**The AlmaLinux Handbook Project**

# Why is having a comprehensive and well-documented handbook\*\* important for the popularity of open-source, community-driven, enterprise Linux distribution?

\*\* like [Fedora\_Handbook](https://fedoraproject.org/wiki/Fedora_Handbook) or [Gentoo\_Handbook](https://wiki.gentoo.org/wiki/Handbook:Main_Page" \l "The_Gentoo_Handbook) or [FreeBSD Handbook](https://docs.freebsd.org/en/books/handbook/)

1. **Ease of use**: A well-written handbook can provide users with clear and concise instructions on how to install, configure, and use the Linux distribution. This can help users overcome any initial barriers to entry and make it easier for them to get started with the distribution.
2. **Community support**: A handbook can also serve as a centralized resource for the community to share knowledge and provide support to one another. By documenting common issues and their solutions, users can help each other troubleshoot problems and find answers to their questions.
3. **Standardization**: A handbook can help to standardize the installation and configuration process across different hardware and software configurations. This can help to reduce variability in the user experience and make it easier for users to share their experiences and collaborate with one another.
4. **Trust**: Having a well-documented handbook can help to build trust with users and potential users by demonstrating a commitment to transparency and user empowerment. This can help to establish the Linux distribution as a reliable and trustworthy option in the open-source community.

# What Foundation goals it aligns with?

The handbook can certainly be used to build an ecosystem for educating users and potential users on how to apply the distribution for modern computing in a variety of environments.

## **Foundation for others**

Comprehensive and well-documented end-user documentation for AlmaLinux can serve as a foundation for other Linux-based solutions by offering a standardized and reliable platform for building and deploying new systems and applications. This documentation assists users in efficiently configuring and managing their systems, simplifying the process of creating custom solutions on top of AlmaLinux, and minimizing the time and effort needed for deploying new solutions.

## **Community development**

Alongside the handbook, focusing on a broader ecosystem of documentation, tutorials, and forums can assist users of all experience levels in getting the most out of AlmaLinux as a "RHEL clone." Our approach involves staging new handbook sections as how-to series and integrating them into the relevant handbook branches. This fosters a sense of community and support among users, helping to cultivate a vibrant ecosystem around the distribution. For instance, the FreeBSD handbook features a direct "edit this page" link to the GitHub repository, enabling immediate collaboration on documentation. While we have a GitHub repository, establishing a similar large-scale goal is essential.

## **HPC content rationale**

The handbook serves as a crucial resource for guiding new Linux users through installation and configuration processes while familiarizing them with the basics of the Linux operating system. Furthermore, it can offer detailed instructions for installing and configuring software applications and tools frequently used in scientific and HPC environments. Some have suggested the need for a dedicated HPC wiki; if a wiki is necessary, comprehensive documentation is even more critical. We aim to encourage knowledgeable administrators from prominent scientific and business organizations to share their expertise more broadly rather than limiting it to a closed circle of like-minded experts.

## **Enterprise Content vs. Wiki Series**

The AlmaLinux Handbook is designed to provide guidance for setting up and managing critical infrastructure services in enterprise settings. These services include databases, web servers, and file sharing systems with high-volume data traffic and high-availability requirements. Additionally, the handbook can incorporate best practices for security management and regulatory compliance.

Our "Nginx-" and "Security Basics-" series are just the beginning of the process of building step-by-step, piece-by-piece. To support ongoing development, we're adding a new "Series" section to the wiki and populating it with content. Our ultimate goal, however, is to integrate this content into the Handbook, section by section.

While we're starting with low-hanging fruit, our long-term objective is to build knowledge from environments ranging from Raspberry Pi home DIY projects to large-scale, enterprise installations in exa-scale corporations and leading research facilities around the world.

To complement the Handbook and Wiki, we're also launching the AlmaLinux Podcast. Our podcast will feature interviews with interesting guests from the industry, who will share real-life use cases and insights to inspire users and contributors to create new sections or extend the handbook.

# Comparison: Differences between Fedora, Gentoo, and FreeBSD

#### **Why/What?**

Fedora, Gentoo, and FreeBSD are three open-source operating systems that have gained popularity in the open-source community. One of the significant factors contributing to the success of these projects is the presence of comprehensive and well-documented handbooks. Here are some examples of how having a handbook has helped these projects gain popularity, and potential differences between them:

#### **Ease of Use**: Fedora, Gentoo, and FreeBSD handbooks provide clear and concise instructions for installing and configuring the operating systems, as well as setting up various applications and services. This has helped new users get up and running quickly and has made it easier for experienced users to configure their systems to meet their needs.

Potential Differences: Fedora is often considered user-friendly, with a straightforward installation process and package management. FreeBSD offers a stable and reliable environment with a focus on performance, while Gentoo is known for its high customizability and requires more advanced technical skills for setup and maintenance.

#### **Community Support**: The handbooks for Fedora, Gentoo, and FreeBSD have served as central resources for their communities to share knowledge and provide support to one another. This has helped build strong and supportive communities, attracting more users to the operating systems.

Potential Differences: The Fedora community is known for being very supportive and welcoming to new users, making it an excellent option for those just starting with open-source operating systems. The Gentoo community is known for being more technical and focused on customization, while the FreeBSD community is recognized for its stability, performance, and reliability.

#### **Standardization**: Handbooks for Fedora, Gentoo, and FreeBSD have helped standardize the installation and configuration process, making it easier for users to share their experiences and collaborate with one another. This has contributed to building communities around these operating systems, which in turn has increased their popularity.

Potential Differences: Fedora has a strong focus on innovation and cutting-edge features, while FreeBSD prioritizes stability and performance. Gentoo, on the other hand, emphasizes customization and user choice in configuring their system.

#### **Trust**: The handbooks for Fedora, Gentoo, and FreeBSD have helped build trust with users and potential users by demonstrating a commitment to transparency and user empowerment. This has established these operating systems as reliable and trustworthy options in the open-source community.

Potential Differences: Fedora is backed by Red Hat and has a strong focus on open-source innovation, while FreeBSD is known for its robust and stable environment. Gentoo is recognized for its community-driven development process and extensive customization options.

#### **Conclusion** Having comprehensive and well-documented handbooks has played a significant role in the success of Fedora, Gentoo, and FreeBSD. While there are differences between these projects, the presence of a handbook has helped make these operating systems more accessible, standardized, and trustworthy for users.

# **AlmaLinux handbook (proposal for TOC)**

[ THIS IS WIP - worked on in separate document ]

This TOC builds on the RHEL version and includes subjects covered in CentOS Stream, such as the Cockpit management interface, network file system (NFS), security-enhanced Linux (SELinux) configuration, and application streams. As it covers a wide range of topics that are relevant to new and experienced users of AlmaLinux, making it a useful resource for everyone.

1. Introduction

* Overview of AlmaLinux
* System Requirements
* Download and Installation

1. Getting Started

* Basic Linux Commands
* Shell Basics
* Users and Groups
* File System Navigation

1. System Configuration and Management

* Basic System Configuration
* System Maintenance
* Managing Services
* Cockpit Management Interface

1. Network Configuration and Management

* Network Configuration
* Network Services Configuration
* Network File System (NFS)

1. Security Policies and Procedures

* Security Policies
* Firewall Configuration
* SELinux Configuration

1. Software Management and Updates

* Package Management
* Software Updates
* Application Streams

1. Storage Management

* Disk Management and Partitioning
* File System Management
* Network Storage Management

1. Monitoring and Performance

* Performance Tuning and Optimization
* System Monitoring
* Troubleshooting Performance Issues

1. Virtualization and Cloud Management

* Virtualization Concepts and Management
* Cloud Deployment and Management
* Containers and Orchestration

1. Developer Tools and Languages

* Compilers and Development Tools
* Languages and Libraries
* Source Control Management and Collaboration

1. High Availability and Disaster Recovery

* High Availability and Clustering
* Scalability and Load Balancing
* Disaster Recovery and Business Continuity

1. Troubleshooting and Support

* Troubleshooting Common Issues
* System Maintenance and Recovery
* AlmaCare Support Services