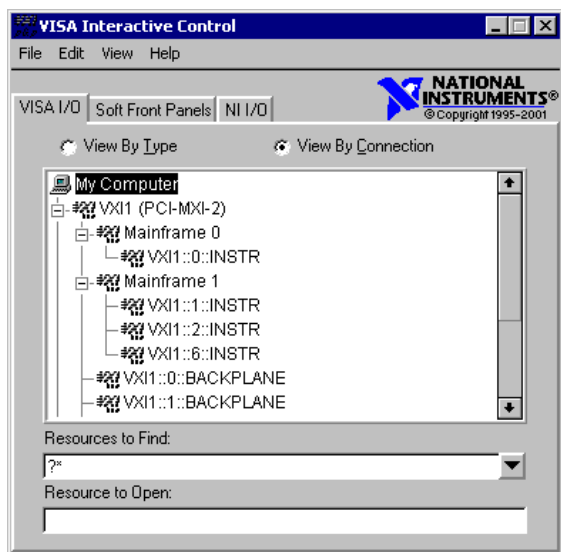# VISA Interactive Control (VISAIC)

VISA includes a utility called VISA Interactive Control (VISAIC) on all platforms that support the LabWindows/CVI Run-Time Engine. This utility provides access to all of VISA's functionality interactively, in an easy-to-use graphical environment. It is a convenient starting point for program development and learning about VISA.

When VISAIC initially runs, it automatically finds all of the available resources in the system and lists the instrument descriptors for each resource under the appropriate resource type. The figure below shows the VISAIC opening window.
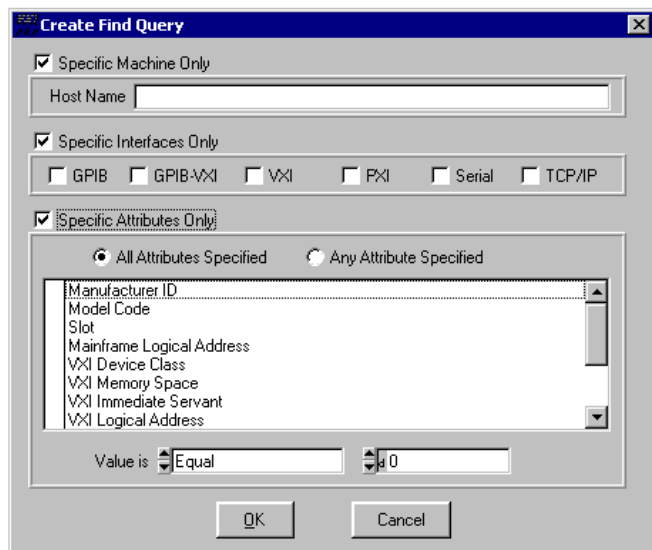

In addition to checking the Resman output table to see what VXI resources are available in the system, VISAIC also tries to read a configuration register for each instrument to verify that the Resman table is correct. If one configuration register read fails, VISAIC provides a warning indicating that a resource is not present. This probably indicates that Resman needs to be run.
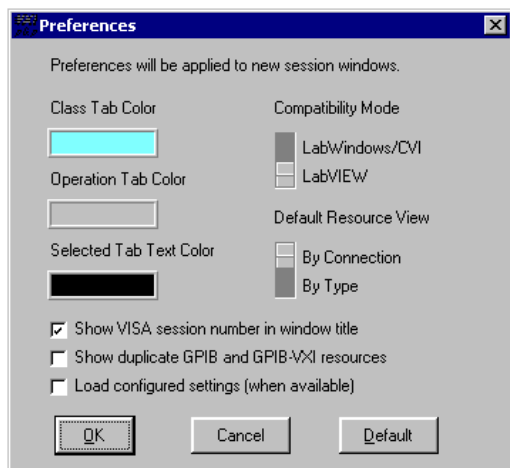
The Soft Front Panels tab of the main VISAIC panel gives the option of launching the soft front panels of any VXIplug&play instrument drivers installed on the system.

The NI I/O tab provides the option to launch the NI-VXI interactive utility or the NI-488 interactive utility. This offers convenient links into the interactive utilities for the drivers that VISA calls, in case debugging needs to be done at that level.

To find a VISA resource, you may enter a regular expression or VISA attribute as specified in the NI-VISA User Manual. You can also have VISAIC create a regular expression for you. Click on the box next to "Resources to Find:" and select Create Query... This will open up the window below. From this window you can search for a resource on a specific machine on the network; you can look for a type of interface; or you can construct a custom query. Make your selections and choose ok. The appropriate regular expression will be build based on your selections. This will take you back to the main VISAIC window where only the resouces that comply with your regular expression or attribute selection will show up.
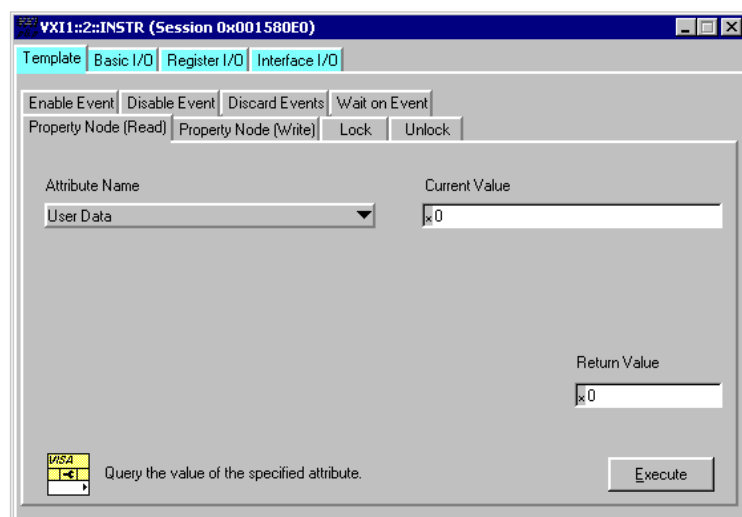

Double-clicking on any instrument descriptor shown in the VISAIC window opens a session to that instrument. Opening a session to the instrument produces a window with a series of tabs for interactively running VISA commands. The exact appearance of these tabs depends on which compatibility mode VISAIC is in. To access the compatibility mode and other VISAIC preferences, select Edit»Preferences... to bring up the window shown below.

The VISA implementations are slightly different in LabVIEW and LabWindows/CVI - these differences are reflected in the operation tabs shown when a session to a resource is opened. By default, the compatibility mode is set to LabWindows/CVI. You should change this setting to LabVIEW if you are working with the LabVIEW package. After you change the preferences, the new preferences take effect for any session opened later.

When you open a session to a VXI resource interactively, a window similar to below appears.

Three main tabs appear in the window. The initial tab is the Template tab that contains all operations dealing with events, attributes, and locks. Notice that there is a different tab for each operation under the main tab. The other main tabs are the Basic I/O, Register I/O, and Interface I/O. The Basic I/O tab contains the basic operations for Message-Based communication, while the Register I/O tab contains the basic operations for Register-Based communication. The Interface I/O tab is used to send miscellaneous commands or queries.

It is important to remember that VISAIC performs a VISA Find Resource when it is run and displays instrument descriptors for all system resources. For VXI instruments, VISAIC also attempts to access one of the configuration registers on each instrument to verify its existence. VISAIC is useful as a learning and development tool. It is often easier to develop an application interactively before doing the actual programming. VISAIC can also serve as a very useful debugging tool when problems arise in writing a program or in using a pre-existing application using VISA operations.

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