Event Handler Event	Event Handler Link	Used in Client/Server/Both	Command Sent from Event Handler	Command Link	Command Arguments	Command Argument Source	Display Connection State Update	Your Global GATT State In Event Handler	Command Normal Result Event(s)	Command Failure Result Event	Command Data Event	Your Global GATT State After Command Send	Event Handler Overview
evt_system_boot	https://docs.silabs.com	Server	See Advertising Commands	See Advertising Commands	See Advertising Commands	See Advertising Commands	"Advertising"	CONNECTION_ADVERTISING	See Advertising Commands	See Advertising Commands	See Advertising Commands	CONNECTION_ADVERTISING	See Advertising Commands
evt_system_boot	https://docs.silabs.com	Client	See Discovery Commands	See Discovery Commands	See Discovery Commands	See Discovery Commands	"Discovering"	CONNECTION_DISCOVERING	See Discovery Commands	See Discovery Commands	See Discovery Commands	CONNECTION_DISCOVERING	See Discovery Commands
evt_system_boot	https://docs.silabs.com	Both	cmd_sm_configure	https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_conf	flags, io_capabilities	Values based on cmd documentation - Setting bit3 to 1 to require bonding requests be confirmed. - io_capability to sm_io_capability_displayyesno for pushbutton	N/A	N/A	N/A	N/A	N/A	N/A	Configure security requirement handling to specify needed settings for bonding process.
evt_le_gap_scan_response	https://docs.silabs.com	Client	cmd_le_gap_connect	https://docs.silabs.com/bluetooth/latest/le-gap/cmd_le_g	fixed address, address_type le_gap_address_type_public_identity, initiating phy le_gap_phy_1m	address and type from evt_le_gap_scan_response. le_gap_phy_1m from const value	N/A	N/A	evt_le_connection_opened, evt_le_connection_parameters	N/A	N/A	CONNECTION_FOUND	Verify if hard-coded BT address has been found; if true, stop scanning and connect to that device
evt_le_connection_opened	https://docs.silabs.com	Server	cmd_le_connection_set_parameters	https://docs.silabs.com/bluetooth/latest/le-connection/cm	min, max interval, latency, timeout	const values based on Assignment 5	"Connected"	CONNECTION_ADVERTISING	evt_le_connection_parameters	N/A	N/A	CONNECTION_BONDING	Sets connection parameters of a connection
evt_le_connection_opened	https://docs.silabs.com	Client	cmd_sm_increase_security	https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_incr	Connection	Connection handler returned from evt->data.evt_le_connection_opened.connection	"Conn Bonding"	CONNECTION_DISCOVERING	le_connection_opened, sm_bonded, sm_bonding_failed	N/A	N/A	CONNECTION_BONDING	Client initiates bonding process after a connection with a server has been made.
evt_sm_confirm_bonding	https://docs.silabs.com	Server	cmd_sm_bonding_confirm	https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_bon	Connection, Confirm	Connection Handler returned from evt->data.evt_sm_confirm_bonding.connection, Setting confirm to true if connection is not already bonded (check bonding_handle)	"Conn Bonding" "Conn Bonding", as well as Display Numeric Comparison Passkey on Screen and "Confirm with PB0" for action	CONNECTION_FOUND	N/A	N/A	N/A	CONNECTION_BONDING	Server accepts bonding request received from client.
evt_sm_confirm_passkey	https://docs.silabs.com	Both	N/A	N/A	N/A	N/A	CONNECTION_BONDING	N/A	N/A	N/A	CONNECTION_BONDING	Display Passkey on LCD, notify user to "Press PB0" to confirm the bonding process.
PB0 Button Pressed During Confirm Passkey Bonding Process	N/A	Both	cmd_sm_passkey_confirm	https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_pas	Connection, Confirm	Connection Handler returned from evt->data.evt_sm_confirm_passkey.connection, Setting confirm to true	N/A	CONNECTION_BONDING	N/A	evt_sm_bonding_failed	N/A	CONNECTION_BONDING	User pressed PB0 button to confirm keypass is valid and confirm/complete bonding process.
evt_sm_bonded	https://docs.silabs.com	Server	N/A	N/A	N/A	N/A	"Bonded"	CONNECTION_BONDING	N/A	N/A	N/A	CONNECTION_BONDED	Update LCD on Server to display new state now that Server and Client are bonded
evt_sm_bonded	https://docs.silabs.com	Client	cmd_gatt_discover_primary_services_by_uuid	https://docs.silabs.com/bluetooth/latest/gatt/cmd_gatt_di	Connection, uuid_len, uuid_data	Connection Handler returned from evt->data.evt_le_connection_parameters. connection, uuid length (2 bytes) as #define, and uuid from .iac file as #define	"Discov Services"	DISCOVER_SERVICES	evt_gatt_service, evt_gatt_procedure_completed	See Discovery Commands	See Discovery Commands	DISCOVER_SERVICES	Discover Service based on UUID of Health Thermometer
evt_gatt_service_id	https://docs.silabs.com	Client	cmd_gatt_discover_characteristics_by_uuid	https://docs.silabs.com/bluetooth/latest/gatt/cmd_gatt_di	Connection, Service, uuid_len, uuid_data	Connection Handler from event, service UUID from as #define, uuid_len as #define, pointer to uuid_data to read value received in the event response	"Discov Services"	DISCOVER_SERVICES	evt_gatt_characteristic, evt_gatt_procedure_completed	N/A	N/A	DISCOVER_SERVICES	Capture and set variable for GATT Server Handle received
evt_gatt_characteristic_id	https://docs.silabs.com	Client	cmd_gatt_set_characteristic_notification	https://docs.silabs.com/bluetooth/latest/gatt/cmd_gatt_se	Connection, characteristic, flags	Connection Handle from event, characteristic returned from uuid_data from cmd_gatt_discover_characteristics_by_uuid, flags set to 2 for gatt_indication	"Discov Services"	DISCOVER_SERVICES	evt_gatt_procedure_completed, evt_gatt_characteristic_value	gatt_procedure_completed	N/A	DISCOVER_SERVICES	Capture and set variable for GATT Characteristic Handle received
evt_gatt_procedure_completed	https://docs.silabs.com	Client	cmd_gatt_read_characteristic_value_by_uuid	https://docs.silabs.com/bluetooth/latest/gatt/cmd_gatt_re	Connection, Service, uuid_len, uuid_data	Connection Handler from event, service UUID from as #define, uuid_len as #define, pointer to uuid_data to read value received in the event response	"Discov Chars" or "Handling Indications"	DISCOVER_CHARACTERISTICS or HANDLE_INDICATIONS	evt_gatt_procedure_completed, evt_gatt_characteristic_value	gatt_procedure_completed failed with error	N/A	DISCOVER_CHARACTERISTICS or HANDLE_INDICATIONS	Based on which procedure was completed, either: (1) Discover Services based on HealthThermo UUID (2) Set characteristic notification
evt_gatt_characteristic_value	https://docs.silabs.com	Client	cmd_gatt_send_characteristic_confirmation	https://docs.silabs.com/bluetooth/latest/gatt/cmd_gatt_se	Connection	Connection Handler returned from the evt	"Handling Indications"	HANDLE_INDICATIONS	evt_gatt_procedure_completed, evt_gatt_characteristic_value	gatt_procedure_completed failed with error	N/A	HANDLE_INDICATIONS	Read and set temperature value to variable to be displayed next time LCD is updated (1Hz)
evt_hardware_soft_timer_id	https://docs.silabs.com	Both	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Display latest state and updates to LCD screen. Occurs at 1Hz
evt_hardware_soft_timer_id	https://docs.silabs.com	Server	cmd_gatt_server_send_characteristic_notification	https://docs.silabs.com/bluetooth/latest/gatt-server/cmd_	Connection, Characteristic, Value_len, Value_data	Connection Handler default set to 0xFF Characteristic set to auto-gen value assigned to gattdb_button_state Value_len set to 1 Value_data populated with PB0 button press state value	N/A	N/A	N/A	N/A	N/A	N/A	Get latest state of the PB0 button and send notification to Client. Occurs at 1Hz
gecko_evt_system_external_signal_id	https://docs.silabs.com	Both	cmd_sm_passkey_confirm	https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_pas	Connection, Confirm	Various internal commands for sensor sampling and event handling. Connection Handler returned from the evt Confirm default set to True	Various	CONNECTION_BONDING	N/A	N/A	N/A	CONNECTION_BONDING	Handle various user defined interrupt events for reading temp sensor and handling external interrupts (PB0 button press).
evt_le_connection_closed	https://docs.silabs.com	Server	See Advertising Commands	See Advertising Commands	See Advertising Commands	See Advertising Commands	"Connection Lost"	CONNECTION_LOST	See Advertising Commands	See Advertising Commands	See Advertising Commands	N/A	See Advertising Commands
evt_le_connection_closed	https://docs.silabs.com	Client	See Discovery Commands	See Discovery Commands	See Discovery Commands	See Discovery Commands	"Discovering"	CONNECTION_DISCOVERING	See Discovery Commands	See Discovery Commands	See Discovery Commands	N/A	See Discovery Commands
evt_le_gap_adv_timeout	https://docs.silabs.com	Server	See Advertising Commands	See Advertising Commands	See Advertising Commands	See Advertising Commands	"Advertising Timeout"	CONNECTION_ADV_TIMEOUT	See Advertising Commands	See Advertising Commands	See Advertising Commands	N/A	See Advertising Commands
evt_sm_bonding_failed	https://docs.silabs.com	Client	See Discovery Commands	See Discovery Commands	See Discovery Commands	See Discovery Commands	"Advertising"	CONNECTION_ADVERTISING	See Advertising Commands	See Advertising Commands	See Advertising Commands	CONNECTION_ADVERTISING	See Advertising Commands

Advertising Commands

multiple (see above)	multiple (see above)	Server	cmd_le_gap_set_advertise_timing	https://docs.silabs.com/bluetooth/latest/le-gap/cmd_le_g	0 for no duration limit or maxevents, min and max advertising intervals, 0 for handle	const values	N/A	N/A	N/A	N/A	N/A	N/A	Sets timing and duration for advertisements
multiple (see above)	multiple (see above)	Server	cmd_sm_delete_bondings	https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_del	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Delete any past bonding connections established - want to confirm bonding each time a connection is made.
multiple (see above)	multiple (see above)	Server	cmd_le_gap_start_advertising	https://docs.silabs.com/bluetooth/latest/le-gap/cmd_le_g	Discoverable mode le_gap_general_discoverable to use general discovery procedure, 0 for handle	const values	"Advertising"	N/A	evt_le_connection_opened	evt_le_gap_advertising_timeout	N/A	CONNECTION_ADVERTISING	Start advertising

Discovery Commands

| multiple (see above) | multiple (see above) | Client | cmd_sm_delete_bondings | https://docs.silabs.com/bluetooth/latest/sm/cmd_sm_del | N/A | N/A | N/A | N/A | N/A | N/A | N/A | N/A | Delete any past bonding connections established - want to confirm bonding each time connection is made. |
| multiple (see above) | multiple (see above) | Client | cmd_le_gap_start_discovery | https://docs.silabs.com/bluetooth/latest/le-gap/cmd_le_g | le_1m_phy for 1m phy, le_gap_general_discoverable for general discovery | const values | "Discovering" | N/A | evt_le_gap_scan_response | N/A | N/A | CONNECTION_DISCOVERING | Starts discovery on the client |

Resources / References

https://docs.silabs.com/bluetooth/2.9/le-connection
https://docs.silabs.com/bluetooth/latest/overview
https://www.silabs.com/community/wireless/bluetooth/knowledge-base.entry.html/2017/06/23/pairing_processes-6Xq6
https://www.silabs.com/community/wireless/bluetooth/knowledge-base.entry.html/2016/11/07/using_bluetooth_secu-VGcD