Bluetooth® Mesh ADK 4.2.4.0
July 3, 2024

Bluetooth mesh is a new topology available for Bluetooth Low Energy (LE) devices that enables many-to-many (m:m) communication. It’s optimized for creating large-scale device networks, and is ideally suited for building automation, sensor networks, and asset tracking. Our software and SDK for Bluetooth development supports Bluetooth Mesh and Bluetooth 5 functionality. Developers can add mesh networking communication to LE devices such as connected lights, home automation, and asset tracking systems. The software also supports Bluetooth beaconing, beacon scanning, and GATT connections so Bluetooth mesh can connect to smart phones, tablets, and other Bluetooth LE devices.

These release notes cover ADK version(s):

4.2.4.0 released on July 3, 2024 (underlying Bluetooth changes only)
4.2.3.0 released on January 24, 2024 (underlying Bluetooth changes only)
4.2.2.0 released on August 16, 2023 (underlying Bluetooth changes only)
4.2.1.0 released on May 3, 2023
4.2.0.0 released on March 8, 2023
4.1.1.0 released on February 1, 2023
4.1.0.0 released on December 14, 2022
4.0.0.0 released on June 22, 2022

Compatibility and Use Notices

- This release is to be used with Bluetooth Mesh SDK 4.2.4.0.
- The iOS ADK supports the last three major releases of the iOS system (iOS 15, iOS 16 and iOS 17).
- The Android ADK supports the Android 8+ for the framework and Android 14+ for the reference application (the last three major releases of the Android system)
1 Android

1.1 New Items

Added in release 4.1.0.0

- Added Mesh Protocol 1.1: Remote Provisioning

- Added Advertisement Extension feature configured via Silicon Labs Configuration vendor model.

Added in release 4.0.0.0

- Added Mesh Protocol 1.1: Certificate-based Provisioning

- Added Device Firmware Update (DFU) using Mesh Binary Large Object Transfer

1.2 Improvements

Changed in release 4.2.0.0

- Performance and stability improvements

Changed in release 4.1.1.0

- Performance and stability improvements

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1074002</td>
<td>Change calculation of automatic BLOB chunk size.</td>
</tr>
<tr>
<td>695846</td>
<td>Update Mesh Protocol 1.1 model identifiers.</td>
</tr>
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1.3 Fixed Issues

Fixed in release 4.2.0.0

<table>
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<tr>
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<tbody>
<tr>
<td>1103503</td>
<td>Fixed losing connection with nodes</td>
</tr>
<tr>
<td>1081815</td>
<td>Fixed node being disconnected after certificate-based provisioning when on configuration screen of the Demo Application</td>
</tr>
<tr>
<td>1080430</td>
<td>Fixed Demo Application crash on remote provisioning when both device and root certificates are loaded from file.</td>
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<tr>
<td>1036367</td>
<td>Fix ProxyControl when connected to a node with a network identity.</td>
</tr>
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</table>

1.4 Known Issues in the Current Release

None
1.5  Deprecated Items
In a future release, Application Key will be separated from Group because the Bluetooth Mesh Specification does not indicate a relationship between Application Key and Group.

1.6  Removed Items
None

1.7  API changes between 3.x and 4.

- Changed `setNetworks` and `getNetworks` to `setNetKeys` and `getNetKeys` in `BluetoothMeshConfigurationLimits`.
- Removed `BluetoothMeshConfigurationLimits.rplSize`.
- Removed `Network.primarySubnet`.
- Removed `Subnet.isPrimary`.
- Changed parameter type result for `SubnetRemovalCallback.error`.
- `ProvisionerConnection` has been rewritten to Kotlin.
2 iOS

2.1 New Items

Added in release 4.1.0.0
Added Mesh Protocol 1.1: Remote Provisioning
Added Advertisement Extension feature configured via Silicon Labs Configuration vendor model.

Added in release 4.0.0.0
Added Mesh Protocol 1.1: Certificate-based Provisioning
Added Device Firmware Update (DFU) using Mesh Binary Large Object Transfer

2.2 Improvements

Changed in release 4.2.0.0
Performance and stability improvements

Changed in release 4.1.1.0
Performance and stability improvements

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<tr>
<td>1077633</td>
<td>Supported iOS versions are: 14, 15 and 16</td>
</tr>
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<td>1074001</td>
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<tr>
<td>856958</td>
<td>Use correct version for ADK logs.</td>
</tr>
<tr>
<td>711210</td>
<td>Fix SBMProxyControl when connected to a node with a network identity.</td>
</tr>
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Fixed in release 4.0.0.0

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<tr>
<td>813278</td>
<td>Fix memory leaks and not working callbacks related to SBMProxyConnection. Only one connection object exists for a given device now.</td>
</tr>
<tr>
<td>758254</td>
<td>Fix typo in one of SBMSensorPropertiesGet properties.</td>
</tr>
<tr>
<td>448775</td>
<td>Fixed memory leaks causing provisioning fail.</td>
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</table>
2.4 Known Issues in the Current Release
None

2.5 Deprecated Items
In a future release, Application Key will be separated from Group because the Bluetooth Mesh Specification does not indicate a relationship between Application Key and Group.

2.6 Removed Items
None

2.7 API changes between 3.x and 4.x
• Added the SBMDevice protocol with fields uuid and name extracted from the SBMConnectableDevice.
• Removed getPrimarySubnet from SBMNetwork (it was redundant to calling SBMNetwork.subnets.first).
• Removed primary from SBMSubnet – the specification defines the primary subnet as the one with with the NetKey at index 0x000.
• Removed error SBMStackErrorBtSynchronousConnectionLimitExceeded.
• Errors renamed:
  • SBMErrorProxyAllowPacketsFromGroupsFailure to SBMErrorProxyAcceptPacketsFromGroupsFailure
  • SBMErrorProxyDenyPacketsFromGroupsFailure to SBMErrorProxyRejectPacketsFromGroupsFailure
• SBMBluetoothMeshConfiguration.initWithLocalVendorModels:andLogger: adds the Silabs Config Client by default now.
• Changed setNetworks and getNetworks to setNetKeys and getNetKeys.
• Added new cases in SBMControlValueSetValueVendorModel.h.
3 Using This Release

3.1 Installation and Use

See AN1200.1: iOS and Android ADK for Bluetooth® Mesh SDK 2.x and Higher for information about required tools and compatible platforms.

3.2 Support

Development Kit customers are eligible for training and technical support. Use the Silicon Labs Bluetooth LE web page to obtain information about all Silicon Labs Bluetooth products and services, and to sign up for product support. Contact Silicon Laboratories support at http://www.silabs.com/support.
Simplicity Studio

One-click access to MCU and wireless tools, documentation, software, source code libraries & more. Available for Windows, Mac and Linux!