Brocade Fabric OS (FOS) Target Path

Selection Guide
Version 2.0

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Chapter 1: Fabric OS (FOS) Target Path Selection Guide

1.1 Overview

This document provides guidance for selecting an ideal Brocade® Fabric OS® (Brocade FOS) code version for use on Brocade Fibre Channel (FC) switch platforms and also for selecting optimum versions of code to use when migrating from one version of Brocade FOS to another. These recommended Brocade FOS versions are referred to as "Target Path" releases.

Brocade FOS Target Path releases are recommended code levels for Brocade Fibre Channel switch platforms. Use these guidelines when trying to determine the ideal version of Brocade FOS software; consider these guidelines with other requirements that may be unique to your particular environment. Always refer to the Brocade FOS release notes and carefully review the "Important Notes and Known Defects" information before selecting and installing any version of FOS on a switch in addition to any specific guidance from your Brocade switch vendor.

This document is updated on a periodic, as-needed basis to reflect the latest Brocade FOS Target Path release recommendations. Always check the latest version of this document when planning to install a new Brocade FOS release.

1.2 Definition of a Target Path Release

A Brocade FOS release is identified as a Target Path release only after it meets the following criteria:

- It is a Brocade FOS version of firmware that was created primarily for stability and reliability and not for the introduction of new features. This version of firmware may contain Reliability, Availability, and Serviceability (RAS) improvements and enhancements, but it typically does not contain any new software features or support for new hardware.
- Most of the Brocade partners and OEMs have qualified and support the firmware version or are planning to do so in the immediate future. This qualification makes it an ideal option for environments in which customers procure Brocade equipment from more than one vendor.
- The specified code level (or an earlier patch at the same release level) must have been deployed in a sufficient number of end-user production environments for a period of at least three months and must have no known pervasive or impacting issues or critical defects, including firmware-related issues identified in a Technical Service Bulletin (TSB).

Once a specific Brocade FOS code version is identified as a Target Path release, newer patches (that is, releases that vary only with a different letter appended to the release number) that are released on the same code stream can also be considered recommended Target Path releases. Fixes and code changes are carefully managed to maintain the Target Path designation. Whenever more significant code changes are required, the version number will be increased to indicate that the Target Path designation could not be maintained, and the criteria for obtaining the Target Path designation must start over.

When selecting firmware, it is recommended to always select the latest patch on the Target Path release stream. These newer patch releases may be formally announced as a Target Path release, or the patch may be a Target Path quality release as it was built on the same code stream as a previously announced Target Path version. These newer patch releases may be considered Target Path releases after a very short exposure time because patch releases typically contain minimal changes from their predecessors. The stability of the major code level release has already been verified; it is unnecessary to wait for this additional field exposure.

Note that for FICON environments, the use of patch releases that are not specifically designated as qualified and supported for FICON is not recommended.

The Target Path release designation in no way implies or guarantees that a release will be free of defects or will not contain behavioral issues that could cause an impact in a production environment. However, following the Target Path release recommendations produces the most trouble-free environments for data center storage area networks (SANs) that use Brocade switching platforms.

Always review the latest version of the Brocade FOS release notes for the code level that you are loading—as well as for the code level that you are migrating from—before you update the firmware. The Target Path designation is not a guarantee that you will not encounter limitations in upgrading or downgrading firmware levels. Brocade recommends that all customers review the release notes to ensure a trouble-free migration and production environment.

1.3 Target Path Release Designations

Table 1 specifies the Target Path release for each major version or family of Brocade FOS releases that are being actively supported by Brocade. In general, Brocade recommends running the most recent major code level that is supported by a particular hardware platform and the most recent patch on the specified Target Path code stream once available. For customers already running on an existing Target Path version, it is not necessary to upgrade if you do not need the new features or capabilities introduced in the later major release levels.

For some release levels, the Target Path release may contain some exceptions for special-purpose hardware platforms and functionality, such as encryption platforms, extension platforms, or embedded switches. These exceptions are called out for each major release level in the Notes and Exceptions column of Table 1.

Table 1: Target Path Releases by Major Brocade FOS Level

Major Brocade FOS Level	Official Target Path Release Version	Notes and Exceptions
FOS 7.4	FOS 7.4.2d	FOS 7.4.2d is the official Target Path version for 8G platforms.
		FOS 7.4.2a was the first officially recognized Target Path version on this release stream and continues to maintain the Target Path designation; however, it is recommended that all new upgrades be to the latest official Target Path version.
		Encryption products are not supported on code versions above 7.4.1x. The BES/Encryption products should continue to use FOS 7.4.1f as the recommended Target Path version.
		All patches released after the listed Target Path on the same code level are also considered Target Path. The recommendation for new upgrades is to always select the highest patch on the Target Path code stream.
		FOS 7.4.X is not a supported Target Path version for Gen 5 platforms.
FOS 8.0	FOS 8.0.2f	FOS 8.0.2c was the first officially recognized Target Path version on this release stream. FOS 8.0.2c, FOS 8.0.2d, and FOS 8.0.2e all maintain their Target Path designation.
		FOS 8.0.2c is the minimum recommended Target Path for any environments that use IPEX.
		All patches released after the listed Target Path on the same code level are also considered Target Path. The recommendation for new upgrades is to always select the highest patch on the Target Path code stream.
FOS 8.1	FOS 8.1.2h	FOS 8.1.2h, as the latest patch, is the recommended Target Path patch on this FOS version stream. FOS 8.1.2a, 8.1.2b, 8.1.2d, 8.1.2f, and 8.1.2g all maintain their Target Path designation.
		FOS 8.1.2f is the minimum Target Path version for customers that use LDAP for authentication to FOS.
		All patches released after the listed Target Path on the same code level are also considered Target Path. The recommendation for new upgrades is to always select the highest patch on the Target Path code stream.

Table 1: Target Path Releases by Major Brocade FOS Level (Continued)

Major Brocade FOS Level	Official Target Path Release Version	Notes and Exceptions
FOS 8.2	FOS 8.2.1c	FOS 8.2.1c is the latest official Target Path version recommended for all Gen 5 and Gen 6 platforms. All patches released after the listed Target Path on the same code level are also considered Target Path. The recommendation for new upgrades is to always select the highest patch on the Target Path code stream.

NOTE: More recent versions of Brocade FOS code will be available that provide additional functionality. As a general recommendation, customers who wish to deploy these latest features and who cannot wait for a Target Path designation on that release level should use the latest release available.

Customers who do not have an immediate need for the latest features should follow the provided Target Path recommendations, selecting the latest Target Path release that provides the level of functionality required.

1.4 Recommendations for FICON Environments

For customers with FICON environments, Brocade generally recommends the use of the most recently released version of Brocade FOS that is supported for a particular platform and has been qualified for FICON. Table 2 lists, in the Official Target Path Release Version column, the latest Brocade FOS release at each major Brocade FOS level that has been qualified for use in FICON environments. When exceptions exist, Brocade recommends specific CCE patch releases in the Notes and Exceptions column of Table 2. These CCE patch releases contain targeted defect fixes based off the official FICON qualified Target Path release.

Table 2: Recommended FICON Qualified Releases by Major Brocade FOS Level

Major Brocade FOS Level	Official Target Path Release Version	Notes and Exceptions
FOS 7.4	FOS 7.4.2a1	FOS 7.4.2a1 is the recommended FICON Target Path for 8G platforms. FOS 7.4.1d is the officially supported FICON Target Path release for the Brocade 7800 platform. For FCIP FICON emulation (XRC, tape, OSTP, …), Brocade recommends FOS 7.4.2a4. For FCIP FICON emulation (FW, OSTP, FICON XRC, tape, …) on the Brocade 7800 platform, Brocade recommends FOS 7.4.1d9.
FOS 8.0	FOS 8.0.2b2	FOS 8.0.2b2 is the recommended FICON Target Path release for this FOS version. For FCIP FICON emulation (XRC, tape, OSTP, …), Brocade recommends FOS 8.0.2b5.
FOS 8.1	FOS 8.1.2a	FOS 8.1.2a is the recommended FICON Target Path release for all Gen 5 and Gen 6 products. For FCIP FICON emulation (XRC, tape, OSTP, …), Brocade recommends FOS 8.1.2a7.
FOS 8.2	FOS 8.2.0a	FOS 8.2.0a is a recommended FICON qualified Target Path release. For FCIP FICON emulation (XRC, tape, OSTP, …), Brocade recommends FOS 8.2.0a4.

NOTE: More recent versions of Brocade FOS code will be available that provide additional functionality. As a general recommendation, customers who wish to deploy these latest features and who cannot wait for a Target Path designation on that release level should use the latest release available.

Customers who do not have an immediate need for the latest features should follow the provided Target Path recommendations, selecting the latest Target Path release that provides the level of functionality required.

1.5 Migrating to Target Path and FICON Recommended Versions

The following upgrade paths are recommended for customers who are running older versions of Brocade FOS and want to upgrade to a Target Path release to avoid the known issues or pitfalls that might exist in some older versions of firmware. If a switch is already running at a major release level that is different from the specific code version recommended in the migration path, simply move forward to the next major release level's recommended Target Path release and continue the migration process from there.

NOTE: Before installing the new code, always carefully review the Brocade FOS release notes for both the version of code that you are moving from and the version of code that is being installed.

1. **Upgrade Path to Brocade for Open Systems Environments**

   FOS 7.4.2d → FOS 8.0.2f → FOS 8.1.2h → FOS 8.2.1c

2. **Upgrade Path to Brocade for FICON Environments**

   FOS 7.4.2a1 → FOS 8.0.2b2 → FOS 8.1.2a

   FOS 7.4.2a1 → FOS 8.0.2b2 → FOS 8.1.2a → FOS 8.2.0a

NOTE: For FCIP FICON emulation (XRC, tape, and so on), substitute the recommended releases noted in Table 2.

Revision History

Version 2.0; 53-1003916-10; August 27, 2019

Identified 8.2.1c as the Target Path and updated all other versions to the latest recommended patch levels.

Version 1.0; 53-1003916-09; April 25, 2018

Initial Broadcom document version.