

Introducing AWX - “An upstream of Ansible Tower”

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what it is ? and why you should be excited about it ?

AWX is a community based project sponsored by Red Hat.

Q: WHY IS RED HAT DOING THIS?

Because this is what Red Hat does.

When Ansible, Inc. was acquired by Red Hat, we told our users that we would open the source code for Ansible Tower. The AWX Project is a fulfillment of that intent.

<https://www.ansible.com/products/awx-project/faq>

AWX project

> web-based user interface, REST API, and task engine built on top of Ansible

<https://github.com/ansible/awx>

Installing AWX

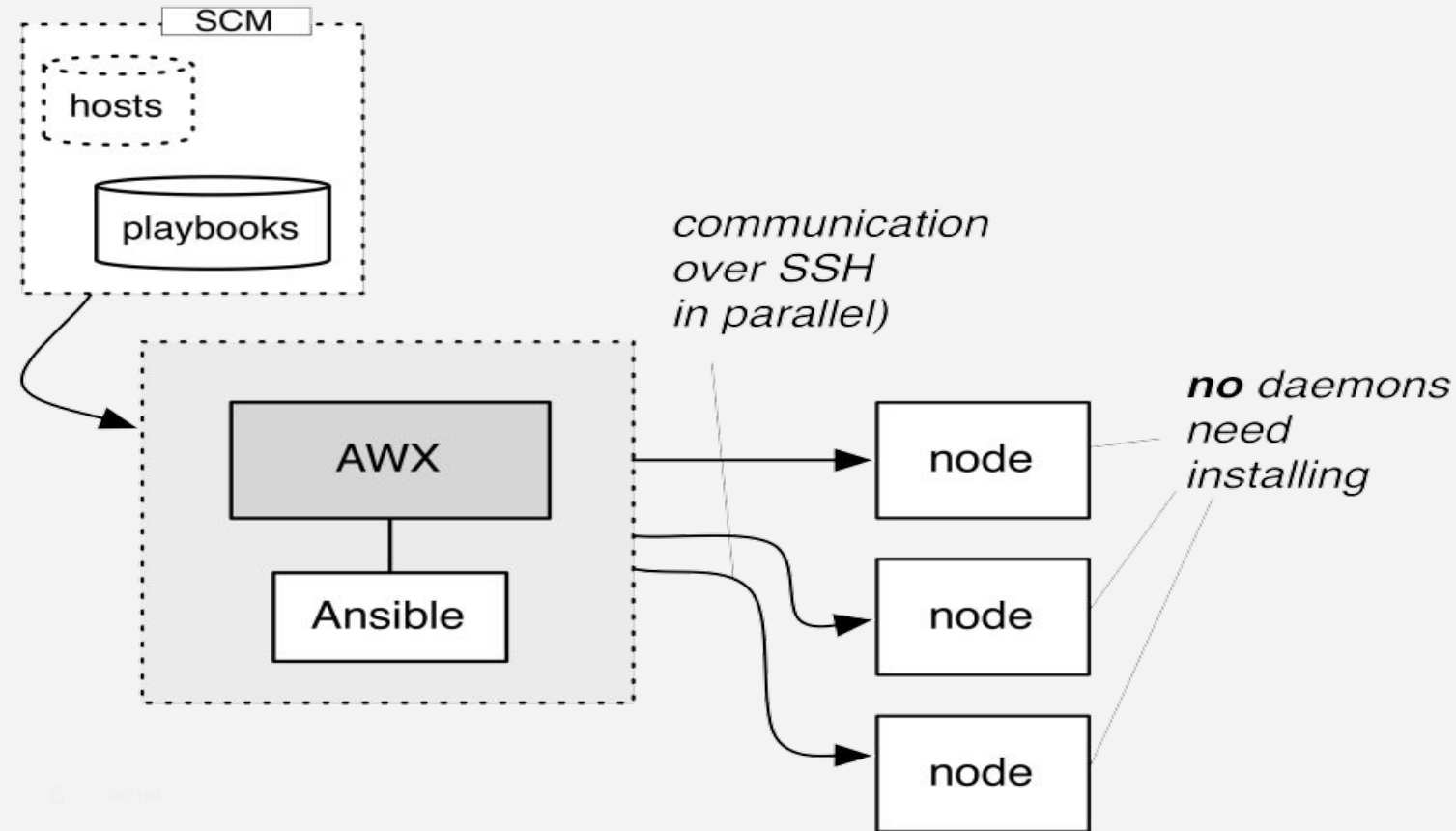
AWX by default installs in to the following platforms:

- Docker
- Kubernetes
- OpenShift

You can run a separate postgres database..... or use the default in built one.

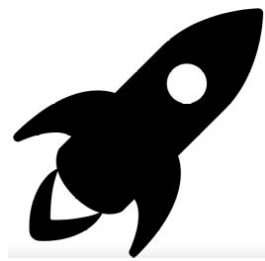
<https://github.com/ansible/awx/blob/devel/INSTALL.md>

Ansible AWX



FEATURES

- Real-time playbook output,
- Push-button deployment,
- Galaxy integration,
- Authentication,
- Projects/Jobs/Workflows,
- Security,
- Notifications,
- Logging,
- Scheduling





DASHBOARD

JOBS

SCHEDULES

PORTAL MODE

PROJECTS

CREDENTIALS

CREDENTIAL
TYPES

INVENTORIES

TEMPLATES

ORGANIZATIONS

USERS

TEAMS

DASHBOARD

15

HOSTS

0

FAILED HOSTS

9

INVENTORIES

0

INVENTORY SYNC
FAILURES

4

PROJECTS

0

PROJECT SYNC FAILURES

JOB STATUS

PERIOD

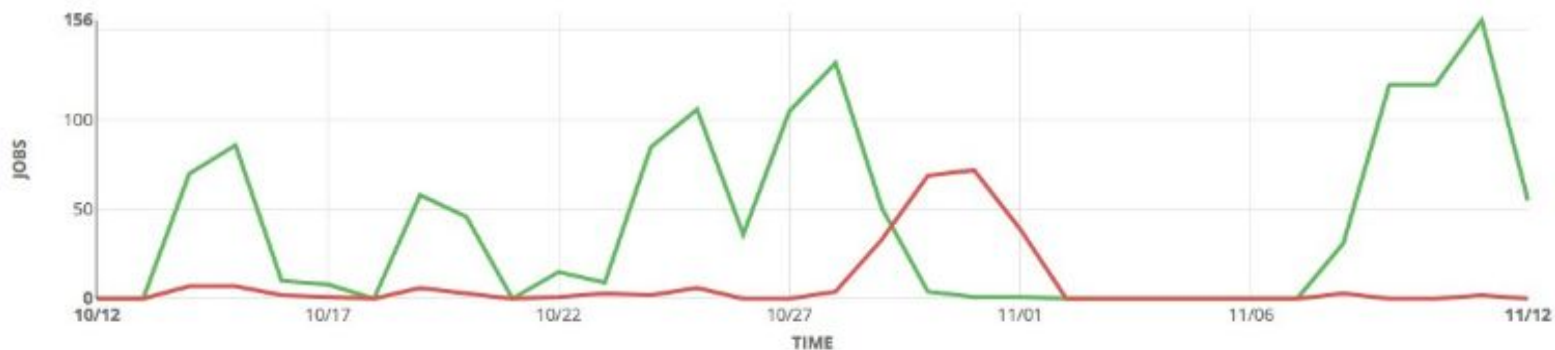
PAST MONTH

JOB TYPE

ALL

VIEW

ALL



RECENTLY USED TEMPLATES

[VIEW ALL](#)

NAME	ACTIVITY	ACTIONS
1pi	● ● ●	
pi1	● ● ● ● ● ● ● ●	
t-job1	● 1 ● 1 ● 1 ● 1 ● 1 ● 1 ● 1	

RECENT JOB RUNS

[VIEW ALL](#)

NAME	TIME
● 1pi	11/12/2017 10:18:21 AM
● pi1	11/12/2017 10:15:53 AM
● pi1	11/12/2017 9:16:19 AM

Authentication

Multiple authentication methods are available.

- AWX Username / Password,
- Azure AD,
- Github,
- Google OAuth2,
- LDAP, RADIUS, SAML, TACACS+

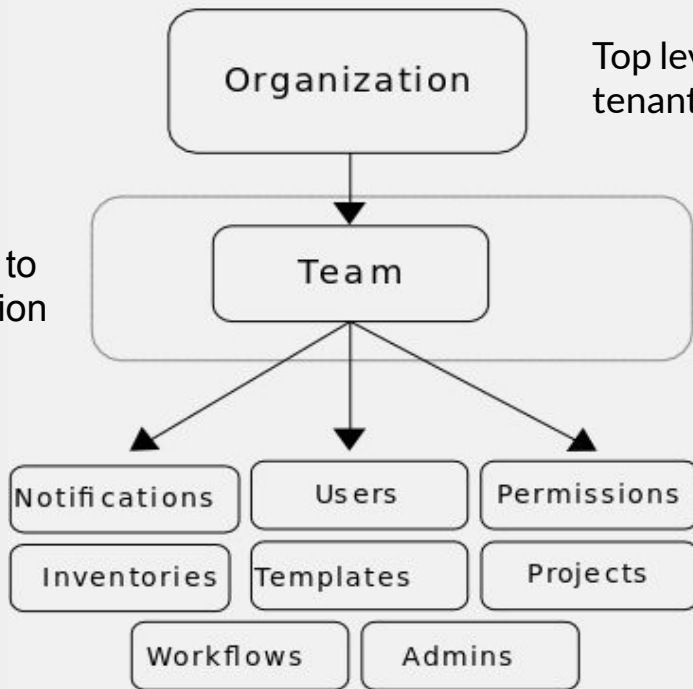
SECURITY

Playbooks are executed in a CHROOT environment as the AWX user. Cannot access other data.

Full RBAC security model for every item within AWX. This means you can tie yourself in knots if you're not careful.

RBAC

Teams are an optional construct to allow groups within an organization to collaborate



Top level construct allows for multi tenant topologies

Each of the items at this level can be assigned to a team or an organization

When assigned, a role specific to the item can be chosen (i.e. execute only or view only)

RBAC : Execute

TINY-PNG | ADD USERS / TEAMS



1 Please select Users / Teams from the lists below.

USERS

TEAMS

SEARCH



KEY

USERNAME ^

FIRST NAME ⇅

LAST NAME ⇅

☒ janej

Jane

Jolie

ITEMS 1 - 1

2 Please assign roles to the selected users/teams

KEY

ADMIN

Can manage all aspects of the job template

EXECUTE

May run the job template

jane jolie USER

× Execute



INVENTORIES

- Comparable to Ansible inventory files.
- Can have multiple inventories.
- Dynamic sync with AWS, GCE, Azure, Rackspace etc.
- Write your own custom inventory scripts (just in case you have AS/400)

INVENTORIES

INVENTORIES / AWS / HOSTS

AWS

DETAILS

PERMISSIONS

GROUPS

HOSTS

SOURCES

COMPLETED JOBS

SEARCH



KEY

HOSTS

RELATED GROUPS



ON



13.210.183.188

469568072720

ami_ccecf5af

ap-southeast-2

ap-southeast-2a

ec2

instance_state_running

key_aws_keys

platform_undefined

security_group_default

tag_Name_Demo

type_t2_micro

vpc_id_vpc_b4c6d5d1

[VIEW LESS](#)

CREDENTIALS

AWS, Google, Machine, SCM, Vault, VMware, Custom Creds

NEW CREDENTIAL ✕

DETAILS

PERMISSIONS

* NAME ?

Lunch access

DESCRIPTION ?

Credentials for lunchtime

ORGANIZATION ?

Q

jPMe

* CREDENTIAL TYPE ?

Q

Pasta

TYPE DETAILS

* UID

janej

* PASSWORD

SHOW

.....

WHICH TYPE OF PASTA WOULD YOU LIKE?

rice

'rice' is not one of ['spaghetti', 'fettucine', 'girandole']

CANCEL

SAVE

15

Red Hat

JOB TEMPLATE/JOB

- Template is the definition of a playbook (i.e. which playbook to use, which credentials to use, which inventory to use, variables etc)
- A Job is the output of a template run. Job output is saved so that you can review it later.
- A Workflow is a way to string together multiple playbooks.

JOB'S OUTPUT

JOBS / 4 - figlet-4

DETAILS

STATUS ● Successful

STARTED 4/10/2018 8:54:56 AM

FINISHED 4/10/2018 8:55:17 AM


TEMPLATE figlet-4

JOB TYPE Run

LAUNCHED BY admin

INVENTORY linux-boxes

PROJECT ● devopsday

REVISION 0145552 

PLAYBOOK figlet-4.yml

MACHINE CREDENTIAL root-ssh

POKS 0

VERBOSITY 0 (Normal)

INSTANCE GROUP tower

EXTRA VARIABLES

```
1 pkg_name: figlet
2 pkg_state: present
3 target_hosts: all
```

figlet-4

PLAYS 1 TASKS 0

SEARCH

```
+ -
1 Identity added: /tmp/awx_4_cmr1bs/credential_2 (/tmp/awx_4_cmr1bs/credential_2)
2
3 PLAY [all] *****
4
5 TASK [Gathering Facts] *****
6 ok: [fedora]
7
8 TASK [figlet will be present] *****
9 ok: [fedora]
10
11 PLAY RECAP *****
12 fedora : ok=2 changed=0 unreachable=0 failed=0
13
```

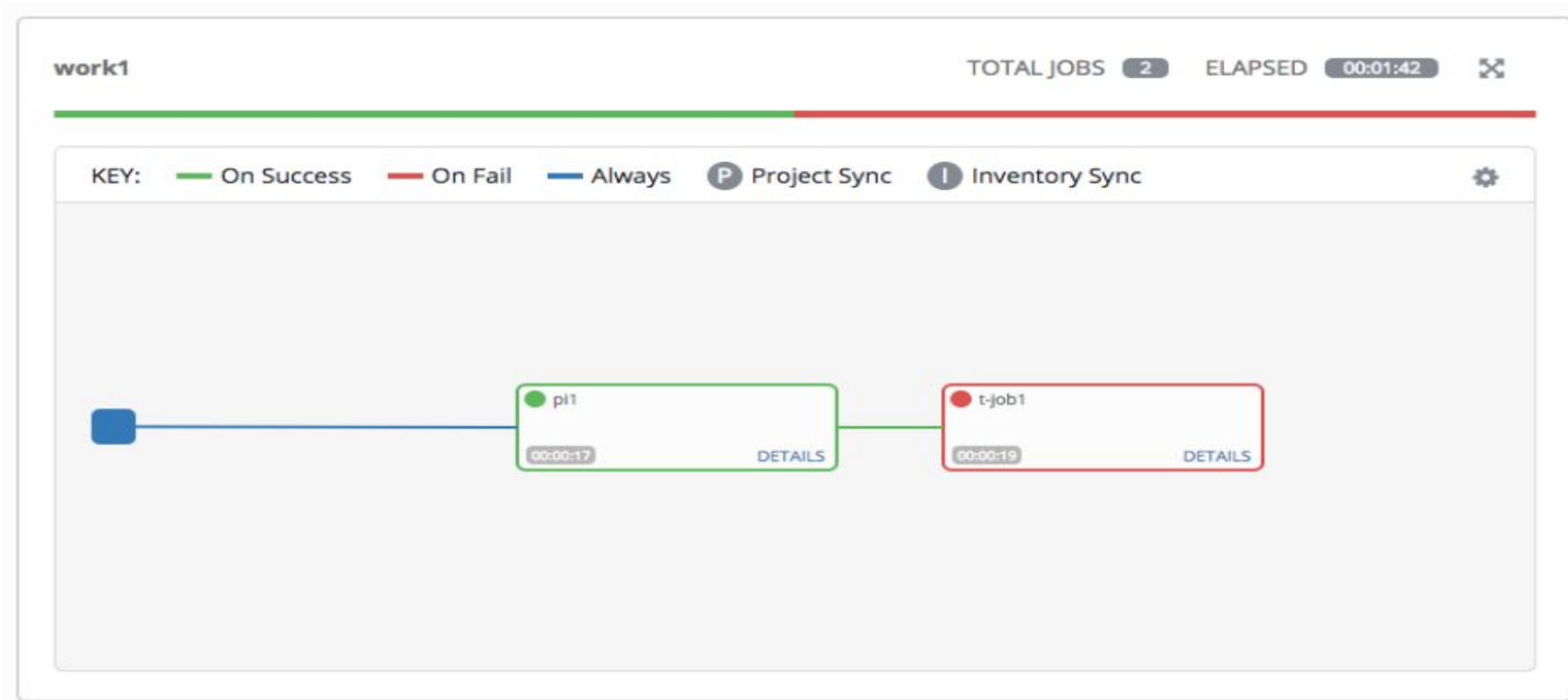
JOB'S HISTORY

JOBS		
SEARCH		
• Terminate EC2	PLAYBOOK RUN	
STARTED	4/11/2018 10:55:45 AM	
LAUNCHED BY	admin	
JOB TEMPLATE	Terminate EC2	
INVENTORY	AWS	
PROJECT	codecowboy	
● AWS - aws-source	INVENTORY SYNC	
STARTED	4/11/2018 10:55:21 AM	FINISHED 4/11/2018 10:55:44 AM
● figlet_workflow	WORKFLOW JOB	
STARTED	4/11/2018 10:50:31 AM	FINISHED 4/11/2018 10:54:09 AM
LAUNCHED BY	admin	
● AWS-figlet	PLAYBOOK RUN	
STARTED	4/11/2018 10:53:54 AM	FINISHED 4/11/2018 10:54:09 AM
JOB TEMPLATE	AWS-figlet	
INVENTORY	AWS	
PROJECT	devopsday	

Job history is saved – both success and failure.

All of the attributes used to run the job are available.

WORKFLOW



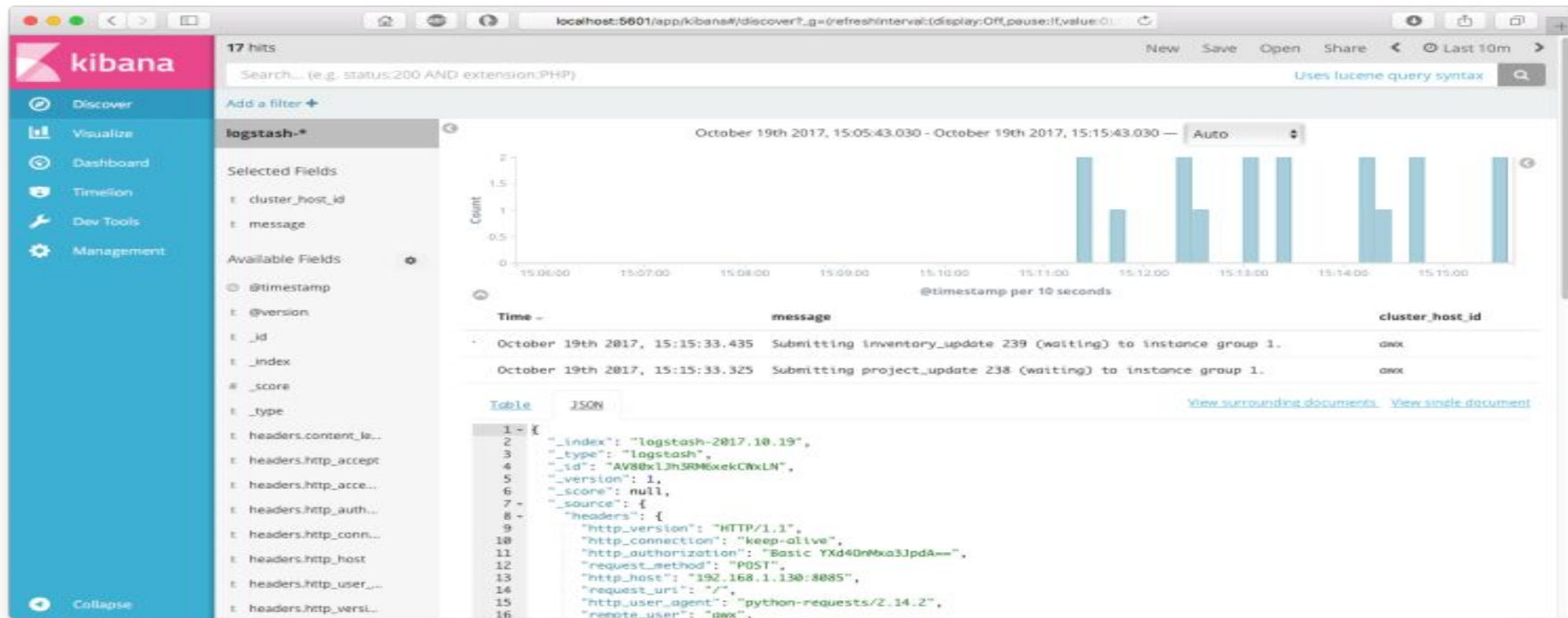
LOGGING

detailed logging, management jobs

```
{  
  "cluster_host_id": "awx",  
  "level": "INFO",  
  "@timestamp": "2017-10-  
14T14:42:43.060Z",  
  "host": "awx",  
  "logger_name":  
  "awx.main.scheduler",  
  "message": "Submitting project_update 70 (waiting) to instance group 1.",  
  "type": "logstash"  
}
```

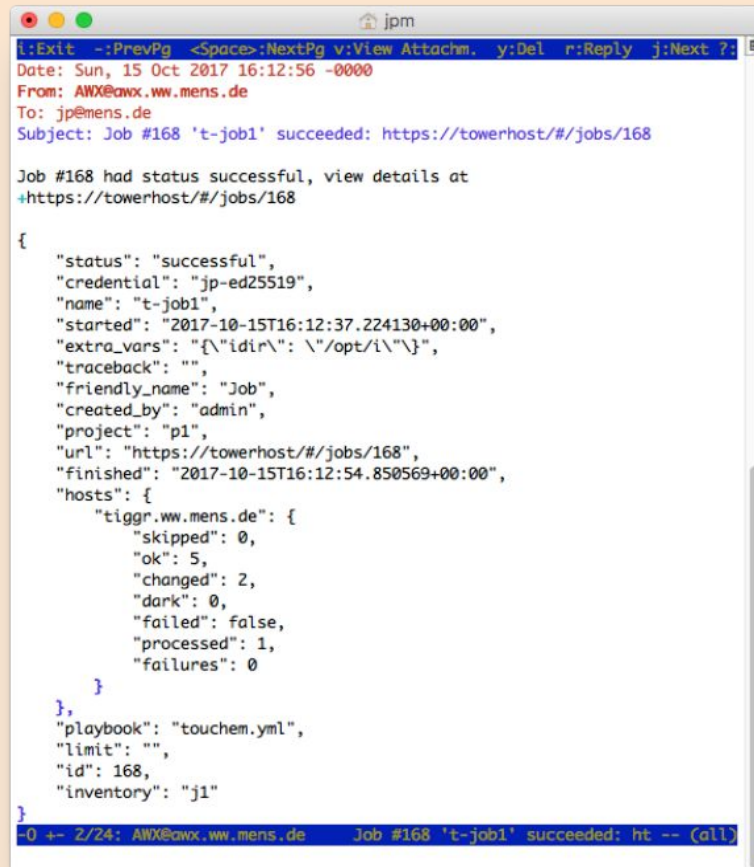
LOGSTASH

aggregator services (Splunk, Loggly, Sumologic, Elastic),



NOTIFICATION

- E-mail
- Slack
- Twilio
- IRC
- PagerDuty
- Hipchat
- Webhook



The screenshot shows a terminal window titled 'jpm' with a notification message. The message is an email-style notification from 'AWX@awx.ww.mens.de' to 'jp@mens.de' with the subject 'Job #168 't-job1' succeeded: https://towerhost/#/jobs/168'. The body of the notification states 'Job #168 had status successful, view details at https://towerhost/#/jobs/168' and contains a JSON object with job details.

```
i:Exit -:PrevPg <Space>:NextPg v:View Attachm. y:Del r:Reply j:Next ?
Date: Sun, 15 Oct 2017 16:12:56 -0000
From: AWX@awx.ww.mens.de
To: jp@mens.de
Subject: Job #168 't-job1' succeeded: https://towerhost/#/jobs/168

Job #168 had status successful, view details at
+https://towerhost/#/jobs/168

{
  "status": "successful",
  "credential": "jp-ed25519",
  "name": "t-job1",
  "started": "2017-10-15T16:12:37.224130+00:00",
  "extra_vars": "{\"idir\": \"\\opt/i\\\"}",
  "traceback": "",
  "friendly_name": "Job",
  "created_by": "admin",
  "project": "p1",
  "url": "https://towerhost/#/jobs/168",
  "finished": "2017-10-15T16:12:54.850569+00:00",
  "hosts": {
    "tigr.ww.mens.de": {
      "skipped": 0,
      "ok": 5,
      "changed": 2,
      "dark": 0,
      "failed": false,
      "processed": 1,
      "failures": 0
    }
  },
  "playbook": "touchem.yml",
  "limit": "",
  "id": 168,
  "inventory": "j1"
}

-0 +- 2/24: AWX@awx.ww.mens.de Job #168 't-job1' succeeded: ht -- (all)
```

“Every new thing creates two new questions and two new opportunities.”

THANK YOU

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