

Oracle Linux Automation Manager / Engine



Oracle Linux Automation Manager and Oracle Linux Automation Engine are the latest additions to the Oracle Linux operating environment. Together, they provide a cost-effective, powerful, scalable, and secure infrastructure automation framework for enterprise environments. Additionally, they streamline software provisioning, configuration management, and application-deployment, enabling infrastructure as code.

Oracle Linux Automation Manager and Engine, based upon the open source AWX and Ansible projects respectively, are included with an Oracle Linux Premier Support subscription. Oracle Linux Premier Support customers, already using or evaluating AWX or Ansible, can run these technologies with Oracle Linux Automation Manager and get support at no additional cost.

Oracle Linux Automation Manager and Engine

Oracle Linux Automation Manager is based on the AWX open source project. The AWX development branch and documentation are available in [GitHub](#). Oracle Linux Automation Manager provides a centralized web-based UI with reporting and control for your IT infrastructure. With a visual dashboard, it provides workflow automation, role-based access control, job scheduling, integrated notifications, and graphical inventory management.

Oracle Linux Automation Engine is based on the Ansible open source project. The Ansible development branch and documentation are available in [GitHub](#).

Oracle Linux Automation Manager Release has a new, decentralized architecture. The modular, container-based approach effectively decouples the control and execution planes with the option of multiple nodes and the ability to have a remote database environment. Current users can easily migrate to the latest release by following instructions within the [documentation](#).

Key Benefits

- Reduces manual processes and automates day-to-day IT tasks
- Stabilizes configuration management
- Avoids accidental and malicious drift using playbook-based configuration as code
- Powerful, intuitive, and secure web-based user interface
- Provides human-readable infrastructure playbooks in YAML configuration language
- Easy to create or leverage existing playbooks for tasks such as configuring SELinux, firewalls, networking, and adding users
- Standardizes installing and configuring applications such as webservers on inventories of hosts
- Simplifies assigning regular and timed job runs for tasks
- Included with Oracle Linux Premier Support at no extra cost

For organizations invested in YAML and using or evaluating AWX or Ansible, Oracle Linux Automation Manager can easily integrate, provide an enterprise solution, comprehensive automation and run existing YAML-based playbooks.

Oracle Linux Automation Manager is comprised of five main components, Control Plane, Automation Execution Environments, Service Mesh, Private Automation Hub and Builder Utility.

Control Plane

The Control Plane for Oracle Linux Automation Manager provides the user interface, role-based access control and content management. The Control Plane defines how automation is initiated, deployed, audited and delegated. From the Controller Plane user interface or via RESTful API, users can manage inventory, schedule workflows, track changes and initiate reporting.

Execution Environments

Execution Environments simplify how automation is executed. With Execution Environments, the place from where the automation is executed is a ready-built container with Oracle Linux, ansible-core, python and supporting collections and libraries, which enables a consistent and defined environment.

Service Mesh

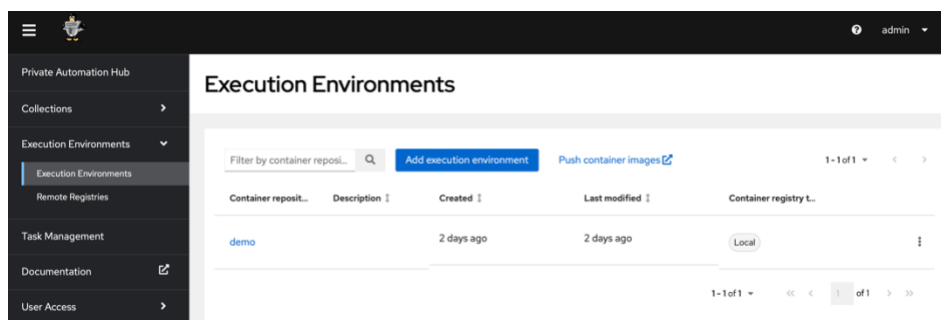
Service Mesh provides a flexible multi-service network linking controller and execution nodes within a secure resilient mesh enabling the sharing of job execution.

Private Automation Hub

Based on open-source project [galaxy_ng](#), Private Automation Hub allows to synchronize and securely store customer Ansible Collections and Execution Environments to use with Oracle Linux Automation Manager. It is a central repository where organizations can store, control access to, and share their user-generated Ansible content.

Key Features

- Projects, which are a logical store for your playbooks, can be stored locally on the Oracle Linux Automation Manager or sourced from a Source Control Manager (SCM) facility such as GIT.
- Inventory management, where logical groups of hosts can run individual modules or playbooks.
- Credential management, for project source and inventory nodes, where credentials such as machine-based SSH credentials, Oracle Cloud Infrastructure (OCI) and GIT access tokens are centrally stored and managed.
- Role-based access control of users, groups, and resources.
- Programmatic interaction with REST API and CLI



Related support services

- [Oracle Linux Support](#)
- [Oracle Premier Support for Systems](#)

Builder-Utility

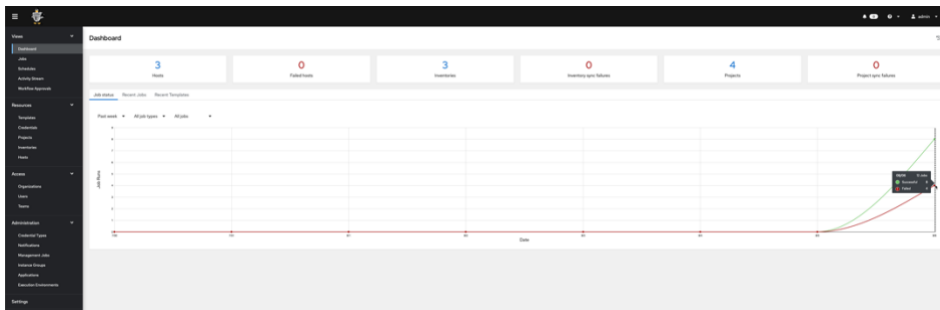
The Builder Utility is based on the open source project [ansible-builder](#). Builder-Utility aids the customization and creation of Execution Environments and then upload them to Private Automation Hub, ultimately to be leveraged by Oracle Linux Automation Manager to suit the dependencies and requirements of numerous Environments.

To access finer and more detailed insights of the above topics, please refer to Oracle Linux Automation Manager: Private Automation Hub Installation Guide and Oracle Linux Automation Manager: Private Automation Hub User's Guide.

Dashboard

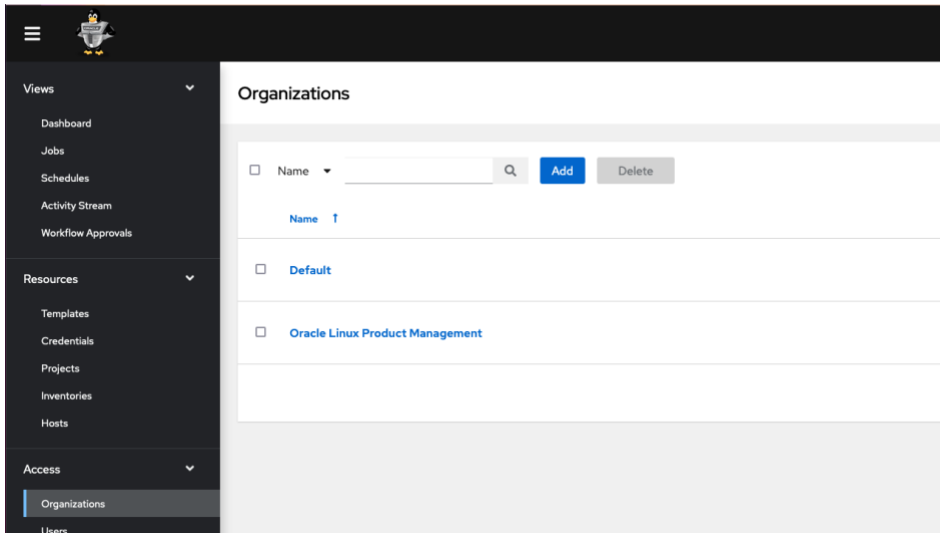
The Oracle Linux Automation Manager dashboard provides an immediate overview for everything scheduled and in flight within your environment.

From the dashboard, you can access hosts and inventory status, view all jobs, and an overview of recent job runs. The option to adjust job status or time range settings enables you to graph data based on specific requirements.



Role-based access control

Allowing the right people with the right access to the right resources is key. Oracle Linux Automation Manager lets organizations quickly and easily control who can run what tasks on what resources.



Real-time job updates

Executed and scheduled jobs run in real time. As Oracle Linux Automation Manager automates across your infrastructure, you'll see running and completed tasks, related to each system, and each success or failure, with complete output of the execution.

Name	Status	Type	Start Time	Finish Time
14 - Update Oracle Linux	Running	Playbook Run	06/19/2022, 10:17:40	
15 - Update Oracle Linux	Completed	Playbook Run	06/19/2022, 10:17:03	06/19/2022, 10:17:40
16 - Update Oracle Linux	Completed	Playbook Run	06/19/2022, 10:12:12	06/19/2022, 10:12:12
17 - Oracle Ansible Collection	Completed	Source Control Update	06/19/2022, 10:00:56	06/19/2022, 10:00:56
18 - Oracle Ansible Collection	Failed	Source Control Update	06/19/2022, 10:00:08	06/19/2022, 10:00:08
19 - Oracle Ansible Collection	Failed	Source Control Update	06/19/2022, 10:00:34	06/19/2022, 10:00:34
20 - Hello World	Completed	Playbook Run	06/19/2022, 10:49:53	06/19/2022, 10:50:00
21 - Hello World	Completed	Playbook Run	06/19/2022, 10:49:57	06/19/2022, 10:49:55
22 - Oracle Project	Completed	Source Control Update	06/19/2022, 10:48:33	06/19/2022, 10:48:39
23 - Oracle GIT	Completed	Source Control Update	06/19/2022, 10:48:14	06/19/2022, 10:48:28
24 - Oracle GIT	Completed	Source Control Update	06/19/2022, 10:48:30	06/19/2022, 10:48:45
25 - ping	Completed	Command	06/19/2022, 10:44:57	06/19/2022, 10:44:43
26 - Oracle GIT	Failed	Source Control Update	06/19/2022, 10:37:58	06/19/2022, 10:40:12
27 - Oracle Project	Failed	Source Control Update	06/19/2022, 10:34:00	06/19/2022, 10:36:17

Job scheduler

Oracle Linux Automation Manager offers different options to schedule playbook runs and source control updates, allowing you to schedule occasional tasks like point-in-time jobs (backup), periodic jobs (configuration remediation for security compliance), or a full and continuous delivery job with just a few clicks.

Name	Type	Next Run
Cleanup Activity Schedule	Management Job	09/09/2022, 11:02:59
Cleanup Expired OAuth 2 Tokens	Management Job	
Cleanup Expired Sessions	Management Job	
Cleanup Job Schedule	Management Job	07/08/2022, 11:02:59

Activity log

Oracle Linux Automation Manager enables you to verify all the activities executed. Events within your infrastructure can be analyzed, monitored for anomalies, and correlated from one service to another. Event data types are job runs, activity stream data, and log messages.

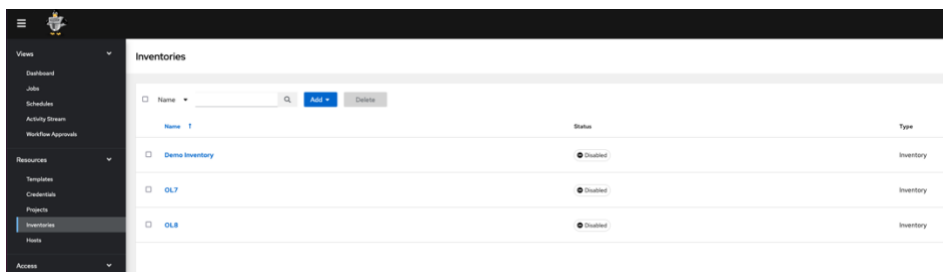
```

0 /usr/local/lib/python3.8/site-packages/paramiko/transport.py:236: CryptographyDeprecationWarning: Blowfish has been deprecated
1 *class*: algorithms.Blowfish,
2 Enter passphrase for /runner/artifacts/12/ssh_key_data:
3 Identity added: /runner/artifacts/12/ssh_key_data (olamc.....us.oracle.com)
4 /usr/local/lib/python3.8/site-packages/paramiko/transport.py:236: CryptographyDeprecationWarning: Blowfish has been deprecated
5 *class*: algorithms.Blowfish,
6
7 PLAY [all] ***** 13:07:06
8
9 TASK [Gathering Facts] ***** 13:07:06
10 ok: [.....us.oracle.com]
11
12 TASK [update all packages on all Oracle Linux 8 systems] ***** 13:07:09
13 skipping: [.....us.oracle.com]
14
15 TASK [update all packages on all Oracle Linux 7 systems] ***** 13:07:09
16 changed: [.....us.oracle.com]
17
18 TASK [check if reboot required] ***** 13:16:58
19 ok: [.....us.oracle.com]
20
21 TASK [debug] ***** 13:16:59
22 ok: [.....us.oracle.com] => {
23   "reboot_required": {
24     "changed": false,
25     "cmd": [
26       "/usr/bin/needs--restarting",
27       "--p"
28     ],
29     "delta": "0:00:00.215460",
30     "end": "2022-08-06 05:18:10.471899",
31     "failed": false,
32     "failed_when_result": false,
33     "msg": "non-zero return code",
34     "rc": 1,
35     "start": "2022-08-06 05:18:10.255639",
36     "stderr": "",
37     "stderr_lines": [],
38     "stdout": "Core libraries or services have been updated:\n kernel -> 3.10.0-1160.71.1.0.1.el7\n dbus -> 1:1.10.24-15.0.1.el7\n 3.29-9.el7_6\n LL
55
56 TASK [reboot (if needed) to apply latest kernel and updates] ***** 13:16:59
57 changed: [.....us.oracle.com]
58
59 PLAY RECAP ***** 13:17:39
60 .....us.oracle.com : ok=5  changed=2  unreachable=0  failed=0  skipped=1  rescued=0  ignored=0

```

Inventory management

Oracle Linux Automation Manager provides inventories that enable a logical segmentation of physical resources to be coupled with the role-based access control framework.



REST API and CLI support

Oracle Linux Automation Manager provides a REST API for programmatic interaction as well as a Command Line Interface (CLI) for direct interaction providing options outside the web based UI.

Streamlined support

Oracle is the only vendor in the industry that offers a complete Linux-based solution stack – applications, middleware, database, management tools, operating system, virtualization, hardware, engineered systems, and cloud – along with streamlined support, which offers several benefits.

With Oracle as your Linux support provider, your costs can be significantly lower than with other vendors' Linux support, while having a single point of contact for all your support needs. Users are free to decide which systems should be covered by a support subscription, and at which level each of them should be supported. There is no all-or-nothing clause. This makes Oracle Linux an ideal choice for both development and production systems. You decide which support coverage is the best for each of your systems individually, while keeping all of them up-to-date and secure.

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