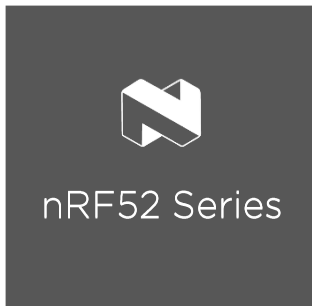


Agenda – part 2 – Development resources



- Code walk-through
- Tools offered by Nordic
- Resources

SDK examples – Heart rate profile



- Code overview/simple walkthrough

Predefined applications/profiles

Single XML Download

SpecificationName	SpecificationType	SpecificationLevel
Alert Notification	org.bluetooth.profile.alert_notification	Adopted
Blood Pressure	org.bluetooth.profile.blood_pressure	Adopted
Cycling Power	org.bluetooth.profile.cycling_power	Adopted
Cycling Speed and Cadence	org.bluetooth.profile.cycling_speed_and_cadence	Adopted
Find Me	org.bluetooth.profile.find_me	Adopted
Glucose	org.bluetooth.profile.glucose	Adopted
Health Thermometer	org.bluetooth.profile.health_thermometer	Adopted
Heart Rate	org.bluetooth.profile.heart_rate	Adopted
HID OVER GATT	org.bluetooth.profile.hid_over_gatt	Adopted
Location and Navigation	org.bluetooth.profile.location_and_navigation	Adopted
Phone Alert Status	org.bluetooth.profile.phone_alert_status	Adopted
Proximity	org.bluetooth.profile.proximity	Adopted
Running Speed and Cadence	org.bluetooth.profile.running_speed_and_cadence	Adopted
Scan Parameters	org.bluetooth.profile.scan_parameters	Adopted
Time	org.bluetooth.profile.time	Adopted

<https://developer.bluetooth.org/gatt/profiles/Pages/ProfilesHome.aspx>

- Defined by Bluetooth SIG
 - Have a defined behavior
- Compatible with all* devices
- Qualified BLE service files in the SDK
 - When left unmodified, no re-qualification required
 - Service interface changed → re-qualification required
- (Re-)Qualification: Profile Tuning Suite (PTS)

nRF52-DK



Development kit with debugger

- BLE, ANT, 2.4 GHz
- NFC interface with antenna
- UART through nano-USB
- Programmer/debugger: Segger J-link
- Program custom board
- Arduino Uno shield compatible
- ARM mbed enabled

Tools



Sniffer

Track transmitted packets
Hardware: nRF51DK/Dongle

Windows, Linux



Mobile apps

Nordic provides several apps,
with source code

Central (and peripheral)
role(s)

iOS, Android, Windows



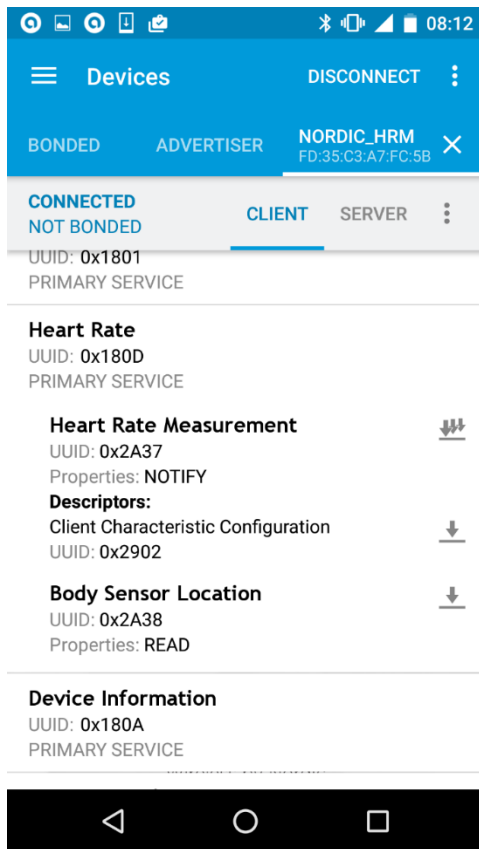
nRF Connect

PC/phone tool for
testing/debugging connections:
do application independent
operations

Central and peripheral roles

Windows, Linux, OSX
Android, iOS

Tools – nRF Connect (phones)



Tool for testing and debugging BLE applications

- Scan for devices
- Read advertisement data
- Connect/bond
- Exchange of data
 - Read, write, enable notifications/indications
- Device firmware update (DFU)
- Advertising (supported devices)
- Android and iOS

Infocenter - infocenter.nordicsemi.com

The screenshot shows the Nordic Semiconductor Infocenter website. At the top, there is a navigation bar with links for "About us", "Products", "Applications", "Support & Community", and "Investors". Below this is a search bar labeled "Search the Infocenter:" and a "Scope: All topics" filter. A left sidebar contains a "Contents" menu with categories like "Welcome", "nRF5 Getting Started", "nRF52 Series", "nRF51 Series", "nRF8000 Series", "Software Development Kit", "nRF24 Series", "nRF9 Series", "Reference Designs", "Application Notes", and "White Papers". The main content area features a "Welcome >" message, a search bar, and a "Welcome!" section. The welcome message states: "The Nordic Semiconductor Infocenter is our comprehensive library containing technical documentation for current and legacy solutions and technologies. Either as a new or existing customer, you will find here the critical information you need to build and manage your development environments. Follow the step-by-step guides to help you get started developing with our custom-made software tools and development kits. Use the search feature or table of contents to find information on each of our product lines as well as on our complete range of supporting tools and products. For information on how to purchase our products, please visit our [Buy Online](#) page." Below this, there are sections for "Technical support" (sign up with a My Page account), "Documentation updates" (listing updates for nRF51 Development Kit User Guide v1.1, nRF24 Environmental Qualification Reports, nRF9 Environmental Qualification Reports, and nRF5 Getting Started).

Contains all necessary information and documentation

- Getting started
- Documentation:
 - Softdevice
 - Softdevice specification
 - API
 - SDK
 - User guides
 - Documentation of examples
 - Libraries
 - API
- Reference layouts
- White papers
- Application notes

Other resources

Devzone

devzone.nordicsemi.com

- Forum
- Tutorials
- Blogs

github

- Unofficial examples
- Mobile apps source code
- PC: library for BLE development

SDK download

developer.nordicsemi.com