

MQTT- topics

iTID

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Introduction

This document is a description of information communicated on-board the vehicle system using MQTT. The communication protocol is implemented according to the *Västtrafik MQTT (VT-MQTT)* and *MQTT_iTID_Best_PA3* specifications.

The scope of this document is only MQTT topics that Consat vehicle computer (iTID) publishes or subscribes to. The other integrating on-board units/ clients are not included in this file.

Infohub topics

Following table lists all on-board infohub topics vehicle computer publishes. Some brief description of the topic is also added in comment column.

Topic	Comment	Example content
/service/infohub/v1/stopPressed	Next stop button status	true
/service/infohub/v1/doorOpen	Door state	false
/service/infohub/v1/atStop	At stop flag	true
/service/infohub/v1/offroute	Off-route state	false
/service/infohub/v1/journeyDigest	journey name, journey start time, line name, , destination, via, dest.2, journeyId, lineId, routeId, ticketTariffId (not available for VT), journeyStatus: JOURNEY_STATUS_NONE = 0; JOURNEY_STATUS_WAITING_TO_START = 1; JOURNEY_STATUS_STARTED = 2; JOURNEY_STATUS_ENDED = 3 journeyServiceType: JST_UNKNOWN = 0; JST_NORMAL = 1; JST_EXTRA = 2; JST_REINFORCEMENT = 3; JST_DEADRUN = 4; JST_TESTRUN = 5; JST_SHORTRUN = 6;	<pre>{ "journeyName": "", "journeyStartTime": 0, "destination2": "", "destination": "", "lineName": "", "lineId": "", "ticketTariffId": "", "journeyId": "", "via": "", "journeyServiceType": 0, "via2": "", "routeId": "", "journeyDestination": "", "status": 0 }</pre>

	JST_LEARNING = 7; JST_TOW = 8;	
/service/infohub/v1/journey	journeyDigest and stop points list	
/service/infohub/v1/lastStop	Last stop	{ "stopPointId": "", "areaId": "", "indexInJourney": 0, "stopPointName": "", "areaName": "", "ticketZonelds": [] }
/service/infohub/v1/nextStop	Next stop	{ "stopPointId": "", "areaId": "", "indexInJourney": 0, "stopPointName": "", "areaName": "", "ticketZonelds": [] }
/service/infohub/journeyProgress	journeyProgressStatus can be: JOURNEY_PROGRESS_UNASSIGNED = 0; JOURNEY_PROGRESS_WAITING_FOR_JOURNEY_START = 1; JOURNEY_PROGRESS_AT_FIRST_STOP = 2; JOURNEY_PROGRESS_BETWEEN_STOPS = 3; JOURNEY_PROGRESS_APPROACHING_STOP = 4; JOURNEY_PROGRESS_REACHED_STOP = 5; JOURNEY_PROGRESS_ARRIVED_STOP = 6; JOURNEY_PROGRESS_LEAVING_STOP = 7; JOURNEY_PROGRESS_OFF_ROUTE = 8;	{ "journeyName": "", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "", "lineId": "", "timetableDeviation": 0, "journeyId": "", "currentSpeed": 0, "journeyServiceType": 0, "routeId": "", "indexInJourney": 0, "linkLength": 0, "status": 0, "longitude": 0 }
/service/infohub/v1/assignment	assignment serviceType: AST_UNKNOWN = 0; AST_NORMAL = 1; AST_EXTRA = 2; AST_REINFORCEMENT = 3; AST_TESTRUN = 4; AST_LEARNING = 5; AST_TOW = 6; assignmentSegmentReason: ASR_NONE = 0;	{ "journeyName": "", "serviceType": 0, "journeyStartTime": 0, "unboundAssignmentSessionStart": 0, "unboundAssignmentLabel": "", "journeyId": "", "segmentReason": 0, "blockId": "", "selectionType": 0, "segmentEnd": 0, "name": "", "indexInBlock": 0, "startTime": 0, "dutyId": "", "segmentStart": 0 }

	ASR_SHORTRUN = 1; ASR_SHORTRUN_TURNAR OUND = 2; ASR_REINFORCE = 3; ASR_SLICED_ASSIGNMENT = 4 assignmentSelectionType: ASSIGNMENT_SELECTION_ TYPE_UNKNOWN = 0; ASSIGNMENT_SELECTION_ TYPE_MANUAL = 1; ASSIGNMENT_SELECTION_ TYPE_AUTOMATIC = 2;	
/service/infohub/v1/expires		2020-10-20T08:30:28Z

The next coming chapters list a more detailed specification of the topics that are published in different states with an example.

After sleep – No assignment

Following topics are published when the vehicle computer wakes up from sleep and has no assignment added.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		false
/service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	journeyStatus: JOURNEY_STATUS_NONE	{"journeyName":"","journeyStartTime":0,"via2":"","routeId":"","destination":"Ej trafik","lineName":"","lineId":"","ticketTariffId":"","journeyId":"","journeyDestination":"","status":0}
/service/infohub/v1/journey	JourneyStatus: JOURNEY_STATUS_NONE	{"journeyName":"","journeyStartTime":0,"via2":"","routeId":"","destination":"Ej trafik","lineName":"","lineId":"","ticketTariffId":"","j

		<pre> journeyId":"","journeyDestination":"","status":0} journeyInfo.stops: </pre>
/service/infohub/v1/lastStop		<pre> {"stopPointId":"","areaId":"","indexInJourney":0,"stopPointName":"","areaName":"","ticketZoneIds":[]} </pre>
/service/infohub/v1/nextStop		<pre> {"stopPointId":"","areaId":"","indexInJourney":0,"stopPointName":"","areaName":"","ticketZoneIds":[]} </pre>
/service/infohub/journeyProgress	Journey progress Status: JOURNEY_PROGRESS_UNASSIGNED	<pre> {"journeyName":"","distanceToNextStop":0,"altitude":0,"latitude":0,"lineName":"","lineId":"","timetableDeviation":0,"journeyId":"","currentSpeed":0,"routeId":"","indexInJourney":0,"linkLength":0,"status":0,"longitude":0} </pre>
/service/infohub/v1/assignment		<pre> {"journeyName":"","serviceType":0,"journeyStartTime":0,"unboundAssignmentSessionStart":0,"unboundAssignmentLabel":"","journeyId":"","segmentReason":0,"blockId":"","selectionType":0,"segmentEnd":0,"name":"","indexInBlock":0,"startTime":0,"dutyId":"","segmentStart":0} </pre>
/service/infohub/v1/expires		2020-08-27T14:13:23+0200

After reboot – No assignment

Following topics are published when the vehicle computer is restarted and has no assignment added.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		false
/service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	journeyStatus: JOURNEY_STATUS_NONE journeyServiceType: JST_UNKNOWN	<pre>{ "journeyName": "", "journeyStartTime": 0, "destination2": "", "destination": "Ej i trafik", "lineName": "", "lineId": "", "ticketTariffId": "", "journeyId": "", "via": "", "journeyServiceType": 0, "via2": "", "routeId": "", "journeyDestination": "", "status": 0 }</pre>
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_NONE	<pre>{ "digest": { "journeyName": "", "journeyStartTime": 0, "destination2": "", "destination": "Ej i trafik", "lineName": "", "lineId": "", "ticketTariffId": "", "journeyId": "", "via": "", "journeyServiceType": 0, "via2": "", "routeId": "", "journeyDestination": "", "status": 0 }, "stops": [] }</pre>
/service/infohub/journeyProgress	status: JOURNEY_PROGRESS_UNASSIGNED journeyServiceType: JST_UNKNOWN	<pre>{ "journeyName": "", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "", "lineId": "", "timetableDeviation": 0, "journeyId": "", "currentSpeed": 0, "journeyServiceType": 0, "routeId": "", "indexInJourney": 0, "linkLength": 0, "status": 0, "longitude": 0 }</pre>
/service/infohub/v1/assignment		<pre>{ "journeyName": "", "serviceType": 0, "journeyStartTime": 0, "unboundAssignmentSessionStart": 0, "unboundAssignmentLabel": "", "journeyId": "", "segmentReason": 0, "blockId": "", "selectionType": 0, "segmentEnd": 0, }</pre>

		name":"","indexInBlock":0,"startTime":0,"dutyId":"","segmentStart":0}
/service/infohub/v1/lastStop		{"stopPointId":"","areaId":"","indexInJourney":0,"stopPointName":"","areaName":"","ticketZonIds":[]}
/service/infohub/v1/nextStop		{"stopPointId":"","areaId":"","indexInJourney":0,"stopPointName":"","areaName":"","ticketZonIds":[]}

Assignment- Before journey start

Following topics are published when the vehicle is assigned but is not at the start point of the journey yet.

Topic	Comment	Example content
/service/infohub/v1/atStop		true
/service/infohub/v1/journeyDigest	JOURNEY_STATUS_WAITING_TO_START journeyServiceType: JST_NORMAL	{"journeyName":"22","journeyStartTime":1603181160,"destination2":"","destination":"Ej i trafik","lineName":"90","lineId":"5090","ticketTariffId":"","journeyId":"9015014509000022","via":"","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"Frölunda Torg","status":1}
/service/infohub/v1/journey	JOURNEY_STATUS_WAITING_TO_START	{"digest":{"journeyName":"22","journeyStartTime":1603181160,"destination2":"","destination":"Ej i trafik","lineName":"90","lineId":"5090","ticketTariffId":"","journeyId":"9015014509000022","via":"","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"Frölunda Torg","status":1},"stops":["Järntorget","Järnvägen","Kustgatan","Blåsutgatan","Gråberget","Blåsutgatan","Kustgatan","Jaegerdorffsplatsen","Klippan","Orustgatan","Kungssten","Bolmörtsgatan","Dalavägen","Kaprifolgatan","Trälåsvägen","Kavåsvägen","Klangfärgsgatan","Beryllgatan","Östes Gata","Västes Gata","Björnåsgatan","Fiskebäcksskolan","Sikgatan","Aprikosgatan","Melongatan","Åkerberget","Grevebergsgatan","Grevegårdsvägen","Björk höjdgatan","Frölunda Torg"]}

/service/infohub/v1/assignment	serviceType: JST_NORMAL ASSIGNMENT_SELECTION_TYPE_MANUAL	<pre>{ "journeyName": "22", "serviceType": 1, "journeyStartTime": 1603181160, "unboundAssignmentSessionStart": 0, "unboundAssignmentLabel": "", "journeyId": "9015014509000022", "segmentReason": 0, "blockId": "19753", "selectionType": 1, "segmentEnd": 0, "name": "19753", "indexInBlock": 6, "startTime": 1603164840, "dutyId": "0", "segmentStart": 0 }</pre>
/service/infohub/v1/lastStop		<pre>{ "stopPointId": "3640012", "arealId": "3640", "areaName": "Järntorget", "indexInJourney": 0, "stopPointName": "L", "ticketZoneIds": [] }</pre>
/service/infohub/v1/nextStop		<pre>{ "stopPointId": "3645002", "arealId": "3645", "areaName": "Järnvågen", "indexInJourney": 1, "stopPointName": "B", "ticketZoneIds": [] }</pre>
/service/infohub/journeyProgress	journeyServiceType: JST_NORMAL status: JOURNEY_PROGRESS_WAITING_FOR_JOURNEY_START	<pre>{ "journeyName": "22", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "90", "lineId": "5090", "timetableDeviation": 0, "journeyId": "9015014509000022", "currentSpeed": 0, "journeyServiceType": 1, "routeId": "127870", "indexInJourney": 0, "linkLength": 0, "status": 1, "longitude": 0 }</pre>

Following topics are published when the vehicle is assigned waiting at the start point of the journey. Following example is when the vehicle is at a public start point. Note: for trams, signs are not changed to the current journey's line and if the start stop point is a non-public stop point, they are updated when the vehicle is at the first public stop point.

Topic	Comment	Example content
/service/infohub/v1/atStop		true
/service/infohub/v1/journeyDigest	journeyServiceType: AST_NORMAL status: JOURNEY_STATUS_STARTED	<pre>{ "journeyName": "130", "journeyStartTime": 1603190700, "destination2": "", "destination": "Ekesträgatan", "lineName": "16", "lineId": "5016", "ticketTariffId": "", "journeyId": "9015014501600130", "via": "", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Ekesträgatan", "status": 1 }</pre>
/service/infohub/v1/journey	Journey status:	<pre>{ "digest": { "journeyName": "130", "journeyStartTime": 1603190700, "destination2": "", "destination": "Ekesträgatan", "lineName": "16", "lineId": "5016", "ticketTariffId": "", "journeyId": "9015014501600130", "via": "", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Ekesträgatan", "status": 1 } }</pre>

	JOURNEY_STATUS_STARTED	<pre> {"lineName":"16","lineId":"5016", "ticketTariffId":"","journeyId":"9015014501600130", "via":"","journeyServiceType":1,"via2":"","routeId":""," journeyDestination":"Eketrågatan", "status":1,"stops":["Marklandsgatan","Marklandsgatan", "Annedalskyrkan","Sahlgrenska Huvudentré","Wavrinskys Plats","Chalmers","Kapellplatsen","Vasaplatsen", "Grönsakstorget","Domkyrkan","Brunnsparke n","Nordstan","Frihamnsporten","Pumpgatan", "Regnbågsgatan","Lindholmen","Sannegårdsha mnen","Nordviksgatan","Sörhallstorget","Eriksb ergstorget","Danaplatsen","Säterigatan","Lundb y Gamla Kyrka","Eketrågatan","Eketrågatan"]} </pre>
/service/infohub/v1/lastStop		<pre> {"stopPointId":"4760007","areald":"4760","a reaName":"Marklandsgatan","indexInJourne y":1,"stopPointName":"G","ticketZonIds":[]} </pre>
/service/infohub/v1/nextStop		<pre> {"stopPointId":"1100001","areald":"1100","a reaName":"Annedalskyrkan","indexInJourne y":2,"stopPointName":"A","ticketZonIds":[]} </pre>
/service/infohub/journeyProgress	Journey progress Status: JOURNEY_PROGRESS_AT_FIRST_STOP	<pre> {"journeyName":"130","distanceToNextStop":0, "altitude":0,"latitude":0,"lineName":"16", "lineId":"5016","timetableDeviation":0,"journ eyId":"9015014501600130","currentSpeed":0, "journeyServiceType":1,"routeId":"133816", "indexInJourney":1,"linkLength":0,"status":5, "longitude":0} </pre>
/service/infohub/v1/assignment	serviceType: AST_NORMAL	<pre> {"journeyName":"130","serviceType":1,"jour neyStartTime":1603190700,"unboundAssign mentSessionStart":0,"unboundAssignmentLa bel":"","journeyId":"9015014501600130","se gmentReason":0,"blockId":"17711","selectio nType":1,"segmentEnd":0,"name":"17711","i ndexInBlock":4,"startTime":1603168500,"dut yId":"0","segmentStart":0} </pre>

Journey started- between stops

This chapter contains topics published, when the journey is started, and vehicle is between two stops.

Topic	Comment	Example content
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/service/infohub/v1/stopPressed		true
service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_STATUS_STARTED	{ "journeyName": "22", "journeyStartTime": 1603181160, "destination2": "", "destination": "Frölunda Torg", "lineName": "90", "lineId": "5090", "ticketTariffId": "", "journeyId": "9015014509000022", "via": "via Gråberget", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Frölunda Torg", "status": 2 }
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_STARTED	{ "digest": { "journeyName": "22", "journeyStartTime": 1603181160, "destination2": "", "destination": "Frölunda Torg", "lineName": "90", "lineId": "5090", "ticketTariffId": "", "journeyId": "9015014509000022", "via": "via Gråberget", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Frölunda Torg", "status": 2 }, "stops": ["Järntorget", "Järnvågen", "Kustgatan", "Blåsutgatan", "Gråberget", "Blåsutgatan", "Kustgatan", "Jaegerdorffsplatsen", "Klippan", "Orustgatan", "Kungssten", "Bölmörtsgatan", "Dalavägen", "Kaprifolgatan", "Trälåsvägen", "Kavåsvägen", "Klangfärgsgatan", "Beryllgatan", "Östes Gata", "Västes Gata", "Björnåsgatan", "Fiskebäcksskolan", "Sikgatan", "Aprikosgatan", "Melongatan", "Åkerberget", "Grevebergsgatan", "Grevegårdsvägen", "Björkhöjdsgatan", "Frölunda Torg"] }
/service/infohub/v1/atStop		false
/service/infohub/v1/lastStop		{ "stopPointId": "3645002", "areaid": "3645", "areaName": "Järnvågen", "indexInJourney": 1, "stopPointName": "B", "ticketZoneIds": [] }
/service/infohub/v1/nextStop		{ "stopPointId": "4130001", "areaid": "4130", "areaName": "Kustgatan", "indexInJourney": 2, "stopPointName": "A", "ticketZoneIds": [] }
/service/infohub/journeyProgress	Journey progress	{ "journeyName": "22", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "90" }

	Status: JOURNEY_ PROGRESS _BETWEE N_STOPS Note: position, speed, deviation and link distance is configurab le to publish.	<pre>, "linelId": "5090", "timetableDeviation": 0, "jo urneyId": "9015014509000022", "currentSpe ed": 0, "journeyServiceType": 1, "routeId": "12 7870", "indexInJourney": 1, "linkLength": 0, "st atus": 3, "longitude": 0}</pre>
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Approaching stop

The vehicle becomes approaching when it is 100 meters (or less) from stop point. Following table lists the published topics when approaching the stop point.

Topic	Comment	Example content
/service/infohub/v1/stopPres sed		true
service/infohub/v1/doorOpe n		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/journey Digest	Journey status: JOURNEY_S TATUS_STA RTED	
/service/infohub/v1/journey	Journey status: JOURNEY_S TATUS_STA RTED	
/service/infohub/v1/atStop		false

/service/infohub/v1/lastStop		{"stopPointId":"3645002","areaId":"3645","areaName":"Järnvågen","indexInJourney":1,"stopPointName":"B","ticketZoneIds":[]}
/service/infohub/v1/nextStop		{"stopPointId":"4130001","areaId":"4130","areaName":"Kustgatan","indexInJourney":2,"stopPointName":"A","ticketZoneIds":[]}
/service/infohub/journeyProgress	Journey progress status JOURNEY_PROGRESS_APPROACHING_STOP	{"journeyName":"22","distanceToNextStop":0,"altitude":0,"latitude":0,"lineName":"90","lineId":"5090","timetableDeviation":0,"journeyId":"9015014509000022","currentSpeed":0,"journeyServiceType":1,"routeId":"127870","indexInJourney":1,"linkLength":0,"status":4,"longitude":0}

Reaching stop

When the vehicle is 0meter from the stop point, and the doors are not opened yet. Following topics are published when reaching a stop point.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		true
service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/assignment/		{"journeyName":"22","serviceType":1,"journeyStartTime":1603181160,"unboundAssignmentSessionStart":0,"unboundAssignmentLabel":"","journeyId":"9015014509000022","segmentReason":0,"blockId":"19753","selectionType":1,"segmentEnd":0,"name":"19753","indexInBlock":6,"startTime":1603164840,"dutyId":"0","segmentStart":0}
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_STATUS_STARTED	{"journeyName":"22","journeyStartTime":1603181160,"destination2":"","destination":"Frölunda Torg","lineName":"90","lineId":"5090","ticketTariffId":"","journeyId":"9015014509000022","via":"via Gråberget","journeyServiceType":1,"via2":"",""

		routeId":"","journeyDestination":"Frölunda Torg","status":2}
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_STARTED	{ "digest":{"journeyName":"22","journeyStartTime":1603181160,"destination2":"","destination":"Frölunda Torg","lineName":"90","lineId":"5090","ticketTariffId":"","journeyId":"9015014509000022","via":"via Gråberget","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"Frölunda Torg","status":2}, "stops":["Järntorget","Järnvågen","Kustgatan","Blåsutgatan","Gråberget","Blåsutgatan","Kustgatan","Jaegerdorffsplatsen","Klippan","Orustgatan","Kungssten","Bolmörtsgatan","Dalavägen","Kaprifolgatan","Trälåsvägen","Kavåsvägen","Klangfärgsgatan","Beryllgatan","Östes Gata","Västes Gata","Björnåsgatan","Fiskebäcksskolan","Sikgatan","Aprikosgatan","Melongatan","Åkerberget","Grevebergsgatan","Grevegårdsvägen","Björkhöjdsgatan","Frölunda Torg"]} }
/service/infohub/v1/atStop		true
/service/infohub/v1/lastStop		{ "stopPointId":"5866001","arealId":"5866","areaName":"Skimmelvägen","indexInJourney":2,"stopPointName":"A","ticketZoneIds":[]} }
/service/infohub/v1/nextStop		{ "stopPointId":"2697001","arealId":"2697","areaName":"Gerrebacka Gård","indexInJourney":3,"stopPointName":"A","ticketZoneIds":[]} }
/service/infohub/journeyProgress	Journey progress status: JOURNEY_PROGRESS_REACHED_STOP	{ "journeyName":"124","distanceToNextStop":323,"altitude":11.976550000000001,"latitude":57.80798,"lineName":"ROSA","lineId":"5213","timetableDeviation":1437,"journeyId":"9015014521300124","currentSpeed":0,"routeId":"126285","indexInJourney":2,"linkLength":323,"status":5,"longitude":11.976550000000001} }

At stop

Following topics are published when the vehicle is at the stop point ie. doors are opened at the stop point.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		true
service/infohub/v1/doorOpen		true
/service/infohub/v1/atStop		true
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_STATUS_STARTED	{ "journeyName": "124", "journeyStartTime": 1602585780, "destination2": "", "destination": "Billdal", "lineName": "ROSA", "lineId": "5213", "ticketTariffId": "", "journeyId": "9015014521300124", "via": "via Kärra", "via2": "", "routeId": "", "journeyDestination": "Billdal", "status": 1 }
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_STARTED	
/service/infohub/v1/atStop		true
/service/infohub/v1/lastStop		{ "stopPointId": "5866001", "arealId": "5866", "areaName": "Skimmelvägen", "indexInJourney": 2, "stopPointName": "A", "ticketZoneIds": [] }
/service/infohub/v1/nextStop		{ "stopPointId": "2697001", "arealId": "2697", "areaName": "Gerrebacka Gård", "indexInJourney": 3, "stopPointName": "A", "ticketZoneIds": [] }
/service/infohub/journeyProgress	Journey progress status: JOURNEY_PROGRESS_ARRIVED_STOP	{ "journeyName": "22", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "90", "lineId": "5090", "timetableDeviation": 0, "journeyId": "9015014509000022", "currentSpeed": 0, "journeyServiceType": 1, "routeId": "127870", "indexInJourney": 2, "linkLength": 0, "status": 6, "longitude": 0 }

Departing stop

Following table lists the published topics when the vehicle leaves the stop point.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		false
service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		true
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_STATUS_STARTED	{ "journeyName": "124", "journeyStartTime": 1602585780, "destination2": "", "destination": "Billdal", "lineName": "ROSA", "lineId": "5213", "ticketTariffId": "", "journeyId": "9015014521300124", "via": "via Kärre", "via2": "", "routeId": "", "journeyDestination": "Billdal", "status": 2 }
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_STARTED	{ "digest": { "journeyName": "22", "journeyStartTime": 1603181160, "destination2": "", "destination": "Frölunda Torg", "lineName": "90", "lineId": "5090", "ticketTariffId": "", "journeyId": "9015014509000022", "via": "via Gråberget", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Frölunda Torg", "status": 2 }, "stops": ["Järntorget", "Järnvågen", "Kustgatan", "Blåsutgatan", "Gråberget", "Blåsutgatan", "Kustgatan", "Jaegerdorffsplatsen", "Klippan", "Orustgatan", "Kungssten", "Bolmörtsgratan", "Dalavägen", "Kaprifolgatan", "Trälåsvägen", "Kavåsvägen", "Klangfärgsgatan", "Beryllgatan", "Östes Gata", "Västes Gata", "Björnåsgatan", "Fiskebäcksskolan", "Sikgatan", "Aprikosgatan", "Melongatan", "Åkerberget", "Grevebergsgatan", "Grevegårdsvägen", "Björkhöjdsgatan", "Frölunda Torg"] }
/service/infohub/v1/lastStop		{ "stopPointId": "4130001", "areaId": "4130", "areaName": "Kustgatan", "indexInJourney": 2, "stopPointName": "A", "ticketZoneIds": [] }
/service/infohub/v1/nextStop		{ "stopPointId": "1580001", "areaId": "1580", "areaName": "Blåsutgatan", "indexInJourney": 3, "stopPointName": "A", "ticketZoneIds": [] }

/service/infohub/journeyProgress	Journey progress status: JOURNEY_PROGRESS_LEAVING_STOP	{"journeyName":"22","distanceToNextStop":0,"altitude":0,"latitude":0,"lineName":"90","lineId":"5090","timetableDeviation":0,"journeyId":"9015014509000022","currentSpeed":0,"journeyServiceType":1,"routeId":"127870","indexInJourney":2,"linkLength":0,"status":7,"longitude":0}
----------------------------------	---	---

Off-route

Following table lists the topics published when the vehicle leaves the planned route.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		false
service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		true
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_STATUS_STOPPED	{"journeyName":"22","journeyStartTime":1603181160,"destination2":"","destination":"Frölunda Torg","lineName":"90","lineId":"5090","ticketTariffId":"","journeyId":"9015014509000022","via":"","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"Frölunda Torg","status":2}
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_STOPPED	{"digest":{"journeyName":"22","journeyStartTime":1603181160,"destination2":"","destination":"Frölunda Torg","lineName":"90","lineId":"5090","ticketTariffId":"","journeyId":"9015014509000022","via":"","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"Frölunda Torg","status":2},"stops":["Järntorget","Järnvågen","Kustgatan","Blåsutgatan","Gråberget","Blåsutgatan","Kustgatan","Jaegerdorfsplatsen","Klippan","Orustgatan","Kungssten","Bolmörtsgatan","Dalavägen","Kaprifolgatan","Trälåsvägen","Kavåsvägen","Klangfärgsgatan","Beryllgatan","Östes Gata","Västes

		Gata", "Björnåsgatan", "Fiskebäcksskolan", "S ikgatan", "Aprikosgatan", "Melongatan", "Åk erberget", "Grevebergsgatan", "Grevegårdsv ägen", "Björkhöjdsgatan", "Frölunda Torg"]}
/service/infohub/v1/lastStop		
/service/infohub/v1/nextStop		
/service/infohub/journeyProgr ess	Journey progress status: JOURNEY_P ROGRESS_O FF_ROUTE	{"journeyName": "22", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "90", "lineId": "5090", "timetableDeviation": 0, "j ourneyId": "9015014509000022", "currentS peed": 0, "journeyServiceType": 1, "routeId": "127870", "indexInJourney": 3, "linkLength": 0, "status": 8, "longitude": 0}

To the last stop point- public or non-public

In this case, vehicle is driving to the last stop point within the current journey.

Topic	Comment	Example content
/service/infohub/v1/stopPres sed		false
service/infohub/v1/doorOpe n		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyD igest	Journey status: JOURNEY_S TATUS_STA RTED	{"journeyName": "22", "journeyStartTime": 1603181160, "destination2": "", "destinatio n": "Frölunda Torg", "lineName": "90", "lineId": "5090", "tic ketTariffId": "", "journeyId": "90150145090 00022", "via": "", "journeyServiceType": 1, "v ia2": "", "routeId": "", "journeyDestination": "Frölunda Torg", "status": 2}
/service/infohub/v1/journey	Journey status: JOURNEY_S	

	TATUS_STA RTED	
/service/infohub/v1/lastStop		{ "stopPointId": "1480001", "areaId": "1480", "areaName": "Björkhöjdsgatan", "indexInJourney": 28, "stopPointName": "A", "ticketZonIds": [] }
/service/infohub/v1/nextStop		{ "stopPointId": "2530010", "areaId": "2530", "areaName": "Frölunda Torg", "indexInJourney": 29, "stopPointName": "J", "ticketZonIds": [] }
/service/infohub/journeyProgress	Journey progress status: JOURNEY_P ROGRESS_B ETWEEN_ST OPS	{ "journeyName": "22", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "90", "lineId": "5090", "timetableDeviation": 0, "journeyId": "9015014509000022", "currentSpeed": 0, "journeyServiceType": 1, "routeId": "127870", "indexInJourney": 28, "linkLength": 0, "status": 3, "longitude": 0 }

At last stop of the journey

This chapter is about the state when vehicle is at the last stop point if the current journey. Following table lists the topics at the last public stop point. In following example there is non-public stop point at the end of the current journey and the next coming journey's start. In this case vehicle moves to next journey when reaching at the end point when using simulator.

Topic	Comment	Example content
service/infohub/v1/doorOpen		true
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_ STATUS_ STARTED	{ "journeyName": "23", "journeyStartTime": 1603183800, "destination2": "", "destination": "Järntorget", "lineName": "90", "lineId": "5090", "ticketTariffId": "", "journeyId": "9015014509000023", "via": "", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Järntorget", "status": 2 }
/service/infohub/v1/journey		{ "digest": { "journeyName": "23", "journeyStartTime": 1603183800, "destination2": "", "destination": "Järntorget", "lineName": "90", "lineId": "5090", "ticketTariffId": "", "journeyId": "9015014509000023", "via": "", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "Järntorget", "status": 1 }, "stops": ["Frölunda Torg", "Björkhöjdsgatan", "Grevegårdsvägen", "Grevebergsgatan", "Åkerberget", "Melongatan"] }

		,"Aprikosgatan","Sikgatan","Fiskebäcksskolan","Björnåsgatan","Västes Gata","Östes Gata","Beryllgatan","Klangfärgsgatan","Kavåsvägen","Trälåsvägen","Kaprifolgatan","Dalavägen","Bolmörtsgatan","Kungssten","Orustgatan","Klippan","Jaegerdorffsplatsen","Kustgatan","Blåsutgatan","Gråberget","Blåsutgatan","Kustgatan","Järntorget"]}]
/service/infohub/v1/lastStop		
/service/infohub/v1/nextStop		{"stopPointId":"","areaid":"","areaName":"","indexInJourney":0,"stopPointName":"","ticketZoneIds":[]}
/service/infohub/journeyProgress		{"journeyName":"23","distanceToNextStop":0,"altitude":0,"latitude":0,"lineName":"90","lineId":"5090","timetableDeviation":0,"journeyId":"9015014509000023","currentSpeed":0,"journeyServiceType":1,"routeId":"127898","indexInJourney":28,"linkLength":0,"status":5,"longitude":0}
/service/infohub/v1/assignment		{"journeyName":"23","serviceType":1,"journeyStartTime":1603183800,"unboundAssignmentSessionStart":0,"unboundAssignmentLabel":"","journeyId":"9015014509000023","segmentReason":0,"blockId":"19753","selectionType":1,"segmentEnd":0,"name":"19753","indexInBlock":7,"startTime":1603164840,"dutyId":"0","segmentStart":0}

At last stop of the last journey

This chapter contains topics when the vehicle is at the last stop point of the last journey in the block and assignment will be removed.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		false
service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		false
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	Journey status:	{"journeyName":"","journeyStartTime":0,"destination2":"","destination":"Ej i

	JOURNEY_STATUS_ENDED	trafik", "lineName": "", "lineId": "", "ticketTarifId": "", "journeyId": "", "via": "", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "", "status": 3}
/service/infohub/v1/journey		{ "digest": { "journeyName": "", "journeyStartTime": 0, "destination2": "", "destination": "Ej i trafik", "lineName": "", "lineId": "", "ticketTarifId": "", "journeyId": "", "via": "", "journeyServiceType": 1, "via2": "", "routeId": "", "journeyDestination": "", "status": 3, "stops": [] }
/service/infohub/v1/lastStop		{ "stopPointId": "", "areaId": "", "areaName": "", "indexInJourney": 0, "stopPointName": "", "ticketZoneIds": [] }
/service/infohub/v1/nextStop		{ "stopPointId": "", "areaId": "", "areaName": "", "indexInJourney": 0, "stopPointName": "", "ticketZoneIds": [] }
/service/infohub/journeyProgress	Journey progress status: JOURNEY_PROGRESS_REACHED_STOP JOURNEY_PROGRESS_UNASSIGNED	{ "journeyName": "8298", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "9E", "lineId": "5409", "timetableDeviation": 0, "journeyId": "9015014540908298", "currentSpeed": 0, "journeyServiceType": 1, "routeId": "137517", "indexInJourney": 6, "linkLength": 0, "status": 5, "longitude": 0 } Doors opened: { "journeyName": "", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "", "lineId": "", "timetableDeviation": 0, "journeyId": "", "currentSpeed": 0, "journeyServiceType": 0, "routeId": "", "indexInJourney": 0, "linkLength": 0, "status": 0, "longitude": 0 }
/service/infohub/v1/assignment		{ "journeyName": "", "serviceType": 0, "journeyStartTime": 0, "unboundAssignmentSessionStart": 0, "unboundAssignmentLabel": "", "journeyId": "", "segmentReason": 0, "blockId": "", "selectionType": 0, "segmentEnd": 0, "name": "", "indexInBlock": 0, "startTime": 0, "dutyId": "", "segmentStart": 0 }

Assignment ended

This chapter contains the topics when assignment is ended after finishing the last journey in the block.

Topic	Comment	Example content
/service/infohub/v1/atStop		false
/service/infohub/v1/journeyDigest	Journey status: JOURNEY_STATUS_ENDED	{"journeyName":"","journeyStartTime":0,"destination2":"","destination":"Ej i trafik","lineName":"","lineId":"","ticketTariffId":"","journeyId":"","via":"","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"","status":3}
/service/infohub/v1/journey	Journey status: JOURNEY_STATUS_ENDED	{"digest":{"journeyName":"","journeyStartTime":0,"destination2":"","destination":"Ej i trafik","lineName":"","lineId":"","ticketTariffId":"","journeyId":"","via":"","journeyServiceType":1,"via2":"","routeId":"","journeyDestination":"","status":3},"stops":[]}
/service/infohub/v1/lastStop		{"stopPointId":"","areaid":"","areaName":"","indexInJourney":0,"stopPointName":"","ticketZoneIds":[]}
/service/infohub/v1/nextStop		{"stopPointId":"","areaid":"","areaName":"","indexInJourney":0,"stopPointName":"","ticketZoneIds":[]}
/service/infohub/journeyProgress	Journey progress status: JOURNEY_PROGRESS_UNASSIGNED	{"journeyName":"","distanceToNextStop":0,"altitude":0,"latitude":0,"lineName":"","lineId":"","timetableDeviation":0,"journeyId":"","currentSpeed":0,"journeyServiceType":0,"routeId":"","indexInJourney":0,"linkLength":0,"status":0,"longitude":0}
/service/infohub/v1/assignment		{"journeyName":"","serviceType":0,"journeyStartTime":0,"unboundAssignmentSessionStart":0,"unboundAssignmentLabel":"","journeyId":"","segmentReason":0,"blockId":"","selectionType":0,"segmentEnd":0,"name":"","indexInBlock":0,"startTime":0,"dutyId":"","segmentStart":0}

Short run

This chapter is about applying a short run. In this case the new destination and updated stop points list is published in journey information.

Topic	Comment	Example content
/service/infohub/v1/stopPressed		false
service/infohub/v1/doorOpen		false
/service/infohub/v1/atStop		true
/service/infohub/v1/offroute		false
/service/infohub/v1/journeyDigest	Destination and stop points list are updated. journeyService Type: JST_SHORTRUN	{ "journeyName": "96", "journeyStartTime": 1603182180, "destination2": "", "destination": "Kärra Centrum", "lineName": "ROSA", "lineId": "5213", "ticketTariffId": "", "journeyId": "9015014521300096", "via": "via Gerrebacka", "journeyServiceType": 6, "via2": "", "routeId": "", "journeyDestination": "Bilidal", "status": 2 }
/service/infohub/v1/journey	Destination and stop points list are updated.	{ "digest": { "journeyName": "96", "journeyStartTime": 1603182180, "destination2": "", "destination": "Kärra Centrum", "lineName": "ROSA", "lineId": "5213", "ticketTariffId": "", "journeyId": "9015014521300096", "via": "via Gerrebacka", "journeyServiceType": 6, "via2": "", "routeId": "", "journeyDestination": "Bilidal", "status": 2 }, "stops": ["Klareberg", "Fyrs pannvägen", "Skimmelvägen", "Gerrebacka Gård", "Ridhästvägen", "Mystängen", "Stora Mysternavägen", "Ingebäcks By", "Klareberg", "Burmans Gata", "Lillekärr Norra", "Kärra Centrum"] }
/service/infohub/v1/lastStop		
/service/infohub/v1/nextStop		
/service/infohub/journeyProgress	journeyService Type:	{ "journeyName": "96", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "" }

	JST_SHORT RUN	ROSA","lineId":"5213","timetableDeviation":0,"journeyId":"9015014521300096","currentSpeed":0,"journeyServiceType":6,"routeId":"126285","indexInJourney":0,"linkLength":0,"status":2,"longitude":0}
/service/infohub/v1/assignment	SegmentReason: ASR_SHORT RUN_TURN AROUND	{"journeyName":"96","serviceType":1,"journeyStartTime":1603182180,"unboundAssignmentSessionStart":0,"unboundAssignmentLabel":"","journeyId":"9015014521300096","segmentReason":2,"blockId":"18761","selectionType":1,"segmentEnd":11,"name":"18761","indexInBlock":5,"startTime":1603168560,"dutyId":"0","segmentStart":0}

Reinforcement

This chapter is about reinforcing parts of a journey. In this case the new destination and updated stop points list must be published in journey information.

Topic	Comment	Example content
/service/infohub/v1/atStop		true
/service/infohub/v1/journey Digest	journeyServiceType: JST_REINFORCEMENT	{"journeyName":"110","journeyStartTime":1603186380,"destination2":"","destination":"Kärä Kyrka","lineName":"ROSA","lineId":"5213","ticketTariffId":"","journeyId":"9015014521300110","via":"via Kärä","journeyServiceType":3,"via2":"","routeId":"","journeyDestination":"Billdal","status":3}
/service/infohub/v1/journey		{"digest":{"journeyName":"110","journeyStartTime":1603186380,"destination2":"","destination":"Kärä Kyrka","lineName":"ROSA","lineId":"5213","ticketTariffId":"","journeyId":"9015014521300110","via":"via Kärä","journeyServiceType":3,"via2":"","routeId":"","journeyDestination":"Billdal","status":2},"stops":["Klareberg","Fyrspannvägen","Skimmelvägen","Gerrebacka Gård","Ridhästvägen","Mystängen","Stora Mysternavägen","Ingebäcks

		By", "Klareberg", "Burmans Gata", "Lillekärr Norra", "Kärre Centrum", "Kärre Kyrka"]}]}
/service/infocenter/v1/lastStop		
/service/infocenter/v1/nextStop		
/service/infocenter/journeyProgress	journeyServiceType: JST_REINFORCEMENT	{"journeyName": "110", "distanceToNextStop": 0, "altitude": 0, "latitude": 0, "lineName": "ROSA", "lineId": "5213", "timetableDeviation": 0, "journeyId": "9015014521300110", "currentSpeed": 0, "journeyServiceType": 3, "routeId": "126285", "indexInJourney": 2, "linkLength": 0, "status": 6, "longitude": 0}
/service/infocenter/v1/assignment	serviceType: AST_REINFORCEMENT segmentReason: ASR_REINFORCE	{"journeyName": "112", "serviceType": 3, "journeyStartTime": 1603186980, "unboundAssignmentSessionStart": 0, "unboundAssignmentLabel": "", "journeyId": "9015014521300112", "segmentReason": 3, "blockId": "18764", "selectionType": 1, "segmentEnd": 40, "name": "18764", "indexInBlock": 6, "startTime": 1603168080, "dutyId": "0", "segmentStart": 0} Reinforce Part of a journey: {"journeyName": "110", "serviceType": 3, "journeyStartTime": 1603186380, "unboundAssignmentSessionStart": 0, "unboundAssignmentLabel": "", "journeyId": "9015014521300110", "segmentReason": 3, "blockId": "18759", "selectionType": 1, "segmentEnd": 12, "name": "18759", "indexInBlock": 4, "startTime": 1603166940, "dutyId": "0", "segmentStart": 2}

System info. Topics

iTID client and On-board TFT signs must publish own system information as system info. topics. Following table list the system information topics with some example contents from iTID unit.

Topic	Comment	Example Topic	Example content
/system/subsystem/serialno/hwversion	HW version	/system/itid/16041093/hwversion	62
/system/subsystem/serialno/ip4addr	IP address	/system/itid/16041093/ip4addr	192.168.3.30
/system/subsystem/serialno/mac	MAC address	/system/itid/16041093/mac	04:1B:94:00:10:35
/system//subsystem/serialno/manufacturer	Manufacturer name	/system/itid/16041093/manufacturer	Consat Telematics AB
/system/subsystem/serialno/model	Hardware model	/system/itid/16041093/model	MX4
/system/subsystem/serialno/swversion	Software version	/system/itid/16041093/swversion	i4m_vehicle_agent-20.9.0
/system/subsystem/serialno/systemAddress	System address	/system/itid/16041093/systemAddress	2194000499
/system/subsystem/serialno/vin	VIN number, chassis ID	/system/itid/16041093/vin	N/A
/system/subsystem/serialno/status/diagnostic	Notification if the connection between iTID and broker goes down. Sleep will change the state to offline, and losing the network connection to iTID causes	/system/itid/16041093/status/diagnostic	Offline / Online/ connectionLost when MX4 goes down to sleep or wakes up. Or ConnectionLost, when suddenly loose the network

	connectionLost state.		connectivity to MX4.
/system/subsystem/serialno/status/ externalId	ExternalID , not used for Västtrafik	/system/itid/16041093 externalId	-

State of charge SOC

Vehicle computer subscribes to State of charge (SOC) signal.

Topic	Comment	Example content
service/infohub/fms/data/batcharge	SOC value	{"pub_time":1597657752,"value":38}

Document history

Version	Date	Comment
0.1	2020-08	First draft.
0.2	2020-10	- New topic: assignment, including assignmentServiceTypes added. - JourneyProgress topic is updated: journeyServiceType is added. - JourneyDigest topic is updated: journeyServiceType is added. - Journey topic is updated: journeyServiceType is added. - Example contents are updated - Journey.proto appendix is updated accordingly. - Overall modifications on the document

Appendix 1 Journey.proto

```
option java_package = "net.volvo.vms.vehicle.infohub.mqtt.journey";

/**
   This file describes the protocol used to broadcast information about the
   current journey
   when using the MQTT service on the Consat iTid device in a VÃsttrafik
   vehicle.

   History:
   v0.1 2014-04-25    MIB    First draft.
   v2.0 2015-09-15    MIB    Extended with additional journey information for
   ticketing and ids.
   v2.1 2016-03-16    MIB    Moved from signal prio to infohub component java
   package, contents the same.
   v2.1 2017-12-19    NL     Topics added
   v2.2 2018-09-27    NL     Added JourneyProgress
   v2.3 2020-08-13    MIB    JourneyProgress now implemented, with minor
   changes to types (made some string to int types).
   v2.4 2020-09-07    MIB    Assignment topic added
   v2.5 2020-10-10    NL     JourneyProgress extended

   MIB, Mattias Isegran Bergander, Consat Telematics AB.
   NL, Niclas Lindgren, Consat Telematics AB.

   MQTT topics when publish on MQTT

   /service/infohub/v1/stopPressed
   /service/infohub/v1/doorOpen
   /service/infohub/v1/atStop
   /service/infohub/v1/journeyDigest
   /service/infohub/v1/journey
   /service/infohub/v1/lastStop
   /service/infohub/v1/nextStop
   /service/infohub/v1/offroute
   /service/infohub/v1/journeyProgress
   /service/infohub/v1/assignment

*/

enum JourneyStatus {
  JOURNEY_STATUS_NONE = 0;
  JOURNEY_STATUS_WAITING_TO_START = 1;
  JOURNEY_STATUS_STARTED = 2;
  JOURNEY_STATUS_ENDED = 3;
};

enum JourneyServiceType {
  JST_UNKNOWN = 0;
  JST_NORMAL = 1;
  JST_EXTRA = 2;
  JST_REINFORCEMENT = 3;
  JST_DEADRUN = 4;
  JST_TESTRUN = 5;
  JST_SHORTRUN = 6;
};
```

```

    JST_LEARNING = 7;
    JST_TOW = 8; /* If multiple train wagons are in tow, the towed vehicle get this
service */
};

message JourneyDigest {
    required JourneyStatus status = 1;
    required string journeyName = 2;
    required string lineName = 3;
    required uint32 journeyStartTime = 4; /* The start time of this journey, seconds
since epoch, UTC. */
    required string destination = 5; /* Destination displayed to passengers. */
    required string via = 6;
    optional string destination2 = 7;
    optional string via2 = 8;
    optional string journeyId = 9;
    optional string lineId = 10;
    optional string routeId = 12;
    optional string ticketTariffId = 13;
    optional string journeyDestination = 14; /* Original traffic data destination.
*/
    optional JourneyServiceType journeyServiceType = 15;
}

message JourneyInfo {
    required JourneyDigest digest = 1;
    repeated string stops = 2;
}

enum JourneyProgressStatus {
    JOURNEY_PROGRESS_UNASSIGNED = 0;
    JOURNEY_PROGRESS_WAITING_FOR_JOURNEY_START = 1;
    JOURNEY_PROGRESS_AT_FIRST_STOP = 2;
    JOURNEY_PROGRESS_BETWEEN_STOPS = 3;
    JOURNEY_PROGRESS_APPROACHING_STOP = 4;
    JOURNEY_PROGRESS_REACHED_STOP = 5;
    JOURNEY_PROGRESS_ARRIVED_STOP = 6;
    JOURNEY_PROGRESS_LEAVING_STOP = 7;
    JOURNEY_PROGRESS_OFF_ROUTE = 8;
};

message JourneyProgress {
    required JourneyProgressStatus status = 1;
    required string journeyId = 2;
    required uint32 indexInJourney = 3;
    optional double latitude = 4;
    optional double longitude = 5;
    optional double currentSpeed = 6;
    optional sint32 timetableDeviation = 7;
    optional string journeyName = 8;
    optional string lineName = 9;
    optional string lineId = 10;
    optional string routeId = 11;
    optional uint32 linkLength = 12;
    optional uint32 distanceToNextStop = 13;
    optional double altitude = 14;
    optional JourneyServiceType journeyServiceType = 15;
}

```

```
message Stop {
    optional string areaName = 1;
    optional uint32 indexInJourney = 2; /* index in JourneyInfo.stops */
    optional string stopPointName = 3; /* A,B,C or similar*/
    optional string areaId = 4;
    optional string stopPointId = 5;
    repeated string ticketZoneIds = 6;
}

message Offroute {
    required bool offroute = 1;
}

message StopPressed {
    required bool stopPressed = 1;
}

message DoorOpen {
    required bool doorOpen = 1;
}

message AtStop {
    required bool atStop = 1;
}

enum AssignmentServiceType {
    AST_UNKNOWN = 0;
    AST_NORMAL = 1;
    AST_EXTRA = 2;
    AST_REINFORCEMENT = 3;
    AST_TESTRUN = 4;
    AST_LEARNING = 5;
    AST_TOW = 6; /* If multiple train wagons are in tow, the towed vehicle get this
service */
};

enum AssignmentSelectionType {
    ASSIGNMENT_SELECTION_TYPE_UNKNOWN = 0;
    ASSIGNMENT_SELECTION_TYPE_MANUAL = 1;
    ASSIGNMENT_SELECTION_TYPE_AUTOMATIC = 2;
};

enum AssignmentSegmentReason {
    ASR_NONE = 0;
    ASR_SHORTRUN = 1;
    ASR_SHORTRUN_TURNAROUND = 2;
    ASR_REINFORCE = 3;
    ASR_SLICED_ASSIGNMENT = 4;
};

message Assignment {
    required string name = 1;
    required string blockId = 2;
    required uint32 startTime = 3; /* The start time of this assignment, seconds
since epoch, UTC. */
    required string journeyId = 4;
    required string journeyName = 5;
```

```
required int32 indexInBlock = 6;
required uint32 journeyStartTime = 7;
required AssignmentServiceType serviceType = 8;
required AssignmentSelectionType selectionType = 9;

optional string dutyId = 10;

optional AssignmentSegmentReason segmentReason = 12;
optional int32 segmentStart = 13;
optional int32 segmentEnd = 14;

optional string unboundAssignmentLabel = 15;
optional uint32 unboundAssignmentSessionStart = 16;
```