SOA Modernization for NonStop Applications
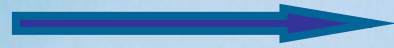
To this...

Process-Centric Solutions

SOA

http://

Standard Interface

Any to any

WSDL
SOAP
HTTP/S

Standard Interface

SOAP/AM

Call Center Services

Order Processing Services

Customer Info. Services

Billing Services

Service Consumer

Service Provider
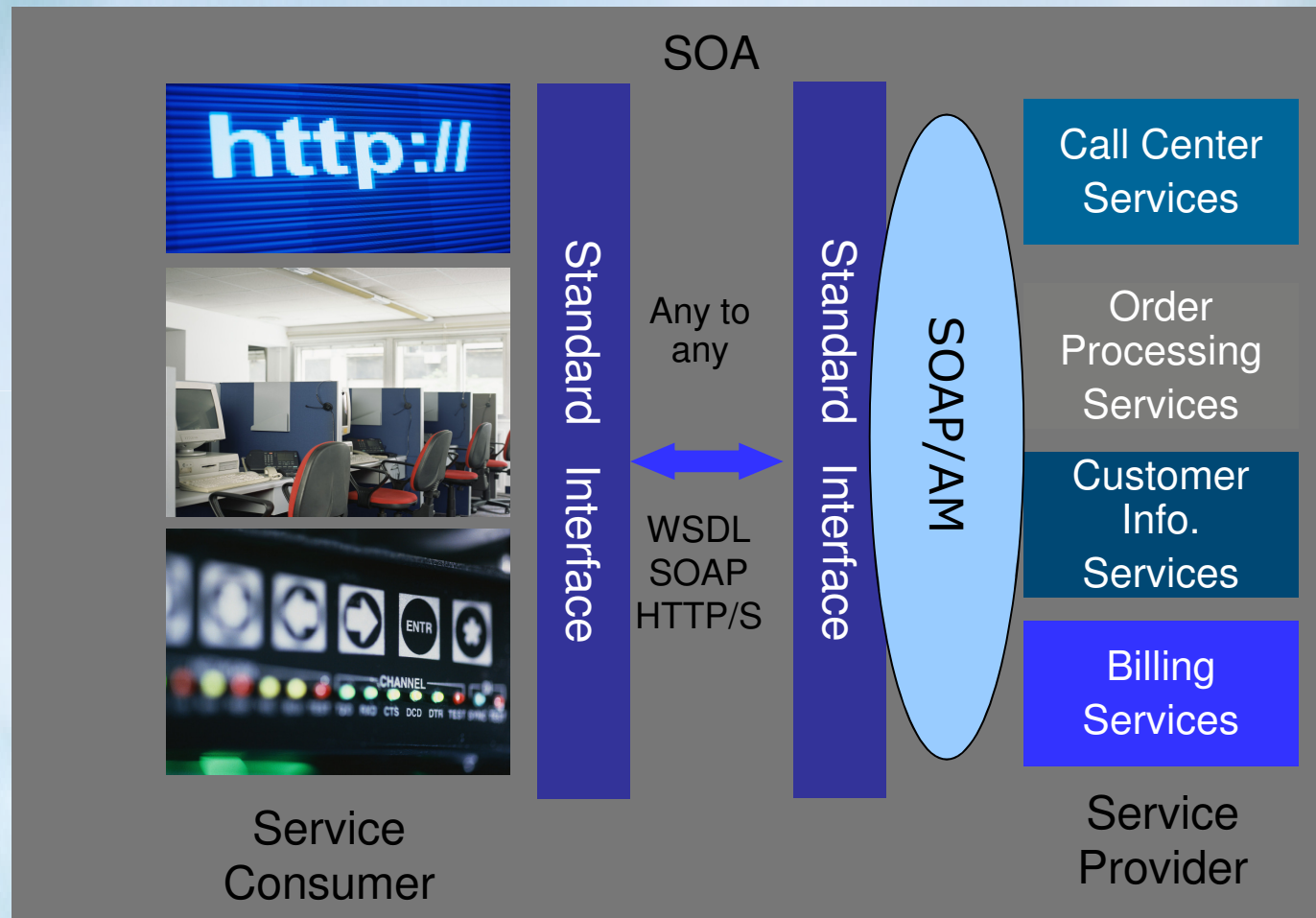
Planning an SOA Initiative

- Target solutions that provide business value
  - Let pain drive SOA investments
- Avoid analysis-paralysis
  - Start small and build over time
  - Show reward and benefits quickly/cheaply
  - Keep integration simple: Synchronous, direct, request-response
- Get the organizational politics right
  - Use short workshops to involve stakeholders
- Build services before buying SOA infrastructure
  - Start by SOA-enabling an existing application
  - Focus on QoS issues (scale, performance, availability)
  - Don't fret too much about service reuse

Low Risk Approach

- Capitalize on existing NonStop technology and investment
- Maximize ROI through complimentary infrastructure products with low costs and minimal development effort
- Consider packaged solutions to respond to market changes quickly

Transforming the Role of NonStop with SOA

1. SOA/Web Enable Legacy Apps

- ✓ *Tools are available to SOA enable NonStop applications*

2. Application Rejuvenation

- ✓ *Leverage NonStop as an active SOA participant*

3. Application Migration

- ✓ *Service Oriented Architecture can simplify the migration process*
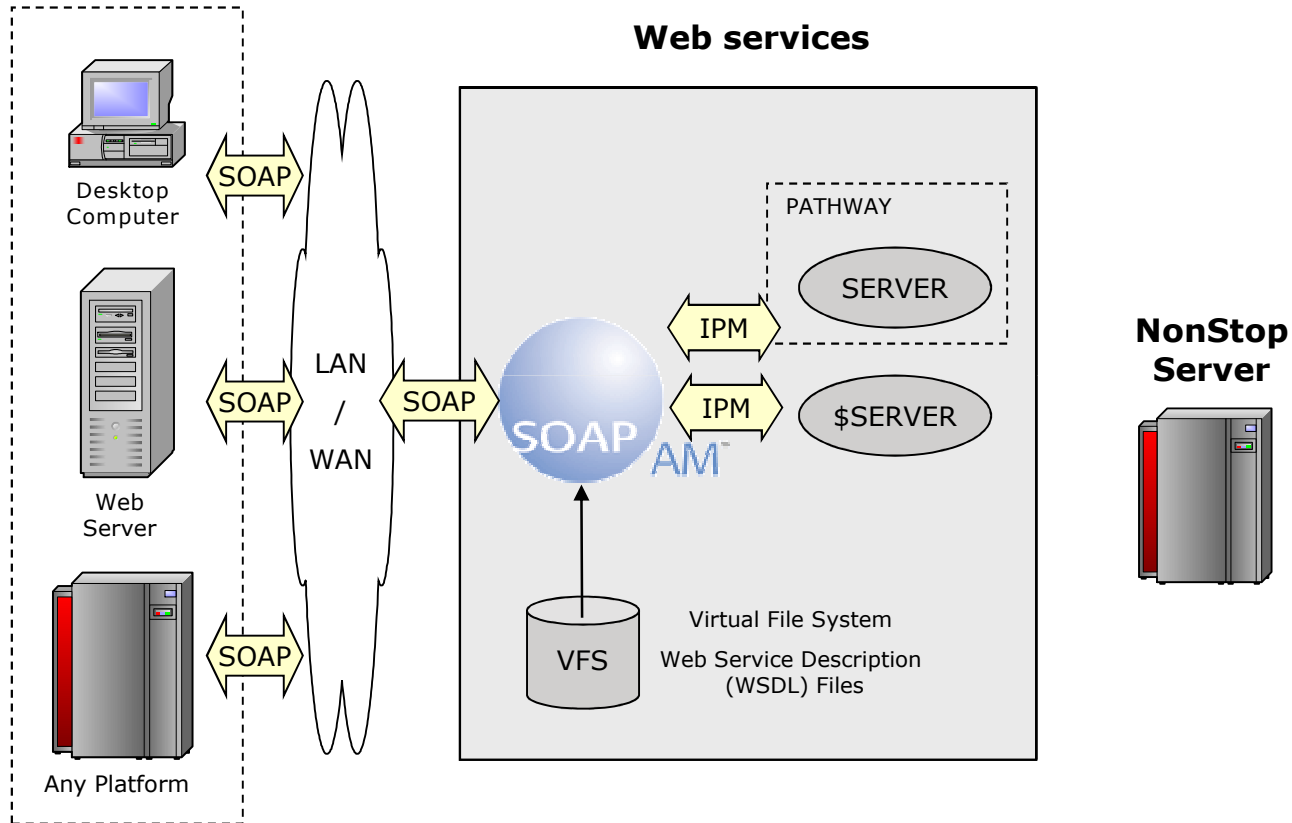
SOA/Web Enable Legacy Apps

- Improve value of NonStop Server without requiring its retirement
- Web services provide the flexibility for immediate reuse of existing functions
- Provides new business value and agility through non-invasive integration of new technology
- Lower IT costs

SOAP/AM Server

- Exposes your server application as a Web service
- Works with existing servers, no code changes required
- Secure - supports SSL and Server Certificates
- Scalable
  - Can be run in multiple CPUs
  - Supports Parallel TCP/IP (IPv6)
- Resilient – runs as a NonStop process pair

SOAP/AM Server

Web service clients

Web services

Desktop Computer

SOAP

LAN / WAN

Web Server

SOAP

SOAP

SOAP

AM

Any Platform

SOAP

PATHWAY

SERVER

IPM

IPM

$SERVER

NonStop Server

VFS

Virtual File System
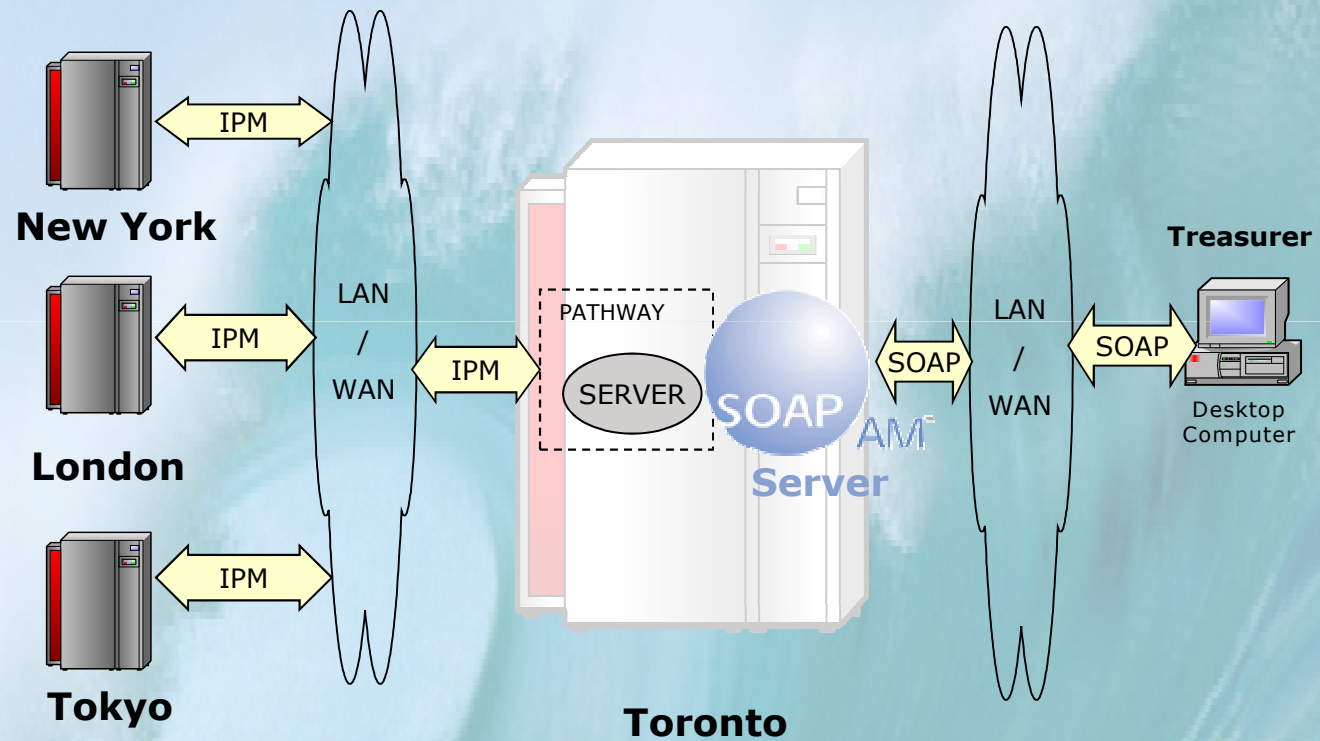
Web Service Description (WSDL) Files

Application Rejuvenation

- *Realizing even more value out of legacy solutions than migration or SOA enabling can provide*
- *Employ non-invasive approach to extract new value out of older systems without requiring risky software changes*
- *Reuse server code for purposes not originally intended by their authors*

Beyond Web Enabling

- Combine existing functions to create new business solutions
- Integrate Web services into existing applications
- Increase your service offerings
- Improve efficiency
- Automate business processes

Global Financial Position

New York

London

Tokyo

LAN / WAN

IPM

Toronto

PATHWAY

SERVER

SOAP AM
Server

LAN / WAN
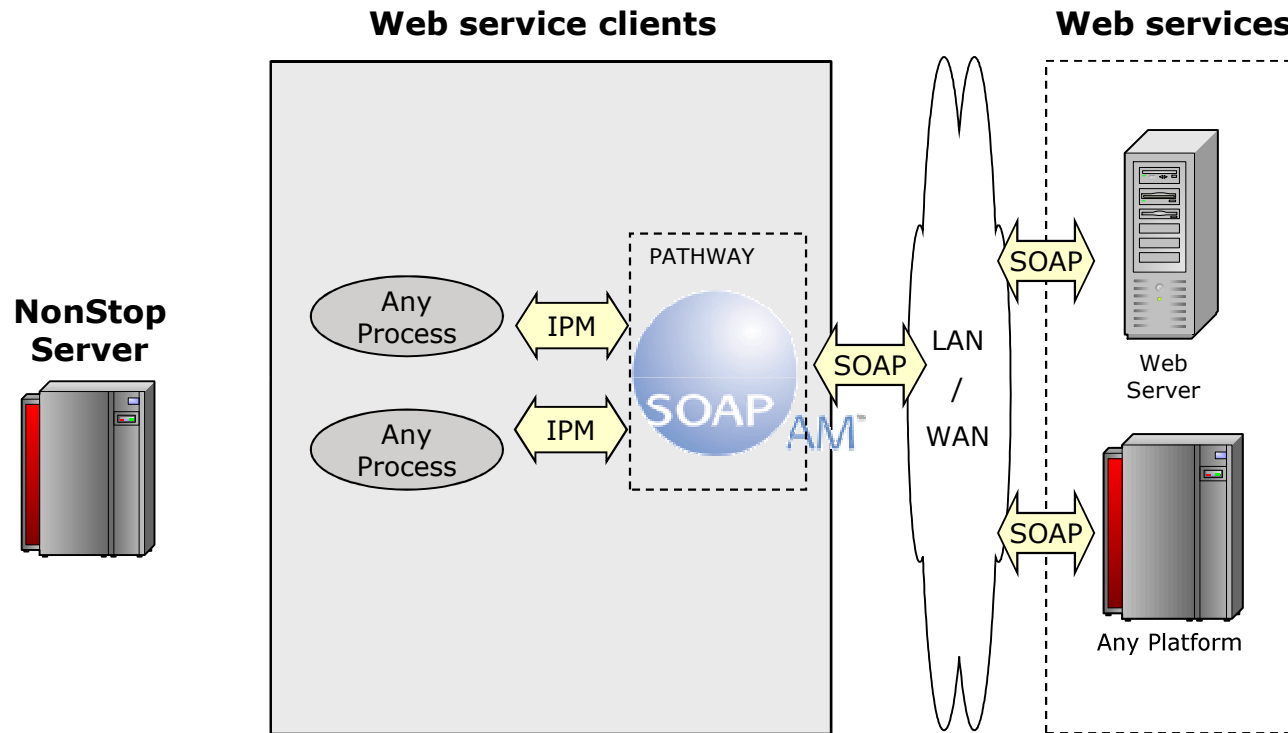
SOAP

Treasurer
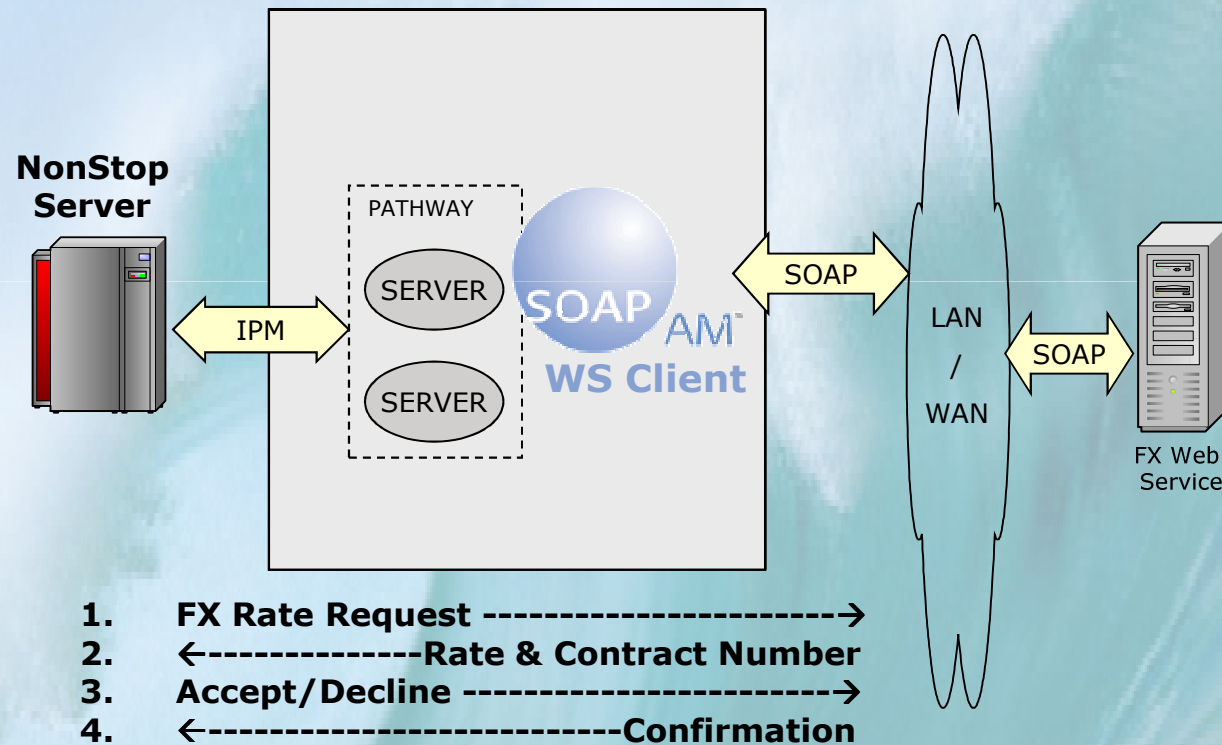
Desktop Computer

SOAP/AM
Web Service Client

- Access Web services on any platform from your NSK application
- Hides the complexity of TCP/IP, HTTP, XML, SOAP and SSL/TLS protocols

SOAP/AM Web Service Client

Web service clients

Web services

NonStop Server

PATHWAY

Any Process

IPM

Any Process

IPM

SOAP

AM™

SOAP

LAN / WAN

SOAP

SOAP

Web Server

Any Platform

Web Service Based Foreign Exchange

NonStop Server

PATHWAY

SERVER

SERVER

SOAP AM
WS Client

IPM

SOAP

LAN / WAN

SOAP

FX Web Service

1. **FX Rate Request** ----------------------→
2. ←---------------**Rate & Contract Number**
3. **Accept/Decline** ------------------------→
4. ←--------------------------**Confirmation**

Plug n Play Web services

- Add commercial Web services to provide new business functions
- Build viable web services in minutes
- Financial web services available from front-office to back-office functions
- Many corporate business functions also available
  - Sales management
  - Supply chain management

Application Migration

- Abstract interface rules
- Facilitate introduction of new technologies
- Reduce costs of ongoing maintenance
- Transition to replacement system in a seamless, well managed process
- Reduce project risk

Xignite Financial Web Services

Financial Services

Financial market data is the lifeblood of the financial services industry. Xignite web services can power a wide array of applications from the front to the back office.

free trial

buy online

demo center

Websites and Portals

- Broker & Advisor Portals. Empower your advisors and brokers with relevant and up-to-date information.
- Investor Websites. Stocks, fixed income, currency, metals, etc.

XigniteQuotes
XigniteChart
XigniteHistorical
XigniteCurrencies
XigniteNasdaqLastSale
XigniteBATSLastSale

Trading

- Trading Applications. Optimize and analyze your trading efficiency. Provide real-time feedback to your traders.
- Compliance Applications. Verify the compliance of your trading execution. Ensure the OFAC compliance of your new accounts.
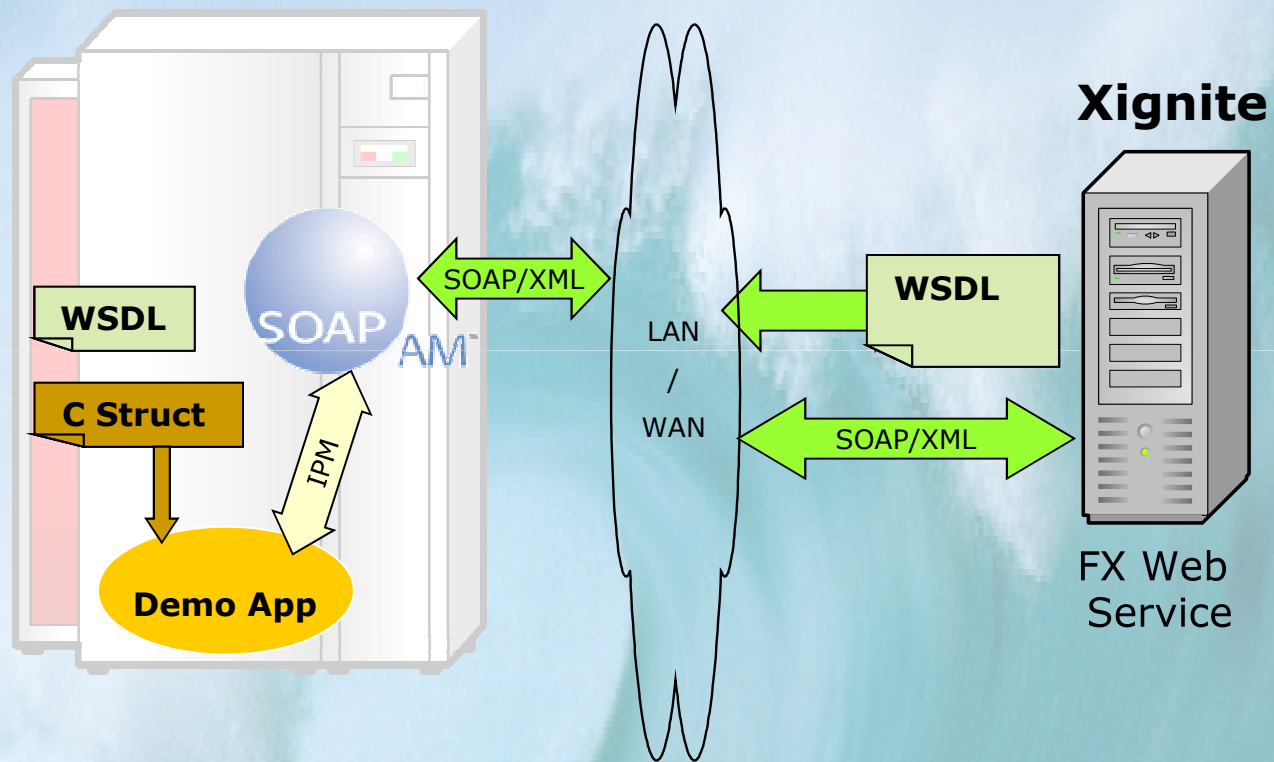
XigniteRealTime
XigniteVWAP
XigniteHistorical
XigniteCurrencies

Lending

- **Mortgage Lenders:** We provide a wide array of index rate information you can use to better inform your brokers or to display on your web site.
- **Commercial Lenders:** You may be indexing loans across a variety of rates. We can provide "official" Federal Reserve H15 interest rates. Wall Street Journal, LIBOR or other rates

XigniteRates
XigniteMoneyMarkets
XigniteInterbanks

one   Internet   100%

Xignite WS Architecture

Xignite

WSDL

C Struct

SOAP AM™

IPM

Demo App

SOAP/XML

LAN / WAN

WSDL

SOAP/XML

FX Web Service

SOA on HP NonStop

- On Guardian:
  - SOAP/AM Server
    - Exposes Pathway servers as SOA services
  - SOAP/AM Web Service Client
    - Allows Pathway servers to consume SOA services

- On OSS:
  - HP NonStop SOAP
  - Open source GSoap
  - Open source Apache Axis2 Software
    - Runs under NonStop Servlets for JSP
  - BEA WebLogic & AquaLogic Server
    - Complete J2EE and SOA application server infrastructure

Using SOAP/AM to SOA-Enable Pathway Servers

- Support the SOAP standard over HTTP/S protocol
  - Includes SSL
- Provide a design-time Wizard to easily expose Pathway servers as Web services
  - Automatically generates WSDL from DDL
- The SOAP/AM Admin. GUI makes this simple
  - No coding is required
  - No change to the existing Pathway server is required
- SOAP/AM products run as persistent processes or Pathway serverclasses for efficiency, scalability and availability

Steps to SOA Enable Existing Pathway Servers

1) Point the Wizard to the DDL Dictionary and select [click] the desired requests and replies
2) Identify the Pathway serverclass(es) Service(s)
3) Generate the WSDL for the service
4) Test the SOA-enabled Pathway service
5) Create the service consumer WS-Client
6) Invoke the Pathway service from the service consumer (client)

What is SOAP/AM® ?

- **SOAP/AM Server**
  - Enables server applications on your NonStop system to act as standard Web services

- **SOAP/AM Web Service Client**
  - Enables applications on your NonStop system to access Web services on any platform

SOAP/AM® Features

- Hides protocol, encoding and encryption complexities

- Leverages native NSK inter-process message system

- Built on NSK fundamentals
  - $RECEIVE
  - WRITEREAD, 'PATHSEND'

Standards Based

- SOAP 1.1
- XML
- SSL/TLS
- HTTP
- TCP/IP

Flexible

- Interoperable with Web service implementations on a wide variety of platforms
- Programming language independent
- Works with existing server applications

Secure

- SSL and TLS for secure https connections included at no extra cost

- Supports password protection and digest authentication

- Configurable permissions to execute/design/administer

Recipe for Success*

1. Strong Executive Level Sponsorship and SOA Evangelist
2. Educate the Business of the Value of SOA
3. Establish a Center of Excellence (CoE)
4. Start With Well-Defined Business Processes and Scale Up
5. Define Completeness of Work within Services
6. Quality Assurance Is Key
7. ROI Is Difficult to Achieve Initially and Is Realized Over Time
8. Deliver Substantial Business Value

* Eight Winning Characteristics of Successful SOA Implementations
(compiled by CIO.com based on the winners of the SOA Consortium)

Questions ?

Thank You !

For More Information:

www.nuwave-tech.com

info.nuwave-tech.com

- Documentation
- Tutorials
- Demonstrations
- Samples