BUILDING APPLICATIONS WITH LABVIEW

Terry Stratoudakis, PE
Certified LabVIEW Developer
Certified Professional Instructor

ALE System Integration
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Overview

A. What is deployment?

I. Among final phases of development

II. Mainly involves executables or installers

III. Not a trivial step

IV. Requires testing

B. Why Build an Executable?

I. Run VI without LabVIEW Dev. Env.

II. Operator cannot change functionality

III. "Controlled" environment (re: QA friendly)

IV. More *professional*

C. Considerations for Deploying

- The architecture of your application

- The programming issues particular to the application

- The application building process

- The installer building process

Considerations…

- Architecture – e.g. plug-in, dynamically called VIs, DLLs, etc.

- Shared Variable usage

- External file locations (cfg, storage)

- Debugging needs

- External programs (DB, ActiveX)

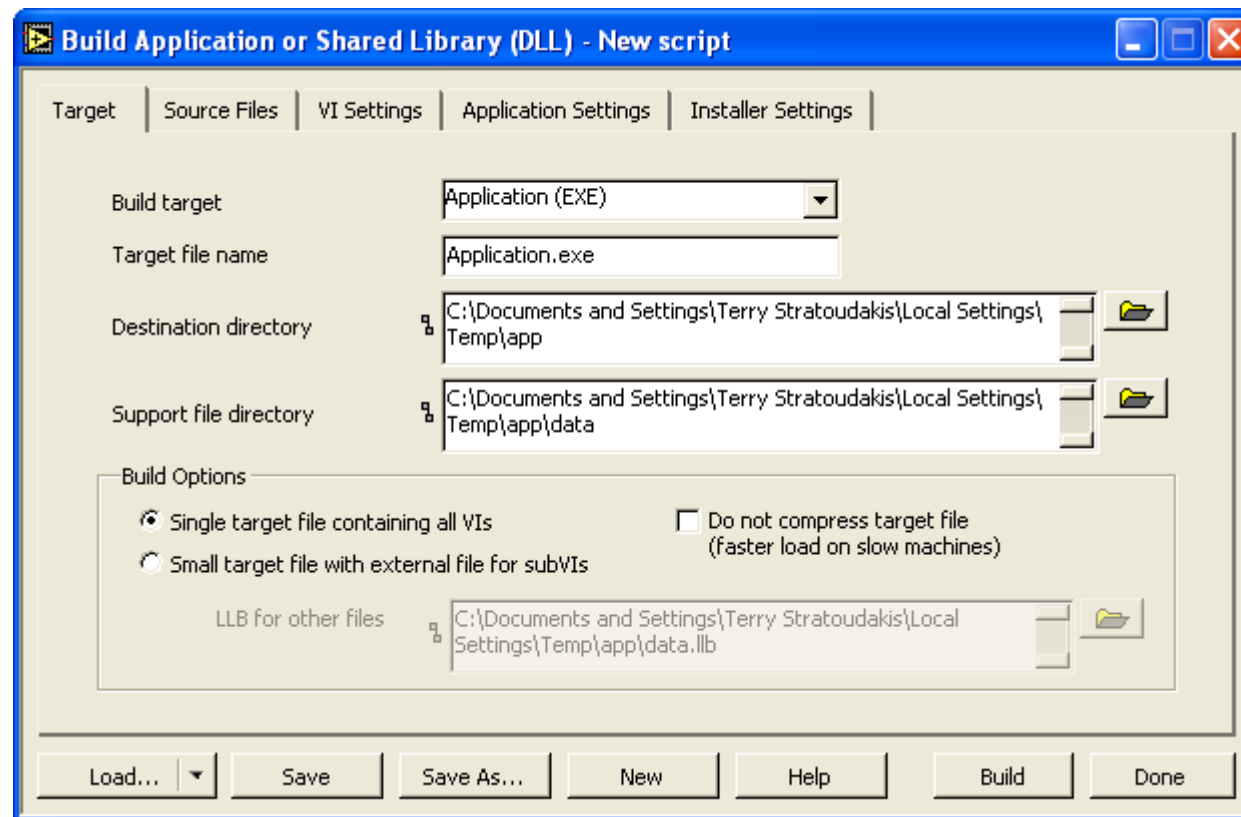- Deployment environment – OS and patches, fonts, screen resolution, etc.

D. Application Builder

I.   Included in LabVIEW Professional

   Development System

   – or as an add-on package

II. Configure and create:

   – Executables, Installers, DLLs

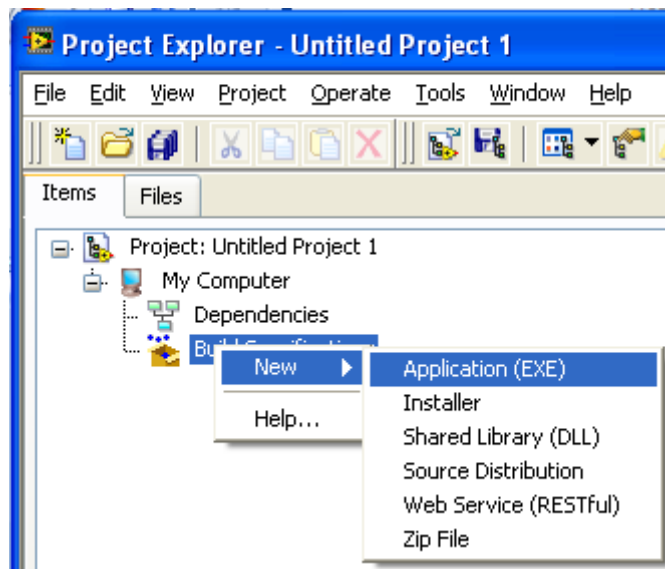   – Web Services, Source Distribution

Application Builder pre 8.x

Stored as .bld files

Application Builder version 8.x

Project Explorer >> Build Specifications

- Application (EXE)

- Installer

- Shared Library (DLL)

- Source Distribution

- Web Service
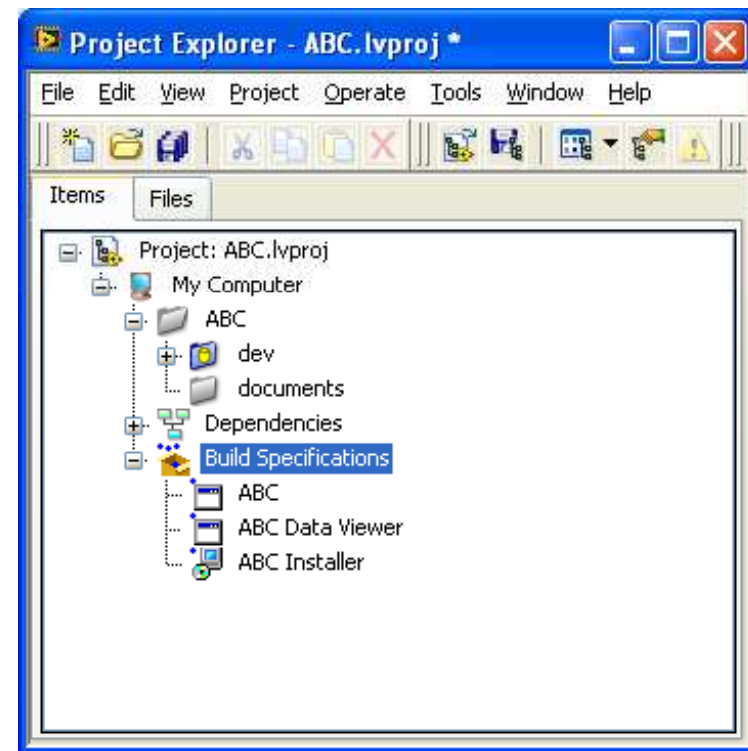
- Zip File

E. Creating an Installer – DEMO

LabVIEW 8.6

NI-DAQmx 8.8

LabVIEW DSC Module

Report Generation Toolkit

F. Licensing

I.   Most applications have no run-time license cost.

    a.   Certain module/toolkit licenses are included with

        hardware

II.   Only certain modules have run-time license

    a.   Datalogging Supervisory Control

    b.   Sound and Vibration

    c.   Vision

G. References

- LabVIEW Help >> Application Builder, Using Build Specifications

- LabVIEW wiki
  http://wiki.lavag.org/

- LabVIEW Advanced Virtual Architects (LAVA)
  http://www.lavag.org

- ALE System Integration website:
  http://www.aleconsultants.com

- National Instruments Website
  http://www.ni.com

ALE SYSTEM INTEGRATION

http://www.aleconsultants.com – info@aleconsultants.com

- LabVIEW, LabWindows/CVI, TestStand, Visual Studio

- Customers: Test Labs, Manufacturers, Mil/Aero, Finance

- Based in Long Island, New York – projects nationwide

- National Instruments Certified Alliance Partner

- Over 11 Years Test & Automation experience

- Expertise in variety of instrument manufacturers' products

- All developers have National Instruments Certification