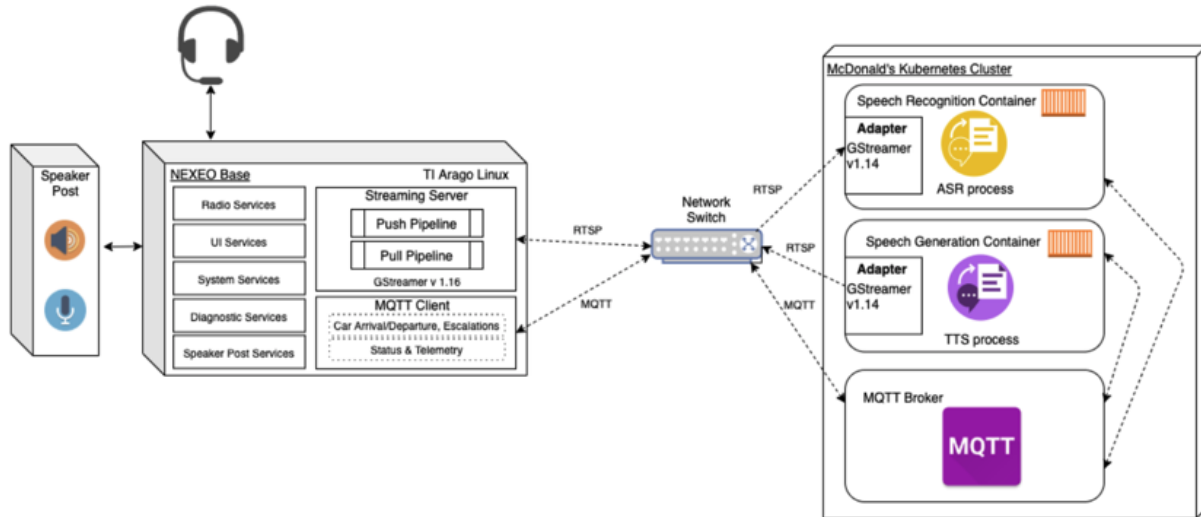


HME NEXEO contract

Context of the HME NEXEO - Agent dependency

The audio solution implemented in collaboration by McDonalds - HME and IBM is based on audio flux and MQTT events exchanged between the Drive-Thru Headset System and the McDonald's AOT Audio Service.



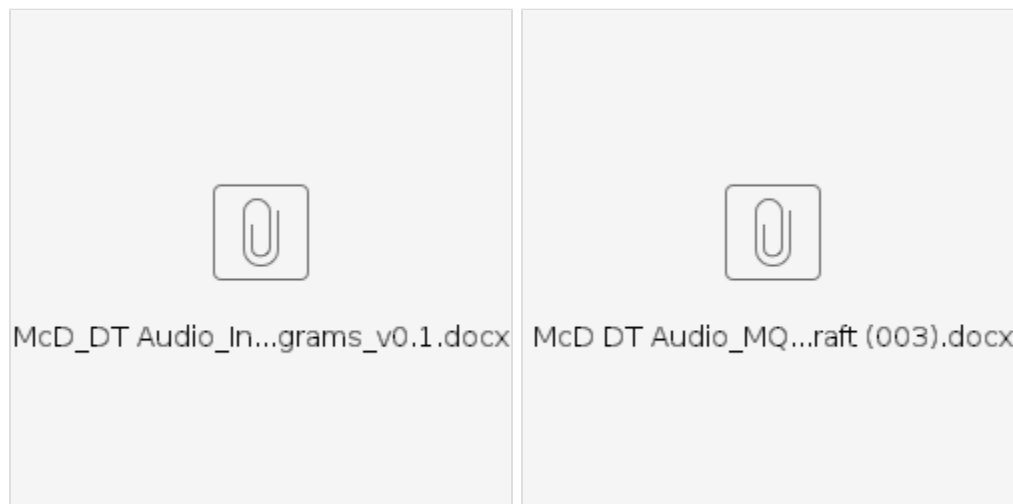
The solution is based on a Gstreamer protocol.

The WO agent solution subscribes to MQTT topics posted by HME NEXEO and EVD to trig the Welcome message over the speaker post at the exact time the car is in the proper position.

The WO solution gets event over MQTT and audio over UDP.

The WO solution posts playback request over MQTT and post the audio packets back to HME to play it over the speaker post.

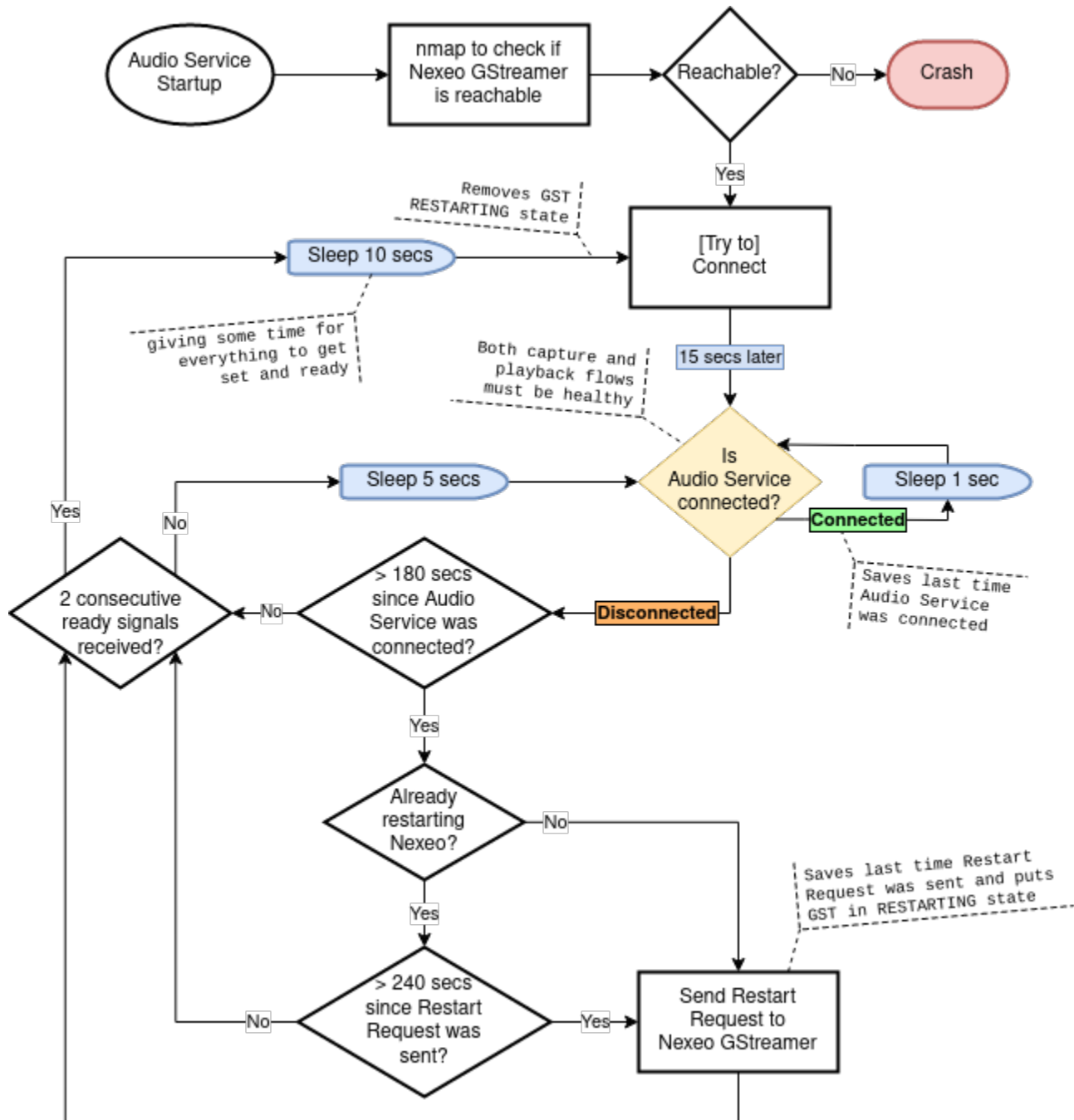
Details about the main MQTT events and payload defined by HME-WO contract



Logic implemented and dependency between HME NEXEO READY signal and audio service to reconnect and request a restart

The solution has been designed over an iterative process done by the support of Mcd and HME and is reported in the following page [NEXEO to generic Gstreamer audio integration TDD](#)

The next session intend to focus on a particular aspect of the connection - the wait WO detect the connection dropped with the HME system and the way it operates to get a reconnection.



```

READY_LOOP_SLEEP = 1 # seconds
"""sleeping time between ready checks."""

RECONNECTION_LOOP_SLEEP = 5 # seconds
"""sleeping time between reconnection checks."""

INITIAL_CONNECTION_SLEEP = 15 # seconds
"""time given to the service to establish the initial GST connection."""

BEFORE_RECONNECTION_SLEEP = 10 # seconds
"""time given to Nexeo to get all set before trying to re-establish GST connection."""



AFTER_RECONNECTION_SLEEP = 15 # seconds
"""time given to the service to re-establish GST connection."""

ELAPSED_TIME_BEFORE_RESTART = 180 # seconds
"""elapsed time since the last moment when GST was ready before sending a restart request."""

RESTART_TIMEOUT = 240 # seconds
"""elapsed time since the last restart request before trying to restart again."""

```

Recent changes applied to audio service :

Issue	Release affected	Jira ticket	Release with the fix
Consecutive Restart request	1.12	 IA-1294 - Audio service sent consecutive restart requests in stores using WO 1.12 	1.15 TBC

Details about the MQTT events

Product	Data source	Metric Name	Description	JSON Payload Sample
NEXEO	"NEXEO/status/ready"	{ "event": "ready" }	REMOVED FROM LATEST VERSION	{ "meta": { "timestamp": "2021-08-27T11:50:00.695-07:00", "msgId": "55ce35a5-94f3-4ff6-9301-db5707362733", "storeId": "99119", "msgType": "status" }, "payload": { "event": "ready" } }
NEXEO	"NEXEO/dt_audio/telemetry"	"ASRstats": { "activeClients": 0, "packetsLost": 0, "packetsReceived": 0, "packetsSent": 0 }		{ "meta": { "msgId": "7185898f-1a91-4d86-96e7-ef94aec2690", "msgType": "notification", "storeId": "99119", "timestamp": "2021-08-30T10:04:22.210-07:00" }, "payload": { "ASRstats": { "activeClients": 0, "packetsLost": 0, "packetsReceived": 0, "packetsSent": 0 }, "BOTstats": { "activeClients": 0, "packetsLost": 0, "packetsReceived": 0, "packetsSent": 0 }, "connectedClients": [], "deviceUptime": { "days": "3", "hours": "19", "min": "06", "ms": "650", "sec": "55" } } }
NEXEO	"NEXEO/dt_audio/telemetry"	"BOTstats": { "activeClients": 0, "packetsLost": 0, "packetsReceived": 0, "packetsSent": 0 }		
NEXEO	"NEXEO/dt_audio/telemetry"	"connectedClients": [], "deviceUptime": { "days": "3", "hours": "19", "min": "06", "ms": "650", "sec": "55" } }		

NEXEO	"NEXEO/dt_audio/telemetry"	"nexeoStatus": { "ipAddress": "192.168.92.168", "mqttPort": "1883", "rtspPort": "10000", "firmwareVersion": "2.7.1" }		"min": "08", "ms": "219", "sec": "06" }, "nexeoStatus": { "firmwareVersion": "2.7.1", "ipAddress": "192.168.92.168", "mqttPort": "1883", "rtspPort": "10000" }, "serviceUptime": { "days": "3", "hours": "22", "min": "07", "ms": "905", "sec": "29" }, "systemHealth": { "loop": [{ "lane": 1, "status": "Loop Disconnected" }, { "lane": 2, "status": "Loop Disconnected" }], "rt7000": [{ "id": "1", "status": "Connected" }, { "id": "2", "status": "Disconnected" }, { "id": "3", "status": "Disconnected" }, { "id": "4", "status": "Disconnected" }] }, "speakerMicPost": [{ "lane": 1, "status": "Disconnected" }, { "lane": 2, "status": "Disconnected" }], "vehicle": [{ "lane": 1, "status": "None" }, { "lane": 2, "status": "None" }] }, "telemetryInterval": 10 } }
NEXEO	"NEXEO/dt_audio/telemetry"	"serviceUptime": { "days": "3", "hours": "19", "min": "06", "ms": "336", "sec": "19" }	GStreamer Service. You can reset see "aot /request/restart"	
NEXEO	"NEXEO/dt_audio/telemetry"	"telemetryInterval": 10		
NEXEO	"NEXEO/dt_audio/telemetry"	"systemHealth": { "rt7000": [{ "id": "1", "status": "Connected" }, { "id": "2", "status": "Disconnected" }, { "id": "3", "status": "Disconnected" }, { "id": "4", "status": "Disconnected" }] }		
NEXEO	"NEXEO/dt_audio/telemetry"	"speakerMicPost": [{ "lane": 1, "status": "Disconnected" }, { "lane": 2, "status": "Disconnected" }]		
NEXEO	"NEXEO/dt_audio/telemetry"	"loop": [{ "lane": 1, "status": "Loop Disconnected" }, { "lane": 2, "status": "Loop Disconnected" }]		
NEXEO	"NEXEO/dt_audio/telemetry"	"vehicle": [{ "lane": 1, "status": "None" }, { "lane": 2, "status": "None" }]		
NEXEO	"NEXEO/request/lane1/arrive"	{ "event": "arrive" }		{ "meta": { "carID": "f98ac696-5d73-4afb-80be-25a19f07ebbf", "msgId": "ec9ee1fb-8367-4d58-a439-edeb9c1bf469", "msgType": "request", "storeId": "99119", "timestamp": "2021-08-27T09:02:42.465-07:00" }, "payload": { "event": "arrive" } }

NEXEO	"NEXEO/request/lane1/depart"	{ "event": "depart" }		{ "meta": { "carID": "f98ac696-5d73-4afb-80be-25a19f07ebbf", "msgId": "44004a15-bfd7-4d98-ae4f-f7ceb3e5b4f6", "msgType": "request", "storeId": "99119", "timestamp": "2021-08-27T09:02:49.364-07:00" }, "payload": { "event": "depart" } }
NEXEO	"NEXEO/request/lane2/arrive"	{ "event": "arrive" }		{ "meta": { "carID": "218f0c7c-8aed-4f96-b426-961bee919114", "msgId": "f2a5b13d-00b6-4eac-b76a-c084d0becd76", "msgType": "request", "storeId": "99119", "timestamp": "2021-08-26T13:00:54.876-07:00" }, "payload": { "event": "arrive" } }
NEXEO	"NEXEO/request/lane2/depart"	{ "event": "depart" }		{ "meta": { "carID": "218f0c7c-8aed-4f96-b426-961bee919114", "msgId": "c0ce2228-314c-49b8-bc91-eeda9fab3b64", "msgType": "request", "storeId": "99119", "timestamp": "2021-08-26T13:00:59.178-07:00" }, "payload": { "event": "depart" } }
NEXEO	"NEXEO/alert/crew-escalation/lane1"	{ "escalation": { "escalationBool": false, "escalationBy": "CREW" } }		{ "meta": { "carID": "f98ac696-5d73-4afb-80be-25a19f07ebbf", "msgId": "4b377f0f-714f-4ba8-be5f-24a97f1ca589", "msgType": "alert", "storeId": "99119", "timestamp": "2021-08-27T09:02:48.283-07:00" }, "payload": { "escalation": { "escalationBool": false, "escalationBy": "CREW" } } }
NEXEO	"NEXEO/alert/crew-escalation/lane1"	{ "escalation": { "escalationBool": true, "escalationBy": "CREW" } }		{ "meta": { "carID": "f98ac696-5d73-4afb-80be-25a19f07ebbf", "msgId": "49ba6d90-a902-41b2-89a8-c489029af4de", "msgType": "alert", "storeId": "99119", "timestamp": "2021-08-27T09:02:47.175-07:00" }, "payload": { "escalation": { "escalationBool": true, "escalationBy": "CREW" } } }
NEXEO	"NEXEO/alert/crew-escalation/lane2"	{ "escalation": { "escalationBool": false, "escalationBy": "CREW" } }		{ "meta": { "carID": "230ef495-414f-4ce9-a74e-8609a47385dc", "msgId": "4e608e16-225c-43ea-b8ee-da7376ecd4f2", "msgType": "alert", "storeId": "99119", "timestamp": "2021-08-26T13:00:52.152-07:00" }, "payload": { "escalation": { "escalationBool": false, "escalationBy": "CREW" } } }

NEXEO	"NEXEO/alert/crew-escalation/lane2"	{ "escalation": { "escalationBool": true, "escalationBy": "CREW" } }		{ "meta": { "carID": "230ef495-414f-4ce9-a74e-8609a47385dc", "msgId": "5c43e244-59dd-46c7-92b0-7b77238a6183", "msgType": "alert", "storeId": "99119", "timestamp": "2021-08-26T13:00:50.694-07:00" }, "payload": { "escalation": { "escalationBool": true, "escalationBy": "CREW" } } }
aot	"aot/request/auto-escalation/lane1"	"event": "help"	Action	{ "meta": { "timestamp": "2021-10-08T13:17:35.067-07:00", "msgId": "80c73768-2258-4ac0-aaec-32fa3746b2d0", "msgType": "request", "storeId": "666" }, "payload": { "event": "help" } }
NEXEO	"NEXEO/response/auto-escalation/lane1"	"event": "help", "response": "ok"	Response	{ "meta": { "timestamp": "2021-11-10T09:53:39.629-08:00", "msgId": "80c73768-2258-4ac0-aaec-32fa3746b2d0", "storeId": "666", "msgType": "resp" }, "payload": { "event": "help", "response": "ok" } }
aot	"aot/request/auto-escalation/lane2"	"event": "help"	Action	{ "meta": { "timestamp": "2021-10-08T13:17:35.067-07:00", "msgId": "80c73768-2258-4ac0-aaec-32fa3746b2d0", "msgType": "request", "storeId": "666" }, "payload": { "event": "help" } }
NEXEO	"NEXEO/response/auto-escalation/lane2"	"event": "help", "response": "ok"	Response	{ "meta": { "timestamp": "2021-11-10T09:59:36.499-08:00", "msgId": "80c73768-2258-4ac0-aaec-32fa3746b2d0", "storeId": "666", "msgType": "resp" }, "payload": { "event": "help", "response": "ok" } }
aot	"aot/request/restart"	"event": "resetNEXEO"	Action	{ "meta": { "timestamp": "2021-10-08T13:17:35.067-07:00", "msgId": "80c73768-2258-4ac0-aaec-32fa3746b2d0", "msgType": "request", "storeId": "666" }, "payload": { "event": "resetNEXEO" } }
NEXEO	"NEXEO/response/restart"	"event": "resetNEXEO", "response": "ok"	Response	{ "meta": { "timestamp": "2021-11-10T09:24:38.298-08:00", "msgId": "80c73768-2258-4ac0-aaec-32fa3746b2d0", "storeId": "666", "msgType": "resp" }, "payload": { "event": "resetNEXEO", "response": "ok" } }