VMware Cloud Foundation – STIG Hardening Overview

Automation

9.0.0.0

vmware by Broadcom

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Revision History

Date	Description of Change
June 2025	Initial Release

Overview

VMware by Broadcom is a trusted partner in highly secure, mission critical systems around the world, including the United States Department of Defense (DoD). In the DoD, all IT systems must adhere to the rigorous Risk Management Framework (RMF) as defined in DoDI 8510.01. A critical component of RMF is the mandatory implementation of Security Technical Implementation Guides (STIGs) and Security Requirements Guidelines (SRGs) as maintained by the Defense Information Systems Agency (DISA).

To support our customers, VCF Automation appliances are evaluated against the following standards:

- DISA Kubernetes Security Technical Implementation Guide, Version 2 Release 3
- VMware Cloud Foundation Photon OS 5.0 STIG Readiness Guide, Version 3 Release 1

This report will document the product's compliance with this guidance, including any deviations.

Applicability

The contents of this document are applicable to the following product versions:

- VMware Cloud Foundation Automation 9.0.0.0

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Automation Compliance

VCF Automation allows the VI administrators, Organization administrators, and Platform engineers to set up self-service consumption of cloud resources. The users can create organizations, manage tenancy, and apply policies to allow end users to deploy and consume resources while retaining control, security, and compliance.

DevOps engineers and other end users can use VCF Automation to provision workloads. They can deploy VM and Kubernetes workloads from the VCF Automation catalog.

To deliver these capabilities, one or more VCF Automation virtual appliances are deployed and provide a platform for running the services that make up VCF Automation.

Photon OS 5.0 Compliance: Overall

The VCF Automation appliances are built on Photon OS 5.0. The results below are based on auditing the appliances against the latest Photon OS 5.0 STIG Readiness Guide release.

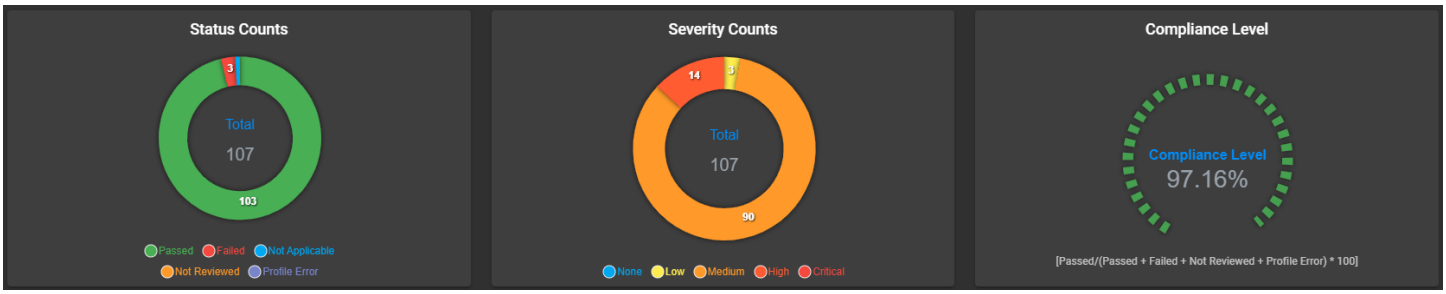


Figure 1: *Overall Compliance for Photon OS 5.0*

A full list of controls and their statuses is available in the Appendix section of this document.

Photon OS 5.0 Compliance: Exceptions

Controls listed in the exceptions table are findings. If post deployment remediation is possible it will be detailed in the justification column.

Control ID	NIST 800-83	Title	Justification
PHTN-50-000005	AC-8 a, AC-8 c 1, AC-8 c 2, AC-8 c 3	The Photon operating system must display the Standard Mandatory DOD Notice and Consent Banner before granting local or remote access to the system.	The DOD login banner is not configured out of the box as it is not appropriate for all customers.
PHTN-50-000046	AC-3	The Photon operating system must require authentication upon booting into single-user and maintenance modes.	Resolution included in product roadmap.
PHTN-50-000133	IA-11	The Photon operating system must require users to reauthenticate for privilege escalation.	Resolution included in product roadmap.

Photon OS 5.0 Compliance: Not Applicable

Controls listed in the not applicable table were determined to be not applicable in the VCF Automation context.

Control ID	NIST 800-83	Title	Justification
PHTN-50-000231	CM-6 b	The Photon operating system must not perform IPv4 packet forwarding.	IPv4 Packet forwarding is required for Kubernetes to route network traffic for pods.

Kubernetes Compliance: Overall

The results below are based on auditing the appliances against the latest Kubernetes STIG release.

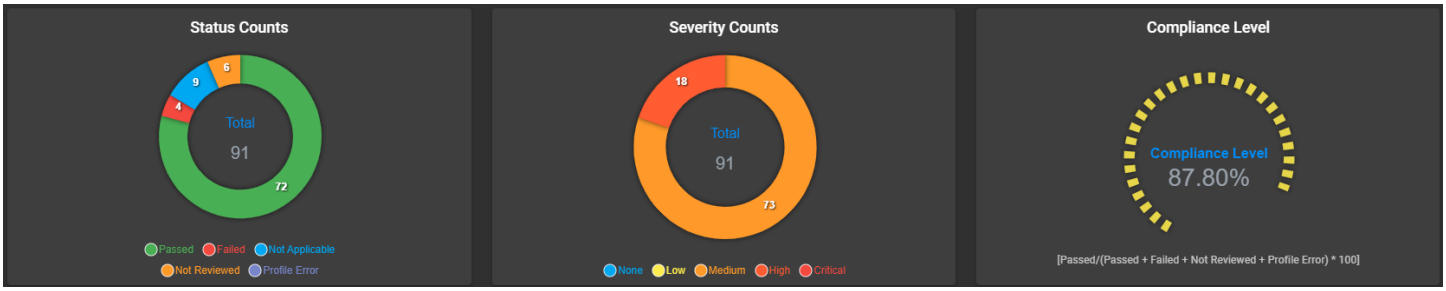


Figure 2: *Overall Compliance for Kubernetes*

A full list of controls and their statuses is available in the Appendix section of this document.

Kubernetes Compliance: Exceptions

Controls listed in the exceptions table are findings. If post deployment remediation is possible it will be detailed in the justification column.

Control ID	NIST 800-83	Title	Justification
CNTR-K8-000360	AC-3	The Kubernetes API server must have anonymous authentication disabled.	Kubeadm is used to deploy and configure K8s and does not support disabling this. See https://github.com/kubernetes/kubeadm/issues/1105
CNTR-K8-000920	CM-7 b	The Kubernetes API Server must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	No known banned ports in use. Ports and protocols used in the product are available at https://ports.broadcom.com/ and can be used by customers to document against the PPSM CAL.
CNTR-K8-000930	CM-7 b	The Kubernetes Scheduler must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	No known banned ports in use. Ports and protocols used in the product are available at https://ports.broadcom.com/ and can be used by customers to document against the PPSM CAL.
CNTR-K8-000940	CM-7 b	The Kubernetes Controllers must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	No known banned ports in use. Ports and protocols used in the product are available at https://ports.broadcom.com/ and can be used by customers to document against the PPSM CAL.

Control ID	NIST 800-83	Title	Justification
CNTR-K8-000950	CM-7 b	The Kubernetes etcd must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	No known banned ports in use. Ports and protocols used in the product are available at https://ports.broadcom.com/ and can be used by customers to document against the PPSM CAL.
CNTR-K8-000960	CM-7 b	The Kubernetes cluster must use non-privileged host ports for user pods.	Resolution included in product roadmap.
CNTR-K8-001160	IA-5 (1) (d), IA-5 (1) (c)	Secrets in Kubernetes must not be stored as environment variables	Resolution included in product roadmap.
CNTR-K8-001360	SC-2	Kubernetes must separate user functionality.	No user pods are present in the kube-node-lease, kube-public, or kube-system namespaces. Pods for running Automation services are in a separate namespace.
CNTR-K8-002011	AC-16 a	Kubernetes must have a Pod Security Admission control file configured.	An alternative policy mechanism via kyverno is used that is more fine grained than PSA to implement the same intent.
CNTR-K8-002700	SI-4 d	Kubernetes must remove old components after updated versions have been installed.	Only a single version of Kubernetes is ever present. When updates are performed they are done in a rolling fashion with new appliances containing only the new Kubernetes version.

Kubernetes Compliance: Not Applicable

Controls listed in the not applicable table were determined to be not applicable in the VCF Automation context.

Control ID	NIST 800-83	Title	Justification
CNTR-K8-000320	AC-3	The Kubernetes API server must have the insecure port flag disabled.	The Kubernetes API server insecure-port flag is no longer present in any supported Kubernetes version so this control is not longer valid. See: https://github.com/kubernetes/kubernetes/pull/102121
CNTR-K8-000400	AC-3	Kubernetes Worker Nodes must not have sshd service running.	This rule is N/A to control plane nodes.
CNTR-K8-000410	AC-3	Kubernetes Worker Nodes must not have the sshd service enabled.	This rule is N/A to control plane nodes.
CNTR-K8-000440	AC-3	The Kubernetes kubelet staticPodPath must not enable static pods.	This rule is N/A to control plane nodes.
CNTR-K8-000460	AC-3	Kubernetes DynamicKubeletConfig must not be enabled.	DynamicKubeletConfig removed in v1.24 and greater and is not applicable to version 1.32.0.
CNTR-K8-002001	AC-16 a	Kubernetes must enable PodSecurity admission controller on static pods and Kubelets.	PodSecurity is no longer a feature gate in 1.28+ and is not applicable to version 1.32.0.

Control ID	NIST 800-83	Title	Justification
CNTR-K8-002010	AC-16 a	Kubernetes must have a pod security policy set.	Pod Security Policy is deprecated in version 1.25+ and is not applicable to version 1.32.0.
CNTR-K8-003140	CM-6 b	The Kubernetes Kube Proxy kubeconfig must have file permissions set to 644 or more restrictive.	The kube-proxy kubeconfig is not present on the host system.
CNTR-K8-003150	CM-6 b	The Kubernetes Kube Proxy kubeconfig must be owned by root.	The kube-proxy kubeconfig is not present on the host system.

Frequently Asked Questions

Can customers make changes to the VCF Automation appliances?

No it is not supported to remediate the findings listed in this document at this time. If individual findings support remediation this will be stated along with the justification in the exceptions table.

Where can I find the Kubernetes STIG?

The Kubernetes STIG may be found at:

https://public.cyber.mil/stigs/

What is a STIG Readiness Guide?

More information about STIG Readiness Guides can be found at:

https://www.vmware.com/docs/vmw-stig-program-overview

What does the "status" column in the control list tables mean?

Status Definitions	
Passed	The compliance check passed.
Failed	The compliance check failed.
Not Applicable	The control was determined to be N/A in this context.
Not Reviewed	These controls were skipped as the conditions of the test did not exist on the system or require manual review and count as failures unless otherwise attested to manually.

Appendix: Full Control List – Photon OS 5.0

Control ID	NIST 800-83	Title	Status
PHTN-50-000003	AC-2 (4), AU-12 c	The Photon operating system must audit all account creations.	Passed
PHTN-50-000004	AC-7 a	The Photon operating system must enforce the limit of three consecutive invalid logon attempts by a user during a 15-minute time period.	Passed
PHTN-50-000005	AC-8 a, AC-8 c 1, AC-8 c 2, AC-8 c 3	The Photon operating system must display the Standard Mandatory DOD Notice and Consent Banner before granting local or remote access to the system.	Failed
PHTN-50-000007	AC-10	The Photon operating system must limit the number of concurrent sessions to ten for all accounts and/or account types.	Passed
PHTN-50-000012	AC-17 (1)	The Photon operating system must monitor remote access logins.	Passed
PHTN-50-000013	AC-17 (2), MA-4 (6), SC-8, SC-8 (2)	The Photon operating system must have the OpenSSL FIPS provider installed to protect the confidentiality of remote access sessions.	Passed
PHTN-50-000014	AU-3 a	The Photon operating system must configure auditd to log to disk.	Passed
PHTN-50-000016	AU-12 a, AU-3 (1), AU-3 c, AU-3 d, AU-3 e, AU-3 f, CM-5 (1) (b)	The Photon operating system must enable the auditd service.	Passed
PHTN-50-000019	AC-6 (8), AU-3 (1)	The Photon operating system must be configured to audit the execution of privileged functions.	Passed
PHTN-50-000021	AU-5 (2), AU-5 a	The Photon operating system must alert the ISSO and SA in the event of an audit processing failure.	Passed
PHTN-50-000026	AU-9 a	The Photon operating system must protect audit logs from unauthorized access.	Passed
PHTN-50-000030	AU-12 b	The Photon operating system must allow only authorized users to configure the auditd service.	Passed
PHTN-50-000031	AU-12 c	The Photon operating system must generate audit records when successful/unsuccessful attempts to access privileges occur.	Passed
PHTN-50-000035	IA-5 (1) (h)	The Photon operating system must enforce password complexity by requiring that at least one uppercase character be used.	Passed
PHTN-50-000036	IA-5 (1) (h)	The Photon operating system must enforce password complexity by requiring that at least one lowercase character be used.	Passed
PHTN-50-000037	IA-5 (1) (h)	The Photon operating system must enforce password complexity by requiring that at least one numeric character be used.	Passed

Control ID	NIST 800-83	Title	Status
PHTN-50-000038	IA-5 (1) (h)	The Photon operating system must require the change of at least eight characters when passwords are changed.	Passed
PHTN-50-000039	IA-5 (1) (d)	The operating system must store only encrypted representations of passwords.	Passed
PHTN-50-000040	IA-5 (1) (c)	The Photon operating system must not have the telnet package installed.	Passed
PHTN-50-000041	IA-5 (1) (h)	The Photon operating system must enforce one day as the minimum password lifetime.	Passed
PHTN-50-000042	IA-5 (1) (h)	The Photon operating systems must enforce a 90-day maximum password lifetime restriction.	Passed
PHTN-50-000044	IA-5 (1) (h)	The Photon operating system must enforce a minimum 15-character password length.	Passed
PHTN-50-000046	AC-3	The Photon operating system must require authentication upon booting into single-user and maintenance modes.	Failed
PHTN-50-000047	CM-7 a, IA-3	The Photon operating system must disable unnecessary kernel modules.	Passed
PHTN-50-000049	IA-2	The Photon operating system must not have duplicate User IDs (UIDs).	Passed
PHTN-50-000059	IA-7	The Photon operating system must use mechanisms meeting the requirements of applicable federal laws, Executive orders, directives, policies, regulations, standards, and guidance for authentication to a cryptographic module.	Passed
PHTN-50-000067	SC-4	The Photon operating system must restrict access to the kernel message buffer.	Passed
PHTN-50-000068	SC-5 (2), SC-5 a	The Photon operating system must be configured to use TCP syncookies.	Passed
PHTN-50-000069	MA-4 (7), SC-10	The Photon operating system must terminate idle Secure Shell (SSH) sessions after 15 minutes.	Passed
PHTN-50-000073	SI-11 a	The Photon operating system /var/log directory must be restricted.	Passed
PHTN-50-000074	SI-11 b	The Photon operating system must reveal error messages only to authorized users.	Passed
PHTN-50-000076	AC-2 (4)	The Photon operating system must audit all account modifications.	Passed
PHTN-50-000078	AC-2 (4)	The Photon operating system must audit all account removal actions.	Passed
PHTN-50-000079	AC-17 (2)	The Photon operating system must implement only approved ciphers to protect the integrity of remote access sessions.	Passed
PHTN-50-000080	AU-14 (1)	The Photon operating system must initiate session audits at system start-up.	Passed
PHTN-50-000082	AU-9, AU-9 a	The Photon operating system must protect audit tools from unauthorized access.	Passed

Control ID	NIST 800-83	Title	Status
PHTN-50-000085	CM-5 (6)	The Photon operating system must limit privileges to change software resident within software libraries.	Passed
PHTN-50-000086	IA-5 (1) (h)	The Photon operating system must enforce password complexity by requiring that at least one special character be used.	Passed
PHTN-50-000092	AU-9 (3)	The Photon operating system must use cryptographic mechanisms to protect the integrity of audit tools.	Passed
PHTN-50-000093	AC-12	The operating system must automatically terminate a user session after inactivity time-outs have expired.	Passed
PHTN-50-000105	AC-6 (10)	The Photon operating system must enable symlink access control protection in the kernel.	Passed
PHTN-50-000107	AC-2 (4), AC-6 (9), AU-12 c, MA-3 (5)	The Photon operating system must audit the execution of privileged functions.	Passed
PHTN-50-000108	AC-7 b	The Photon operating system must automatically lock an account until the locked account is released by an administrator when three unsuccessful logon attempts in 15 minutes occur.	Passed
PHTN-50-000110	AU-4	The Photon operating system must allocate audit record storage capacity to store audit records when audit records are not immediately sent to a central audit record storage facility.	Passed
PHTN-50-000112	AU-5 (1)	The Photon operating system must immediately notify the SA and ISSO when allocated audit record storage volume reaches 75% of the repository maximum audit record storage capacity.	Passed
PHTN-50-000127	CM-3 (5), SI-6 b	The Photon operating system must install AIDE to detect changes to baseline configurations.	Passed
PHTN-50-000130	CM-14	The Photon operating system TDNF package management tool must cryptographically verify the authenticity of all software packages during installation.	Passed
PHTN-50-000133	IA-11	The Photon operating system must require users to reauthenticate for privilege escalation.	Failed
PHTN-50-000160	SI-16	The Photon operating system must implement address space layout randomization to protect its memory from unauthorized code execution.	Passed
PHTN-50-000161	SI-2 (6)	The Photon operating system must remove all software components after updated versions have been installed.	Passed
PHTN-50-000173	AU-12 c	The Photon operating system must generate audit records when successful/unsuccessful logon attempts occur.	Passed
PHTN-50-000175	AU-12 c	The Photon operating system must be configured to audit the loading and unloading of dynamic kernel modules.	Passed

Control ID	NIST 800-83	Title	Status
PHTN-50-000182	SC-13 b	The Photon operating system must implement NIST FIPS-validated cryptography for the following: to provision digital signatures, to generate cryptographic hashes, and to protect unclassified information requiring confidentiality and cryptographic protection in accordance with applicable federal laws, Executive Orders, directives, policies, regulations, and standards.	Passed
PHTN-50-000184	CM-6 b, IA-5 (1) (b)	The Photon operating system must prevent the use of dictionary words for passwords.	Passed
PHTN-50-000185	CM-6 b	The Photon operating system must enforce a delay of at least four seconds between logon prompts following a failed logon attempt in login.defs.	Passed
PHTN-50-000186	CM-6 b	The Photon operating system must ensure audit events are flushed to disk at proper intervals.	Passed
PHTN-50-000187	CM-6 b	The Photon operating system must define default permissions for all authenticated users in such a way that the user can only read and modify their own files.	Passed
PHTN-50-000188	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disallow HostbasedAuthentication.	Passed
PHTN-50-000192	AC-7 a	The Photon operating system must be configured to use the pam_faillock.so module.	Passed
PHTN-50-000193	AC-7 a	The Photon operating system must prevent leaking information of the existence of a user account.	Passed
PHTN-50-000194	AC-7 a	The Photon operating system must audit logon attempts for unknown users.	Passed
PHTN-50-000195	AC-7 a	The Photon operating system must include root when automatically locking an account until the locked account is released by an administrator when three unsuccessful logon attempts occur during a 15-minute time period.	Passed
PHTN-50-000196	AC-7 a	The Photon operating system must persist lockouts between system reboots.	Passed
PHTN-50-000197	IA-5 (1) (h)	The Photon operating system must be configured to use the pam_pwquality.so module.	Passed
PHTN-50-000199	CM-14	The Photon operating system TDNF package management tool must cryptographically verify the authenticity of all software packages during installation for all repos.	Passed
PHTN-50-000200	AC-17 (1)	The Photon operating system must configure the Secure Shell (SSH) SyslogFacility.	Passed
PHTN-50-000201	AC-17 (1)	The Photon operating system must enable Secure Shell (SSH) authentication logging.	Passed
PHTN-50-000203	SC-10	The Photon operating system must terminate idle Secure Shell (SSH) sessions.	Passed

Control ID	NIST 800-83	Title	Status
PHTN-50-000204	AC-2 (4), AU-12 c	The Photon operating system must audit all account modifications.	Passed
PHTN-50-000206	CM-6 b	The Photon operating system must enforce a delay of at least four seconds between logon prompts following a failed logon attempt.	Passed
PHTN-50-000207	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disallow authentication with an empty password.	Passed
PHTN-50-000208	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disable user environment processing.	Passed
PHTN-50-000209	CM-6 b	The Photon operating system must create a home directory for all new local interactive user accounts.	Passed
PHTN-50-000210	CM-6 b	The Photon operating system must disable the debug-shell service.	Passed
PHTN-50-000211	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disallow Generic Security Service Application Program Interface (GSSAPI) authentication.	Passed
PHTN-50-000212	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disable X11 forwarding.	Passed
PHTN-50-000213	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to perform strict mode checking of home directory configuration files.	Passed
PHTN-50-000214	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disallow Kerberos authentication.	Passed
PHTN-50-000215	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to disallow compression of the encrypted session stream.	Passed
PHTN-50-000216	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to display the last login immediately after authentication.	Passed
PHTN-50-000217	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to ignore user-specific trusted hosts lists.	Passed
PHTN-50-000218	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to ignore user-specific known_host files.	Passed
PHTN-50-000219	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to limit the number of allowed login attempts per connection.	Passed
PHTN-50-000220	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to restrict AllowTcpForwarding.	Passed
PHTN-50-000221	CM-6 b	The Photon operating system must configure Secure Shell (SSH) to restrict LoginGraceTime.	Passed

Control ID	NIST 800-83	Title	Status
PHTN-50-000222	CM-6 b	The Photon operating system must be configured so that the x86 Ctrl-Alt-Delete key sequence is disabled on the command line.	Passed
PHTN-50-000223	CM-6 b	The Photon operating system must not forward IPv4 or IPv6 source-routed packets.	Passed
PHTN-50-000224	CM-6 b	The Photon operating system must not respond to IPv4 Internet Control Message Protocol (ICMP) echoes sent to a broadcast address.	Passed
PHTN-50-000225	CM-6 b	The Photon operating system must prevent IPv4 Internet Control Message Protocol (ICMP) redirect messages from being accepted.	Passed
PHTN-50-000226	CM-6 b	The Photon operating system must prevent IPv4 Internet Control Message Protocol (ICMP) secure redirect messages from being accepted.	Passed
PHTN-50-000227	CM-6 b	The Photon operating system must not send IPv4 Internet Control Message Protocol (ICMP) redirects.	Passed
PHTN-50-000228	CM-6 b	The Photon operating system must log IPv4 packets with impossible addresses.	Passed
PHTN-50-000229	CM-6 b	The Photon operating system must use a reverse-path filter for IPv4 network traffic.	Passed
PHTN-50-000231	CM-6 b	The Photon operating system must not perform IPv4 packet forwarding.	Not Applicable
PHTN-50-000232	CM-6 b	The Photon operating system must send TCP timestamps.	Passed
PHTN-50-000233	CM-6 b	The Photon operating system must be configured to protect the Secure Shell (SSH) public host key from unauthorized modification.	Passed
PHTN-50-000234	CM-6 b	The Photon operating system must be configured to protect the Secure Shell (SSH) private host key from unauthorized access.	Passed
PHTN-50-000235	CM-6 b	The Photon operating system must enforce password complexity on the root account.	Passed
PHTN-50-000236	CM-6 b	The Photon operating system must disable systemd fallback DNS.	Passed
PHTN-50-000237	CM-3 (5)	The Photon operating system must configure AIDE to detect changes to baseline configurations.	Passed
PHTN-50-000239	AC-17 (2)	The Photon operating system must implement only approved Message Authentication Codes (MACs) to protect the integrity of remote access sessions.	Passed
PHTN-50-000241	CM-6 b	The Photon operating system must install rsyslog for offloading of audit logs.	Passed
PHTN-50-000242	CM-6 b	The Photon operating system must enable the rsyslog service.	Passed
PHTN-50-000244	CM-6 b	The Photon operating system must enable hardlink access control protection in the kernel.	Passed
PHTN-50-000245	CM-6 b	The Photon operating system must mount /tmp securely.	Passed

Control ID	NIST 800-83	Title	Status
PHTN-50-000246	CM-6 b	The Photon operating system must restrict core dumps.	Passed
PHTN-50-000247	CM-6 b	The Photon operating system must not allow empty passwords.	Passed

Appendix: Full Control List – Kubernetes

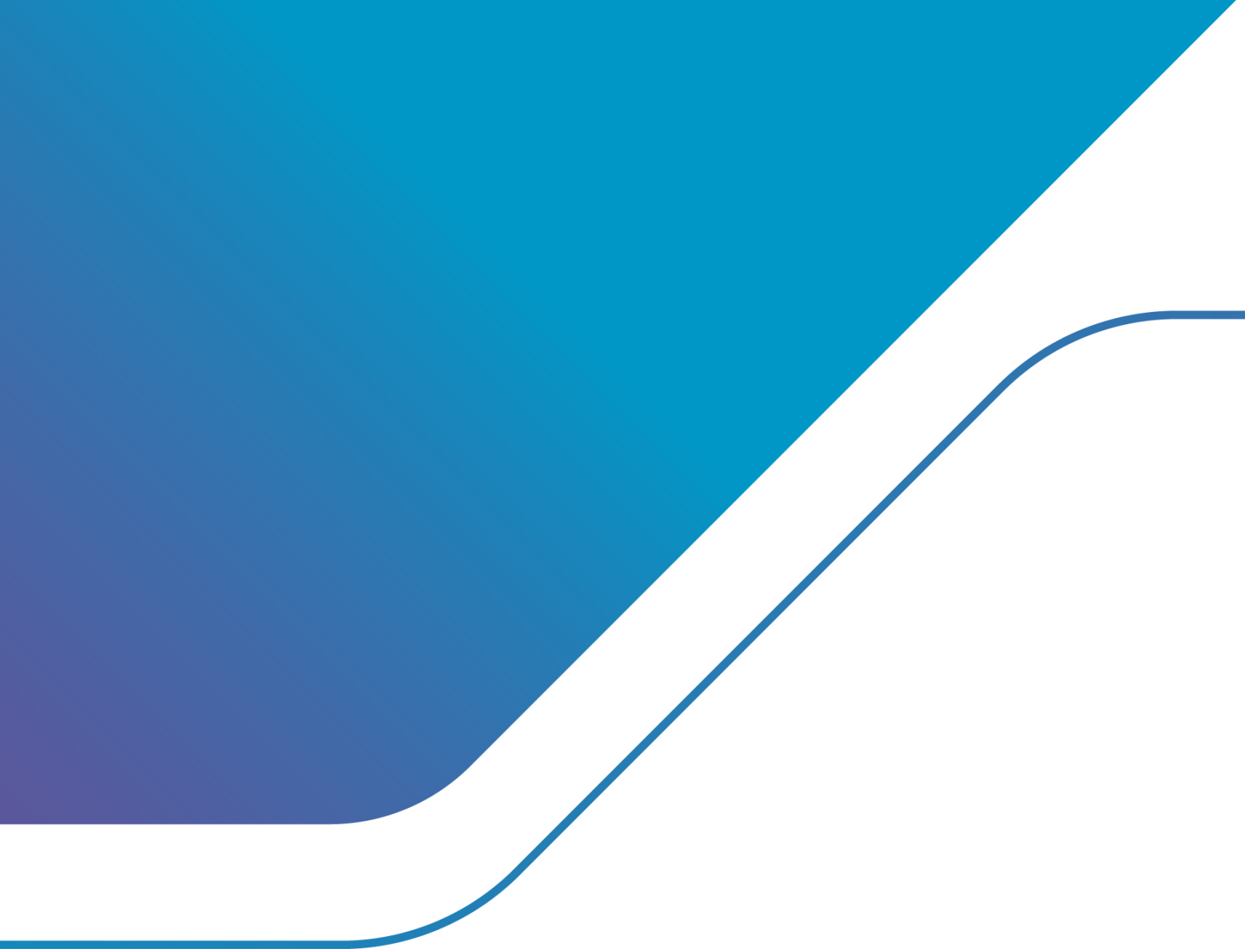
Control ID	NIST 800-83	Title	Status
CNTR-K8-000150	AC-17 (2)	The Kubernetes Controller Manager must use TLS 1.2, at a minimum, to protect the confidentiality of sensitive data during electronic dissemination.	Passed
CNTR-K8-000160	AC-17 (2)	The Kubernetes Scheduler must use TLS 1.2, at a minimum, to protect the confidentiality of sensitive data during electronic dissemination.	Passed
CNTR-K8-000170	AC-17 (2)	The Kubernetes API Server must use TLS 1.2, at a minimum, to protect the confidentiality of sensitive data during electronic dissemination.	Passed
CNTR-K8-000180	AC-17 (2)	The Kubernetes etcd must use TLS to protect the confidentiality of sensitive data during electronic dissemination.	Passed
CNTR-K8-000190	AC-17 (2)	The Kubernetes etcd must use TLS to protect the confidentiality of sensitive data during electronic dissemination.	Passed
CNTR-K8-000220	AC-2 (1)	The Kubernetes Controller Manager must create unique service accounts for each work payload.	Passed
CNTR-K8-000270	AC-3	The Kubernetes API Server must enable Node,RBAC as the authorization mode.	Passed
CNTR-K8-000290	CM-6 b	User-managed resources must be created in dedicated namespaces.	Passed
CNTR-K8-000300	AC-3	The Kubernetes Scheduler must have secure binding.	Passed
CNTR-K8-000310	AC-3	The Kubernetes Controller Manager must have secure binding.	Passed
CNTR-K8-000320	AC-3	The Kubernetes API server must have the insecure port flag disabled.	Not Applicable
CNTR-K8-000330	AC-3	The Kubernetes Kubelet must have the "readOnlyPort" flag disabled.	Passed
CNTR-K8-000340	AC-3	The Kubernetes API server must have the insecure bind address not set.	Passed
CNTR-K8-000350	AC-3	The Kubernetes API server must have the secure port set.	Passed
CNTR-K8-000360	AC-3	The Kubernetes API server must have anonymous authentication disabled.	Failed
CNTR-K8-000370	AC-3	The Kubernetes Kubelet must have anonymous authentication disabled.	Passed
CNTR-K8-000380	AC-3	The Kubernetes kubelet must enable explicit authorization.	Passed
CNTR-K8-000400	AC-3	Kubernetes Worker Nodes must not have sshd service running.	Not Applicable
CNTR-K8-000410	AC-3	Kubernetes Worker Nodes must not have the sshd service enabled.	Not Applicable
CNTR-K8-000420	AC-3	Kubernetes dashboard must not be enabled.	Passed
CNTR-K8-000430	AC-3	Kubernetes Kubectl cp command must give expected access and results.	Passed

Control ID	NIST 800-83	Title	Status
CNTR-K8-000440	AC-3	The Kubernetes kubelet staticPodPath must not enable static pods.	Not Applicable
CNTR-K8-000450	AC-3	Kubernetes DynamicAuditing must not be enabled.	Passed
CNTR-K8-000460	AC-3	Kubernetes DynamicKubeletConfig must not be enabled.	Not Applicable
CNTR-K8-000470	AC-3	The Kubernetes API server must have Alpha APIs disabled.	Passed
CNTR-K8-000610	AU-14 (1)	The Kubernetes API Server must have an audit log path set.	Passed
CNTR-K8-000700	AC-2 (4), AU-3 a, AU-3 b, AU-3 c, AU-3 d, AU-3 e, AU-3 (1), AU-12 c, AU-3 f, AU-3 (2), AC-16 a	Kubernetes API Server must generate audit records that identify what type of event has occurred, identify the source of the event, contain the event results, identify any users, and identify any containers associated with the event.	Passed
CNTR-K8-000850	CM-5 (6)	Kubernetes Kubelet must deny hostname override.	Passed
CNTR-K8-000860	CM-5 (6)	The Kubernetes manifests must be owned by root.	Passed
CNTR-K8-000880	CM-5 (6)	The Kubernetes KubeletConfiguration file must be owned by root.	Passed
CNTR-K8-000890	CM-5 (6)	The Kubernetes KubeletConfiguration files must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-000900	CM-5 (6), CM-6 b	The Kubernetes manifest files must have least privileges.	Passed
CNTR-K8-000910	CM-7 a	Kubernetes Controller Manager must disable profiling.	Passed
CNTR-K8-000920	CM-7 b	The Kubernetes API Server must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	Not Reviewed
CNTR-K8-000930	CM-7 b	The Kubernetes Scheduler must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	Not Reviewed
CNTR-K8-000940	CM-7 b	The Kubernetes Controllers must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	Not Reviewed
CNTR-K8-000950	CM-7 b	The Kubernetes etcd must enforce ports, protocols, and services (PPS) that adhere to the Ports, Protocols, and Services Management Category Assurance List (PPSM CAL).	Not Reviewed
CNTR-K8-000960	CM-7 b	The Kubernetes cluster must use non-privileged host ports for user pods.	Failed

Control ID	NIST 800-83	Title	Status
CNTR-K8-001160	IA-5 (1) (d), IA-5 (1) (c)	Secrets in Kubernetes must not be stored as environment variables	Failed
CNTR-K8-001300	SC-10	Kubernetes Kubelet must not disable timeouts.	Passed
CNTR-K8-001360	SC-2	Kubernetes must separate user functionality.	Not Reviewed
CNTR-K8-001400	SC-23	The Kubernetes API server must use approved cipher suites.	Passed
CNTR-K8-001410	SC-23	Kubernetes API Server must have the SSL Certificate Authority set.	Passed
CNTR-K8-001420	SC-23	Kubernetes Kubelet must have the SSL Certificate Authority set.	Passed
CNTR-K8-001430	SC-23	Kubernetes Controller Manager must have the SSL Certificate Authority set.	Passed
CNTR-K8-001440	SC-23	Kubernetes API Server must have a certificate for communication.	Passed
CNTR-K8-001450	SC-23	Kubernetes etcd must enable client authentication to secure service.	Passed
CNTR-K8-001460	SC-23	Kubernetes Kubelet must enable tlsPrivateKeyFile for client authentication to secure service.	Passed
CNTR-K8-001470	SC-23	Kubernetes Kubelet must enable tlsCertFile for client authentication to secure service.	Passed
CNTR-K8-001480	SC-23	Kubernetes etcd must enable client authentication to secure service.	Passed
CNTR-K8-001490	SC-23	Kubernetes etcd must have a key file for secure communication.	Passed
CNTR-K8-001500	SC-23	Kubernetes etcd must have a certificate for communication.	Passed
CNTR-K8-001510	SC-23	Kubernetes etcd must have the SSL Certificate Authority set.	Passed
CNTR-K8-001520	SC-23	Kubernetes etcd must have a certificate for communication.	Passed
CNTR-K8-001530	SC-23	Kubernetes etcd must have a key file for secure communication.	Passed
CNTR-K8-001540	SC-23	Kubernetes etcd must have peer-cert-file set for secure communication.	Passed
CNTR-K8-001550	SC-23	Kubernetes etcd must have a peer-key-file set for secure communication.	Passed
CNTR-K8-001620	SC-3	Kubernetes Kubelet must enable kernel protection.	Passed
CNTR-K8-002000	AC-16 a	The Kubernetes API server must have the ValidatingAdmissionWebhook enabled.	Passed
CNTR-K8-002001	AC-16 a	Kubernetes must enable PodSecurity admission controller on static pods and Kubelets.	Not Applicable
CNTR-K8-002010	AC-16 a	Kubernetes must have a pod security policy set.	Not Applicable

Control ID	NIST 800-83	Title	Status
CNTR-K8-002011	AC-16 a	Kubernetes must have a Pod Security Admission control file configured.	Failed
CNTR-K8-002600	SC-7 (21)	Kubernetes API Server must configure timeouts to limit attack surface.	Passed
CNTR-K8-002620	SC-12 (3)	Kubernetes API Server must disable basic authentication to protect information in transit.	Passed
CNTR-K8-002630	SC-12 (3)	Kubernetes API Server must disable token authentication to protect information in transit.	Passed
CNTR-K8-002640	SC-12 (3)	Kubernetes endpoints must use approved organizational certificate and key pair to protect information in transit.	Passed
CNTR-K8-002700	SI-4 d	Kubernetes must remove old components after updated versions have been installed.	Not Reviewed
CNTR-K8-002720	SI-3 (10) (a)	Kubernetes must contain the latest updates as authorized by IAVMs, CTOs, DTMs, and STIGs.	Passed
CNTR-K8-003110	CM-6 b	The Kubernetes component manifests must be owned by root.	Passed
CNTR-K8-003120	CM-6 b	The Kubernetes component etcd must be owned by etcd.	Passed
CNTR-K8-003130	CM-6 b	The Kubernetes conf files must be owned by root.	Passed
CNTR-K8-003140	CM-6 b	The Kubernetes Kube Proxy kubeconfig must have file permissions set to 644 or more restrictive.	Not Applicable
CNTR-K8-003150	CM-6 b	The Kubernetes Kube Proxy kubeconfig must be owned by root.	Not Applicable
CNTR-K8-003160	CM-6 b	The Kubernetes Kubelet certificate authority file must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-003170	CM-6 b	The Kubernetes Kubelet certificate authority must be owned by root.	Passed
CNTR-K8-003180	CM-6 b	The Kubernetes component PKI must be owned by root.	Passed
CNTR-K8-003190	CM-6 b	The Kubernetes kubelet KubeConfig must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-003200	CM-6 b	The Kubernetes kubelet KubeConfig file must be owned by root.	Passed
CNTR-K8-003210	CM-6 b	The Kubernetes kubeadm.conf must be owned by root.	Passed
CNTR-K8-003220	CM-6 b	The Kubernetes kubeadm.conf must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-003230	CM-6 b	The Kubernetes kubelet config must have file permissions set to 644 or more restrictive.	Passed

Control ID	NIST 800-83	Title	Status
CNTR-K8-003240	CM-6 b	The Kubernetes kubelet config must be owned by root.	Passed
CNTR-K8-003260	CM-6 b	The Kubernetes etcd must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-003270	CM-6 b	The Kubernetes admin kubeconfig must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-003280	CM-6 b	Kubernetes API Server audit logs must be enabled.	Passed
CNTR-K8-003290	CM-6 b	The Kubernetes API Server must be set to audit log max size.	Passed
CNTR-K8-003300	CM-6 b	The Kubernetes API Server must be set to audit log maximum backup.	Passed
CNTR-K8-003310	CM-6 b	The Kubernetes API Server audit log retention must be set.	Passed
CNTR-K8-003320	CM-6 b	The Kubernetes API Server audit log path must be set.	Passed
CNTR-K8-003330	CM-6 b	The Kubernetes PKI CRT must have file permissions set to 644 or more restrictive.	Passed
CNTR-K8-003340	CM-6 b	The Kubernetes PKI keys must have file permissions set to 600 or more restrictive.	Passed



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