Dual-Stack solution is a hosted solution with Talaria TWO Wi-Fi module which replaces normal Wi-Fi driver concept of Linux stack. This solution is suitable for power consuming high performance host processor with Linux as the operating system.

​This document includes custom application walkthroughs. Each application uses a unique group ID to communicate with Talaria TWO and each functionality within this group is identified by a unique message ID.

Following are the range for group IDs:

|  |  |
| --- | --- |
| **Group IDs** | **Usage** |
| 0-63 | Firmware HIO groups |
| 65-127 | Talaria TWO apps |
| 128-255 | Custom |

Table 1: Group ID – range

This section contains example applications intended to demonstrate Dual-Stack solution functionality. These applications can also be customized using the source code available at: *\talaria\_two\_dual\_stack\talaria\_two\_dual\_stack\_vx.y\host\<host\_platform>\dual-stack\dualstack\_examples\src\*.

Following are the list of custom applications currently supported in the Dual-Stack solution:

1. Custom GPIO Monitor
2. Custom Echo
3. Custom MQTT
4. Heartbeat Monitor
5. Custom FOS
6. Custom Network Test
7. Custom Wi-Fi Connection
8. PIR Monitor

## Compilation of Dual-Stack Example Applications

Prebuilt binaries for custom applications are available at: *talaria\_two\_dual\_stack\_vx.y\host\<host\_platform>\dual-stack\bins*.

**Note**: x and y in *vx.y* refers to the package release version.

In case any changes are made to the custom application, the binaries can be clean compiled for a specific platform.

For example:

1. Browse the path *\talaria\_two\_dual\_stack\talaria\_two\_dual\_stack\_vx.y\host\<host\_platform>\dual-stack\*.
2. Refer build.mak file to get the correct platform name.
3. Build the application using make command.

|  |
| --- |
| $ cd <PACKAGE>/host/<platform>/dual-stack/  $ make clean  $ make platform=<host>\_SDIO |

Copy the compiled binaries to host using TFTP/SD card depending on availability of the ethernet interface or SD card slot on host platform.

**Note:** Following are the prerequisites to execute the Dual-Stack example application:

1. tunadapter should be running (. /tunadapter &)
2. Talaria TWO side ELF must support the custom groups
3. Serial terminal application such as GTKTerm can be used on the host to run the example application