Installing Perl/TK on a Sun Workstation

Introduction

The scripting language Perl is widely used around the world under both the Unix and Windows® operating systems. Its graphic extension (Tk) allows generating GUI applications easily. Keithley's Applications Department, working with customers, has created a number of applications and utilities for the S600 and S400 systems using Perl/Tk, such as the Diagnostics Log File Reader described in Keithley Application Note #2432. Perl/TK is included and installed with recent releases of KTE software, but customers using older versions of KTE will need to download and install Perl themselves using the instructions in this document. This procedure typically takes about an hour to complete and typically can be performed by a test engineer or field applications engineer.

Applicability

This procedure applies only to S400 systems running KTE v4.2.1 or earlier, and S600 series systems running KTE v4.2.2 or earlier. The Sun system controller must be running Solaris v2.6 or higher and have at least 35 MB of hard disk space available. Due to a bug in the Solaris *tar* function on Solaris 2.6 and 2.7 (but not 2.8), users with those versions will need to download and install GNU tar (*gtar*). These instructions do not apply to installation on a PC.

Description of Procedure

This Application Note outlines the steps required to download and install ActiveState's Perl/Tk on a Sun workstation, and includes a simple Perl/Tk application to verify the correct operation of the Perl/Tk installation. Users can then employ a Perl-based utility provided by Keithley or create and use a utility they create themselves.

ActiveState provides language programming software, services, and resources for cross platform and Web services development. One of ActiveState's key technologies is Perl/Tk, the Internet's most popular programming languages and graphics packages. At this writing, ActivePerl-5.6.1 (build 631) is the current version of Perl/Tk.

To download Perl/Tk, first log on to the ActiveState's web site (www.ActiveState.com), which offers access to the company's products, services, and downloads. Search for "ActivePerl" in the Downloads section. As shown in *Figure 1*, click the highlighted ActivePerl "download" link. There are three screens to

Figure 1

view before the download process begins: "Verify System Requirements," "Register with ActiveState," and "Download." Depending on the type of Internet connection available, it should be possible to download the source file to an intermediate PC in the office, then transfer it to the tester, either by tape or the intrafab network.

The Download screen will display several Perl packages from which to choose. Select the "Solaris AS package." You will be prompted to Open or Save the file: "…1.631-sun4-solaris.tar.gz." Select "Save" and specify the location for the ActivePerl tar file. The download process will take several minutes. The file downloaded is: *ActivePerl-5.6.1.631-sun4-solaris.tar.gz.*

Once the file has been downloaded, take a few moments to view the Installation Notes.

If the file was downloaded to a PC as an intermediate step, copy the ActivePerl *tar* file to a working directory on the Sun workstation.

Installation Steps

NOTE for Solaris 2.6 and 2.7 only:

The Solaris tar function on Solaris 2.6 and 2.7 has a bug that prevents extraction of long file names. To work around this, download GNU tar (gtar) to extract the files from the ActivePerl tar file correctly. The steps to download *gtar* are:

- Log on to www.sunfreeware.com

- Select "Sparc/Solaris 2.x" from the list of "Processor & Solaris OS."

- The list of available Solaris 2.x packages is below the list of "Processor & Solaris OS." This displayed list is very small. Scroll down and select "tar-1.13.19". This will display the actual tar package, depending on the Solaris version:

  Solaris 2.6   *tar-1.13.19-sol26-sparc-local.gz*

  Solaris 2.7   *tar-1.13.19-sol7-sparc-local.gz*

  Select the appropriate package. You are prompted to Save "…13.19-solx-sparc-local.gz". Select Save and specify the location for the GNU tar file. The download process will take less than one minute.

- If the file was downloaded to a PC, copy the GNU *tar* file to a working directory on the Sun workstation.

- The Sunfreeware version of GNU tar and will be stored in the directory: "*/usr/local*" and is called "*tar*". After the installation of GNU *tar*, change the name to "*gtar*" (for GNU tar) so not to conflict with the Solaris versions of "*tar*". This step is done with the following commands:

```
cd    working_dir
gunzip   tar-1.13.19-solx-sparc-local.gz
```

  where "solx" is the appropriate Solaris *tar* file

```
su  (become root)
<root   password>
pkgadd   -d    tar-1.13.19-solx-sparc-local
cd    /usr/local
mv   tar   gtar
rehash
exit      (exit root)
```

Installing Perl/Tk

The Installation Notes are available from the ActiveState web site. The actual steps to install Per/Tk are slightly different than specified in the "ActiveState Installer Format" section.

  To install Perl/Tk, type in the following commands:

```
cd    working_directory
```

(where the ActivePerl tar file is located)

```
gunzip   ActivePerl-5.6.1.631-sun4-solaris.tar.gz
gtar     ActivePerl-5.6.1.631-sun4-solaris.tar
```

NOTE: use gtar (GNU tar) in place of Solaris tar. "gtar" is included in the Keithley software distribution for Solaris 2.8 (KTE 5.0 or KTE 4.2.3). See the NOTE above for Solaris 2.6 or Solaris 2.7.

```
su         (become root)
<root password>
mdir    /usr/local/ActivePerl-5.6
chown   kthmgr:Keithley /usr/local/ActivePerl-5.6
chmod   775   /usr/local/ActivePerl-5.6
exit       (exit root)
cd   ActivePerl-5.6
./install.sh
```

  This installation script will ask for the directory to install Perl/Tk. Use the same directory as created above, which is the default.

Results: Example Perl/Tk code

A small simple Perl/Tk script is included to verify the Perl/Tk installation. Create a file called "test.pl" that contains the following code:

```
#!/usr/local/ActivePerl-5.6/bin/perl
#————————————————
use English;
use strict;
use Tk;
my $mw  = MainWindow->new;
$mw->title("Perl/Tk test");
$mw->Button(-text=>'exit',
 -command=>sub{exit;},
 -backgrou -width=>12)
 ->pack(-side=>'right');
MainLoop;
```

  To execute this script, type in the commands:

```
chmod  777   test.pl
test.pl
```

  This script will display a small window titled "Perl/Tk test" and with a yellow button labeled "exit". If you click on the "exit" button, the window will close.

Other Considerations and Risk Analysis

Improper installation and setup of Perl may render Perl-based utilities inoperable, but will have no impact on tester uptime or measurement results. The installation process may change for future Solaris releases, but will be installed and working properly with the updated KTE release.

References

Refer to www.ActiveState.com web site for information on Perl/Tk, which includes release and installation notes, and system requirements.

  To learn more about programming with Perl/Tk, consult:

Learning Perl/Tk: Graphical User Interfaces with Perl (O'Reilly Nutshell) by Nancy Walsh, Linda Mui (Editor) Publisher: O'Reilly & Associates; ISBN: 1565923146; 1 edition (January 1999)

  To learn more about programming with Perl, refer to:

Programming Perl (3rd Edition) by Larry Wall, Tom Christiansen, Jon Orwant, Publisher: O'Reilly & Associates; ISBN: 0596000278; 3rd edition (July 2000)

Glossary of Abbreviations Used

KTE Keithley Test Environment

KEITHLEY