

System Management and Information (SMI) Reference Library

NI Systems Engineering, 2015

Overview

The System Management and Information (SMI) is a new LabVIEW reference library which will address some of the most common customer system configuration management and detection tasks. This new LabVIEW reference library will build upon the feature sets of the two existing code bases, RT Management and the CompactRIO System Configuration Information (CRI) Reference Library. The SMI will be published on the LabVIEW Tools Network, and source code will be made available on the LabVIEW developer community for ongoing collaboration.

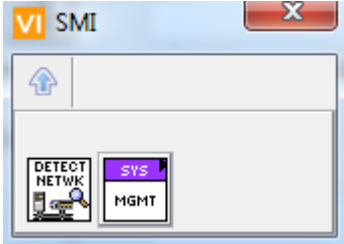
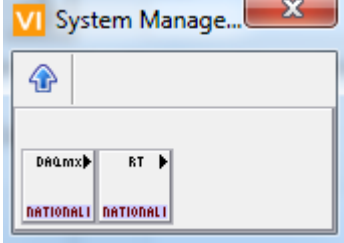
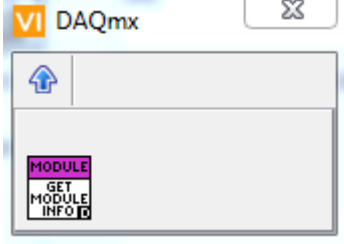

Background

The internal NI RT Management library, created by NI R&D Systems Engineering, is a Real-Time target management and file transfer tool for NI CompactRIO and PXI hardware. The CRI library, created and maintained by NI Systems Engineering, is a target and module configuration detection tool for the RIO hardware platform (found at: <http://www.ni.com/example/51852/en/features>). Both libraries have been used in large customer applications. SMI library will incorporate most of the features of RT Management and all essential features of CRI into a single intuitive reference library.

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SMI Reference Library (Tentative)

<p>SMI palette</p> <ul style="list-style-type: none"> • Detect Network Devices • System Management 	 <p>Functions>>Addons>>SMI</p>
<p>System Management palette</p>	 <p>Functions>>Addons>>System Management</p>
<p>DAQmx (subpalette)</p> <ul style="list-style-type: none"> • Get Module Info (DAQmx) 	 <p>Functions>>Addons>>System Management>>DAQmx</p>
<p>RT (subpalette)</p> <ul style="list-style-type: none"> • RT >> Initialize • RT >> Close • RT >> Get Controller Info • RT >> Get Chassis Info • RT >> Get Module Info (FPGA mode) • RT >> Get System Settings • RT >> Get Time Settings • RT >> Get System Resources • RT >> Restart • RT >> Advanced (subpalette) 	 <p>Functions>>Addons>>System Management>> Real-Time</p>

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Advanced (subpalette)

- Set System Settings
- Set Time Settings
- Get status
- Get startup directory
- Get installed software
- Capture image
- Get RT INI location
- Get RT INI
- Modify RT INI
- Put RT INI
- Install startup application
- Uninstall startup application
- Configure VI Server
- Rename RT target
- Format
- Get OS
- Update OS
- **Get Device Mode**
- Check for RT
- Refresh SysCfg Session
- Reset device names
- Get latest RSS and all addons
- Get latest RSS
- RSS addons filter
- Install latest RSS and all addons
- Install all from repository
- Save changes
- **Get SysCfg session**
- **RT >> Advanced >> File Transfer Behavior (subpalette)**



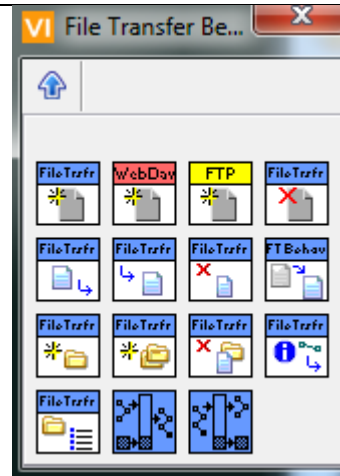
Functions>>Addons>>System Management>>Real-Time>>Advanced

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RT File Transfer Behavior (subpalette)

- Initialize
- Initialize (WebDAV)
- Initialize (FTP)
- Close
- Get file
- Put file
- Delete
- Move
- Create directory
- Create directories
- Delete directory
- File or directory exists
- Recursive file list
- Build path
- Strip path



Functions>>Addons>>System Management>>Real-Time>>Advanced>>File Transfer Behavior