



IBM Software Group

## Packaging a Solution

**IBM Virtual Innovation Center**



IBM Express Runtime

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# Objectives

- The objectives of this module are to:
  - Demonstrate how to package a solution
    - For local deployment
    - For staging server
    - For CD images
  - Demonstrate how to create a solution with the application only and no middleware components

## Agenda

- **Creating a solution package**
  - Export the Runtime solution
- **Creating installation CDs for a solution**
  - Export the Runtime Solution Launcher Image
- **Packaging a solution with the application only**

## Overview

- **After you develop a solution, you need to:**
  - Generate a solution
  - Package a solution. There are several ways to package a solution:
    - Create a CD/DVD image
    - Set up a staging server

## Before packaging a solution...

- Generate the solution:
  1. Generate the application project.
  2. Generate deployment packages.
  3. Generate the solution project.



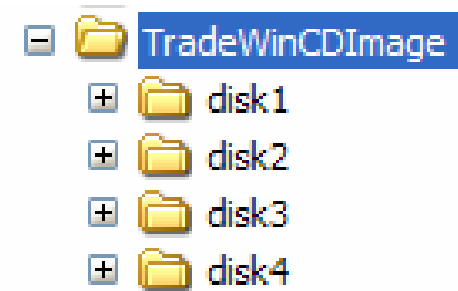
These topics are covered in the *Developing a Real-life Solution Using Express Runtime Developer* module

# Creating installation CDs/DVDs for your solution



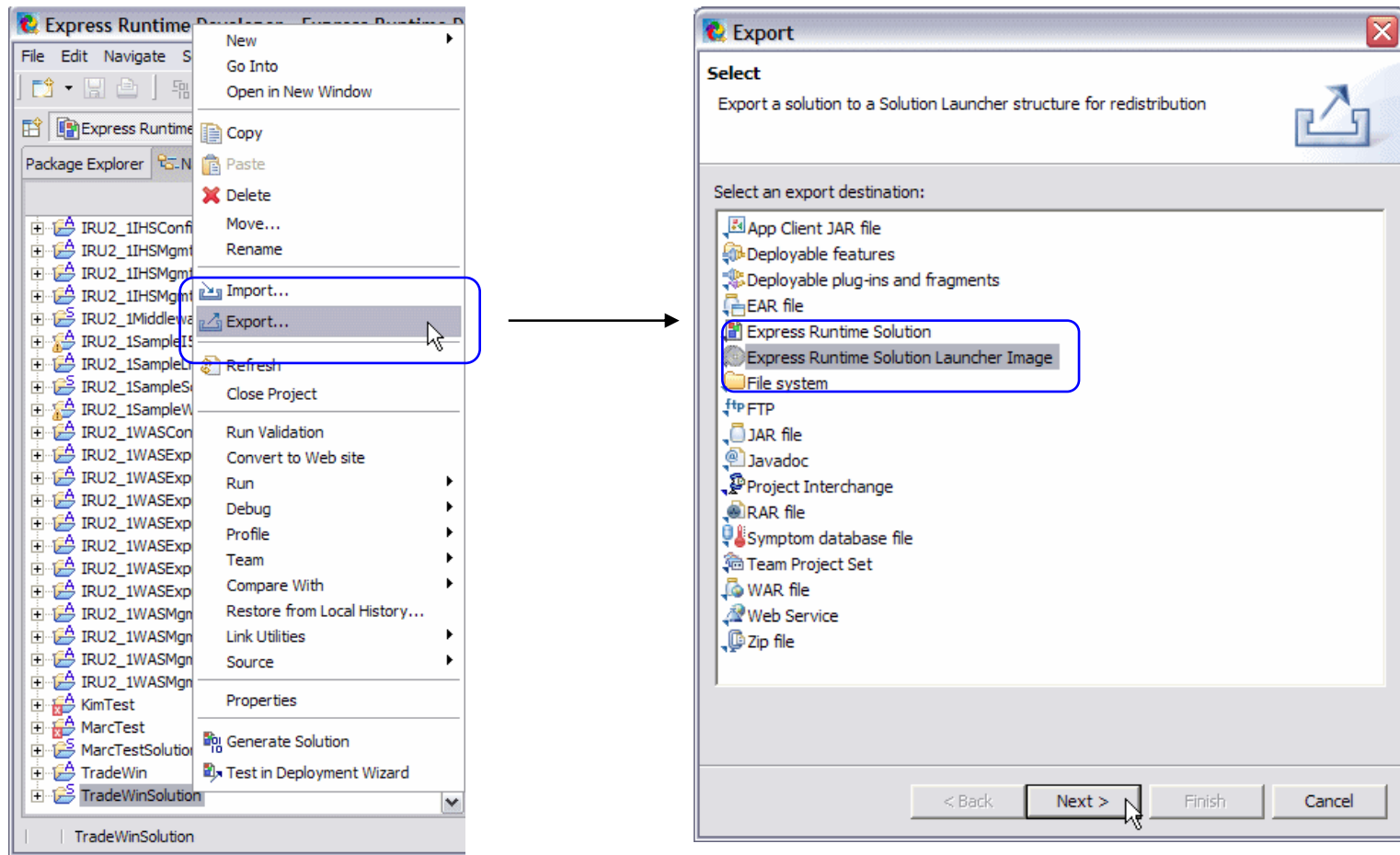
## Overview of the process

- Express Runtime Developer supports the option to export the CD/DVD image
- CD/DVD images are created in the file system.
- You copy the content of each “disk” folder to a separate CD/DVD.



## Step 1: Export the solution to CD images

- Select **Export -> Express Runtime Solution Launcher Image** from the solution context menu



## Step 2: Enter the CD image information

- Select project to export.
- Select the CD size.
- Enter or select the destination directory for the CD images.
- Select the Solution Launcher operating system.
- Enter the Install location for the solution on the target machine and Temporary drive.

The screenshot shows the 'Export' dialog box for 'Express Runtime Solution Launcher Image'. The dialog is titled 'Export' and has a close button (X) in the top right corner. Below the title bar, it says 'Express Runtime Solution Launcher Image' and 'Choose the solution and general configuration for your Solution Launcher'. There is a folder icon in the top right corner.

The dialog is divided into several sections:

- Project to export:** A dropdown menu with 'TradeWinSolution' selected.
- Media size (MB):** A dropdown menu with '650' selected.
- Include directory:** A dropdown menu with a 'Browse...' button to its right.
- Destination directory:** A dropdown menu with 'c:\TradeWinCDImage' selected and a 'Browse...' button to its right.
- Solution Launcher operating system:** A section with three radio buttons: 'Linux', 'LinuxOnPOWER', and 'Windows'. The 'Windows' radio button is selected.
- Linux:** 'Install location:' is '/SolutionFiles' and 'Temporary location:' is '/tmp'.
- LinuxOnPOWER:** 'Install location:' is '/SolutionFiles' and 'Temporary location:' is '/tmp'.
- Windows:** 'Install location:' is 'C:\SolutionFiles' and 'Temporary drive:' is 'C:\'.

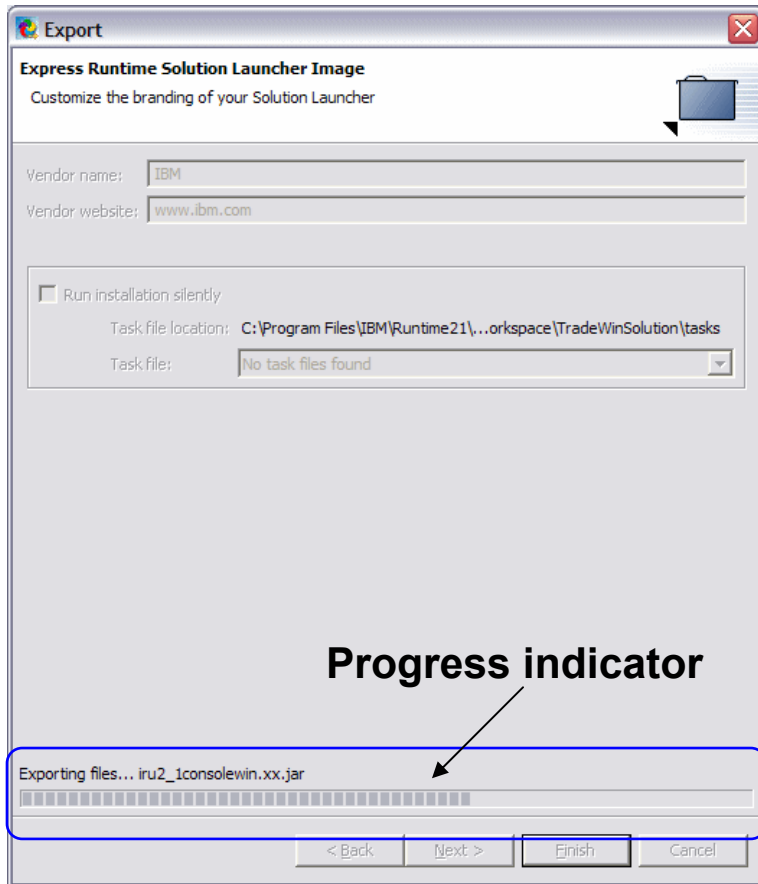
At the bottom of the dialog, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a blue box, and a mouse cursor is pointing at it.

## Step 3: Enter the vendor information

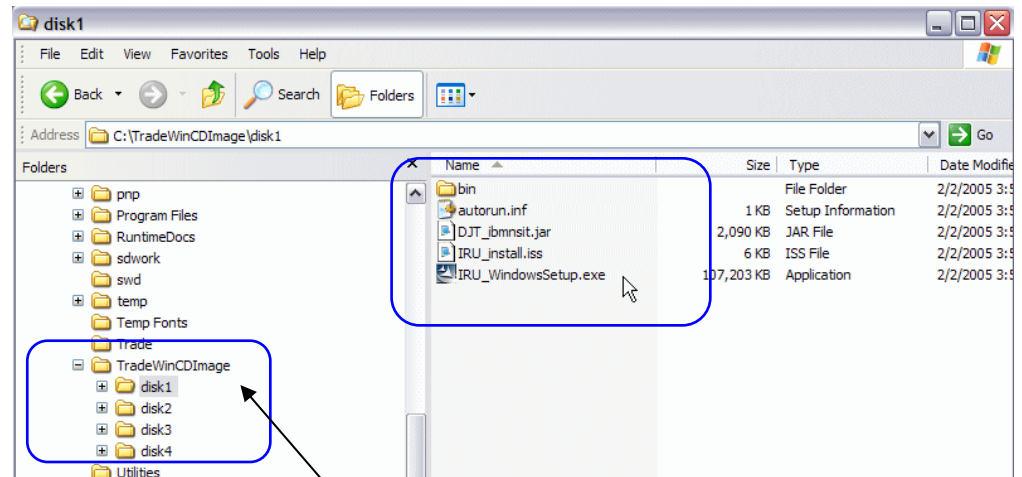
- Provide vendor name and Web site. This appears on the installation wizard when deploying the solution.

The screenshot shows a Windows-style dialog box titled "Export" with a close button in the top right corner. The main heading is "Express Runtime Solution Launcher Image" with the subtitle "Customize the branding of your Solution Launcher". A folder icon is visible in the top right. Two text input fields are present: "Vendor name:" with the value "IBM" and "Vendor website:" with the value "www.ibm.com". Below these is a checkbox labeled "Run installation silently" which is unchecked. Underneath, the "Task file location:" is set to "C:\Program Files\IBM\Runtime21\...orkspace\TradeWinSolution\tasks" and the "Task file:" dropdown menu shows "No task files found". At the bottom, there are four buttons: "< Back", "Next >", "Finish", and "Cancel". A mouse cursor is pointing at the "Finish" button.

# Step 4: Create folders with the CD images



**Progress indicator**



The CD image folders are created in the destination folder

**The images are ready for burning!**

## Demo 2 – Packaging a solution

## Setting up a staging server

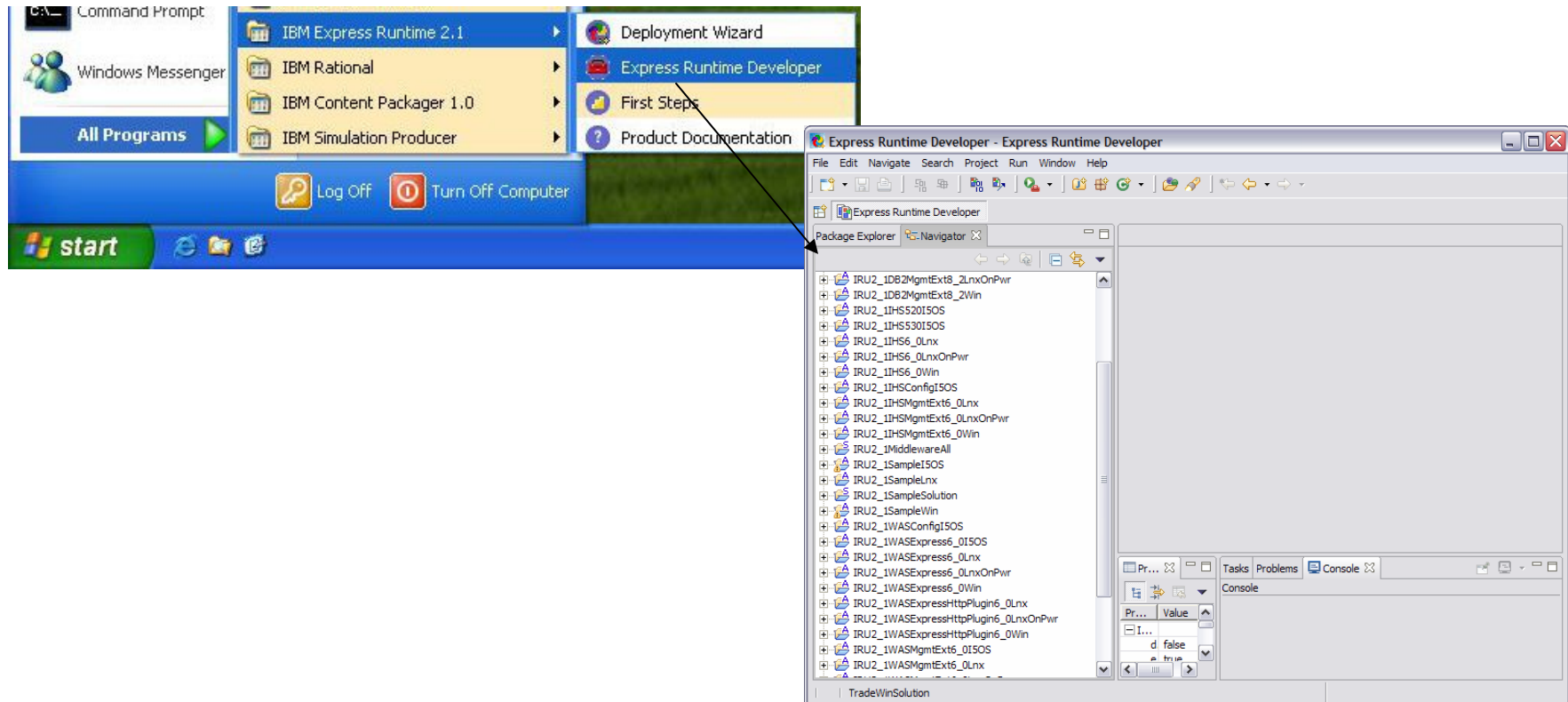
## Setting up a staging server

- A staging server is a separate system that is used to run the Deployment Wizard to install your solution locally or remotely.
- To prepare a staging server, you need:
  - Install Deployment Wizard: Refer to the [Installing Express Runtime](#) module for the details.
  - Copy several files from the development system.
- This module explains how to set up a staging server.



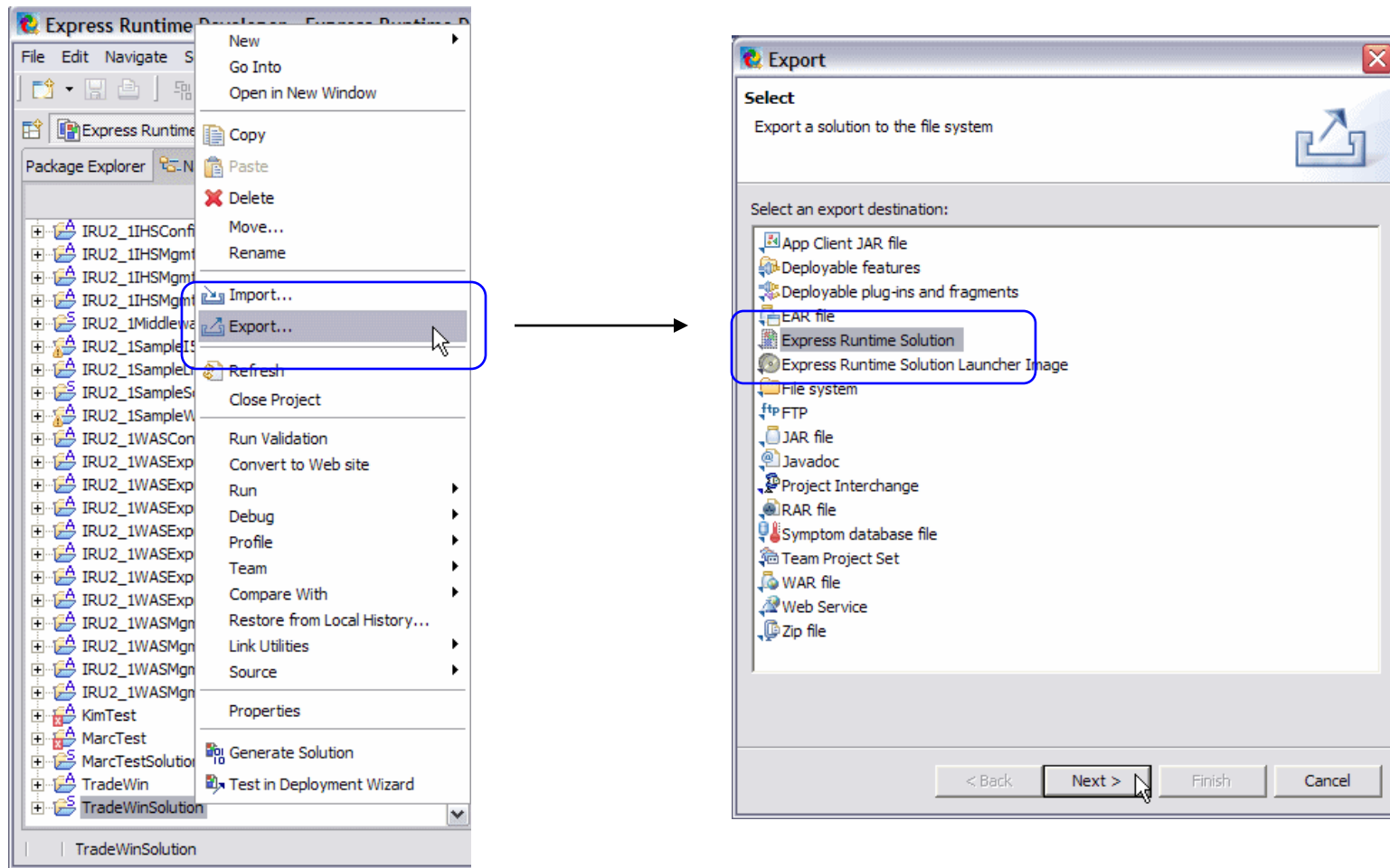
## Step 1: Open IBM Express Runtime Developer

- Start Express Runtime Developer on the system where you develop your solution.



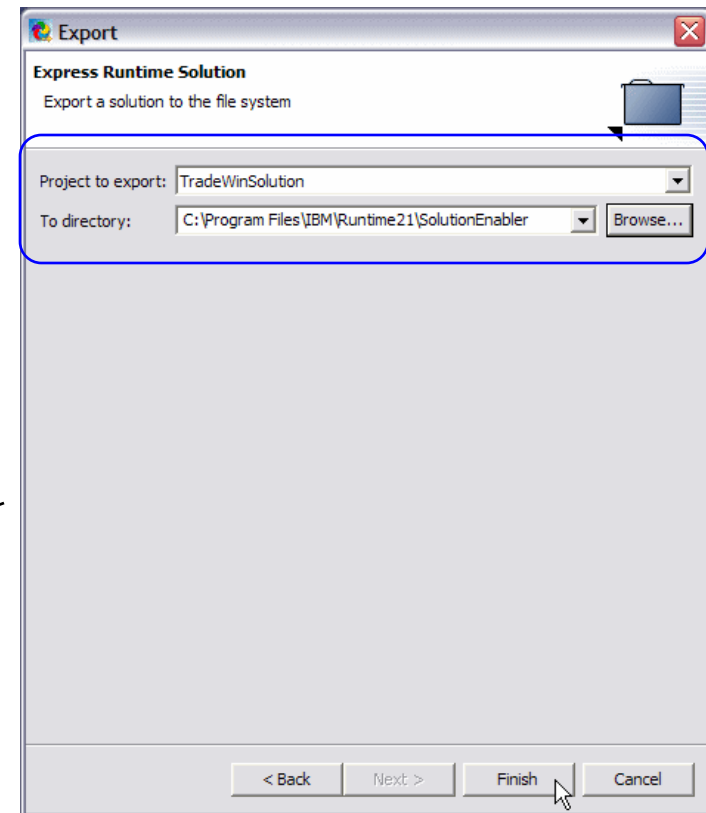
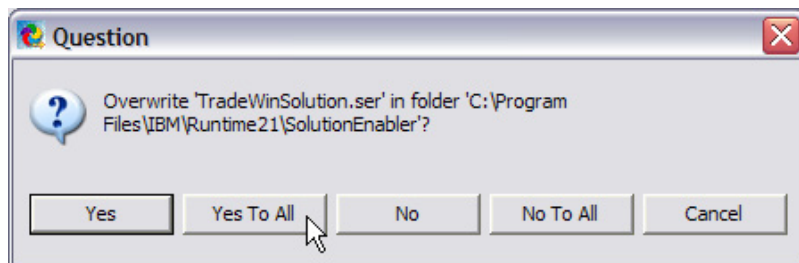
## Step 2: Export the solution binary file and user Program packages

- Select **Export -> Express Runtime Solution** from the solution context menu



## Step 3: Specify the location for the packages

- Specify the project name and directory where the solution binary (.ser) file is created.
- Click **Yes To All** to update the .ser file for your solution.



## Required files

- **To set up a staging server, copy the following files from the development system to the staging server:**
  - Your solution .ser file
  - The userPrograms package in the form of a JAR file
  - The deployment package for your application in the form of a JAR file

## Location of the required files

- The locations of the required files on a development machine for TradeWinSolution are as indicated in the following list:
  - Your solution .ser file is in the directory that you specified while exporting your solution. In our example, it is  
`<ER_install_dir>\SolutionEnabler\TradeWinSolution.ser`
  - The userPrograms package in the form of a JAR file is in  
`<ER_install_dir>\SolutionEnabler\userPrograms\tradewin.xx.userPrograms.jar`
  - The deployment package for your application is in  
`<ER_install_dir>\SolutionEnabler\workspace\IRU_common_resources\mediaJars\tradewin.xx.jar`

## Copying the files

- You can use any method to transfer the files to the staging server.
- Place the files in the following locations:
  - Solution .ser file: `<DeploymentWizard_install_dir>\SolutionEnabler\`
    - This is the default location for the solution .ser files. However, Deployment Wizard allows you to select a different directory.
  - userPrograms JAR file:  
`<DeploymentWizard_install_dir>\SolutionEnabler\userPrograms\`
    - You **must** place your userPrograms JAR file in this directory so that the Deployment Wizard can find it.
  - Deployment package JAR file:  
`<DeploymentWizard_install_dir>\SolutionEnabler\`
    - This is the default location for the deployment package JAR files. However, the Deployment Wizard allows you to select a different directory.

## Middleware images

- When you install the Deployment Wizard, you select the images of the middleware components you need to copy to the staging server.
- These images are copied to the predefined location:  
`<DeploymentWizard_install_dir>\SolutionEnabler\com\ibm\jsdt\webserver\tree`
- When you deploy a solution, the Deployment Wizard finds these images in the default location.

## Ready to deploy

- **After you install the Deployment Wizard and copy the required files, your staging server is ready for the deployment process!**



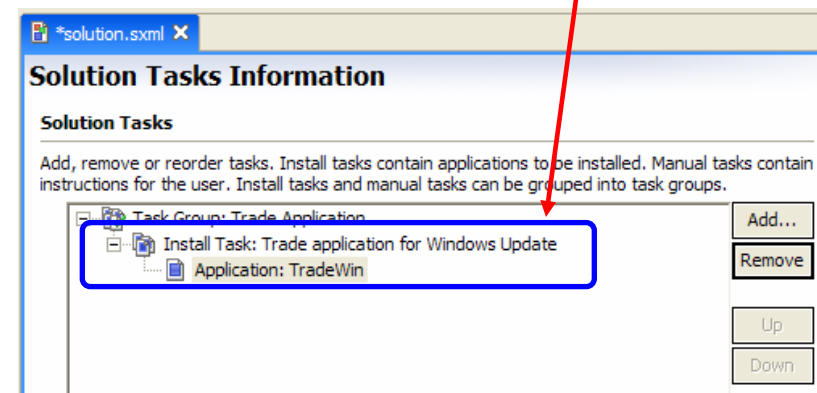
## Packaging a solution with the application only

## Why create a solution with the application only?

- **Update the installed application with a new fix, level, or version.**
- **You don't need to update middleware components.**

## Steps to package the application

- Use the same steps in developing the application project.
- Create or modify the solution project.
  - Your application should be the only entry in the Install Task; there should not be any middleware components.
  - Ensure that no middleware variables are in the Validation page.
- Rebuild the solution.
  - TradeWinSolution.ser (application only)
  - Tradewin.xx.userPrograms.jar
  - Tradewin.xx.jar



End of the module