

BOSE SOUNDTOUCH WEB API

Bose Corporation

Version 1.1

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1 Document Version History

<i>Version</i>	<i>Release Date</i>	<i>Changes</i>
1.0.0	January 7, 2026	• Initial Release
1.1.0	April 1, 2026	• Added Device Discovery sections

2 Acronyms and Definitions

<i>Acronyms</i>	<i>Expanded Term</i>	<i>Definition</i>
API	Application Programming Interface	A definition for how to interact with and use a software component
REST	Representational State Transfer	A common type of web service API that is modeled around resources
WAPI	Web API	An API made available by a web server
SSDP	Simple Services Discovery Protocol	A discovery protocol that uses unicast and multicast over UDP
MDNS	Multicast Domain Name System	A type of discovery protocol that requires zero configuration
	Bonjour	Apple's implementation of MDNS

3 Legal Notice

By using the SoundTouch Materials, you are agreeing to **BOSE SOUNDTOUCH WEB API TERMS OF USE, INCLUDING THE MINIMUM TERMS FOR EULA** found at Section 8 and Addendum A herein.

4 Discovery Overview

This document intends to describe the methods by which a SoundTouch speaker can be discovered on a given network. The SoundTouch ecosystem will be broken down into individual components and the roles and relationships of these components will help illustrate working examples of discovery in a number of different scenarios. Further below, this document will cover the Web Services API provided by the SoundTouch speakers.

5 SoundTouch Ecosystem

The SoundTouch ecosystem consists of a variety of components that work in harmony to deliver a unified experience to a customer. The following components exist:

- SoundTouch Speaker
- SoundTouch App
- SoundTouch Cloud Server (Deprecated)

5.1 SoundTouch Experience

The SoundTouch unified experience starts with a customer's home network. The SoundTouch speaker and the SoundTouch App work together during the out of box setup process to configure a SoundTouch speaker to a customer's home network. This setup can happen via wired ethernet or via wifi configuration in order to connect the SoundTouch speaker on to the customer's home wifi access point.

5.2 SoundTouch Speaker

This is a speaker that may be in the form of one of the following available products:

- SoundTouch Portable music system - a battery powered, small, portable mono speaker with a display and built in buttons on the top of the speaker
- SoundTouch 20 music system - a medium sized one-piece speaker with display and built in buttons on the top of the speaker
- SoundTouch 30 music system - a large sized one-piece speaker with display and built in buttons on the top of the speaker
- Wave SoundTouch music system
- SoundTouch Stereo JC music system
- SoundTouch SA-4 amplifier package
- SoundTouch outdoor speaker systems
- Cinemate home theater systems
- Lifestyle home theater systems
- VideoWave entertainment systems

5.3 SoundTouch App

This is the rich user interface that runs as a native app on Apple iOS devices and Google Android devices.

The role of the App in general is to find SoundTouch speakers on the network using one of the discovery protocols (SSDP, Bonjour) described in this document.

- SoundTouch App – Apple iOS
- SoundTouch App – Google Android

5.4 SoundTouch Cloud Server (Deprecated)

The SoundTouch cloud creates, stores, and updates accounts in the cloud. A cloud server provides a central storage location for all things related to a particular SoundTouch account. This includes things like the list of SoundTouch speakers available to the account. Examples of some other information stored on the cloud include some of the following:

- A list of associated SoundTouch speaker products and related info such as the speaker name
- A list of recents for each product
- A list of presets for each product
- A list of logged-in music services/sources in the account

5.5 Putting It Together

Each of the components working together form a SoundTouch ecosystem. Any given ecosystem may combine one or more SoundTouch speakers, one or more SoundTouch apps, along with a single home network and a single SoundTouch cloud account (deprecated). Within the SoundTouch app, the device tray will present a list of SoundTouch speakers provided by the SoundTouch cloud account. Each speaker will show up in one of two possible states depending on the outcome of device discovery on the home network between the SoundTouch app and the SoundTouch speakers. If a speaker is not discovered using one of the discovery protocols, then the speaker will be presented as a dotted outline in the device tray. If the speaker is discovered and is available, then the speaker will be presented as a solid-colored image within the device tray, indicating that it is ready to be interacted with.

In this example of how the app searches for SoundTouch speakers, it demonstrates the two roles played where the app plays the role of the client (searcher, seeker) and the speaker plays the role of the service provider (announcer, advertiser).

Third party developers integrating SoundTouch control functionality into apps or systems will need to implement these discovery protocols in order to find and communicate with SoundTouch devices on the network. Throughout this document, developers should use the SoundTouch App as the example to follow for their own implementations.

6 Discovery Protocols

There are two discovery protocols that are used within the SoundTouch ecosystem. The first is Simple Service Discovery Protocol (SSDP), and the second is Zero-configuration which has implementations known as Bonjour and MDNS. The protocols provide redundancy and variation which work in favor of providing more reliable discovery in a number of different environments where port availability might vary.

6.1 SSDP (Simple Service Discovery Protocol)

6.1.1 SSDP Client

When a client wants to find devices that provide a specific service, it will do an M-SEARCH over UDP multicast port 1900, with a service type header containing the type of service it is looking for.

The two services used are

- urn:schemas-upnp-org:device:MediaRenderer:1 for devices that can play audio (SoundTouch speakers)
- urn:schemas-upnp-org:device:MediaServer:1 for devices that contain media (SoundTouch app and music server)

A client that wants to use services must continuously listen to UDP multicast and unicast port 1900 to receive replies to searches and also announcements from service providers.

A search should only be performed once per service type while the client is continuously listening. If the client stops listening for some period of time then wants to start using services again it must start listening again and perform another M-SEARCH.

When a service provider replies to a search or announces itself, it will provide a Location header and an expiration time in the Cache-control:max-age header. The UPnP specification specifies that the max-age must be a minimum of 1800 seconds, or 30 minutes.

All further communication to the service provider should be done via the address contained in the Location header.

The client must keep track of the device expiry. If it has not heard a new announcement containing a new expiration time from a service provider by the expiry time, it must consider the device no longer available. This is to handle devices that go offline unexpectedly.

6.1.2 SSDP Service Provider

A device that wants to provide services must continuously listen to UDP multicast port 1900 to receive search requests from clients.

When a device becomes available and wants to provide services it must send a NOTIFY over UDP multicast port 1900 for each service type it provides along with an sdp:alive, its uuid (via the USN header) and an expiration time (in the Cache-control: max-age header). The uPnP

specification specifies that max-age must be a minimum of 1800s (30m); it also recommends that initial notifications be sent more than once, but not more than three times, at random intervals between 0 and 100ms.

When a device receives an M-SEARCH request for a service it provides it must send a reply back via UDP unicast port 1900 to the originating requester containing its uuid (in the USN header) and an expiration time (in the Cache-control: max-age header). The uPnP specification specifies that max-age must be a minimum of 1800s (30m).

The device must keep track of when its notification/reply expiration times are about to occur and re-send another NOTIFY with a new expiration time before the expiration happens. The uPnP spec recommends that new NOTIFY messages be sent at randomly distributed intervals of less than 1/2 the expiration time.

When a device's services become unavailable it must send a NOTIFY over UDP multicast port 1900 for each service type that will be unavailable along with an ssdp:byebye.

If the device has multiple network interfaces, it must listen and send notifications on all interfaces that it wishes to provide services on. I.e. it's up to the device to decide which interfaces it wants to provide services on and then listen, announce, and reply on those interfaces.

6.2 MDNS

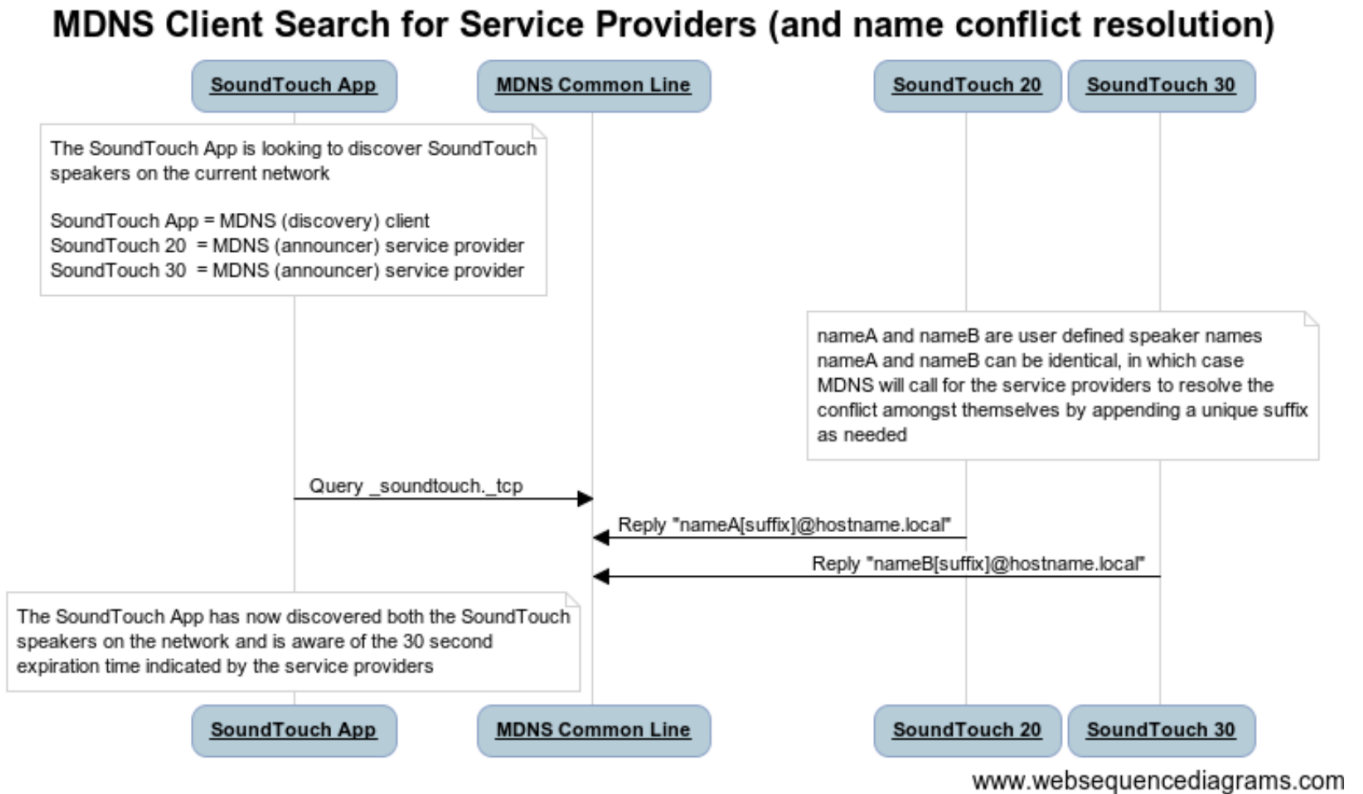
MDNS is the protocol that has implementations that go by the name of Zero-configuration, Bonjour, and Avahi. Each are different implementations of the same discovery protocol that allow systems on the same network to automatically discover each other and their capabilities via advertised services. For service providers running Zero-configuration, the service types used are:

- `_soundtouch._tcp.local` for general SoundTouch capabilities
- `_raop._tcp.local` for specific Airplay capabilities if available on a particular SoundTouch speaker

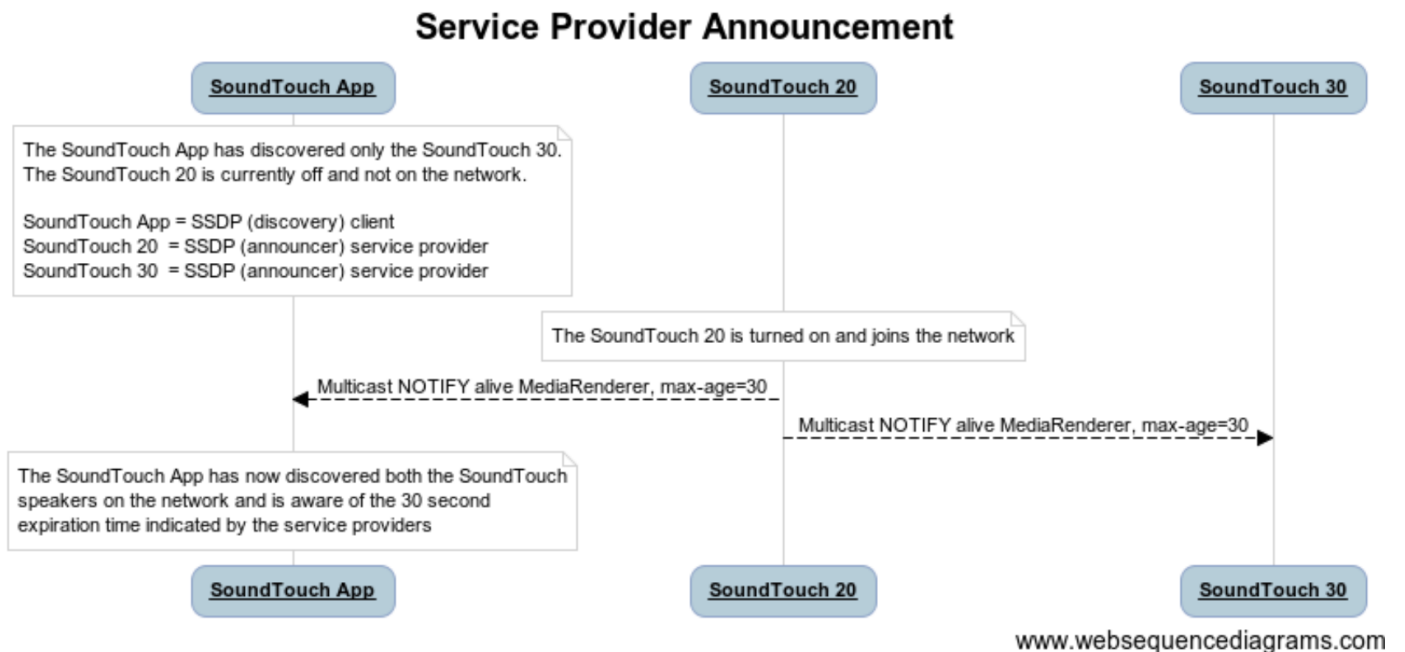
7 Examples

7.1 SSDP

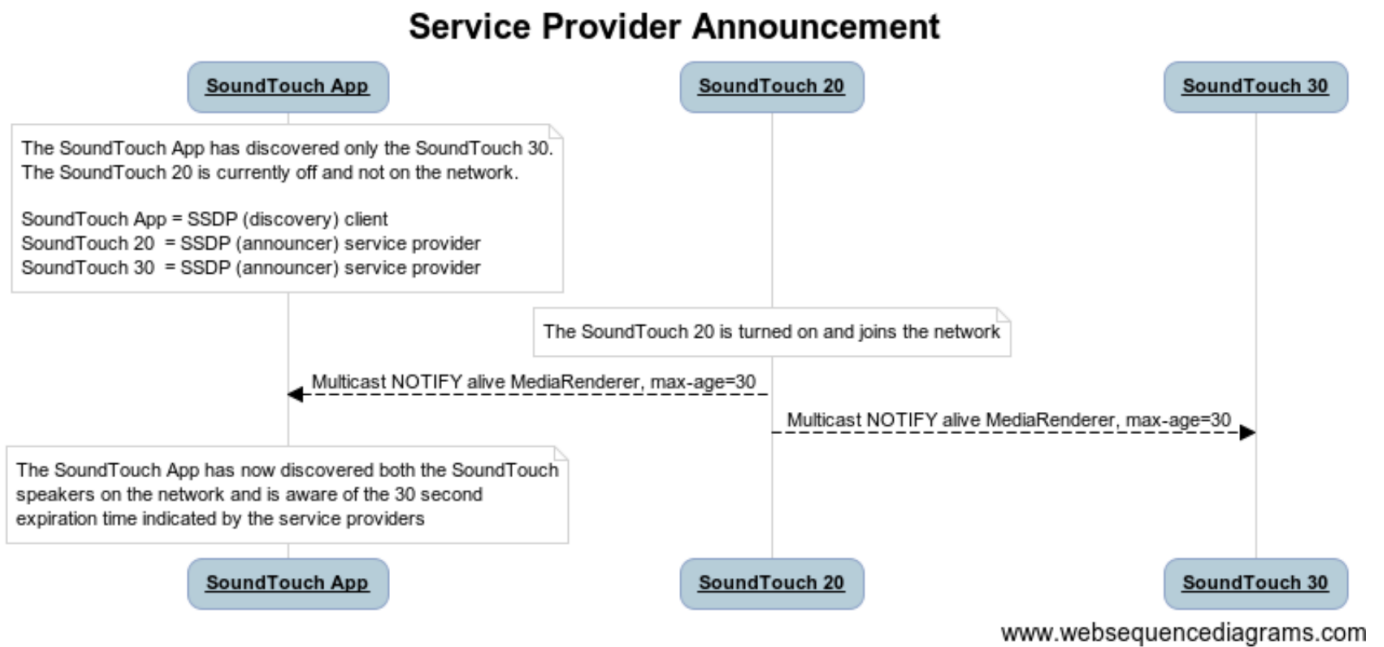
7.1.1 Client search and service providers reply:



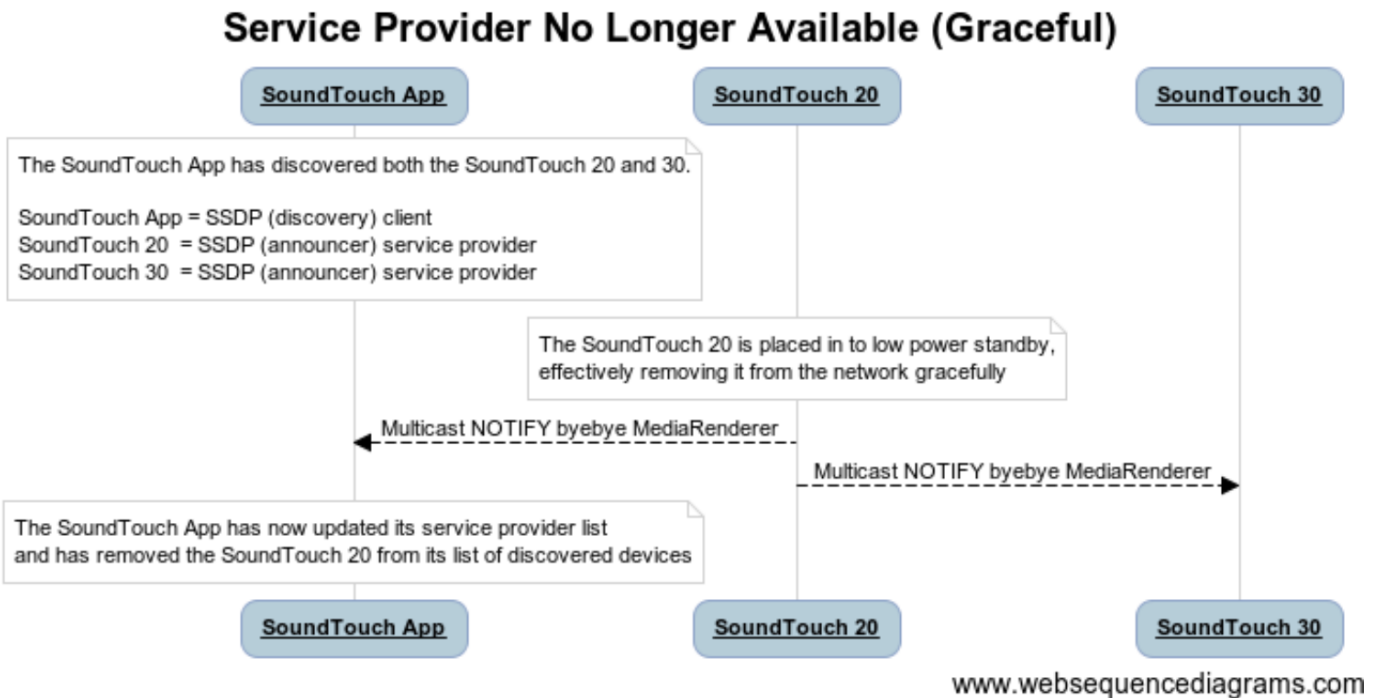
7.1.2 Service provider comes online and announces itself:



7.1.3 Service provider's previous announcement is about to expire so it announces itself:



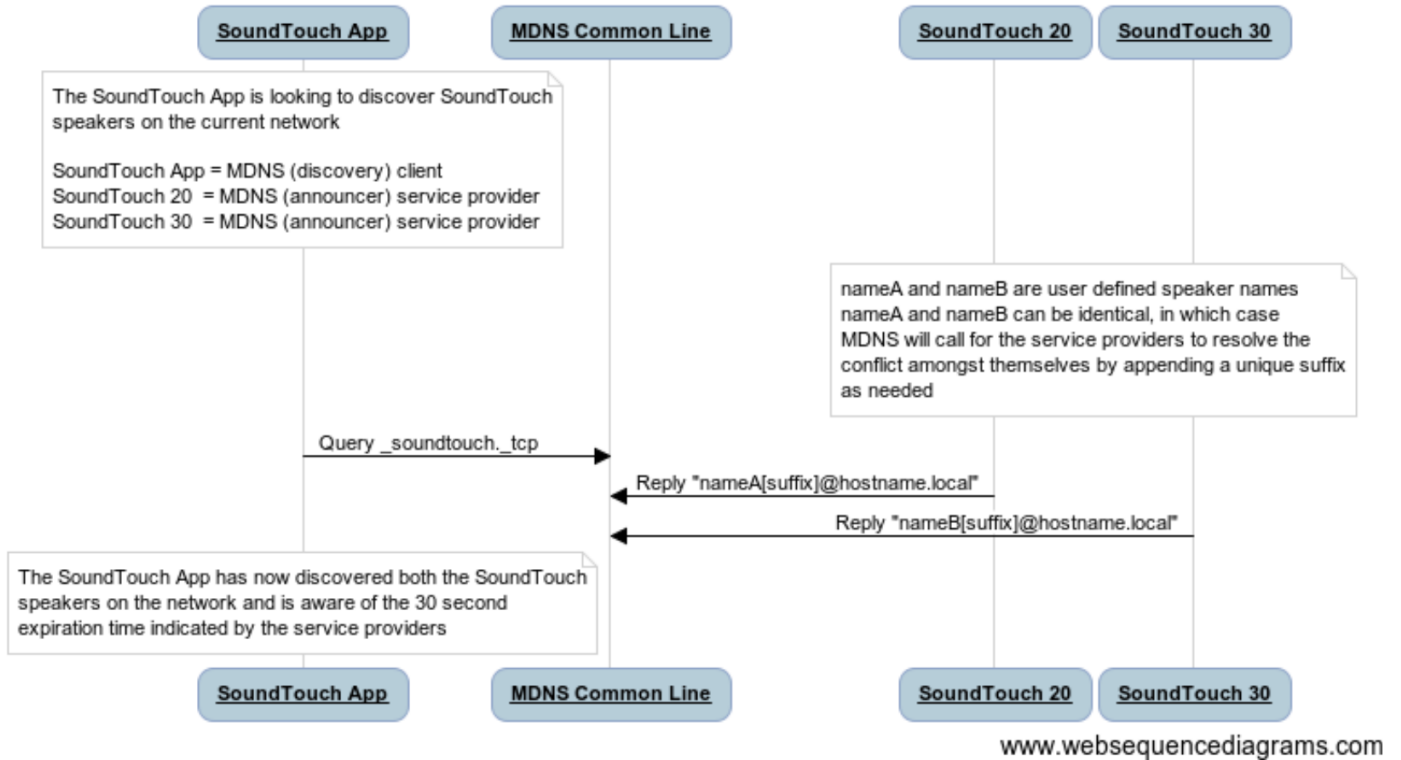
7.1.4 Service provider becomes unavailable due to a graceful shutdown:



7.2 Zero-configuration

7.2.1 Client searches for service providers

MDNS Client Search for Service Providers (and name conflict resolution)



8 Additional Resources

8.1 Software Tools For Development and Debugging

Some of the following tools might be of use during development and debugging:

- Wireshark
- Avahi
- Bonjour Browser
- A DLNA controller that uses SSDP to find a media renderer device

8.2 Web Resources For Further Information

- http://en.wikipedia.org/wiki/Simple_Service_Discovery_Protocol
- http://en.wikipedia.org/wiki/Multicast_DNS

9 Beyond Discovery

Discovery is the first phase in allowing the SoundTouch speakers to be found prior to engaging in communication with the speaker via the available WS API. Please refer to the Bose SoundTouch Web API sections below for more information about the SoundTouch WS API.

10 Web API Overview

These commands are the primary interface to command and control a Bose SoundTouch. They are sent over HTTP on port 8090 to the SoundTouch device you would like to connect to using the GET and POST methods.

10.1 Special types used by the SoundTouch WAPI

```
ART_STATUS {  
    INVALID  
    SHOW_DEFAULT_IMAGE  
    DOWNLOADING  
    IMAGE_PRESENT  
}
```

BOOL: "true" or "false"

INT: a 32-bit integer

IPADDR: an IP address, represented as a string

```
KEY_VALUE {  
    PLAY  
    PAUSE  
    STOP  
    PREV_TRACK  
    NEXT_TRACK  
    THUMBS_UP  
    THUMBS_DOWN  
    BOOKMARK  
    POWER  
    MUTE  
    VOLUME_UP  
    VOLUME_DOWN  
    PRESET_1  
    PRESET_2  
    PRESET_3  
    PRESET_4  
    PRESET_5  
    PRESET_6  
    AUX_INPUT  
    SHUFFLE_OFF  
    SHUFFLE_ON  
    REPEAT_OFF
```

REPEAT_ONE
REPEAT_ALL
PLAY_PAUSE
ADD_FAVORITE
REMOVE_FAVORITE

INVALID_KEY
}

KEY_STATE
{
press
release
}

MACADDR: a MAC address, upcased, represented as a string

PLAY_STATUS {
PLAY_STATE
PAUSE_STATE
STOP_STATE
BUFFERING_STATE
INVALID_PLAY_STATUS
}

PRESET_ID: An integer, 1 through 6 inclusive

SOURCE_STATUS {
UNAVAILABLE
READY
}

AUDIO_MODE {
AUDIO_MODE_DIRECT
AUDIO_MODE_NORMAL
AUDIO_MODE_DIALOG
AUDIO_MODE_NIGHT
}

STRING: any valid XML-escaped string

UINT: a 32-bit unsigned integer

UINT64: a 64-bit unsigned integer

URL: a URL, encoded as a string

Any get* command results in a HTTP GET command
Any set* command results in a HTTP POST command, i.e. requires a payload

11 General Status and Errors

For calls that do not have a special return payload, the default response is:

```
<status>$STRING</status>
```

For calls that can produce errors, the error response is:

```
<errors deviceId="$STRING">  
  <error value="$INT" name="$STRING"  
    severity="$STRING">$STRING</error> ...  
</errors>
```

For malformed requests, i.e., wrong value the response is:

```
<error>XML parse error (1:116): Error reading Attributes.</error>
```

```
<errors deviceId="D05FB8A9591D"><error value="1019"
  name="CLIENT_XML_ERROR" severity="Unknown">1019</error></errors>
```

12 API Methods/URLs

12.1 /key

Description: Keys are used as a simple means to interact with the SoundTouch speaker. For a full listing of supported keys please see the list under KEY VALUE in section 4.1

Send a remote button press to the device

GET:

N/A

POST:

```
<key state="$KEY_STATE" sender="$KEY_SENDER">$KEY_VALUE</key>
```

In general, it is good practice to send 2 discrete HTTP POST calls, the first using “press” as the key state, and the second using “release” as the key state. Doing so simulates both the press and release action of clicking a key. Possible values for “\$KEY STATE” are “press” or “release”.

The back to back message bodies will look like the following:

```
<key state="press" sender="Gabbo">$KEY_VALUE</key>
```

```
<key state="release" sender="Gabbo">$KEY_VALUE</key>
```

12.2 /select

Description:

Use this /select API to select any of the available sources. Sources available via this /select API will vary based on product and on the SoundTouch account. Use the /sources API to query the availability for the device.

GET:

N/A

POST:

Examples:

Sources available via this /select API will vary based on product.

Use the /sources API to view the availability for the device. Below are some samples for Product, Bluetooth and AUX

```
<ContentItem source="AUX" sourceAccount="AUX"></ContentItem>
```

```
<ContentItem source="AUX" sourceAccount="AUX3"></ContentItem>
```

```
<ContentItem source="BLUETOOTH"></ContentItem>
```

```
<ContentItem source="PRODUCT" sourceAccount="TV"></ContentItem>
```

12.3 /sources

Description:

List all available content

sources GET:

```
<sources deviceId="$MACADDR">
  <sourceItem source="$SOURCE" sourceAccount="$STRING"
    status="$SOURCE_STATUS">$STRING</sourceItem>
  ...
</sources>
```

POST:

N/A

12.4 /bassCapabilities

Description: Some speakers do not support the ability to customize the bass levels, use this to find out whether bass customization is supported

Get or set bassCapabilities

GET:

```
<bassCapabilities deviceId="$MACADDR">
  <bassAvailable>$BOOL</bassAvailable>
  <bassMin>$INT</bassMin>
  <bassMax>$INT</bassMax>
  <bassDefault>$INT</bassDefault>
</bassCapabilities>
```

POST:

N/A

12.5 /bass

Description: Sets or gets the current bass setting for a particular speaker. This may or may not be a supported capability, use the /bassCapabilities to find out whether a speaker supports bass configuration Get or set bass

GET:

```
<bass deviceId="$MACADDR">
  <targetbass>$INT</targetbass>
  <actualbass>$INT</actualbass>
</bass>
```

POST:

```
<bass>$INT</bass>
```

12.6 /getZone

Description:

Gets the current state of the multi-room zone from particular device GET:

```
<zone master="$MACADDR">
  <member
    ipaddress="$MASTER_IPADDR">"$MASTER_MACAD
    DR"</member>
  <member
    ipaddress="$SLAVE1_IPADDR">"$SLAVE1_MACADDR
    "</member> ...
</zone>
```

12.7 /setZone

Description: Creates a multi-room zone

GET:

N/A

POST:

```
<zone master="$MACADDR"
  senderIPAddress="$IPADDR"> <member
  ipaddress="$IPADDR">$MACADDR</me
  mber> ...
</zone>
```

12.8 /addZoneSlave

Description:

Add a slave to a “play everywhere” zone

GET:

N/A

POST:

```
<zone master="$MACADDR">
  <member
    ipaddress="$IPADDR">$MACADDR</me
  mber> ...
</zone>
```

12.9 /removeZoneSlave

Description:

Take a slave out of a “play everywhere” zone

GET:

N/A

POST:

```
<zone master="$MACADDR">
  <member
    ipaddress="$IPADDR">$MACADDR</me
  mber> ...
</zone>
```

12.10 /nowPlaying

Description:

Gets all info about the currently playing media

GET:

```
<nowPlaying deviceId="$MACADDR" source="$SOURCE">
  <ContentItem source="$SOURCE" location="$STRING" sourceAccount="$STRING"
    isPresetable="$BOOL">
    <itemName>$STRING</itemName>
  </ContentItem>
  <track>$STRING</track>
  <artist>$STRING</artist>
  <album>$STRING</album>
  <stationName>$STRING</stationName>
  <art artImageStatus="$ART_STATUS">$URL</art>
  <playStatus>$PLAY_STATUS</playStatus>
  <description>$STRING</description>
  <stationLocation>$STRING</stationLocation>
```

</nowPlaying>

POST:

N/A

12.11 /trackInfo

Description: Get

track information

GET:

```
<nowPlaying deviceId="$MACADDR" source="$SOURCE">
  <ContentItem source="$SOURCE" location="$STRING"
  sourceAccount="$STRING" isPresetable="$BOOL">
    <itemName>$STRING</itemName>
  </ContentItem>
  <track>$STRING</track>
  <artist>$STRING</artist>
  <album>$STRING</album>
  <stationName>$STRING</stationName>
  <art artImageStatus="$ART_STATUS">$URL</art>
  <playStatus>$PLAY_STATUS</playStatus>
  <description>$STRING</description>
  <stationLocation>$STRING</stationLocation>
</nowPlaying>
```

POST:

N/A

12.12 /volume

Description:

Get or Set the volume and mute status for this SoundTouch device. Volume ranges between 0, 100 inclusive.

GET:

```
<volume deviceId="$MACADDR">
  <targetvolume>$INT</targetvolume>
```

```
<actualvolume>$INT</actualvolume>
<muteenabled>$BOOL</muteenabled>
</volume>
```

POST:

The muteenabled setting is applied first, if present. The system will be unmuted if the volume value is larger than the current volume setting.

```
<volume>$INT<muteenabled>$BOOL</muteenabled></volume>
```

12.13 /presets

Description: Presets are a core part of the SoundTouch ecosystem. A preset is used to set and recall a specific music stream supported by the SoundTouch speaker

List of current Presets

GET:

```
<presets>
  <preset id="$PRESET_ID" createdOn="$UINT64" updateOn="$UINT64">
    <ContentItem source="$SOURCE" location="$STRING"
      sourceAccount="$STRING" isPresetable="$BOOL">
      <itemName>$STRING</itemName>
    </ContentItem>
  </preset>
  ...
</presets>
```

POST:

N/A

12.14 /info

Description:

Get device information; mostly static device info such as device id, type, IP address (per component if applicable), cloud account ID,

software version, product version and component type and version

GET:

```
<info deviceId="$MACADDR">
  <name>$STRING</name>
  <type>$STRING</type>
  <margeAccountUUID>$STRING</margeAccountUUID>
  <components>
    <component>
      <componentCategory>$STRING</componentCategory>
      <softwareVersion>$STRING</softwareVersion>
      <serialNumber>$STRING</serialNumber>
    </component>
    > ...
  </components>
  <margeURL>$URL</margeURL>
  <networkInfo type="$STRING">
    <macAddress>$MACADDR</macAddress>
    <ipAddress>$IPADDR</ipAddress>
  </networkInfo>
  ...
</info>
```

POST:

N/A

12.15 /name

Description: Set

the device name

GET:

N/A

POST:

```
<name>$STRING</name>
```

12.16 /capabilities

Description:

Retrieve specific system capabilities. Listed in the reply to GET of this URL may be optional additional URLs. Clients should only attempt to access such URLs if they are present in this reply.

For each capability, this reply provides a unique name to be used in identification, the url to be used for access, and optionally other related information to be used by the client.

GET:

```
<capabilities
  deviceId="$MACADDR"> ...
  <capability name="$STRING" url="/$STRING" info="$STRING"/>
  <capability name="$STRING" url="/$STRING"
    info="$STRING"/> ...
</capabilities>
```

POST:

N/A

12.17 /audiodspcontrols

Description:

Accesses the system DSP settings.

Only available if audiodspcontrols is listed in the reply to GET /capabilities. supportedaudiomodes conveys the set of audiomode values that are supported by the system and are accepted by POST.

GET:

```
<audiodspcontrols audiomode="$AUDIO_MODE" videosyncaudiodelay="0"
  supportedaudiomodes="$AUDIO_MODE|$AUDIO_MODE..."/>
```

POST:

If audiomode or videosyncaudiodelay are not included in the POST, they would not be changed.

```
<audiodspcontrols audiomode="$AUDIO_MODE" videosyncaudiodelay="$UINT"/>
```

12.18 /audioproducttonecontrols

Description:

Accesses the system bass and treble settings.

Only available if audioproducttonecontrols is listed in the reply to GET /capabilities.
minValue, maxValue and step convey the restrictions imposed on the POST value.

GET:

```
<audioproducttonecontrols>  
  <bass value="$INT" minValue="$INT" maxValue="$INT" step="$UINT"/>  
  <treble value="$INT" minValue="$INT" maxValue="$INT" step="$UINT"/>  
</audioproducttonecontrols>
```

POST:

If bass or treble are not included in the POST, they would not be changed.

```
<audioproducttonecontrols>  
  <bass value="$INT" />  
  <treble value="$INT" />  
</audioproducttonecontrols>
```

12.19 /audioproductlevelcontrols

Description:

Accesses the system front-center and rear-surround level settings.

Only available if audioproductlevelcontrols is listed in the reply to GET /capabilities.
minValue, maxValue and step convey the restrictions imposed on the POST value.

GET:

```
<audioproductlevelcontrols>  
  <frontCenterSpeakerLevel value="$INT" minValue="$INT" maxValue="$INT"  
    step="$UINT"/>  
  <rearSurroundSpeakersLevel value="$INT" minValue="$INT" maxValue="$INT"  
    step="$UINT"/> </audioproductlevelcontrols>
```

POST:

If frontCenterSpeakerLevel or rearSurroundSpeakersLevel are not included in the POST, they would not be changed.

```
<audioproductlevelcontrols>
  <frontCenterSpeakerLevel value="$INT" />
  <rearSurroundSpeakersLevel value="$INT" />
</audioproductlevelcontrols>
```

13 WebSockets

Notifications are server initiated WebSocket messages which inform client(s) of changes in SoundTouch device. They serve to keep clients in sync with the server. They are sent over HTTP on port 8080 via a WebSocket connection which is initiated from a WebSocket client. The WebSocket connection offers an advantage over HTTP because it allows for bidirectional communication, which allows for asynchronous notifications to be initiated from the server side (SoundTouch device) to the client connection.

13.1 WebSocket Asynchronous Notifications

After a successful WebSocket connection has been established, the simplest thing a client can do is to listen for the asynchronous notifications that are published by the SoundTouch device.

The incomplete example below shows examples of a single update notification describing what changed on the SoundTouch device. This will help inform the client, if it is interested, to perform a new request for the updated values. In some cases the notification does not contain the changed information, but for convenience, in other cases it may. Creating the websocket:

When creating a client websocket connection, be sure to specify the protocol as "gabbo". An example javascript example is shown below.

```
socket = new WebSocket("ws://$IP", "gabbo")
```

Examples:

```
<updates deviceID="$MACADDR">
</updates>
```

```
<updates deviceId="$MACADDR">
  <volume>
    <targetvolume>$INT</targetvolume>
    <actualvolume>$INT</actualvolume>
  </volume>
</updates>
```

13.1.1 PresetsChangedNotifyUI

Description: When a preset is changed in any way like added, cleared, or modified the SoundTouch speaker will send this asynchronous notification. This is a signal for the WAPI client to request the new list of presets via the /presets API

```
<updates deviceId="$MACADDR">
  <presetsUpdated>
    <presets>
      <preset id="$INT">
        <ContentItem source="$SOURCE" location="$STRING" sourceAccount=""
          isPresetable="$BOOL">
          <itemName>$STRING</itemName>
        </ContentItem>
      </preset>
      <preset id="$INT">
        <ContentItem source="$SOURCE" location="$STRING"
          sourceAccount="$STRING" isPresetable="$BOOL">
          <itemName>STRING</itemName>
        </ContentItem>
      </preset>
      <preset id="$INT">
        <ContentItem source="$SOURCE" location="$STRING"
          sourceAccount="STRING" isPresetable="$BOOL">
          <itemName>$STRING</itemName>
        </ContentItem>
      </preset>
      <preset id="$INT" createdOn="$UINT64" updatedOn="$UINT64">
        <ContentItem source="$SOURCE" location="$STRING" sourceAccount=""
          isPresetable="$BOOL">
          <itemName>$STRING</itemName>
        </ContentItem>
      </preset>
    </presets>
  </presetsUpdated>
</updates>
```

13.1.2 RecentsUpdatedNotifyUI

Description: When the recents list is changed in any way like a recent is added, removed, or moved within the list, the SoundTouch speaker will send this asynchronous notification. This is a signal for the WAPI client to request the new list of recents via the /recents API

```
<updates deviceId='$MACADDR'>
  <recentsUpdated>
    <recents>
      <recent deviceId="$MACADDR" utcTime="$UINT64">
        <contentItem source="$SOURCE" location="$STRING"
          sourceAccount="$STRING" isPresetable="$BOOL">
          <itemName>$STRING</itemName>
        </contentItem>
      </recent>
      <recent deviceId="$MACADDR" utcTime="$UINT64">
        <contentItem source="$SOURCE" location="$STRING" sourceAccount=""
          isPresetable="$BOOL">
          <itemName>$STRING</itemName>
        </contentItem>
      </recent>
      <recent deviceId="$MACADDR" utcTime="$UINT64">
        <contentItem source="$SOURCE" location="$STRING" sourceAccount=""
          isPresetable="$BOOL">
          <itemName>$STRING</itemName>
        </contentItem>
      </recent>
    </recents>
  </recentsUpdated>
</updates>
```

13.1.3 AcctModeChangedNotifyUI

Description: When the SoundTouch speaker's association with a cloud account changes then this asynchronous notification will be sent

```
<updates deviceId='$MACADDR'>
  <acctModeUpdated>
  </acctModeUpdated>
</updates>
```

13.1.4 ErrorNotification

ErrorNotification

13.1.5 NowPlayingChange

```
<updates deviceId="$MACADDR">
  <nowPlayingUpdated><nowPlaying deviceId="$MACADDR" source="$SOURCE">
    <ContentItem source="$SOURCE" location="$STRING" sourceAccount=""
    isPresetable="$BOOL">
      <itemName>$STRING</itemName>
    </ContentItem>
    <track/>
    <artist/>
    <album/>
    <stationName>$STRING</stationName>
    <art artImageStatus="$ART_STATUS">$URL</art>
    <playStatus>$PLAY_STATUS</playStatus>
    <description>$STRING</description>
    <stationLocation>$STRING</stationLocation>
  </nowPlaying>
</nowPlayingUpdated>
</updates>
```

13.1.6 VolumeChange

```
<updates deviceId="$MACADDR">
  <volumeUpdated/>
</updates>
```

13.1.7 BassChange

```
<updates deviceId="$MACADDR">
  <bassUpdated/>
</updates>
```

13.1.8 ZoneMapChange

```
<updates deviceId="$MACADDR">  
  <zoneUpdated/>  
</updates>
```

* Slave device joining a zone

```
<updates deviceId="slave $MACADDR">  
  <zoneUpdated/>  
</updates>  
<updates deviceId="slave $MACADDR">  
  <volumeUpdated/>  
</updates>  
<updates deviceId="slave $MACADDR">  
  <volumeUpdated/>  
</updates>  
<updates deviceId="slave $MACADDR">  
  <nowPlayingUpdated/>  
</updates>
```

* Slave device leaving a zone

```
<updates deviceId="slave $MACADDR">  
  <zoneUpdated/>  
</updates>  
<updates deviceId="slave $MACADDR">  
  <nowPlayingUpdated/>  
</updates>
```

* Master device notifies any time a slave device joins its zone

```
<updates deviceId="slave $MACADDR">  
  <zoneUpdated/>  
</updates>
```

```
<updates deviceId="slave $MACADDR">
  <nowPlayingUpdated/>
</updates>
```

*** Master device notifies any time a slave device leaves its zone**

```
<updates deviceId="$MACADDR">
  <zoneUpdated/>
</updates>
<updates deviceId="$MACADDR">
  <zoneUpdated/>
</updates>
```

13.1.9 SWUpdateStatusChange

Description: While this may happen in general, it is not important and there is no need to take any action when this is received

```
<updates deviceId="$MACADDR">
  <swUpdateStatusUpdated/>
</updates>
```

13.1.10 SiteSurveyResultsChange

Description: While this may happen in general, it is not important and there is no need to take any action when this is received

```
<updates deviceId="$MACADDR">
  <siteSurveyResultsUpdated/>
</updates>
```

13.1.11 SourcesChange

```
<updates deviceId="$MACADDR">
  <sourcesUpdated/>
</updates>
```

13.1.12 NowSelectionChange

```
<updates deviceId="$MACADDR">
  <nowSelectionUpdated>
    <preset id="$INT">
      <ContentItem source="$SOURCE" location="$STRING"
        sourceAccount="$STRING" isPresetable="$BOOL">
        <itemName>$STRING</itemName>
      </ContentItem>
    </preset>
  </nowSelectionUpdated>
</updates>
```

13.1.13 NetworkConnectionStatus

```
<updates deviceId="$MACADDR">
  <connectionStateUpdated/>
</updates>
```

13.1.14 InfoChange, e.g., the device name changed

```
<updates deviceId="$MACADDR">
  <infoUpdated/>
</updates>
```

14 BOSE SOUNDTOUCH WEB API TERMS OF USE

Effective January 7, 2026

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13. Survival. The provisions of Sections 10 through 14 shall survive any expiration or termination of this Agreement. In addition, any provision which by its essence and context is reasonably intended to survive beyond termination or expiration of this Agreement shall so survive.

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Addendum A

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2. Scope of License. The license granted to the end-user for the Application shall be limited to a non-transferable license to use the Application on a Compatible Bose Product that the end-user owns or controls.

3. Maintenance and Support. You shall be solely responsible for providing any maintenance and support services with respect to the Application, as specified in the EULA, or as required under applicable law. You and the end-user shall acknowledge that Bose has no obligation whatsoever to furnish any maintenance and support services with respect to the Application.

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7. Developer Name and Address. You shall state in the EULA your name and address, and the contact information (telephone number; E-mail address) to which any end-user questions, complaints or claims with respect to the Application should be directed.

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