# Installation Guide for WebSphere Application Server (WAS) and its Fix Packs on AIX V5.3L

**Introduction:**

This guide is written to help any person with little knowledge in AIX V5.3L to prepare the P Server to install and run an IBM WebSphere Application Server on it. This guide has been heavily tested in order to make sure of every step written in it, so please if you find any errors, mistakes, or typos please don't hesitate to mail us. The guide includes the following steps:

Step1: Install IBM AIX V5.3 L
Step2: Prepare the system to install/run WAS
Step3: Install IBM WebSphere Application Server
Step4: Install IBM WebSphere Application Server Fix Pack – Level1
Step5: Install IBM WebSphere Application Server Fix Pack – Level2
Step6: Final Checking and Verification

**Step1: Install IBM AIX V5.3 L**

If you already have an installed operating system, lets make sure that our system boots from the cdrom, so run the following command:
#bootlist –m normal cd0

Now insert the AIX V5.3L cd1 into the CD Drive, and then run the following:
#shutdown –Fr
Now your system shall reboot and go to the first screen of the installation menu.

If you don't have a working AIX System, just insert the AIX V5.3L cd1 into the CD Drive and press the power button, when you hear a beep going out twice, press F5, this shall take you to the installation first screen.

In any of the above cases, we now are at the first installation screen, press F1 and then Enter. After that choose the default settings for English or switch them to the settings you need, and then press Enter. After that choose number 2 to change the default installation settings, and then choose number 1 to make a complete overwrite install (Please make sure this is not a production environment, if it is please make a complete backup and then choose the preserve installation method).

Now just press Enter twice to start the installation of the system.

**Step2: Prepare the system to install/run WAS**

After the installation is finished and the system goes up for the first time, the Installation Assistant shall work for you to make some initial settings. Go through the Assist Manager and configure the following:
- Configure the Time and Date depending on your location.
- Configure the Security settings, just choose the default for now, change them later if required.
- Set a password for the user root (Administrator of the AIX System).
- Configure your Network Connection (Manually or Dynamic), set the host name, name server (DNS Server), and the gateway.

Now our system is ready to accept order from its Administrator, so lets start first by increasing our file systems, as AIX when installed only uses the required space for the system and leaves the rest of space on your disk (Hard disk) not allocated to any file system. We need the following disk space:
- On the /usr we need around 3G.
- On the /opt we need around 2G.
- On the /tmp we need around 110, but I recommend 1G.

To do the above changes to the system, do the following:
#chfs -a size=+3G /usr
#chfs -a size=+2G /opt
#chfs -a size=+1G /tmp

Now let's go and upload the files needed. The files needed are:
- Mozilla Web Browser.
- WAS ND 6.0.1 – AIX
- WAS Fix Packs

Please use any ftp client from any other machine and upload the files to the server.

#cd /path2/installation_files/
#ftp AIX_SERVER_IP
ftp> put files

Note: AIX_SERVER_IP is the IP of your system.

We shall now go through the steps to install the Mozilla web browser, as it is required by WAS in order to be installed. First let's install the Mozilla prerequisites:

#cd /path2/Mozilla_pre
#rpm –Uvh *.rpm

If you get an error message such that gettext is already installed, then do the following:
#rpm –Uvh --force *.rpm

Now let's extract the Mozilla base package:
#gzip -cd Mozilla.base.tar.gz | tar -xvf -

Now let's run smitty to install the Mozilla base package, so do the following:
#smit

- Go to "Software Install and Maintenance"
- Go to "Install and Update Software"
- Go to "Install Software"

Or just run the following:
#smit install_software

In the input device field choose the location where the Mozilla base package is stored, and then press enter. Now in the "Install Software" window select the following:
- Place the cursor on the SOFTWARE to Install field and press F4 and select "Mozilla Web Browser and Application Suite"
- In the Accept new license field, make it yes using the up and down arrows.
- Leave all other settings as they are (defaults) and just press Enter, to start the installation process of the Mozilla Web Browser.

Now to check that Mozilla is working properly, in any Terminal just type:
#/usr/bin/Mozilla
Or
#mozilla

If the web browser is displayed then everything went great and let's move on to the next step. If Mozilla doesn't work please check your log files.

**Step3: Install IBM WebSphere Application Server**

Now we are in to the hard work of this installation guide, please grab a bucket of water or a big mug of Coffee and let's start. First lets extract the WAS Installation files:

<span style="color:red">#cd /path2/was_setup/files/
#tar xvf was_setup.tar</span>

I always like checking, so let me make a quick check on JAVA, just do the following:
<span style="color:red">#java -version</span>

If everything is working fine, you shall get info about it's version and other version blah blah blah stuff.

Now start the WAS launchpad for installation process:
<span style="color:red">#./launchpad.sh</span>

Here a browser shall open with links to installation wizards. Go and press on the installation wizard for the **WebSphere Application Server Network Deployment**. When the wizard is launched just accept all default settings and walk through the pages of the wizard till the end. Now at the end of this process you shall see a check box checked saying "**Launch Profile creation wizard**", keep it checked and press Next. Now choose **create an Application Server Profile**, click Next. Then choose **profile1** for our profile name, and keep all other settings as they are and move till the end of the wizard. Now we shall see another check box called "**Launch the First steps console**", keep it checked and click Finish.

Now the **First steps** page shall open. Let's make a quick check of our installation process, so let's click on the **Installation and Verification** link. This shall open a terminal and starts checking and verifying our installation, in the end it shall give us a installation complete successful message. Also, what the last step did too is it started the WAS Server for us.

Now we go back to the **First steps** page and press on the **Administrative Console** link, this shall open the Mozilla browser and requires a login to be done by us. Just login using any random name (This is only done when running the console for the first time).

Here to proceed further we need to add a new user to the system with root privileges, so please do the following:
<span style="color:red">#smit user</span>

- Name = wasadmin
- Home Dir = /wasadmin
- Default Group = system
- Group Set: bin, security, audit, ….

Now go back to the terminal and assign a default password for the new user using the following:
<span style="color:red">#passwd wasadmin</span>

Enter the password you like twice and then <u>please do a login into the system using this user</u> so that he can change his password and so that we shall not have problems in authenticating this user with the WAS Server.

Now go back to our browser and press on **Security -> Global Security -> Local OS**
Here add the **wasadmin** user we created and the password you chose and press **OK**, then **Save**.

Now back to first page and then go to **General Properties**, and check "**Enable global security**", press **OK**, and then **Save**. When you are done, just **logout** of the page.

Now go to the **First steps** page click on **Stop the Server** wait for the process to complete then go and click on **Start the Server** again. After that click on **Administrative Console**, here Mozilla shall launch and this time asking if we accept the certificate. Choose accept and press Enter. Login using the user we created "**wasadmin**" and the password of the user. See if everything is fine the logout.

Now launch Mozilla, don't ask me how, by now you must know how to do it by yourself. Enter the following URL in the URL bar:
http://localhost:9080/snoop

See if it is working, if yes let's move on we have a long road to walk through.

We now reached the **IBM HTTP Server** installation which can be launched from the launchpad. Click on **Install wizard for IBM HTTP Server** and accept all the default settings in the wizard. At the end of the wizard keep the check box checked which shall launch the **WAS Plug-in Installation wizard**. Leave all settings as they are until you reach the selection page and choose **IBM HTTP Server V6**, click Next. Then choose **WAS machine (local)**, click Next. Leave all settings as they are until the wizard asks you for the existing IBM HTTP Server httpd.conf file. Browse to the directory which is: **/usr/IBMIHS/conf/httpd.conf**. Leave all other settings as they are and finish the setup process.
Now open Mozilla and start the console:
http://localhost:9043/ibm/console/logon.jsp

User = wasadmin
Pass = wasadmin

Go to **Servers -> Web Servers**
In this page we must see that the webserver named "**webserver1**" is installed but a red color in the status column indicating that it is not running. Go to the Terminal and do the following to start the Apache server:
<span style="color:red">#cd /usr/IBMIHS/bin</span>
<span style="color:red">#./apachectl start</span>

Now get back to the **Web Servers** page and check if the color is green. If the color has changed to green this means that the Apache server now is up and running.

One last check, open Mozilla and go to:
http://localhost

Check if Apache default page is working. Then also:
http://localhost/snoop

User = wasadmin
Pass = wasadmin

And check if it is working. If it is? Well congratulations Step3 is complete, and let's move to step4, which is for the fix pack installation.

**Step4: Install IBM WebSphere Application Server Fix Pack – level1**

In order to install the fix packs properly we first need to stop the following:
-    Apache Web Server:
        #cd /usr/IBMIHS/bin
        #./apachectl stop
-    WAS Server:
        #cd /usr/IBM/WebSphere/AppServer/profiles/profile1/bin/
        #./stopServer.sh server1 –username wasadmin –password wasadmin
     Any running java application
        #ps ae |grep java (make sure no process is running, if so wait for it to finish, if
        it is in the defunct state, kill it.

Now let us copy the fix pack tar files to the root directory of WAS Server:
#cd /path2/fix_packs
#cp * /usr/IBM/WebSphere/AppServer/

Extract the fix packs in the same directory:
#tar xvf fixpack1.tar
#tar xvf fixpack2.tar
#tar xvf fixpack3.tar

To save some space, delete all the tar files:
#rm -rf *.tar

Now let us move to the update process. First let's go to the directory which we shall
run the update process from:
#cd /usr/IBM/WebSphere/AppServer/bin/

Now run the following command:
#./setupCmdLine.sh

Now move to the following:
#cd updateinstaller/

Now let us run the installer, but first run the following:
#./update -silent -w relaunch.active=false

Now we are ready to run the update installer wizard:
#./update

Select the first fix pack (WAS Fix Pack) and keep all other default settings and move
to the end of the process. Then click finish.

Now we shall start the update for the 2^(nd) fix pack (HTTP Server Fix Pack):
#./update

- Select the path: /usr/IBMIHS/
- Select the WASIHS Pack and proceed to the end. Then click finish.

Now we shall start the update for the 3rd fix pack (WAS Plugins Fix Pack):
#./update

- Select the path: /usr/IBM/WebSphere/Plugins/
- Select the Plugins Pack and proceed to the end. Then click finish.


Now let us check if the update process went all well without any problems. First let us move to the following:
#cd /usr/IBM/WebSphere/AppServer/bin/

Now in this directory there is a predefined script to check the version of the WAS Server, so just do the following:
#./versionInfo.sh

In this installation guide we must see 6.0.2.0, if yes? Then let's move on, every thing is fine.

Now let us check Apache, has it's update process succeeded. Move to the Apache directory:
#cd /usr/IBMIHS/bin/
#./apachectl –version
In this installation guide we must see 6.0.2, if yes? Then let's move on, every thing is fine.

Now start Apache Web Server:
#./apachectl start

Start the WAS Server:
#cd /usr/IBM/WebSphere/AppServer/profiles/profile1/bin/
#./startServer.sh server1

Go to Mozilla, and in the URL bar type the following:
http://localhost/snoop

If everything is working fine then congratulations, you have finished the level1 update process. Now let us move to the update process level2.

**Step5: Install IBM WebSphere Application Server Fix Pack – Level2**

Now before we start the update process, we need the fix packs that shall be used in this step, so let's go and get them. Copy the fix packs from the level2 fix packs directory to the root installation directory of the WAS Server:
#cd /path2/level2/fix_packs
#cp * /usr/IBM/WebSphere/AppServer/

Now just like in step4, we need to stop the Apache Web Server and the WAS Server:
#cd /usr/IBMIHS/bin
#./apachectl stop

Then stop WAS, what are you waiting for?:
#cd /usr/IBM/WebSphere/AppServer/profiles/profile1/bin/
#./stopServer.sh server1 –username wasadmin –password wasadmin

Now we need to delete the maintenance directory which is found inside the updateinstaller directory before we extract the fix pack tar files. So do the following:
#cd updateinstaller/
# rm -rf maintenance/

Now get back to the last working directory:
#cd ..

Now it's extract time. Start extracting the 4 fix pack tar files:
#tar xvf fixpack1-level2.tar
#tar xvf fixpack2-level2.tar
#tar xvf fixpack3-level2.tar
#tar xvf fixpack4-level2.tar

To save some space, delete all the tar files:
#rm -rf *.tar

Now let's move to the update process, so:
#cd /usr/IBM/WebSphere/AppServer/bin/

Now run the following command:
#./setupCmdLine.sh

Now move to the following:
#cd updateinstaller/

Now let us run the installer, but first run the following:
#./update -silent -W relaunch.active=false

Now we are ready to run the update installer wizard:
#./update

Select the first fix pack (WAS Fix Pack) and keep all other default settings and move to the end of the process. Then click finish.

Now we shall start the update for the 2$^{nd}$ fix pack (HTTP Server Fix Pack):
#./update

- Select the path: /usr/IBMIHS/
- Select the WASIHS Pack and proceed to the end. Then click finish.

Now we shall start the update for the 3rd fix pack (WAS Plugins Fix Pack):
#./update

- Select the path: /usr/IBM/WebSphere/Plugins/
- Select the Plugins Pack and proceed to the end. Then click finish.

The final update shall be for the JAVA SDK, just do following:
#./update

- Select the path: /usr/IBM/WebSphere/AppServer/
- Select the JAVA Pack and proceed to the end. Then click finish.

**Step6: Final Checking and Verification**

In order to say that our level2 update process went fine, we need to check and verify that. So we shall do the following:

- Check the WAS Server version:
#/usr/IBM/WebSphere/AppServer/bin/versionInfo.bat

The output expected for this installation guide is: 6.0.2.11

- Check the Apache Web Server version:
#/usr/IBMIHS/bin/apachectl –version

The output expected for this installation guide is: 6.0.2.11

Now start Apache Web Server:
#/usr/IBMIHS/bin/apachectl start

Start the WAS Server:
#cd /usr/IBM/WebSphere/AppServer/profiles/profile1/bin/
#./startServer.sh server1

Go to Mozilla, and in the URL bar type the following:
http://localhost/snoop

If it is running? Well now a big congratulations to you. You now have WAS Server 6.0.2.11 up and running on AIX V5.3L.


**EOF**