

# MotM - Supervisor

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# Introduction

- Supervisord is a process control system written in Python that can be used to manage scripts, applications and/or frameworks as Unix daemons
    - Child programs you write that run in supervisord are referred to as sub-processes
  - It requires Python 2.4 – 2.7, but not Python 3
  - Supervisord has been tested with Linux, Solaris, FreeBSD and Mac OS X, but will not run under any version of Windows
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# Supervisord Components

- supervisord

- The server piece that is responsible for starting and managing sub-processes configured in it's configuration file, typically located in `/etc/supervisord.conf`

- supervisorctl

- A client command-line tool used to connect and control supervisord and its sub-processes
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# Supervisord Components

- Web server
  - A simple web UI with similar functionality to supervisorctl; it must be configured in supervisord.conf
- XML-RPC Interface
  - Provided in the web server, this API can be used to monitor and control supervisor and its sub-processes programmatically

# Installing

- The simplest way to install is via pip:  
**pip install supervisor**
- Next, generate a default configuration file (as root):  
**echo\_supervisord\_conf > /etc/supervisord.conf**
- Scripts are available to automatically run supervisord on startup

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# Sub-processes

- Don't daemonize programs running in supervisord—they should run in the foreground
    - Sub-processes should not detach themselves from the terminal where they are started
  - Environmental variables can be set in supervisord.conf which makes them accessible to sub-processes
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# Logging

- Supervisord will log messages on it's own health and sub-process state changes
  - Each program managed by supervisord can have a stderr and stdout log file, or both combined in one file
  - Both supervisord and programs can be configured with log file rotation, maximum sizes and the number of backups to keep
  - Logging is configured in supervisord.conf
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# Additional Features

- Run a sub-process from start to finish continuously while supervisord is running
  - Custom event listeners can be written to respond to changes in supervisord states
  - The XML-RPC API can be extended for deeper programmatic control of supervisord
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# Demo: Log Monitoring

- Installing and configuring supervisord, including using an init.d script
- Monitoring a log file (/var/log/messages) and replicating 1–10 lines at a time into another file
- Keeping track of where we are, i.e., state management
- Installing the demo:

1. `pip install supervisor`

2. `cp supervisord_demo/config/supervisord.conf /etc/supervisord.conf`

3. `cp supervisord_demo/config/supervisord /etc/init.d/supervisord`

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# Resources

- All information in this presentation provided by the excellent documentation at:  
<http://supervisord.org>
  - Startup scripts are discussed and referenced from:  
<http://supervisord.org/running.html#running-supervisord-automatically-on-startup>
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