

# CC32xx mDNS

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## Overview

mDNS(multicast domain name system) is a host name resolution service. Mdns host can multicast messages containing information about its services, ip address, text on mDNS port. An Mdns client on the same subnet shall be able to listen to those messages. CC3200 device can make use of these services.

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## Application Details

This application can either be used as a Advertise(Mdns host) application or as a listen(Mdns client) application. One can switch between the two using a predefined symbol "MDNS\_ADVERTISE". First step for each case is to connect to an AP. one can change the AP name by modifying the "SSID\_NAME" macro (common.h). The advertise application registers and multicasts one service(CC3200.\_uart.\_tcp.local) at mDNS port. The Listen application tries to get the IP, port and text of a service multicast by another device(mdns host).

This mDNS sample application registers services as 'unique services'. .i.e. if a service w/ the same name is already registered in the n/w, the new service registration will fail

## Source Files briefly explained

- **main.c** - Initializes the device, connects to an AP, registers service for broadcast and tries to get IP, port and text of the service by name.

### Supporting Files

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- **pinmux.c** - Generated by the PinMUX utility.

### Common Files

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- **startup\_ccs.c** - CCS related functions
- **startup\_ewarm.c** - IAR related functions
- **uart\_if.c** - Interface file for uart communication

## Usage

- Setup a serial communication application (HyperTerminal/TeraTerm). For detail info visit Terminal setup

On the host PC. The settings are:

- **Port**: Enumerated COM port
- **Baud rate**: 115200
- **Data**: 8 bit
- **Parity**: None
- **Stop**: 1 bit
- **Flow control**: None
- Run the reference application as advertise application or listen application.(Flashing the bin/IAR/CCS).
- If ran as a advertise application, the serial communication will be something like:

```

*****
CC3200 mDNS Advertise Application
*****

Host Driver Version: 1.0.0.1
Build Version 2.1.0.12.31.1.1.0.5.1.0.3.20
Device is configured in default state
Device started as STATION
[WLAN EVENT] STA Connected to the AP: cc3200demo ,BSSID: 10:fe:ed:4a:d6:44
[NETAPP EVENT] IP Acquired: IP=192.168.0.101 , Gateway=192.168.0.1
Connection established w/ AP and IP is aquired
MDNS Registration successful

```

- If ran as a listen application, one needs to run mdns host on the same subnet(can be a PC, mobile or another CC3200 device running as a advertise). upon receiving the multicast message the serial communication will be as:

```

*****
CC3200 mDNS Listen Application
*****

Host Driver Version: 1.0.0.1
Build Version 2.1.0.12.31.1.1.0.5.1.0.3.20
Device is configured in default state
Device started as STATION
[WLAN EVENT] STA Connected to the AP: cc3200demo ,BSSID: 10:fe:ed:4a:d6:44
[NETAPP EVENT] IP Acquired: IP=192.168.0.103 , Gateway=192.168.0.1
Connection established w/ AP and IP is aquired

Port: 200
Addr: 192.168.0.101
TLen: 27
Text: Service registered for 3200

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Addr: 192.168.0.101
TLen: 27
Text: Service registered for 3200

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```

## **Limitations/Known Issues**

- Trying to get a service broadcasted by the same board is not a valid use case.

# Article Sources and Contributors

**CC32xx mDNS** *Source:* <http://processors.wiki.ti.com/index.php?oldid=184866> *Contributors:* A0221015, Codycooke, Jitgupta, Malokyle

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