

Preparing for the **STM32U5 Azure IoT** Hands-on Workshop

All steps must be completed BEFORE
Starting the STBOX Hands-On Workshop

1 Workshop Prerequisites

3 ST Tool Validator

2 Software Setup

4 BLE Firmware Patching

Workshop Prerequisites

- This hands-on training is a working session and requires a PC or laptop running the 64-bit version of Windows® 10 or later
- Administrator rights are needed for software and driver installation
- One spare USB port will be required
- You will need the following hardware for the workshop:
 - B-U585I-IOT02A Discovery Kit (provided)
 - USB-A to Micro-B cable (provided)

Workshop - Preparation

HW Platform: B-U585I-IOT02A



Software Content

Name	Date modified	Type	Size
.git	9/29/2022 2:58 PM	File folder	
docs	9/29/2022 3:15 PM	File folder	
scripts	9/28/2022 1:03 PM	File folder	
.gitignore	9/28/2022 1:03 PM	Text Document	1 KB
AzCheckPrereq.bat	9/29/2022 2:57 PM	Windows Batch File	5 KB
CODE_OF_CONDUCT.md	9/28/2022 1:03 PM	MD File	4 KB
CONTRIBUTING.md	9/28/2022 1:03 PM	MD File	1 KB
credentials.txt	9/28/2022 1:03 PM	Text Document	1 KB
LICENSE.md	9/28/2022 1:03 PM	MD File	1 KB
SECURITY.md	9/28/2022 1:03 PM	MD File	2 KB

Software Prerequisites

- Python 3: Object oriented open-source programming language
 - Pip: Python package installer
 - Pyserial: Python library used for Serial Communication
- Azure Command Line Interface (AZ CLI): set of commands used to create and manage Azure resources
- STM32CubeProgrammer: all-in-one multi-OS software tool for programming STM32 products
- X-CUBE-AZURE: Expansion Package that consists of a set of libraries and application examples for STM32U5 Series microcontrollers acting as Azure IoT end devices

AzPrereqCheck.bat Description

- This script validates that the host machine meets all the required prerequisites:
 - Python 3
 - Pip
 - Pyserial
 - Azure Command Line Interface (AZ CLI)
 - STM32CubeProgrammer
 - X-CUBE-AZURE
 - Active Azure account
- If a tool isn't installed the script will download (if applicable) and install it

Step by step Guide

- 1) Follow the instructions (this document)
- 2) Run the prerequisite installation and validation tool

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Running AzCheckPrereq.bat

1) Double click the AzCheckPrereq.bat

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Running AzCheckPrereq.bat

- In the case that you have the prerequisites installed the window will look as follows
- **NOTE: IF YOU ARE MISSING ANY REQUIRED SOFTWARE THE SCRIPT WILL INSTALL IT TO YOUR MACHINE AND PROMPT YOU TO RUN AGAIN**

```
C:\WINDOWS\system32\cmd.exe

A subdirectory or file tools already exists.
STM32CubeProgrammer Successfully Installed
Python 3.10.7
Python Successfully Installed
azure-cli 2.34.1 *
core 2.34.1 *
telemetry 1.0.6 *

Extensions:
account 0.2.3
azure-iot 0.17.1

Dependencies:
msal 1.16.0
azure-mgmt-resource 20.0.0

Python location 'C:\Program Files (x86)\Microsoft SDKs\Azure\CLI2\python.exe'
Extensions directory 'C:\Users\alnur elberier\.azure\cliextensions'

Python (Windows) 3.8.9 (tags/v3.8.9:a743f81, Apr 6 2021, 13:22:56) [MSC v.1928 32 bit (Intel)]

Legal docs and information: aka.ms/AzureCliLegal

AZ CLI Successfully Installed

X-CUBE-AZURE Successfully Installed

pip 22.2.2 from C:\Users\alnur elberier\scoop\apps\python\current\lib\site-packages\pip (python 3.10)
pip Successfully Installed
Installing pyserial...
Requirement already satisfied: pyserial in c:\users\alnur elberier\scoop\persist\python\lib\site-packages (3.5)

Extension 'azure-iot' is already installed.
No updates available for 'azure-iot'. Use --debug for more information.

Extension 'account' is already installed.
No updates available for 'account'. Use --debug for more information.

Redirecting to a browser window to log in to Azure Cli
Please return to the script after logging in
```



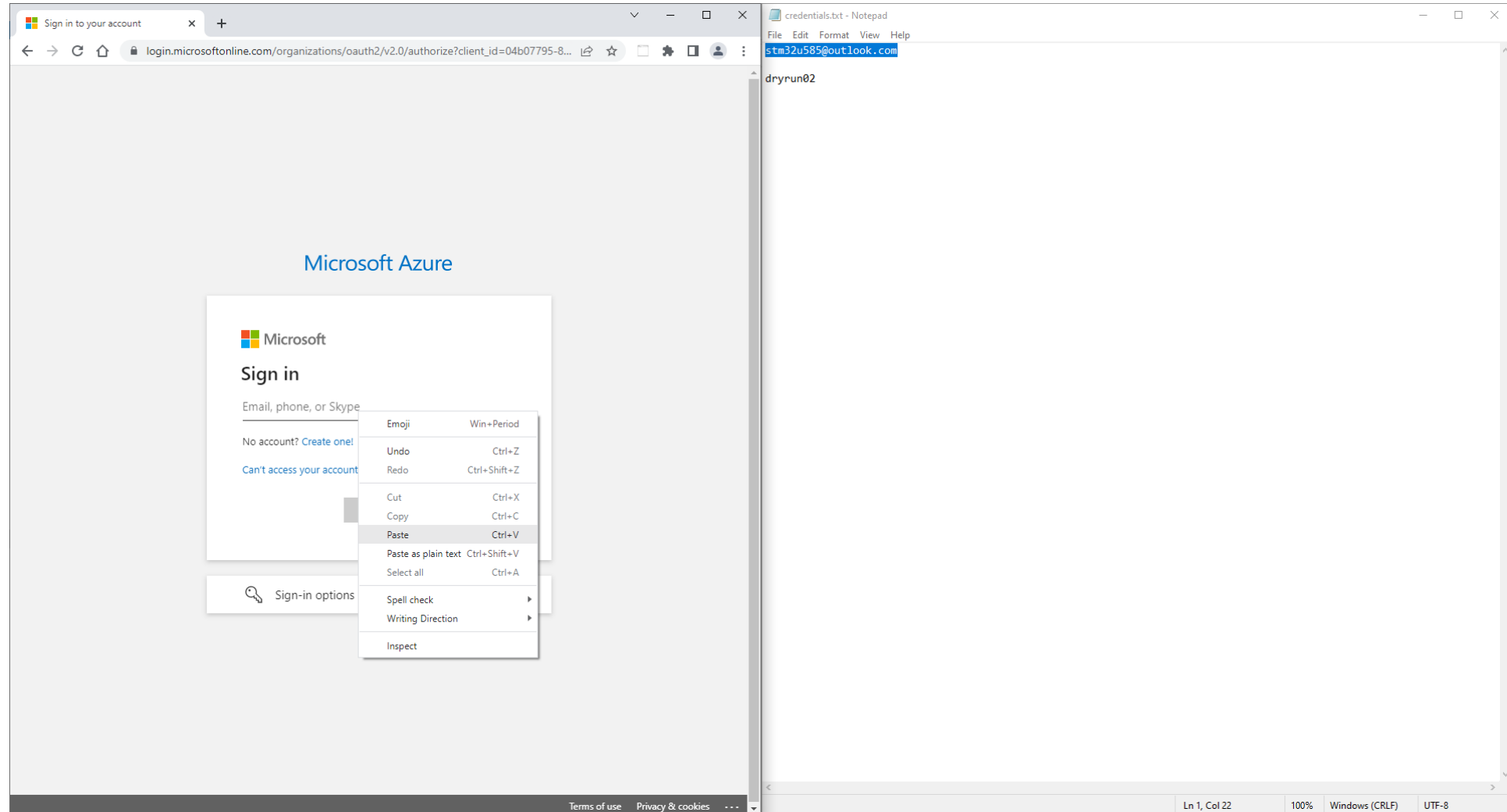
Running AzCheckPrereq.bat

- If dependencies were installed by the script, please run the script again.
- The script will then add a few necessary Az CLI extensions

```
Extension 'azure-iot' is already installed.  
No updates available for 'azure-iot'. Use --debug for more information.  
Extension 'account' is already installed.  
No updates available for 'account'. Use --debug for more information.
```

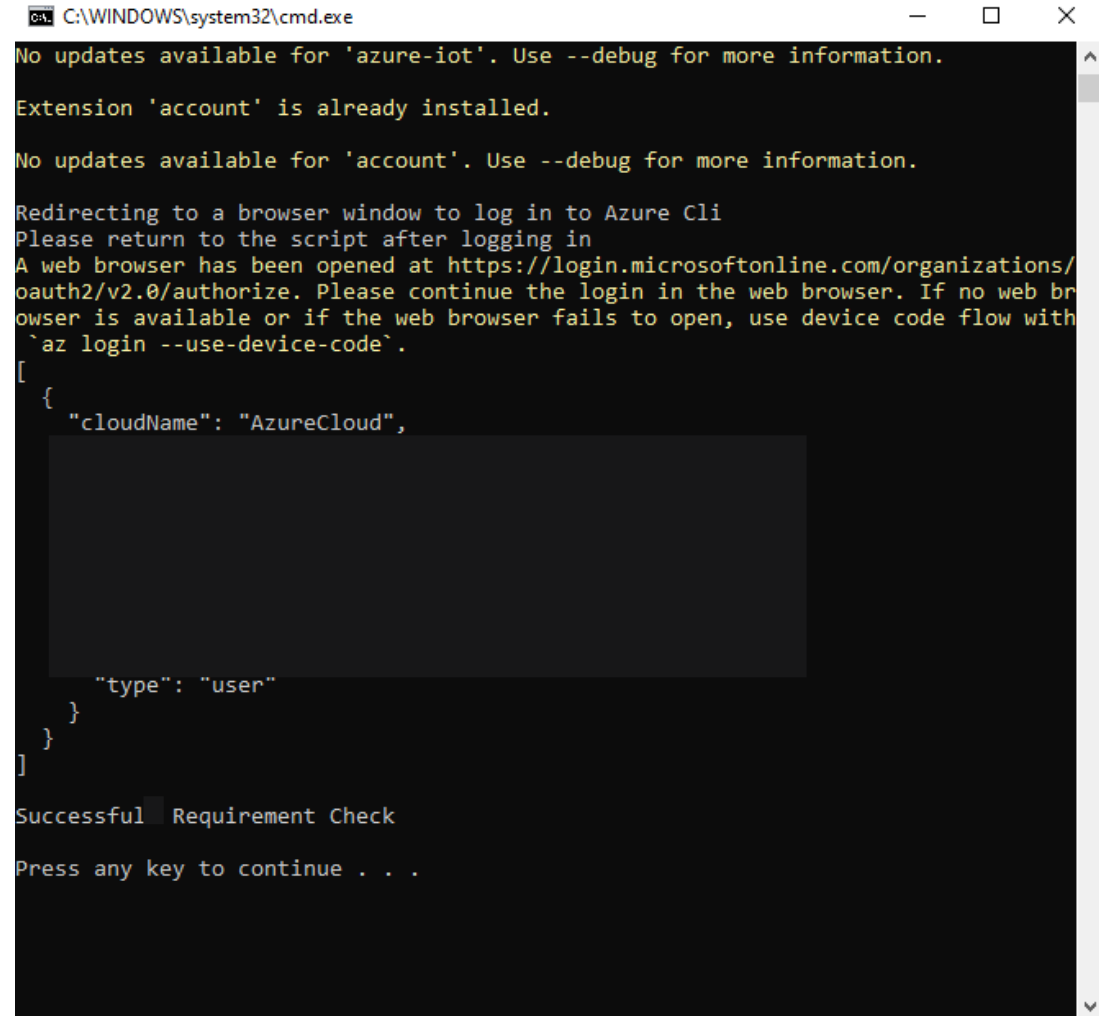
Running AzCheckPrereq.bat

- The script will then open an Azure Login page and a Text file
- Please copy/paste the credentials to login to the provided Azure Account



Running AzCheckPrereq.bat

- Navigate back to the script window to verify that you have a 'Successful Requirement Check'
- When this message is displayed the host machine is ready to begin the hands on



```
C:\WINDOWS\system32\cmd.exe

No updates available for 'azure-iot'. Use --debug for more information.

Extension 'account' is already installed.

No updates available for 'account'. Use --debug for more information.

Redirecting to a browser window to log in to Azure Cli
Please return to the script after logging in
A web browser has been opened at https://login.microsoftonline.com/organizations/
oauth2/v2.0/authorize. Please continue the login in the web browser. If no web br
owser is available or if the web browser fails to open, use device code flow with
`az login --use-device-code`.
[
  {
    "cloudName": "AzureCloud",
    [REDACTED]
    "type": "user"
  }
]

Successful Requirement Check

Press any key to continue . . .
```

Thank you

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