Configuring Host PC and Galileo System for First Use

1) Ensure that you are enrolled in the Windows Developer Program for IoT
   (For access to the program content / downloads.)
2) Start @ https://dev.windows.com/en-us/featured/Windows-Developer-Program-for-IoT
3) Follow **Getting started** -> https://ms-iot.github.io/content/
4) Follow **Setting up your PC** -> https://ms-iot.github.io/content/SetupPC.htm
   a. Installed -> Visual Studio Professional 2013 with Update 3
   b. Download and Install -> WindowsDeveloperProgramforIoT.msi
      (VS IoT Project Template & Galileo Watcher Program)
      i. Uncheck **Launch Galileo Watcher**, will launch later
   c. Installed -> Telnet
   d. Download & Install -> Intel Galileo Software Package
      Intel_Galileo_Arduino_SW_1.5.3_on_Windows_v1.0.2.zip
      Install @ root of drive, C:\arduino-1.5.3, for example.
5) Follow **Setting up your Galileo** -> https://ms-iot.github.io/content/SetupGalileo.htm
6) Follow **Self-setup** -> http://ms-iot.github.io/content/IBoughtAGalileo.htm
   a. Intel Galileo Firmware Update
      Follow **Intel's Getting Started Guide** ->
      https://communities.intel.com/docs/DOC-22872
      Follow guide to completion, Blink sketch should work after updating firmware to v1.0.2.
   b. Download Windows [OS] Image (WIM)
      9600.16384.x86fre.winblue_rtm_iotbuild.140815-1515_galileo_v1.wim
   c. Download Imaging Script for Windows [OS] Image apply-BootMedia.cmd
   d. If using Windows 7, Follow **Imaging on Windows 7**, Install adksetup.exe, and modify apply-BootMedia.cmd as directed.
      i. Copy 9600.16384.x86fre.winblue_rtm_iotbuild.140815-1515_galileo_v1.wim to C:\galileo
      ii. Copy apply-BootMedia.cmd to C:\galileo
      iii. Rename apply-BootMedia.cmd apply-BootMedia-Win7.cmd
      iv. Edit apply-BootMedia-Win7.cmd, Replace All:
      "%SystemRoot%\System32\Dism.exe"
      with
      "%ProgramFiles(x86)%\Windows Kits\8.1\Assessment and Deployment Kit\Deployment Tools\amd64\DISM\dism.exe"
   e. Write Windows to the microSD card
      i. Attach microSD card reader, with microSD card inserted, to host PC.

ii. Do a "quick format" of microSD card with volume name of GALILEO. (To avoid, " `**** ERROR: Destination folder must be empty. [F:\]`".)

iii. Create imageSD.cmd file containing:

```
apply-bootmedia-win7.cmd -destination F:\ -image
9600.16384.x86fre.winblue_rtm_iotbuild.140815-
1515_galileo_v1.wim -hostname mygalileo -password admin
```

adjusting drive letter to the drive letter of the attached microSD card.

iv. Open Command Prompt, Run as Administrator @ C:\galileo

v. Run **imageSD**

vi. When finished, you should see:

```
Deployment Image Servicing and Management tool
Version: 6.3.9600.17029

Applying image
[==========================100.0%==========================]
The operation completed successfully.
**** Mounting F:\\Windows\System32\config\SYSTEM
****       to HKEY_USERS\Galileo-14479-SYSTEM
**** Setting hostname to mygalileo
**** Restoring time zone to 'Eastern Standard Time'
****
****   Successfully applied
C:\galileo\9600.16384.x86fre.winblue_rtm_iotbuild.140815-
1515_galileo_v1.wim
****                        to F:\
****
****               hostname: mygalileo
****               timezone: Pacific Standard Time
****               Username: Administrator
****               Password: admin
****
**** Done.
```

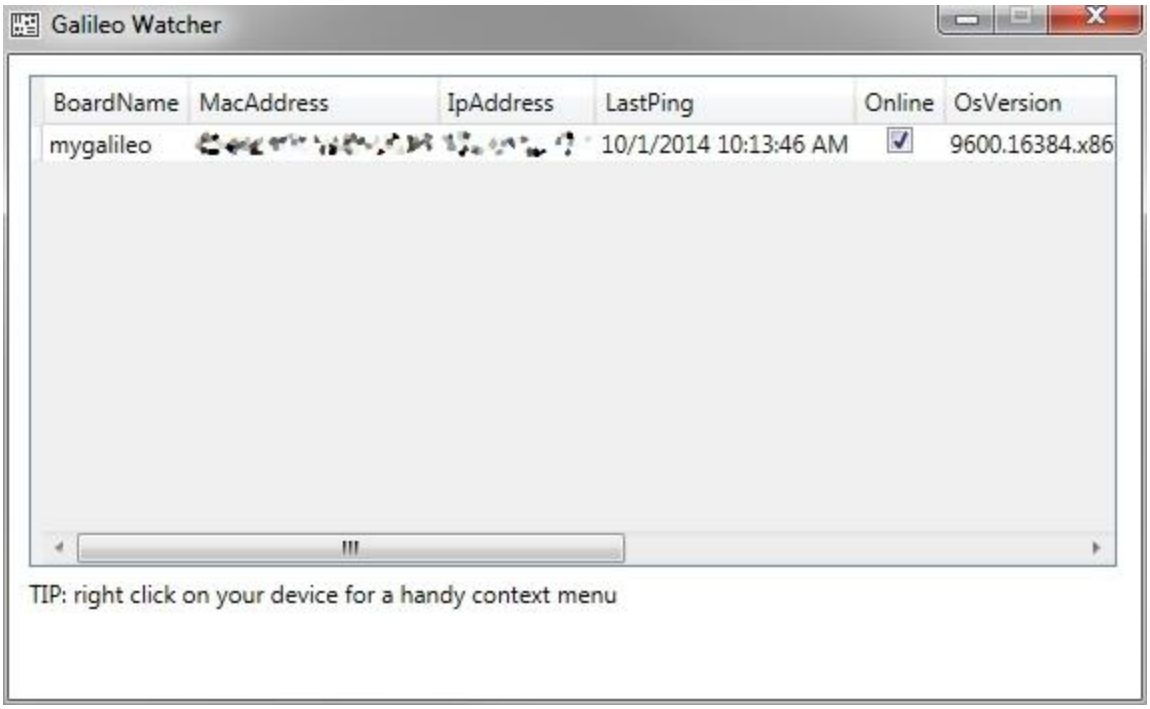
i. Eject microSD card reader, with microSD card inserted, from host PC.

ii. Remove microSD card from card reader and insert card into Galileo.

7) Back to **Setting up your Galileo** -> https://ms-iot.github.io/content/SetupGalileo.htm

a. Patch your Galileo board into your Ethernet network.
(You do not need to use USB to Ethernet adapter or any of that nonsense.)

b. With USB cable **detached** and Ethernet cable **attached**, apply power to Galileo board. Allow Galileo to boot, LED by SD card slot will flash for up to two minutes while OS loads, when finished your Galileo should appear in the Gallileo Watcher application:



NOTE: For whatever reason, if the first boot off of the microSD card does not result in the Galileo board showing up in the Galileo Watcher application, pressing the Galileo's **Reboot** pushbutton and allowing the system to reboot should result in the Galileo board showing up in the Galileo Watcher as "Online".

c. Your network should assign the Galileo an IP Address via DHCP.
d. Galileo Watcher should now show **mygalileo**, right-click **Telnet Here**.
e. You should get a Telnet window with a **Username:** prompt
f. log in (Administrator, admin) and you should see:

```
Microsoft Windows [Version 6.3.9600]
Copyright (c) Microsoft Corporation. All rights reserved.

C:\windows\system32>
```

g. **IMPORTANT:** Before you unplug the power from the Galileo, it is advisable to gracefully shut it down. To do this:
    i. Telnet to the Galileo as described above
    ii. Enter the following command to shut down:
    `shutdown /s /t 0`

    After the microSD activity LED stops blinking, you may unplug the Galileo.

Your Galileo board and your host PC should now be set up so you can be productive as you develop your IoT application.

Install Driver (Offline install using DISM)

1) Copy PE15N driver's release\fre_win7_x86 folder content to C:\galileo\drivers\PE15N
2) Copy the WIM file, you want to start with, to C:\galileo\images
3) Create batch script, install-driver.cmd, @ C:\galileo, like this:

```
@set savePath=%PATH%
@set PATH="%ProgramFiles(x86)%\Windows Kits\8.1\Assessment and
Deployment Kit\Deployment Tools\amd64\DISM";%PATH%
@set IMAGE=9600.16384.x86fre.winblue_rtm_iotbuild.140815-
1515_galileo_v1.wim
@md \galileo\offline
dism /Get-WimInfo /WimFile:C:\galileo\images\%IMAGE%
dism /Mount-Wim /WimFile:C:\galileo\images\%IMAGE%
/Name:"MODERNCORE_INSTALL" /MountDir:C:\galileo\offline
@if not "%errorlevel%" == "0" goto :ERROR
dism /Image:C:\galileo\offline /Add-Driver
/Driver:C:\galileo\drivers\PE15N\sdc6npce_ccx.inf
@if not "%errorlevel%" == "0" goto :ERROR
dism /Unmount-Wim /MountDir:C:\galileo\offline /Commit
:ERROR
@copy /y C:\Windows\Logs\DISM\dism.log .
@del /q C:\Windows\Logs\DISM\dism.log
@set PATH=%savePath%
```

4) Open Command Prompt, Run as Administrator @ C:\galileo

5) Run **install-driver**, you should see:

```
C:\galileo>install-driver

C:\galileo>dism /Get-WimInfo
/WimFile:C:\galileo\images\9600.16384.x86fre.winblue_rtm_iotbuild.140815-1515_galileo_v1.wim

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Details for image : C:\galileo\images\9600.16384.x86fre.winblue_rtm_iotbuild.140815-
1515_galileo_v1.wim

Index : 1
Name : MODERNCORE_INSTALL
Description : <undefined>
Size : 791,039,614 bytes

Index : 2
Name : MODERNCORE_BOOT
Description : <undefined>
Size : 745,949,322 bytes

The operation completed successfully.

C:\galileo>dism /Mount-Wim
/WimFile:C:\galileo\images\9600.16384.x86fre.winblue_rtm_iotbuild.140815-1515_galileo_v1.wim
/Name:"MODERNCORE_INSTALL" /MountDir:C:\galileo\offline

Deployment Image Servicing and Management tool
Version: 6.3.9600.17029

Mounting image
[==========================100.0%==========================]
The operation completed successfully.

C:\galileo>dism /Image:C:\galileo\offline /Add-Driver
/Driver:C:\galileo\drivers\PE15N\sdc6npce_ccx.inf

Deployment Image Servicing and Management tool
Version: 6.3.9600.17029

Image Version: 6.3.9600.16384

Found 1 driver package(s) to install.
Installing 1 of 1 - C:\galileo\drivers\PE15N\sdc6npce_ccx.inf: The driver package was
successfully installed.
The operation completed successfully.

C:\galileo>dism /Unmount-Wim /MountDir:C:\galileo\offline /Commit

Deployment Image Servicing and Management tool
Version: 6.3.9600.17029

Image File : C:\galileo\images\9600.16384.x86fre.winblue_rtm_iotbuild.140815-
1515_galileo_v1.wim
Image Index : 1
Saving image
[==========================100.0%==========================]
Unmounting image
[==========================100.0%==========================]
The operation completed successfully.
        1 file(s) copied.

C:\galileo>
```

6) Copy images\WIM file (that was created) to C:\galileo
   (The new images\WIM file should now be larger than original file that you started with.)
   This will be the image applied to the SD card for execution on your Galileo board.
7) Follow procedure to, "Write Windows to the microSD card".
8) Boot image from microSD card.