LabVIEW 2014

What's New in 2014

Chris Mead

District Sales Manager, National Instruments



















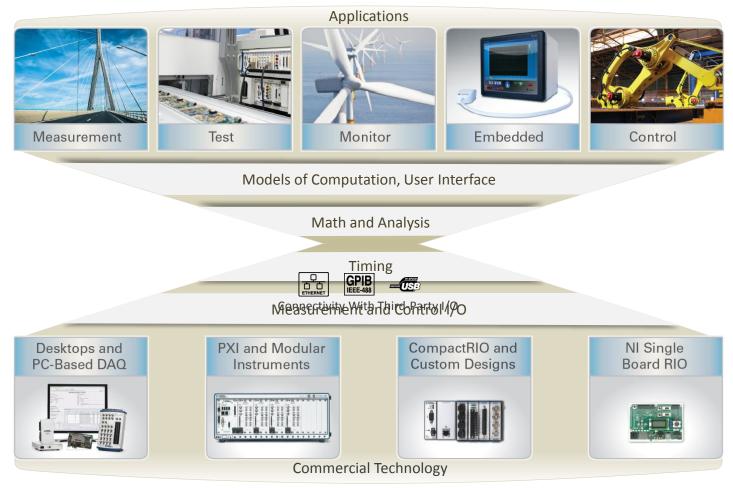


informed decisions fast.

Expanded Interface Development	Global Solutions to Mine	Innovate With a
and Deployment Options	and Search Data	Community

Graphical System Design

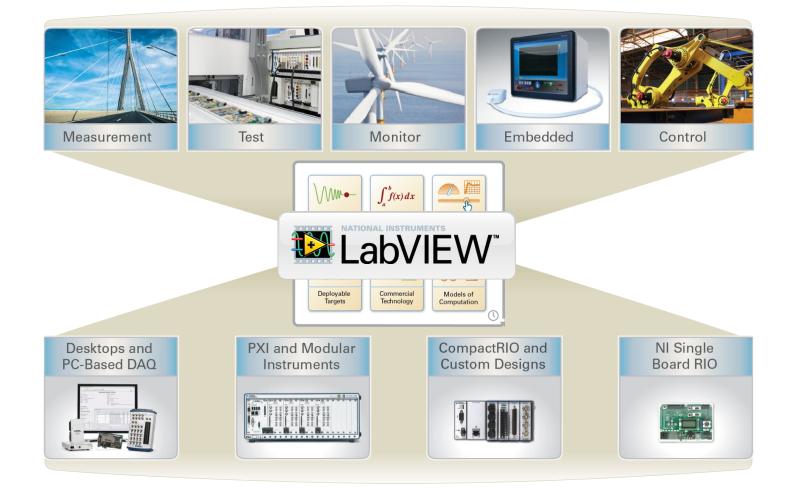
A platform-based approach for measurement and control



Deployable Targets

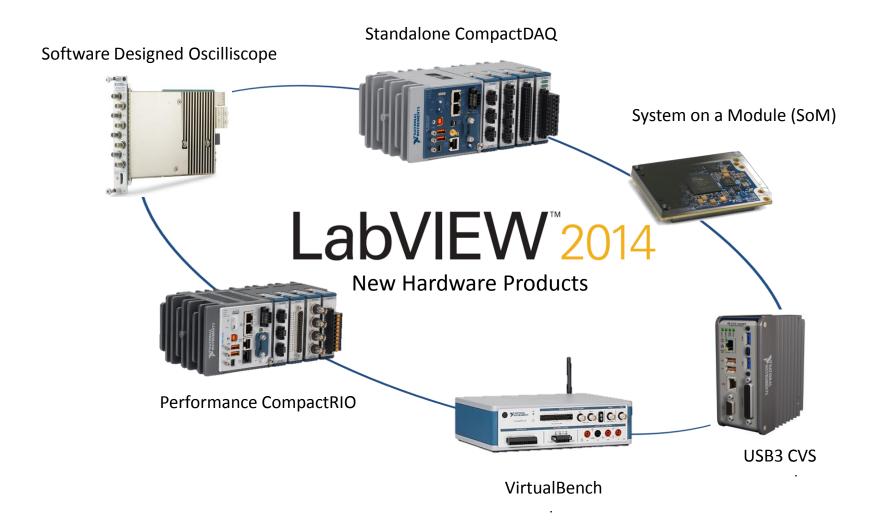
Graphical System Design

A platform-based approach for measurement and control





Unrivaled Integration with the Latest Technology





Value Added to Existing LabVIEW Editions

Full Edition

Make advanced control applications through included PID and Fuzzy Logic palettes

Professional Edition

Trace low-level bugs, validate coding practices, and manipulate data through the now included:

- VI Analyzer Toolkit
- Unit Test Framework Toolkit
- Desktop Execution Trace Toolkit
- Database Connectivity Toolkit
- Report Generation Toolkit

LabVIEW Base Edition

- Graphical development environment
- Drag-and-drop UI libraries
- PC-based data acquisition

LabVIEW Full Edition

LabVIEW Base Edition plus:

- 950+ built-in analysis libraries
- Core edition for add-ons

LabVIEW Professional Edition

LabVIEW Full Edition plus:

- Building and distributing EXEs
- Unit testing and code validation
- Source code control integration

Application-Specific LabVIEW Suites



LabVIEW Embedded Control and Monitoring Suite

Includes NI LabVIEW Real-Time and FPGA Modules



LabVIEW Automated Test Suite

Includes NI TestStand and Switch Executive



LabVIEW HIL and Real-Time Test Suite

Includes NI VeriStand and LabVIEW Real-Time and FPGA Modules

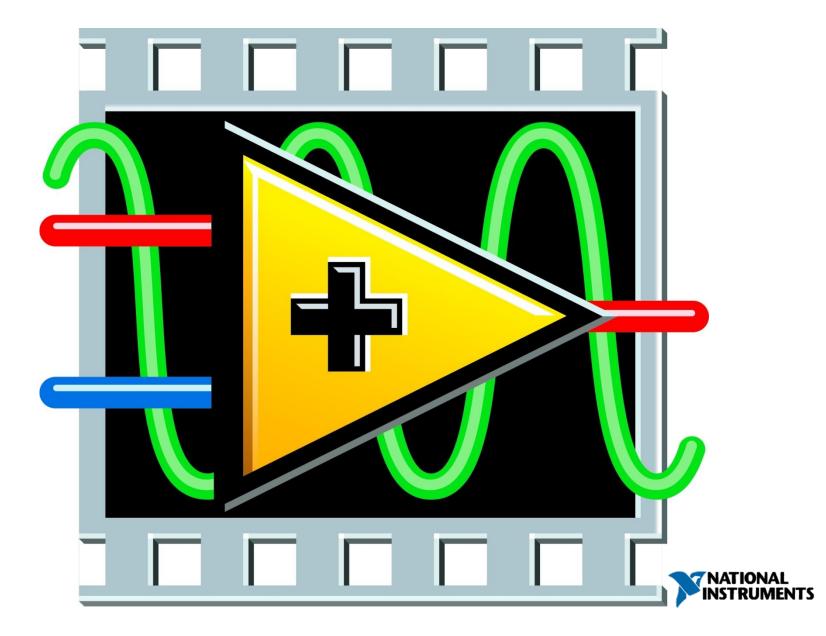
The Tools You Need

New LabVIEW Suites group LabVIEW Professional with all the tools you will likely need for your application

Convenient USB Install

Suites are distributed on a USB 3.0 flash drive with all the software and drivers you need already included

LabVIEW Taskbar Icon



LabVIEW Taskbar Icon

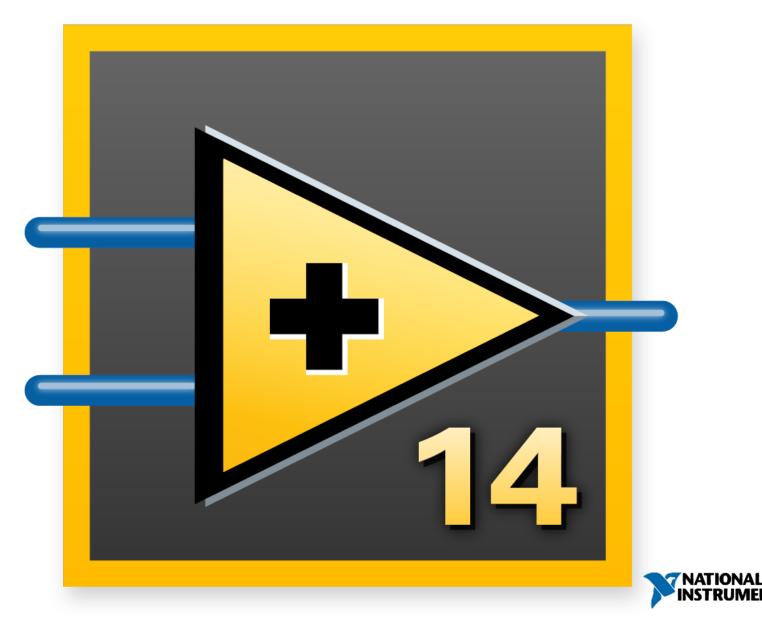


LabVIEW Taskbar Icon

- Users upgrade every 1-3 years
- Identical task bar icons create confusion



New Taskbar Icon



ENTS

New Taskbar Icon

• Easily Differentiate between LabVIEW versions

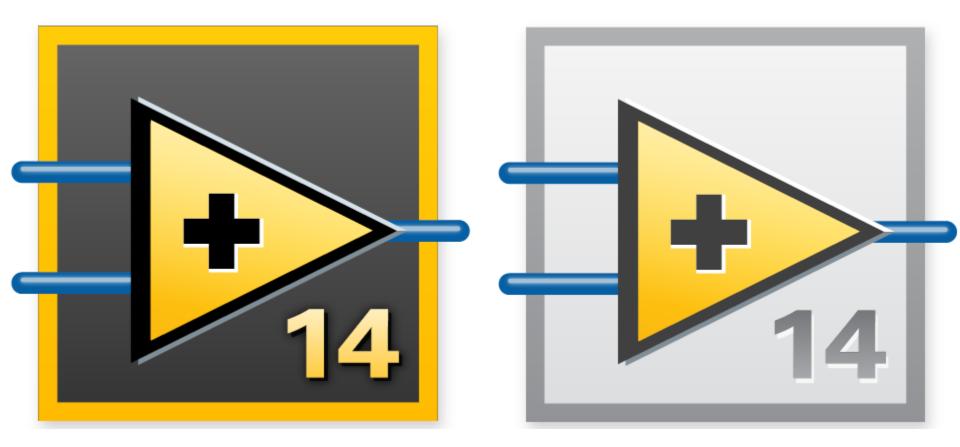




New Taskbar Icon

32-bit

64-bit



64-bit for Mac and Linux Desktop OS



Windows

Mac OS X

Linux

Run Algorithms and Models on NI Linux Real-Time

Add-on Modules with LabVIEW Real-Time Capability

- Native LabVIEW solution
- No code generation or 3rd party software required

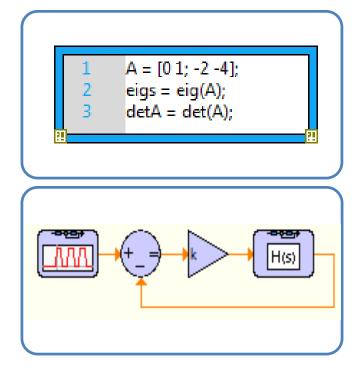
MathScript RT Module

Re-use **.m scripts** that you developed in MathWorks Inc. MATLAB [®] or GNU Octave

Control Design & Simulation Module

Move beyond PID for **advanced control** and dynamic system simulation

Model your system with the included **System** Identification Toolkit



Troubleshoot Faster with Guided Error

Embedded Resource Links

1. Error Dialog

Debugg Why do I get Error 43 when using the Open/Create/Replace File VI?

Primary Software: LabVIEW Development Systems>>LabVIEW Professional Development System Primary Software Version: 8.2

Primary Software Fixed Version: N/A

Secondary Software: LabVIEW Development Systems>>LabVIEW Full Development System

Problem:

When I use the Open/Create/Replace File VI, I have the option to select a file path or cancel the operation. If I choose **Cancel** I get the

Error 43 occurred at Open/Create/Replace File error, Error 43 occurred at Open/Create/Replace File in [VI Name] . in Untitled 2 х Ð, Error 43 occurred at Open/Create/Replace File in Possible reason(s): Untitled 3 LabVIEW: Operation cancelled by user. Possible reason(s): Stop Continue Search ni.com for error LabVIEW: Operation cancelled by user. Continue Stop

2. Search Result 3. Solution error 43 Search 1-10 of 3,564 Show 10 20 30 results per page

Why do I get Error 43 when using the Open/Create/Replace File.vi?

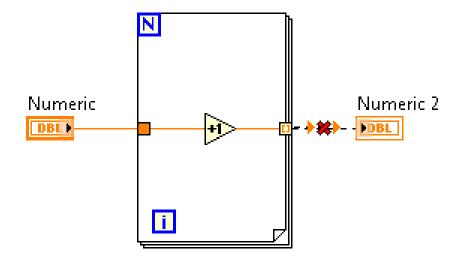
I get Error 43 when using the Open/Create/Replace File.vi? Primary Software: LabVIEW Development Systems>>LabVIEW... following error, ...

digital.ni.com/public.nsf/allkb/E78D4D60B08E4CCE86257297005BB706



Automatic Shift Register Creation

• For Loops output Arrays by default

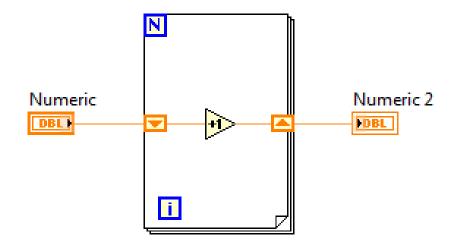


LabVIEW 2013



Automatic Shift Register Creation

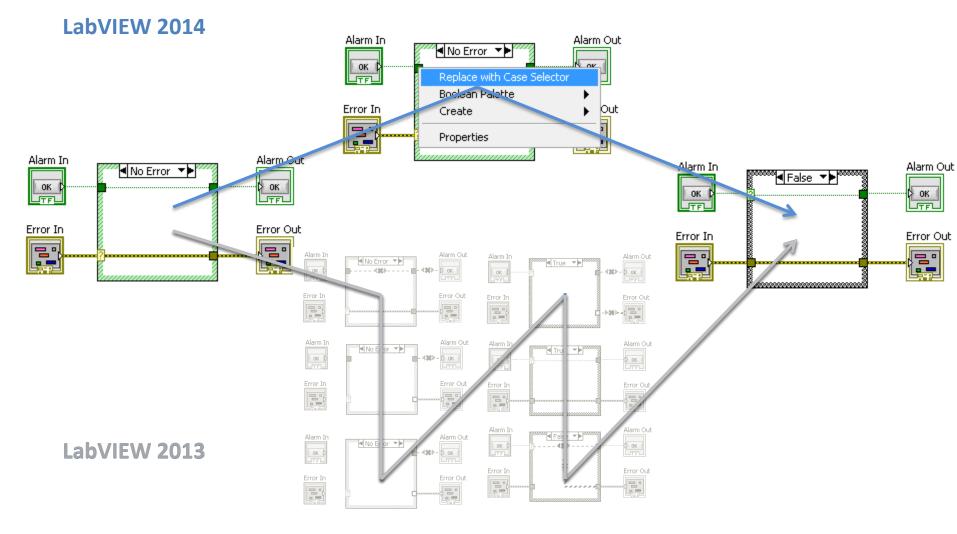
- For Loops output Arrays by default
- Context-sensitive to wired outputs
- Shift register creation matches logical flow



LabVIEW 2014

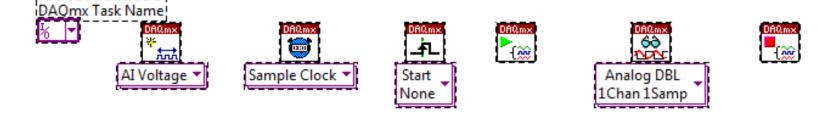


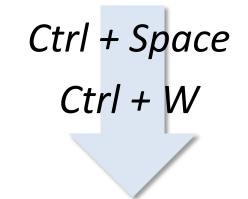
Replace Case Structure Tunnel with Selector

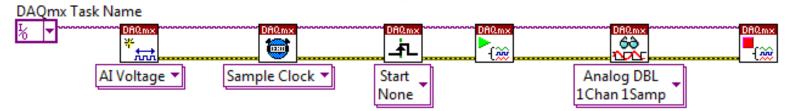




Auto-Wire Quick Drop Shortcut



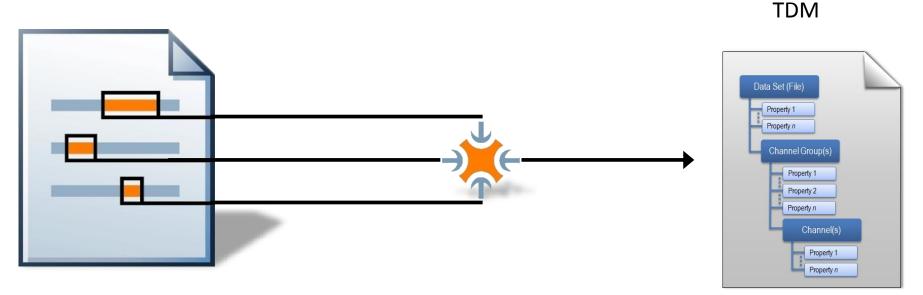




DataPlugins

Any Arbitrary Data File

DataPlugin



Load Any Data

Load a huge variety of data formats with **1000+ DataPlugins** or submit a sample file to make a new one

Universal Format

Get all your data in one **standard format** that also includes properties such as average and extreme values

Mapped to

Seamless DataPlugins Installation

Previously needed to mar

🛃 Install/Update DataPlugins

Search DataPlugins by name or file extension:

Begin with *, to search for file extension only

Double-click the table headers to sort by Name or Status.

DataPlugin	Name	Status	File Extensions	Description	
<auto-detect for<="" storage="" td="" the=""><td>Minitab_MTP</td><td>Not Installed</td><td>*.MTP</td><td>Supports Minitab® text</td><td>:1</td></auto-detect>	Minitab_MTP	Not Installed	*.MTP	Supports Minitab® text	:1
<adto-detect for<="" storage="" td="" the=""><td>MME Import</td><td>Not Installed</td><td>*.MME</td><td>Supports ISO®-TS 134</td><td>9</td></adto-detect>	MME Import	Not Installed	*.MME	Supports ISO®-TS 134	9
DataPlugin parameters (if n	MTS_ADF	Not Installed	*.ADF	Supports MTS Adapt Da	at
File le setie e	Multisim	Not Installed	*.*;*.TXT	Supports Multisim GRAP	4
File location	NetCDF	Not Installed	*.NC	Supports NetCDF file fo)r
	NF_FRA_DAT	Not Installed	*.DAT	Supports DAT files write	ie -
	Nicolet	Not Installed	*.NRF	Supports Nicolet NRF d	al
	Nicolet_TEAM	Not Installed	*,*	Supports LDS-Nicolet T	E/E
	Nicolet_WFT	Not Installed	*.WFT	Supports LDS-Nicolet di	g
	NMEA_GPS	Not Installed	*.NMEA	Supports standard GPS	r
	Oasys_LS_Dyna	Not Installed	*.CUR	Supports reading LS-DV	<u>م</u>
	Origin_ASCII	Not Installed	*.TXT;*.CSV;*.DAT	Supports Origin ASCII f	ile –
	Origin_OPJ	Not Installed	*.OPJ	Supports Origin OPJ file	

Update All

Install

Cancel

OK

Close

Help

х

Overwrite options, of not w

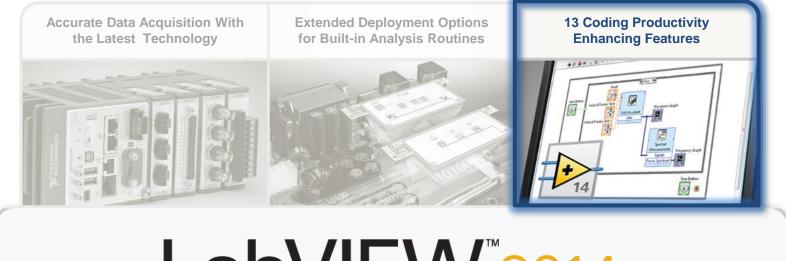
Install/Update DataPlugins

open

🔛 Configure Open Data Stora

LabVIEW 2014

Open Data Storage <auto>



LabVIEW[®]2014

Acquire, **analyze**, and visualize any data set to make informed decisions fast.



Data Dashboard for LabVIEW 2.2

Alternate Servers

Now you can set up one dashboard to monitor multiple targets and use the drop down menu to switch where the data is streaming from while the dashboard is running

<u>Multi-Plot</u>

Data Dashboard now supports 2D array of numerics as a datatype for charts and graphs.



Android Tablets

Data Dashboard on Android tablets now supports monitor and control applications and free canvas customizations.

Transparency

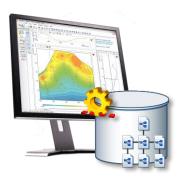
Adjust the transparency of images, controls, and indicators on your dashboard

LabVIEW 2014 Real-Time with Embedded UI

Simplify system complexity by implementing a local HMI on the cRIO



NI DataFinder for Individuals or Working Groups







My DataFinder included with DIAdem or DataFinder Toolkit for LabVIEW Each client accessing NI DataFinder Server Edition

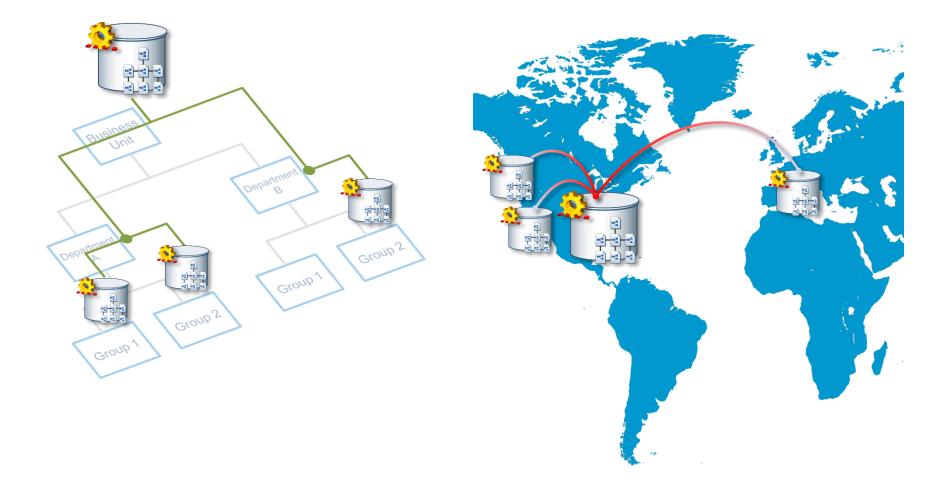
Designed for collaboration data

analysis and reporting, built-in user management and security, archiving system and more

DataFinder Federation: Sharing Data...

...across the organization

...across dispersed locations



What is NI DIAdem?

relayout TOV Settings

3000

2000

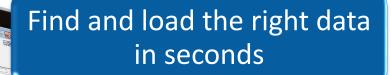
1000

A A P P Sheet J

REPORT SCRIPT Window Help

gine Temperature





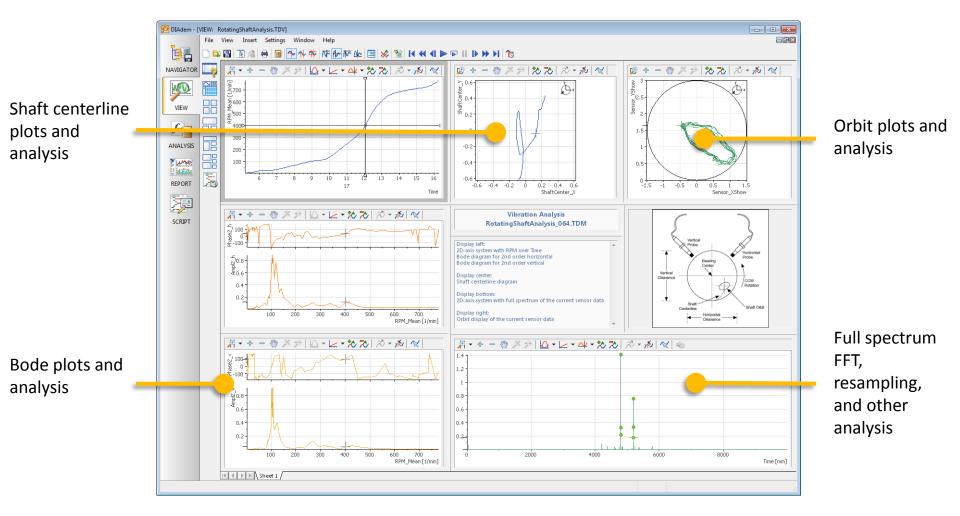
Easy, flexible access to any file formats and databases

Automated analysis and reporting

Make data-driven decisions to maximize your efficiency

What's New in DIAdem – Vibration Analysis

Ideal for Machine Condition Monitoring and Energy Applications





Acquire, analyze, and **visualize** any data set to make informed decisions fast.



Growing LabVIEW Ecosystem

LabVIEW Tools Network

3,000,000 add-ons downloaded Over 250 add-ons

User Community

Over 10,000 certified users Over 800 alliance partners 80+ registered user groups

Connectivity

Over 10,000 instrument drivers Any bus, any protocol, any platform Integration with third-party languages



informed decisions fast.

Expanded Interface Development	Global Solutions to Mine	Innovate With a
and Deployment Options	and Search Data	Community