

visibility into system health and performance.

Both dev-app and stage-web hosts were prepared by installing and verifying the CheckMK agent, confirming systemd services were active, and validating communication with the monitoring server. Hosts were added through the CheckMK interface, assigned to the correct site, and configured for IPv4-only connectivity to align with environment standards.

Service discovery identified essential operating system and performance checks, including CPU load, CPU utilization, disk I/O, and filesystem usage. Discovered host labels accurately reflected Linux virtual machine attributes and CentOS Stream 9, confirming proper system identification and readiness for monitoring activation.

Additional validation included reviewing Apache log rotation on the staging web server to ensure logs are managed correctly and that the httpd service reloads cleanly after rotation. Together, these efforts establish a stable monitoring baseline, improve operational visibility, and support proactive system management.

The output shows the RPM transaction completing without errors, followed by the installation of check-mk-agent-2.3.0p2-1.noarch and its dependency wget. Systemd components for the agent are deployed and enabled, including check-mk-agent-async.service, check-mk-agent.socket, and cmk-agent-ctl-daemon.service. The agent controller is initialized, a dedicated cmk-agent user account is created or updated, and all services are activated and linked into the appropriate system targets.

A warning indicates the agent is currently operating in insecure mode, with a note that registration via cmk-agent-ctl register can be used to secure the connection. Final verification confirms the packages are installed, and the process completes successfully, returning to the shell prompt with no errors.

```
egarrido@dev-app-eg3:~ x + v Total 700 kB/s | 784 kB 00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Running scriptlet: check-mk-agent-2.3.0p2-1.noarch 1/2
Installing : check-mk-agent-2.3.0p2-1.noarch 1/2
Installing : wget-1.21.1-8.el9.x86_64 2/2
Running scriptlet: check-mk-agent-2.3.0p2-1.noarch 2/2

Deploying agent controller: /usr/bin/cmk-agent-ctl
Deploying systemd units: check-mk-agent-async.service check-mk-agent.socket check-mk-agent@.service cmk-agent-ctl-daemon.service 1/2
Deployed systemd 1/2
Creating/updating cmk-agent user account ... 2/2

WARNING: The agent controller is operating in an insecure mode! To secure the connection run 'cmk-agent-ctl register'.

Activating systemd unit 'check-mk-agent-async.service' ...
Created symlink /etc/systemd/system/multi-user.target.wants/check-mk-agent-async.service → /usr/lib/systemd/system/check-mk-agent-async.service.
Activating systemd unit 'check-mk-agent.socket' ...
Created symlink /etc/systemd/system/sockets.target.wants/check-mk-agent.socket → /usr/lib/systemd/system/check-mk-agent.socket.
Activating systemd unit 'cmk-agent-ctl-daemon.service' ...
Created symlink /etc/systemd/system/multi-user.target.wants/cmk-agent-ctl-daemon.service → /usr/lib/systemd/system/cmk-agent-ctl-daemon.service.

Running scriptlet: wget-1.21.1-8.el9.x86_64 2/2
Verifying : wget-1.21.1-8.el9.x86_64 1/2
Verifying : check-mk-agent-2.3.0p2-1.noarch 2/2

Installed:
check-mk-agent-2.3.0p2-1.noarch wget-1.21.1-8.el9.x86_64

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

This image shows the CheckMK web interface under Setup → Hosts, displaying the host inventory for the procore – Local site procore monitoring site.

The hosts table lists multiple systems with their hostnames, IPv4 addresses, and monitoring status. Entries include several dev-app-* and stage-web-* servers, each configured to use the CheckMK agent. Tags visible on the hosts indicate address_family: ipv4-only and agent: cmk-agent, confirming agent-based monitoring is enabled. Authentication keys are present for each host, showing they are registered with the local CheckMK site.

At the top, the interface indicates 178 hosts in the Dev folder, with filtering and host management options such as Add host and Add folder available. A notification badge shows 1 pending change, meaning configuration changes have been made and are ready to be activated. Overall, the view confirms that the development and staging servers have been successfully added to CheckMK and are centrally managed

The screenshot displays the CheckMK web interface for managing hosts. At the top, there are navigation links for 'Board - Edward Garrido - Pro-Core...', 'Log rotation configuration', 'Check-mk - Procore-Plus Wiki', and 'Checkmk Local site procore - Main'. A notification badge indicates '1 change' with a yellow exclamation mark. The main header includes 'Main', 'Setup > Hosts > Main', 'Hosts', 'Folder', 'Related', 'Display', 'Help', and a search bar. Below this, there are two folder icons: 'Dev' containing '178 Hosts' and 'Prod' containing '(no hosts)', with a large '+' button for adding new hosts.

The 'Hosts' table lists 12 hosts:

Actions	Host name	Alias	IPv4 address	Monitored on site	Auth	Tags	Explicit labels
	dev-app-da.procore.prod1		10.1.31.10	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-app-gy.procore.prod1		10.1.30.169	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-app-np.procore.prod1		10.1.31.250	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-app-sdredo		10.1.30.144	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-app-sp.procore.prod1	dev-app-sd	10.1.30.130	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-app-td		10.1.31.163	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-app-th.procore.prod1		10.1.30.156	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	dev-preformance-hd.procore.prod1		10.1.31.158	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	stage-web-da.procore.prod1		10.1.31.12	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	stage-web-ef.procore.prod1		10.1.31.35	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	stage-web-gy.procore.prod1		10.1.30.178	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	
	stage-web-np.procore.prod1		10.1.31.252	procore - Local site procore		<code>address_family:ip-v4-only</code> , <code>agent:cmk-agent</code> , <code>checkmk-agent:checkmk-agent</code> , ... (show all)	

At the bottom left, there are sidebar icons for Help, User, and Sidebar. The bottom right corner features a circular button with a plus sign. The footer includes 'PCP Tickets Page 3'.

The CheckMK “Add host” configuration screen is shown under Setup → Hosts → Dev, where new system is being prepared for monitoring. The host name is set to dev-app-eg3.procure.prod1, and it is assigned to the procure – Local site procure monitoring site. Default permissions are applied, with no custom contact groups or parent hosts defined.

The network configuration specifies IPv4-only addressing, relying on automatic name resolution via CheckMK’s DNS cache, with no additional IPv4 addresses configured. Monitoring is set to use the CheckMK agent by default, with SNMP disabled and piggyback support available but not explicitly configured. Action buttons at the top allow saving the host, running service discovery, and executing connection tests, and a pending change indicator confirms the configuration is ready to be activated.

The screenshot shows the 'Add host' configuration page in the CheckMK interface. The host name is set to 'dev-app-eg3.procure.prod1'. It is assigned to the 'procure - Local site procure' monitoring site. The host has no parents. The network address is set to 'IPv4 only'. There are no additional IPv4 addresses specified. Monitoring agents include the 'Checkmk agent / API integrations' and 'Piggyback' options. A pending change indicator shows '1 change' with a yellow exclamation mark icon.

Add host
Setup > Hosts > Main > Dev > Add host

Host Display Help

Save & run service discovery Save & view folder Save & run connection tests Dev

Basic settings

Host name (required): dev-app-eg3.procure.prod1
Alias: empty (Default value)
Monitored on site: procure - Local site procure (Default value)
Permissions: Only members of the contact groups listed here have Setup permission for the host/folder. Optionally, you can make these contact groups automatically monitor contacts. The assignment of hosts to contact groups can also be defined by rules.
Parents: empty (Default value)

Network address

IP address family: IPv4 only (Default value)
IPv4 address: Specify an explicit IP address or resolvable DNS name here, if the host name is not resolvable via `/etc/hosts` or DNS. If you do not set this attribute, host name resolution will be performed when the configuration is enabled. Checkmk's built-in DNS cache is enabled by default in the global configuration to speed up the activation process. The cache is normally updated daily by a cron job. You can manually update the cache with the `cmk -v --update-dns-cache` command.
Dynamic IP address(es) only: If you enter a DNS name here, the DNS resolution will be performed each time the host is checked. Checkmk's DNS cache is NOT queried.
Additional IPv4 addresses: No entries (Default value)

Monitoring agents

Checkmk agent / API integrations: API integrations if configured, else Checkmk agent (Default value)
SNMP: No SNMP (Default value)
Piggyback: By default, each host has a piggyback data source. Use piggyback data from other hosts if present: If selected, the `Check_MK` service of this host will process the piggyback data, but will not warn if no piggyback data is available. The associated discovered services would become stale.

Service discovery for dev-app-eg3.procore.prod1 completed successfully, with the CheckMK agent responding OK. The host is identified as a Linux VM running CentOS Stream 9, and 156 services were discovered but are not yet committed to monitoring.

Core checks such as CPU load, CPU utilization, disk I/O, and the root filesystem (/) are detected and reporting OK. Pending changes indicate the services are ready to be accepted and activated.

The screenshot shows the Checkmk web interface for the host `dev-app-eg3.procore.prod1`. The top navigation bar includes links for "Board - Edward Garrido - Pro-Core-F", "Log rotation configuration", "Check-mk - Procore-Plus Wiki", and "Checkmk Local site procore - Se...". A yellow warning icon indicates "2 changes".

The main page displays the following information:

- Services of host `dev-app-eg3.procore.prod1`:** All data sources are OK. Status: Success (agent), Success (piggyback).
- Metrics:** Changed services: 0 | Undecided services: 156 | Vanished services: 0 | New host labels: 6 | Vanished host labels: 0 | Changed host labels: 0.
- Discovered host labels (6):** Status, Host labels, Check plug-in. Labels include: cmk/device_type.vm, cmk/os_family.linux, cmk/os_name.CentOS Stream, cmk/os_platform.centos, cmk/os_type.linux, cmk/os_version.9. Check plug-ins: check_mk (repeated 6 times).
- Undecided services - currently not monitored (156):** These services have been found by the service discovery but are not yet added to the monitoring. You should either decide to monitor them or to permanently disable them. If you are sure that they are just transitional, just leave them until they vanish.
- Services Summary:** State, Service, Summary. Services listed include: Check_MK Agent (OK, Version: 2.3.0p2, OS: linux, TLS is not activated on monitored host (see def Agent plug-ins: 0, Local checks: 0)), CPU load (OK, 15 min load: 0.01, 15 min load per core: 0.01 (1 cores)), CPU utilization (OK, Total CPU: 1.18%), Disk IO SUMMARY (OK, Initializing counters), and Filesystem / (OK, Initialized: '/.delta').

The sidebar on the left includes icons for Help, User, and Sidebar, along with a search bar and a plus sign for adding new items.

The output shows the Apache (httpd) log rotation configuration on stage-web-eg3. Logs under /var/log/httpd/*.log are managed by logrotate with safeguards like missingok andnotifempty, shared scripts enabled, and delayed compression. After rotation, the configuration triggers a graceful reload of the httpd service using systemctl reload httpd.service, ensuring logging continues without downtime.

```
[egarrido@stage-web-eg3 ~]$ sudo cat /etc/logrotate.d/httpd
[sudo] password for egarrido:
# Note that logs are not compressed unless "compress" is configured,
# which can be done either here or globally in /etc/logrotate.conf.
/var/log/httpd/*log {
    missingok
    notifempty
    sharedscripts
    delaycompress
    postrotate
        /bin/systemctl reload httpd.service > /dev/null 2>/dev/null || true
    endscript
}
[egarrido@stage-web-eg3 ~]$
```

The command output confirms the CheckMK agent RPM was successfully downloaded on stage-web-eg3 using wget. The system connected to the CheckMK server, received a 200 OK response, and saved check-mk-agent-2.3.0p2-1.noarch.rpm locally with no errors, indicating the agent package is ready for installation.

```
[egarrido@stage-web-eg3:~]$ wget http://10.1.30.37/procore/check_mk/agents/check-mk-agent-2.3.0p2-1.noarch.rpm
--2025-10-04 18:41:59-- http://10.1.30.37/procore/check_mk/agents/check-mk-agent-2.3.0p2-1.noarch.rpm
Connecting to 10.1.30.37:80 ... connected.
HTTP request sent, awaiting response ... 200 OK
Length: 4746126 (4.5M) [application/x-rpm]
Saving to: 'check-mk-agent-2.3.0p2-1.noarch.rpm.1'

check-mk-agent-2.3.0p2-1.noa 100%[=====] 4.53M ---KB/s in 0.08s
2025-10-04 18:41:59 (54.1 MB/s) - 'check-mk-agent-2.3.0p2-1.noarch.rpm.1' saved [4746126/4746126]
[egarrido@stage-web-eg3 ~]$
```

The CheckMK “Add host” page shows the staging server stage-web-eg3.procore.prod1 being configured for monitoring in the Dev folder. The host is assigned to the procore – Local site procore site with default permissions and no parent relationships defined.

Network settings are configured for IPv4 only, with an explicit IPv4 address entered, while monitoring is set to use the CheckMK agent with SNMP disabled. Action buttons at the top allow saving the host, running service discovery, and testing connectivity, confirming the staging server is ready to be added and monitored.

The screenshot shows the 'Add host' configuration page in the CheckMK interface. The host name is set to 'stage-web-eg3.procore.prod1'. The 'Monitored on site' dropdown is set to 'procure - Local site procure'. The 'Permissions' section indicates that only members of contact groups listed here have setup permission for the host/folder. The 'Parents' section is currently empty. In the 'Network address' section, the IP address family is set to 'IPv4 only' and the primary IPv4 address is '10.1.31.136'. The 'Monitoring agents' section shows that the Checkmk agent is configured, and SNMP is disabled. A note about piggyback data is present at the bottom of this section.

Add host
Setup > Hosts > Main > Dev > Add host
Host Display Help

Basic settings

Host name (required): stage-web-eg3.procore.prod1
Alias: empty (Default value)

Monitored on site: procure - Local site procure (Default value)

Permissions: Only members of the contact groups listed here have Setup permission for the host/folder. Optionally, you can make these contact groups automatically monitor contacts. The assignment of hosts to contact groups can also be defined by rules.
empty (Default value)

Parents: Parents are used to configure the reachability of hosts to the monitoring server. A host is considered unreachable if all of its parents are unreachable or down. Unreachable hosts are not actively monitored.
Clusters automatically configure all their nodes as Parents, but only if you do not manually configure Parents.
Distributed setup:
Make sure that the host and all its parents are monitored by the same site. You may paste a text from your clipboard which contains several parts separated by ";" characters into the last input field. The text will then be split by these separators and the single parts are added into dedicated input fields.
empty (Default value)

Network address

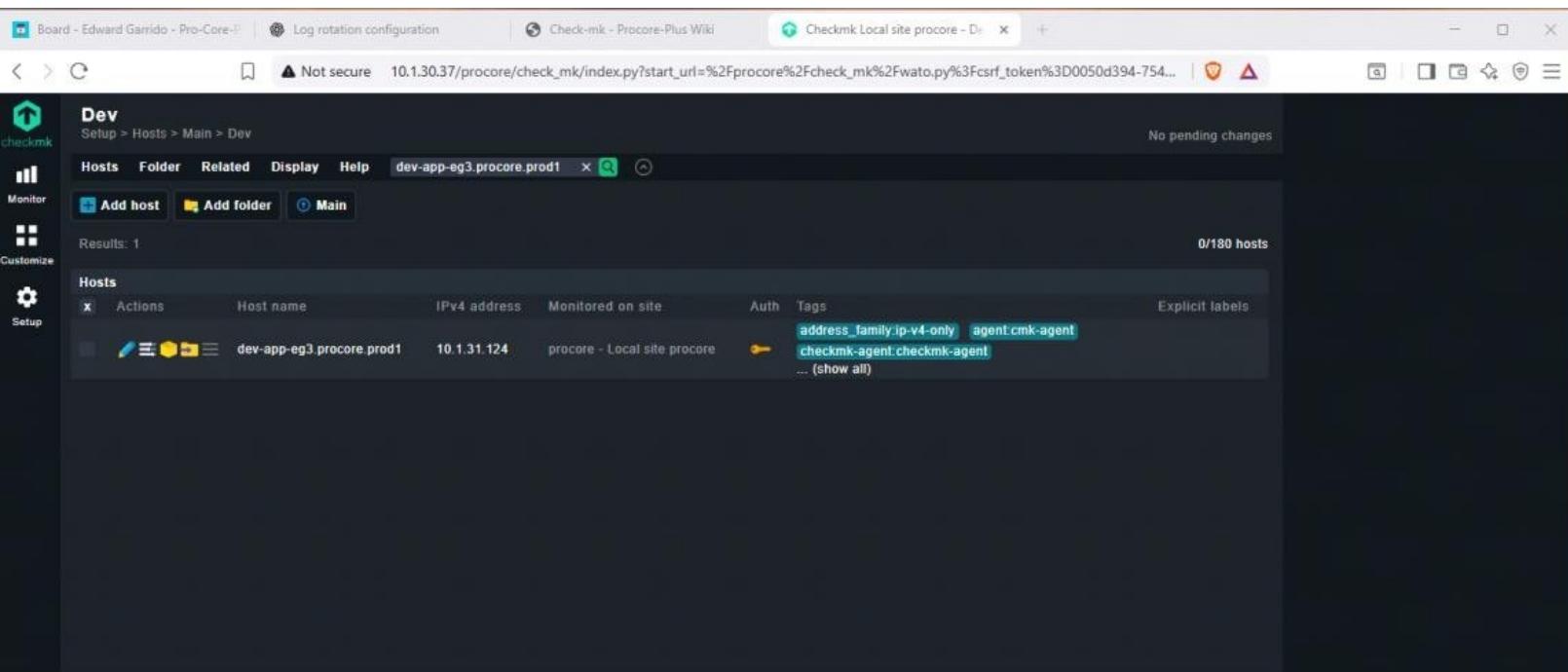
IP address family: IPv4 only (Default value)
IPv4 address: 10.1.31.136
Additional IPv4 addresses: No entries (Default value)

Monitoring agents

Checkmk agent / API integrations: API integrations if configured, else Checkmk agent (Default value)
SNMP: No SNMP (Default value)
Piggyback: By default, each host has a piggyback data source.
Use piggyback data from other hosts if present:
If selected, the Check MK service of this host will process the piggyback data, but will not warn if no piggyback data is available. The associated discovered services would become stale.

The Dev hosts view confirms that dev-app-eg3.procore.prod1 has been successfully added to CheckMK. The host is registered with its IPv4 address, monitored on the procore – Local site procore, and authenticated correctly.

Tags show IPv4-only addressing and agent-based monitoring (cmk-agent), indicating the CheckMK agent is properly configured and associated with the host. The filtered results display the host as active and ready for monitoring within the Dev environment.



The Dev hosts view confirms that stage-web-eg3.procore.prod1 has been successfully added to CheckMK. The host is registered with its IPv4 address, monitored on the procore – Local site procore, and authenticated correctly.

Tags indicate IPv4-only addressing and agent-based monitoring (cmk-agent), confirming the CheckMK agent is installed and associated with the staging server.

The screenshot shows the Checkmk web interface with the following details:

- Page Title:** Checkmk Local site procore - Dev
- Host Details:** Host name: stage-web-eg3.procore.prod1, IPv4 address: 10.1.31.136, Monitored on site: procore - Local site procore.
- Tags:** address_family.ip-v4-only, agent.cmk-agent, checkmk-agent.checkmk-agent, ... (show all)
- Navigation:** Board - Edward Garrido - Pro-Core->, Log rotation configuration, Check-mk - Procore-Plus Wiki, Checkmk Local site procore - Dev
- Toolbar:** Hosts, Folder, Related, Display, Help, Add host, Add folder, Main
- Sidebar:** Dev, Setup > Hosts > Main > Dev, No pending changes, 0/180 hosts, Results: 1.

Summary

Linux development and staging servers were successfully integrated into CheckMK using agent-based monitoring. The CheckMK agent was downloaded, installed, and verified on each system, with connectivity to the monitoring site confirmed and hosts added under the appropriate environment.

Service discovery identified core system checks such as CPU load, CPU utilization, disk I/O, and filesystem usage, along with accurate host labels for Linux virtual machines running CentOS Stream 9. Supporting configurations, including Apache log rotation on the staging web server, were reviewed to ensure stable operations. Overall, monitoring coverage and system visibility were improved across both environments.