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.

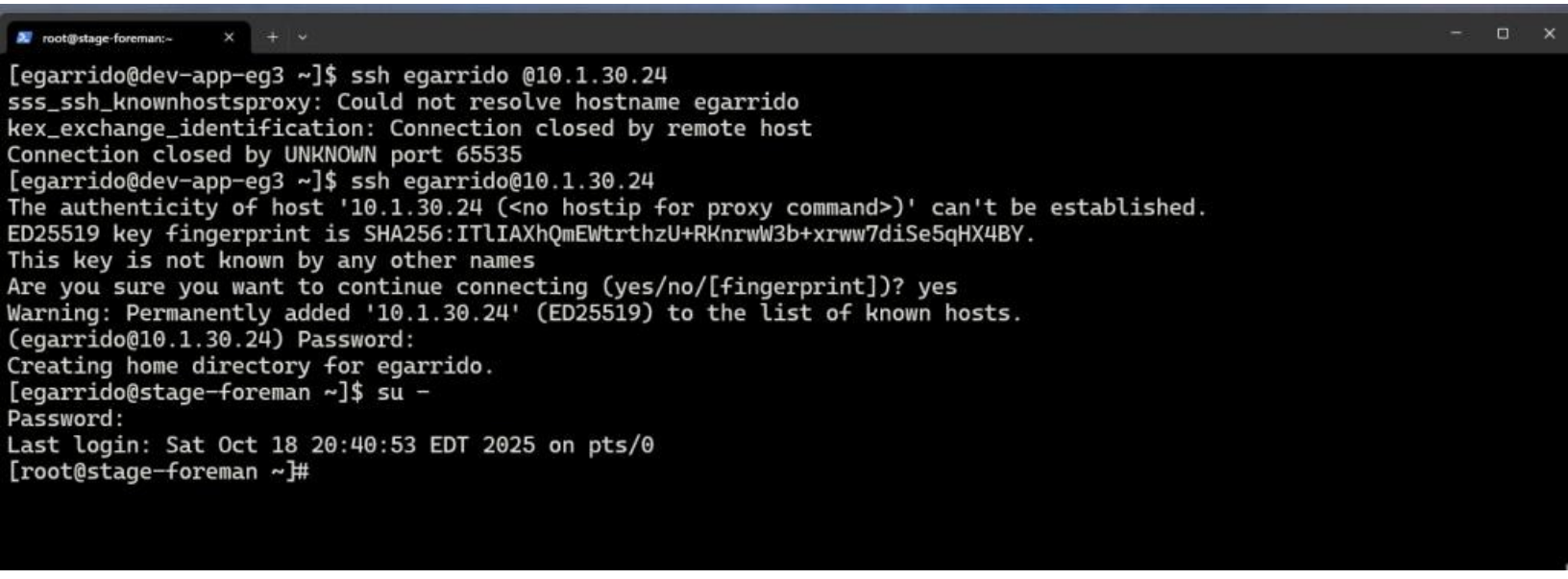
Outcome

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.

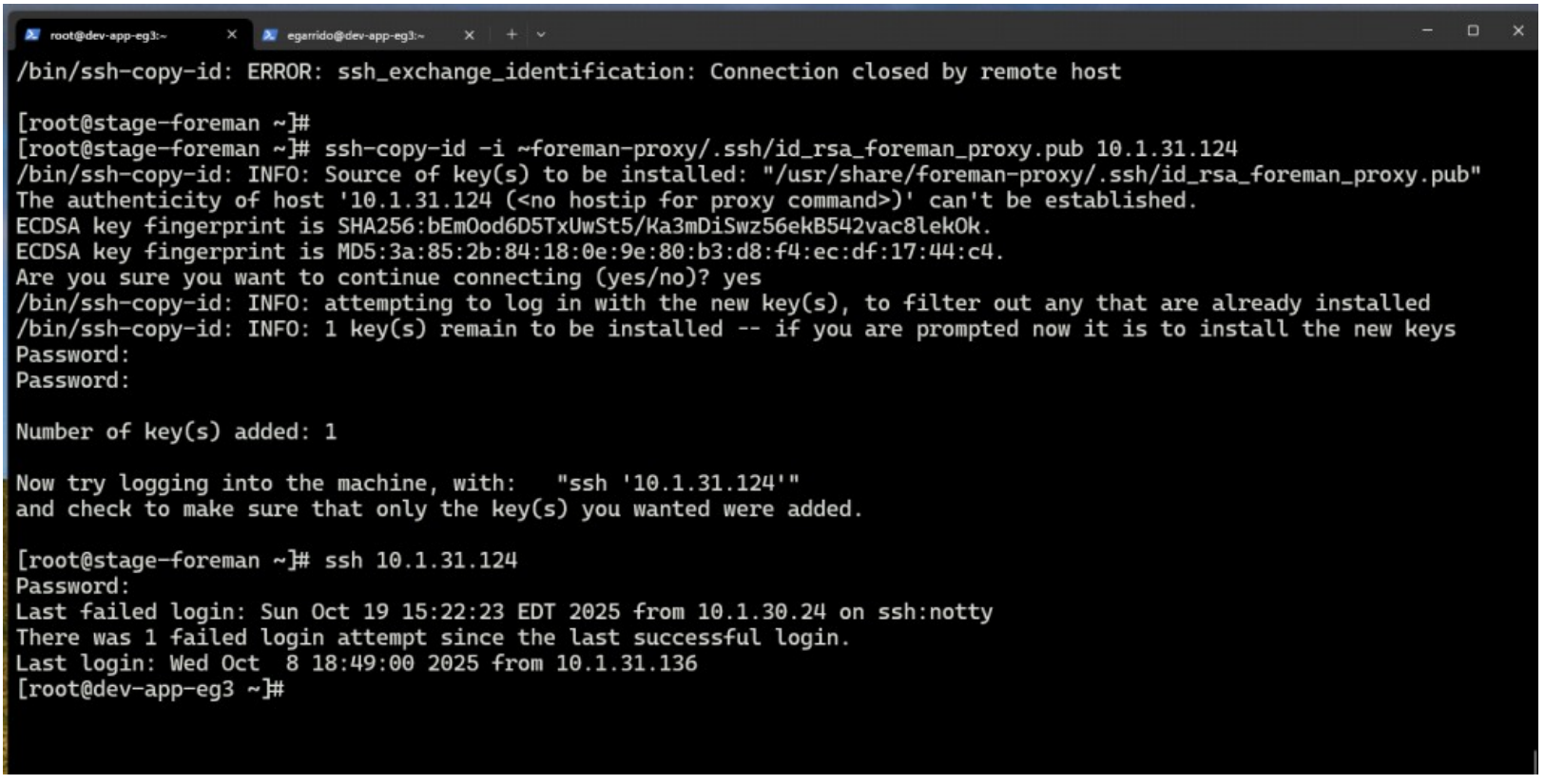
Sanitation Disclaimer

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.

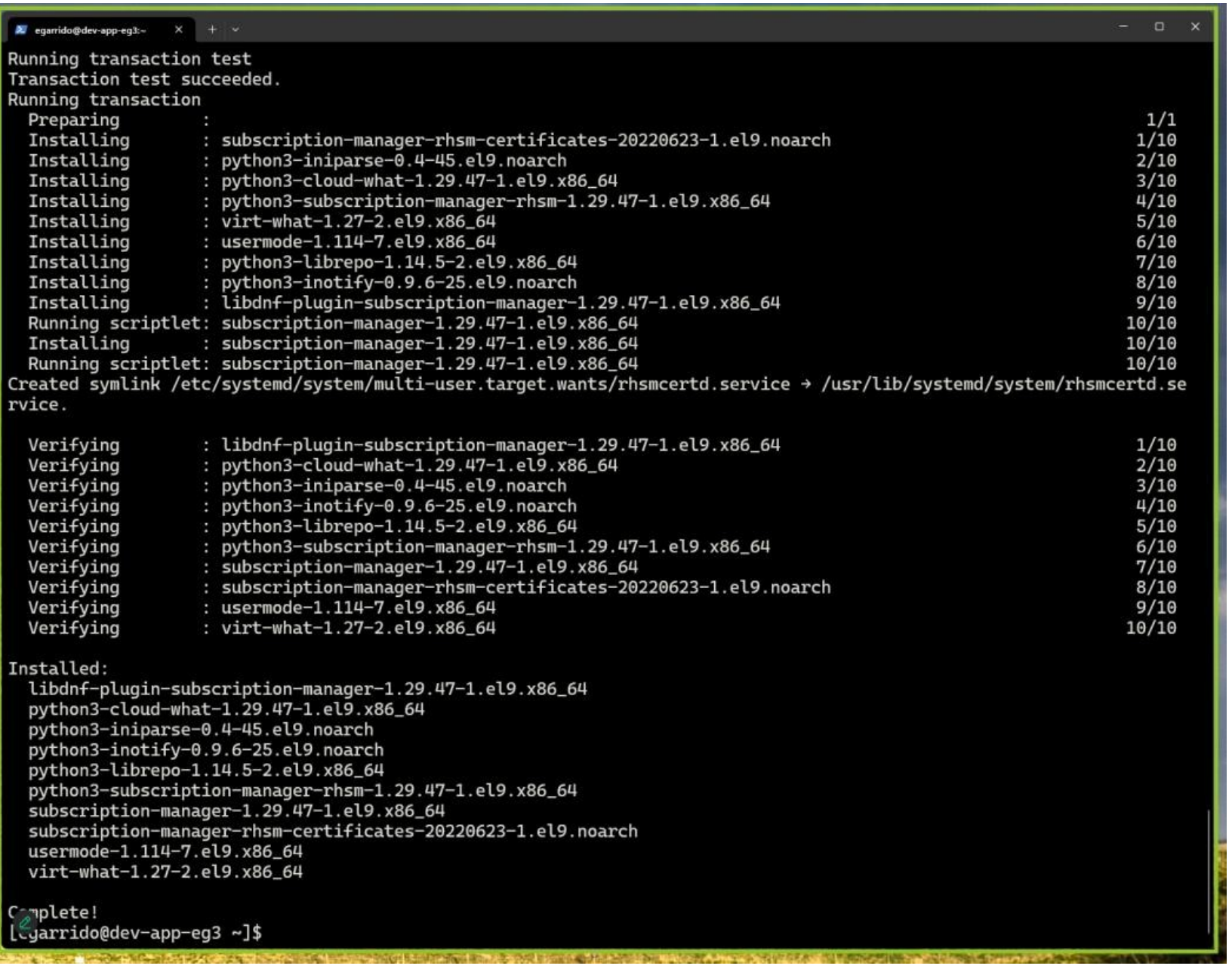
A successful SSH connection was established to the remote system at 10.1.30.24 after resolving an initial hostname issue by connecting directly via IP address. The host key was verified and added to the known hosts file, a user home directory was created on first login, and privilege escalation to the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



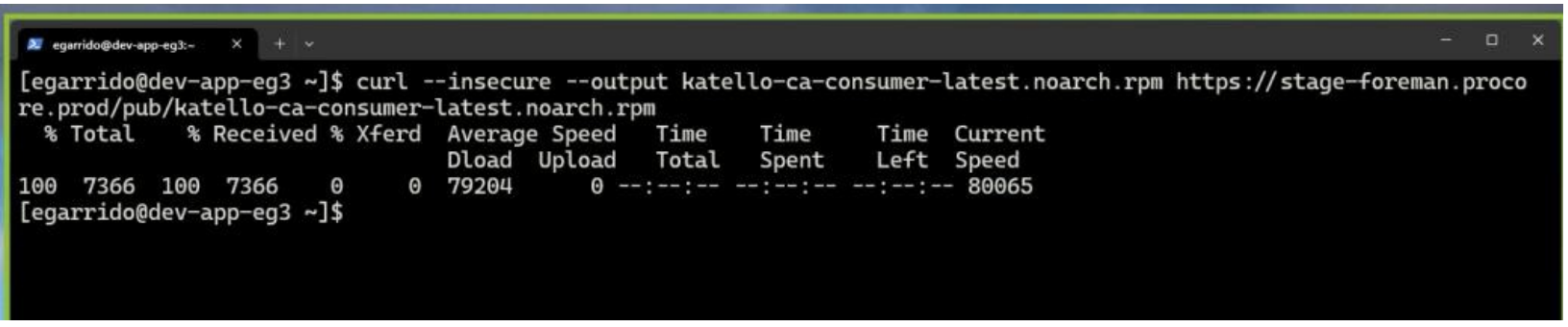
An SSH key–based authentication workflow is being configured and validated. After an initial connection issue, a public key was successfully copied to the remote host using ssh-copy-id, the host key was verified and trusted, and the key was added to the authorized keys on the target system. A follow-up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



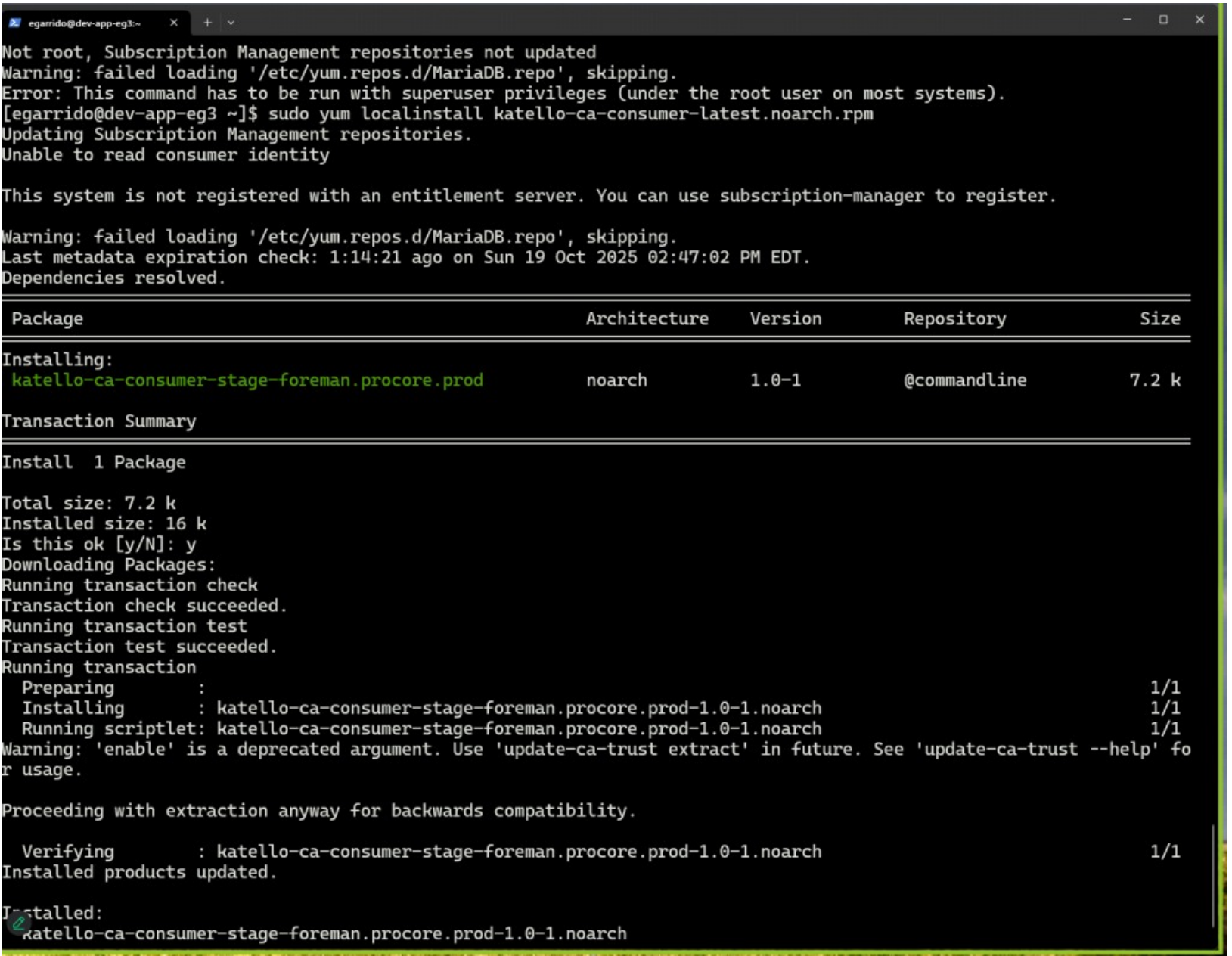
The system successfully completed a package installation transaction using dnf. Required subscription-manager, Python, and system utility packages were installed, verified, and configured without errors. The process finished cleanly, confirming the system is properly updated and ready for subscription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



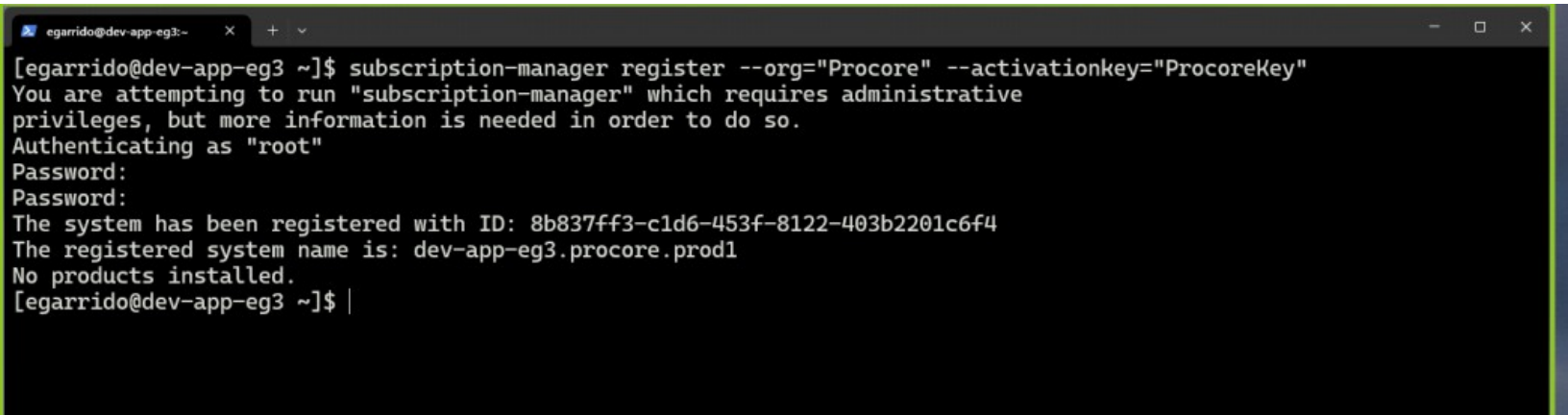
A package was successfully downloaded using curl, retrieving the katello-ca-consumer RPM from the Foreman server. The transfer completed without errors, confirming network connectivity and preparing the system for Foreman/Katello client registration and subscription management.



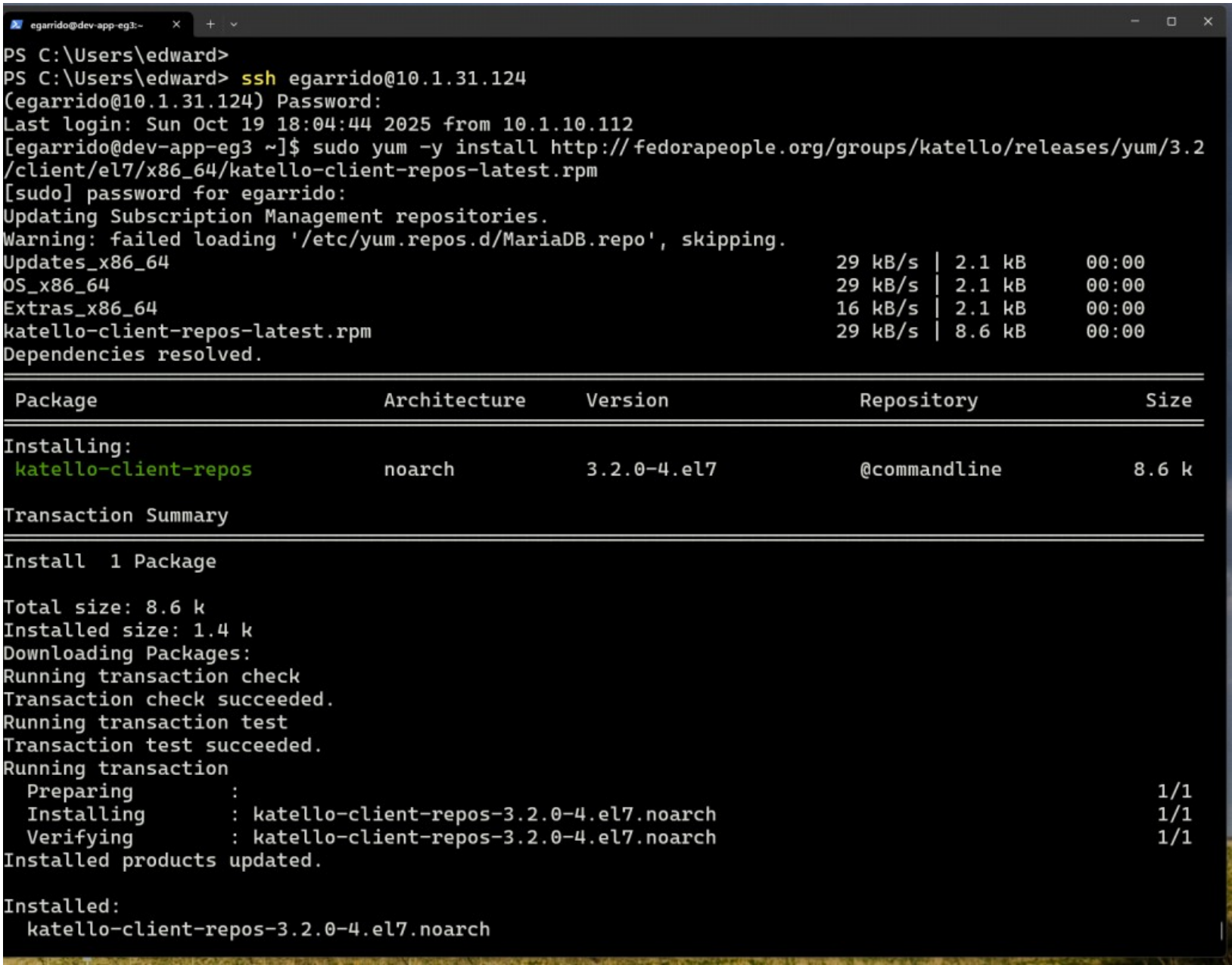
The Katello CA consumer package was successfully installed on the system using yum localinstall. Despite initial warnings about subscription registration and a skipped MariaDB repo, the transaction completed cleanly, updated the trusted CA certificates, and prepared the host for registration with the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



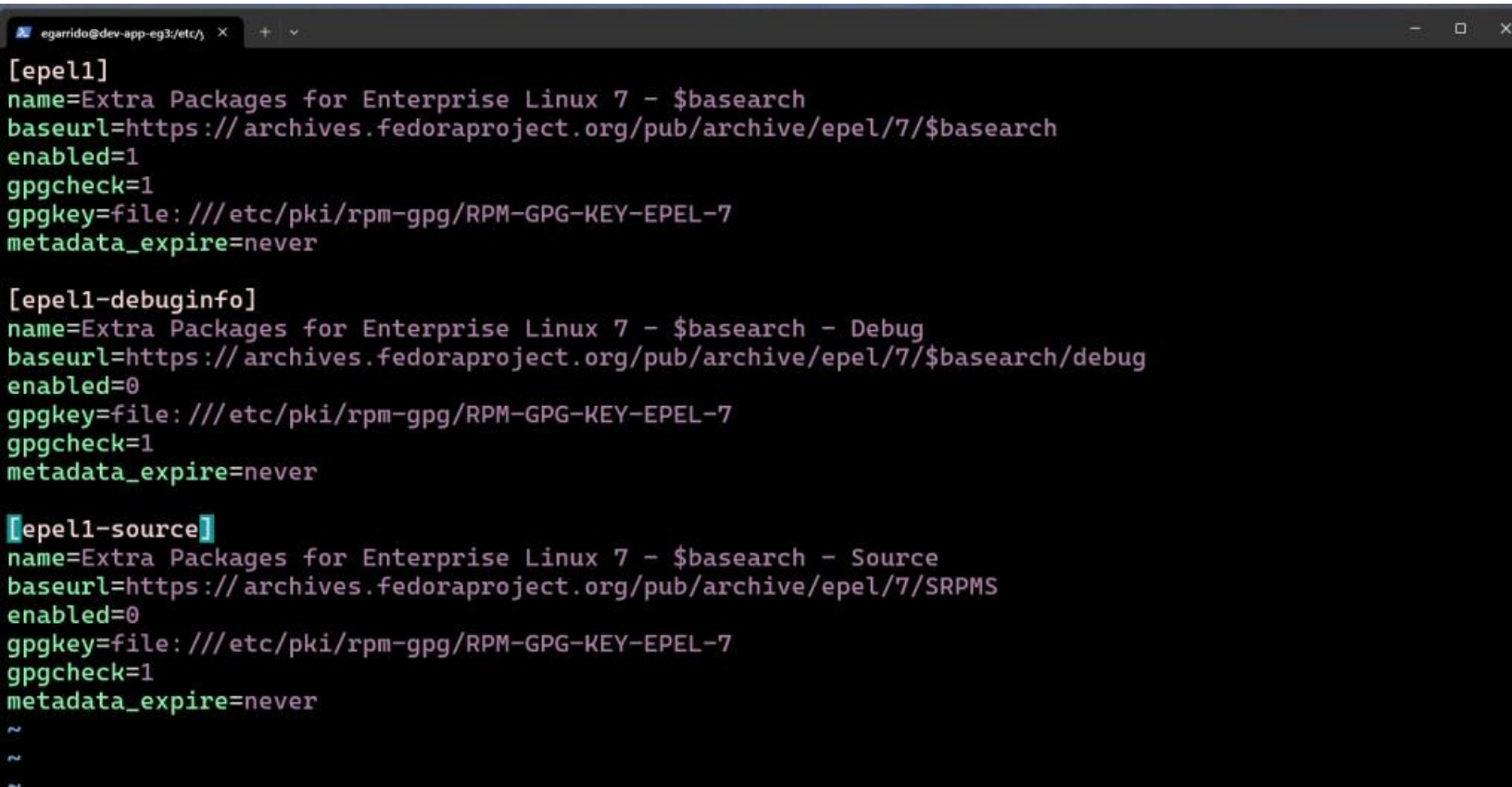
The system is being registered to a Foreman/Katello server using subscription-manager with an organization and activation key. Administrative authentication is performed successfully, and the host is assigned a unique system ID and registered hostname, confirming successful enrollment with the subscription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



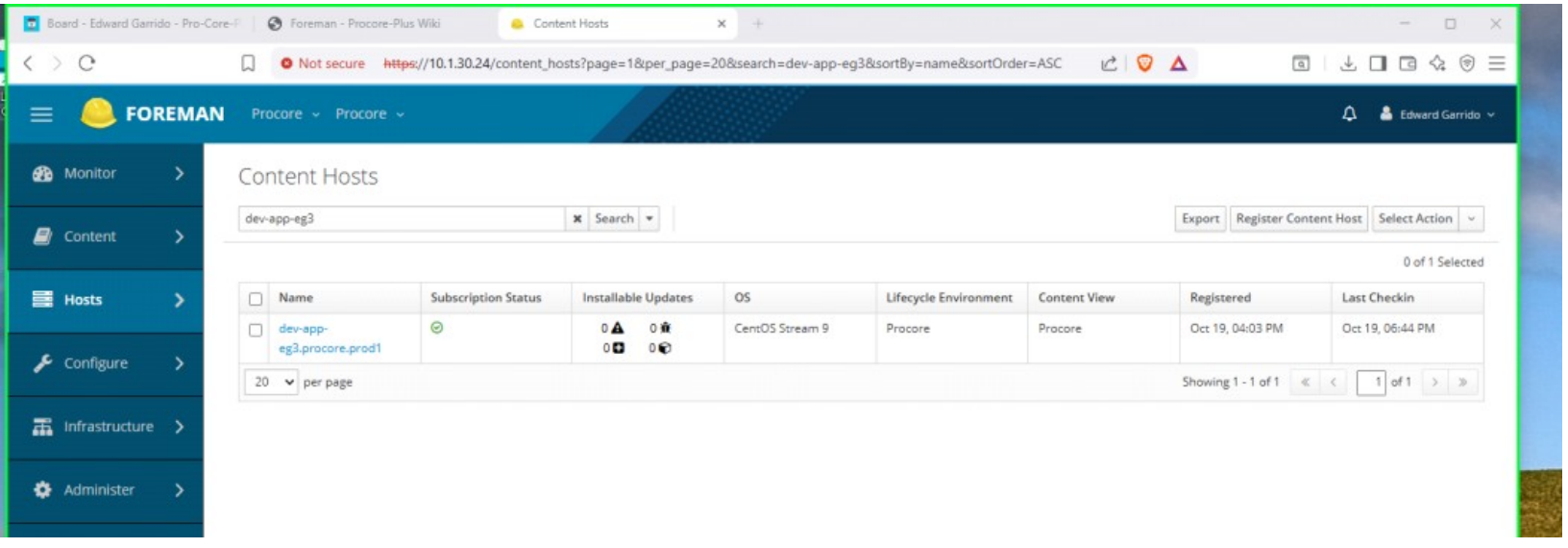
An SSH connection is established to a remote Linux system, followed by the installation of the Katello client repository package using yum. Subscription management repositories are updated, dependencies are resolved, and the katello-client-repos package installs successfully, confirming the system is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



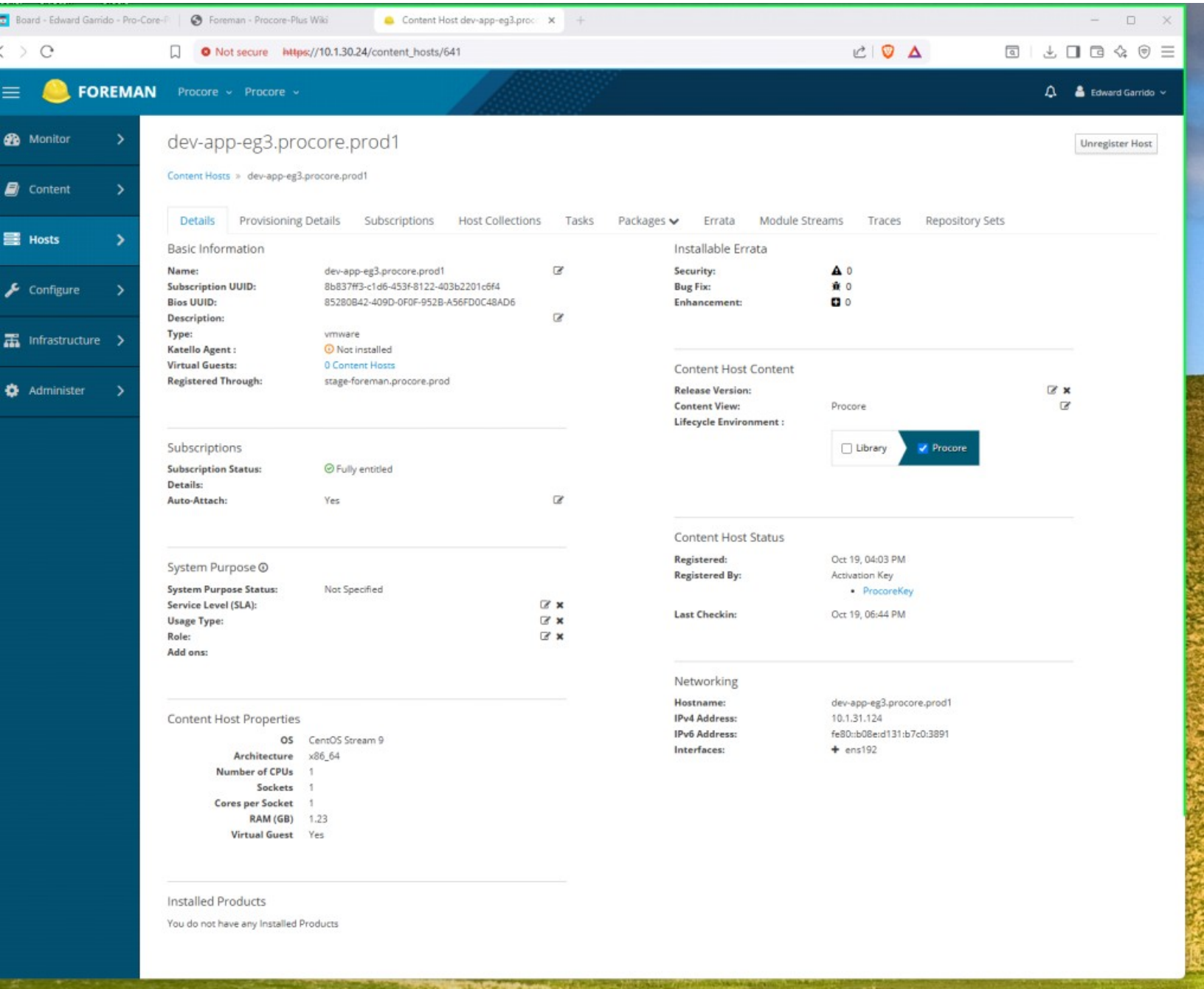
An EPEL repository configuration file is being viewed or edited, defining the EPEL 7 base, debuginfo, and source repositories. The configuration specifies archive URLs, GPG key verification, enabled states for each repo, and disables metadata expiration to ensure consistent package availability.



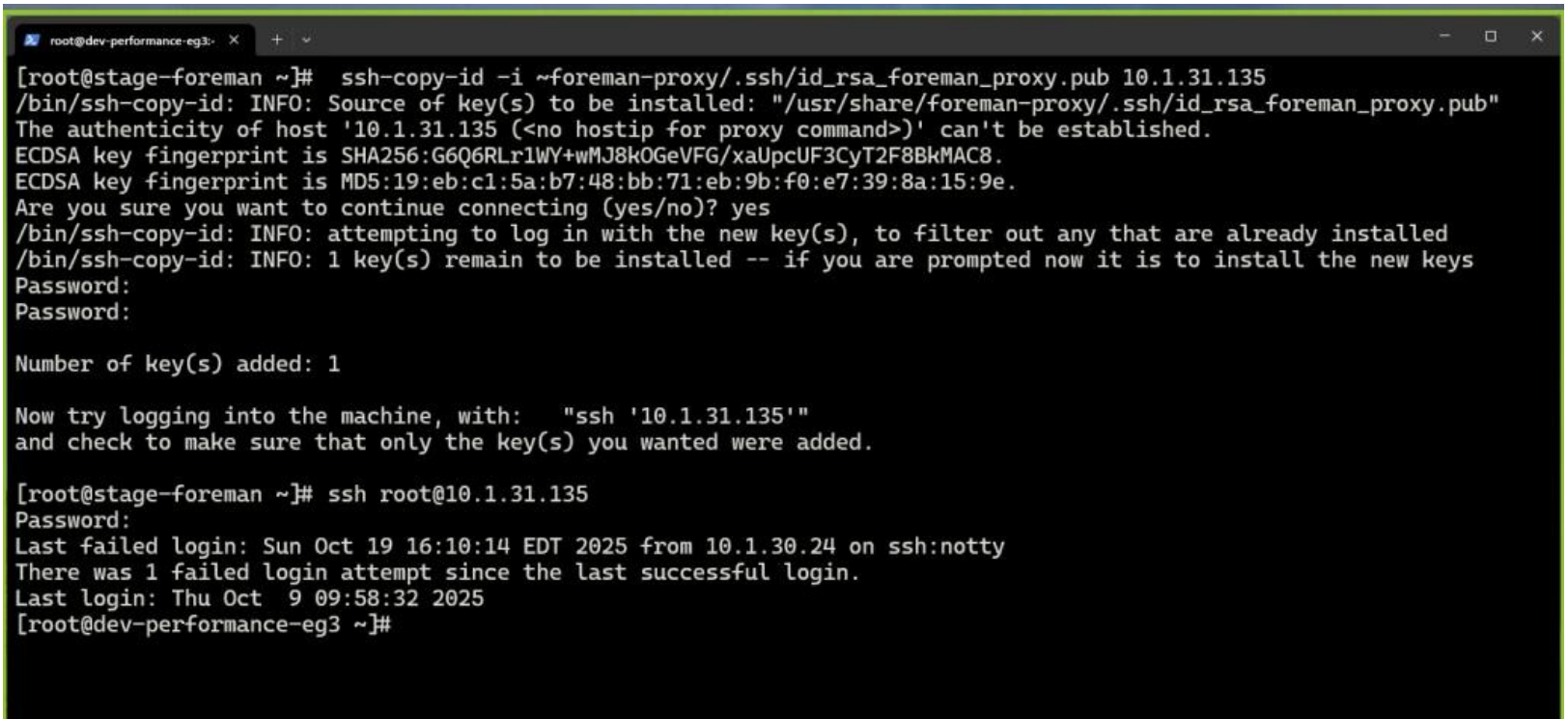
The Foreman web interface is displaying the Content Hosts page, showing a registered host named dev-app-eg3.procore.prod1. The system is listed as running CentOS Stream 9, successfully registered to the Procore organization and lifecycle environment, associated with a defined content view, and reporting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



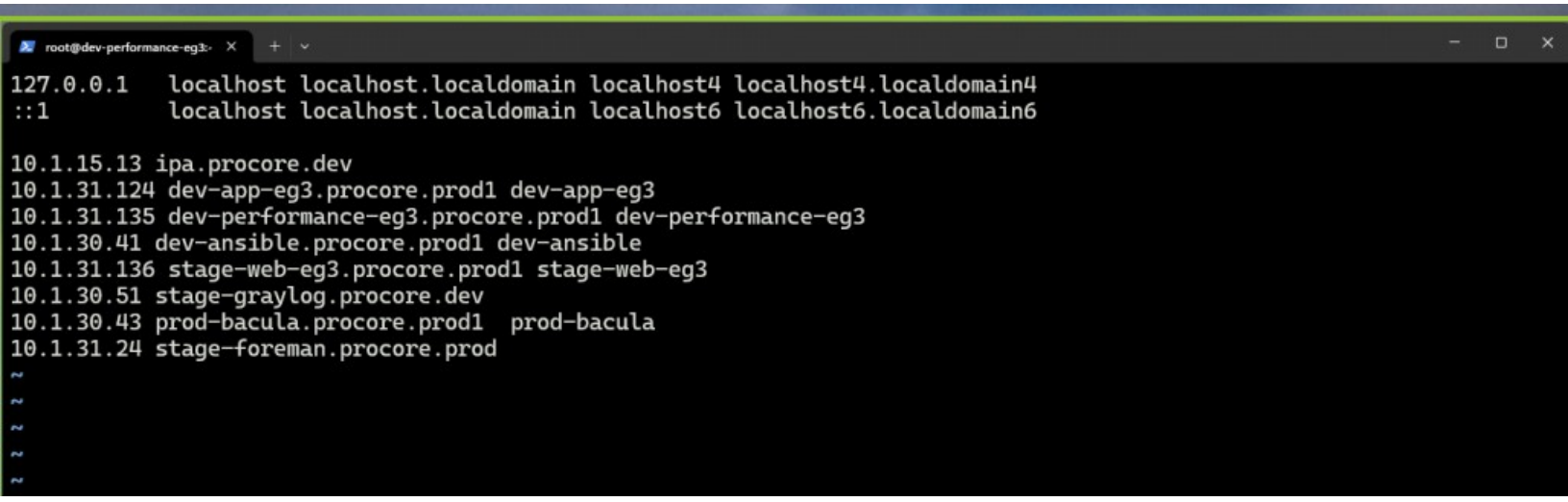
The Foreman Content Host details page is displayed for dev-app-eg3.procore.prod1, showing the system fully registered and entitled. The host is running CentOS Stream 9 on a VMware virtual machine, registered through the stage-foreman.procore.prod server using an activation key. Subscription status is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



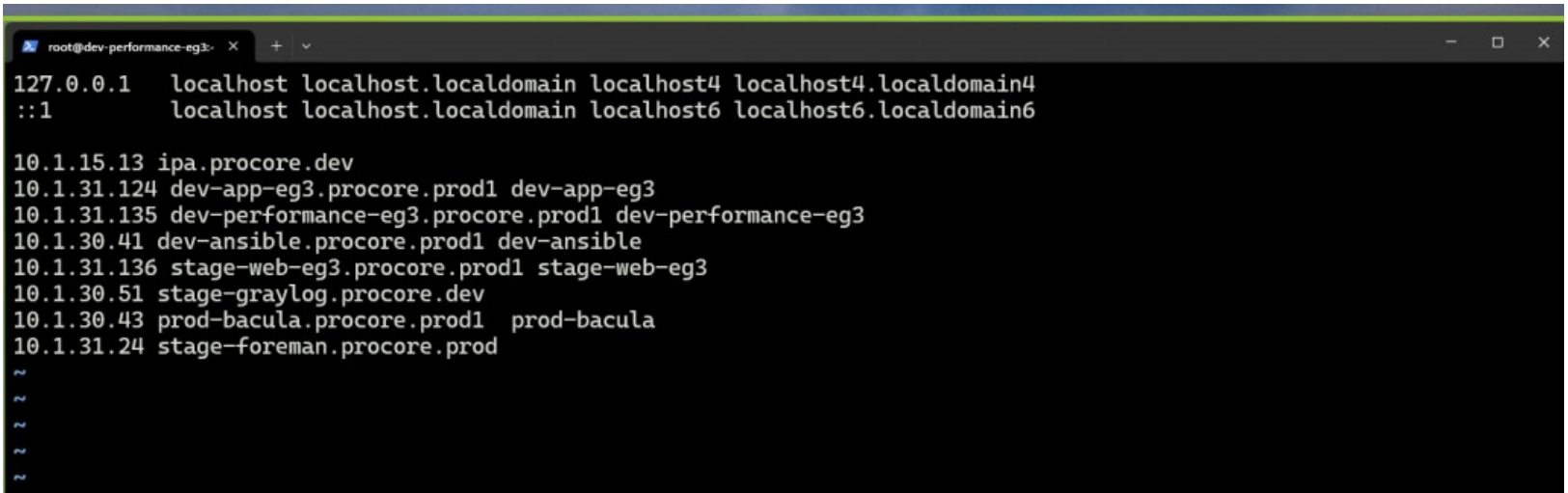
An SSH public key is copied to a remote host using ssh-copy-id, with the host key verified and trusted during the first connection. The key is successfully added to the remote system, and a follow-up SSH login as root confirms access to the target server, indicating that key-based authentication is functioning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



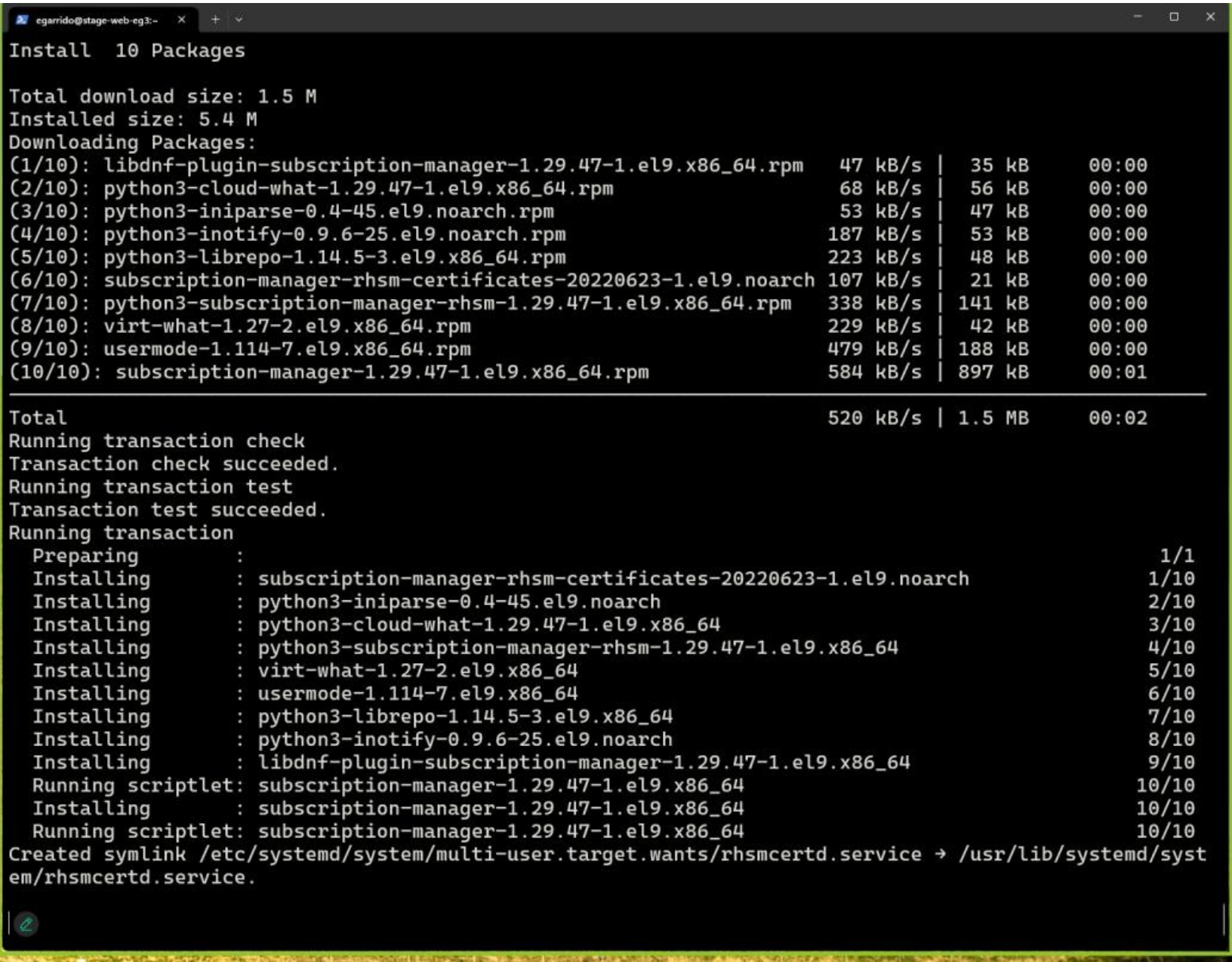
The /etc/hosts file is being reviewed and maintained as part of a sanitation step to ensure clean and consistent hostname resolution. Static IP-to-hostname mappings are defined for key internal systems (IPA, application, performance, web, Ansible, logging, backup, and Foreman hosts), helping prevent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



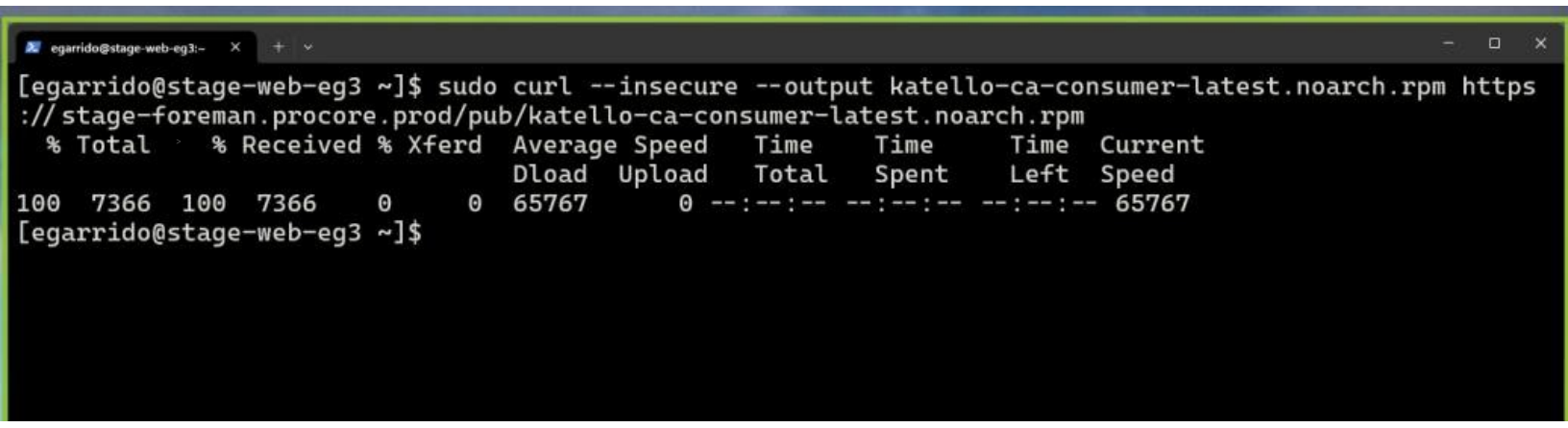
The /etc/hosts file is shown with updated static IP-to-hostname mappings for multiple internal systems. These entries standardize name resolution across application, performance, web, Ansible, logging, backup, IPA, and Foreman servers, serving as a sanitation step to keep hostname resolution clean, consistent,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



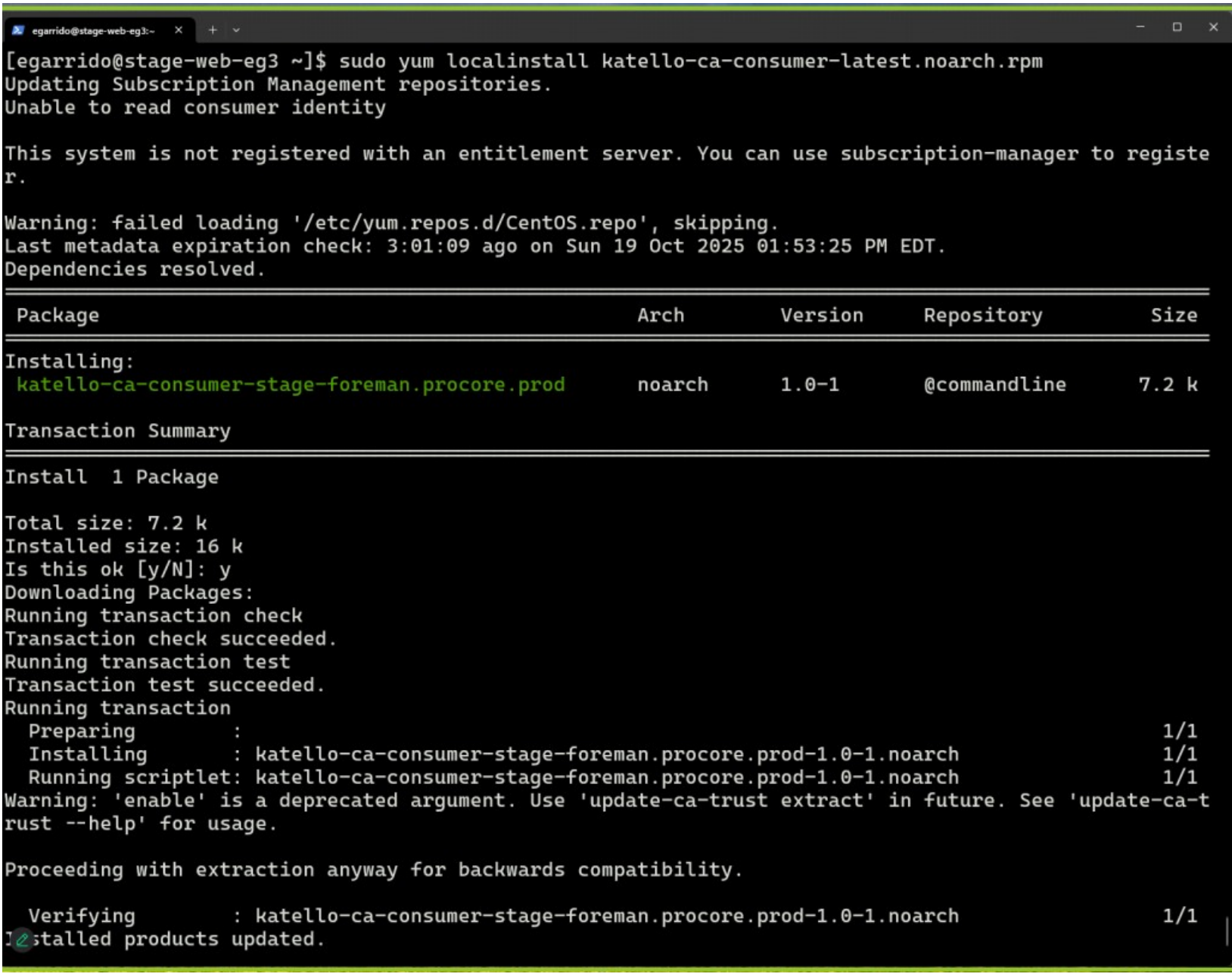
System packages related to subscription management are being installed on the host. Multiple dependencies are downloaded and verified, the transaction completes successfully, and required services are enabled via systemd. This step serves as a sanitation action, ensuring the system is clean, properly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



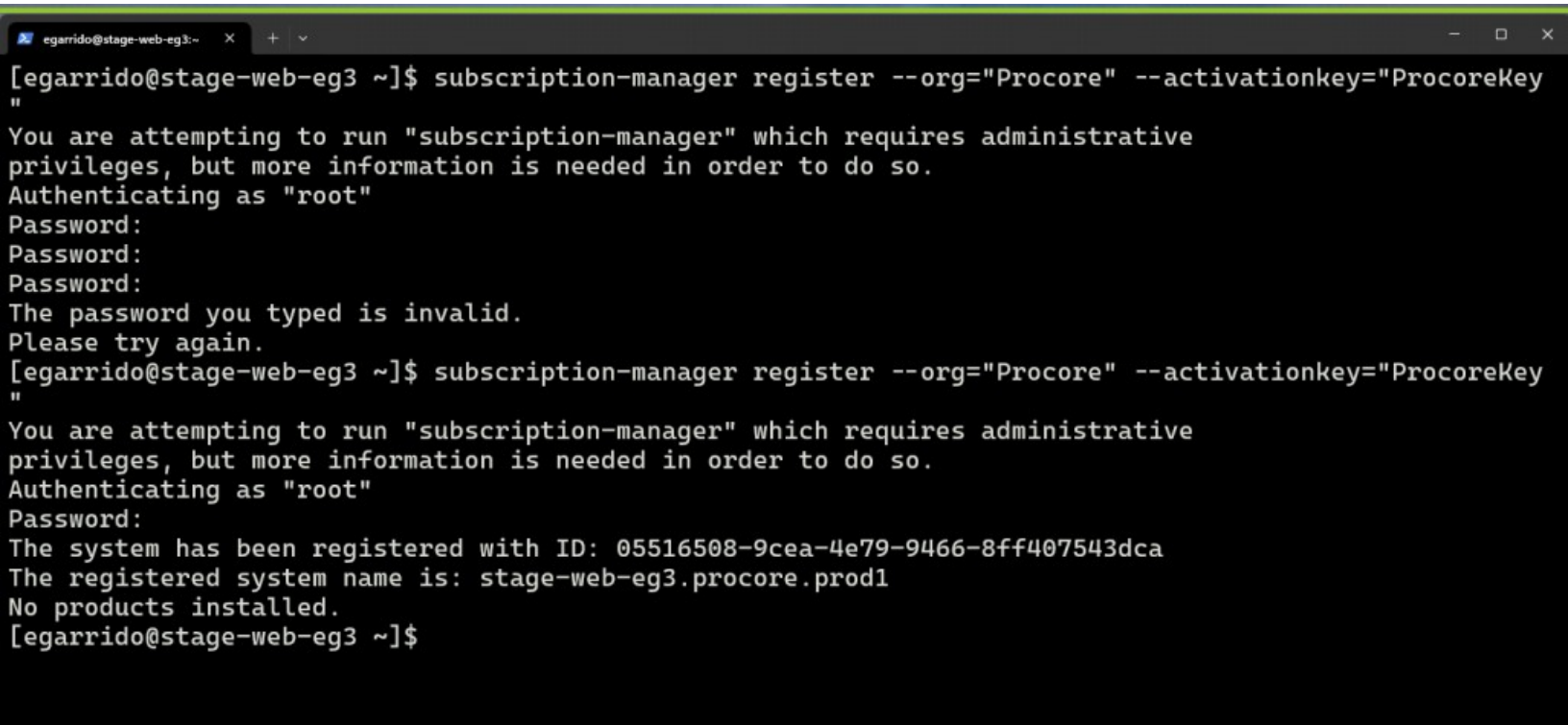
The Katello CA consumer RPM is downloaded from the Foreman server using curl with SSL verification bypassed. The transfer completes successfully, confirming network connectivity to the Foreman server and preparing the system for trusted certificate installation and subsequent subscription registration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



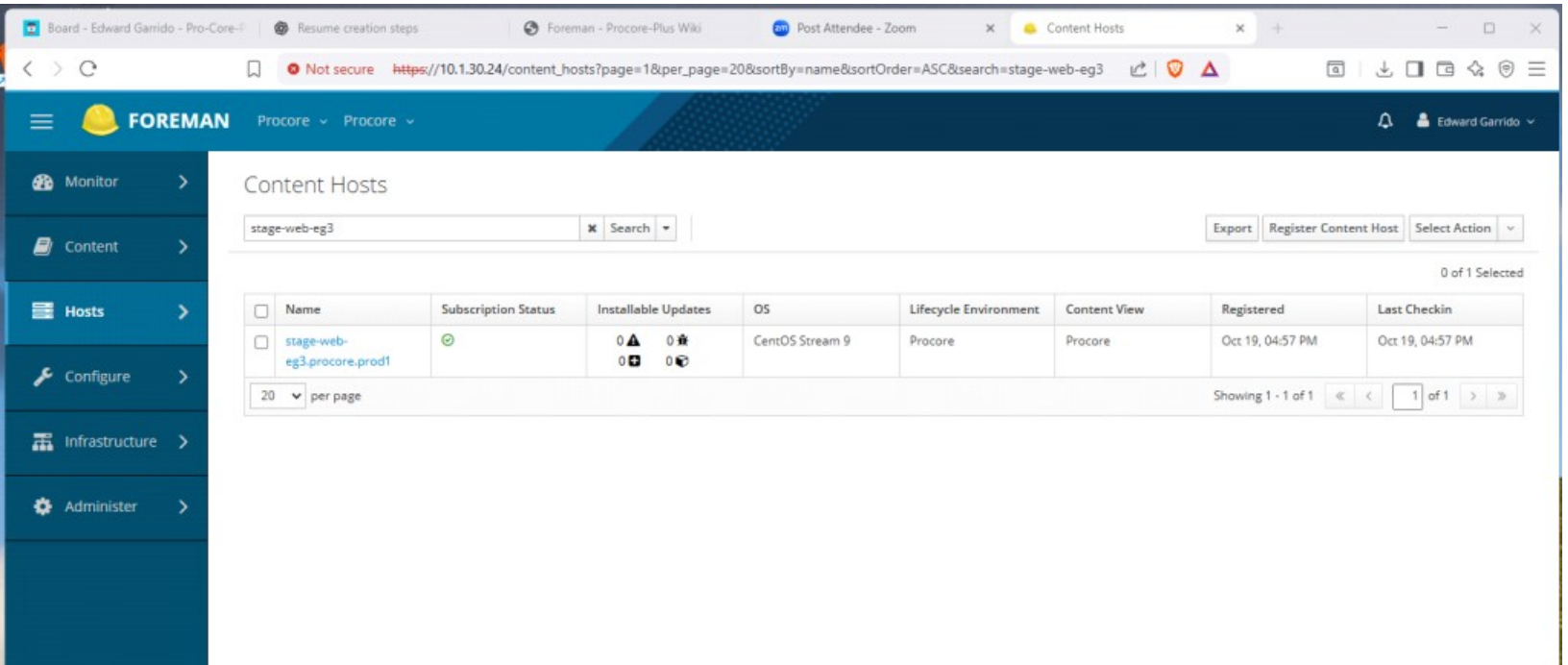
The katello-ca-consumer package is installed locally using yum localinstall. Despite warnings about the system not yet being registered, the installation completes successfully, updates the trusted CA certificates, and prepares the host for secure registration with the Foreman/Katello server as part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



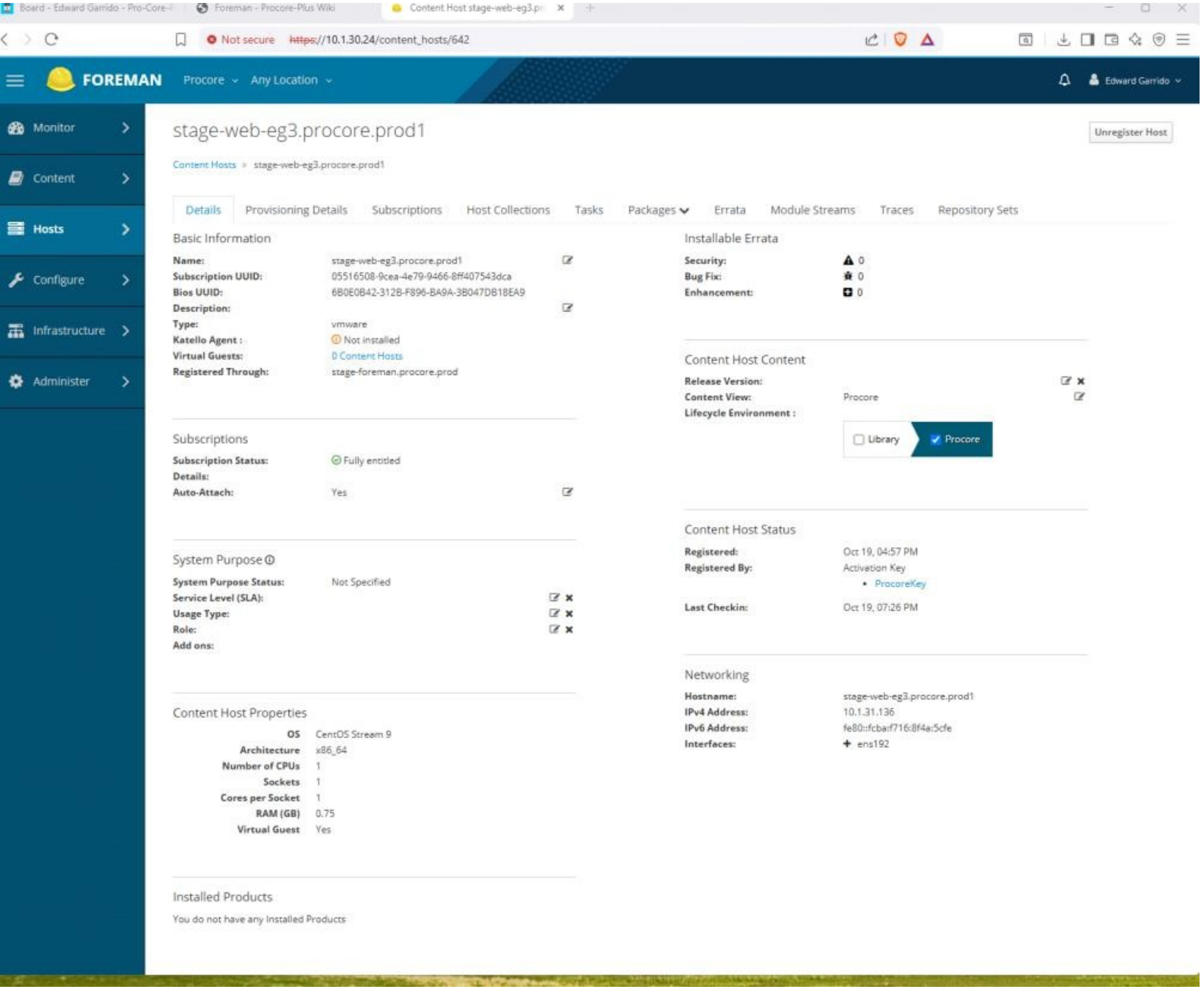
The system is registered with the Foreman/Katello server using subscription-manager and an activation key after successful administrative authentication. An initial authentication attempt fails, followed by a successful registration that assigns a unique system ID and confirms the host name stage-web-eg3.procore.prod1,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



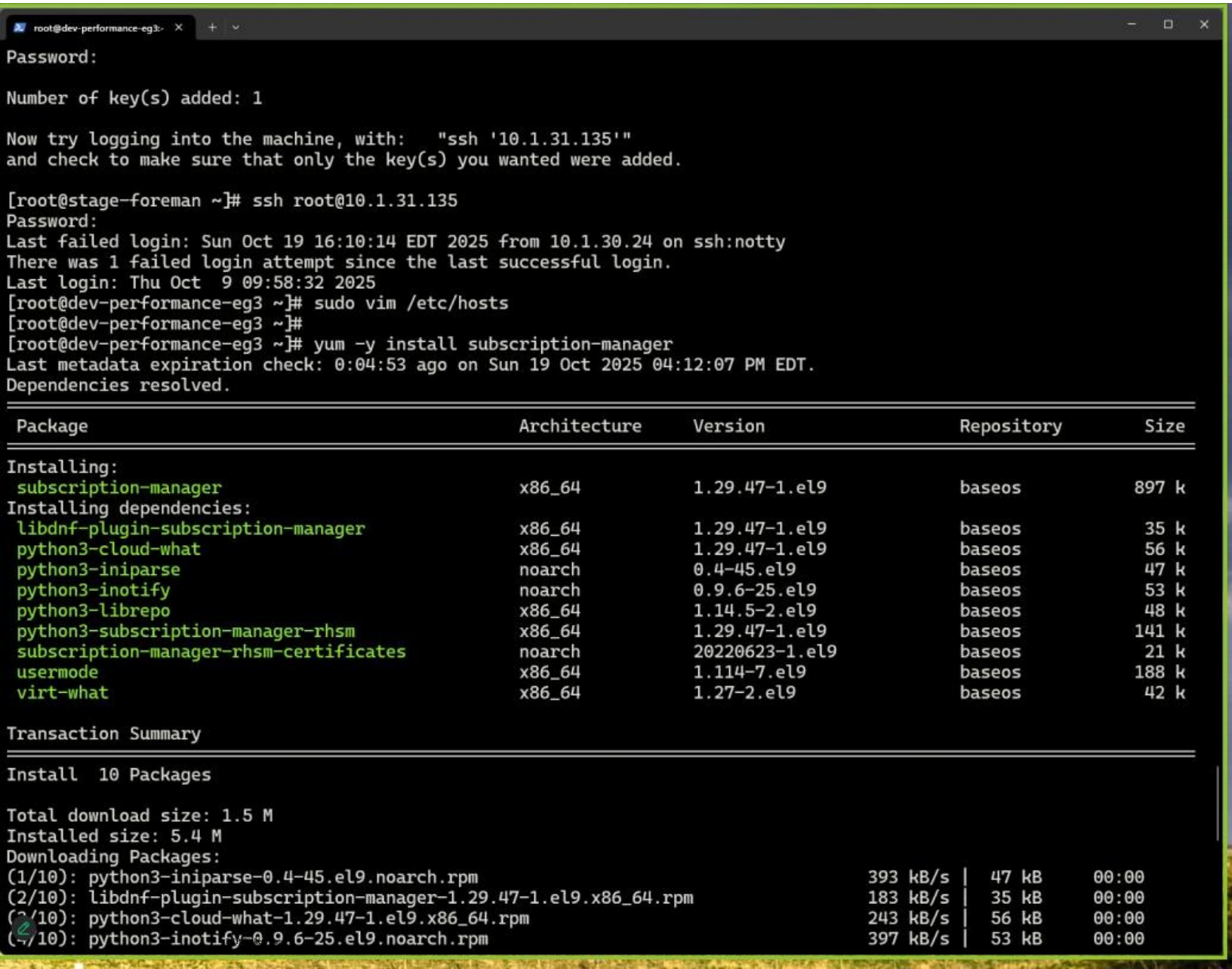
The Foreman web interface is displaying the Content Hosts page filtered for stage-web-eg3. The host stage-web-eg3.procore.prod1 is listed as running CentOS Stream 9, successfully registered in the Procore lifecycle environment and content view, with an active subscription status and a recent check-in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



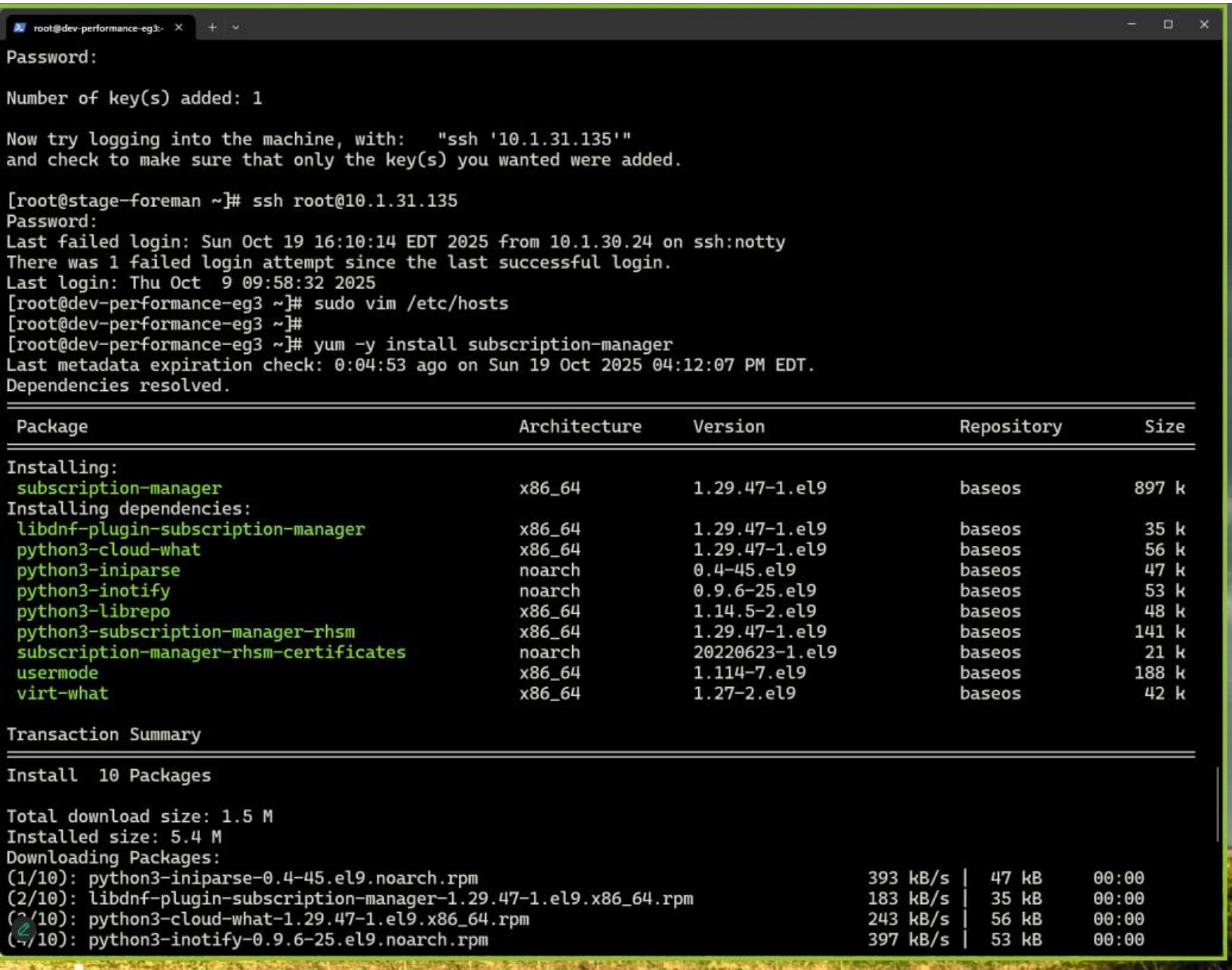
The Foreman Content Host details page is displayed for stage-web-eg3.procore.prod1, showing the host fully registered and entitled. The system is running CentOS Stream 9 on a VMware virtual machine, registered through stage-foreman.procore.prod using an activation key. Subscription status is healthy,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



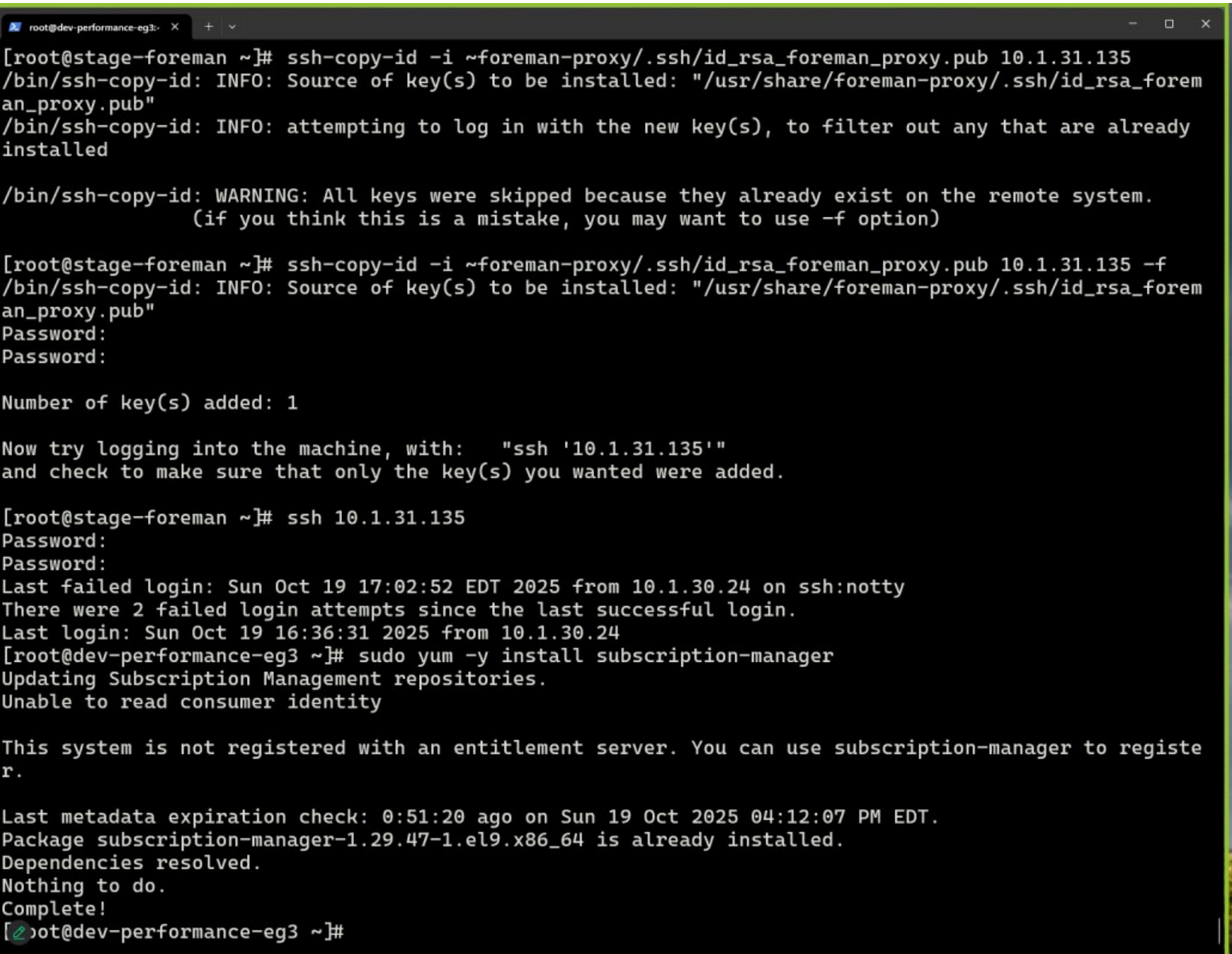
An SSH key is successfully added to the remote host and validated by logging in as root. After access is confirmed, the /etc/hosts file is edited to ensure proper hostname resolution, followed by installing subscription-manager and its dependencies from the base OS repository. The installation completes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



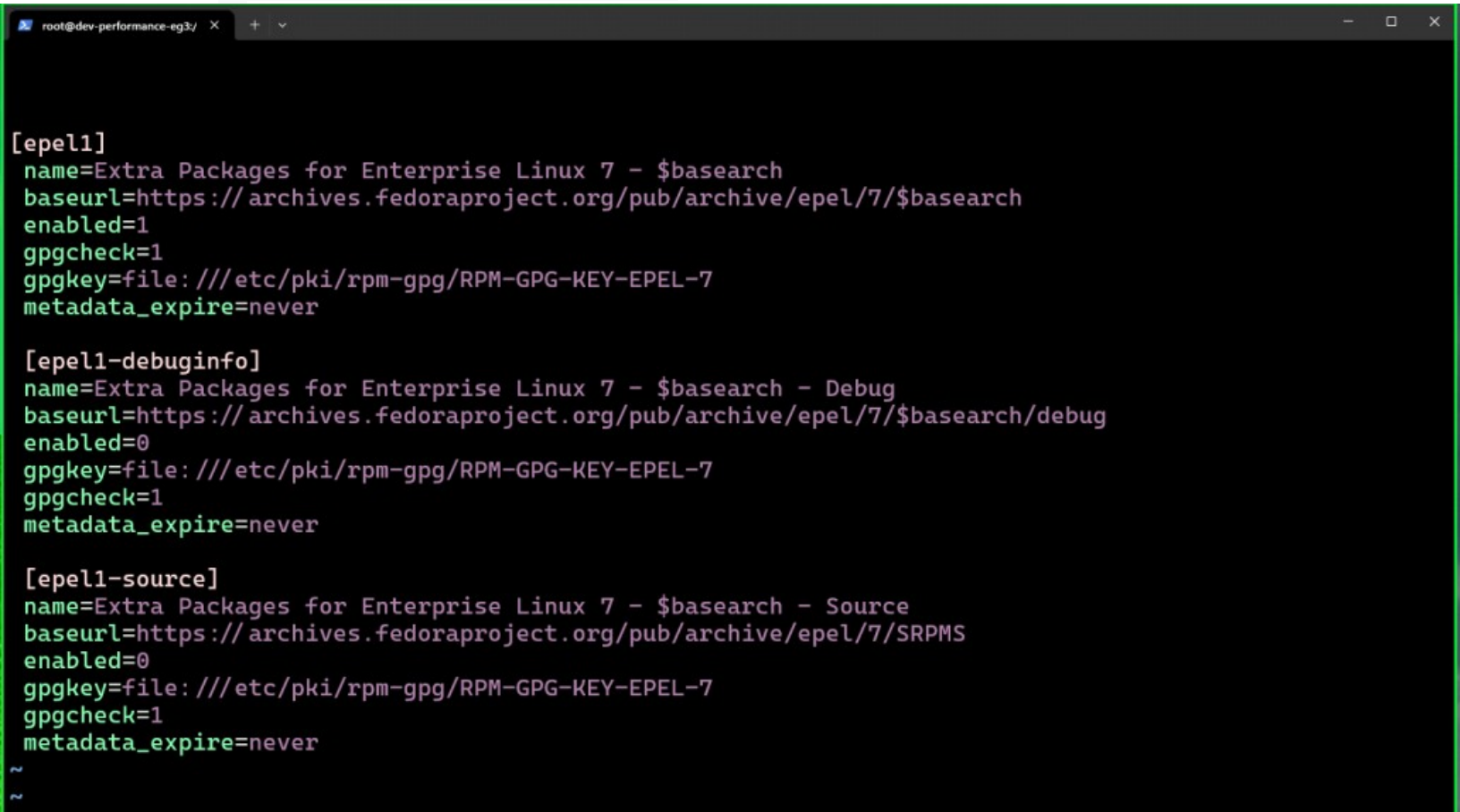
An SSH key is successfully added and verified by logging in to the remote host as root. After access is confirmed, the /etc/hosts file is edited to ensure correct hostname resolution, followed by installing subscription-manager and its required dependencies from the base OS repository, with packages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



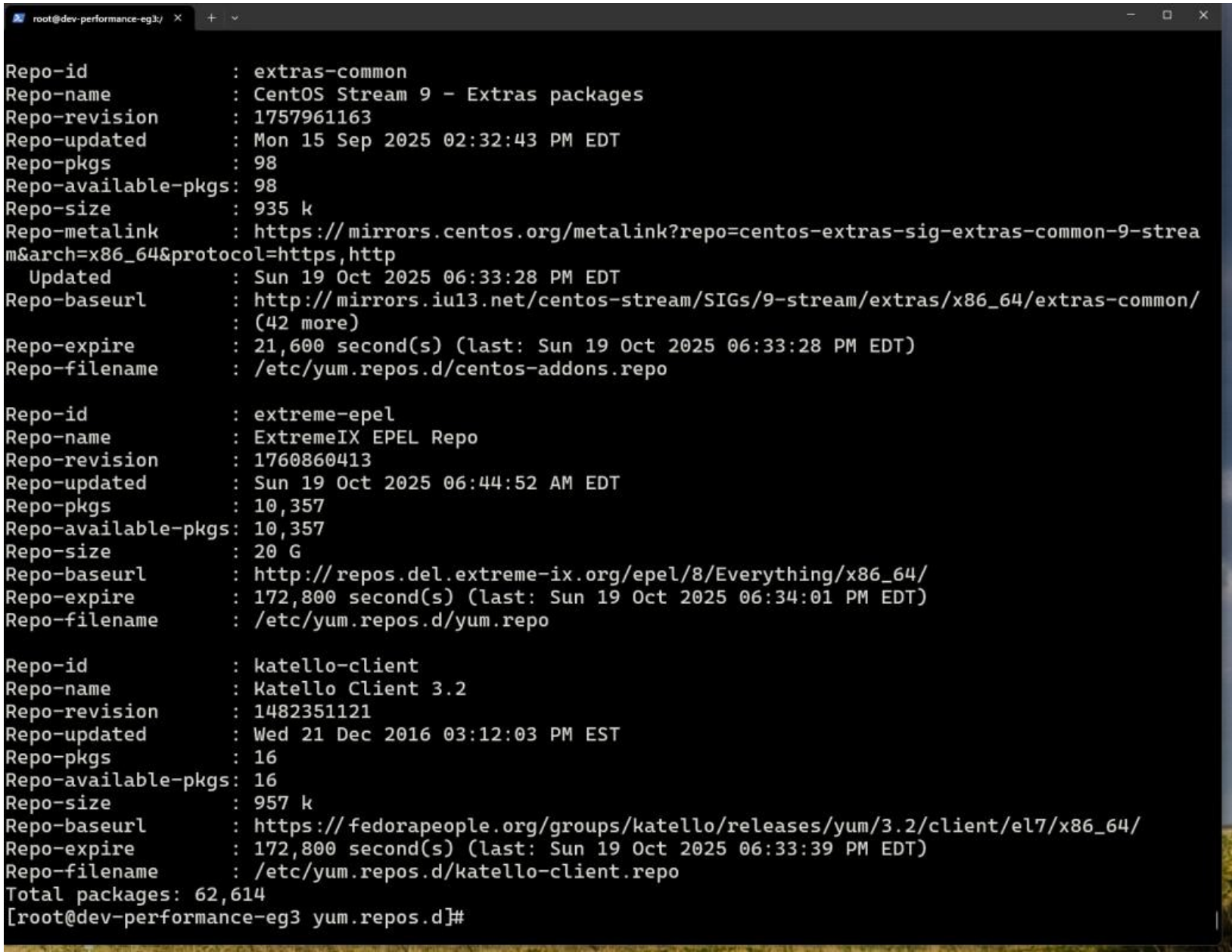
An SSH public key from the Foreman proxy is copied to the remote host, initially detected as already present, then re-added using the force option. A successful SSH login to the target system follows, confirming access. The system then checks for subscription-manager, which is already installed, indicating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



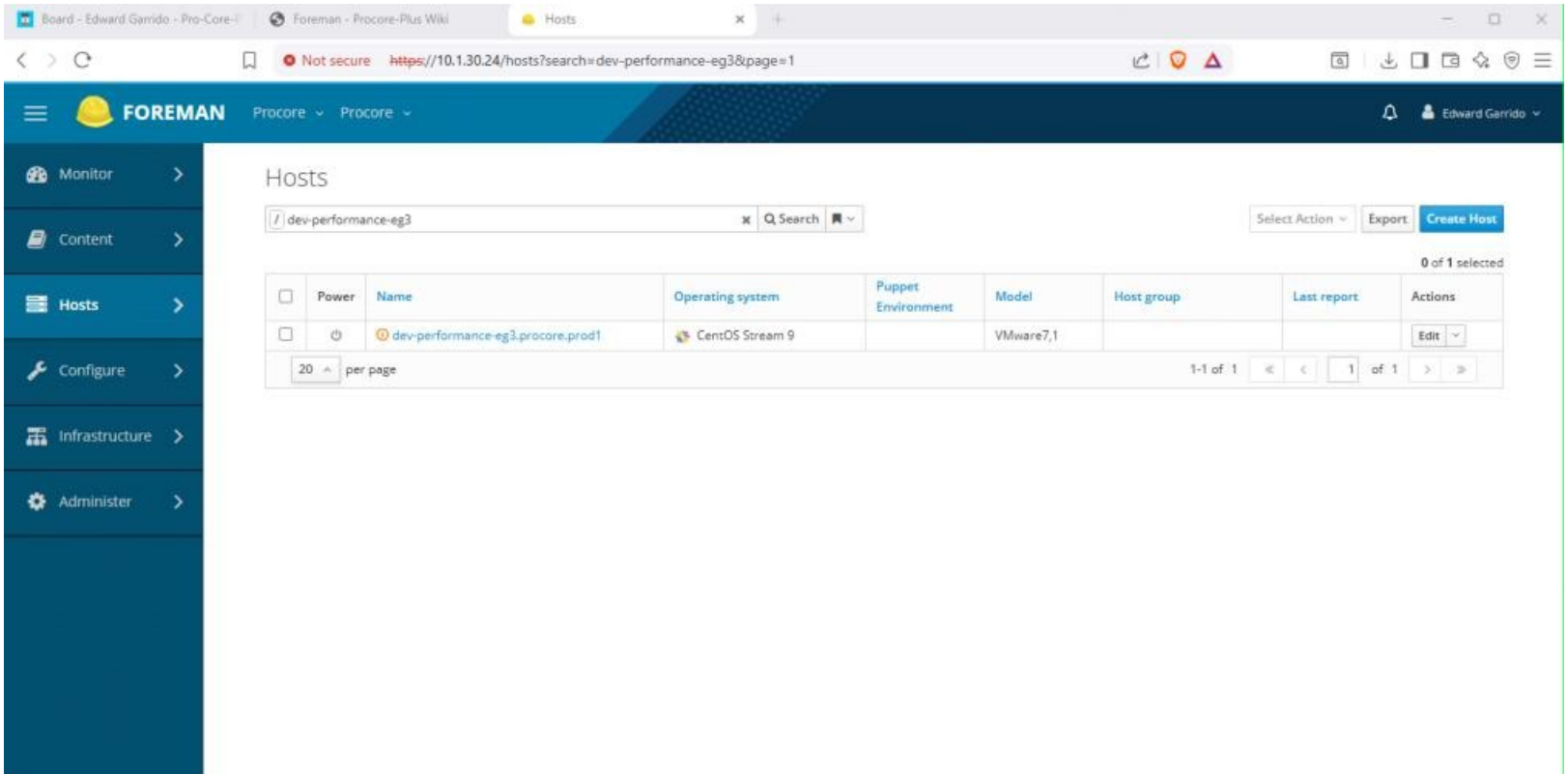
An EPEL 7 repository configuration file is displayed, showing the base, debuginfo, and source repositories. The configuration defines archive URLs, enables the main EPEL repository, disables debug and source repos, enforces GPG signature verification, and sets metadata to never expire, ensuring consistent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



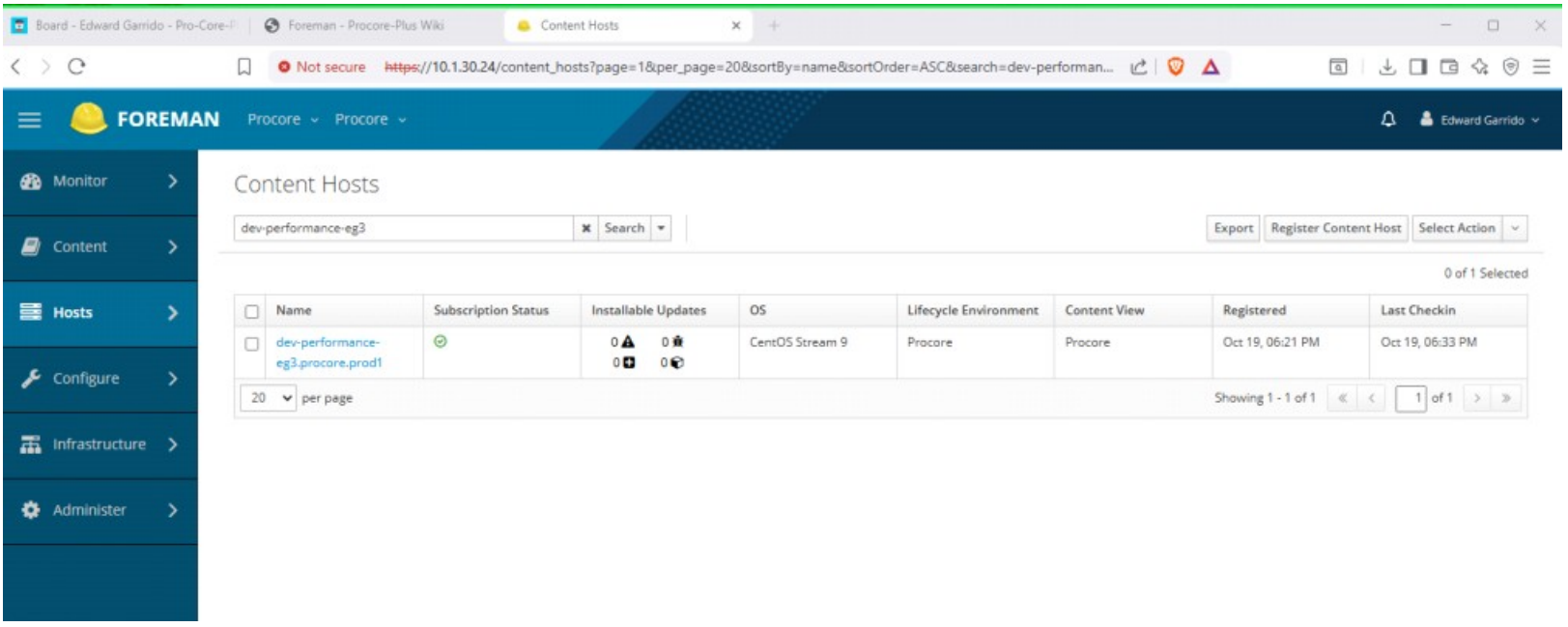
Lists enabled YUM repositories on a CentOS Stream 9 system, including extras-common, ExtremeIX EPEL, and katello-client. For each repo, it displays metadata such as repository ID and name, revision, last update time, package counts, repository size, base URL or metalink, cache expiration, and the source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



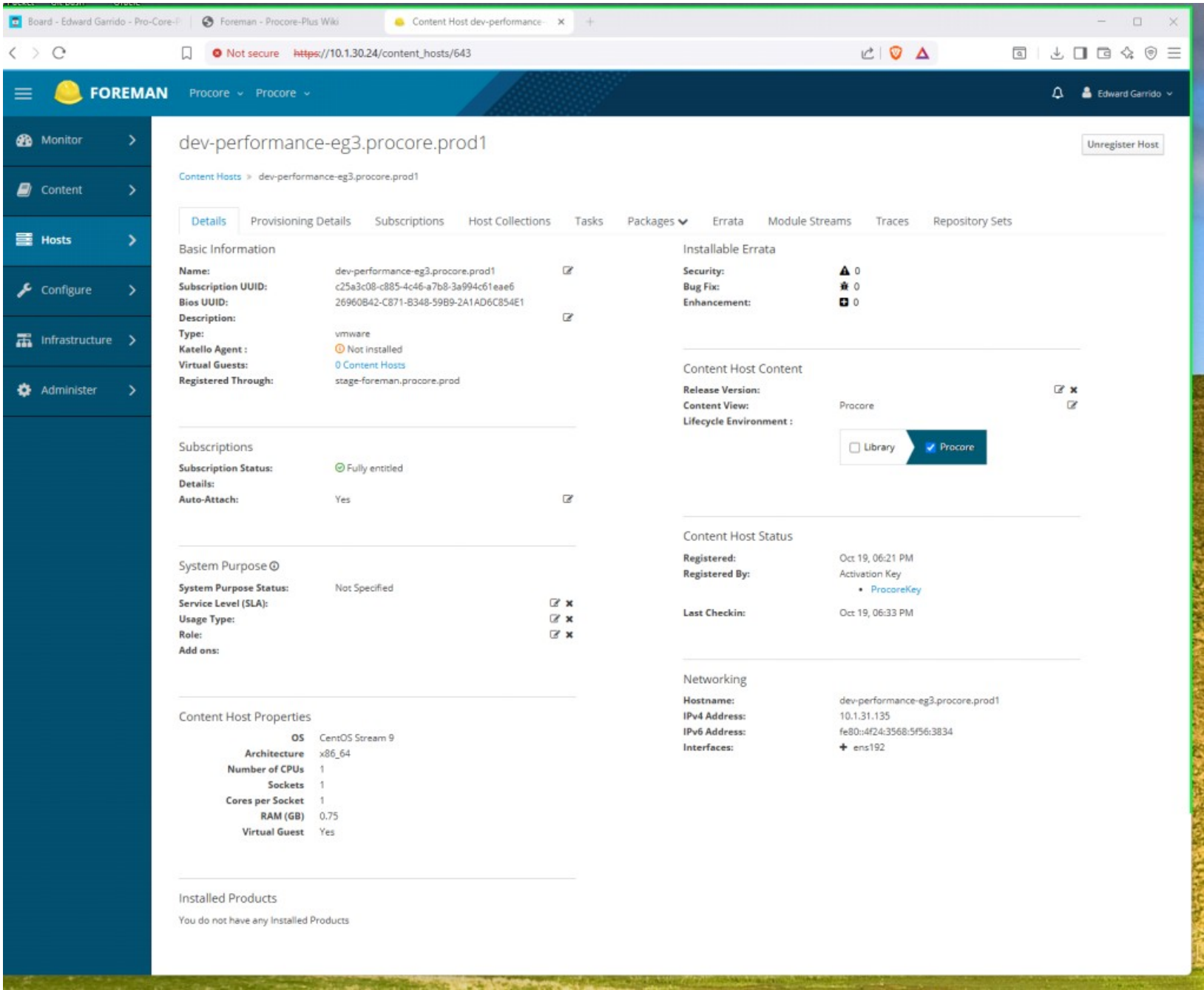
Displays the Foreman Hosts inventory filtered to a single system, dev-performance-eg3.procore.prod1. The host is registered and reachable, running CentOS Stream 9 on a VMware 7.1 platform, and is associated with a defined host group. Management actions such as Edit, Export, and Create Host are available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



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.



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.



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.