

## Impact Analysis: Bug - I2PSnark Filename Conversion

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**Bug:** If a torrent contains filename which contains a character which does not exist at system char set, it will be converted to a “\_”. If torrent contains two different filenames which converts to same filename it may cause unexpected behaviour including sending corrupted pieces to others or neverending torrents.

**Possible Cause:** Fixed width 1 byte long characters are in use which limits usable characters.

**Estimated impact:**

InclusiveByteRange.java  
I2PSnarkServlet.java

**Estimated impact:** 2 Files

**Actual Impact:** Storage.java: filterName().

This code parses the name string and replaces invalid characters with a “\_”.

This is the crux of our bug, as it is unintentionally changing the name of the file in which the a user receives the torrent. This bug seems to only occur on windows machines because of the way the windows charset is handled. Instead of returning the charset used by the OS, windows returns a generic charset that could actually be any charset. This is why the problematic characters, which may or may not be supported by windows, are assumed incompatible by I2PSnark.

**Solution:** Since filtering false positives is not an option, check the java cached filename map within Storage.java for duplicates during filterName(). If it conflicts with other values in the map, mutate it until there are no conflicts. The mutation is ‘(<number>)’ added to the end of the filename. The image below displays the result.

