

# Requirements Management Software

## NI Requirements Gateway

### Managing Requirements

- Link requirements documents to test and control software implementation
- Graphically create traceability relationships between documents
- Use graphical, coverage analysis, and impact analysis views to visualize and analyze traceability relationships
- Capture and compare project snapshots to determine changes in requirements and coverage
- Generate reports using several report templates

### Customization

- Customize types for importing various types of data from National Instruments and third-party products
- Create filters to customize analysis and displays
- Generate reports using default and custom templates

### Operating Systems

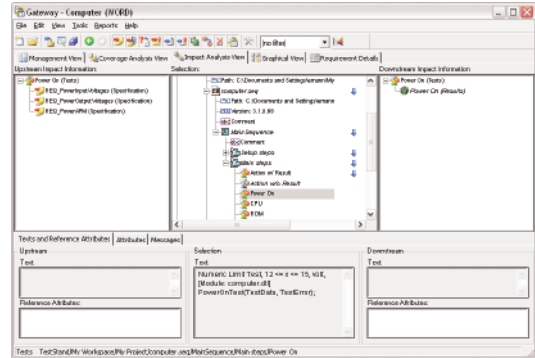
- Windows 2000/XP

### Compatible NI Software

- LabVIEW
- LabWindows/CVI
- NI TestStand
- MATRIXx

### Other Compatible Software

- Telelogic DOORS
- IBM RequisitePro
- Microsoft Word
- Microsoft Excel
- Microsoft Access
- Acrobat PDF
- Microsoft Visio
- Generic text files
- Generic source code files



## Overview

National Instruments Requirements Gateway is a requirements traceability solution that links your development and verification documents with formal requirements stored in documents and databases.

Most engineering projects start by defining high-level specifications, followed by more detailed specifications as the project progresses. Specifications contain technical and procedural requirements that guide the product through each engineering phase. In addition, working documents, such as hardware schematics, simulation models, software source code, and test specifications and procedures must adhere to and cover the requirements defined by the specifications.

With NI Requirements Gateway, you can configure which specification and working documents to process, the type of traceability information to obtain from each type of document, and the traceability relationship between these documents. NI Requirements Gateway performs coverage and impact analysis, graphically displays relationships between documents, and generates comprehensive reports. NI Requirements Gateway improves quality by effectively managing requirements traceability and impact analysis throughout the life cycle of a project.

## The Missing Link

NI Requirements Gateway works with the NI LabVIEW graphical development environment, NI LabWindows/CVI for ANSI C development, NI TestStand test management software, and NI MATRIXx design and development tools, as well as common tools for managing and documenting requirements, such as Telelogic DOORS, IBM Rational RequisitePro, and Microsoft Word. Thus, you can use NI Requirements Gateway software to create projects that define the relationship

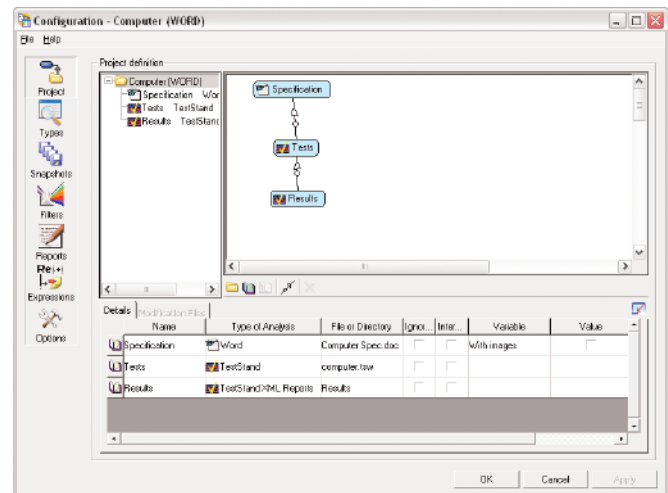


Figure 1. Specify relationships in the Project pane of the Configuration dialog.

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between documented requirements and the applications, tests, and simulation models that have been developed to cover them.

## Viewing Traceability Information

The project workspace in NI Requirements Gateway displays information and analysis for a loaded project. The project workspace contains multiple views for displaying the traceability information of the project.

- **Management View** – Displays a high-level view of the project including the documents in the project, the elements of each document, and a summary of coverage information for the project.
- **Coverage Analysis View** – For a selected element of a document such as a specific requirement, displays one level of covering elements and one level of covered elements from the other documents as defined by the project.
- **Impact Analysis View** – For a selected element of a document, displays all levels of covering elements and all levels of covered elements from the other documents as defined by the project.
- **Graphical View** – Displays each document graphically using a tree view with lines connecting requirement elements in documents and covering elements in other documents.
- **Requirement Details** – Displays each requirement and its attributes for a document in a table.

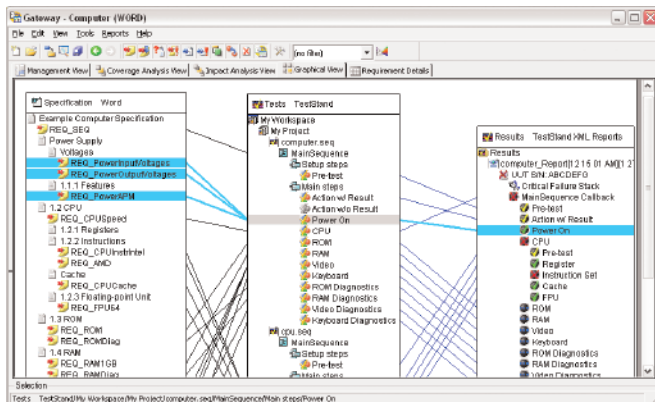


Figure 2. You can display traceability information in the Graphical View.

## Benefits of Requirements Management

Tracking the relationship from requirements to test and control software is crucial for validating implementation, analyzing the impact of changing requirements, and understanding the impact of test failures. Performing this coverage and impact analysis helps engineers meet their requirements and streamline development efforts. NI Requirements Gateway is ideal for applications that simulate or test complex components against documented requirements in industries such as automotive, aerospace, defense, and consumer electronics.

By helping you organize and manage requirements and the documents or applications that cover them, NI Requirements Gateway assists you in addressing concerns about system complexity, compliance to industry and company standards, and bringing products to market at an acceptable cost. With this software, you can specify which applications, tests, and simulation models correlate with documented requirements. In specifying this correlation, NI Requirements Gateway captures traceability information and offers an interface for inspecting and analyzing coverage and impact information.

## Ordering Information

NI Requirements Gateway with SSP .....779551-09  
NI Requirements Gateway .....779551-03

## BUY NOW!

For complete product specifications, pricing, and accessory information, call (800) 813 3693 (U.S.) or go to [ni.com](http://ni.com).

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### Basic Service Level

- Upgrades purchased separately
- Support by NI applications engineers, R&D engineers, partners, and community members through online Developer Exchange
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### Premier Service Level

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[ni.com](http://ni.com) • (800) 813 3693

National Instruments • [info@ni.com](mailto:info@ni.com)

