



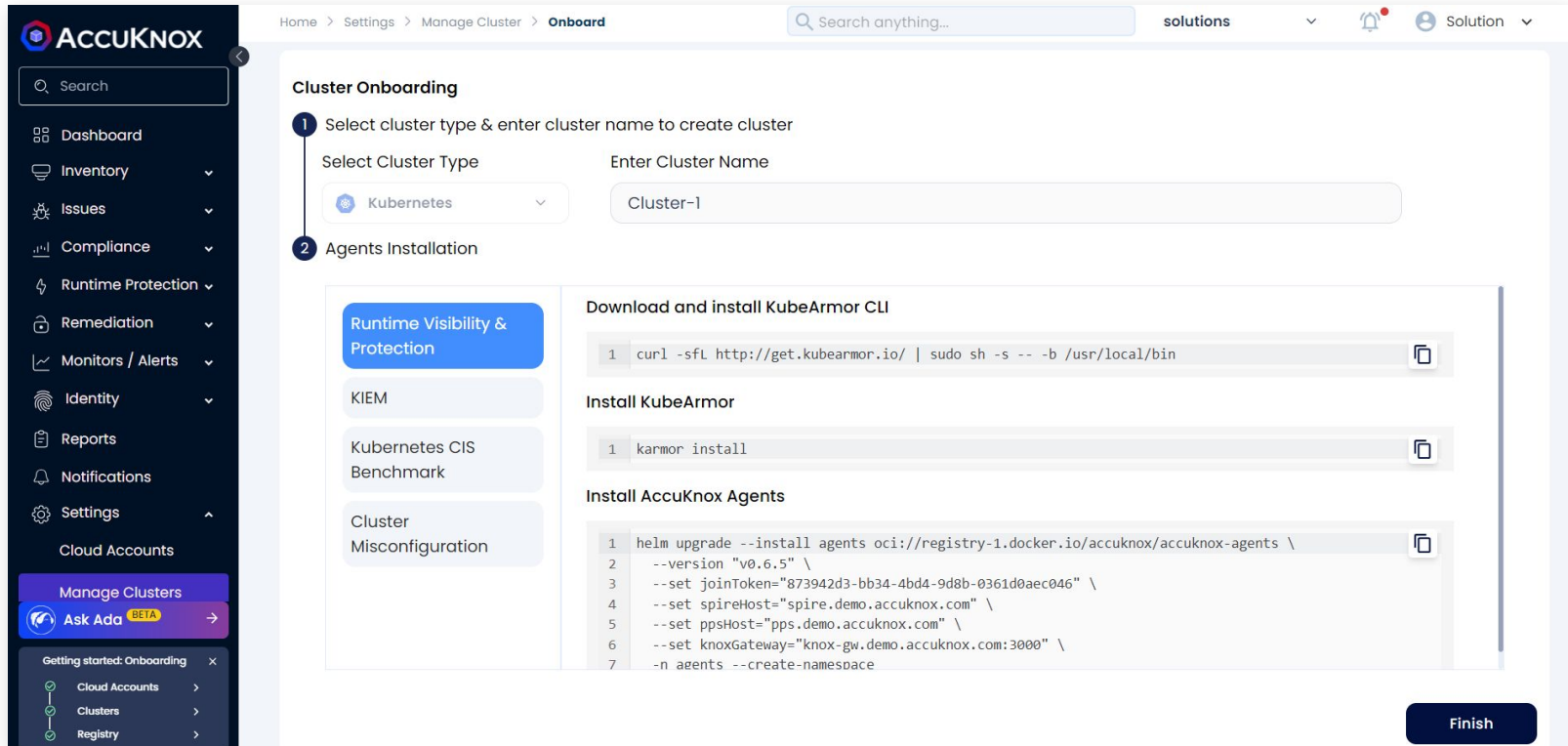
 **ACCUKNOX**

CWPP Playbook

- Realtime Protection for K8s Shared Network
 - Onboarding
 - App Behavior Monitoring
 - Policies
 - Pod Security Admission (PSA)
- Container Registry Scanning
- Forensics

Cluster Onboarding (Agent Based)

- Navigate to Settings → Manage Cluster and click on Onboard Now
- Provide a name for the cluster and install the agents via the commands on screen



The screenshot shows the AccuKnox web interface for cluster onboarding. The breadcrumb navigation is Home > Settings > Manage Cluster > Onboard. The page title is "Cluster Onboarding".

Step 1: Select cluster type & enter cluster name to create cluster

Select Cluster Type: **Kubernetes** (dropdown menu)

Enter Cluster Name: **Cluster-1** (input field)

Step 2: Agents Installation

On the left, there are several categories: Runtime Visibility & Protection (highlighted in blue), KIEM, Kubernetes CIS Benchmark, Cluster, and Misconfiguration.

Download and install KubeArmor CLI

```
1 curl -sL http://get.kubearmor.io/ | sudo sh -s -- -b /usr/local/bin
```

Install KubeArmor

```
1 karmor install
```

Install AccuKnox Agents

```
1 helm upgrade --install agents oci://registry-1.docker.io/accuknox/accuknox-agents \
2 --version "v0.6.5" \
3 --set joinToken="873942d3-bb34-4bd4-9d8b-0361d0aec046" \
4 --set spireHost="spire.demo.accuknox.com" \
5 --set ppsHost="pps.demo.accuknox.com" \
6 --set knoxGateway="knox-gw.demo.accuknox.com:3000" \
7 -n agents --create-namespace
```

A **Finish** button is located at the bottom right of the main content area.

View Clusters

- Navigate to Inventory → Clusters to view the onboarded clusters
- Click on the onboarded cluster and select View Workloads to view the containers/pods

The image displays two screenshots of the AccuKnox web interface. The top screenshot shows the 'Clusters' overview page, where a red box highlights the 'View Workloads' option in a context menu. The bottom screenshot shows the 'Workloads' view for a specific cluster, 'DO-demo-cluster', with a red arrow pointing from the 'View Workloads' option in the top screenshot to the 'jupyter' workload group. The 'jupyter' group contains several pods: proxy, hub, user-scheduler, user-placeholder, and continuos. A context menu is open over the 'jupyter' group, listing options: '+ Add Policies', 'View Policies', 'View Application Behavior', and 'View Alerts'. The left sidebar of the interface lists various navigation options, with 'Clusters' selected.

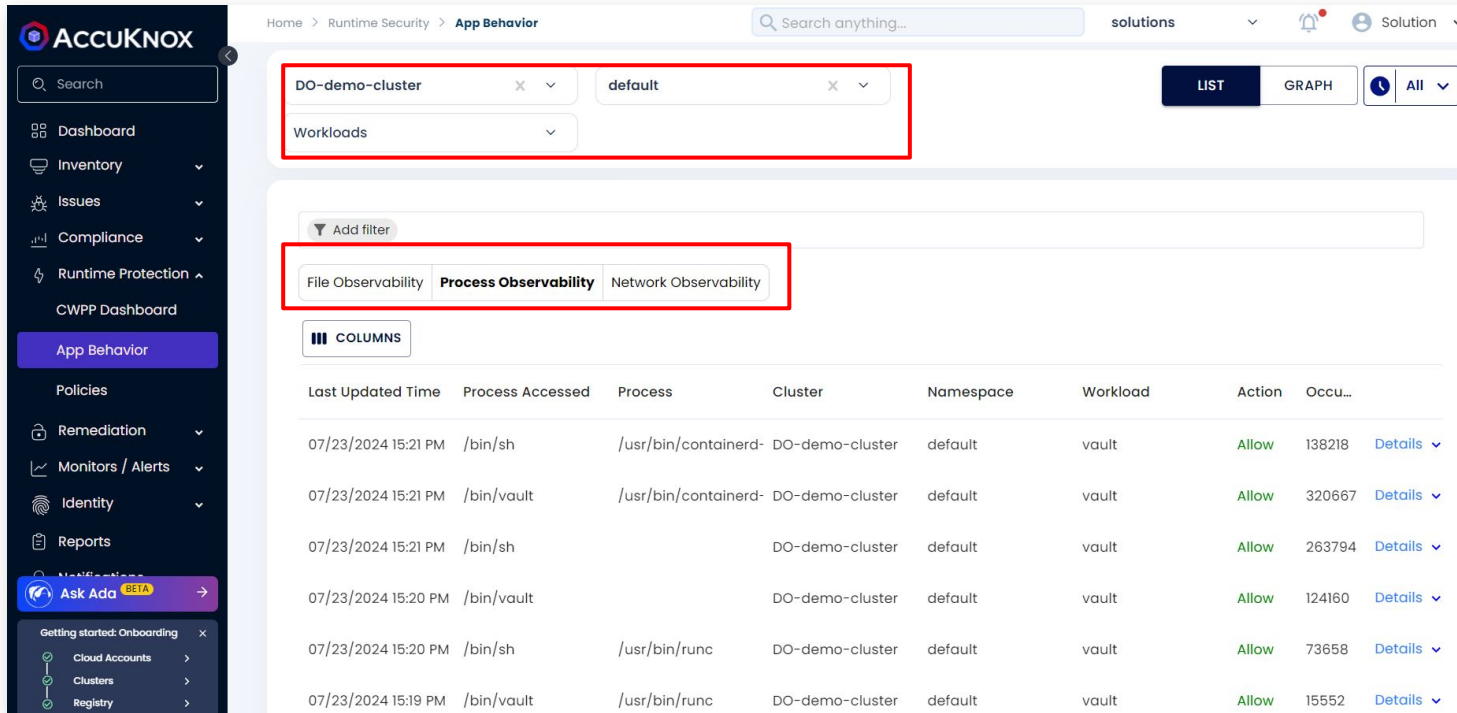
Application Behavior - Graph view

Navigate to Runtime Protection → App Behavior to view a Network Graph

The screenshot displays the AccuKnox 'App Behavior' interface. On the left is a dark sidebar with navigation options: Dashboard, Inventory, Issues, Compliance, Runtime Protection, CWPP Dashboard, App Behavior (highlighted), Policies, Remediation, Monitors / Alerts, Identity, Reports, and Ask Ada BETA. The main content area has a breadcrumb 'Home > Runtime Security > App Behavior' and a search bar. Below the search bar are filters for Cluster, Namespace, and Workloads. A summary row shows: Total Clusters (81, 1 Connected, 80 Disconnected), Total Blocked Files (40/76), Total Blocked Processes (12/2511), Total Blocked Egress Connections (0/2582), and Total Blocked Ingress Connections (0/471). The main section is a network graph with a dashed border, containing nodes for 'k8s-demo-cluster', 'peaTestCluster-1', and 'demo-cluster'. Nodes are connected by arrows and labeled with ports such as 8200, 8000, 8090, 8081, 8080, 8081, 443, and 3000. A 'Select Connections' dropdown is visible above the graph.

Application Behavior - List view

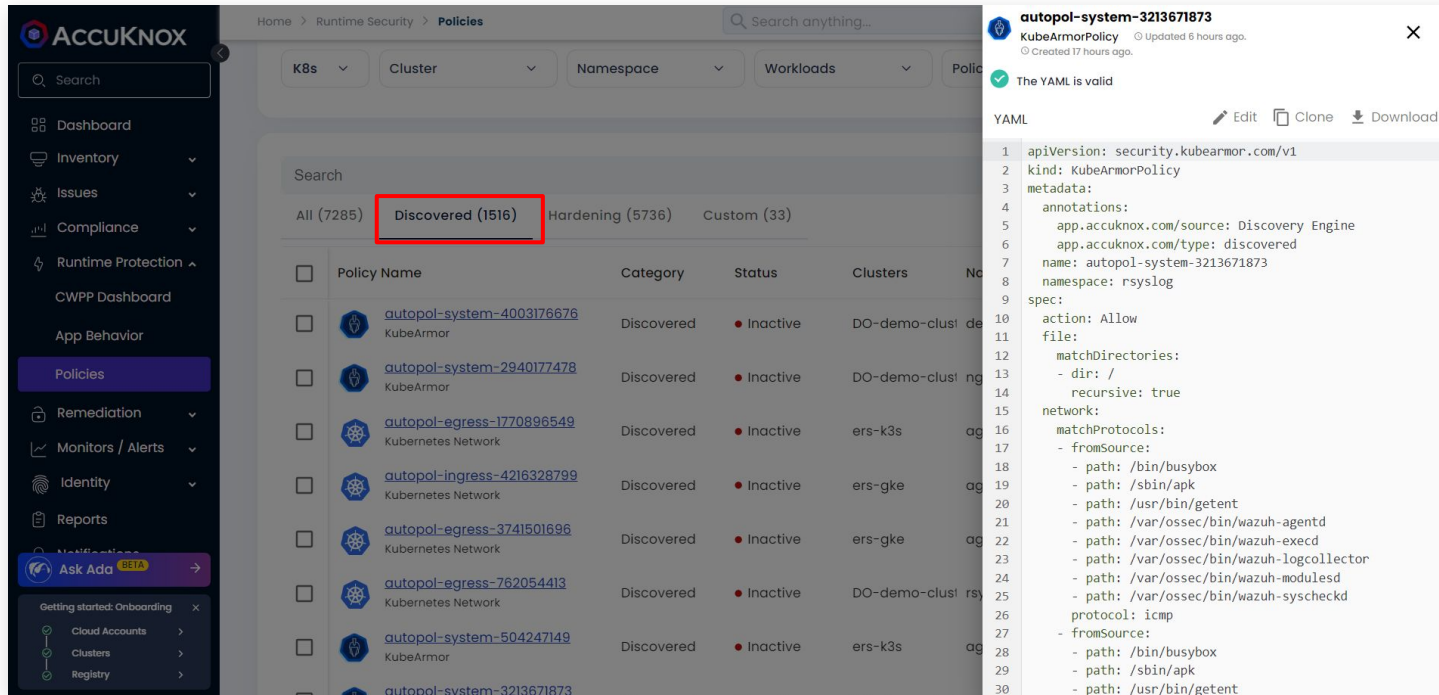
The behavior can be filtered for particular workloads by selecting a specific cluster, namespace or workload. The data can also be provided in a list view including the network, file access and process execution observability.



The screenshot shows the ACCUKNOX interface for the 'App Behavior' section. The left sidebar contains navigation options like Dashboard, Inventory, Issues, Compliance, Runtime Protection, and App Behavior. The main content area displays a list of application behaviors with filters for cluster (DO-demo-cluster), namespace (default), and workload (vault). The 'Process Observability' filter is selected. The table below shows the list of behaviors with columns for Last Updated Time, Process Accessed, Process, Cluster, Namespace, Workload, Action, and Occu...

Last Updated Time	Process Accessed	Process	Cluster	Namespace	Workload	Action	Occu...
07/23/2024 15:21 PM	/bin/sh	/usr/bin/containerd-	DO-demo-cluster	default	vault	Allow	138218 Details
07/23/2024 15:21 PM	/bin/vault	/usr/bin/containerd-	DO-demo-cluster	default	vault	Allow	320667 Details
07/23/2024 15:21 PM	/bin/sh		DO-demo-cluster	default	vault	Allow	263794 Details
07/23/2024 15:20 PM	/bin/vault		DO-demo-cluster	default	vault	Allow	124160 Details
07/23/2024 15:20 PM	/bin/sh	/usr/bin/runc	DO-demo-cluster	default	vault	Allow	73658 Details
07/23/2024 15:19 PM	/bin/vault	/usr/bin/runc	DO-demo-cluster	default	vault	Allow	15552 Details

- Navigate to Runtime Protection → Policies and click on Discovered tab
- These discovered policies are generated based on the app behavior identified and whitelist the detected behavior. Click on any of the policies to view the whitelisted behavior



The screenshot displays the ACCUKNOX interface. On the left is a navigation sidebar with options like Dashboard, Inventory, Issues, Compliance, Runtime Protection, and Policies. The main area shows a list of discovered policies under the 'Policies' tab. A red box highlights the 'Discovered (1516)' filter. Below this is a table of policies:

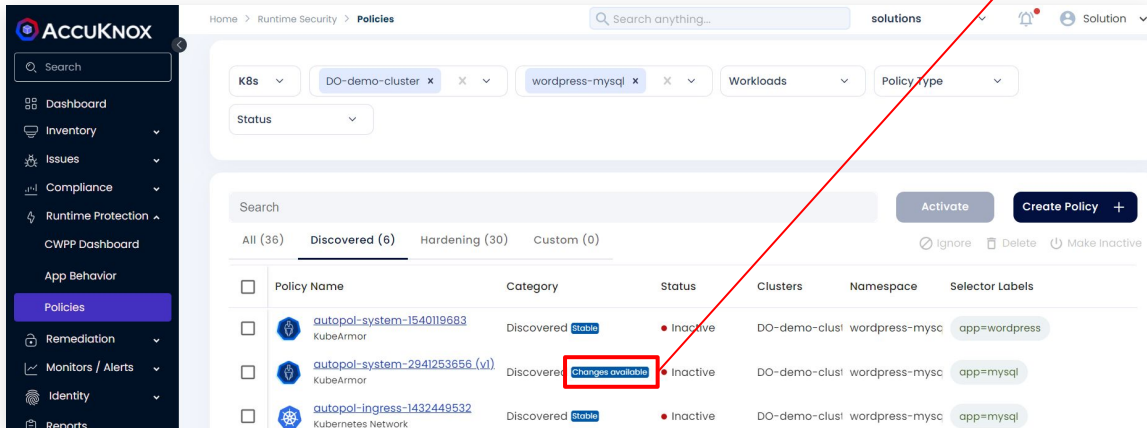
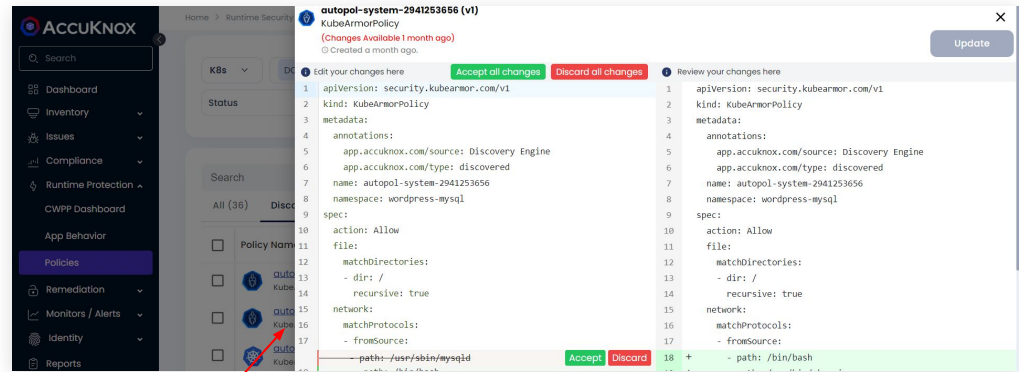
Policy Name	Category	Status	Clusters
autopol-system-4003176676 KubeArmor	Discovered	Inactive	DO-demo-clus...
autopol-system-2940177478 KubeArmor	Discovered	Inactive	DO-demo-clus...
autopol-egress-1770896549 Kubernetes Network	Discovered	Inactive	ers-k3s
autopol-ingress-4216328799 Kubernetes Network	Discovered	Inactive	ers-gke
autopol-egress-3741501696 Kubernetes Network	Discovered	Inactive	ers-gke
autopol-egress-762054413 Kubernetes Network	Discovered	Inactive	DO-demo-clus...
autopol-system-504247149 KubeArmor	Discovered	Inactive	ers-k3s
autopol-system-3213671873 KubeArmor	Discovered	Inactive	ers-k3s

On the right, a modal window shows the YAML configuration for the selected policy 'autopol-system-3213671873'. The YAML content is as follows:

```
1 apiVersion: security.kubearmor.com/v1
2 kind: KubeArmorPolicy
3 metadata:
4   annotations:
5     app.accuknox.com/source: Discovery Engine
6     app.accuknox.com/type: discovered
7   name: autopol-system-3213671873
8   namespace: rsyslog
9 spec:
10  action: Allow
11  file:
12    matchDirectories:
13      - dir: /
14        recursive: true
15  network:
16    matchProtocols:
17      - fromSource:
18        - path: /bin/busybox
19        - path: /sbin/apk
20        - path: /usr/bin/getent
21        - path: /var/ossec/bin/wazuh-agentd
22        - path: /var/ossec/bin/wazuh-execd
23        - path: /var/ossec/bin/wazuh-logcollector
24        - path: /var/ossec/bin/wazuh-modulesd
25        - path: /var/ossec/bin/wazuh-syscheckd
26    protocol: icmp
27  - fromSource:
28    - path: /bin/busybox
29    - path: /sbin/apk
30    - path: /usr/bin/getent
```

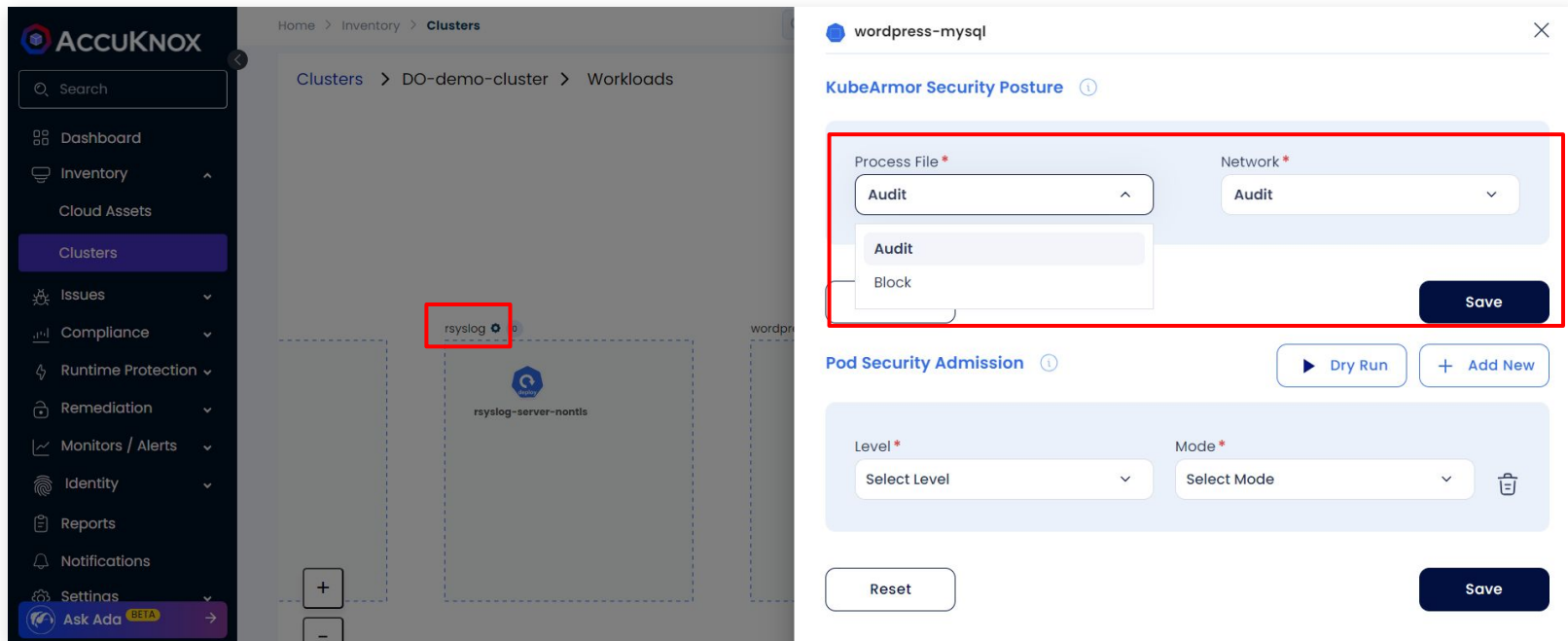
Policies - Zero Trust Journey

- The discovered policies will be applied in a learning/audit mode by default and will only alert for any violations
- Update the policy as required by selecting the Changes Available



- The discovered policies will be marked stable if no deviation is detected from the policy
- When the policies have become stable, they can be enforced in block mode

- After applying the stable discovered policies for a namespace, navigate to Inventory → Clusters. Click on the Cluster → View Workloads
- Click on the Cog Icon next to the namespace, set the KubeArmor posture to Block
- When the application is updated, change back to Audit to learn new behavior



The screenshot displays the ACCUKNOX interface. On the left is a dark sidebar with navigation options: Dashboard, Inventory, Cloud Assets, Clusters (highlighted), Issues, Compliance, Runtime Protection, Remediation, Monitors / Alerts, Identity, Reports, Notifications, and Settings. The main area shows a breadcrumb trail: Home > Inventory > Clusters. Below this, it indicates 'Clusters > DO-demo-cluster > Workloads'. A grid of workload cards is visible, with one card labeled 'rsyslog' highlighted by a red box. To the right, a detailed configuration window for 'wordpress-mysql' is open. It features a 'KubeArmor Security Posture' section with two dropdown menus: 'Process File*' and 'Network*', both currently set to 'Audit'. A dropdown menu is open for 'Process File*', showing 'Audit' and 'Block' options. A 'Save' button is located to the right of these dropdowns. Below this section is the 'Pod Security Admission' section, which includes 'Level*' and 'Mode*' dropdowns, both set to 'Select Level' and 'Select Mode' respectively. A 'Reset' button is on the left and a 'Save' button is on the right of this section.

Policies - Hardening

- Navigate to Runtime Protection → Policies and click on Hardening tab
- These discovered policies are based on frameworks like MITRE, CIS, NIST, etc... to improve security and compliance
- Select the Policy and click on Activate to apply it

The screenshot shows the AccuKnox interface for managing policies. The left sidebar contains navigation options like Dashboard, Inventory, Issues, Compliance, Runtime Protection, and Policies. The main content area displays a list of policies under the 'Hardening' tab. A table lists three policies, with the 'File integrity monitoring/Protector' policy selected. The 'Activate' button is highlighted with a red box, and the checkbox for the selected policy is also highlighted with a red box.

	Policy Name	Category	Status	Clusters	Namespace	Selector Labels	Alerts
<input type="checkbox"/>	Audit device directory for enhance KubeArmor	Hardening Applied 6 days ag	Active	DO-demo-clust	wordpress-mysc	app=mysql	0
<input type="checkbox"/>	Prohibit package manager proces KubeArmor	Hardening Applied 4 days ag	Active	DO-demo-clust	wordpress-mysc	app=wordpress	4
<input checked="" type="checkbox"/>	File integrity monitoring/Protector KubeArmor	Hardening	Inactive	DO-demo-clust	wordpress-mysc	app=wordpress	7

- Pod Security admission places requirements on a Pod's Security Context and other related fields according to the three levels defined by the Pod Security Standards:

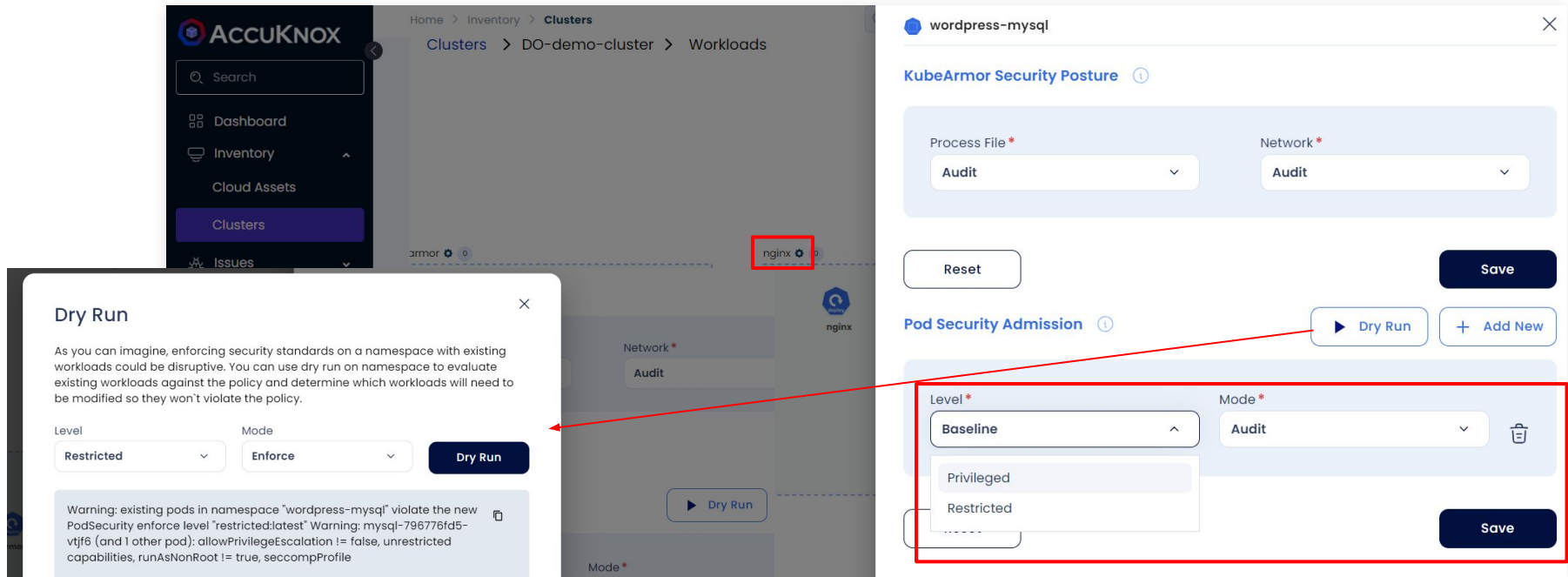
Level	Description
Privileged	Unrestricted policy, allows for known privilege escalations.
Baseline	Minimally restrictive policy. Allows the default (minimally specified) Pod configuration.
Restricted	Heavily restricted policy, following current Pod hardening best practices.

- PSA can be enabled in two modes:

Mode	Description
enforce	Policy violations will cause the pod to be rejected.
audit	Policy violations will trigger an alert but will otherwise be allowed

Enabling Pod Security Admission (PSA)

- Navigate to Inventory → Clusters and click on the cluster, select View Workloads
- Click on the cog icon next to the namespace
- Select a Level and Mode for the PSA. In case of Enforce mode, click on Dry Run to view potential effects before applying



The screenshot displays the ACCUKNOX interface for configuring Pod Security Admission (PSA) for a namespace. The main content area shows the breadcrumb trail: Home > Inventory > Clusters > Clusters > DO-demo-cluster > Workloads. The namespace 'wordpress-mysql' is selected, and the 'KubeArmor Security Posture' is configured with 'Process File' and 'Network' set to 'Audit'. The 'Pod Security Admission' section is highlighted with a red box, showing 'Level' set to 'Baseline' and 'Mode' set to 'Audit'. A 'Dry Run' button is highlighted with a red box, and a 'Dry Run' dialog is open, showing a warning about existing pods violating the new policy.

Dry Run

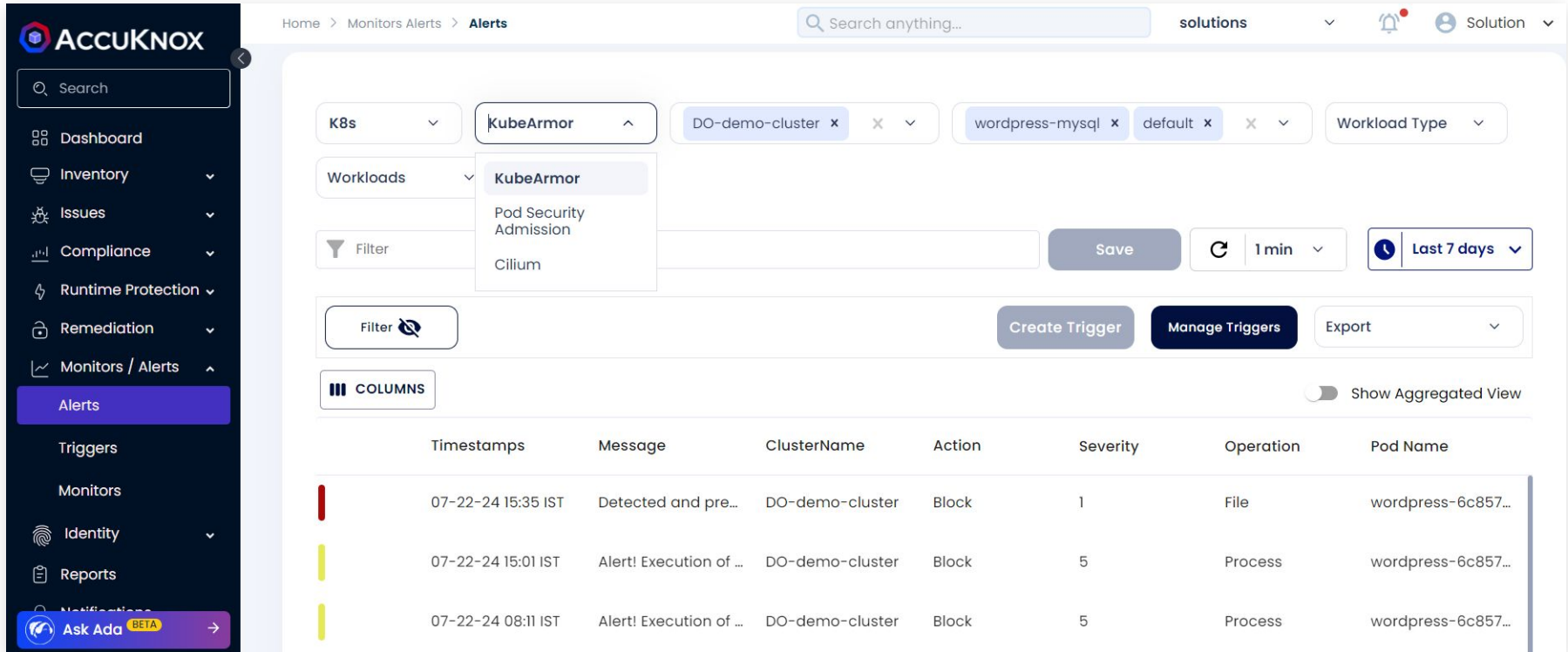
As you can imagine, enforcing security standards on a namespace with existing workloads could be disruptive. You can use dry run on namespace to evaluate existing workloads against the policy and determine which workloads will need to be modified so they won't violate the policy.

Level: **Restricted** Mode: **Enforce** **Dry Run**




Warning: existing pods in namespace "wordpress-mysql" violate the new PodSecurity enforce level "restrictedlatest" Warning: mysql-796776fd5-vtj6 (and 1 other pod): allowPrivilegeEscalation != false, unrestricted capabilities, runAsNonRoot != true, seccompProfile

Logs and Alerts for Policy Violation

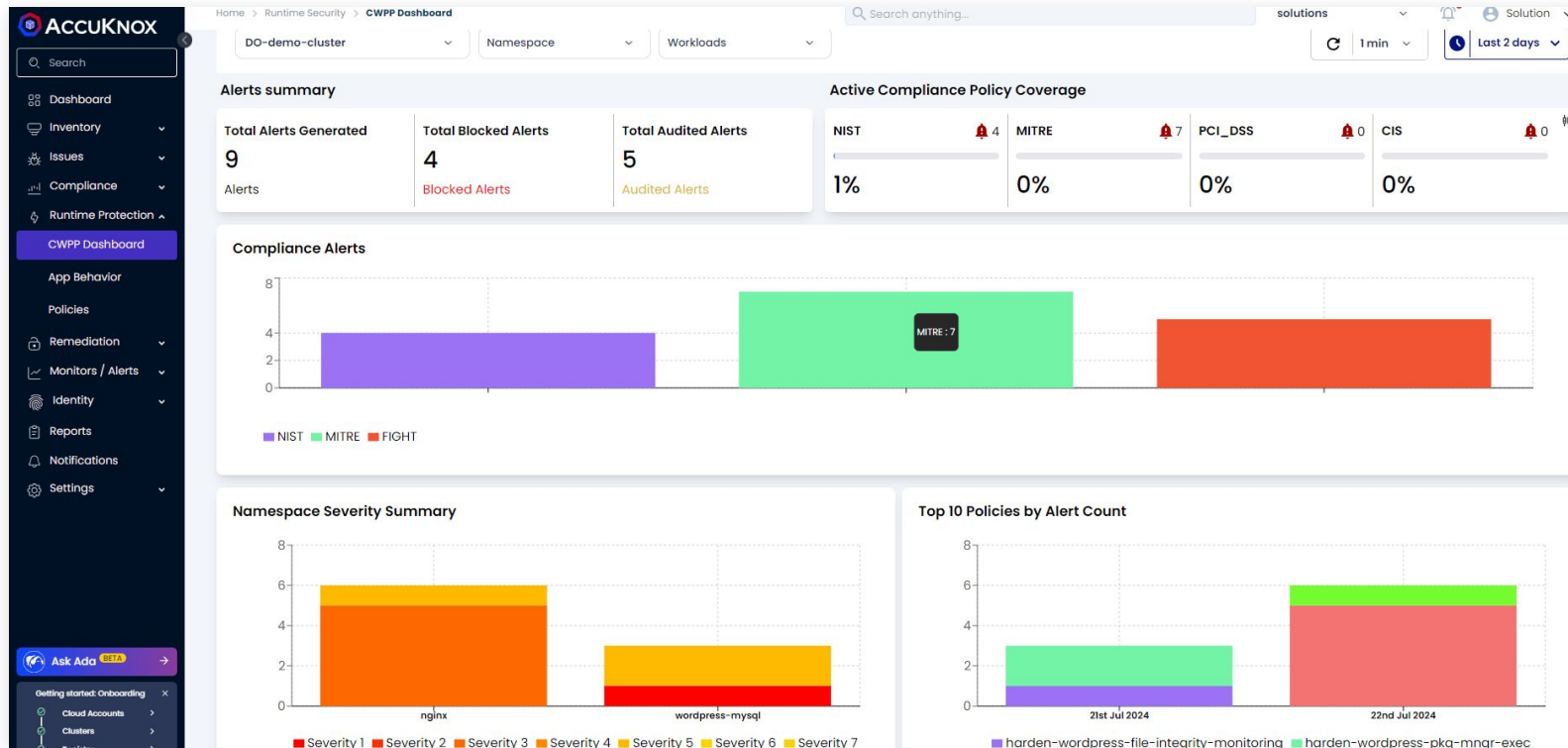
- Navigate to Monitors/Alerts → Alerts to view the alerts generated for policy violations
- Custom Filtering can be performed on this screen and saved for quick filtering



The screenshot displays the ACCUKNOX Alerts interface. On the left is a dark sidebar with navigation options: Dashboard, Inventory, Issues, Compliance, Runtime Protection, Remediation, Monitors / Alerts (expanded), Alerts (selected), Triggers, Monitors, Identity, Reports, and a bottom button 'Ask Ada BETA'. The main content area shows the 'Alerts' page with a breadcrumb 'Home > Monitors Alerts > Alerts', a search bar, and a 'solutions' dropdown. Below this are filter controls for 'K8s' (set to KubeArmor), 'Workloads' (set to KubeArmor), and 'Workload Type'. A 'Filter' button is present. The table below shows three alerts:

COLUMNS	Timestamps	Message	ClusterName	Action	Severity	Operation	Pod Name
	07-22-24 15:35 IST	Detected and pre...	DO-demo-cluster	Block	1	File	wordpress-6c857...
	07-22-24 15:01 IST	Alert! Execution of ...	DO-demo-cluster	Block	5	Process	wordpress-6c857...
	07-22-24 08:11 IST	Alert! Execution of ...	DO-demo-cluster	Block	5	Process	wordpress-6c857...

After applying policies and some alerts have been triggered, navigate to Runtime Protection → CWPP Dashboard and select the cluster for a comprehensive view

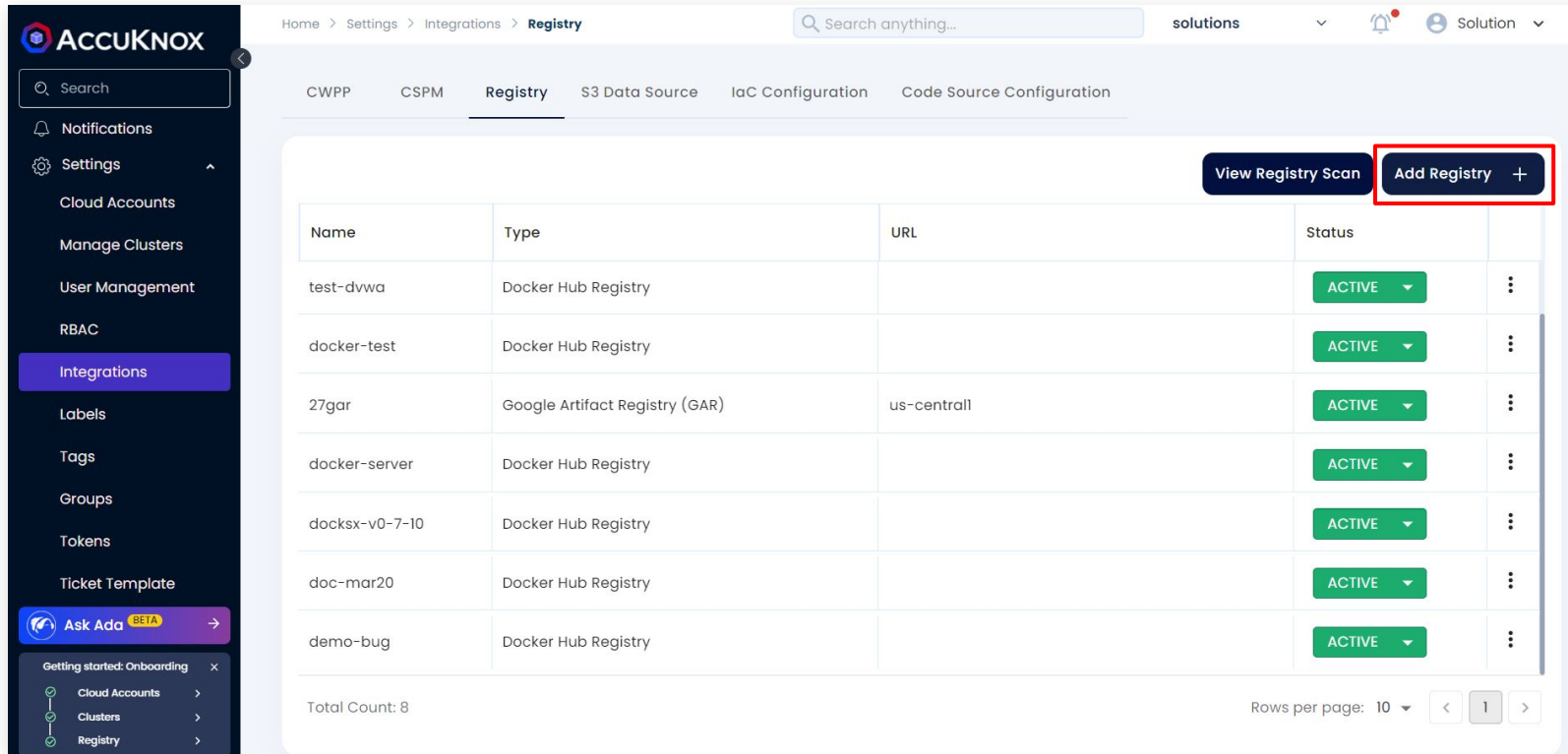




Vulnerability Management for Containers

Onboard Container Image Registries

- Navigate to Settings → Integrations → Registry tab
- Click on Add Registry



The screenshot shows the AccuKnox web interface. On the left is a dark sidebar with navigation options: Search, Notifications, Settings, Cloud Accounts, Manage Clusters, User Management, RBAC, Integrations (highlighted in purple), Labels, Tags, Groups, Tokens, and Ticket Template. At the bottom of the sidebar is a 'Getting started: Onboarding' section with links for Cloud Accounts, Clusters, and Registry. The main content area is titled 'Registry' and contains a table of existing registries. A red box highlights the 'Add Registry +' button in the top right corner of the table area. The table has columns for Name, Type, URL, and Status. All listed registries are in an 'ACTIVE' state.

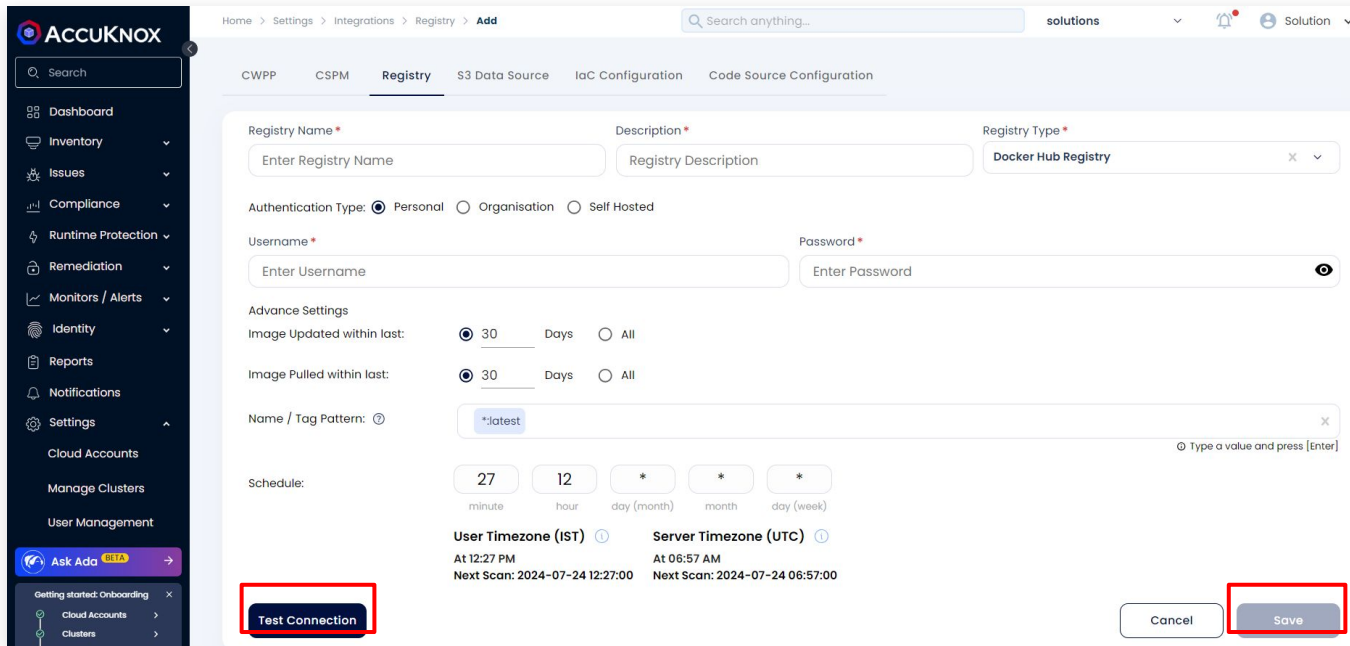
Name	Type	URL	Status
test-dvwa	Docker Hub Registry		ACTIVE
docker-test	Docker Hub Registry		ACTIVE
27gar	Google Artifact Registry (GAR)	us-central1	ACTIVE
docker-server	Docker Hub Registry		ACTIVE
docksx-v0-7-10	Docker Hub Registry		ACTIVE
doc-mar20	Docker Hub Registry		ACTIVE
demo-bug	Docker Hub Registry		ACTIVE

Total Count: 8

Rows per page: 10

Onboard Container Image Registries

- Input a Name and Description of the registry. Select the Registry Type
- Provide Auth Credentials as per the selected registry



Optionally, the following can be configured:

- Images to be scanned via
 - Regex
 - Update date
 - Pull date
- Scan schedule

- Click on Test Connection to verify and then Save

- Navigate to Issues → Registry Scan to view the scanned registries
- Click on any of the images to view detailed scan results

The screenshot displays the AccuKnox web interface. The top navigation bar includes 'Home', 'Issues', and 'Registry Scan'. The main content area is divided into three panels: 'Image Scanning Progress', 'Image Risk Assessment', and 'Image Security Issues'. The 'Image Scanning Progress' panel shows 12 Total Registered Images, with a donut chart indicating 12 Scanned Images, 0 Failed to Scan, and 0 Images in Queue. The 'Image Risk Assessment' panel shows 2.4k Total Vulnerabilities, with a bar chart showing counts for Critical (168), High (486), Medium (705), Low (982), and Negligible (19). The 'Image Security Issues' panel shows 12 Total Images and a bar chart with counts for 6, 7, 12, 12, 2, and 0. Below these panels is a 'Findings' section with a 'Scan Queue' and a list of repositories, including 'nginx' and 'nginx:latest'. A red arrow points from 'nginx:latest' in the list to the 'Image Details' view. The 'Image Details' view for 'nginx:latest' shows metadata such as Architecture (amd64), Content Digest, Created (04/24/2024 03:45 AM), Docker Digest, Docker ID, Docker Labels, Docker Version, Environment (PATH, NGINX_VERSION, NJS_VERSION, NJS_RELEASE, PKG_RELEASE), and Operating System (linux (debian)). A 'Vulnerability Scan Details' panel on the right shows 'nginx:latest' created 91 day(s) ago, with a donut chart indicating a Total of 183 vulnerabilities, and a bar chart showing counts for 2, 25, 67, 88, and 1.

Inventory of Container Images

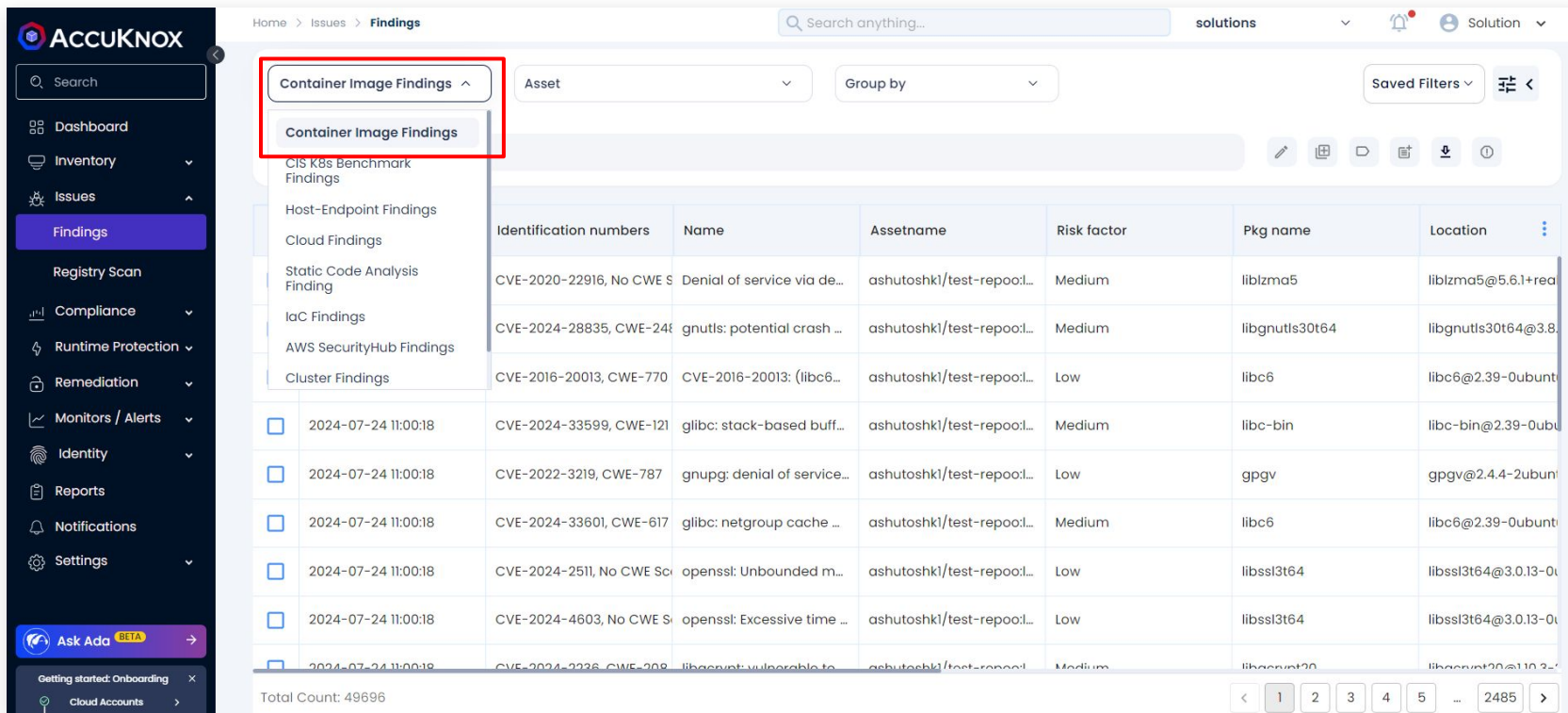
- Navigate to Inventory → Cloud Assets
- Filter Asset Type as Container to view list of all scanned images and associated findings

The screenshot displays the ACCUKNOX dashboard for 'Cloud Assets'. The left sidebar contains navigation options: Dashboard, Inventory (expanded), Cloud Assets (selected), Clusters, Issues, Compliance, Runtime Protection, Remediation, Monitors / Alerts, Identity, Reports, Notifications, and Settings. The main content area shows a summary of asset counts: Cloud Accounts (4), VMs (13), Clusters (3), Storage (31), Functions (0), and Database (2). Below this is a table of assets with columns for Asset, Label, Findings, Last Scan date, Asset Category, Data type, Monitors, and Regions. The 'Asset Category' dropdown is open, showing 'Container' selected and highlighted with a red box. Other options in the dropdown include WebApp, k8s_security_User, k8s_security_Group, k8s_security_ClusterRoleBin, k8s_security_Service, k8s_security_ConfigMap, k8s_security_Deployment, and k8s_security_Node.

Asset	Label	Findings	Last Scan date	Asset Category	Data type	Monitors	Regions
<input type="checkbox"/>	750567562417.dkr.ecr.us...	7 44 47 6	2023-10-17	Container	Container	0	-
<input type="checkbox"/>	788471067825.dkr.ecr.us...	8 37 16 1	2023-10-30	Container	Container	0	-
<input type="checkbox"/>	accuknox/bootstrap:De...	16 65 31 2	2023-11-27	Container	Container	0	-
<input type="checkbox"/>	accuknoxns/celery:latest	26 101 17 102 4	2024-02-27	Container	Container	0	-

View all Findings in Container Images

- Navigate to Issues → Findings
- Select top-left filter as Container Image Findings to get a list of all findings



Home > Issues > Findings

Search anything...

solutions

Container Image Findings

Asset

Group by

Saved Filters

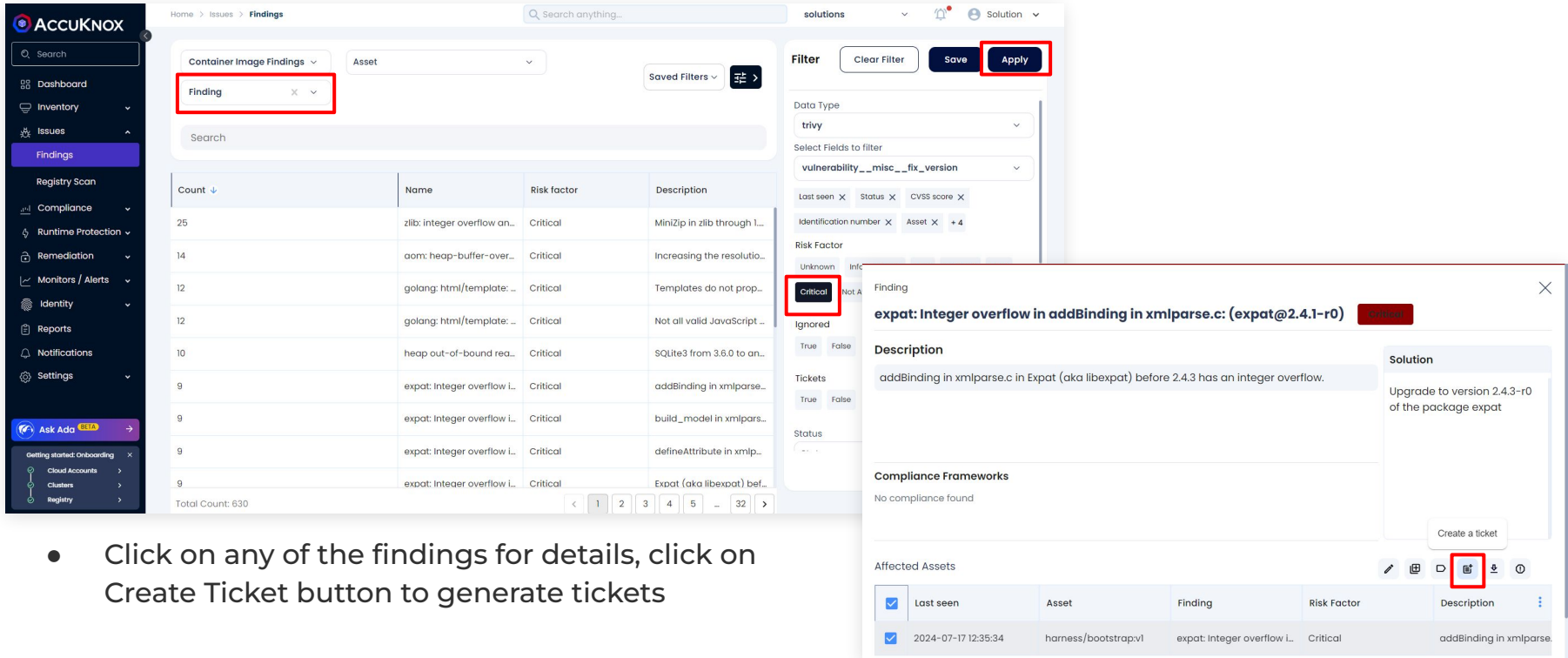
Identification numbers	Name	Assetname	Risk factor	Pkg name	Location
CVE-2020-22916, No CWE S	Denial of service via de...	ashutoshki/test-repool...	Medium	libzma5	liblzma5@5.6.1+rea
CVE-2024-28835, CWE-248	gnutls: potential crash ...	ashutoshki/test-repool...	Medium	libgnutls30t64	libgnutls30t64@3.8
CVE-2016-20013, CWE-770	CVE-2016-20013: (libc6...	ashutoshki/test-repool...	Low	libc6	libc6@2.39-0ubunt
2024-07-24 11:00:18	CVE-2024-33599, CWE-121	glibc: stack-based buff...	Medium	libc-bin	libc-bin@2.39-0ubu
2024-07-24 11:00:18	CVE-2022-3219, CWE-787	gnupg: denial of service...	Low	gpgv	gpgv@2.4.4-2ubunt
2024-07-24 11:00:18	CVE-2024-33601, CWE-617	glibc: netgroup cache ...	Medium	libc6	libc6@2.39-0ubunt
2024-07-24 11:00:18	CVE-2024-2511, No CWE Sc	openssl: Unbounded m...	Low	libssl3t64	libssl3t64@3.0.13-0
2024-07-24 11:00:18	CVE-2024-4603, No CWE S	openssl: Excessive time ...	Low	libssl3t64	libssl3t64@3.0.13-0
2024-07-24 11:00:18	CVE-2024-2236, CWE-209	libaccount-vulnerable to	Medium	libaccount20	libaccount20@1.10.2-

Total Count: 49696

1 2 3 4 5 ... 2485

Work on Critical Findings in Container Images

- Select Group By as Findings
- In the Filters tab, select Critical under Risk Factor and click on Apply



The screenshot displays the ACCUKNOX Findings page. The left sidebar shows navigation options like Dashboard, Inventory, Issues, Findings, Registry Scan, Compliance, Runtime Protection, Remediation, Monitors / Alerts, Identity, Reports, Notifications, and Settings. The main area shows a table of findings with columns for Count, Name, Risk factor, and Description. The table is filtered to show only Critical findings. A modal window is open for a specific finding, showing details and a 'Create a ticket' button.

Count	Name	Risk factor	Description
25	zlib: integer overflow an...	Critical	MiniZip in zlib through 1...
14	oom: heap-buffer-over...	Critical	Increasing the resolutio...
12	golang: html/template: ...	Critical	Templates do not prop...
12	golang: html/template: ...	Critical	Not all valid JavaScript ...
10	heap out-of-bound rea...	Critical	SQLite3 from 3.6.0 to an...
9	expat: Integer overflow l...	Critical	addBinding in xmlpars...
9	expat: Integer overflow l...	Critical	build_model in xmlpars...
9	expat: Integer overflow l...	Critical	defineAttribute in xmlp...
9	expat: Integer overflow l...	Critical	Expat (aka libexpat) bef...

Modal window details:

- Finding:** expat: Integer overflow in addBinding in xmlparse.c: (expat@2.4.1-r0)
- Description:** addBinding in xmlparse.c in Expat (aka libexpat) before 2.4.3 has an integer overflow.
- Solution:** Upgrade to version 2.4.3-r0 of the package expat
- Compliance Frameworks:** No compliance found
- Affected Assets:** Table with columns: Last seen, Asset, Finding, Risk Factor, Description.

- Click on any of the findings for details, click on Create Ticket button to generate tickets

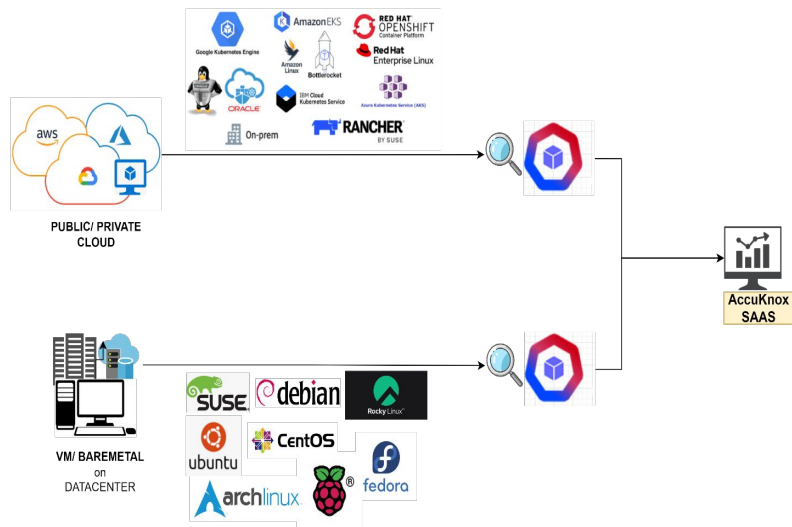


Forensics

1- Telemetry Data Collection:

● eBPF Instrumentation:

- KubeArmor uses eBPF (Extended Berkeley Packet Filter) to collect real-time data.
- It Captures detailed telemetry, including:
 - **File Access Logs:** Records of all file interactions (reads, writes, modifications).
 - **Network Connections:** Details of network traffic, connections, and communications.
 - **Process Execution Logs:** Information about process start, stop, and activity.
- It can generate:
 - **Audit** based Alerts
 - **Block** based Alerts
 - **Drift Detection** and Alerts



Sample policies for aggregating telemetry events:

1- Process Based Telemetry

```
apiVersion: security.kubearmor.com/v1
kind: KubeArmorPolicy
metadata:
  name: ksp-discovery-process-discovery
  namespace: wordpress-mysql
spec:
  tags: ["MITRE", "Discovery"]
  message: "Someone accessed running
process"
  selector:
    matchLabels:
      app: wordpress
  process:
    matchPaths:
      - path: /bin/ps
      - path: /usr/bin/ps
      - path: /usr/bin/pgrep
      - path: /usr/bin/top
      - path: /usr/bin/htop
    action: Audit
    severity: 5
```

2- File Based Telemetry

```
apiVersion: security.kubearmor.com/v1
kind: KubeArmorPolicy
metadata:
  name: audit-for-system-paths
  namespace: wordpress-mysql
spec:
  action: Allow
  file:
    matchDirectories:
      - dir: /bin/
        readOnly: true
        recursive: true
        action: Audit
      - dir: /sbin/
        readOnly: true
        recursive: true
        action: Audit
      - dir: /usr/sbin/
        readOnly: true
        recursive: true
        action: Audit
      - dir: /usr/bin/
        readOnly: true
        recursive: true
        action: Audit
      - dir: /etc/
        readOnly: true
        recursive: true
        action: Audit
    severity: 5
    tags:
      - NIST
      - PCI-DSS
    message: Access to network files detected. Possible
violation of NIST Controls
  selector:
    matchLabels:
      app: mysql
```

3- Network Based Telemetry

```
apiVersion: security.kubearmor.com/v1
kind: KubeArmorPolicy
metadata:
  name: ksp-nist-ac-18-1-network-audit
  namespace: wordpress-mysql
spec:
  severity: 3
  tags: ["NIST-800", "AC-18(1)", "Networking",
"Access", "NIST_SA", "NIST_SA-20",
"NIST_SA-20-Customized Development of Critical
Components", "SA"]
  message: "Access to network files detected.
Possible violation of NIST Controls"
  selector:
    matchLabels:
      app: wordpress
  file:
    matchPaths:
      - path: /proc/net/tcp
      - path: /proc/net/udp
      - path: /proc/net/icmp
      - path: /proc/net/snmp
      - path: /proc/net/route
      - path: /proc/net/dev
      - path: /var/log/syslog
      - path: /var/log/audit/audit.log
      - path: /etc/hostapd/hostapd.conf
      - path: /etc/network/if-up.d
    action: Audit
```


Sample forensics data generated by the policies:

```
ClusterName: default
HostName: gke-cluster-1-default-pool-37f4c896-8cn6
NamespaceName: wordpress-mysql
PodName: wordpress-7c966b5d85-wvtln
Labels: app=wordpress
ContainerName: wordpress
ContainerID: 6d09394a988c5cf6b9fe260d28fdd57d6ff281618869a173965ecd94a3efac44
ContainerImage: docker.io/library/wordpress:4.8-apache@sha256:6216f64ab88fc51d311e38c7f69ca3f9aaba621492b4f1fa93ddf63093768845
Type: MatchedPolicy
PolicyName: ksp-nist-ac-18-1-network-audit
Severity: 3
Message: Access to network files detected. Possible violation of NIST Controls
Source: /bin/ls
Resource: /etc/network/if-up.d
Operation: File
Action: Audit
Data: syscall=SYS_OPENAT fd=-100 flags=O_RDONLY|O_NONBLOCK|O_DIRECTORY|O_CLOEXEC
Enforcer: eBPF Monitor
Result: Passed
ATags: [NIST-800 AC-18(1) Networking Access NIST_SA NIST_SA-20 NIST_SA-20-Customized Development of Critical Components SA]
HostPID: 1.275441e+06
HostPPID: 1.275298e+06
Owner: map[Name:wordpress Namespace:wordpress-mysql Ref:Deployment]
PID: 342
PPID: 336
ParentProcessName: /bin/bash
ProcessName: /bin/ls
Tags: NIST-800,AC-18(1),Networking,Access,NIST_SA,NIST_SA-20,NIST_SA-20-Customized Development of Critical Components,SA
```

