

# Advanced Scalability and Portability of Ansible Tower

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# Module Introduction



**The Tower architecture**

**Separate control from execution**

**Automation mesh and the use of overlays**

**Scaling automation**

**Troubleshooting steps**





**Source of truth**

**Automation categories**

**Agentless and scalable**

**Easy and straightforward**



# Tower Supported Environments

**Possible  
architectures**

**Tower clustering**

**Instance groups**

**Rigid and tightly  
coupled**

**Challenges to  
isolated nodes**

**Limited deployment  
options**





THINGS  
TO  
CONSIDER



# Tower Supported Environments

**Possible  
architectures**

**Tower clustering**

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**Rigid and tightly  
coupled**

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isolated nodes**

**Limited deployment  
options**



# Automation Mesh

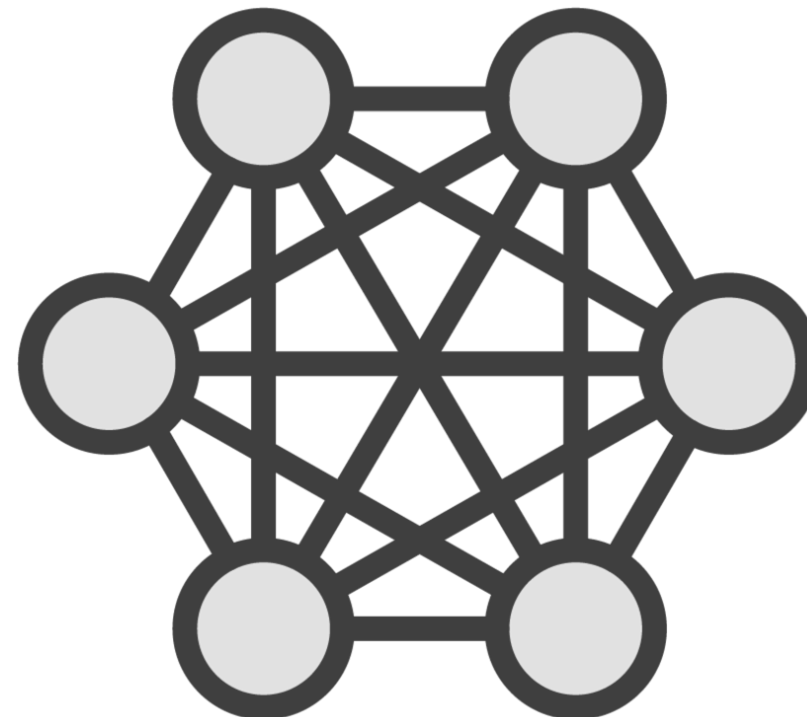
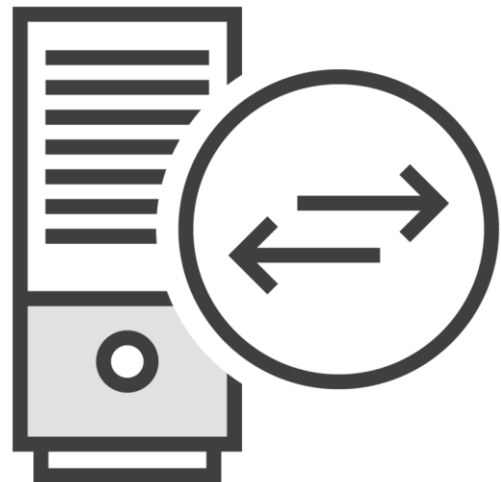
**Tower Controller**

**RBAC**

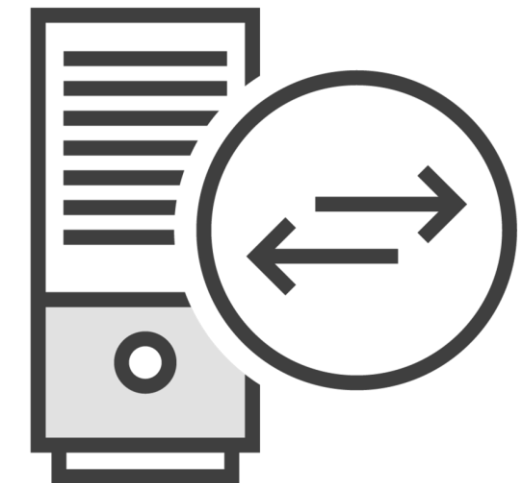
**Workflow**

**Audit**

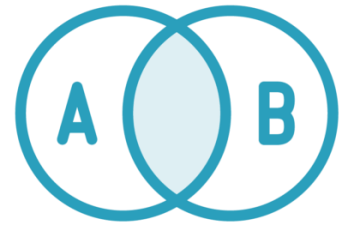
**Execution  
nodes**



**Execution  
nodes**



# Highlighting Automation Mesh



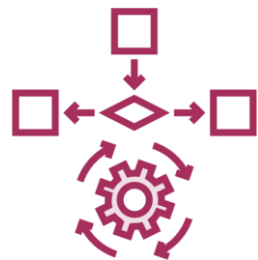
**Multi-directional, multi-hopped overlay network**



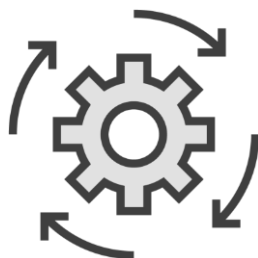
**Advanced security features**



**Decoupling control from execution plane**



**Automation mesh operations**



**Instance groups and mesh worker nodes**





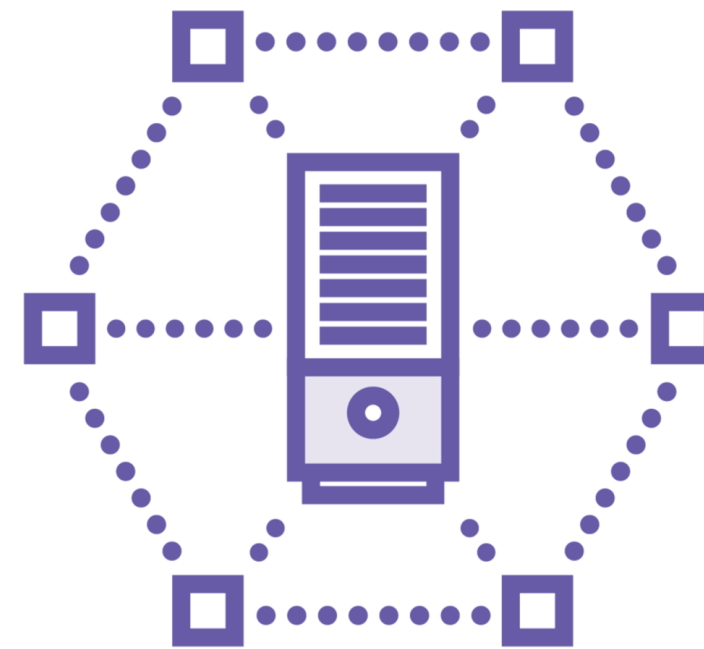
# Execution Environments



**Highlighting  
execution  
environments**



**The previous  
challenges**



**Python virtual  
environments**



**Ansible  
Builders**

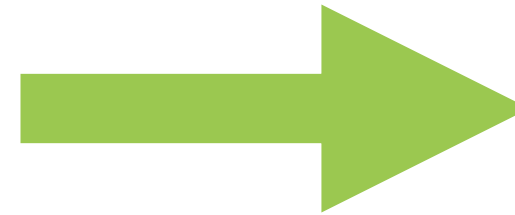


Content  
Creator



**Ansible Builder**

Pull/create



Pull/create

Execution  
Environment





**Content of automation environments**

**RHEL operating system**

**Ansible core**

**Python 3.8**

**Collections and dependancies**



# Scaling and Integrating Tower

**Orchestration**

**Orchestration  
example**

**OpenStack**

**DevOps and CI/CD**

**Jenkins stages**

**A final note on  
integrations**





# Troubleshooting



**Audit trail: Ansible keeps track of all modifications**



**Activity stream: View the audit trail**



**Problems connecting to hosts**



**Problems running playbooks**



**Problems running a job**



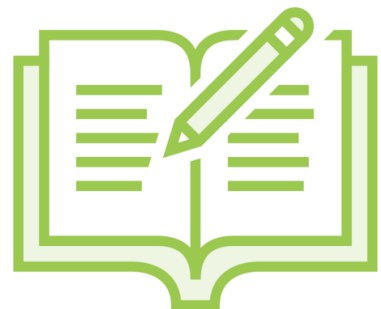
# Demo



# Logging and Metrics



**Tower logging and aggregation**



**Centralized logs such as the ELK stack**



**Metrics collection with Prometheus**



# Module Summary



**The Tower architecture**

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# Course Summary



**Key environmental challenges**

**Fully integrated platform**

**Execution environments and automation mesh**

**Key Tower automation components**

**Troubleshooting paths**

**Demos!**

