

# Troubleshooting BitLocker Activation Issues on Windows 11 Post-Imaging

## Overview

This article outlines a known issue encountered with Windows 11 deployments where BitLocker encryption fails to initialize properly after imaging. The failure presents as a specific Boot Configuration Data (BCD) error and prevents the successful activation of BitLocker. A resolution is included in this article, along with an explanation of the root cause and steps to remediate the issue.

## Issue Description

After deploying a Windows 11 image to devices, attempts to enable BitLocker fail with the following error:

 "The path specified in the Boot Configuration Data (BCD) for a BitLocker Drive Encryption integrity-protected application is incorrect. Please verify and correct your BCD settings and try again."

This problem was observed across multiple devices imaged with a FileWave-managed deployment, suggesting a systemic issue with the imaging or BCD configuration process.

## Initial Troubleshooting Attempts

### Unattend File Adjustments

One of the first suspected causes was the Windows unattend.xml file used during deployment. Specifically, we considered that the partitioning and wiping directives in the answer file conflicted with FileWave's imaging and partitioning steps.

To test this theory:

- Removed the entire partitioning section from the unattend file.
- Re-imaged devices using the updated unattend configuration.

Result: This change did not resolve the BitLocker error.

### Manual BCD Edits

We experimented with manual edits to the BCD store using `bcdedit`, in an attempt to update or repair paths that might be misconfigured post-image. However, these attempts did not lead to a consistent fix.

## Resolution

A working solution was identified via a community-sourced thread on Reddit ([source](#)).

The issue appears to be related to incorrect `device` and `osdevice` settings within the BCD store. BitLocker can initialize successfully by explicitly setting these values to point to the system partition.

### Required Commands

Execute the following commands in an elevated Command Prompt:

```
bcdedit -set {current} osdevice partition=C:
bcdedit -set {current} device partition=C:
bcdedit -set {memdiag} device partition=\Device\HarddiskVolume1
```

### Optional: Batch File Version

You may also save the above commands to a `.bat` file for repeated use. Below is the complete content of the file:

```
@echo off
bcdedit -set {current} osdevice partition=C:
bcdedit -set {current} device partition=C:
bcdedit -set {memdiag} device partition=\Device\HarddiskVolume1
echo Edit complete.
```

# Post-Fix Behavior

After running the commands (or executing the batch script) and rebooting the device:

- BitLocker can be successfully enabled.
- The internal script for enabling BitLocker and sending the recovery key to Active Directory functions as expected.

This fix has been validated across multiple test devices and resolves the issue consistently. Below is a PowerShell script that may be deployed.

```
##
##.SYNOPSIS Fixes BCD configuration to resolve BitLocker activation issues on Windows 11.
##
##.DESCRIPTION
## This script sets the correct BCD partition values for osdevice, device, and memdiag using bcdedit.
## Intended for deployment through FileWave as a Fileset or custom script.
##

# Requires elevation
if (-not ([Security.Principal.WindowsPrincipal] [Security.Principal.WindowsIdentity]::GetCurrent()).IsInRole(`
    [Security.Principal.WindowsBuiltInRole] "Administrator")) {
    Write-Host "This script must be run as Administrator."
    exit 1
}

# Define target values
$osDevice = "partition=C:"
$device = "partition=C:"
$memdiagDevice = "\Device\HarddiskVolume1"

try {
    Write-Host "Applying BCD changes..."

    # Set the current OS device and boot device
    bcdedit /set {current} osdevice $osDevice
    bcdedit /set {current} device $device
    bcdedit /set {memdiag} device $memdiagDevice

    Write-Host "BCD changes applied successfully."

    # Optional: Trigger reboot after applying fix
    # Restart-Computer -Force
} catch {
    Write-Error "An error occurred while editing BCD: $_"
    exit 2
}

exit 0
```

Optional verification/detection script:

```
$bcdOutput = bcdedit /enum {current}
if ($bcdOutput -match "osdevice.*partition=C:" -and $bcdOutput -match "device.*partition=C:") {
    Write-Host "BCD is already configured correctly."
    exit 0
} else {
    Write-Host "BCD configuration needs to be fixed."
    exit 1
}
```

## Conclusion

The root cause appears to be incorrect or incomplete BCD configuration following image deployment. This is a result of how the imaging process or unattend file interacts with the BCD setup on Windows 11 systems.

If BitLocker activation issues are encountered, we recommend incorporating the BCD fix as a post-deployment step. This can be integrated into your provisioning workflow until a more permanent fix is identified at the image or unattended setup level.

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## References

- Reddit thread with the original solution: <https://www.reddit.com/r/sysadmin/comments/1hh4d4s/comment/m6di6vq/?rdt=42301>
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