

# **Foreman / Katello Content Host Registration & Repository Validation (CentOS Stream 9)**

## **Overview**

This documentation covers the successful onboarding of a CentOS Stream 9 virtual machine into Foreman (Katello) for centralized host, subscription, and content lifecycle management. The system is registered, assigned to the appropriate lifecycle environment and content view, and validated through both the Foreman web interface and the Linux CLI.

## **Work Performed**

Confirmed the system is present and managed under Foreman Hosts with the correct operating system and virtualization platform. Verified the same system appears under Content Hosts, confirming enrollment for subscription and content management. Reviewed the Content Host Details page to validate: Registration method and activation sourceSubscription and entitlement statusLifecycle environment and content view assignmentHost inventory, networking, and system metadataSuccessful check-in and reporting statusValidated repository access from the VM using the command line by confirming enabled repositories, metadata refresh times, and available package counts.

## **Outcome**

The host is fully registered and entitled in Foreman/Katello. Lifecycle environment and content view assignments are correctly applied. Repository access and package availability are confirmed from the system. The VM is ready for controlled updates, patching, and lifecycle promotion using centralized content management.

## **Sanitation Disclaimer**

All screenshots and command outputs have been sanitized prior to publication. IP addresses, hostnames, domain names, URLs, subscription UUIDs, activation keys, organization names, lifecycle environments, and user identifiers have been replaced with non-identifiable placeholders to protect internal infrastructure and sensitive configuration details.

A successful SSH connection was established to the remote system at 10.1.30.24 after resolving an initial hostname issue by connecting directly via IP address. The host key was verified and added to the known hosts file, a user home directory was created on first login, and privilege escalation to the root account was completed, confirming administrative access to the target server.

```
[root@stage-foreman:~]# ssh egarrido @10.1.30.24
sss_ssh_knownhostsproxy: Could not resolve hostname egarrido
kex_exchange_identification: Connection closed by remote host
Connection closed by UNKNOWN port 65535
[egarrido@dev-app-eg3 ~]$ ssh egarrido@10.1.30.24
The authenticity of host '10.1.30.24 (<no hostip for proxy command>)' can't be established.
ED25519 key fingerprint is SHA256:ITLIAXhQmEWtrthzU+RKnrvW3b+xrww7diSe5qHX4BY.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '10.1.30.24' (ED25519) to the list of known hosts.
(egarrido@10.1.30.24) Password:
Creating home directory for egarrido.
[egarrido@stage-foreman ~]$ su -
Password:
Last login: Sat Oct 18 20:40:53 EDT 2025 on pts/0
[root@stage-foreman ~]#
```

An SSH key-based authentication workflow is being configured and validated. After an initial connection issue, a public key was successfully copied to the remote host using ssh-copy-id, the host key was verified and trusted, and the key was added to the authorized keys on the target system. A follow-up SSH login confirms access to the remote server, demonstrating successful setup of secure, password-less SSH access for administrative operations.

```
[root@dev-app-eg3:~]# /bin/ssh-copy-id: ERROR: ssh_exchange_identification: Connection closed by remote host
[root@stage-foreman ~]# [root@stage-foreman ~]# ssh-copy-id -i ~foreman-proxy/.ssh/id_rsa_foreman_proxy.pub 10.1.31.124
/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/usr/share/foreman-proxy/.ssh/id_rsa_foreman_proxy.pub"
The authenticity of host '10.1.31.124 (<no hostip for proxy command>)' can't be established.
ECDSA key fingerprint is SHA256:bEmOod6D5TxUwSt5/Ka3mDiSwz56ekB542vac8lek0k.
ECDSA key fingerprint is MD5:3a:85:2b:84:18:0e:9e:80:b3:d8:f4:ec:df:17:44:c4.
Are you sure you want to continue connecting (yes/no)? yes
/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
Password:
Password:

Number of key(s) added: 1

Now try logging into the machine, with:    "ssh '10.1.31.124'"
and check to make sure that only the key(s) you wanted were added.

[root@stage-foreman ~]# ssh 10.1.31.124
Password:
Last failed login: Sun Oct 19 15:22:23 EDT 2025 from 10.1.30.24 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Wed Oct  8 18:49:00 2025 from 10.1.31.136
[root@dev-app-eg3 ~]#
```

The system successfully completed a package installation transaction using dnf. Required subscription-manager, Python, and system utility packages were installed, verified, and configured without errors. The process finished cleanly, confirming the system is properly updated and ready for subscription management and related administrative tasks.

```
egarrido@dev-app-eg3:~ % + - x
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Installing : subscription-manager-rhsm-certificates-20220623-1.el9.noarch 1/10
Installing : python3-iniparse-0.4-45.el9.noarch 2/10
Installing : python3-cloud-what-1.29.47-1.el9.x86_64 3/10
Installing : python3-subscription-manager-rhsm-1.29.47-1.el9.x86_64 4/10
Installing : virt-what-1.27-2.el9.x86_64 5/10
Installing : usermode-1.114-7.el9.x86_64 6/10
Installing : python3-librepo-1.14.5-2.el9.x86_64 7/10
Installing : python3-inotify-0.9.6-25.el9.noarch 8/10
Installing : libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64 9/10
Running scriptlet: subscription-manager-1.29.47-1.el9.x86_64 10/10
Installing : subscription-manager-1.29.47-1.el9.x86_64 10/10
Running scriptlet: subscription-manager-1.29.47-1.el9.x86_64 10/10
Created symlink /etc/systemd/system/multi-user.target.wants/rhsmcertd.service → /usr/lib/systemd/system/rhsmcertd.service.

Verifying : libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64 1/10
Verifying : python3-cloud-what-1.29.47-1.el9.x86_64 2/10
Verifying : python3-iniparse-0.4-45.el9.noarch 3/10
Verifying : python3-inotify-0.9.6-25.el9.noarch 4/10
Verifying : python3-librepo-1.14.5-2.el9.x86_64 5/10
Verifying : python3-subscription-manager-rhsm-1.29.47-1.el9.x86_64 6/10
Verifying : subscription-manager-1.29.47-1.el9.x86_64 7/10
Verifying : subscription-manager-rhsm-certificates-20220623-1.el9.noarch 8/10
Verifying : usermode-1.114-7.el9.x86_64 9/10
Verifying : virt-what-1.27-2.el9.x86_64 10/10

Installed:
libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64
python3-cloud-what-1.29.47-1.el9.x86_64
python3-iniparse-0.4-45.el9.noarch
python3-inotify-0.9.6-25.el9.noarch
python3-librepo-1.14.5-2.el9.x86_64
python3-subscription-manager-rhsm-1.29.47-1.el9.x86_64
subscription-manager-1.29.47-1.el9.x86_64
subscription-manager-rhsm-certificates-20220623-1.el9.noarch
usermode-1.114-7.el9.x86_64
virt-what-1.27-2.el9.x86_64

Complete!
[egarrido@dev-app-eg3 ~]$
```

A package was successfully downloaded using curl, retrieving the katello-ca-consumer RPM from the Foreman server. The transfer completed without errors, confirming network connectivity and preparing the system for Foreman/Katello client registration and subscription management.

```
[egarrido@dev-app-eg3 ~]$ curl --insecure --output katello-ca-consumer-latest.noarch.rpm https://stage-foreman.prov.re.prod/pub/katello-ca-consumer-latest.noarch.rpm
% Total    % Received % Xferd  Average Speed   Time     Time      Current
          Dload  Upload Total   Spent    Left  Speed
100  7366  100  7366    0      0  79204      0 --:--:-- --:--:-- --:--:-- 80065
[egarrido@dev-app-eg3 ~]$
```

The Katello CA consumer package was successfully installed on the system using yum localinstall. Despite initial warnings about subscription registration and a skipped MariaDB repo, the transaction completed cleanly, updated the trusted CA certificates, and prepared the host for registration with the Foreman/Katello server for repository and subscription management.

```
egarrido@dev-app-eg3:~ % sudo yum localinstall katello-ca-consumer-latest.noarch.rpm
Not root, Subscription Management repositories not updated
Warning: failed loading '/etc/yum.repos.d/MariaDB.repo', skipping.
Error: This command has to be run with superuser privileges (under the root user on most systems).
[egarrido@dev-app-eg3 ~]$ sudo yum localinstall katello-ca-consumer-latest.noarch.rpm
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Warning: failed loading '/etc/yum.repos.d/MariaDB.repo', skipping.
Last metadata expiration check: 1:14:21 ago on Sun 19 Oct 2025 02:47:02 PM EDT.
Dependencies resolved.

Transaction Summary
Install 1 Package

Total size: 7.2 k
Installed size: 16 k
Is this ok [y/N]: y
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Installing : katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch 1/1
Running scriptlet: katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch 1/1
Warning: 'enable' is a deprecated argument. Use 'update-ca-trust extract' in future. See 'update-ca-trust --help' for usage.

Proceeding with extraction anyway for backwards compatibility.

Verifying : katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch 1/1
Installed products updated.

Installed:
katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch
```

The system is being registered to a Foreman/Katello server using subscription-manager with an organization and activation key. Administrative authentication is performed successfully, and the host is assigned a unique system ID and registered hostname, confirming successful enrollment with the subscription management platform.

```
[egarrido@dev-app-eg3 ~]$ subscription-manager register --org="Procore" --activationkey="ProcoreKey"
You are attempting to run "subscription-manager" which requires administrative
privileges, but more information is needed in order to do so.
Authenticating as "root"
Password:
Password:
The system has been registered with ID: 8b837ff3-c1d6-453f-8122-403b2201c6f4
The registered system name is: dev-app-eg3.procore.prod1
No products installed.
[egarrido@dev-app-eg3 ~]$ |
```

An SSH connection is established to a remote Linux system, followed by the installation of the Katello client repository package using yum. Subscription management repositories are updated, dependencies are resolved, and the katello-client-repos package installs successfully, confirming the system is prepared to receive Katello-managed repositories.

```
PS C:\Users\edward>
PS C:\Users\edward> ssh egarrido@10.1.31.124
(egarrido@10.1.31.124) Password:
Last login: Sun Oct 19 18:04:44 2025 from 10.1.10.112
[egarrido@dev-app-eg3 ~]$ sudo yum -y install http://fedorapeople.org/groups/katello/releases/yum/3.2
/client/el7/x86_64/katello-client-repos-latest.rpm
[sudo] password for egarrido:
Updating Subscription Management repositories.
Warning: failed loading '/etc/yum.repos.d/MariaDB.repo', skipping.
Updates_x86_64
OS_x86_64
Extras_x86_64
katello-client-repos-latest.rpm
Dependencies resolved.

=====
Package           Architecture   Version      Repository    Size
=====
Installing:
katello-client-repos      noarch        3.2.0-4.el7  @commandline  8.6 k

Transaction Summary

Install 1 Package

Total size: 8.6 k
Installed size: 1.4 k
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing          :
  Installing         : katello-client-repos-3.2.0-4.el7.noarch  1/1
  Verifying          : katello-client-repos-3.2.0-4.el7.noarch  1/1
Installed products updated.

Installed:
  katello-client-repos-3.2.0-4.el7.noarch
```

An EPEL repository configuration file is being viewed or edited, defining the EPEL 7 base, debuginfo, and source repositories. The configuration specifies archive URLs, GPG key verification, enabled states for each repo, and disables metadata expiration to ensure consistent package availability.

```
[epel1]
name=Extra Packages for Enterprise Linux 7 - $basearch
baseurl=https://archives.fedoraproject.org/pub/archive/epel/7/$basearch
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
metadata_expire=never

[epel1-debuginfo]
name=Extra Packages for Enterprise Linux 7 - $basearch - Debug
baseurl=https://archives.fedoraproject.org/pub/archive/epel/7/$basearch/debug
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
gpgcheck=1
metadata_expire=never

[epel1-source]
name=Extra Packages for Enterprise Linux 7 - $basearch - Source
baseurl=https://archives.fedoraproject.org/pub/archive/epel/7/SRPMS
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
gpgcheck=1
metadata_expire=never
~
```

The Foreman web interface is displaying the Content Hosts page, showing a registered host named dev-app-eg3.procore.prod1. The system is listed as running CentOS Stream 9, successfully registered to the Procore organization and lifecycle environment, associated with a defined content view, and reporting a healthy subscription status with recent check-in activity.

A screenshot of a web browser displaying the Foreman Content Hosts page. The URL is https://10.1.30.24/content\_hosts?page=1&per\_page=20&search=dev-app-eg3&sortBy=name&sortOrder=ASC. The page title is "Content Hosts". A search bar contains "dev-app-eg3". The results table has columns: Name, Subscription Status, Installable Updates, OS, Lifecycle Environment, Content View, Registered, and Last Checkin. One host is listed: dev-app-eg3.procore.prod1, which is registered, has 0 installable updates, runs CentOS Stream 9, is in the Procore lifecycle environment, and is associated with the Procore content view. It was registered on Oct 19, 04:03 PM and last checked in on Oct 19, 06:44 PM. The table shows 1 of 1 selected. The left sidebar shows navigation links for Monitor, Content, Hosts, Configure, Infrastructure, and Administer. The top navigation bar includes links for Board, Foreman - ProCore-Plus Wiki, and Edward Garrido.

Name	Subscription Status	Installable Updates	OS	Lifecycle Environment	Content View	Registered	Last Checkin
dev-app-eg3.procore.prod1	Green circle with question mark	0▲ 0● 0✚ 0✖	CentOS Stream 9	Procore	Procore	Oct 19, 04:03 PM	Oct 19, 06:44 PM

The Foreman Content Host details page is displayed for dev-app-eg3.procore.prod1, showing the system fully registered and entitled. The host is running CentOS Stream 9 on a VMware virtual machine, registered through the stage-foreman.procore.prod server using an activation key. Subscription status is healthy, the host is associated with the Procore lifecycle environment and content view, and recent check-in activity confirms active communication with Foreman.

The screenshot shows the Foreman interface for managing content hosts. The left sidebar navigation includes: Monitor, Content, Hosts (selected), Configure, Infrastructure, and Administer. The main content area displays the details for host 'dev-app-eg3.procore.prod1'. The top navigation bar shows the URL as https://10.1.30.24/content\_hosts/641 and indicates 'Not secure'.

**Host Details:**

- Name:** dev-app-eg3.procore.prod1
- Subscription UUID:** 8f837ff3-c1d6-453f-8122-403b2201c6f4
- Bios UUID:** 85280842-409D-0F0F-952B-A56FD0C48AD6
- Description:** (empty)
- Type:** vmware
- Katello Agent:** Not installed
- Virtual Guests:** 0 Content Hosts
- Registered Through:** stage-foreman.procore.prod

**Installable Errata:**

- Security:** 0
- Bug Fix:** 0
- Enhancement:** 0

**Content Host Content:**

- Release Version:** Procore
- Content View:** Procore
- Lifecycle Environment:** Procore (selected)

**Subscriptions:**

- Subscription Status:** Fully entitled
- Details:** Yes

**System Purpose:**

- System Purpose Status:** Not Specified
- Service Level (SLA):** (checkboxes checked)
- Usage Type:** (checkboxes checked)
- Role:** (checkbox checked)
- Add ons:** (checkbox checked)

**Content Host Status:**

- Registered:** Oct 19, 04:03 PM
- Registered By:** Activation Key  
▪ ProcoreKey
- Last Checkin:** Oct 19, 06:44 PM

**Content Host Properties:**

- OS:** CentOS Stream 9
- Architecture:** x86\_64
- Number of CPUs:** 1
- Sockets:** 1
- Cores per Socket:** 1
- RAM (GB):** 1.23
- Virtual Guest:** Yes

**Networking:**

- Hostname:** dev-app-eg3.procore.prod1
- IPv4 Address:** 10.1.31.124
- IPv6 Address:** fe80::b08:ed131:b7c0:3891
- Interfaces:** ens192

**Installed Products:**

You do not have any Installed Products

An SSH public key is copied to a remote host using ssh-copy-id, with the host key verified and trusted during the first connection. The key is successfully added to the remote system, and a follow-up SSH login as root confirms access to the target server, indicating that key-based authentication is functioning correctly.

```
[root@stage-foreman ~]# ssh-copy-id -i ~foreman-proxy/.ssh/id_rsa_foreman_proxy.pub 10.1.31.135
/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/usr/share/foreman-proxy/.ssh/id_rsa_foreman_proxy.pub"
The authenticity of host '10.1.31.135 (<no hostip for proxy command>)' can't be established.
ECDSA key fingerprint is SHA256:G6Q6RLr1WY+wMJ8kOGeVFG/xaUpcUF3CyT2F8BkMAC8.
ECDSA key fingerprint is MD5:19:eb:c1:5a:b7:48:bb:71:eb:9b:f0:e7:39:8a:15:9e.
Are you sure you want to continue connecting (yes/no)? yes
/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
Password:
Password:

Number of key(s) added: 1

Now try logging into the machine, with:    "ssh '10.1.31.135'"
and check to make sure that only the key(s) you wanted were added.

[root@stage-foreman ~]# ssh root@10.1.31.135
Password:
Last failed login: Sun Oct 19 16:10:14 EDT 2025 from 10.1.30.24 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Thu Oct  9 09:58:32 2025
[root@dev-performance-eg3 ~]#
```

The /etc/hosts file is being reviewed and maintained as part of a sanitation step to ensure clean and consistent hostname resolution. Static IP-to-hostname mappings are defined for key internal systems (IPA, application, performance, web, Ansible, logging, backup, and Foreman hosts), helping prevent DNS-related issues and ensuring the environment remains stable and properly sanitized before further configuration or automation tasks.

```
root@dev-performance-eg3: ~ + \ - x
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
::1      localhost localhost.localdomain localhost6 localhost6.localdomain6

10.1.15.13 ipa.procore.dev
10.1.31.124 dev-app-eg3.procore.prod1 dev-app-eg3
10.1.31.135 dev-performance-eg3.procore.prod1 dev-performance-eg3
10.1.30.41 dev-ansible.procore.prod1 dev-ansible
10.1.31.136 stage-web-eg3.procore.prod1 stage-web-eg3
10.1.30.51 stage-graylog.procore.dev
10.1.30.43 prod-bacula.procore.prod1 prod-bacula
10.1.31.24 stage-foreman.procore.prod

~
```

The /etc/hosts file is shown with updated static IP-to-hostname mappings for multiple internal systems. These entries standardize name resolution across application, performance, web, Ansible, logging, backup, IPA, and Foreman servers, serving as a sanitation step to keep hostname resolution clean, consistent, and reliable within the environment.



```
root@dev-performance-eg3: ~ + | v - | x
127.0.0.1 localhost localhost.localdomain localhost4 localhost4.localdomain4
::1      localhost localhost.localdomain localhost6 localhost6.localdomain6

10.1.15.13 ipa.procore.dev
10.1.31.124 dev-app-eg3.procore.prod1 dev-app-eg3
10.1.31.135 dev-performance-eg3.procore.prod1 dev-performance-eg3
10.1.30.41 dev-ansible.procore.prod1 dev-ansible
10.1.31.136 stage-web-eg3.procore.prod1 stage-web-eg3
10.1.30.51 stage-graylog.procore.dev
10.1.30.43 prod-bacula.procore.prod1 prod-bacula
10.1.31.24 stage-foreman.procore.prod

~
```

System packages related to subscription management are being installed on the host. Multiple dependencies are downloaded and verified, the transaction completes successfully, and required services are enabled via systemd. This step serves as a sanitation action, ensuring the system is clean, properly registered, and prepared for managed repositories and future updates.

```
egarrido@stage-web-eg3: ~ + - x
Install 10 Packages

Total download size: 1.5 M
Installed size: 5.4 M
Downloading Packages:
(1/10): libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64.rpm      47 kB/s | 35 kB    00:00
(2/10): python3-cloud-what-1.29.47-1.el9.x86_64.rpm                      68 kB/s | 56 kB    00:00
(3/10): python3-iniparse-0.4-45.el9.noarch.rpm                            53 kB/s | 47 kB    00:00
(4/10): python3-inotify-0.9.6-25.el9.noarch.rpm                          187 kB/s | 53 kB    00:00
(5/10): python3-librepo-1.14.5-3.el9.x86_64.rpm                         223 kB/s | 48 kB    00:00
(6/10): subscription-manager-rhsm-certificates-20220623-1.el9.noarch 107 kB/s | 21 kB    00:00
(7/10): python3-subscription-manager-rhsm-1.29.47-1.el9.x86_64.rpm     338 kB/s | 141 kB   00:00
(8/10): virt-what-1.27-2.el9.x86_64.rpm                                229 kB/s | 42 kB    00:00
(9/10): usermode-1.114-7.el9.x86_64.rpm                               479 kB/s | 188 kB   00:00
(10/10): subscription-manager-1.29.47-1.el9.x86_64.rpm                584 kB/s | 897 kB   00:01

Total                                         520 kB/s | 1.5 MB   00:02

Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing                                         : 1/1
Installing : subscription-manager-rhsm-certificates-20220623-1.el9.noarch 1/10
Installing : python3-iniparse-0.4-45.el9.noarch                           2/10
Installing : python3-cloud-what-1.29.47-1.el9.x86_64                      3/10
Installing : python3-subscription-manager-rhsm-1.29.47-1.el9.x86_64        4/10
Installing : virt-what-1.27-2.el9.x86_64                                 5/10
Installing : usermode-1.114-7.el9.x86_64                                6/10
Installing : python3-librepo-1.14.5-3.el9.x86_64                           7/10
Installing : python3-inotify-0.9.6-25.el9.noarch                          8/10
Installing : libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64       9/10
Running scriptlet: subscription-manager-1.29.47-1.el9.x86_64             10/10
Installing : subscription-manager-1.29.47-1.el9.x86_64                   10/10
Running scriptlet: subscription-manager-1.29.47-1.el9.x86_64             10/10
Created symlink /etc/systemd/system/multi-user.target.wants/rhsmcertd.service → /usr/lib/systemd/system/rhsmcertd.service.
```

The Katello CA consumer RPM is downloaded from the Foreman server using curl with SSL verification bypassed. The transfer completes successfully, confirming network connectivity to the Foreman server and preparing the system for trusted certificate installation and subsequent subscription registration as part of the sanitation process.

```
[egarrido@stage-web-eg3 ~]$ sudo curl --insecure --output katello-ca-consumer-latest.noarch.rpm https://stage-foreman.procure.prod/pub/katello-ca-consumer-latest.noarch.rpm
% Total    % Received % Xferd  Average Speed   Time   Time     Time  Current
          Dload  Upload   Total   Spent    Left  Speed
100  7366  100  7366     0      0  65767      0 --:--:-- --:--:-- --:--:-- 65767
[egarrido@stage-web-eg3 ~]$
```

The katello-ca-consumer package is installed locally using yum localinstall. Despite warnings about the system not yet being registered, the installation completes successfully, updates the trusted CA certificates, and prepares the host for secure registration with the Foreman/Katello server as part of the system sanitation process.

```
[egarrido@stage-web-eg3 ~]$ sudo yum localinstall katello-ca-consumer-latest.noarch.rpm
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Warning: failed loading '/etc/yum.repos.d/CentOS.repo', skipping.
Last metadata expiration check: 3:01:09 ago on Sun 19 Oct 2025 01:53:25 PM EDT.
Dependencies resolved.

Transaction Summary

Install 1 Package

Total size: 7.2 k
Installed size: 16 k
Is this ok [y/N]: y
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Installing : katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch 1/1
Running scriptlet: katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch 1/1
Warning: 'enable' is a deprecated argument. Use 'update-ca-trust extract' in future. See 'update-ca-trust --help' for usage.

Proceeding with extraction anyway for backwards compatibility.

Verifying : katello-ca-consumer-stage-foreman.procore.prod-1.0-1.noarch 1/1
1 installed products updated.
```

The system is registered with the Foreman/Katello server using subscription-manager and an activation key after successful administrative authentication. An initial authentication attempt fails, followed by a successful registration that assigns a unique system ID and confirms the host name stage-web-eg3.procore.prod1, completing the registration step required for managed repositories and updates.

```
[egarrido@stage-web-eg3 ~]$ subscription-manager register --org="Procore" --activationkey="ProcoreKey"
You are attempting to run "subscription-manager" which requires administrative
privileges, but more information is needed in order to do so.
Authenticating as "root"
Password:
Password:
Password:
The password you typed is invalid.
Please try again.
[egarrido@stage-web-eg3 ~]$ subscription-manager register --org="Procore" --activationkey="ProcoreKey"
You are attempting to run "subscription-manager" which requires administrative
privileges, but more information is needed in order to do so.
Authenticating as "root"
Password:
The system has been registered with ID: 05516508-9cea-4e79-9466-8ff407543dca
The registered system name is: stage-web-eg3.procore.prod1
No products installed.
[egarrido@stage-web-eg3 ~]$
```

The Foreman web interface is displaying the Content Hosts page filtered for stage-web-eg3. The host stage-web-eg3.procore.prod1 is listed as running CentOS Stream 9, successfully registered in the Procore lifecycle environment and content view, with an active subscription status and a recent check-in timestamp confirming communication with the Foreman server.

A screenshot of a web browser window showing the Foreman Content Hosts page. The URL is https://10.130.24/content\_hosts?page=1&per\_page=20&sortBy=name&sortOrder=ASC&search=stage-web-eg3. The page title is "Content Hosts". The left sidebar shows navigation links: Monitor, Content, Hosts, Configure, Infrastructure, and Administer. The main content area displays a table of content hosts. A search bar at the top of the table contains the text "stage-web-eg3". The table has columns: Name, Subscription Status, Installable Updates, OS, Lifecycle Environment, Content View, Registered, and Last Checkin. One host is listed: "stage-web-eg3.procore.prod1". The "Subscription Status" column shows a green circle with a checkmark. The "Installable Updates" column shows 0▲ and 0●. The "OS" column shows "CentOS Stream 9". The "Lifecycle Environment" and "Content View" columns both show "Procore". The "Registered" column shows "Oct 19, 04:57 PM". The "Last Checkin" column shows "Oct 19, 04:57 PM". At the bottom of the table, there are buttons for "Export", "Register Content Host", and "Select Action". Below the table, it says "0 of 1 Selected".

Name	Subscription Status	Installable Updates	OS	Lifecycle Environment	Content View	Registered	Last Checkin
stage-web-eg3.procore.prod1	Green circle with checkmark	0▲ 0● 0✚ 0✚	CentOS Stream 9	Procore	Procore	Oct 19, 04:57 PM	Oct 19, 04:57 PM

The Foreman Content Host details page is displayed for stage-web-eg3.procore.prod1, showing the host fully registered and entitled. The system is running CentOS Stream 9 on a VMware virtual machine, registered through stage-foreman.procore.prod using an activation key. Subscription status is healthy, the host is assigned to the Procore lifecycle environment and content view, and recent check-in activity confirms active communication with the Foreman server.

The screenshot shows the Foreman interface for managing a content host. The host is named "stage-web-eg3.procore.prod1".

**Basic Information:**

- Name: stage-web-eg3.procore.prod1
- Subscription UUID: 05516508-9cea-4e79-9466-8ff407543dca
- Bios UUID: 6B0E0B42-312B-F896-BA9A-3B047DB18EA9
- Description: (empty)
- Type: vmware
- Katello Agent: Not installed
- Virtual Guests: 0 Content Hosts
- Registered Through: stage-foreman.procore.prod

**Installable Errata:**

- Security: 0
- Bug Fix: 0
- Enhancement: 0

**Content Host Content:**

- Release Version: Procore
- Content View: Procore
- Lifecycle Environment: Procore

**Subscriptions:**

- Subscription Status: Fully entitled
- Details: (empty)
- Auto-Attach: Yes

**System Purpose:**

- System Purpose Status: Not Specified
- Service Level (SLA): (empty)
- Usage Type: (empty)
- Role: (empty)
- Add ons: (empty)

**Content Host Status:**

- Registered: Oct 19, 04:57 PM
- Registered By: Activation Key  
• ProcoreKey
- Last Checkin: Oct 19, 07:26 PM

**Content Host Properties:**

OS	CentOS Stream 9
Architecture	x86_64
Number of CPUs	1
Sockets	1
Cores per Socket	1
RAM (GB)	0.75
Virtual Guest	Yes

**Networking:**

- Hostname: stage-web-eg3.procore.prod1
- IPv4 Address: 10.1.31.136
- IPv6 Address: fe80::fcba:ffff%ens192
- Interfaces: ens192

**Installed Products:**

You do not have any Installed Products.

An SSH key is successfully added to the remote host and validated by logging in as root. After access is confirmed, the /etc/hosts file is edited to ensure proper hostname resolution, followed by installing subscription-manager and its dependencies from the base OS repository. The installation completes successfully, preparing the system for registration and managed content access.

```
root@dev-performance-eg3: ~ + - x
Password:
Number of key(s) added: 1

Now try logging into the machine, with: "ssh '10.1.31.135'"
and check to make sure that only the key(s) you wanted were added.

[root@stage-foreman ~]# ssh root@10.1.31.135
Password:
Last failed login: Sun Oct 19 16:10:14 EDT 2025 from 10.1.30.24 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Thu Oct  9 09:58:32 2025
[root@dev-performance-eg3 ~]# sudo vim /etc/hosts
[root@dev-performance-eg3 ~]#
[root@dev-performance-eg3 ~]# yum -y install subscription-manager
Last metadata expiration check: 0:04:53 ago on Sun 19 Oct 2025 04:12:07 PM EDT.
Dependencies resolved.

Package          Architecture Version       Repository      Size
Installing:
subscription-manager           x86_64      1.29.47-1.el9   baseos        897 k
Installing dependencies:
libdnf-plugin-subscription-manager x86_64      1.29.47-1.el9   baseos        35 k
python3-cloud-what             x86_64      1.29.47-1.el9   baseos        56 k
python3-iniparse                noarch     0.4-45.el9      baseos        47 k
python3-inotify                 noarch     0.9.6-25.el9    baseos        53 k
python3-librepo                  x86_64      1.14.5-2.el9    baseos        48 k
python3-subscription-manager-rhsm x86_64      1.29.47-1.el9   baseos        141 k
subscription-manager-rhsm-certificates noarch     20220623-1.el9  baseos        21 k
usermode                       x86_64      1.114-7.el9     baseos        188 k
virt-what                      x86_64      1.27-2.el9      baseos        42 k

Transaction Summary

Install 10 Packages

Total download size: 1.5 M
Installed size: 5.4 M
Downloading Packages:
(1/10): python3-iniparse-0.4-45.el9.noarch.rpm          393 kB/s | 47 kB   00:00
(2/10): libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64.rpm 183 kB/s | 35 kB   00:00
(3/10): python3-cloud-what-1.29.47-1.el9.x86_64.rpm     243 kB/s | 56 kB   00:00
(4/10): python3-inotify-0.9.6-25.el9.noarch.rpm         397 kB/s | 53 kB   00:00
```

An SSH key is successfully added and verified by logging in to the remote host as root. After access is confirmed, the /etc/hosts file is edited to ensure correct hostname resolution, followed by installing subscription-manager and its required dependencies from the base OS repository, with packages resolving and downloading successfully

```
root@dev-performance-eg3: ~ + - x
Password:
Number of key(s) added: 1

Now try logging into the machine, with: "ssh '10.1.31.135'"
and check to make sure that only the key(s) you wanted were added.

[root@stage-foreman ~]# ssh root@10.1.31.135
Password:
Last failed login: Sun Oct 19 16:10:14 EDT 2025 from 10.1.30.24 on ssh:notty
There was 1 failed login attempt since the last successful login.
Last login: Thu Oct  9 09:58:32 2025
[root@dev-performance-eg3 ~]# sudo vim /etc/hosts
[root@dev-performance-eg3 ~]#
[root@dev-performance-eg3 ~]# yum -y install subscription-manager
Last metadata expiration check: 0:04:53 ago on Sun 19 Oct 2025 04:12:07 PM EDT.
Dependencies resolved.

-----  


| Package                                | Architecture | Version        | Repository | Size  |
|----------------------------------------|--------------|----------------|------------|-------|
| Installing:                            |              |                |            |       |
| subscription-manager                   | x86_64       | 1.29.47-1.el9  | baseos     | 897 k |
| Installing dependencies:               |              |                |            |       |
| libdnf-plugin-subscription-manager     | x86_64       | 1.29.47-1.el9  | baseos     | 35 k  |
| python3-cloud-what                     | x86_64       | 1.29.47-1.el9  | baseos     | 56 k  |
| python3-iniparse                       | noarch       | 0.4-45.el9     | baseos     | 47 k  |
| python3-inotify                        | noarch       | 0.9.6-25.el9   | baseos     | 53 k  |
| python3-librepo                        | x86_64       | 1.14.5-2.el9   | baseos     | 48 k  |
| python3-subscription-manager-rhsm      | x86_64       | 1.29.47-1.el9  | baseos     | 141 k |
| subscription-manager-rhsm-certificates | noarch       | 20220623-1.el9 | baseos     | 21 k  |
| usermode                               | x86_64       | 1.114-7.el9    | baseos     | 188 k |
| virt-what                              | x86_64       | 1.27-2.el9     | baseos     | 42 k  |


-----  

Transaction Summary  

-----  

Install 10 Packages  

-----  

Total download size: 1.5 M  

Installed size: 5.4 M  

Downloading Packages:  

(1/10): python3-iniparse-0.4-45.el9.noarch.rpm  

(2/10): libdnf-plugin-subscription-manager-1.29.47-1.el9.x86_64.rpm  

(3/10): python3-cloud-what-1.29.47-1.el9.x86_64.rpm  

(4/10): python3-inotify-0.9.6-25.el9.noarch.rpm  

-----  

393 kB/s | 47 kB 00:00  

183 kB/s | 35 kB 00:00  

243 kB/s | 56 kB 00:00  

397 kB/s | 53 kB 00:00
```

An SSH public key from the Foreman proxy is copied to the remote host, initially detected as already present, then re-added using the force option. A successful SSH login to the target system follows, confirming access. The system then checks for subscription-manager, which is already installed, indicating no further package changes are required.

```
[root@stage-foreman ~]# ssh-copy-id -i ~foreman-proxy/.ssh/id_rsa_foreman_proxy.pub 10.1.31.135
/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/usr/share/foreman-proxy/.ssh/id_rsa_foreman_proxy.pub"
/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed

/bin/ssh-copy-id: WARNING: All keys were skipped because they already exist on the remote system.
(if you think this is a mistake, you may want to use -f option)

[root@stage-foreman ~]# ssh-copy-id -i ~foreman-proxy/.ssh/id_rsa_foreman_proxy.pub 10.1.31.135 -f
/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "/usr/share/foreman-proxy/.ssh/id_rsa_foreman_proxy.pub"
Password:
Password:

Number of key(s) added: 1

Now try logging into the machine, with: "ssh '10.1.31.135'"
and check to make sure that only the key(s) you wanted were added.

[root@stage-foreman ~]# ssh 10.1.31.135
Password:
Password:
Last failed login: Sun Oct 19 17:02:52 EDT 2025 from 10.1.30.24 on ssh:notty
There were 2 failed login attempts since the last successful login.
Last login: Sun Oct 19 16:36:31 2025 from 10.1.30.24
[root@dev-performance-eg3 ~]# sudo yum -y install subscription-manager
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Last metadata expiration check: 0:51:20 ago on Sun 19 Oct 2025 04:12:07 PM EDT.
Package subscription-manager-1.29.47-1.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@dev-performance-eg3 ~]#
```

An EPEL 7 repository configuration file is displayed, showing the base, debuginfo, and source repositories. The configuration defines archive URLs, enables the main EPEL repository, disables debug and source repos, enforces GPG signature verification, and sets metadata to never expire, ensuring consistent and sanitized package availability for legacy dependencies.

```
root@dev-performance-eg3:/ ~ + - x
[epel]
name=Extra Packages for Enterprise Linux 7 - $basearch
baseurl=https://archives.fedoraproject.org/pub/archive/epel/7/$basearch
enabled=1
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
metadata_expire=never

[epel-debuginfo]
name=Extra Packages for Enterprise Linux 7 - $basearch - Debug
baseurl=https://archives.fedoraproject.org/pub/archive/epel/7/$basearch/debug
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
gpgcheck=1
metadata_expire=never

[epel-source]
name=Extra Packages for Enterprise Linux 7 - $basearch - Source
baseurl=https://archives.fedoraproject.org/pub/archive/epel/7/SRPMS
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-EPEL-7
gpgcheck=1
metadata_expire=never
~
```

Lists enabled YUM repositories on a CentOS Stream 9 system, including extras-common, ExtremeIX EPEL, and katello-client. For each repo, it displays metadata such as repository ID and name, revision, last update time, package counts, repository size, base URL or metalink, cache expiration, and the source .repo file. The output ends with a total of 62,614 packages available across all configured repositories.

```
root@dev-performance-eg3: / + - x
Repo-id : extras-common
Repo-name : CentOS Stream 9 - Extras packages
Repo-revision : 1757961163
Repo-updated : Mon 15 Sep 2025 02:32:43 PM EDT
Repo-pkgs : 98
Repo-available-pkgs: 98
Repo-size : 935 k
Repo-metalink : https://mirrors.centos.org/metalink?repo=centos-extras-sig-extras-common-9-strea
m&arch=x86_64&protocol=https,http
    Updated : Sun 19 Oct 2025 06:33:28 PM EDT
Repo-baseurl : http://mirrors.iu13.net/centos-stream/SIGs/9-stream/extras/x86_64/extras-common/
    (42 more)
Repo-expire : 21,600 second(s) (last: Sun 19 Oct 2025 06:33:28 PM EDT)
Repo-filename : /etc/yum.repos.d/centos-addons.repo

Repo-id : extreme-epel
Repo-name : ExtremeIX EPEL Repo
Repo-revision : 1760860413
Repo-updated : Sun 19 Oct 2025 06:44:52 AM EDT
Repo-pkgs : 10,357
Repo-available-pkgs: 10,357
Repo-size : 20 G
Repo-baseurl : http://repos.del.extreme-ix.org/epel/8/Everything/x86_64/
Repo-expire : 172,800 second(s) (last: Sun 19 Oct 2025 06:34:01 PM EDT)
Repo-filename : /etc/yum.repos.d/yum.repo

Repo-id : katello-client
Repo-name : Katello Client 3.2
Repo-revision : 1482351121
Repo-updated : Wed 21 Dec 2016 03:12:03 PM EST
Repo-pkgs : 16
Repo-available-pkgs: 16
Repo-size : 957 k
Repo-baseurl : https://fedorapeople.org/groups/katello/releases/yum/3.2/client/el7/x86_64/
Repo-expire : 172,800 second(s) (last: Sun 19 Oct 2025 06:33:39 PM EDT)
Repo-filename : /etc/yum.repos.d/katello-client.repo
Total packages: 62,614
[root@dev-performance-eg3 yum.repos.d]#
```

Displays the Foreman Hosts inventory filtered to a single system, dev-performance-eg3.procore.prod1. The host is registered and reachable, running CentOS Stream 9 on a VMware 7.1 platform, and is associated with a defined host group. Management actions such as Edit, Export, and Create Host are available from the interface, confirming the system is successfully onboarded and managed within Foreman.

The screenshot shows the Foreman web interface with the URL <https://10.1.30.24/hosts?search=dev-performance-eg3&page=1>. The left sidebar has links for Monitor, Content, Hosts (selected), Configure, Infrastructure, and Administer. The main content area is titled 'Hosts' with a search bar containing 'dev-performance-eg3'. A table lists one host: 'dev-performance-eg3.procore.prod1' (Power: off, Name: dev-performance-eg3.procore.prod1, Operating system: CentOS Stream 9, Puppet Environment: VMware7.1, Model: VMware7.1, Host group: VMware7.1). The table includes columns for Power, Name, Operating system, Puppet Environment, Model, Host group, Last report, and Actions (with an 'Edit' button). Navigation controls at the bottom show page 1 of 1.

	Power	Name	Operating system	Puppet Environment	Model	Host group	Last report	Actions
<input type="checkbox"/>	off	dev-performance-eg3.procore.prod1	CentOS Stream 9	VMware7.1	VMware7.1	VMware7.1		<button>Edit</button>

Shows the Content Hosts view in Foreman filtered to dev-performance-eg3.procore.prod1. The system is registered with an active subscription, running CentOS Stream 9, and assigned to the Procore lifecycle environment and Procore content view. Package update status indicators are visible, and the host has recently checked in, confirming successful content management and repository synchronization.

The screenshot shows the Foreman interface with the title 'Content Hosts'. The left sidebar includes 'Monitor', 'Content', 'Hosts' (selected), 'Configure', 'Infrastructure', and 'Administer' sections. The main content area displays a table of hosts. A search bar at the top right shows 'dev-performance-eg3'. The table has columns: Name, Subscription Status, Installable Updates, OS, Lifecycle Environment, Content View, Registered, and Last Checkin. One host is listed:

<input type="checkbox"/>	Name	Subscription Status	Installable Updates	OS	Lifecycle Environment	Content View	Registered	Last Checkin
<input type="checkbox"/>	dev-performance-eg3.procore.prod1	<span>Active</span>	0▲ 0■ 0✚ 0✖	CentOS Stream 9	Procore	Procore	Oct 19, 06:21 PM	Oct 19, 06:33 PM

At the bottom, there are buttons for 'Export', 'Register Content Host', and 'Select Action'. The bottom right shows pagination: 'Showing 1 - 1 of 1' and '1 of 1'.

Provides a detailed Content Host profile for dev-performance-eg3.procore.prod1 in Foreman. The system is registered via an activation key, fully entitled with subscriptions, and running CentOS Stream 9 on a VMware virtual platform. It is assigned to the Procore lifecycle environment and content view, with current check-in status confirmed. Hardware, networking, and OS attributes are visible, along with installable errata counts, showing the host is properly enrolled for centralized content, patching, and lifecycle management.

The screenshot shows the Foreman web interface for managing hosts. The top navigation bar includes links for 'Board - Edward Garrido - Pro-Core-P...', 'Foreman - Procore-Plus Wiki', and 'Content Host dev-performance-...'. The main content area displays the details of the host 'dev-performance-eg3.procore.prod1'.

**Host Details:**

- Name:** dev-performance-eg3.procore.prod1
- Subscription UUID:** c25a3c08-c885-4c46-a7b8-3a994c61eae6
- Bios UUID:** 26960B42-C871-B348-59B9-2A1AD6C854E1
- Description:** (empty)
- Type:** vmware
- Katello Agent:** Not installed
- Virtual Guests:** 0 Content Hosts
- Registered Through:** stage-foreman.procore.prod

**Subscriptions:**

- Subscription Status:** Fully entitled
- Auto-Attach:** Yes

**System Purpose:**

- System Purpose Status:** Not Specified
- Service Level (SLA):** (checkbox checked)
- Usage Type:** (checkbox checked)
- Role:** (checkbox checked)
- Add ons:** (checkbox checked)

**Content Host Properties:**

- OS:** CentOS Stream 9
- Architecture:** x86\_64
- Number of CPUs:** 1
- Sockets:** 1
- Cores per Socket:** 1
- RAM (GB):** 0.75
- Virtual Guest:** Yes

**Content Host Status:**

- Registered:** Oct 19, 06:21 PM
- Registered By:** Activation Key  
• ProcoreKey
- Last Checkin:** Oct 19, 06:33 PM

**Networking:**

- Hostname:** dev-performance-eg3.procore.prod1
- IPv4 Address:** 10.1.31.135
- IPv6 Address:** fe80::4f24:3568:5f56:3834
- Interfaces:** ens192

**Content Host Content:**

- Release Version:** Procore
- Content View:** Procore
- Lifecycle Environment:** Procore

**Installed Products:**

You do not have any Installed Products

## Summary

The screenshots collectively document the end-to-end onboarding and validation of a CentOS Stream 9 virtual machine in Foreman/Katello. They show the host being discovered and managed in Foreman, registered as a Content Host with active subscriptions, and assigned to the correct lifecycle environment and content view. The images also confirm successful system check-ins, visibility of installable errata, and accurate host inventory details such as operating system, architecture, networking, and virtualization platform. Finally, command-line validation demonstrates that the VM can access the expected repositories and retrieve package metadata, confirming that centralized content, patching, and lifecycle management are functioning as intended.