



Fix Windows 7 BlackJack Server Boot Issue after Windows Update(KB4512506) is installed

Overview

1. Blackjack servers with Windows 7 Embedded will not boot after Windows August 2019 Monthly Rollup Update **KB4512506** was installed.
2. After the KB4512506 update is installed, Windows will not boot and display one of these message

```
Windows Boot Manager

A recent hardware or software change might have installed a file that is signed
incorrectly or damaged, or that might be malicious software from an unknown
source.

If you have a Windows installation disc, insert the disc and restart your
computer. Click "Repair your computer," and then choose a recovery tool.

Otherwise, to start Windows so you can investigate further, press the ENTER key
to display the boot menu, press F8 for Advanced Boot Options, and select Last
Known Good. If you understand why the digital signature cannot be verified and
want to start Windows without this file, temporarily disable driver signature
enforcement.

File: \windows\system32\winload.efi

Status: 0xc0000428

Info: windows cannot verify the digital signature for this file.

ENTER=Continue ESC=Exit
```

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3. Refer to the Known Issues on the <https://support.microsoft.com/en-us/help/4512506/windows-7-update-kb4512506>



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4. The update forces the Windows boot manager to only allow SHA-2 digital signature so the files with SHA-1 digital signature cannot be loaded.

Solution

Follow the steps below to restore the working boot files.

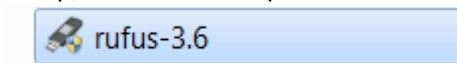
Requirement: USB Flash Drive 8GB or 16B (all the data will be deleted)

Step 1: Prepare to create bootable USB Flash Drive

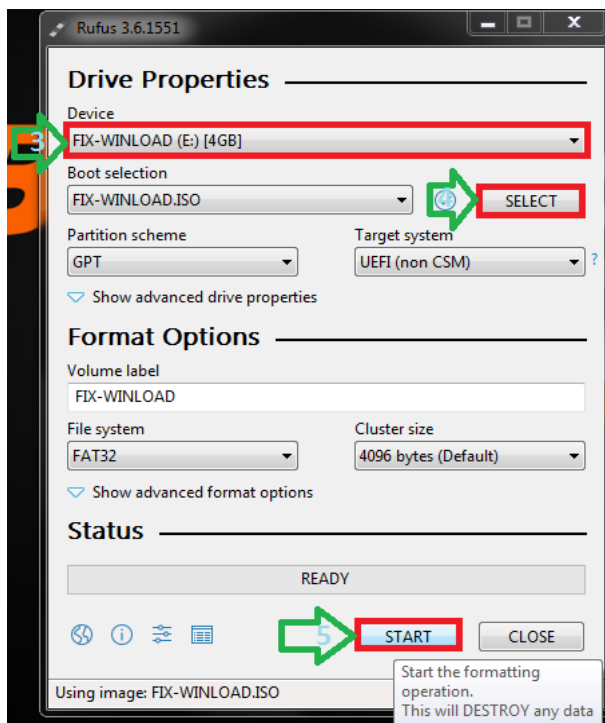
1. Download FIX-WINLOAD.ISO and rufus.zip from <https://tsftp2.dwcc.tv/Blackjack/FixWinload- Win7/>

Step 2: Create bootable USB Flash Drive

1. Unzip/Extract Rufus.zip and run Rufus-3.6.exe.



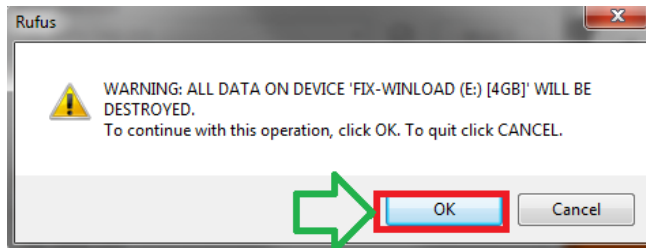
2. Insert formatted USB Flash Drive (Preferably 8GB or 16GB) - No other USB drives should be inserted.
3. Select flash drive from drop down menu
4. Browse to Fixwinload-win7.iso
5. Click start button



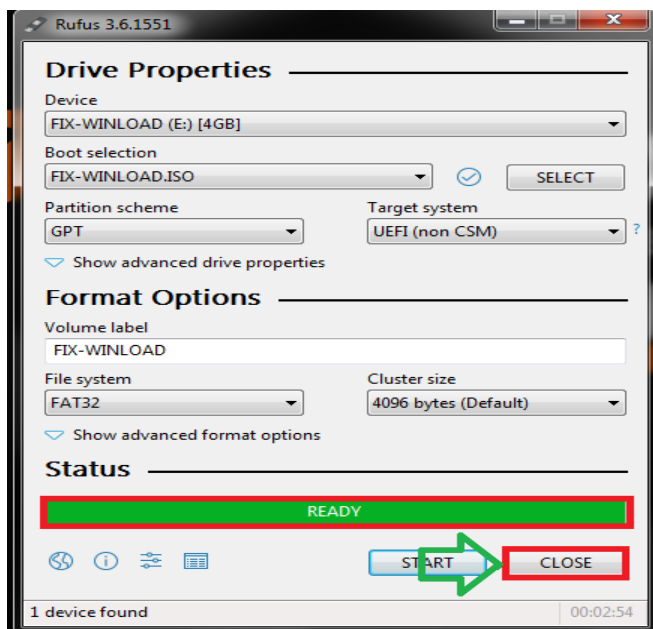


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6. Click OK for DATA loss warning pop up



7. Once status bar shows "Ready" click close button



8. Insert bootable USB Flash drive to the BlackJack NVR.



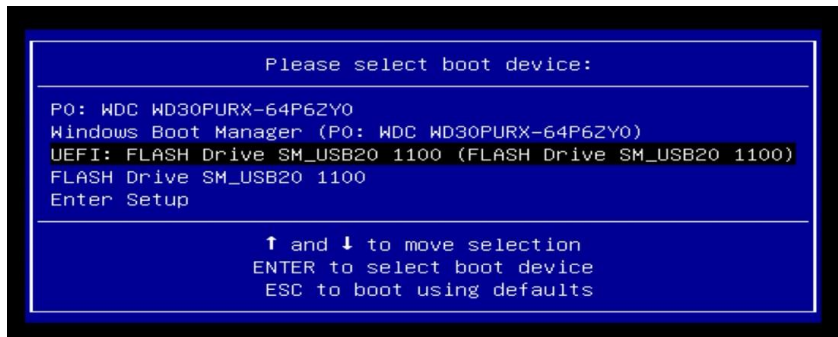
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Step 3: Boot using USB Flash Drive

1. Turn on the BlackJack NVR. (if it's already on, turn off first then turn it on)
2. While the Digital Watchdog logo is showing, press [F7] for the CUBE and [F11] for the P-Rack on the keyboard while booting. (continuously tap [F7] for Cube and [F11] for P-Rack until password prompt is shown)
3. Enter password on the prompt. (password = admin)

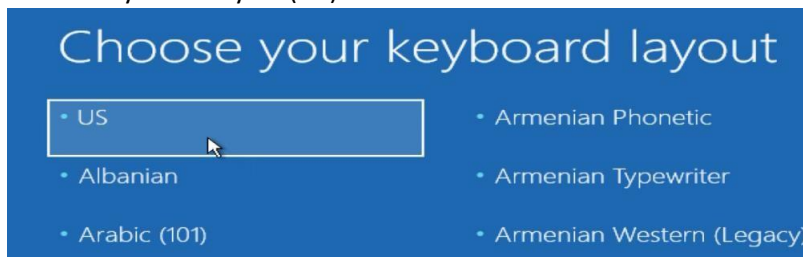


4. Select the USB Flash drive as boot device. (select the one starting with UEFI)
- * The list of boot devices and the name of the USB drive will differ on your system



Step 4: Open Command Prompt

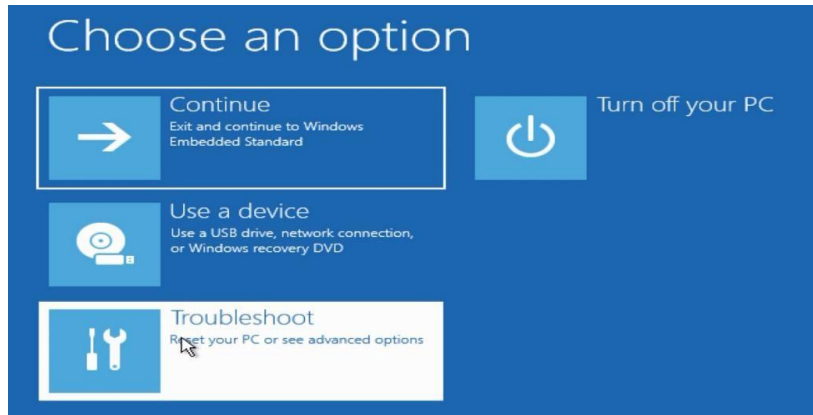
1. Choose keyboard layout(US)



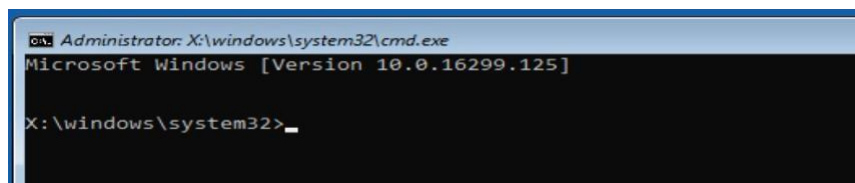
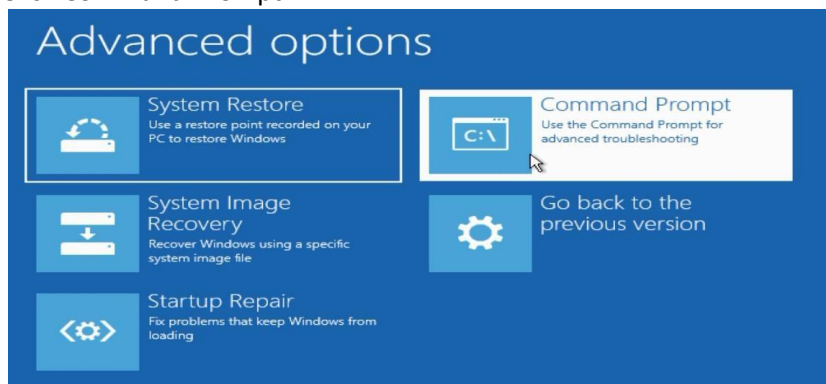


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2. Click Troubleshoot



3. Click Command Prompt





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Step 5: Access the USB Flash drive

1. Type **diskpart** and press [Enter]
2. Type **list volume** and press [Enter]
3. Verify the drive letter(Ltr) of the USB Flash drive labeled “FIX-WINLOAD”

```
Administrator: X:\windows\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.125]

X:\windows\system32>diskpart

Microsoft DiskPart version 10.0.16299.15

Copyright (C) Microsoft Corporation.
On computer: MININT-QIAUSA0

DISKPART> list volume

Volume ### Ltr Label          Fs          Type        Size         Status       Info
-----
Volume 0    C  System        NTFS        Partition   1036 GB      Healthy
Volume 1    D  DW Media      NTFS        Partition   1757 GB      Healthy
Volume 2    E  FIX-WINLOAD   FAT32       Partition   100 MB       Healthy
Volume 3    F  FIX-WINLOAD   FAT32       Removable   14 GB        Healthy

DISKPART> exit

Leaving DiskPart...

X:\windows\system32>
```

4. Type **exit** and press [Enter] to exit from DISKPART.

Step 6: Run batch file to update the boot files.

1. Move to the USB Flash drive by type the drive letter followed by : and press [Enter]
e.g. from above image, the drive letter is E, so type e: and press [Enter]
2. Type **fixwinload** and press [Enter]
3. Enter the number corresponding to the BlackJack server model and press [ENTER]

```
=====
Select the model of the BlackJack Server
=====
1 - DW-BJCUBExT, DW-BJP1UxT
2 - DW-BJP2U6T, DW-BJP2U12T, DW-BJP2U18T, DW-BJP2U24T
3 - DW-BJP2U10T, DW-BJP2U20T, DW-BJP2U40T, DW-BJP2U50T
4 - DW-BJP2U36T, DW-BJP2U60T
5 - EXIT(Not listed) - Contact DW Tech Support
Type 1, 2, 3, 4 or 5 then press ENTER:
```

4. Confirm 4 files are copied.

```
The system cannot find the file sp
The system cannot find the file sp
** Copying working files
winload.efi
winload.exe
winresume.efi
winresume.exe
4 file(s) copied.
Press any key to continue . . .
```

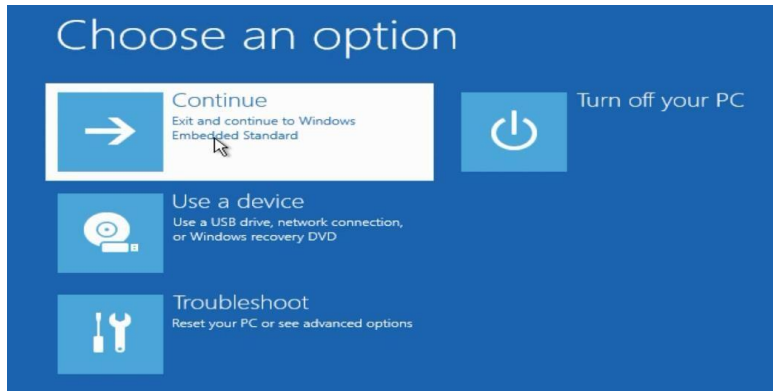
5. Close the Command Prompt by clicking X on the upper right hand corner.



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Step 7: Boot to Windows 7

1. Click Continue to boot to Windows 7



2. Remove the USB Flash drive.

Post Process

1. Disable Windows Update
 - Go to control panel, open Windows Update
 - Click Change settings



- Change the Important Update option to "Never Check for updates".
- Uncheck "Give me recommended updates the same way I receive important updates"
- Uncheck "Allow all users to install updates on this computer"



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Choose how Windows can install updates

When your computer is online, Windows can automatically check for important updates and install them using these settings. When new updates are available, you can also install them before shutting down the computer.

[How does automatic updating help me?](#)

Important updates



Never check for updates (not recommended)

Install new updates: Every day at 3:00 AM

Recommended updates

Give me recommended updates the same way I receive important updates

Who can install updates

Allow all users to install updates on this computer

Note: Windows Update might update itself automatically first when checking for other updates. Read our [privacy statement online](#).

* On the BlackJack NVR, Windows Updates were not configured to download and install automatically from the factory due to the unforeseen and unexpected issues the Windows Updates can cause to the performance of the system and DW Spectrum.