**NeonSwitch Customizations**

NeonSwitch is a managed wrapper over the excellent FreeSWITCH telephony engine. NeonSwitch depends (by default) on the FreeSWITCH source being installed and built at **C:\NeonSwitch** on the developer’s workstation. Developers will typically just clone the project from **lilltek.visualstudio.com**. The instructions configuring the Git enlistment are in **NeonSwitch Git Repository.docx**.

Note that NeonSwitch customizations are **conditionally compiled** using the **NEONSWITCH macro** definition.

NeonSwitch depends on a customized version of **mod\_managed** module. These customizations address the following issues:

* The stock **mod\_managed** does not implement the FreeSWITCH **shutdown** API function and does not unload the plugin **AppDomains** even though the documentation claims this happens. The result is that managed plugins are not able to shutdown gracefully. The enhanced **mod\_managed** keeps track of the **AppDomains** it creates and implements shutdown by unloading all of the domains.
* The stock **mod\_managed** implementation uses the name of the class implementing the **IAppPlugin** and **IApiPlugin** interfaces as the name used in commands. This is a problem since NeonSwitch applications all use the **LillTek.Telephony.NeonAppLoader** class to bootstrap themselves so the stock **mod\_managed** module will not be able to distinguish between the different applications.  
    
  The customizations address this by looking to see if a plugin implements a **Name** property. If this property exists, the name returned will be used as the plugin name rather than the class name. The class name will still be used otherwise, for compatibility with normal managed modules. The **NeonAppLoader** class implements **Name** by returning the **AppName** setting from the INI file.

Other customizations:

* Modified the **startup banner** to say **NeonSwitch**.
* **conf:** Major changes the configuration files. Removed a bunch of stuff and changed some things. The conf folder checked into the project should replace all default FreeSWITCH configuration files.
* Added the **uuid\_broadcast2** command implementation to **src\mod\applications\mod\_commands\mod\_commands.c**. This command works the same as **uuid\_broadcast** but accepts a URL encoded **path** parameter which will allow for the execution of arbitrary dial plan applications.
* Modified **switch\_ivr\_play\_file()** in **src\switch\_ivr\_play\_say.c** to default to the **def\_tts\_engine** and **def\_tts\_voice** global variables if these are not specified in channel variables.
* Modified **speak\_function()** in **src\mod\applications\mod\_dptools\mod\_dptools.c** to default to the **def\_tts\_engine** and **def\_tts\_voice** global variables if these are not specified in channel variables.