

Tips of Installing SAS/IntrNet on Linux

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ABSTRACT

SAS supports all major operating systems including Windows, UNIX, Linux, mainframe, Macintosh, and OpenVMS. Although Windows is SAS largest operating platform, Linux is widely used and tested by users worldwide, and more and more users are attracted to its open source and rapid growth. The North Carolina Trauma Registry initially developed ISSAC (Information System for State Trauma Advisory Committee) as a SAS/IntrNet application in a Windows environment, and then transferred it to the Linux operating system due to its reliability and ease of use. In contrast to most SAS installations, SAS/IntrNet is rather complicated. This paper covers tips on SAS/IntrNet Installation on Linux.

INTRODUCTION

The purpose of this paper is to serve as a quick reference to the installation of SAS/IntrNet on LINUX operating platform. Software requirements for this paper are: Red Hat Linux 7.3, SAS8.2 for Linux and Web Server Apache 2.0.49.

INSTALLATION OF SAS AND APACHE

Although it is beyond the scope of this paper to provide detailed installation of SAS and apache web server, it is useful to mention a few tips on these subjects.

TIP 1: INSTALL SAS ON LINUX

There is a good link for useful information on the installation of SAS on Linux
<http://support.sas.com/techsup/unotes/SN/005/005818.html>

TIP 2: INSTALL WEB SERVER - APACHE

You can download the web server apache using the following command line:
`wget http://www.apache.org/dist/httpd/httpd-2.0.49.tar.gz`

Before you can install it, you need unzip and de-tar the package:

1. Unzip the file: `$ gunzip httpd-2.0.49.tar.gz`
2. Make its own directory: `$ tar tf httpd-2.0.49.tar | head`
3. De-tar: `$ tar xf httpd-2.0.49.tar`
4. cd the directory : `cd httpd-2.0.49` before proceeding with compiling the server.

Now, you can configure and install the web server.

Configure the Source Tree

```
$ ./configure --enable-so
```

```
$ make
```

```
$ make install
```

TIP 3: START WEB SERVER

By typing in the following command, you can start up the web server – apache:

```
/usr/local/apache2/bin/apahcectl start
```

If the web server is up, you should see a test page at URL:

```
http://localhost/
```

INSTALLATION OF SAS/INTRNET

Now, we are ready to install SAS/IntrNet. In contrast to most SAS installations, SAS/IntrNet is rather complicated. In order to make SAS/IntrNet work properly, you need to edit the configuration files for application broker and web server.

TIP 4: DOWNLOAD CGI TOOLS

The CGI Tools package is a tar format file. You can either download it from SAS support website, or use the installation disk marked "SAS Client-Side Components". Find the package "websrv.tar" for Linux version, and download it to a temporary directory.

TIP 5: KSH INSTALL

After unpacking the tar file – websrv.tar, you need to make the installation by typing:

```
ksh INSTALL
```

If your Linux does not have ksh, you can download and install it. The simplest and probably best way to get it is to just use the up2date utility built into Red Hat, which if you all already have this configured should be as simple as typing:

"up2date pdksh" on the command line and allowing it to download the latest version. If this command does not work, you can use a direct link to an RPM of pdksh. To install the rpm, just download it to a temporary directory (e.g., /tmp), and then do: rpm -i /tmp/pdksh-5.2.14-16.i386.rpm

TIP 6: QUESTIONS ASKED IN THE INSTALLATION SCRIPT

The install script will prompt for Web server configuration data and then install the package.

Q: Enter the physical path corresponding to http://<your_server>/sasweb.

A: Since we're using Apache web sever, we entered /httpd/sasweb.

Q: Enter the physical path for SAS/IntrNet CGI executables.

A: The installation script will prompt the correct path /httpd/cgi-bin, you just press ENTER key to accept it.

Q: Enter the URL path corresponding to the physical path /httpd/cgi-bin. CGI URL [http://<your_server>/cgi-bin].

A: In our case this is http://hubble.med.unc.edu/cgi-bin.

TIP 7: WEB SERVER CONFIGURATION

After SAS/IntrNet CGI Tools are installed on your Web server, you need to configure your web server.

Find the httpd.conf file under /usr/local/apache2/conf, and make the following changes:

1. Use Find to locate: ScriptAlias /cgi-bin/, then type:

ScriptAlias /cgi-bin/ "/httpd/cgi-bin/"

2. Use Find to locate: DocumentRoot "/usr/local/apache2/htdocs", and then change it to:

DocumentRoot "/httpd"

3. Use Find to locate: ServerAdmin, then change the email address to your server administrator's email address:

ServerAdmin yourname@yourcompany.com

TIP 8: CREATING AN APPLICATION DISPATCHER SERVICE

To create the application dispatcher service, open a terminal window, and type the following at the prompt:

```
# cd /usr/local/SAS_8.2/utilities/bin
```

```
# ./inetcfg.pl
```

In the script, only one user-provided value is needed – the path to /sasweb/IntrNet8. For all the other prompts, you can just accept the defaults.

Root directory for SAS/IntrNet services (/root/intrnet):

/httpd/sasweb/IntrNet8

TIP 9: CONFIGURATION OF BROKER.CFG FILE

One last thing to do before starting SAS/IntrNet is making some changes in the broker.cfg file. It located at /httpd/cgi-bin directory, and you need to search for the section – Definition for full-time ("socket") servers. Make the changes to the following parameters: ServiceAdmin, ServiceAdminMail, Server, and port. For example:

SocketService default

ServiceAdmin "Sharon Schiro"

ServiceAdminMail "sharon_schiro@med.unc.edu"

Server hubble.med.unc.edu

Port 5001

FullDuplex True

TIP 10: START THE SERVICE

To start the default service execute: /httpd/sasweb/IntrNet8/default/start.pl

CONCLUSION

Installation of SAS/IntrNet on Linux is a complicated process, requiring knowledge of both the Linux operating system and web servers.

REFERENCES

SAS website for SAS/IntrNet software: <http://support.sas.com/rnd/web/intrnet/index.html>

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