

## Spigit's Fontello Font not Appearing Correctly on Internet Explorer Browser

### The Issue

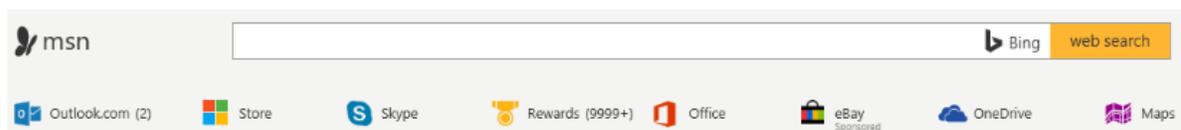
The underlying cause of this issue relates how Microsoft handles fonts for versions below Microsoft Windows 10, where from an Enterprise perspective, any font not stored in the **\Windows\Fonts** directory is considered an "untrusted font".

On Windows versions older than the latest version of Windows 10 (1703), the font processing was done in the kernel, making it a target for exploits. Hackers could build a payload in a font file that executed when opened by an application such as IE. Microsoft's suggested mitigation was to not allow the use of untrusted fonts, **which is any font not stored in \Windows\Fonts**.

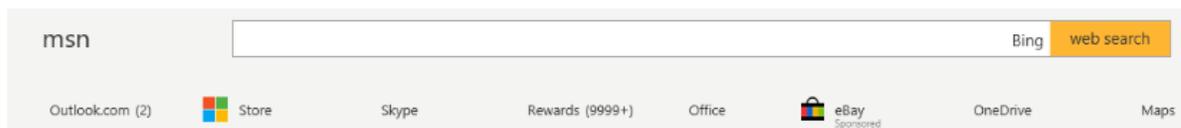
Applications such as Spigit that have a font embedded when used on a platform that does not allow downloadable fonts will look for the font in **C:\Windows\Fonts**, and will use a default font if it cannot find an exact match for the embedded font. The typical default font has Asian characters in place of the glyphs used in the Spigit application's Fontello font.

Font embedding is common practice for web-based applications. Microsoft embeds fonts in their web applications. See the screen captures below, showing the effect of blocking embedded fonts on MSN and Office 365.

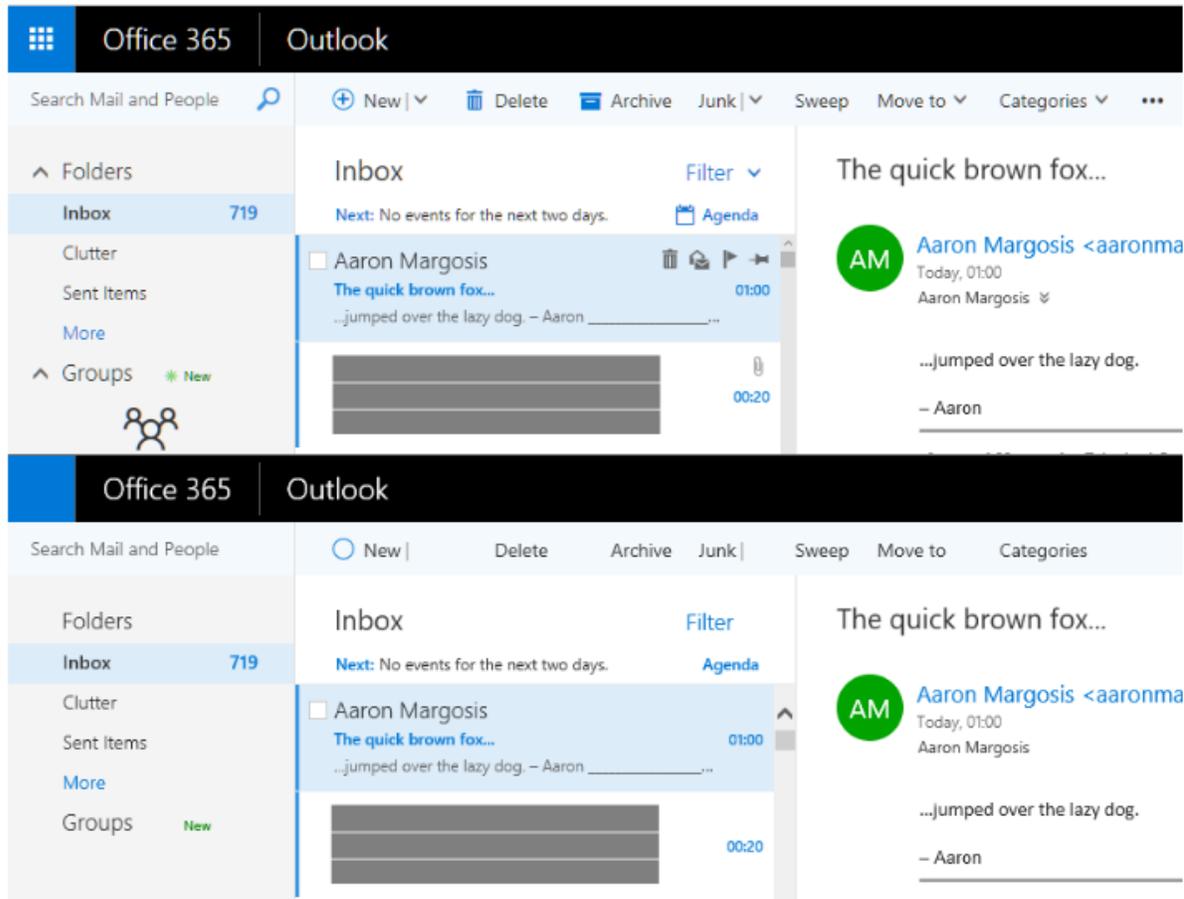
One of the most visible downsides of blocking downloaded and embedded fonts is that many web sites rely on them, and blocking them can substantially diminish usability. For example, here is the MSN home page's banner rendered in Microsoft Edge, which is not affected by the Untrusted Font Blocking setting:



And here is the same banner rendered in Internet Explorer with font-blocking enabled:



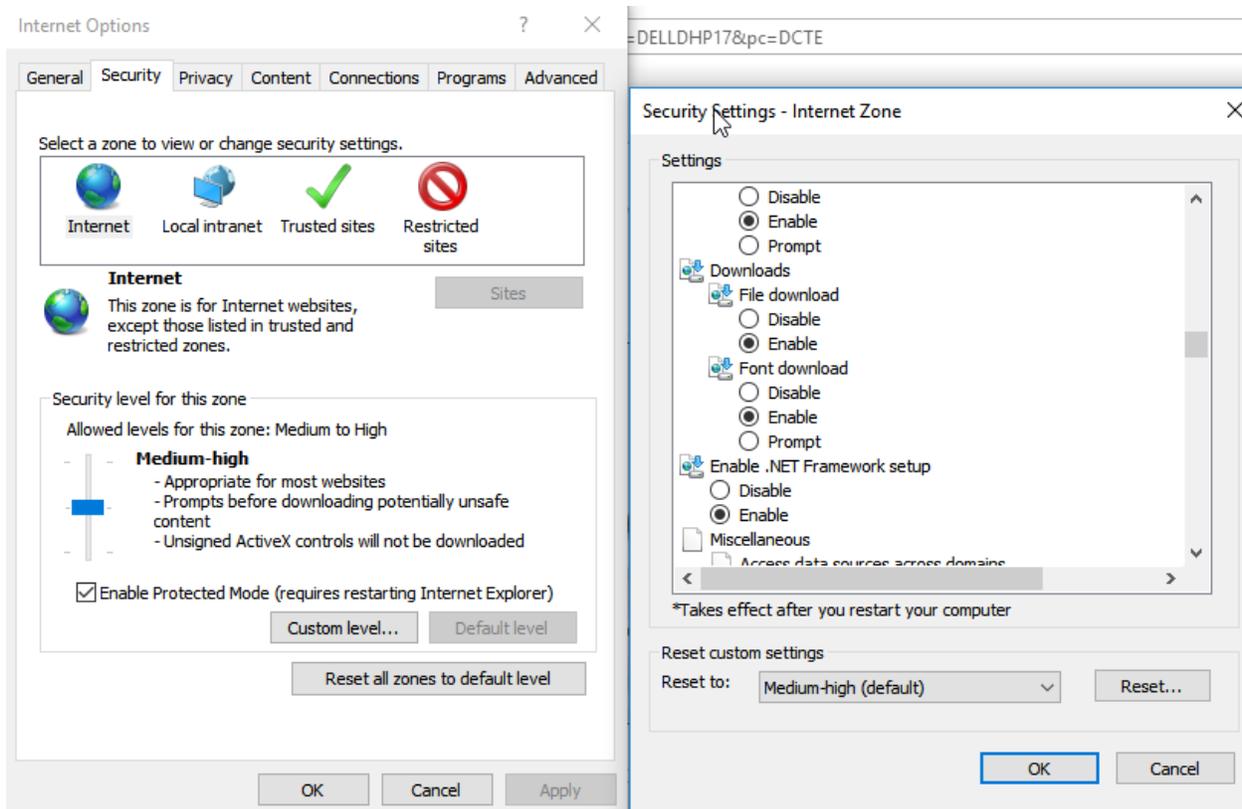
As you can see, the MSN and Bing logos are represented using downloaded fonts, as are most of the Microsoft application logos. In addition to app logos, Microsoft's Office 365 also makes liberal use of downloaded fonts for web application graphics such as navigation aids and actions such as "delete" and "flag this message." These screenshots show the differences: the first shows Microsoft Edge without font blocking; the second shows Internet Explorer with font blocking enforced:



### Remedies

If user permissions allow IE setting changes, the users can go into IE Settings, Internet Options, Custom Level, and enable Font download.

(See screen capture next page.)



Another alternative is to add the Spigit Instance URL to the trusted sites list in Internet Explorer, and allow font download from trusted sites. This can be done by your IT team, or if users can make IE changes by going to IE Settings, Internet Options, Security, and add your Spigit URL to your trusted sites list. If your Trusted Sites show a Custom security level, then check to make sure Font download is enabled.

## A Proactive Approach

We've been taking the precautionary step of asking all clients to work with their enterprise IT teams to ensure spigit.com is a "trusted" site where Internet Explorer is a commonly used browser. Specifically, the best approach we've found is to have your IT group enable yoursite.spigit.com as a "trusted" site within your deployed IE settings, with font downloading enabled.

Though the issues we've encountered have been very few and far between, there have been some IE users reporting voting icons not displaying properly, based on their Internet Explorer settings. Applications such as Spigit that have a font embedded when used on a platform that does not allow downloadable fonts will look for the font in **C:\Windows\Fonts**, and will use a default font if it cannot find a match for the embedded font. In our case, the fonts impacted have been the Thumbs Up and Thumbs Down icons: they either do not display or display a different glyph on certain IE desktops. This behavior is limited specifically to IE. Users with Chrome, Edge, Firefox, etc. will not have this issue due to how they process fonts.