

NServiceBus Hands-On Lab

**Lab 101: Hello NServiceBus World** (rev 1.3)

#### Greetings, NServiceBus user, and welcome to the first NServiceBus hands-on lab

We are glad that you have chosen to give NServiceBus a try, and hope that after running this hands-on lab you’ll see how simple it can be to build robust, scalable, and secure systems using NServiceBus.

Lab 1: Hello NServiceBus World will guide you in building a simple ordering system with NServiceBus. The ordering system includes three projects—Client, Server, and Messages—to hold the message contracts between the client and the server.

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Table of Contents

[Creating the Client project 4](#_Toc361844411)

[Creating the Messages project 5](#_Toc361844412)

[Creating the Server project 6](#_Toc361844413)

[Sending an order 7](#_Toc361844414)

[Running the solution 8](#_Toc361844415)

[Completed Solution 8](#_Toc361844416)

## Creating the Client project

Create a **Client** project, which you will use to send order requests to an NServiceBus endpoint:

* Open Visual Studio 2012 as administrator and open the OrderingSolution from C:\Hands on Labs\Exercises\Lab 101 – Hello World:   
  File 🡪 Open 🡪 Project/Solution…

Add references from the NServiceBus assemblies to the Client project. The quickest and easiest way is using NuGet:

* Open the NuGet Package Manager Console:  
  Tools 🡪 Library Package Manager 🡪 Package Manager Console  
  Type the following command at the Package Manager Console:

PM> Install-Package NServiceBus.Host –projectName Client

**NOTE**: Upon running the command, Visual Studio detects a change in the Client project file and asks you to reload the project. Click the Reload button.

The package installation process adds references to NServiceBus assemblies and creates several boiler template files in the Client project. For example, EndpointConfig.cs is used to configure the project endpoints, and by default the configuration is set to Server. To change the configuration to Client:

* Open the EndpointConfig.cs file that was just created for you and replace this line:

public class EndpointConfig : IConfigureThisEndpoint, **AsA\_Server**

With:

public class EndpointConfig : IConfigureThisEndpoint, **AsA\_Client**

You will add more code to the **Client** project later on. For now, concentrate on the area that will handle your order requests.

## Creating the Messages project

The Messages project is the container of message definitions. This project will be shared between the client and server so both sides agree on the typed message descriptions:

Install the **NServiceBus Interfaces** NuGet package for this new project:

* At the Package Manager Console, type

PM> Install-Package NServiceBus.Interfaces -ProjectName Messages

Add a command with a property to hold a product name:

Implement the PlaceOrder command in PlaceOrder.cs.

* Replace the content of PlaceOrder.cs with the following code:

namespace Messages

{

using NServiceBus;

public class PlaceOrder : ICommand

{

public string Product { get; set; }

}

}

## Creating the Server project

You are now ready to create the order processing server:

Install the **NServiceBus Host** NuGet package for this new project:

* At the Package Manager Console, type

PM> Install-Package NServiceBus.Host –ProjectName Server

**NOTE**: As before, upon running the command, Visual Studio detects a change in the Client project file and asks you to reload the project. Click the Reload button.

* For the server side to understand and interpret the message content, add a reference to the **Messages** project you created earlier:

Right click References in the Server Project 🡪 Add Reference 🡪 Messages

* Replace the content of PlaceOrderHandler.cs with the following code:

using System;

using NServiceBus;

using Messages;

namespace Server

{

public class PlaceOrderHandler : IHandleMessages<PlaceOrder>

{

public void Handle(PlaceOrder message)

{

Console.WriteLine("Order for Product: {0} placed.", message.Product);

}

}

}

## Sending an order

You are nearly done; you just have to add a Messages reference to the client side and add SendOrder logic:

* For the client side to understand and interpret the message content, return to the Client project and add a reference to the **Messages** project you created earlier:

Right click References at the Client Project 🡪 Add Reference 🡪 Messages

* Replace the content of SendOrder.cs with the following code:

using Messages;

using NServiceBus;

namespace Client

{

public class SendOrder : IWantToRunWhenBusStartsAndStops

{

public IBus Bus { get; set; }

public void Start()

{

Bus.Send("Server", new PlaceOrder() {Product = "New shoes"});

}

public void Stop()

{

}

}

}

## Running the solution

You’ve completed coding the example and now it’s time to run the solution. To see the complete system, run both the Client and the Server projects together:

* Start the Server (Right click **Server -> Debug -> Start new instance)**
* Start the Client (Right click **Client -> Debug -> Start new instance)**

In the Server window, you should now see: "Order for Product:New shoes placed".

**NOTE**: Warnings indicate that the NServiceBus framework could not find the queues on the running machine so it creates them on the fly. If no warnings appear, the queues already exist.

## Completed Solution

For your convenience the completed solution is available at C:\Hands on Labs\Completed Solutions\Lab101-Hello World.

Congratulations!

You've just built your first NServiceBus application.

Wasn't that easy?