



العطاء الرقمي
Digital Attaa

الطريق الى عالم البنية التحتية والأتمتة Red Hat



الوزاره الرازي
جهاز الاتصالات
وتقنيات المعلومات
MINISTRY OF COMMUNICATIONS
AND INFORMATION TECHNOLOGY

العطاء الرقمي
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العطاء
الرقمي





الى اسراء
وزير الاتصالات والمعلوماتية
MINISTRY OF COMMUNICATIONS
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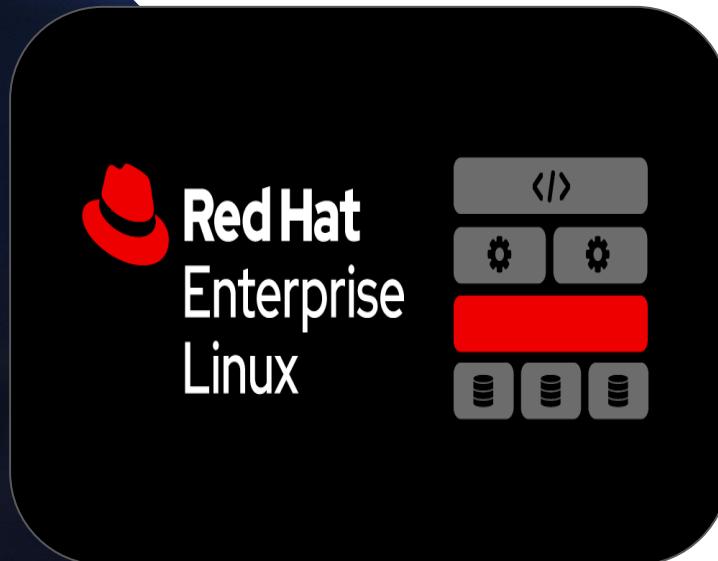
Afnan Mohammed

- BSc. Computer Information System - KKU
- Red Hat Security bootcamp - SDA



Red Hat Enterprise Linux (RHEL) is an enterprise Linux operating system (OS) developed by Red Hat for the business market. RHEL

مقدمة عن Red Hat





CentOS Stream relationship to RHEL and Fedora



fedora



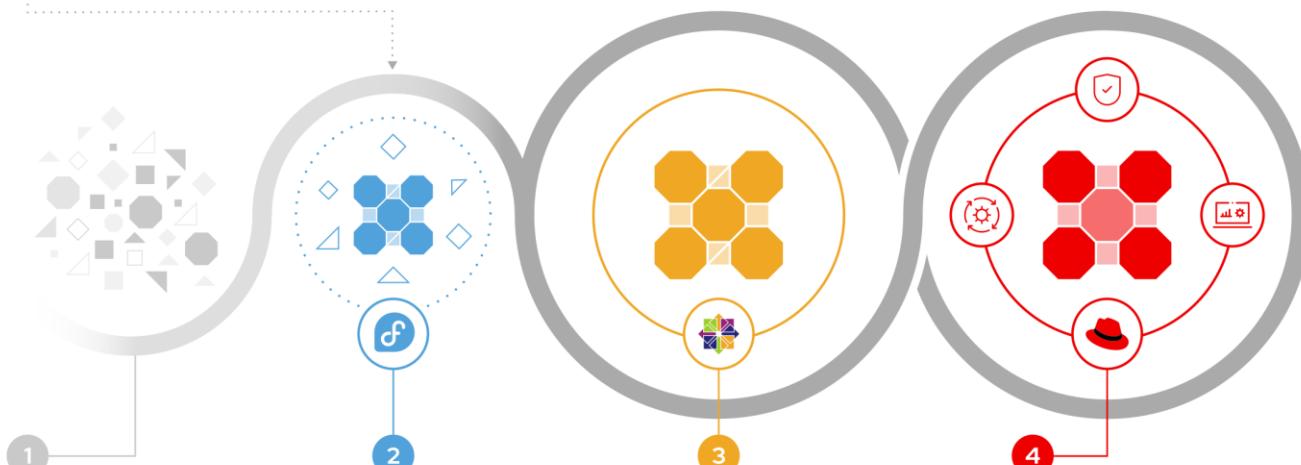
**CentOS
Stream**



Red Hat



Contributions flow among all elements of the ecosystem; however, there is a stronger connection between CentOS Stream and Red Hat Enterprise Linux. They each contribute to the other while also ensuring that new code is submitted as far upstream as possible; and, ideally, directly into the relevant open source community projects.



**Open source
community projects**
A collection of projects,
each working toward
their own goals

Fedora Linux
Brings together the best
ideas from the huge
number of available open
source community projects

[fedoraproject](https://fedoraproject.org)

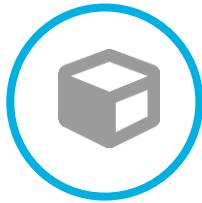
CentOS Stream
Provides a streamlined
contribution path to the
next minor release of
Red Hat Enterprise Linux

[centos](https://centos.org)

Red Hat Enterprise Linux
A production-grade operating
system that provides a more secure,
supported, and flexible foundation
for critical workloads and applications



عنوان فرعی



بعض الأمثلة العملية
لتوزيعة Red Hat



مصادر للتحضير
للشهادة



نظرة عامة على
شهادة RHCE



نظرة عامة على
شهادة RHCSA



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التعريف بمسار شهادات Red Hat



Red Hat Certified System Administrator

- Introduction to bash script
- Cron job
- Manage Storage Stack
- Manage Networking

نظرة عامة على شهادة RHCSA



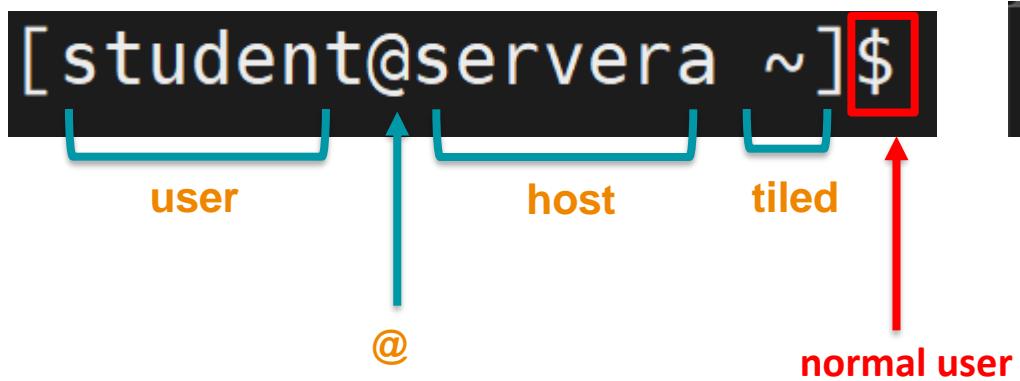


Introduction to Bash Shell

```
[student@servera ~]$
```

Diagram illustrating the components of a normal user's Bash shell prompt:

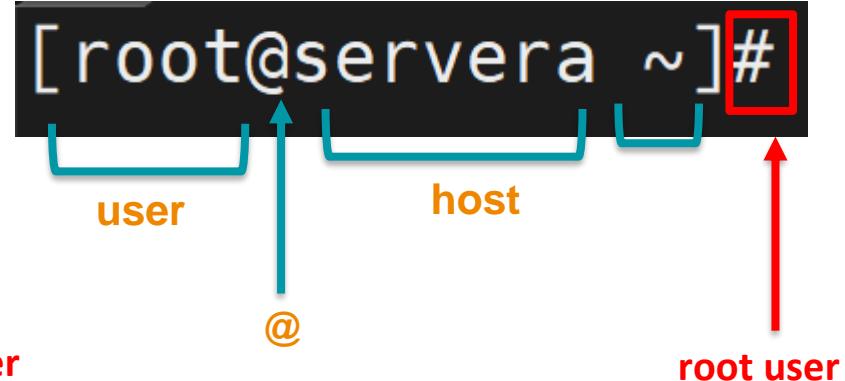
- user**: The part before the '@' symbol.
- host**: The part after the '@' symbol.
- tiled**: The tilde (~) character at the end of the host name.
- normal user**: The label for the user type, positioned below the tiled indicator.



```
[root@servera ~]#
```

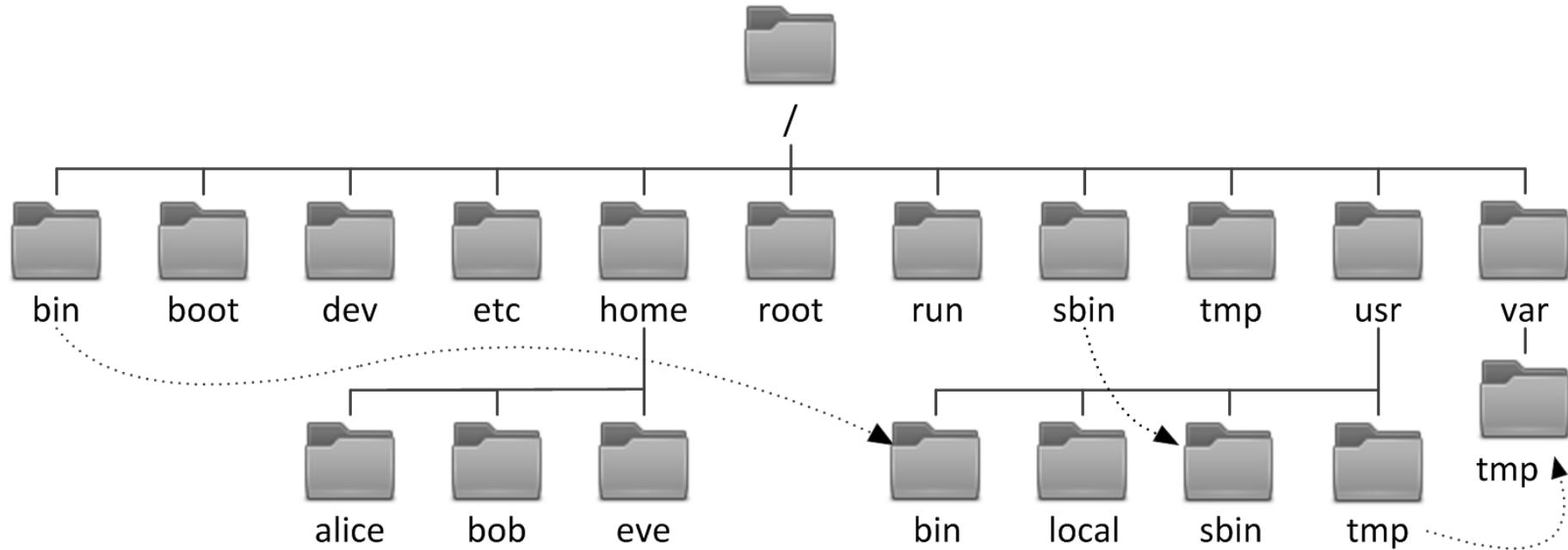
Diagram illustrating the components of a root user's Bash shell prompt:

- user**: The part before the '@' symbol.
- host**: The part after the '@' symbol.
- root user**: The label for the user type, positioned below the host indicator.



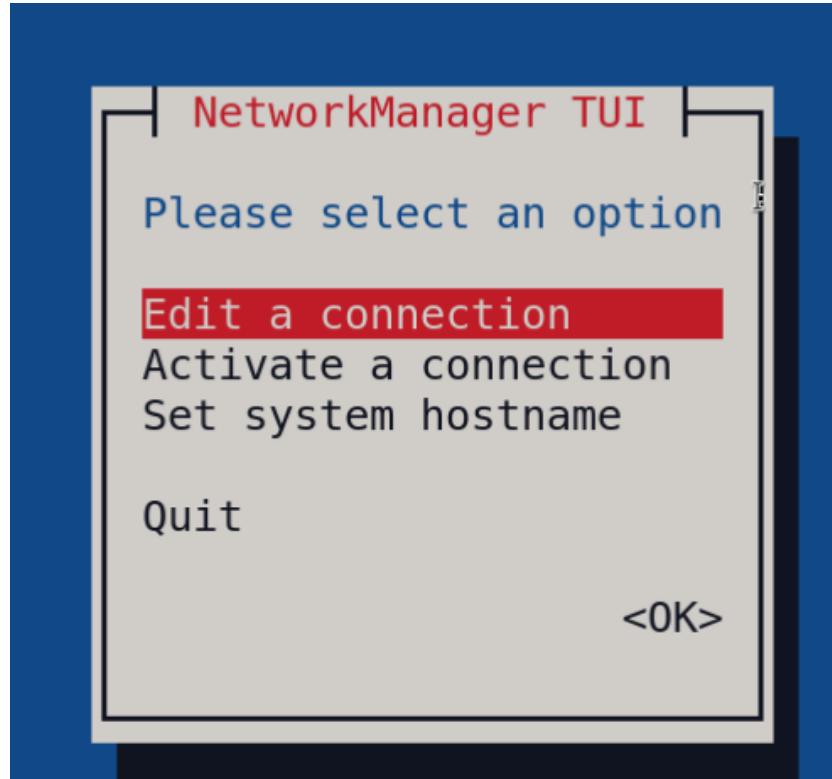


Linux File Hierarchy Structure





Configure network interfaces





User & group

```
useradd [options] username
```

```
tail -1 /etc/passwd
```



output

```
kedar:x:1001:1001:John Doe:/home/john:/bin/bash
```

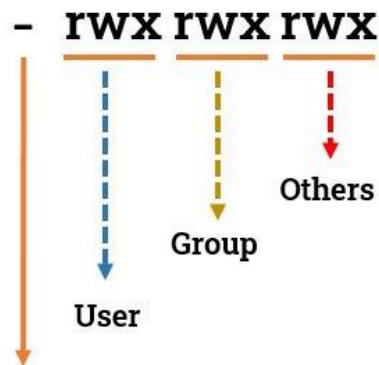
kedar : x : 1001 : 1611 : John Doe : /home/john : /bin/bash

User Name	Masked Password	User Id	Primary GroupId	User Information	Home Directory	Login Shell
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Linux File Permissions

- **rwx rwx rwx**

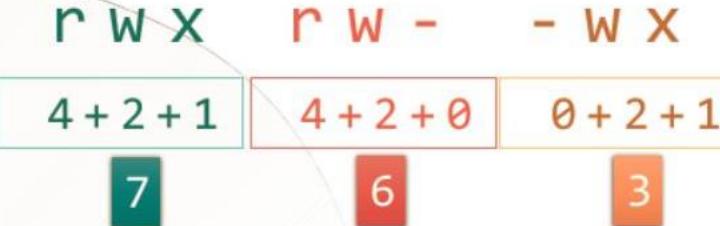


File Type

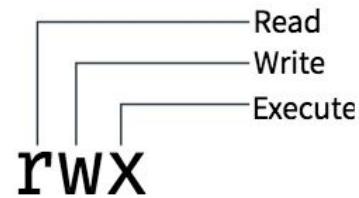
d = Directory

- = Regular File

l = Symbolic link



Bit	Purpose	Octal Value
r	Read	4
w	Write	2
x	Execute	1
-	No permission	0



Read

Write

Execute

rwx



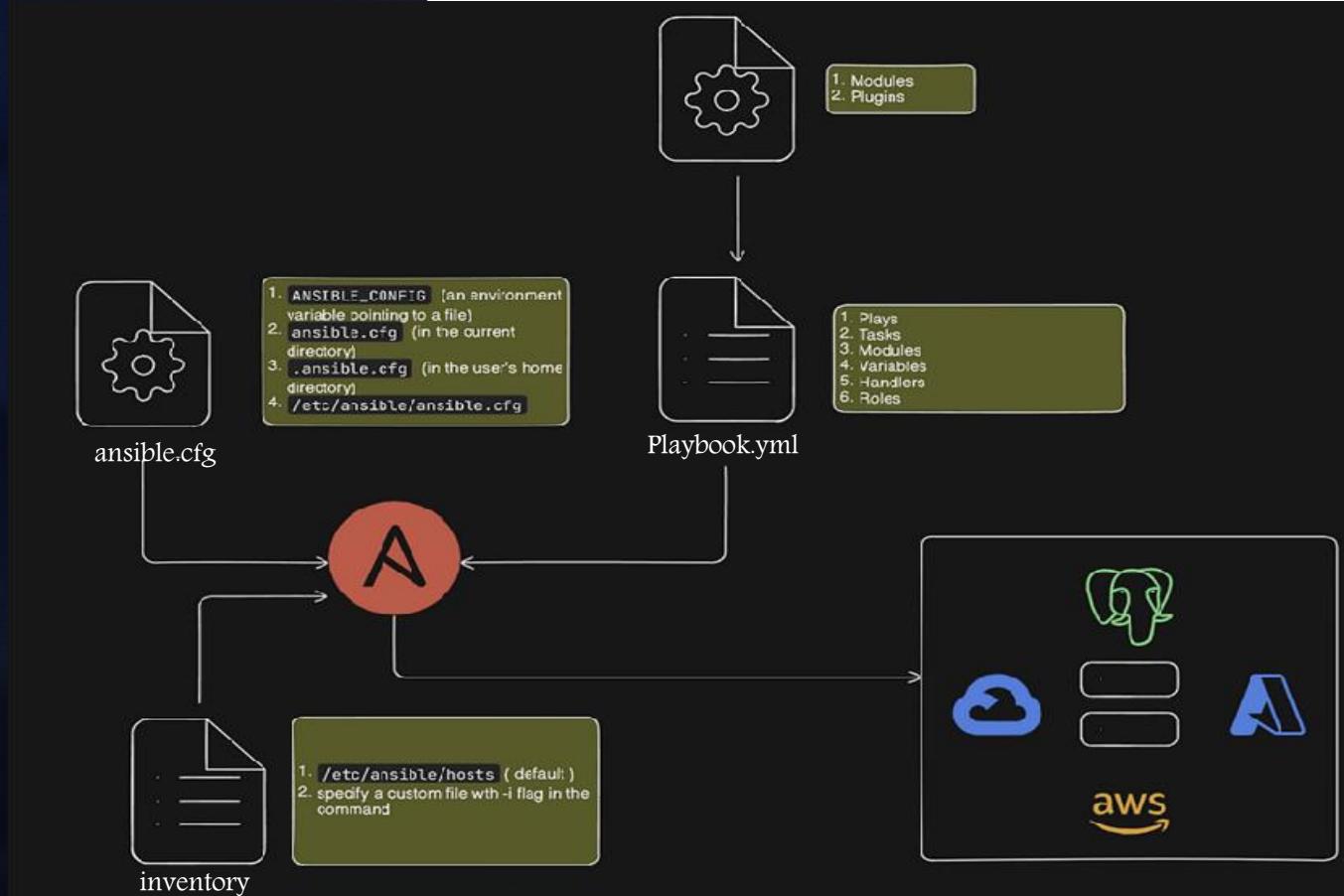
نظرة عامة على شهادة RHCE

Red Hat Certified Engineer

- Introducing Ansible
- Implementing an Ansible Playbook
- Variables and Facts
- Roles and Ansible Collections
- Troubleshooting



Ansible components





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Ansible.cfg

```
student@workstation:~/project — vim ansible.cfg

[defaults]
inventory= /home/student/project/inventory
remote_user=student
roles_path= /home/student/project/rol
collections_path= /home/student/project/coll
valut_password_file=/home/student/project/key.txt

[privilegeEscalation]
become= true
~
```



inventory

```
student@workstation:~ — vim inventory
student@workstation:~ — vim inventory x student@workstation:~  

[group1]  
servera  
  

[group2]  
serverb  
  

[gruop3]  
serverc  
serverd  
~  
~  
~
```



Playbook

Play level

Task level

```
---
```

```
- name: Update web servers
  hosts: webservers
  remote_user: root
```

```
tasks:
```

```
- name: Ensure apache is at the latest version
  ansible.builtin.yum:
    name: httpd
    state: latest
```

```
- name: Write the apache config file
  ansible.builtin.template:
    dest: /etc/httpd.conf
```

```
- name: Update db servers
  hosts: databases
  remote_user: root
```

```
tasks:
```

```
- name: Ensure postgresql is at the latest version
  ansible.builtin.yum:
    name: postgresql
    state: latest
```

```
- name: Ensure that postgresql is started
  ansible.builtin.service:
    name: postgresql
    state: started
```

Playbook

```
---
```

```
- name: Update web servers
  hosts: webservers
  remote_user: root

  tasks:
    - name: Ensure apache is at the latest version
      ansible.builtin.yum:
        name: httpd
        state: latest

    - name: Write the apache config file
      ansible.builtin.template:
        src: /srv/httpd.j2
        dest: /etc/httpd.conf

    - name: Update db servers
      hosts: databases
      remote_user: root

  tasks:
    - name: Ensure postgresql is at the latest version
      ansible.builtin.yum:
        name: postgresql
        state: latest

    - name: Ensure that postgresql is started
      ansible.builtin.service:
        name: postgresql
        state: started
```



مصادر للتحضير للشهادة



Red Hat official website
<https://rol.redhat.com/>

1



Alal Mahmoud
YouTube
https://youtu.be/UFJL5UX0z6Q?si=zp0GARoYm0GtsM_z

2



3



مصادر إضافية

[Learn Ansible Quickly](#)

1

[linux-commands](#)

2

[Ansible Full Course](#)

3



[Kodekloud website](#)

4



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