

# Guide to the Secure Configuration of Fedora

with profile `PCI-DSS v3.2.1 Control Baseline for Fedora`

— Ensures PCI-DSS v3.2.1 related security configuration settings are applied.

The SCAP Security Guide Project

<https://www.open-scap.org/security-policies/scap-security-guide>

This guide presents a catalog of security-relevant configuration settings for Fedora. It is a rendering of content structured in the eXtensible Configuration Checklist Description Format (XCCDF) in order to support security automation. The SCAP content is available in the `scap-security-guide` package which is developed at <https://www.open-scap.org/security-policies/scap-security-guide>.

Providing system administrators with such guidance informs them how to securely configure systems under their control in a variety of network roles. Policy makers and baseline creators can use this catalog of settings, with its associated references to higher-level security control catalogs, in order to assist them in security baseline creation. This guide is a *catalog*, *not a checklist*, and satisfaction of every item is not likely to be possible or sensible in many operational scenarios. However, the XCCDF format enables granular selection and adjustment of settings, and their association with OVAL and OCIL content provides an automated checking capability. Transformations of this document, and its associated automated checking content, are capable of providing baselines that meet a diverse set of policy objectives. Some example XCCDF *Profiles*, which are selections of items that form checklists and can be used as baselines, are available with this guide. They can be processed, in an automated fashion, with tools that support the Security Content Automation Protocol (SCAP). The DISA STIG, which provides required settings for US Department of Defense systems, is one example of a baseline created from this guidance.

Do not attempt to implement any of the settings in this guide without first testing them in a non-operational environment. The creators of this guidance assume no responsibility whatsoever for its use by other parties, and makes no guarantees, expressed or implied, about its quality, reliability, or any other characteristic.

## Evaluation Characteristics

<b>Evaluation target</b>	Inanna.
<b>Benchmark URL</b>	<code>#scap_org.open-scap_comp_ssg-fedora-xccdf.xml</code>
<b>Benchmark ID</b>	<code>xccdf_org.ssgproject.content_benchmark_FEDORA</code>
<b>Benchmark version</b>	0.1.75
<b>Profile ID</b>	<code>xccdf_org.ssgproject.content_profile_pci-dss</code>
<b>Started at</b>	2025-05-26T18:54:30-06:00
<b>Finished at</b>	2025-05-26T18:55:48-06:00
<b>Performed by</b>	root
<b>Test system</b>	<code>cpe:/a:redhat:openscap:1.4.2</code>

## CPE Platforms

- `cpe:/o:fedoraproject:fedora:39`

- `cpe:/o:fedoraproject:fedora:40`
- `cpe:/o:fedoraproject:fedora:41`
- `cpe:/o:fedoraproject:fedora:42`
- `cpe:/o:fedoraproject:fedora:43`
- `cpe:/o:fedoraproject:fedora:44`
- `cpe:/o:fedoraproject:fedora:45`

## Addresses

- **IPv4** 127.0.0.1
- **IPv4** 10.255.255.254
- **IPv4** 172.19.81.111
- **IPv6** 0:0:0:0:0:0:1
- **IPv6** fe80:0:0:0:215:5dff:fedc:bfe5
- **MAC** 00:00:00:00:00:00
- **MAC** 00:15:5D:DC:BF:E5

# Compliance and Scoring

The target system did not satisfy the conditions of 15 rules! Please review rule results and consider applying remediation.

## Rule results

18 passed  
15 failed  
1 other

## Severity of failed rules

0 other  
1 low  
12 medium  
2 high

## Score

Scoring system	Score	Maximum	Percent
urn:xccdf:scoring:default	46.875000	100.000000	46.88%

# Rule Overview

Title	Severity	Result
Guide to the Secure Configuration of Fedora 15x fail 1x notchecked		
System Settings 15x fail 1x notchecked		
Installing and Maintaining Software 2x fail 1x notchecked		
System and Software Integrity 1x fail		

Title	Severity	Result
<b>Software Integrity Checking</b> 1x fail		
<b>Verify Integrity with RPM</b> 1x fail		
Verify File Hashes with RPM	high	pass
Verify and Correct File Permissions with RPM	high	fail
Verify Integrity with AIDE		
System Cryptographic Policies		
Endpoint Protection Software		
GNOME Desktop Environment		
<b>Updating Software</b> 1x fail 1x notchecked		
Ensure Fedora GPG Key Installed	high	fail
Ensure gpgcheck Enabled In Main dnf Configuration	high	notapplicable
Ensure gpgcheck Enabled for All dnf Package Repositories	high	pass
Ensure Software Patches Installed	medium	notchecked
<b>Account and Access Control</b> 12x fail		
<b>Protect Accounts by Configuring PAM</b> 10x fail		
<b>Set Lockouts for Failed Password Attempts</b> 3x fail		
Limit Password Reuse	medium	fail
Lock Accounts After Failed Password Attempts	medium	fail
Set Lockout Time for Failed Password Attempts	medium	fail
<b>Set Password Quality Requirements</b> 4x fail		
<b>Set Password Quality Requirements with pam_pwquality</b> 4x fail		
Ensure PAM Enforces Password Requirements - Minimum Digit Characters	medium	fail
Ensure PAM Enforces Password Requirements - Minimum Lowercase Characters	medium	fail
Ensure PAM Enforces Password Requirements - Minimum Length	medium	fail
Ensure PAM Enforces Password Requirements - Minimum Uppercase Characters	medium	fail
<b>Set Password Hashing Algorithm</b> 2x fail		
Set Password Hashing Algorithm in /etc/libuser.conf	medium	notapplicable

Title	Severity	Result
Set Password Hashing Algorithm in /etc/login.defs	medium	fail
Set PAM's Password Hashing Algorithm	medium	fail
Ensure PAM Displays Last Logon/Access Notification	low	fail
Protect Physical Console Access		
<b>Protect Accounts by Restricting Password-Based Login</b> 2x fail		
<b>Set Account Expiration Parameters</b> 1x fail		
Set Account Expiration Following Inactivity	medium	fail
Ensure All Accounts on the System Have Unique Names	medium	pass
<b>Set Password Expiration Parameters</b> 1x fail		
Set Password Maximum Age	medium	fail
Verify Proper Storage and Existence of Password Hashes		
GRUB2 bootloader configuration		
Configure Syslog		
<b>Network Configuration and Firewalls</b> 1x fail		
<b>IPSec Support</b> 1x fail		
Install libreswan Package	medium	fail
File Permissions and Masks		
Services		
System Accounting with auditd		

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