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Test Summary

**For Cloud-Connected Toaster Oven**

**Document Version:** 1.0

**Date:** 05/18/2022

**Cloud**

The Cloud tests are located in the “Cloud\_Code/Firebase/functions/test” directory. To run them, NodeJS must first be installed. Additionally, the Cloud tests use [Chai](https://www.chaijs.com/) as the assertion library and [Sinon](https://sinonjs.org/) as the mocking framework. Both must be installed before the tests can run. Once the required technologies are installed, the tests can be executed by opening a command prompt in the “Cloud\_Code/Firebase/functions” directory. Ensure that all required packages are installed with npm install before running the tests with npm run test.

Test Traceability

|  |  |
| --- | --- |
| **Test Case File** | **Software Under Test File(s)** |
| createDevice.test.js | createDeviceFunction.js |
| device-helper-tests.js | device-helper.js  firestore-helper.js |
| fulfillment\_tests.js | fulfillment-controller.js  Toaster.js  device-helper.js  firestore-helper.js  execute.js  query.js  sync.js |
| getDeviceConfig.test.js | getDeviceConfigFunction.js |
| getDeviceDocumentHelper.test.js | getDeviceDocumentHelper.js |
| getDeviceProperties.test.js | getDevicePropertiesFunction.js |
| getDeviceState.test.js | getDeviceStateFunction.js |
| iotHelper.test.js | IotClientHelper.js |
| listDevices.test.js | listDeviceFunction.js |
| registerAndCreateIntegration.test.js | registerDeviceFunction.js createDeviceFunction.js iotClientHelper.js |
| registerDevice.test.js | registerDeviceFunction.js |
| toaster-tests.js | toaster.js  device-model.js  cook.js  on\_off.js  temperature.js  timer.js  bagel.js  pizza.js |
| token.test.js | token.js |
| updateDeviceConfig.test.js | updateDeviceConfigFunction.js |

**Embedded**

The Nuvoton unit tests are located in the “Embedded\_Code/ConnectedToasterOven/Unit\_Testing/Source” directory in the “embedded\_unit\_testing” branch.

Test Traceability

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| **Test Case File** | **Software Under Test File(s)** |
| Test\_BLE\_App\_Connection.cpp | ESP32\_AppConnection.h |
| QuadratureUnitTests.cpp | Quadrature.h  Quadrature.c |

**App**

Tests for the methods in Themes.dart can be found in Themes\_Test.dart, all tests contain the expected values. If changes are made to the colors within the themes, the tests need to be updated to ensure matching values. The remaining classes do not currently have test cases.

Test Traceability

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| --- | --- |
| **Test Case File** | **Software Under Test File(s)** |
| Themes\_Test.dart | Themes.dart |