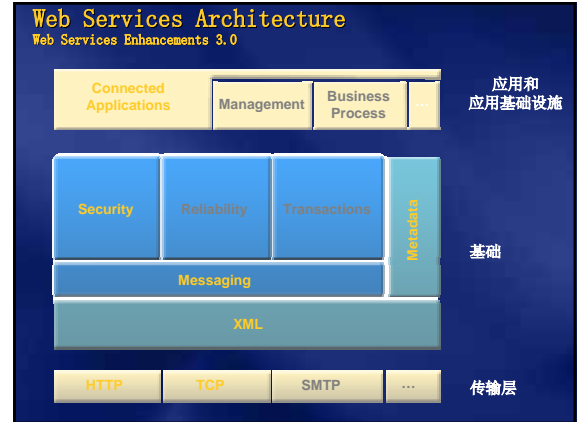
Service Orientation Tenets

- Services are autonomous
- Boundaries are explicit
- Services share schemas not types
- Compatibility based on policy



演示

Security with Policy



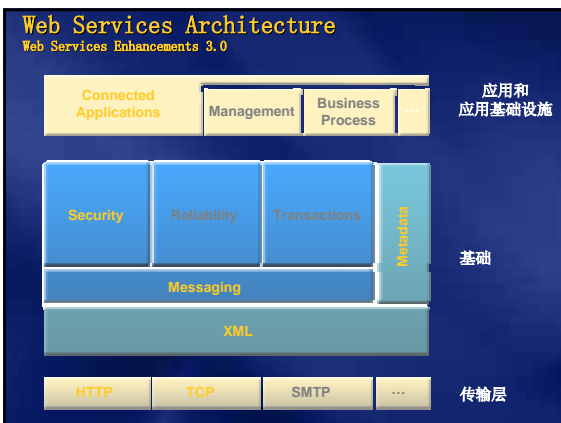
MTOM

- Message Transmission Optimization Mechanism (MTOM)
- MTOM取代了对DIME & WS-Attachments
- 益处
 - 和 WS-Security 可以保护传输的数据
 - 简化的变成模型
 - 减少消息的大小

Security
Simplify
Reduction

演示

使用MTOM传输大数据



Extend ASMX programming Model

Example: ASMX Web Service over TCP

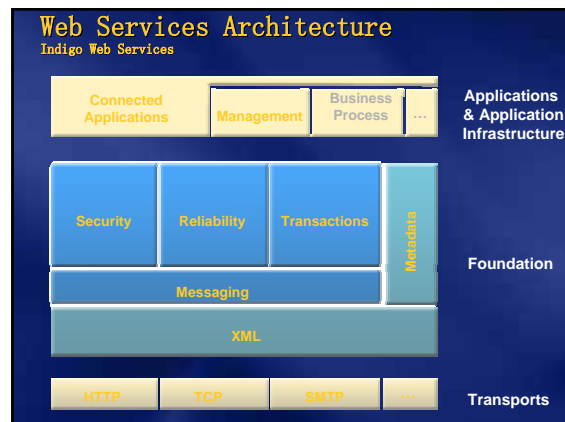
```

public class StockService
    System.Web.Services.WebService
    {
        [WebMethod]
        public StockQuote[] StockQuoteRequest([string[]
        symbols) {}
    }

    static void Main(string[] args)
    {
        Uri to = new Uri("soap.tcp://StockService/StockQuote");
        EndpointReference EPR = new EndpointReference(to);
        SoapReceivers.Add(EPR, typeof(StockService));
    }
    
```

演示

Web Service via TCP



演示

Indigo中的统一编程模型

通向Indigo

Leveraging Existing Microsoft Investments

- Side-by-side co-existence with existing distributed technologies
- Seamless communication with applications built on existing technologies
- Smooth upgrade of existing code to Indigo

下一步

1. 如果开发分布式应用首选Web Service
2. 如果开发基本的Web Service,使用 ASMX
3. 如果需要支持WS-*, 使用WSE3.0
4. 开始关注Indigo

社区资源

- <http://msdn.microsoft.com/webservices>
- <http://www.microsoft.com/china/msdn/>

问题

1. 例举WSE3.0中支持的WS-*规范
2. 例举SOA的四大特点
3. 什么是MTOM

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