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Access to Pathway from remote clients in a service oriented manner

Ralph Stommel
Product Manager
comForte GmbH.

September 2006

Company Profile

Our Mission: Assisting enterprises to deploy secure, manageable and cost-effective NonStop server access

➔ comForte GmbH / Germany

➔ **Founded:** Oct 1998

➔ **CEO:** Dr. Michael Rossbach
CTO: Michael Horst

➔ **Offices:**

- ➔ **Neuruppin** (north of Berlin)
- ➔ **Wiesbaden** (near Frankfurt)

➔ comForte Inc. / USA

➔ **Founded:** June 2005

➔ **President:** Knut Rossbach
CTO: Thomas Burg

➔ **Office:** Old Tappan, New Jersey

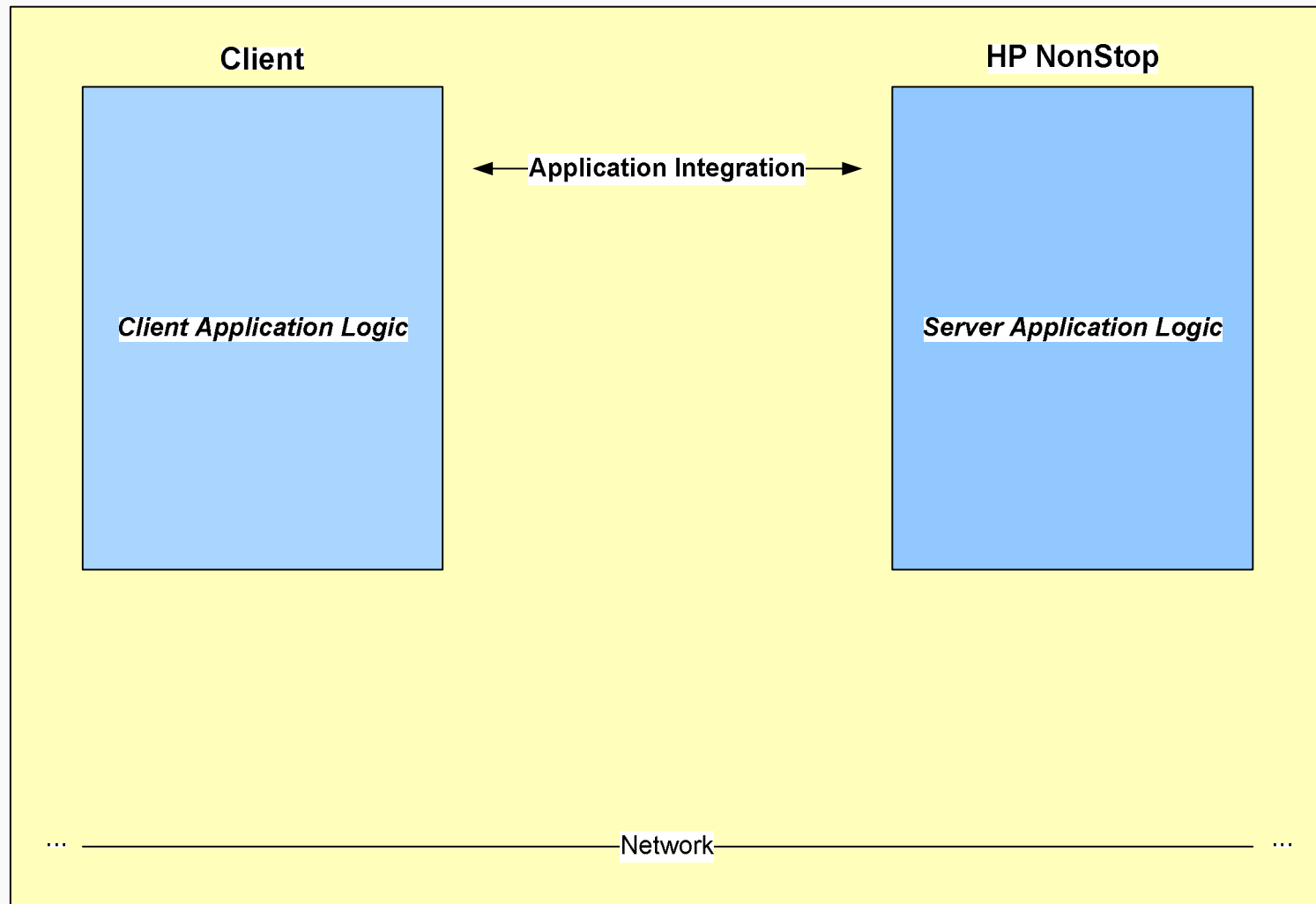
➔ **Employees:** 20

➔ **Revenue** 2005: 2.5 Mio Euro

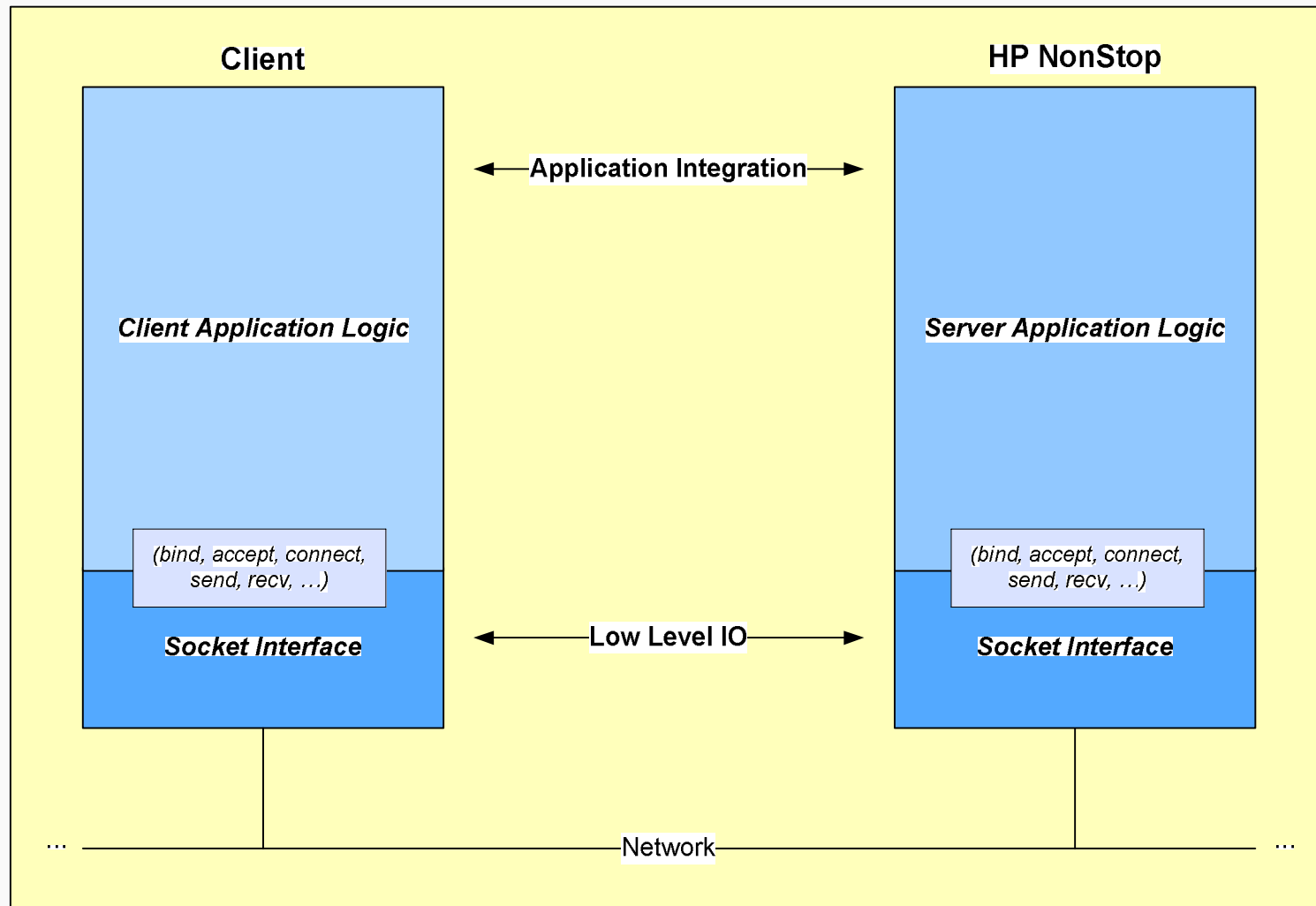


communication is our Forte

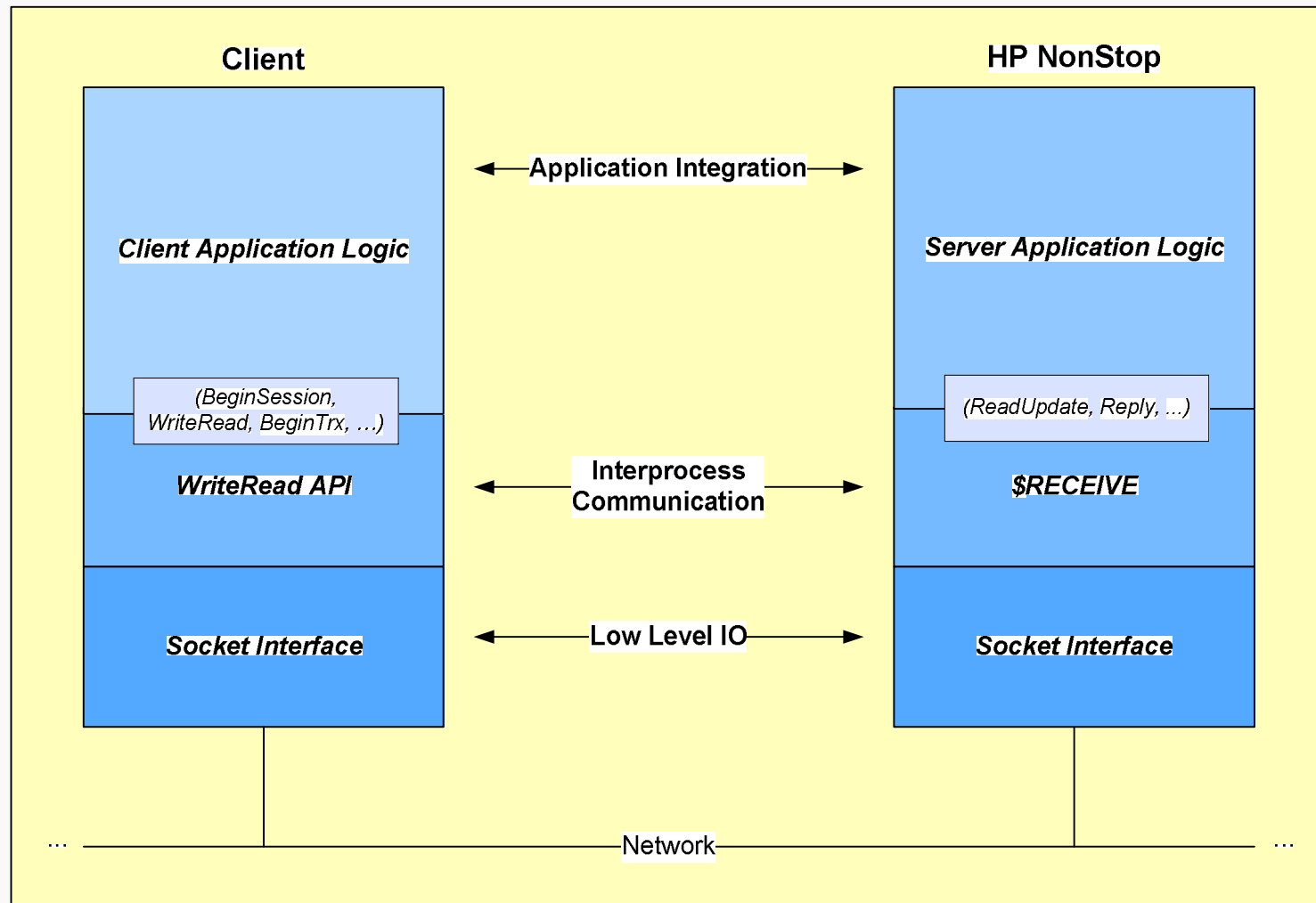
NonStop Access Layered: Application Integration



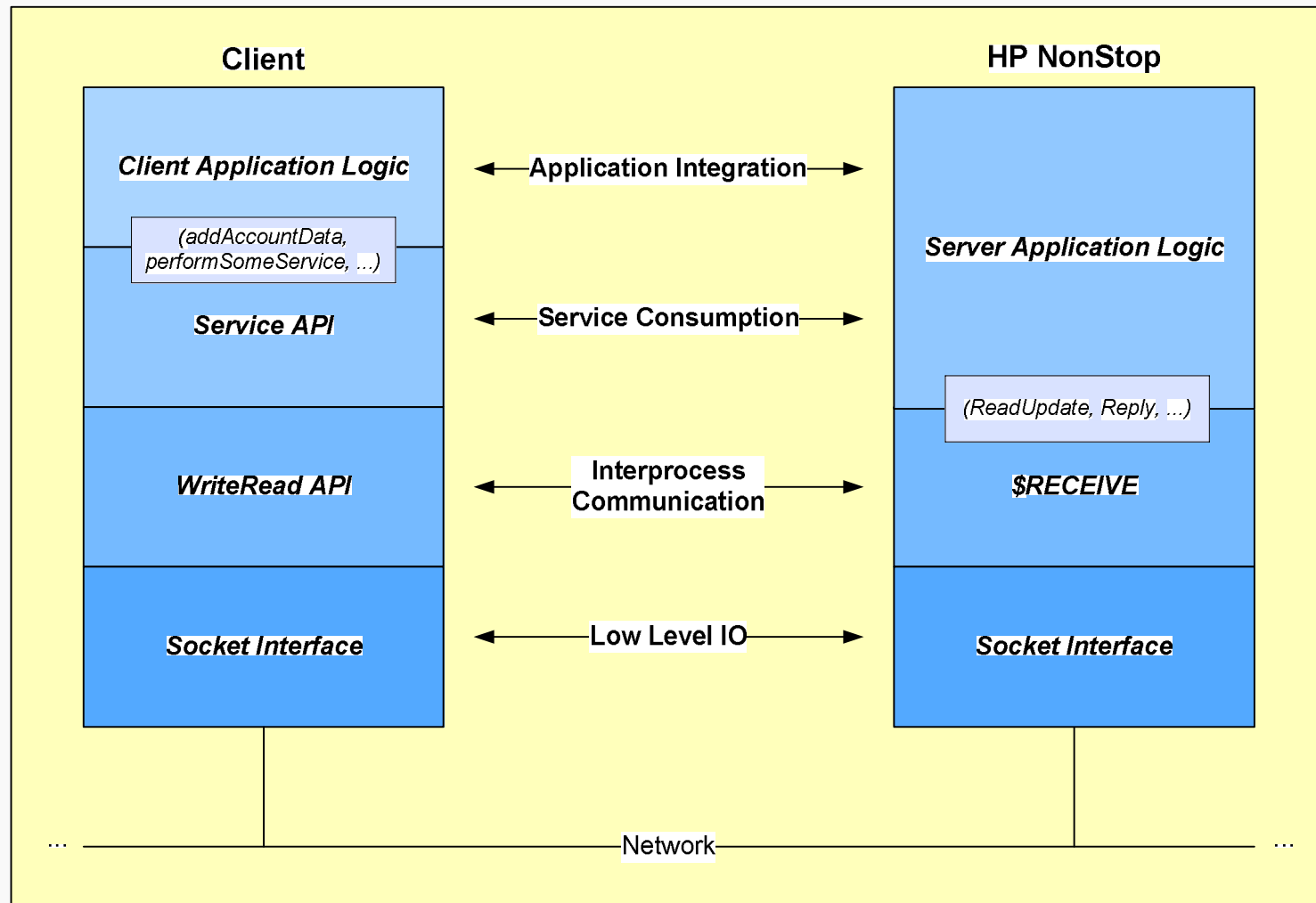
NonStop Access Layered: Low Level Communication



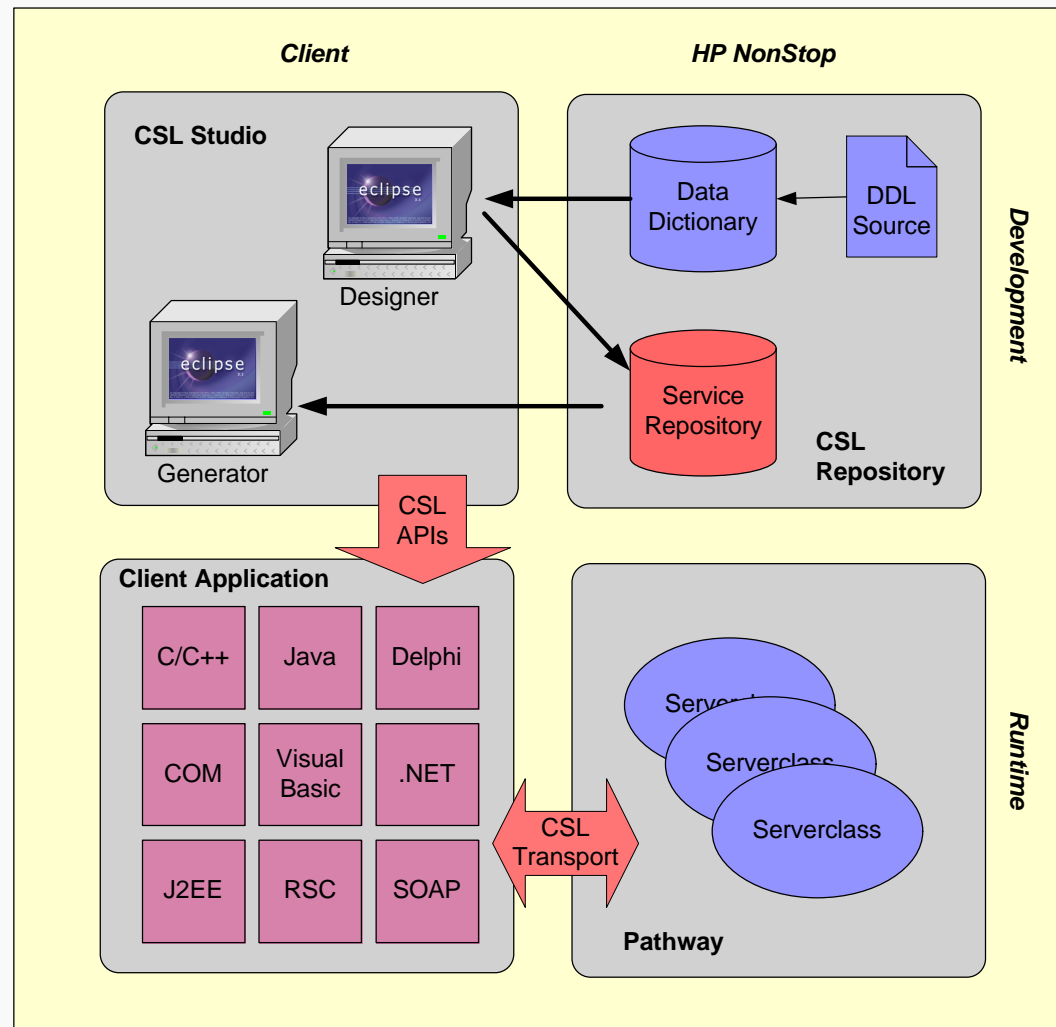
NonStop Access Layered: Interprocess Communication



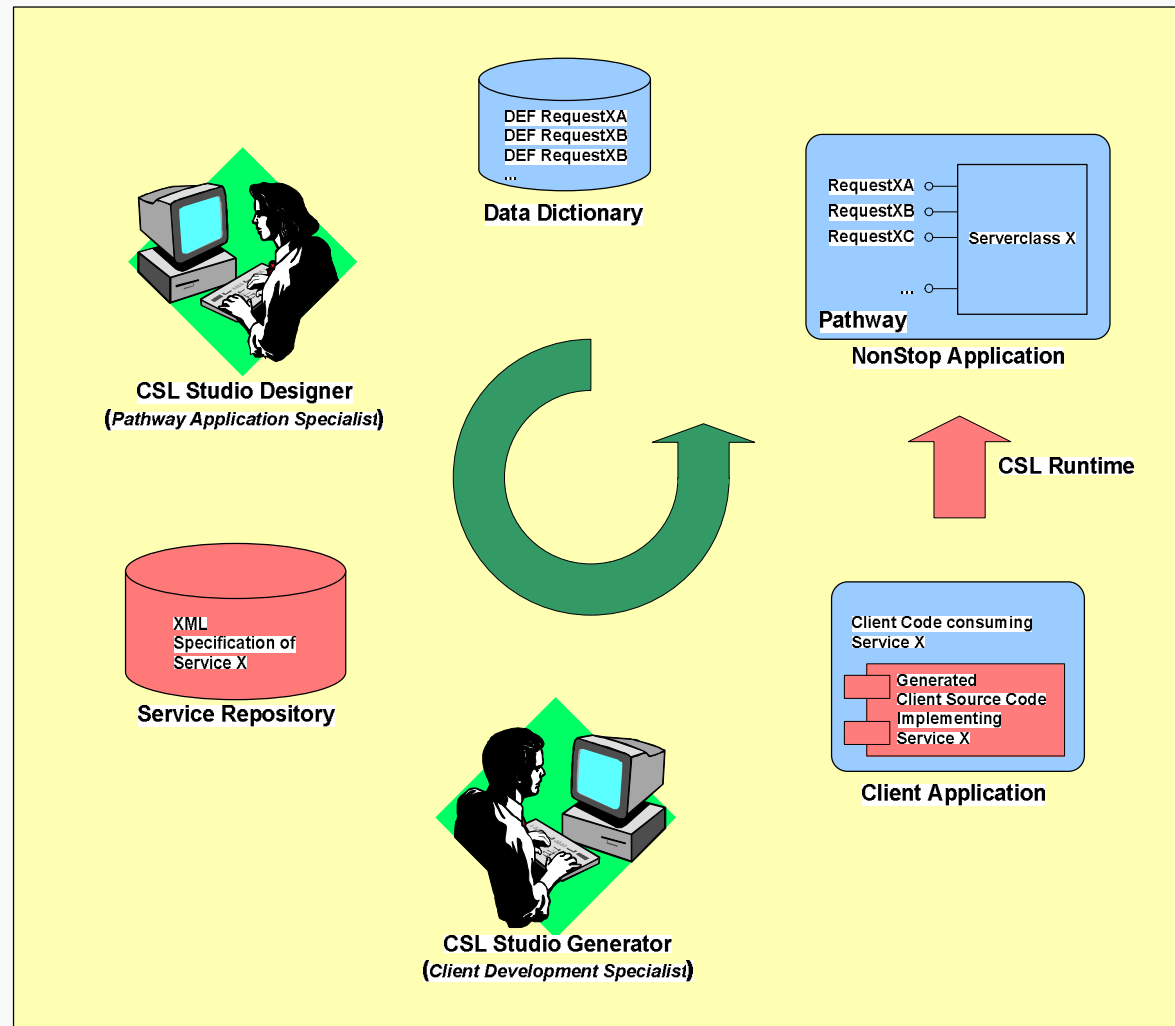
NonStop Access Layered: Service Consumption



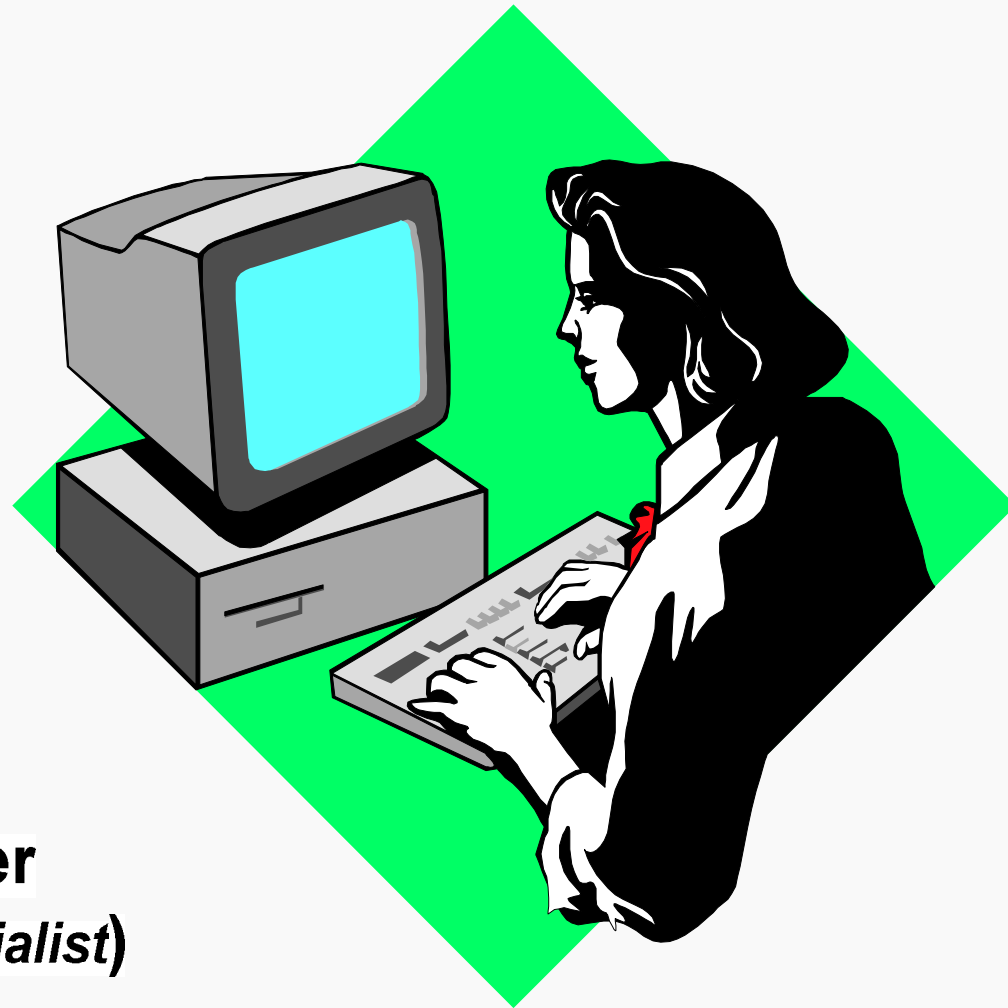
Pathway Access With CSL In A Nutshell



CSL Development Cycle

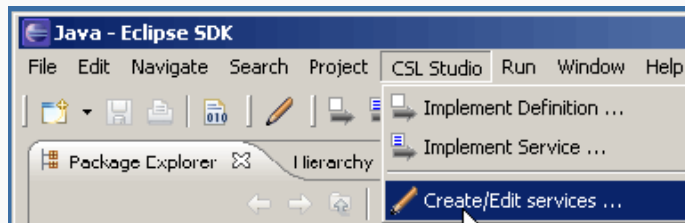


CSL Studio Designer – Sample Screens

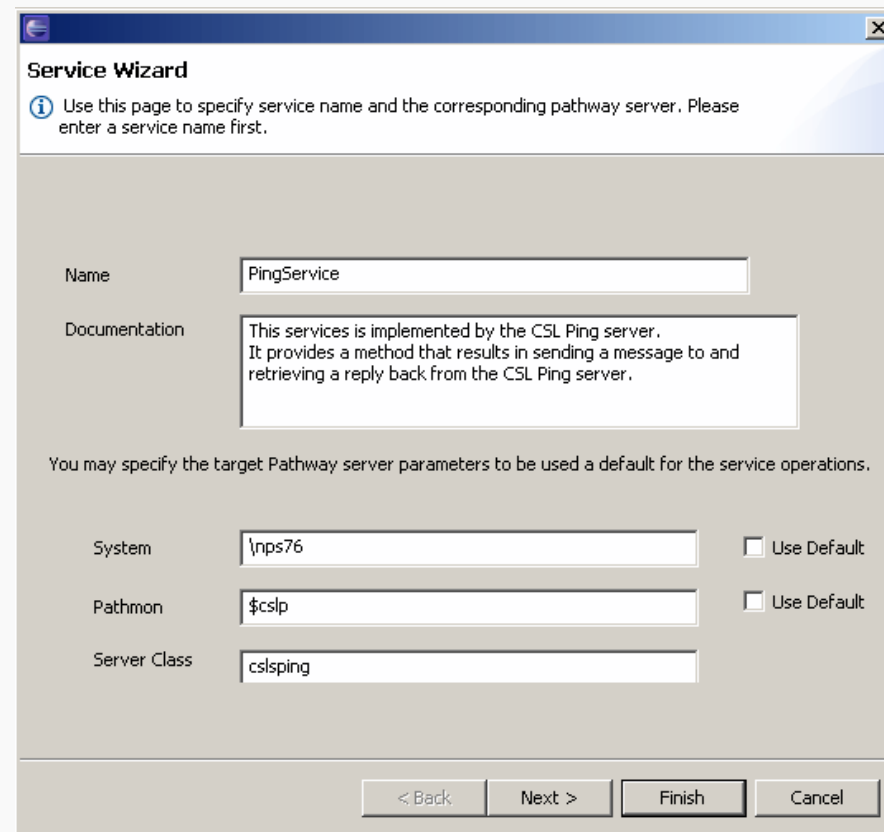


CSL Studio Designer
(Pathway Application Specialist)

Designing a Service



- ➔ Giving the service a name
- ➔ Add some explanations about scope and purpose of the service
- ➔ Associate the targeted Pathway Serverclass



Service Wizard

Use this page to specify service name and the corresponding pathway server. Please enter a service name first.

Name:

Documentation:

You may specify the target Pathway server parameters to be used a default for the service operations.

System: Use Default

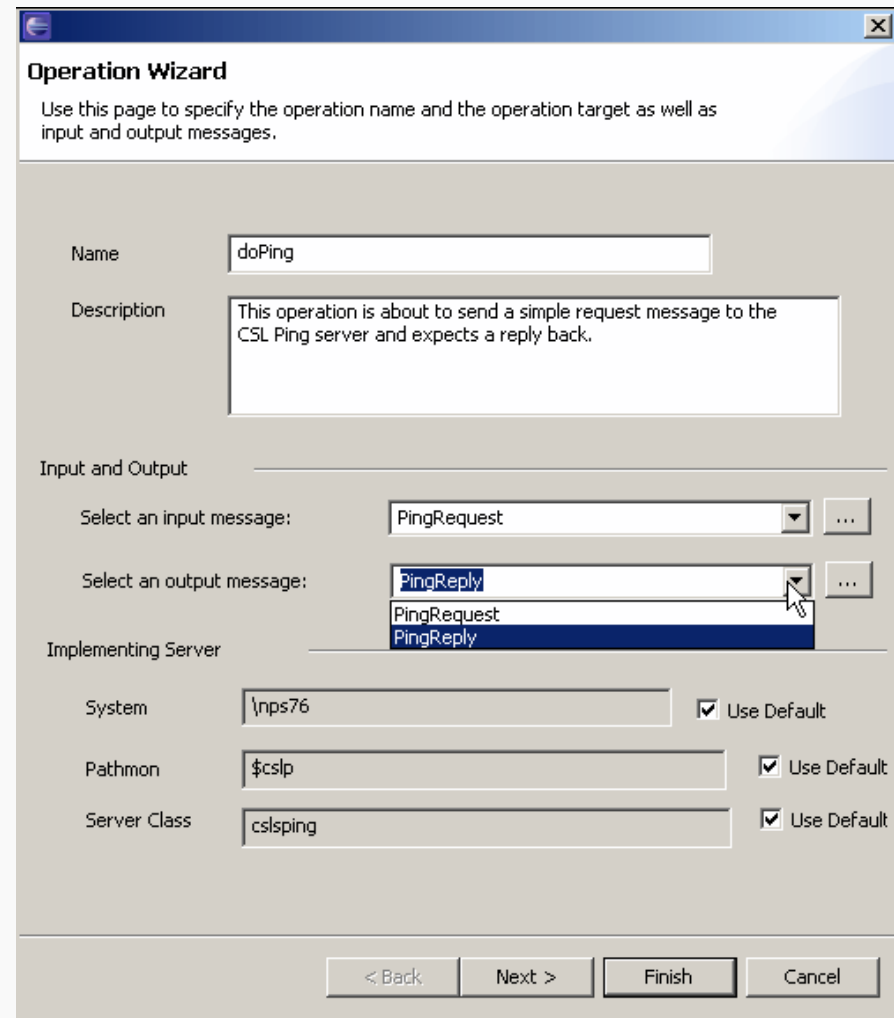
Pathmon: Use Default

Server Class:

< Back Next > Finish Cancel

Designing a Service

- ➔ **Assign** a Service Operation
- ➔ **Give** the Service Operation a name
- ➔ **Add** some explanations about its purpose
- ➔ **Associate** the operation's input and output message.



Operation Wizard
Use this page to specify the operation name and the operation target as well as input and output messages.

Name: doPing

Description: This operation is about to send a simple request message to the CSL Ping server and expects a reply back.

Input and Output

Select an input message: PingRequest

Select an output message: PingReply

Implementing Server

System: \nps76 Use Default

Pathmon: \$cslp Use Default

Server Class: cslsping Use Default

< Back Next > Finish Cancel

Designing a Service

- ➔ **Define** the format of the Service Operation's input and output message
- ➔ **The** input message format corresponds with the request message accepted by the targeted Pathway serverclass
- ➔ **The** output message format corresponds with the reply messages returned by the targeted Pathway server

Message Wizard

Use this page to add and remove definitions.

Name: PingRequest

Documentation: This is the request message being sent to the CSL Ping server.

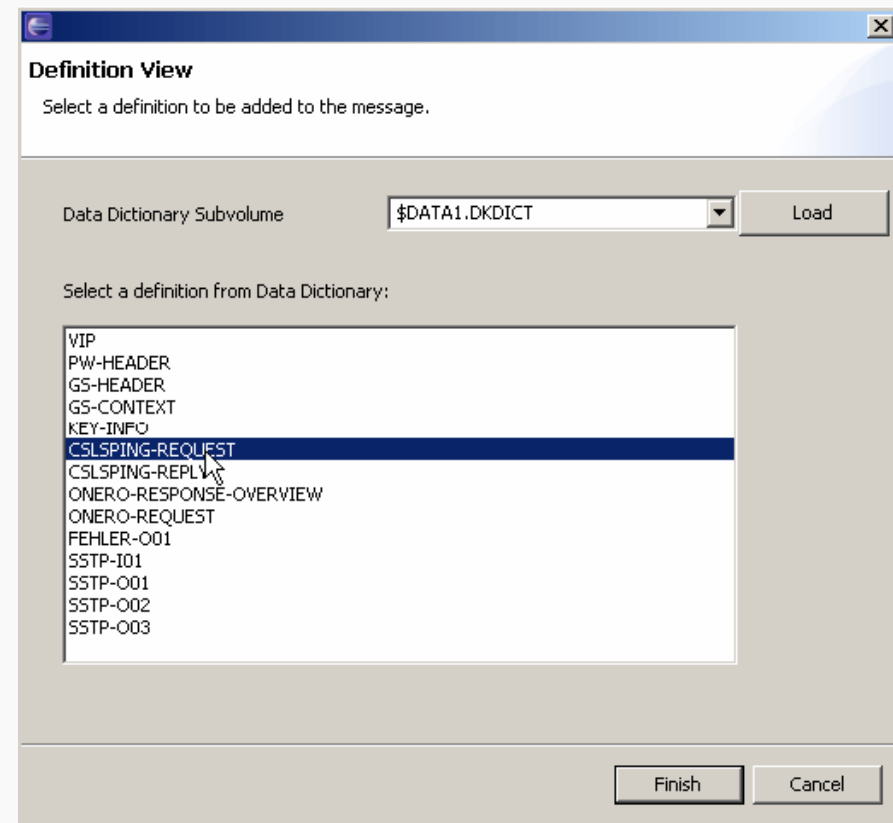
Server message definition

Definition Name	Dictionary
CSLSPING-REQUEST	\$DATA1.DKDICT

Buttons: Add..., Remove, up, down, Finish, Cancel

Designing a Service

- ➔ **Associate** Data Definitions retrieved from Data Dictionary on NonStop with the Service Operation's input and out message.



Designing a Service

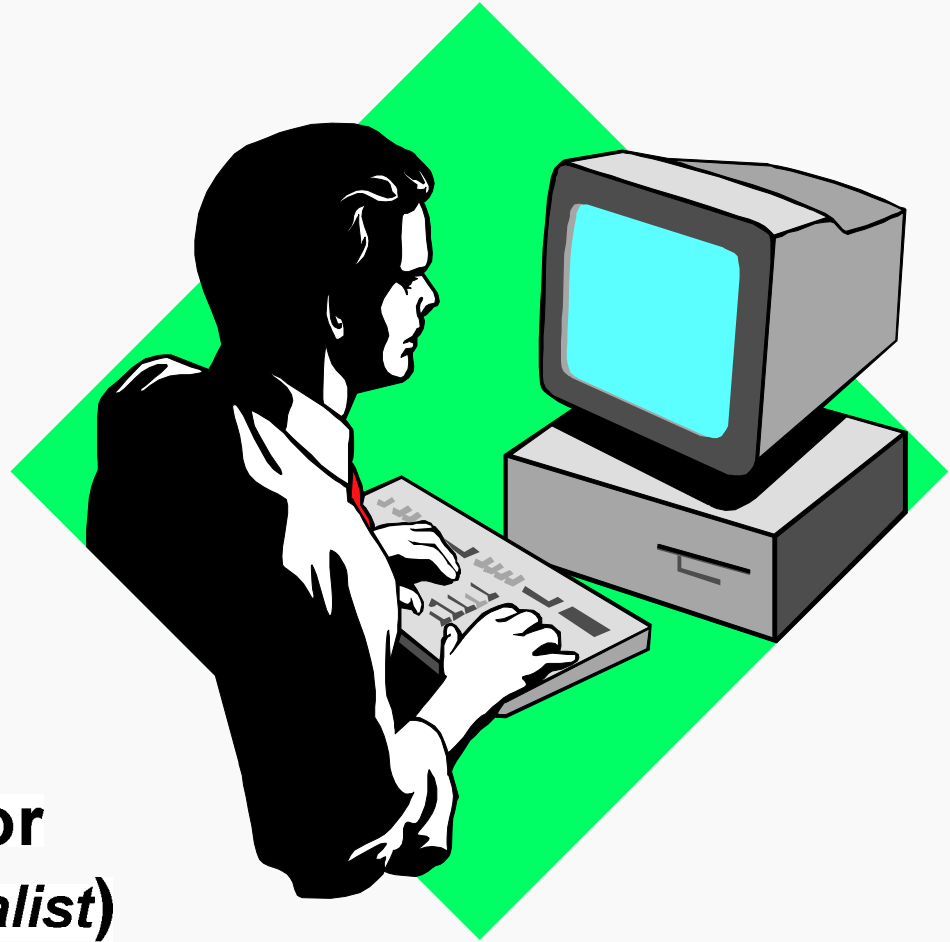
- ➔ **Assign** default values to fields of the Service Operation's input message where needed

The screenshot shows the 'Operation Wizard' dialog box. The title bar reads 'Operation Wizard'. Below the title bar, there is a text instruction: 'Use this page to define values for the input message. To set values, please select an item in the message column.' The main area contains a table with three columns: 'Message', 'Value', and 'Type'. The table is structured as follows:

Message	Value	Type
[-] PingRequest		
[-] CSLSPING-REQUEST		
[-] PING-HEADER		
... PATHMON-NAME	\$CSLP	csString
... SERVER-NAME	ECHOSERV	csString
... SEND-UP-SIZE	100	csShort
... REPLY-SIZE	100	csShort
[-] PING-DATA		
... DATA-FIELD	abcd	csString

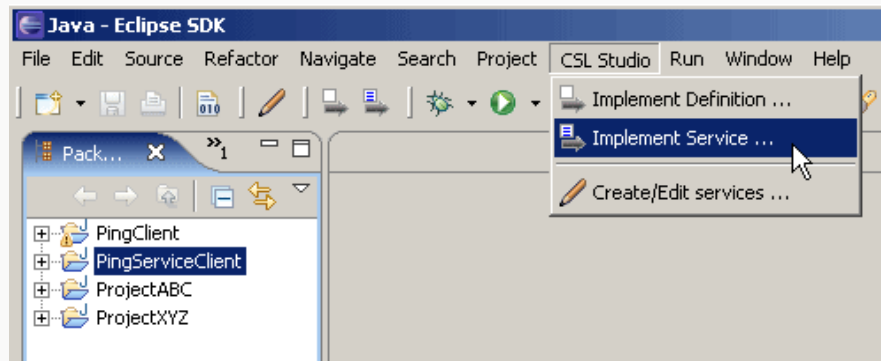
At the bottom of the dialog box, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

CSL Studio Generator – Sample Screens

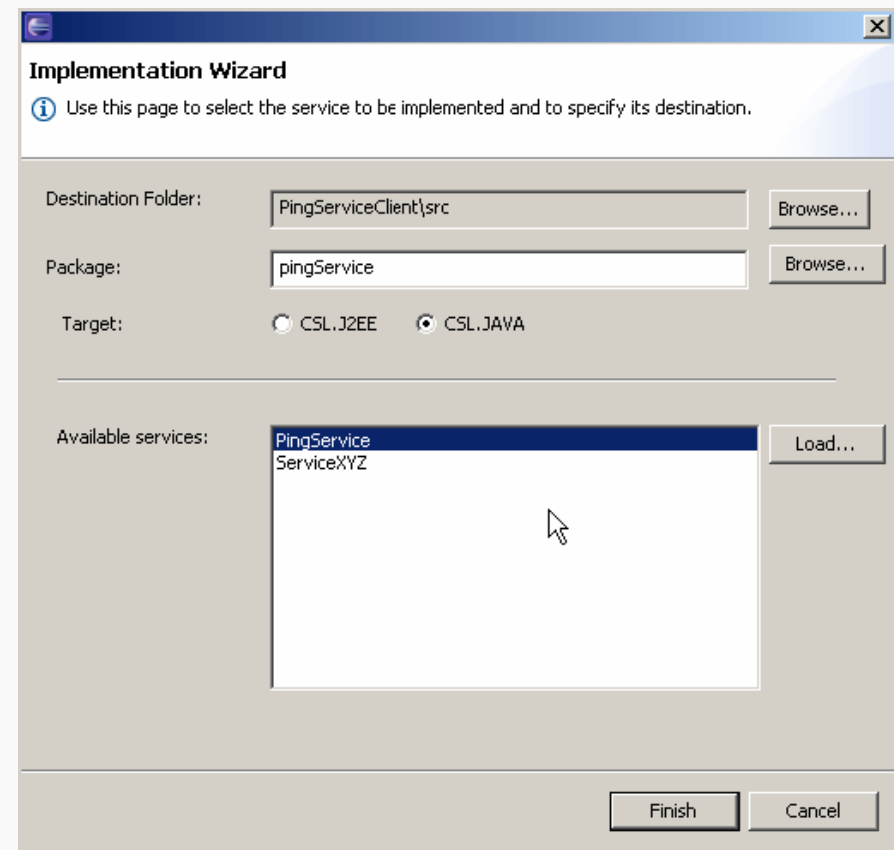


CSL Studio Generator *(Client Development Specialist)*

Generate Java Client code consuming the Service

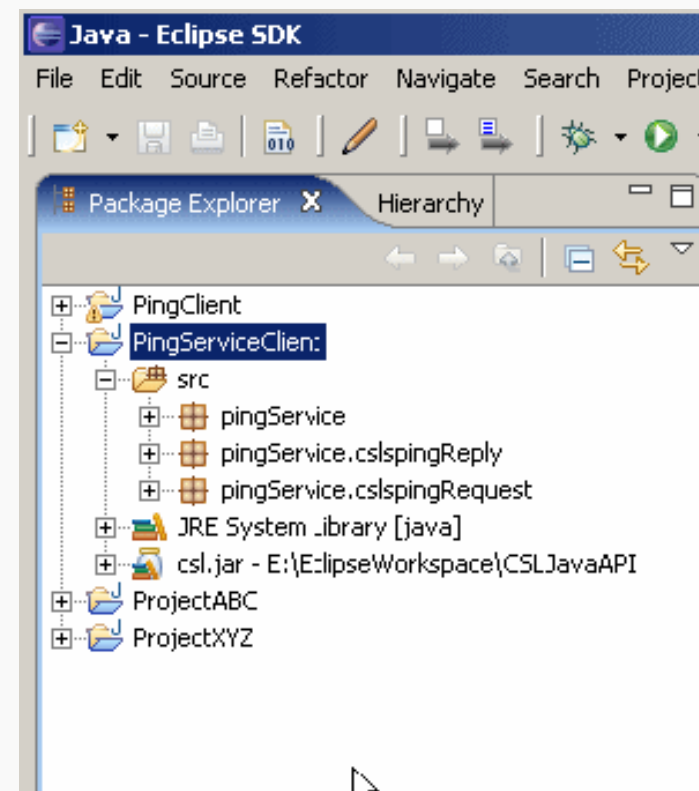
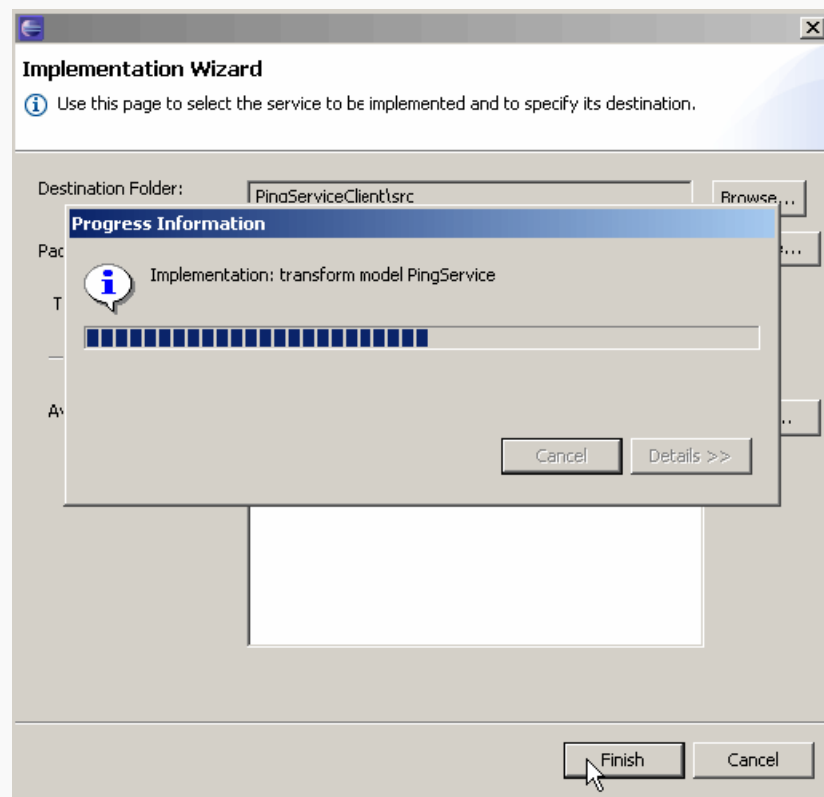


- ➔ **Execute** the CSL Studio Generator
- ➔ **Select** Service Definition to generate code for



CSL Studio Generator – Sample Screens

➔ Wait until code is generated into the current Java project



Generate Java Client code consuming the Service

```
import pingService.*;
public class PingServiceClient {
    public static void main(String[] args) {

        PingService pngService = null;

        try {
            pngService = new PingService();
        } catch (Exception e) {...}

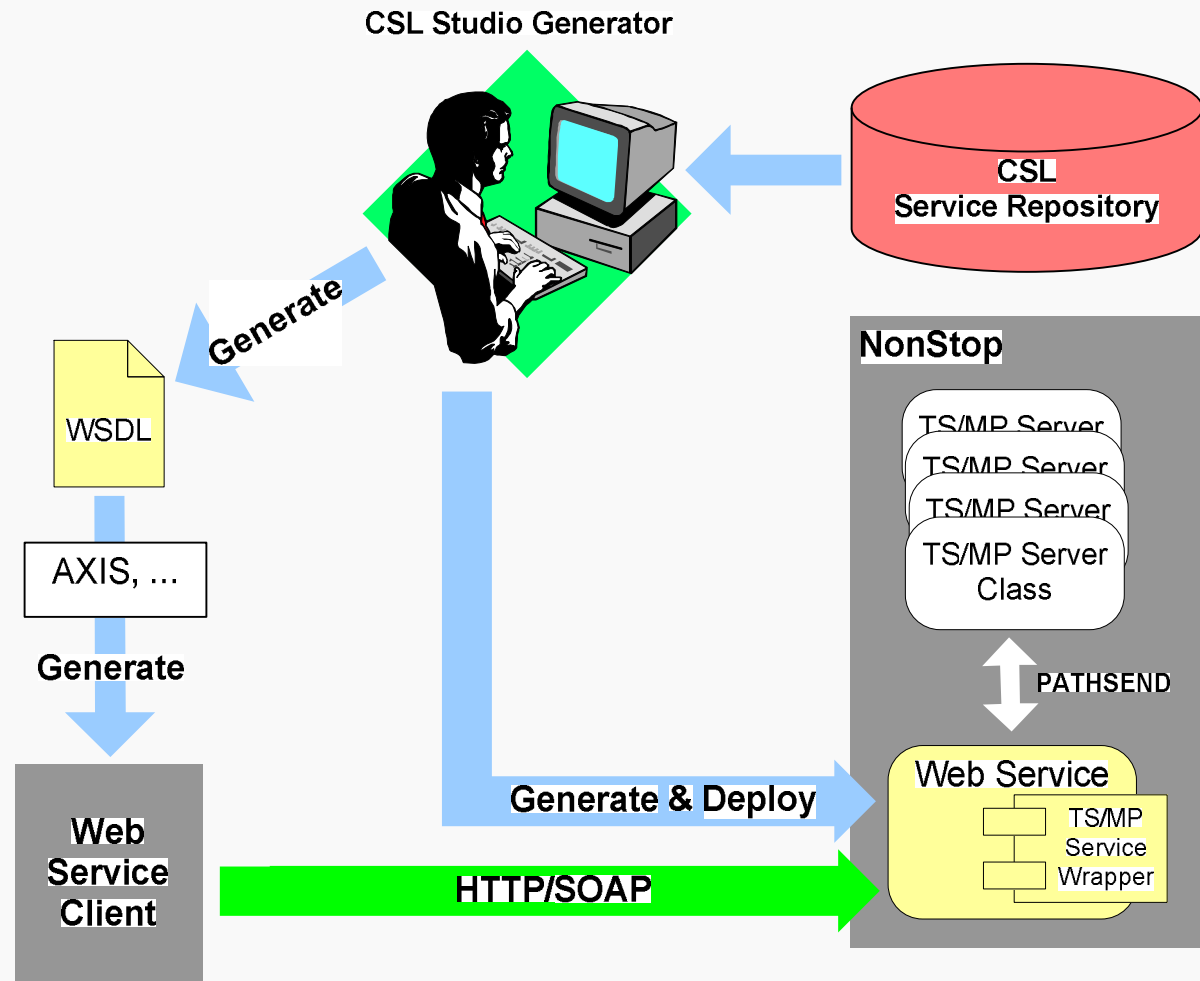
        try {
            PingReply pngReply =
                pngService.doPing(new PingRequest());
            ...
        } catch (Exception e) {...}
    }
}
```

CSL Studio Benefits

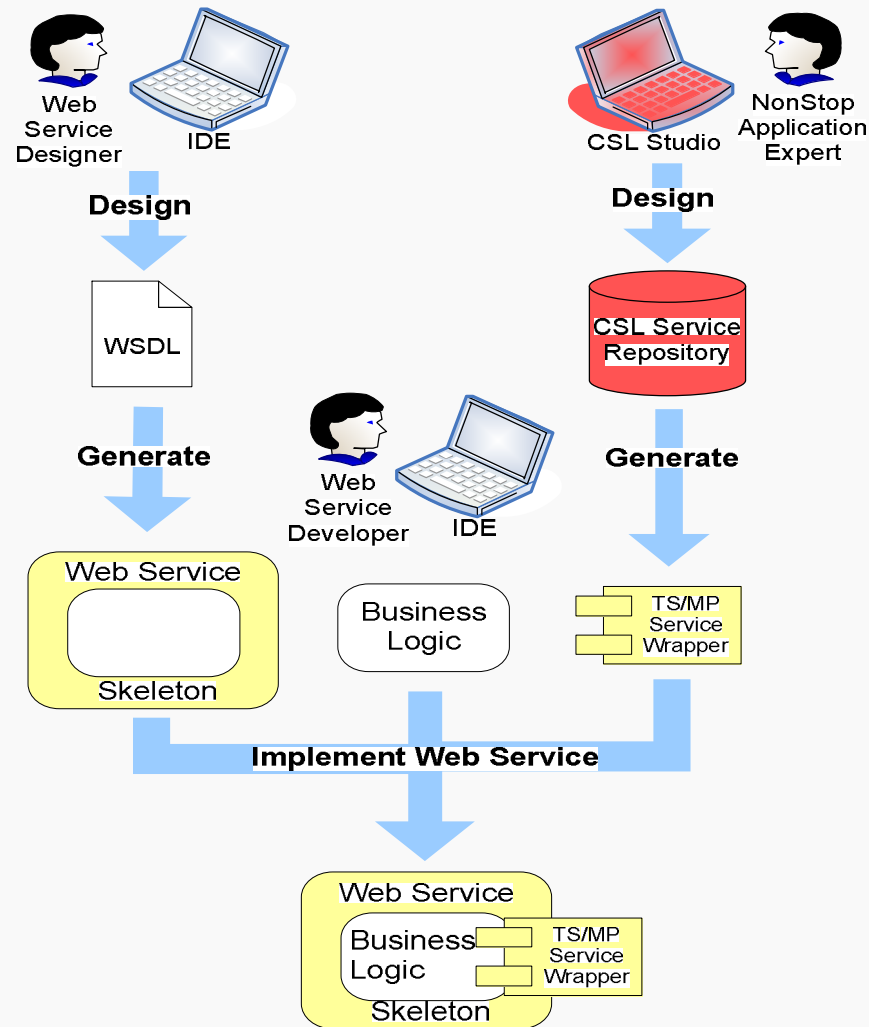
- ➔ **NonStop** & Pathway knowledge not needed at client development side
- ➔ **Results** in less complex code -> easier to maintain
- ➔ **Client** developer can focus on business logic
- ➔ **Allows** rapid client development -> less effort
- ➔ **Pathway** Development specialist involved only once for different client programming environments

Exposing a Pathway Serverclass as a Webservice

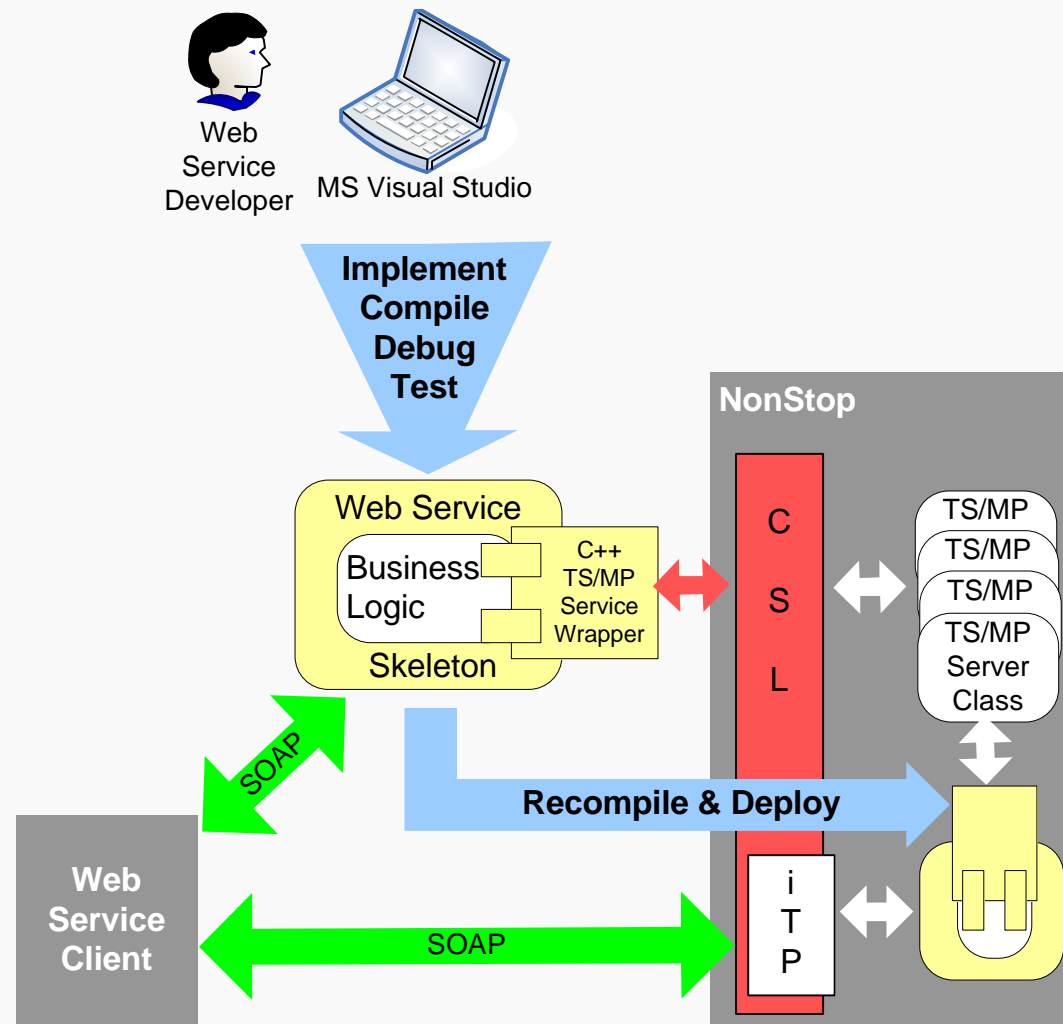
- ➔ **Expose** Pathway Applications as a Webservice
- ➔ **CSL Studio** generates WSDL file and SOAP/Pathway Proxy
- ➔ **Webservice Client** created from WSDL using standard tools



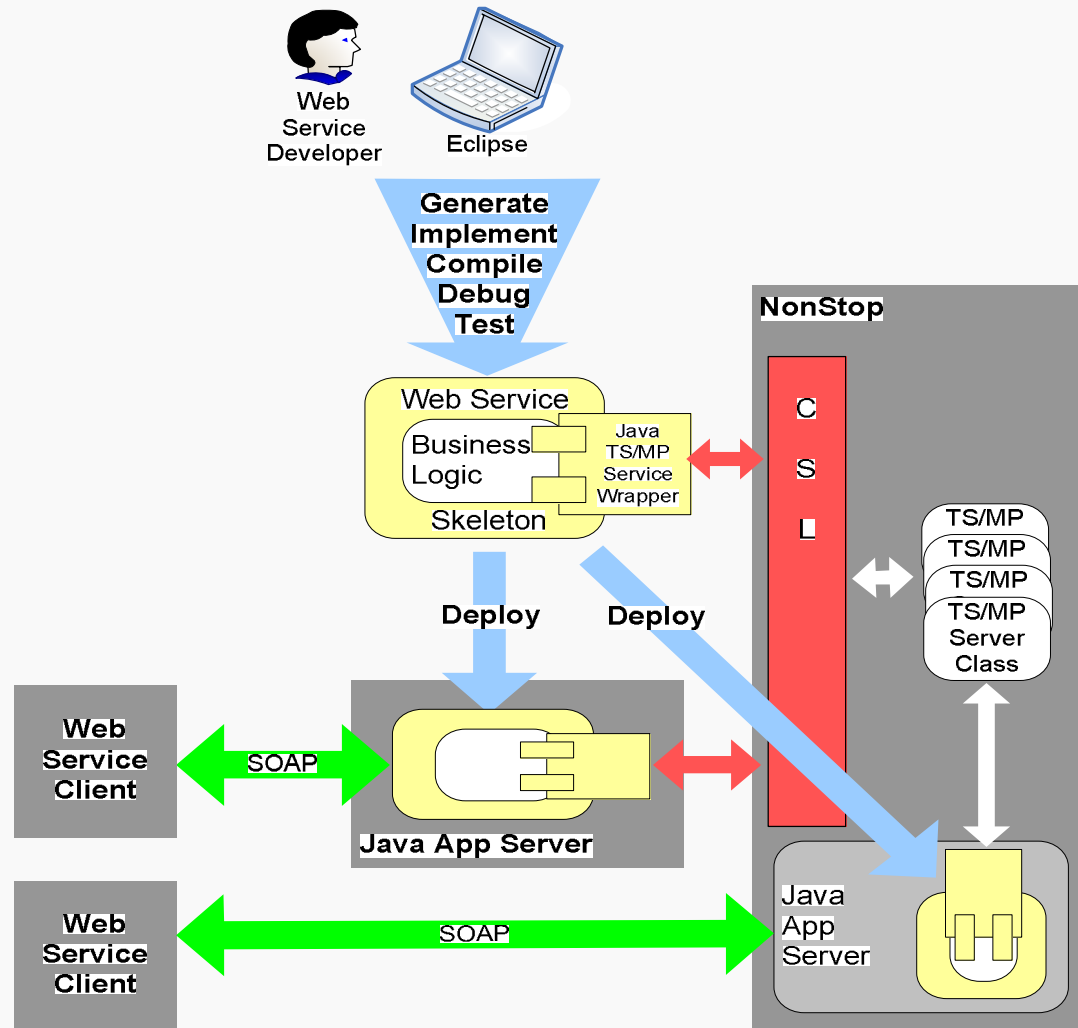
NonStop as the basis for mission critical SOA-based services



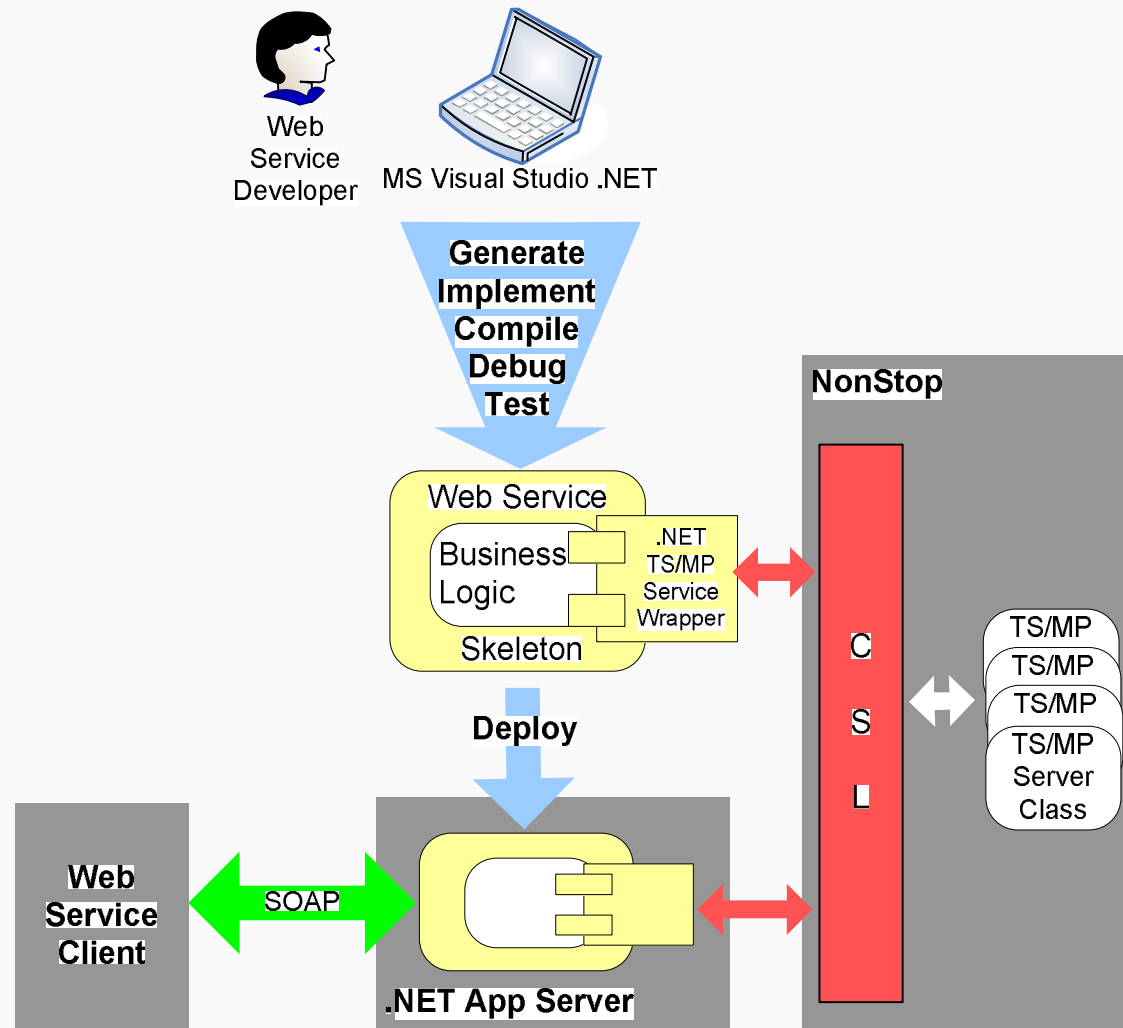
NonStop as the basis for mission critical SOA-based services



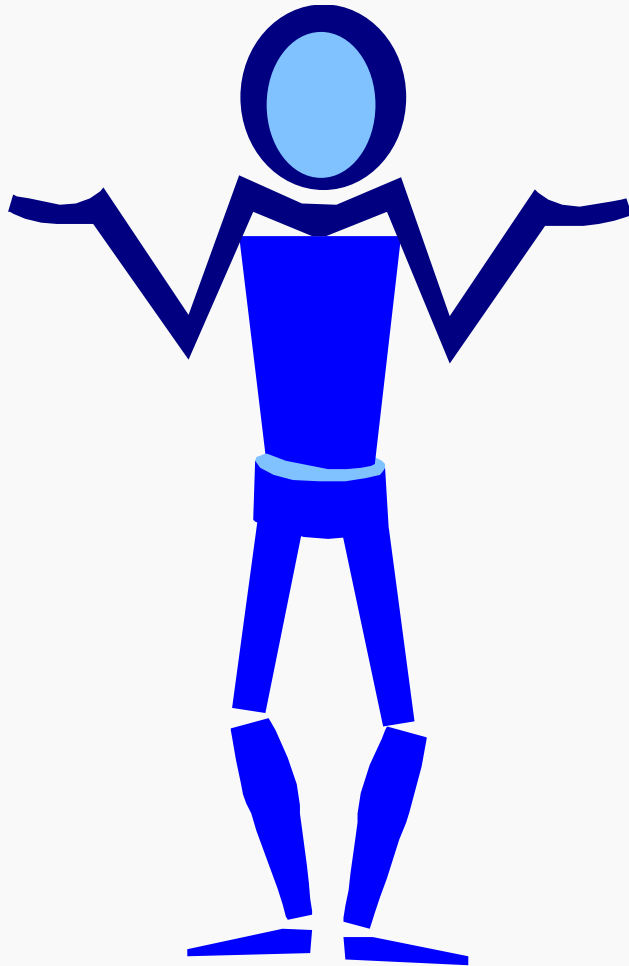
NonStop as the basis for mission critical SOA-based services



NonStop as the basis for mission critical SOA-based services



Questions?



→ If you have further questions please contact us here at VNUG or send an e-mail to sales@comforte.com