**About Autosys and work with bash**

Autosys is an enterprise job scheduling and workload automation tool developed by CA Technologies, now Broadcom. It enables organizations to automate and manage complex business processes, batch jobs, and data workflows. Autosys provides a centralized platform to define, schedule, monitor, and control jobs across various systems and applications.

**What is job scheduling by Autosys?**

Autosys can schedule and manage various types of jobs across different systems and applications. Here are some common types of jobs that can be scheduled and executed by Autosys:

1. Shell/Script Jobs: These jobs involve executing shell scripts or command-line scripts written in languages such as Bash, Python, Perl, or PowerShell. Shell/Script jobs can perform a wide range of tasks, including file operations, data processing, system configurations, and application integrations.
2. Database Jobs: Autosys can schedule jobs related to database operations, such as executing SQL scripts, running stored procedures, performing data extracts, loading data into databases, and running database maintenance tasks.
3. File Transfer Jobs: Autosys can handle jobs related to file transfers between different systems or locations. These jobs can involve FTP/SFTP transfers, file copy operations, file encryption/decryption, and data synchronization tasks.
4. ETL (Extract, Transform, Load) Jobs: Autosys can schedule and manage jobs involved in data integration and ETL processes. These jobs typically extract data from various sources, transform it according to predefined rules, and load it into target systems or databases.
5. Batch Processing Jobs: Autosys is commonly used to schedule batch processing jobs that run in sequence or parallel. These jobs can include data validation, data processing, report generation, data imports/exports, and other batch-oriented tasks.
6. Web Services Jobs: Autosys can schedule jobs that interact with web services or APIs. These jobs can invoke web service endpoints, perform data retrieval or data submission tasks, and integrate with external systems or cloud services.
7. Data Backup/Restore Jobs: Autosys can schedule jobs related to data backup and restoration. These jobs involve creating backups of files, databases, or entire systems and restoring data from backups when required.
8. System Commands/Jobs: Autosys can schedule jobs that involve executing system commands or predefined tasks specific to the underlying operating system. These jobs can include system maintenance tasks, server restarts, log rotations, or other system-level operations.
9. Custom Application Jobs: Autosys can schedule jobs specific to custom applications or proprietary software used within an organization. These jobs may involve application-specific tasks, data processing, report generation, or integrations with other systems etc.

**System requirements (in Unix)**

To install and run the AutoSys Workload Automation server in a UNIX or Linux environment, the minimum recommended requirements are as follows:

* Processor: 1 GHz, 2CPU
* Physical memory: 4 GB RAM
* Swap space: 2 GB
* Hard disk free space: 5 GB

Disk space requirements for AutoSys Workload Automation:

* Full product: 700 MB
* Scheduler, Client, Agent: 430 MB
* Application Server, Web Server: 360 MB
* Application Server only: 300 MB
* Agent only: 420 MB
* Client only: 300 MB
* SDK only: 250 MB
* Documentation only: 250 MB
* SDK runtime environment: 250 MB
* Disk space for the database (to support default installation values):
  + Oracle: Data—800 MB, Index—80 MB
  + Sybase: Data—800 MB, Log—100 MB, tempdb—500 MB, tempdb log—50 MB

**Java Runtime Environment (JRE) and Adopt OpenJDK Supported Versions**

|  |  |
| --- | --- |
| **Operating Environment** | **Supported JRE Version** |
| Linux | 1.8.0\_252-b09 |

On UNIX, the AutoSys Workload Automation installer must be allowed to run the following command with no user response or interaction:

Command:- sudo su

To enable the root command.

**Download & Installation of Autosys**

To download the autosys application first we need to log in into there portal by then we have a user ID or need to register to download software from Broadcom but I was waste a lot of time in search of Download file so here's the link from where we need to download after just logging into the web page.

Link:- <https://downloads.broadcom.com>

I have download 12.3 version (which is latest on May 2023)

Supported Databases

* [Preparing the AE Database - DB2](https://docs.automic.com/documentation/webhelp/english/AA/12.3/DOCU/12.3/Automic%20Automation%20Guides/Content/Installation_Common/PreparationSteps/PrepareAEDB_DB2.htm)
* [Preparing the AE Database - MS SQL](https://docs.automic.com/documentation/webhelp/english/AA/12.3/DOCU/12.3/Automic%20Automation%20Guides/Content/Installation_Common/PreparationSteps/PrepareAEDB_MSSQL.htm)
  + [Integrating an Alternative MS SQL Server Schema](https://docs.automic.com/documentation/webhelp/english/AA/12.3/DOCU/12.3/Automic%20Automation%20Guides/Content/Installation_Common/install_alternative_MS_SQL_Server_DB_schema.htm)
* [Preparing the AE Database - Oracle](https://docs.automic.com/documentation/webhelp/english/AA/12.3/DOCU/12.3/Automic%20Automation%20Guides/Content/Installation_Common/PreparationSteps/PrepareAEDB_Oracle.htm)
* [Preparing the AE Database - PostgreSQL](https://docs.automic.com/documentation/webhelp/english/AA/12.3/DOCU/12.3/Automic%20Automation%20Guides/Content/Installation_Common/PreparationSteps/PrepareAEDB_PostgreSQL.htm)

**Step1:** After all we have already installed a database or need to set it up database (In my case - postgrasql )

# Preparing the AE Database - PostgreSQL

Disk Space Required

The initial database space required for an Automation Engine installation depends on the type and size of the system:

* Test systems: 1 GB
* Production systems
  + Small systems: 5 - 20 GB
  + Medium systems: 20 - 50 GB
  + Large systems: > 50 GB

**Steps to setup postgrasql database**

1. Update Package Manager

Sudo apt update

1. Install PostgreSQL:

sudo apt install postgresql

1. PostgreSQL Configuration: PostgreSQL should be automatically initialized after installation. However, there are a few configurations you may need to check or modify. The main configuration file is located at /etc/postgresql/<version>/main/postgresql.conf.

Open the configuration file using a text editor: sudo nano

/etc/postgresql/<version>/main/postgresql.conf

Replace <version> with the actual version number of PostgreSQL installed on your system.

Some common configurations you might want to consider:

Adjusting the listen\_addresses parameter to allow remote connections if necessary.

Modifying the max\_connections parameter to control the maximum number of concurrent connections.

Adjusting the shared\_buffers parameter to allocate memory for database caching.

Save the file and exit the text editor.

1. Start PostgreSQL:

sudo service postgresql start

1. Verify PostgreSQL Installation: To check if PostgreSQL is running, you can use the following command:

sudo service postgresql status

than download that zip file need to uncompressed or unzip after that we have installation file (Two different files four different operating system I.e. windows and unix) install.sh (unix, linux) Install.exe(windows) in my case it's Unix .

**Step2:** first I need to give execution permission to that bash executive file using command:

chmod +x install.sh

**Step3**: after provide that permission need to execute in terminal to install using command:

./install.sh

**Step 4:** now it needs some information like Java installation or install Java directory that we have already so we just need to provide that directory according to the installation of Java in (my case it's default) if it is already done it's OK else we need to install it and the Java version must be stable version 8 or 11

**Step 5:** now we have to accept some user agreement and then select default/ custom directory for installation of autosys software in (my case it's default) and then I just keep everything default and take a step forward there's a choice for installation or setting up of any database in my case it's postgreSQL it's an choice weather want to set database manully or automatic . Then set up will start installing in this system.

# ServiceManager - Command Line Program (CLI)

You can start and end services, as well as call up a list services of a computer in a ServiceManager environment.

**Note:** The CLI Program is case-sensitive.

All services that belong to the ServiceManager's environment can be protected with a password, thus protecting the services from being started, ended, or modified without authorization.

There are three different authorization levels:

1. *Read -* Allows you to monitor the status of the services.
2. *Read and execute -* Allows you to execute commands, such as start and stop services, and monitor the status of the services.
3. *Read, execute, and administrate -* Allows you to edit the configuration of the ServiceManager, to execute commands, and to monitor the status of the services.

**Important!** You require the authorization level *Read, execute, and administrate* to set or change passwords. For more information, see [Handling Components](https://docs.automic.com/documentation/webhelp/english/AA/12.3/DOCU/12.3/Automic%20Automation%20Guides/Content/ServiceManager/ServiceManager_DialogProgram.htm#HandlingComponents).

You can establish a secure connection (TLS 1.2) with the ServiceManager but still support non secure connections to legacy ServiceManagers. For secure connections, you need to have CAPKI installed on the same computer in which you have installed the ServiceManager CLI. If you are using an insecure connection, the CLI executes the command towards the ServiceManager but also writes a warning message to Standard error.

If the Client Certification is enabled in the ServiceManager, the client requires a certificate for authentication. The certificate and key files for the ServiceManager - CLI have to be provided as additional command line parameters.

**Example**

In this example, the certificate and key files are located in the .\bin directory of the ServiceManager - CLI.

**ucybsmcl** -c GET\_PROCESS\_LIST -h unixw2k01:8871 -n uc4p -certificate C:\Automic\Automation.Platform\ ServiceManagerDialog\bin\<certificatefilename>.pem -key C:\Automic\Automation.Platform\ ServiceManagerDialog\bin\<keyfilename>.pem

Some certificates may require an intermediate certificate for validation if the signing certificate authority is not trusted directly. Use the command line parameter -chain <*chain file name*> to point to the location of the intermediate certificate.

If the client certification is enabled and the client does not have a certificate or if the certificate validation fails, the connection is terminated. In this case, the ServiceManager writes a corresponding log entry and returns an error message to the client.

**Unix:**

**ucybsmcl -c GET\_PROCESS\_LIST -h** *computer name:port number* **-n** *phrase*

**ucybsmcl -c START\_PROCESS -h** *computer name:port number* **-n** *phrase* **-s** *name of the service* [**-p** *password*]

**ucybsmcl -c STOP\_PROCESS -h** *computer name:port number* **-n** *phrase* **-s** *name of the service* [**-m** *stop mode*] [**-p** *password*]

**ucybsmcl -c SET\_DATA -h** *computer name:port number* **-n** *phrase* **-s** *name of the service* **-d** *property value* [**-p** *password*]

Installation of AE AWI

# Configuring Automic Web Interface

Installing and Starting the Application Server

**Tomcat**

* Java is needed check or install command: sudo apt install default-jdk
* Change the directory command : cd /opt
* Download tomcat using link: [Apache Tomcat® - Apache Tomcat 9 Software Downloads](https://tomcat.apache.org/download-90.cgi)
  + Direct link to download gui
  + Command to download wget <https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.75/bin/apache-tomcat-9.0.75.tar.gz>
* Untar the download file command
  1. mkdir tomcat
  2. tar –xvf apache-tomcat-xxx.tar.gz
* Setting EnvironmentVariable
  1. Vim .bashrc
  2. export CATALINA\_HOME="/opt/tomcat" << directory may vary in different machine>>
  3. export JAVA\_HOME="/usr/lib/jvm/default-java" << directory may vary in different machine>>

Deploying the WAR File

If you are using **Tomcat**, copy the awi.war file to the **webapps** folder of the Tomcat installation. If the Tomcat is running, the awi.war file will be deployed automatically, creating a folder with the same name.

**Important!** Deleting the awi.war file removes the corresponding subfolder, which also undeploys the AWI.

Installing the Agent In Linux

Register with user ID AE.

download 12.3 version tar or zip form

Untar or unzip the pack and change directory to - Automic/Automation.Platform/Agents/unix/bin

unzip -d ucxj???.tar.gz or unzip ucxj???.tar.gz  
tar -xvf ucxj???.tar  
(Linux: tar -zxvf ucs???.tar.gz)

Paste to ~ /opt/Atomic/Automation.Plateform/Agent/unix/bin

Provide these pemission to file

* chown root ucxjlx6
* chgrp admin ucxjlx6
* chmod 4755 ucxjlx6