Session 10 : Deployment

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Objective

Cognex Designer – Deployment

- Explore how the system deploys
- Understand some of the utilities available
- Learn how to save images

❖ Lab: Save some images and deploy the application

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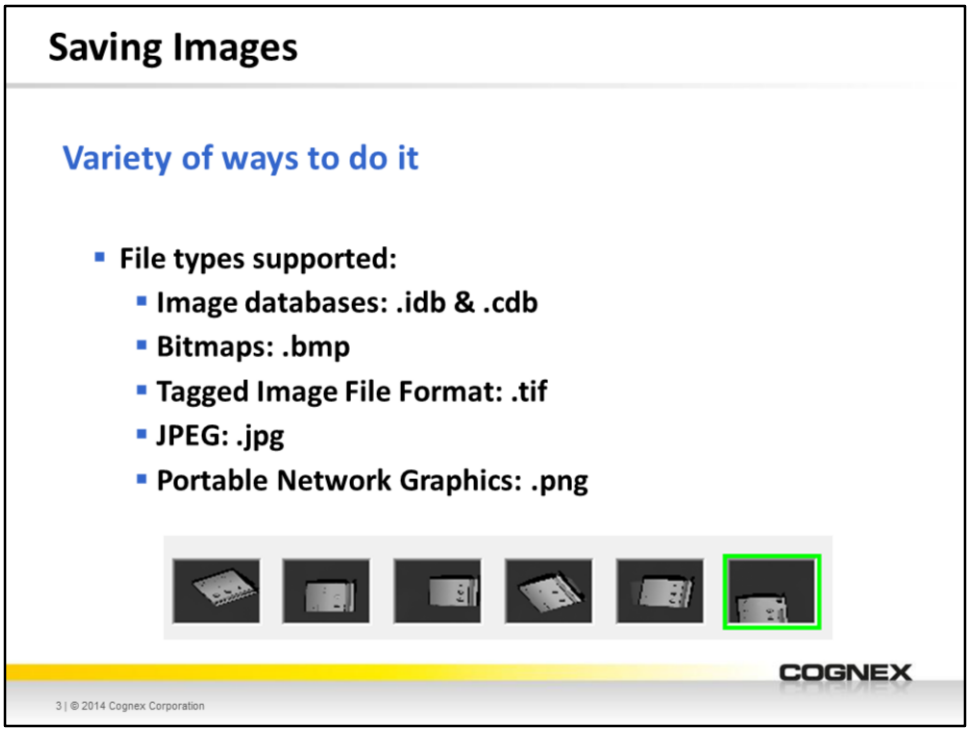


We should get a set of images to bring back with us. There are a variety of ways to do this. We will look at the ImageFile tool is VisionPro to accomplish this task.

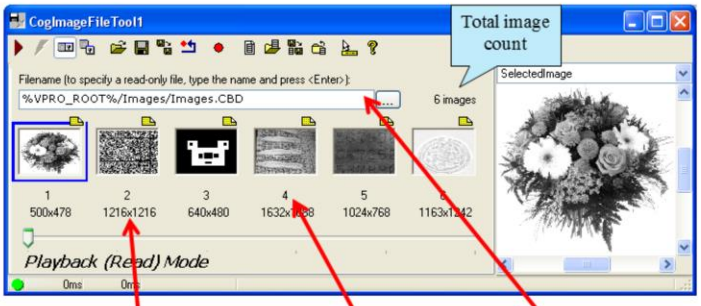
Examples:

To save and read back test images for prototyping, development, and documentation

To save and read back images from a production run

i.e. All failed parts

ImageFile Tool



Resolution Index of image Relative paths

	IDB	CDB	BMP	TIFF	PNG	JPEG
8 bit grey	✓	✓	✓	✓	✓	✓
24 bit RGB	✓	✓	✓	✓	✓	✓
16 bit grey	✓	✓		✓	✓	

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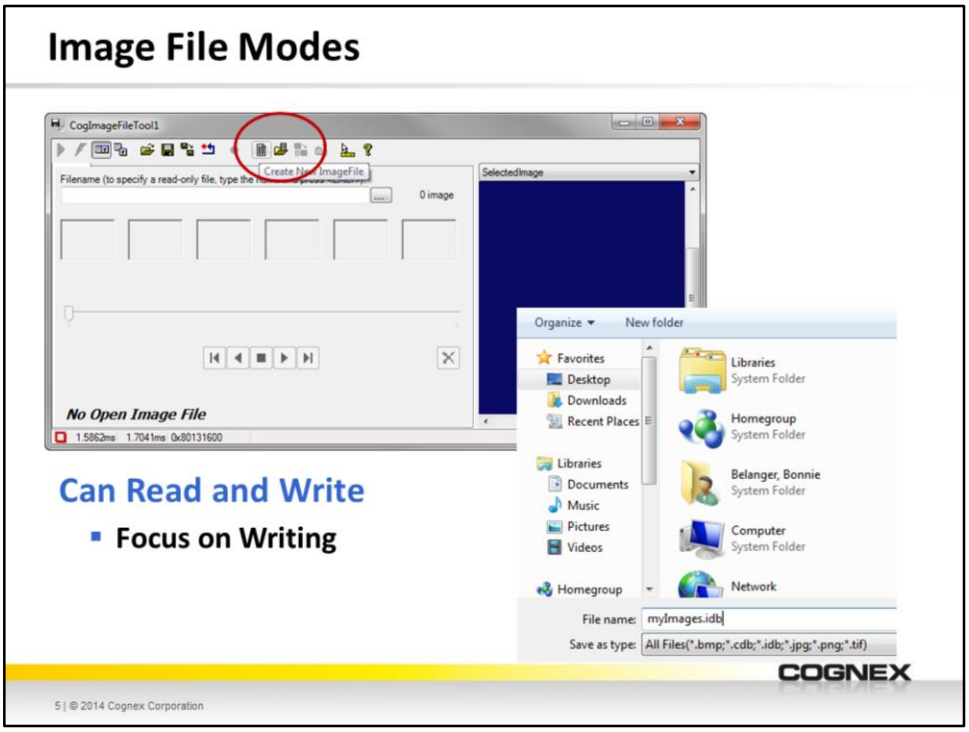
The ImageFile Tool can support a variety of different formats. It can reference a folder with multiple images (doesn't have to be the same type) as well as files that contain multiple images like a .TIFF or .IDB.



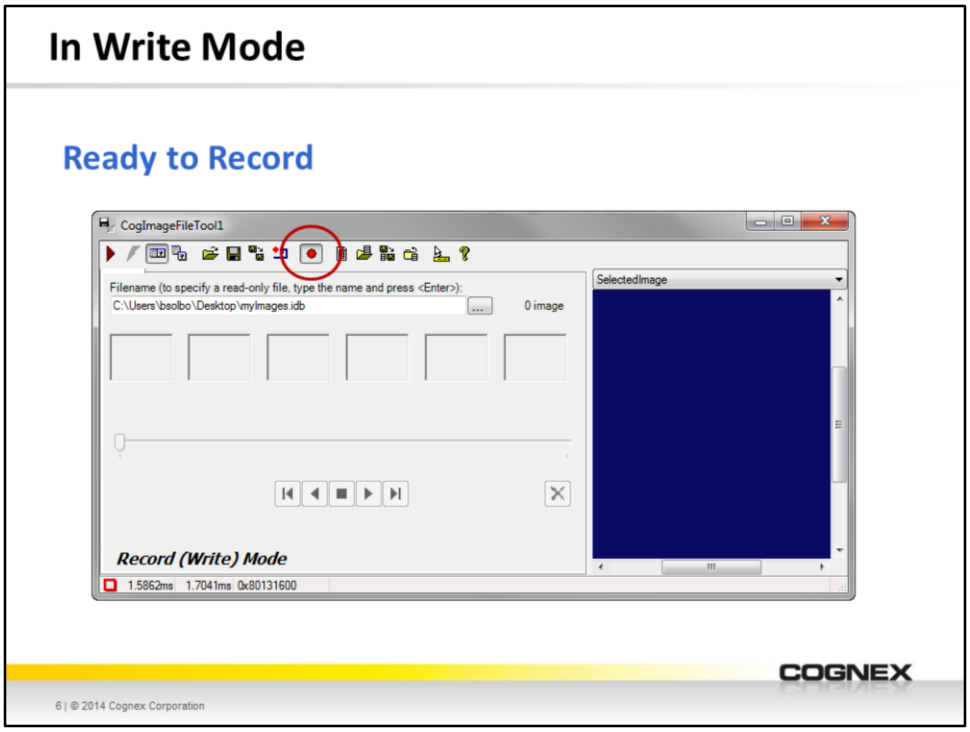
Toggle between *Read* and *Write* mode using the Record button

- In Read mode, you are reading images from an image file
- In Write mode, you are appending images to an image file

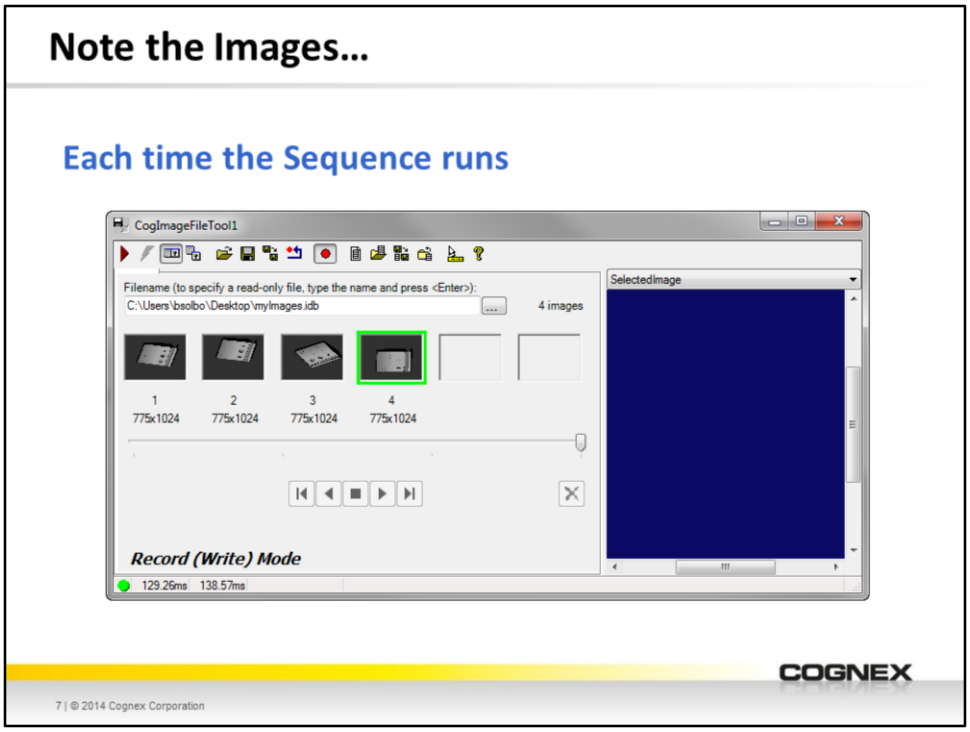
We will only concentrate on writing images as reading them back can be done through an IDB Device.

To begin, we need to open a new or existing image file. It will then bring up a file utility to either create or point to the file.

Note: Please make sure you choose .IDB or .CDB as an extension to get multiple images in one file. The default is .BMP which will keep saving over the image so you only get the most recent image.

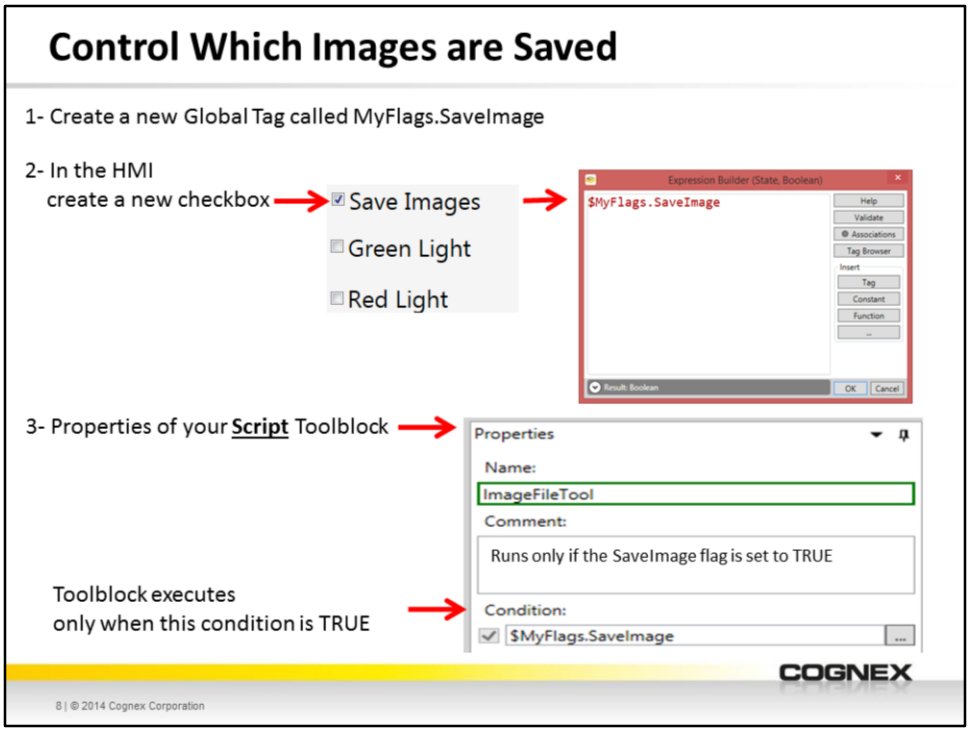


Write Mode is designated by pressing the red circle which is the record button. Now every time an new image comes into the toolgroup, it will save the image into the database.



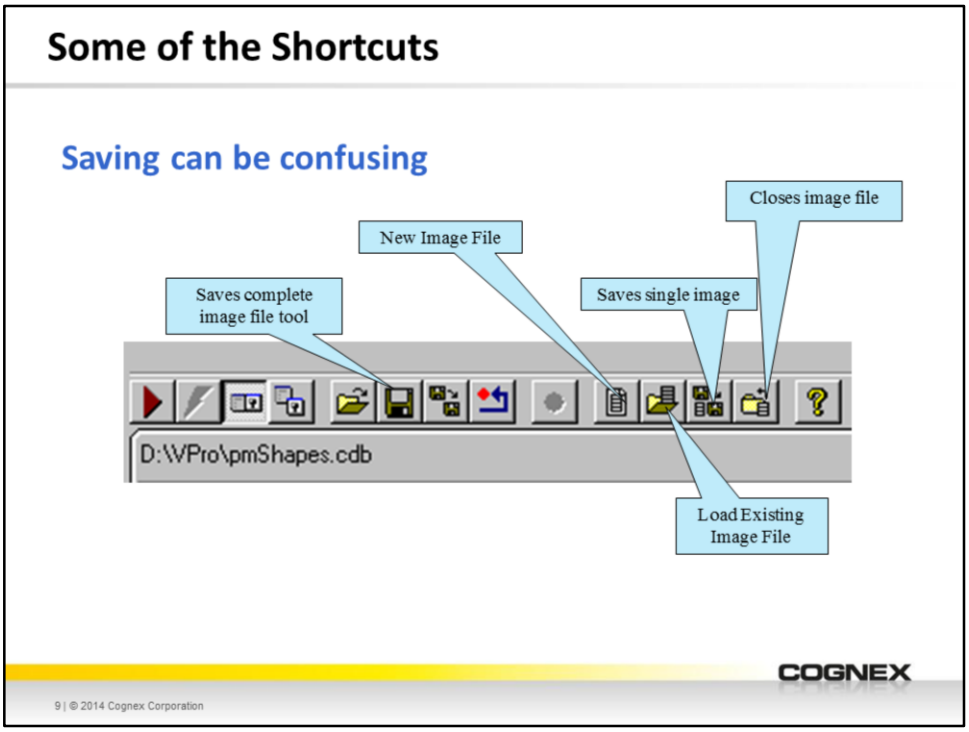
Each time the sequence runs, the image is saved as part of the database of images.

The IDB Editor utility that is automatically installed with VisionPro can let you get access to the file to remove or add images manually. Please make sure you close the file by selecting the CloseImageFile button.



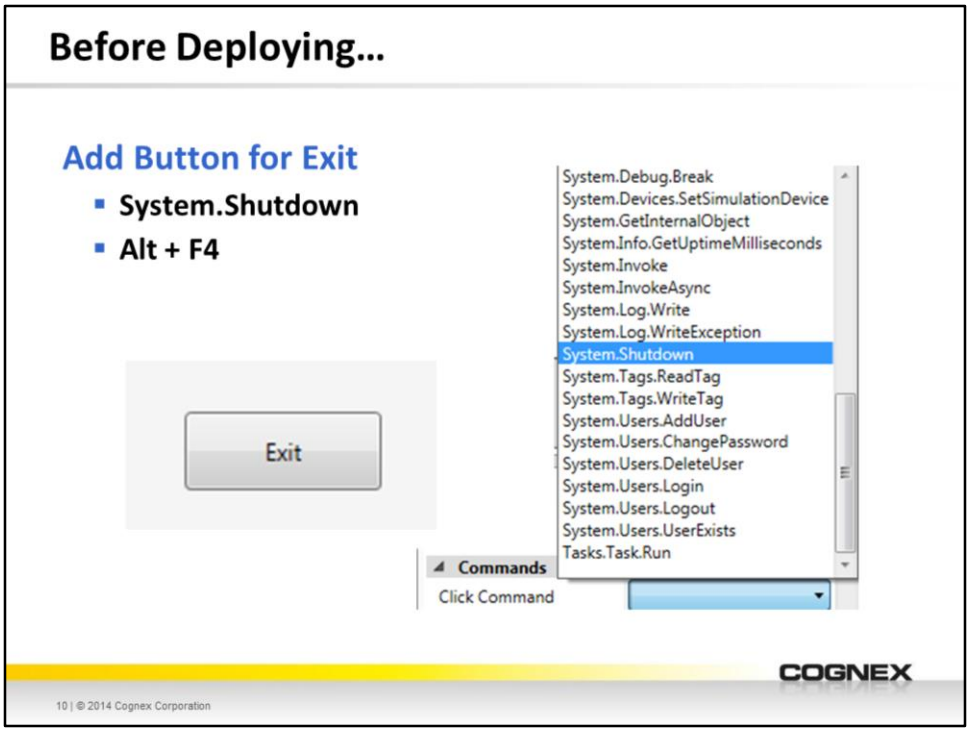
Now we need to control whether images are going to be saved or not. This can be done by creating a tag in the Tag Manager that can now be used as a Condition for the ToolBlock.

For the above example, we created a tag called MyFlags.SaveImage in the TagManager. We then set the Condition to look for that tag. If the tag is true, then the ToolBlock will run. If the tag is false, no images will be saved.



There are two sections for saving in the tool. One saves the tool itself while the other saves the image file that the tool is using.

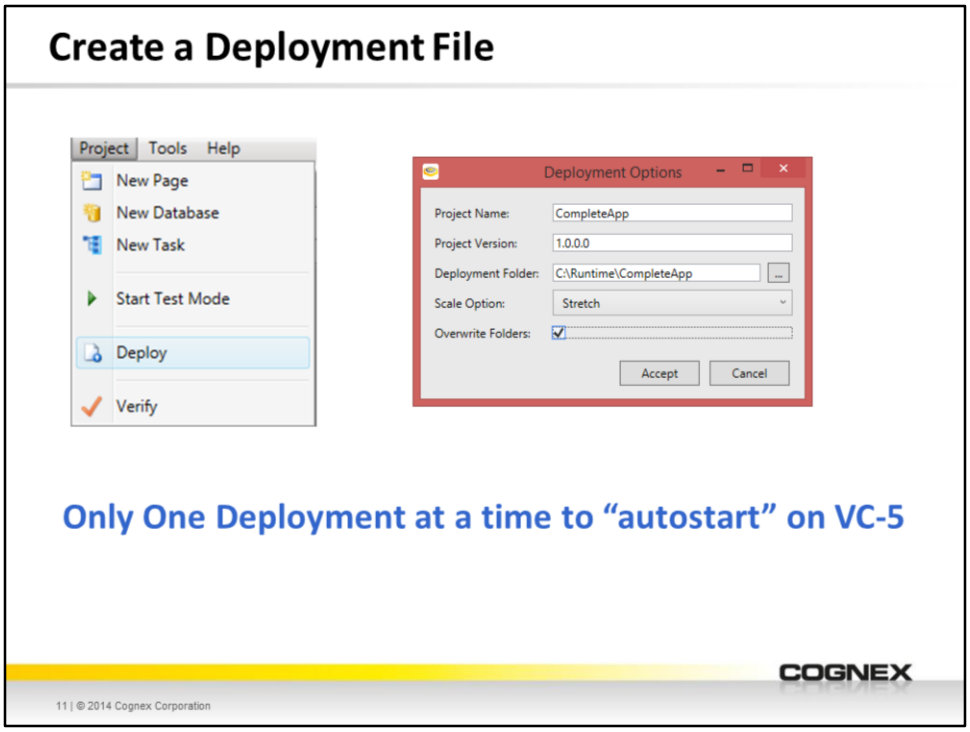
Saving one does not mean that the other is being saved.



It is always good to include a button into the interface to allow the user to properly close the program. In this case, we have the Shutdown() function for the system attached to the click command for this button.

If more than one function is needed, then use the Mouse Click script that can be accessed by right clicking on the button in the HMI and choosing “Scripts”.

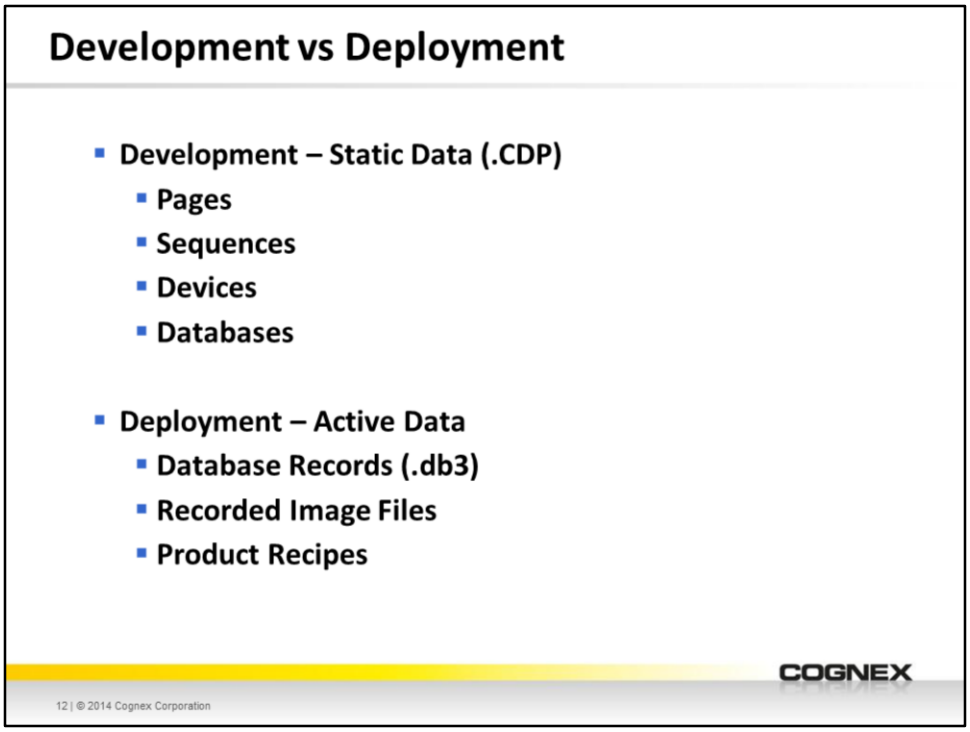
The Alt+F4 can be disabled on the VC-5 by selecting the Windows key, then type “emb”. This should bring up the Embedded Lockdown Utility. This can be used to add or remove some of the default settings in Windows. Doing this on another PC or laptop may be different. Please consult your user’s guide or the vendor for this information.



- Project Name – indicates the name that you want to save the deployed project
- Project Version – allows you to state a version number of your deployed .EXE file
- Deployment Folder: Specifies where the run time application will be stored.
- Scale Option specifies three display options:
    - *None*: Uses the Pages resolution.
    - *Stretch*: Fills the entire screen.
    - *Fit*: Fills the screen, while preserving aspect ratio.
- Overwrite Folders - specifies whether or not to overwrite any existing RunTime database

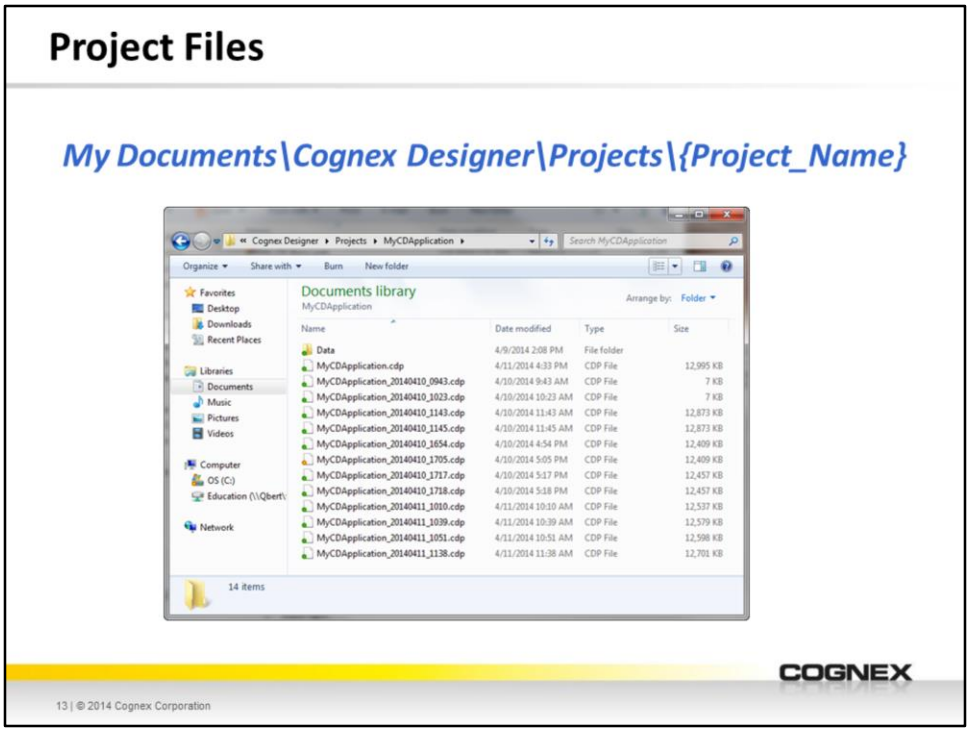
Path for "autostart" : C:\Users\user\AppData\Roaming\Microsoft\Windows\Start Menu\Programs\Startup

To stop, simply remove the Designer launcher and replace it with the project for deployment.



Cognex Designer is divided into two modes of operation: Development Mode and Deployment Mode. As a result, Cognex Designer divides application configuration data into two areas: static data and active data.

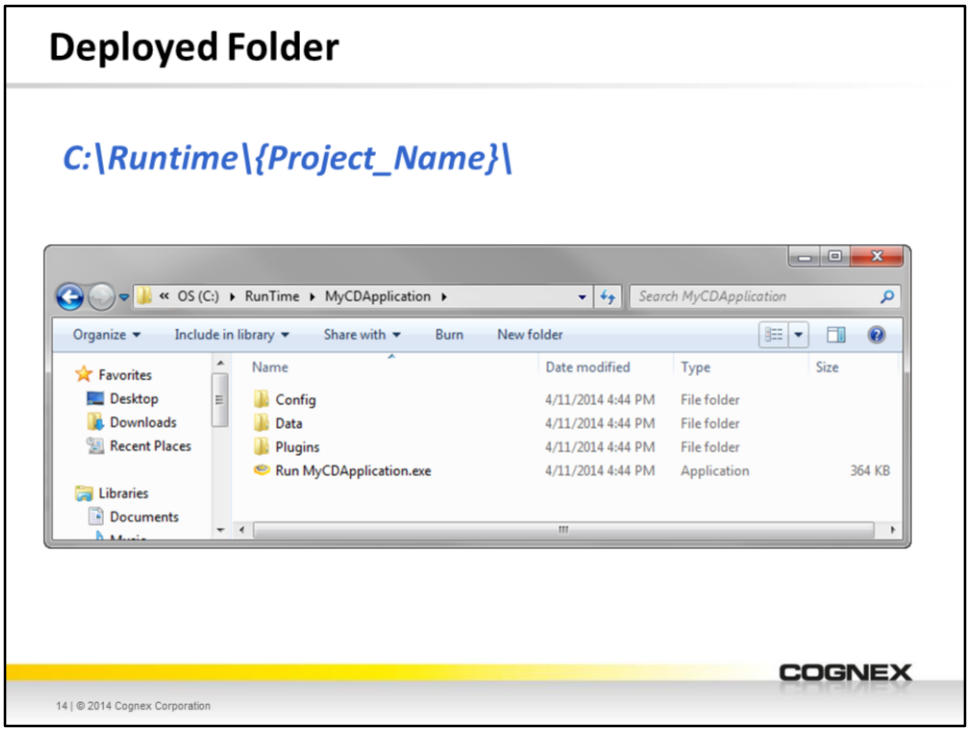
- Static data is used in Development Mode. This is the configuration information, and includes the Page, Sequences, Device configurations, and anything else needed to recreate the application. This information is all stored in the project file (.cdp).
- Active data is used in Deployment Mode. This information will change when the application is running, and includes the database records, recorded image files and product recipe data.



A Cognex Designer project file contains the configuration of a specific Cognex Designer application, and is required in order to make modifications to the application in Development Mode. By default, project files are stored in the following directory: *My Documents\Cognex Designer\Projects\{Project_Name}*

Note: Sub-folders within the project folder will be deployed with the project.

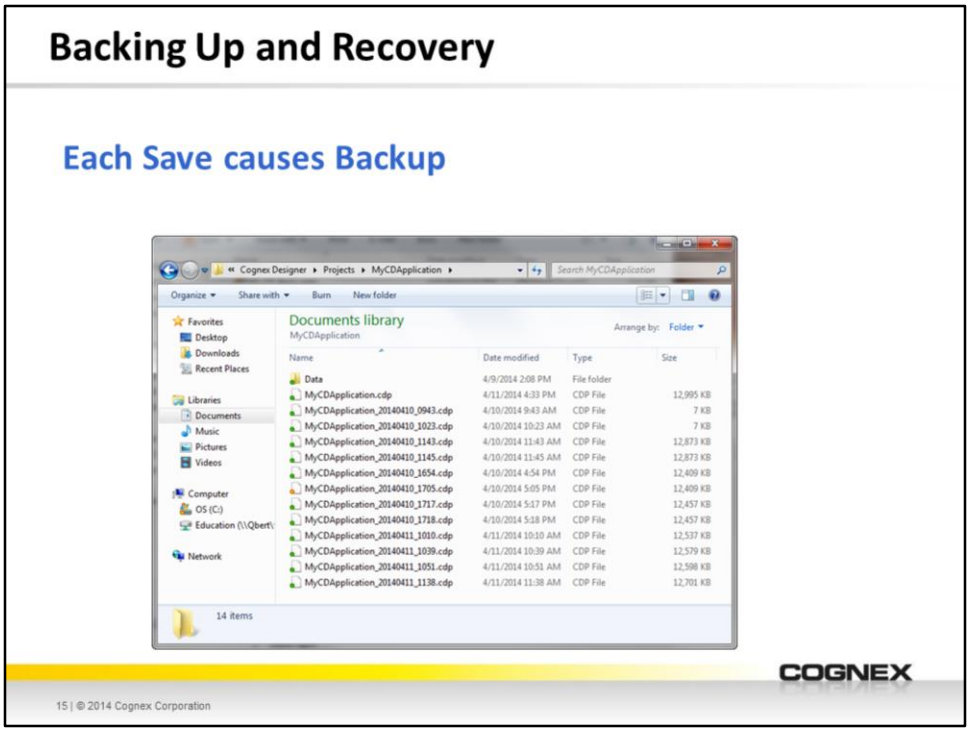
Cognex Designer automatically keeps a backup of project files so that previous versions can be restored, if necessary.
The project file does not contain any modifiable data while the system is running, i.e. Databases, Image Files, Recipes, etc. This data is included in the Deployed Folder.



When an application is deployed, a new folder is created at the specified path and the runtime files are created.
The default deployment path is: **C:\Runtime\{Project_Name}**

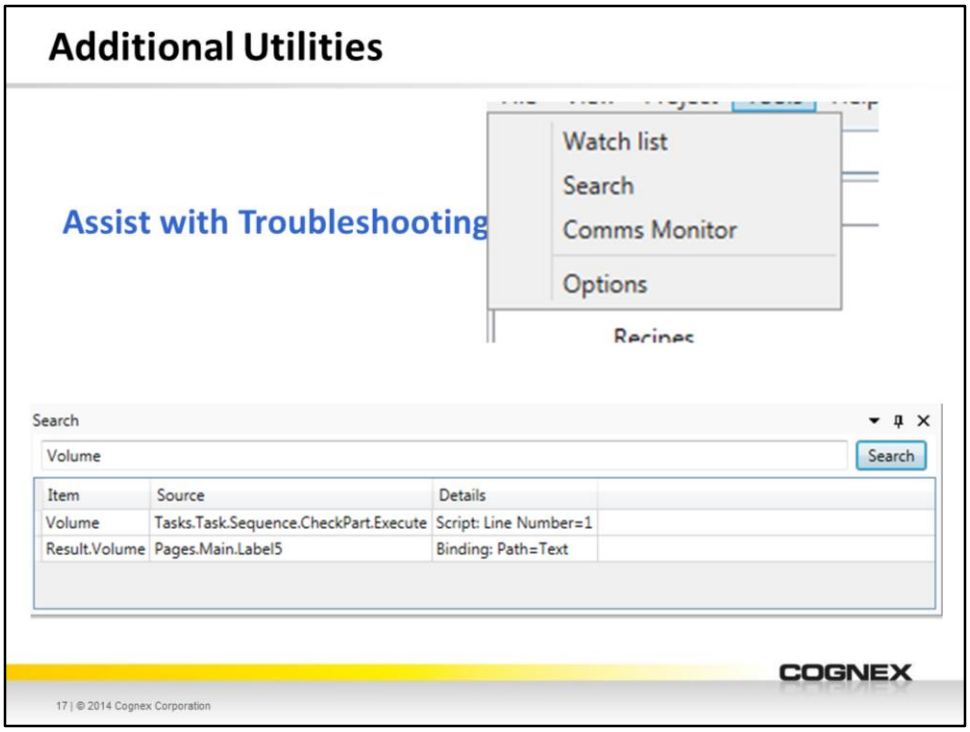
> **Note**: The deployment **\Config** folder contains the deployed application configuration that is created from the project file.
> - The deployed application can not be opened in the development environment; the project file is required to make modifications.
> - The deployed application opens in run-mode, with no development tools accessible.
> - The deployment folder will usually contain multiple sub-folders for Databases, Image Files and Recipes, depending on the application.

When “installing” on another system, copy the entire deployed folder. Also, VisionPro must be installed on the system, Cognex Designer does not need to be installed



Cognex Designer will automatically backup the previous version of your project every time you save it (with the file name of: *{ProjectName}_yyyyMMdd_hhmm.cdp*).
To make backing up easier, try to keep all database files, sample images, etc. in the *Project Folder*. This will allow you to move the project from computer to computer more easily.

- **Project Files**: Located in the project folder, with a .cdp file extension (**Libraries > Documents > Cognex Designer**).
- **Persistent Tags**: Located in the *Data* folder, and given the name *runtime.db3* (**RunTime > "ProjectName" > Data**).
- **Database**: Dependent upon where the Database is saved (best practice is to keep it located in **Project Folder\Data**).



- The *Watch* window allows users to monitor any tag in the application and modify tag values without having to make changes to the HMI pages.
- The *Search* tool window allows you to a search for usages of a given string inside scripts, property bindings and tags.Just by selecting the result of the Search, it will direct you to the area in which your query is being used.
- The Comms Monitor is to monitor communication.
- Options allows you to set the templates folder and reset the workspace.

Summary

Cognex Designer –Deployment

- Learned how to save images
- Understood how the system deploys
- Explored some of the utilities available

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