Highlighted fields will be included in the database. The fields have been selected based on the research work done for different supply chain systems.

The highlighted field include following information

1. Entity type, source information, destination information, milestone updates/details, site name, geo locations, data updated timestamps, related entity details, primary/foreign keys for the relationship between entities, product shipped (type/classification), quantity shipped/received and other details.
2. Delivery

{

"dataType": "Delivery",

"totalCount": 1,

"count": 1,

"startIndex": 1,

"data": [

{

"id": "a4b7a825f67930965747445709011120-Delivery-aae8a9611d14bbdbad09dc2de9e217be",

"refObjects": {

"shipToSites": [

{

"id": "a4b7a825f67930965747445709011120-Site-c0f233373cd54d9593b776cd8172a379",

"tid": "a4b7a825f67930965747445709011120",

"creationDate": "2020-05-20T20:21:12.000+0000",

"lmd": "2020-05-20T20:21:12.000+0000",

"participantName": "Acme Inc",

"siteName": "AC\_DC06",

"siteType": "DC",

"siteDescription": "Ohio Distribution Center",

"siteOwnerName": "Acme Inc",

"siteLongitude": -84.398138,

"siteLatitude": 39.448875,

"status": "Active",

"geoLocation": {

"lon": -84.398138,

"lat": 39.448875

},

"siteCity": "Middletown",

"siteState": "OH",

"siteCountry": "US",

"siteZipCode": "45044",

"locationType": "DC",

"siteAddress1": "3500 Salzman Rd",

"siteOwnerType": "Tenant",

"regionHierarchyL1": "Middletown",

"regionHierarchyL2": "OH",

"regionHierarchyL3": "Northern",

"regionHierarchyL4": "US",

"regionHierarchyL5": "North America",

"siteLateDeliveryToleranceDays": 1,

"siteEarlyDeliveryToleranceDays": 1,

"projectedInventoryComputeRequired": "Yes"

}

],

"shipFromSites": [

{

"id": "a4b7a825f67930965747445709011120-Site-36fb5da5df16245d4e1cb238ee77f479",

"tid": "a4b7a825f67930965747445709011120",

"creationDate": "2020-05-20T20:40:21.000+0000",

"lmd": "2020-05-20T20:40:21.000+0000",

"participantName": "ACOEM01",

"siteName": "AC\_OEMF5",

"siteType": "Internal",

"status": "Active",

"sourceOrigin": "Internal",

"sourceObjectId": "a4b7a825f67930965747445709011120-Delivery-6bc3e1ffe3c58bed48722997208e6b07",

"sourceObjectDataType": "Delivery"

}

]

},

"tid": "a4b7a825f67930965747445709011120",

"creationDate": "2020-05-20T20:40:22.000+0000",

"lmd": "2020-05-20T20:42:02.000+0000",

"state": "Shipped",

"processType": "supply",

"deliveryId": "ID0070\_SO",

"deliveryType": "inboundDelivery",

"exceptionStatus": "Untracked",

"daysDelayed": 0,

"customerName": "Acme Inc",

"supplierName": "ACOEM01",

"shipMode": "Ocean",

"shipToSiteName": "AC\_DC06",

"shipToSiteDescription": "Ohio Distribution Center",

"shipFromSiteName": "AC\_OEMF5",

"plannedShipDate": "2020-05-14T00:00:00.000+0000",

"actualShipDate": "2020-05-15T00:00:00.000+0000",

"plannedDeliveryDate": "2020-06-24T00:00:00.000+0000",

"predictedDeliveryDate": "2020-06-24T00:00:00.000+0000",

"shipmentId": "IS0066\_SO",

"shipmentLineId": "10",

"deliveryLines": {

"10": {

"refObjects": {

"customerItems": [

{

"id": "a4b7a825f67930965747445709011120-Item-a782e02ed2e718c69d9c3881768386e3",

"tid": "a4b7a825f67930965747445709011120",

"creationDate": "2020-05-20T20:21:25.000+0000",

"lmd": "2020-05-20T20:21:25.000+0000",

"itemName": "AC-CP-002",

"itemOwnerName": "Acme Inc",

"itemDescription": "AC COMP 002",

"itemType": "Purchased",

"CASE": 1,

"BOTTLE": 1,

"PALLET": 1,

"status": "Active",

"baseUOM": "EA",

"itemLob": "Components",

"materialType": "Components",

"participantName": "Acme Inc",

"itemCommodityCode": "CTP550-5",

"itemMaterialGroup": "ACME\_CP\_MG1",

"itemIsCriticalItem": "Yes",

"productHierarchyL1": "Burner Rings",

"productHierarchyL2": "Stainless Steel",

"productHierarchyL3": "Range Parts",

"productHierarchyL4": "Appliances",

"productHierarchyL5": "Kitchen",

"itemIsLotControlled": "Yes",

"itemPurchasingGroup": "PG001",

"itemClassificationCode": "CLACODE002"

}

]

},

"deliveryLineId": "10",

"customerItemName": "AC-CP-002",

"customerItemDescription": "AC COMP 002",

"materialGroup": "ACME\_CP\_MG1",

"shippedQuantity": 580,

"shippingUom": "EA",

"poNumber": "POA0040",

"poLineNumber": "10",

"orderUom": "EA",

"lotEnabled": false,

"batches": {},

"state": "Shipped",

"erpLineState": "Shipped",

"operationName": "Save Delivery",

"deliveryLineState": "Shipped",

"isHotItem": "No"

}

},

"dataMismatchExceptions": [],

"lineStates": [

"Shipped"

],

"lineExceptionStatus": [],

"lob": "Components",

"carrier": "OCEAN NETWORK EXPRESS (ONE LINE)",

"bolNumber": "ONEY894563",

"orderType": "standardPO",

"shipmentType": "inboundShipment",

"shipToSiteType": "DC",

"containerNumber": "ONEY4586335",

"erpCreationDate": "2020-05-04T00:00:00.000+0000",

"shipFromSiteType": "Internal",

"totalBoLineCount": 1

}

],

"typeCounts": null,

"highlights": {}

}

1. Purchase Order:

[

{

"id": "a4b7a-PurchaseOrder-4f713",

"tid": "a4b7a825f67930965747445709011120",

"creationDate": "2020-08-20T20:37:21.000+0000",

"lmd": "2020-07-31T00:01:56.000+0000",

"criticalities": [

"HotOrder"

],

"state": "Shipped",

"processType": "supply",

"purchaseOrderId": "POA004000\_ADH03",

"customerName": "Acme Inc",

"supplierName": "ACOEM1",

"purchaseOrderType": "standardPO",

"purchaseOrderLines": {

"10": {

"customerItemName": "AC-CP-002",

"needByDate": "2020-08-30T00:00:00.000+0000",

"orderQuantity": 1000,

"shipFromSiteName": "AC\_OEMF5",

"grDeliveryInfos": {},

"deliveryInfos": {

"a4b7a825f67930965747445709011120-Delivery-aae8a9611d14bbdbad09dc2de9e217be:10": {

"deliveryInternalId": "a4b7a825f67930965747445709011120-Delivery-aae8a9611d14bbdbad09dc2de9e217be",

"deliveryExternalId": "ID0070\_SO",

"deliveryLineId": "10",

"deliveryLineState": "Open",

"shippedQuantity": 0,

"predictedDeliveryDate": null,

"plannedDeliveryDate": null

}

},

"poLineId": "10",

"shipToSiteName": "AC\_DC06",

"purchaseOrderDeliverySchedule": {

"10": {

"confirmedDeliveryDate": "2020-08-25T00:00:00.000+0000",

"confirmedQuantity": 0,

"poDeliveryScheduleId": "10",

"shippedQuantity": 0,

"confirmedShipDate": "2020-08-27T00:00:00.000+0000",

"deliveryId": "ID0070\_SO"

}

},

"unitPrice": 145,

"totalConfirmedQuantity": 0,

"totalOpenQuantity": 1000,

"daysToImpact": 6,

"requestedShipDate": "2020-08-14T00:00:00.000+0000",

"plannedDeliveryDate": "2020-06-24T00:00:00.000+0000",

"operationName": "Save Order",

"totalClosedQuantity": 0,

"totalDeliveredQuantity": 0,

"totalShippedQuantity": 0,

"shipFromSiteDescription": "Acme OEM\_01 Factory\_08",

"shipToSiteDescription": "Ohio Distribution Center",

"lineStatus": "Shipped",

"erpLineState": "Shipped",

"predictedDeliveryDate": "2020-06-24T00:00:00.000+0000",

"exceptionStatus": "Late",

"orderUom": "EA",

"shipFromSiteType": "Factory",

"materialGroup": "ACME\_CP\_MG2",

"deliveryState": "Shipped",

"customerItemDescription": "AC COMP 002",

"shipToSiteType": "DC"

}

},

"dataMismatchExceptionCount": 0,

"lineStates": [

"Shipped"

],

"lineExceptionStatus": [

"Late"

],

"lob": "Components",

"amount": 84100,

"billTo": "AC\_DC06",

"soldTo": "AC\_DC06",

"currency": "USD",

"buyerCode": "CN0012",

"buyerName": "Abby",

"incoTerms": "EXW",

"daysToImpact": 6,

"paymentTerms": "Net 60",

"shipComplete": "Y",

"requisitionNo": "R0057\_SO",

"monetaryImpact": 84100,

"shipToSiteName": "AC\_DC06",

"shipToSiteType": "DC",

"erpCreationDate": "2020-08-04T00:00:00.000+0000",

"exceptionStatus": "Late",

"requisitionCreateDate": "2020-08-04T00:00:00.000+0000",

"shipToSiteDescription": "Ohio Distribution Center",

"totalBoLineCount": 1

}

]

1. **Shipment json:**

{

"dataType": "shipment",

"totalCount": 1,

"count": 1,

"startIndex": 0,

"data": [

{

"id": "dg8f3n26-Shipment-422365caedf336dc3b783f9e479ccc06",

"tid": "dg8f3n26",

"creationDate": "2020-11-06T21:45:32.000+0000",

"lmd": "2020-11-24T14:09:26.560+0000",

"state": "In Transit",

"processType": "demand",

"shipmentId": "6622905",

"shipmentType": "outboundShipment",

"shipmentMode": "Ocean",

"countryOfOrigin": "GB",

"bolNo": "CMDULPL0992197",

"geoLocation": {

"lon": -4.3601,

"lat": 55.8679

},

"shipmentLines": {

"3003422996": {

"refObjects": {

"shipToSites": [

{

"id": "dg8f3n26-Site-ce9afec49006edcb903b303434138285",

"tid": "dg8f3n26",

"creationDate": "2020-08-04T19:49:58.000+0000",

"lmd": "2020-09-15T08:19:22.000+0000",

"participantName": "9000006250",

"siteName": "SG2",

"siteType": "Customer",

"siteDescription": "LF Logistics Services Pte Ltd",

"siteOwnerName": "9000006250",

"siteLongitude": 103.7082,

"siteLatitude": 1.3524,

"geoLocation": {

"lon": 103.7082,

"lat": 1.3524

},

"soldTo": "9000006250",

"siteCity": "SINGAPORE",

"siteCountry": "SG",

"siteZipCode": "648146",

"locationType": "Customer",

"siteAddress2": "10 Bulim Avenue #05-01",

"sourceOrigin": "Customer",

"siteOwnerType": "9000006250",

"regionHierarchyL3": "SG",

"projectedInventoryComputeRequired": "No"

}

],

"shipFromSites": [

{

"id": "dg8f3n26-Site-8dd754bc37b26c522b30ce43a7bbcbdb",

"tid": "dg8f3n26",

"creationDate": "2020-08-04T02:00:08.000+0000",

"lmd": "2020-08-04T07:14:25.000+0000",

"participantName": "Diageo",

"siteName": "ZLCT\_SHX1",

"siteType": "Factory",

"siteDescription": "Diageo Scotland Ltd",

"siteOwnerName": "Diageo",

"siteLongitude": -4.3601,

"siteLatitude": 55.8679,

"status": "Active",

"geoLocation": {

"lon": -4.3601,

"lat": 55.8679

},

"siteCity": "Shieldhall",

"siteCountry": "GB",

"siteZipCode": "G51 4SA",

"locationType": "Primary",

"siteAddress2": "500 Renfrew Road",

"sourceOrigin": "Internal",

"siteOwnerType": "DIAGEO",

"sourceObjectId": "dg8f3n26-Node-01af8af17869f6a66f07cbbda30300e4",

"soTimeHorizonInDays": 14,

"sourceObjectDataType": "Node",

"stoTimeHorizonInDays": 9,

"projectedInventoryComputeRequired": "Yes"

}

]

},

"shipmentLineId": "3003422996",

"containerNo": "CMAU7176249",

"containerType": "40HCBE",

"shipFromSiteName": "ZLCT\_SHX1",

"shipToSiteName": "SG2",

"currentLocationLatitude": 49.74938,

"currentLocationLongitude": -4.258914,

"containerLastKnownMilestone": "GBGRK",

"containerLastMilestoneDepartTime": "2020-11-22T18:14:00.000+0000",

"containerNextMilestoneName": "GBSOU",

"predictedDeliveryDate": "2020-12-28T12:00:00.000+0000",

"plannedDeliveryDate": "2020-12-28T12:00:00.000+0000",

"shipmentLineMilestones": {

"SG2": {

"shipFromSiteName": "ZLCT\_SHX1",

"shipToSiteName": "SG2",

"milestoneName": "SG2",

"creationDate": "2020-11-11T14:08:07.999+0000",

"predictedTimeOfArrival": "2020-12-28T12:00:00.000+0000",

"milestoneUpdates": {}

},

"GBGRK": {

"shipFromSiteName": "ZLCT\_SHX1",

"shipToSiteName": "SG2",

"stopType": "pickup",

"milestoneName": "GBGRK",

"arrivalTime": "2020-11-11T19:23:00.000+0000",

"departTime": "2020-11-22T18:14:00.000+0000",

"creationDate": "2020-11-11T20:15:55.045+0000",

"predictedTimeOfDeparture": "2020-11-20T12:00:00.000+0000",

"milestoneUpdates": {

"20201117120420LIPPPT": {

"key": "20201117120420LIPPPT",

"status": "Tracking Info Unassigned",

"statusCode": "LIPPPT",

"message": "Load is past planned pickup time",

"timestamp": "2020-11-17T12:04:20.000+0000"

},

"20201122160033VGAFT": {

"key": "20201122160033VGAFT",

"status": "Vessel Assigned",

"statusCode": "VGAFT",

"message": "Vessel GREETJE assigned for tracking",

"timestamp": "2020-11-22T16:00:33.000+0000"

},

"20201111192300I": {},

"20201112015000VCCJMIETAA2": {

"key": "20201112015000VCCJMIETAA2",

"status": "ETA Update",

"statusCode": "VCCJMIETAA2",

"message": "Vessel CMA CGM JEAN MERMOZ is expected to arrive at 2020-12-28T14:00:00Z",

"timestamp": "2020-11-12T01:50:00.000+0000"

},

"20201122160034I9AFT": {

"key": "20201122160034I9AFT",

"status": "IMO Assigned",

"statusCode": "I9AFT",

"message": "IMO 9186388 assigned for tracking",

"timestamp": "2020-11-22T16:00:34.000+0000"

},

"20201122151400AE": {

"key": "20201122151400AE",

"status": "Loaded on Vessel",

"statusCode": "AE",

"message": "Container CMAU7176249 was loaded onto vessel GREETJE",

"timestamp": "2020-11-22T15:14:00.000+0000"

},

"20201112015000AG": {

"key": "20201112015000AG",

"status": "ETA Update",

"statusCode": "AG",

"message": "Vessel CMA CGM JEAN MERMOZ is expected to arrive at 2020-12-28T14:00:00Z",

"timestamp": "2020-11-12T01:50:00.000+0000"

},

"20201111192300CCI": {},

"20201122181400VD": {

"key": "20201122181400VD",

"status": "Vessel Departure",

"statusCode": "VD",

"message": "Vessel GREETJE has departed",

"timestamp": "2020-11-22T18:14:00.000+0000"

},

"20201122084000VGBATCCTCG": {

"key": "20201122084000VGBATCCTCG",

"status": "Berthed at Terminal",

"statusCode": "VGBATCCTCG",

"message": "Vessel GREETJE berthed at terminal Clydeport Container Terminal, CLYDEPORT GREENOCK ",

"timestamp": "2020-11-22T08:40:00.000+0000"

},

"20201117120216LIPPPT": {

"key": "20201117120216LIPPPT",

"status": "Tracking Info Unassigned",

"statusCode": "LIPPPT",

"message": "Load is past planned pickup time",

"timestamp": "2020-11-17T12:02:16.000+0000"

},

"20201117120319LIPPPT": {

"key": "20201117120319LIPPPT",

"status": "Tracking Info Unassigned",

"statusCode": "LIPPPT",

"message": "Load is past planned pickup time",

"timestamp": "2020-11-17T12:03:19.000+0000"

},

"20201122151400CCWLOVG": {

"key": "20201122151400CCWLOVG",

"status": "Loaded on Vessel",

"statusCode": "CCWLOVG",

"message": "Container CMAU7176249 was loaded onto vessel GREETJE",

"timestamp": "2020-11-22T15:14:00.000+0000"

},

"20201112120808LIPPPT": {

"key": "20201112120808LIPPPT",

"status": "Tracking Info Unassigned",

"statusCode": "LIPPPT",

"message": "Load is past planned pickup time",

"timestamp": "2020-11-12T12:08:08.000+0000"

},

"20201117120220LIPPPT": {

"key": "20201117120220LIPPPT",

"status": "Tracking Info Unassigned",

"statusCode": "LIPPPT",

"message": "Load is past planned pickup time",

"timestamp": "2020-11-17T12:02:20.000+0000"

},

"20201122084000BT": {

"key": "20201122084000BT",

"status": "Berthed at Terminal",

"statusCode": "BT",

"message": "Vessel GREETJE berthed at terminal Clydeport Container Terminal, CLYDEPORT GREENOCK ",

"timestamp": "2020-11-22T08:40:00.000+0000"

},

"20201117120111LIPPPT": {

"key": "20201117120111LIPPPT",

"status": "Tracking Info Unassigned",

"statusCode": "LIPPPT",

"message": "Load is past planned pickup time",

"timestamp": "2020-11-17T12:01:11.000+0000"

}

}

},

"SGSIN": {

"shipFromSiteName": "ZLCT\_SHX1",

"shipToSiteName": "SG2",

"milestoneName": "SGSIN",

"creationDate": "2020-11-11T20:15:57.482+0000",

"predictedTimeOfArrival": "2020-12-26T12:00:00.000+0000",

"predictedTimeOfDeparture": "2020-12-28T02:00:00.000+0000",

"milestoneUpdates": {}

},

"ZLCT\_SHX1": {

"shipFromSiteName": "ZLCT\_SHX1",

"shipToSiteName": "SG2",

"milestoneName": "ZLCT\_SHX1",

"creationDate": "2020-11-06T21:58:02.992+0000",

"milestoneUpdates": {

"20201106215805MCA": {

"key": "20201106215805MCA",

"status": "Managing Carrier Assigned",

"statusCode": "MCA",

"message": "Managing Carrier Assigned",

"timestamp": "2020-11-06T21:58:05.000+0000"

},

"20201106215759MCA": {

"key": "20201106215759MCA",

"status": "Managing Carrier Assigned",

"statusCode": "MCA",

"message": "Managing Carrier Assigned",

"timestamp": "2020-11-06T21:57:59.000+0000"

},

"20201111134101CCAVCAFT": {

"key": "20201111134101CCAVCAFT",

"status": "Container Assigned",

"statusCode": "CCAVCAFT",

"message": "Container CMAU7176249 assigned via Create API for tracking",

"timestamp": "2020-11-11T13:41:01.000+0000"

},

"20201111134102MCA": {

"key": "20201111134102MCA",

"status": "Managing Carrier Assigned",

"statusCode": "MCA",

"message": "Managing Carrier Assigned",

"timestamp": "2020-11-11T13:41:02.000+0000"

},

"20201106215802MCA": {

"key": "20201106215802MCA",

"status": "Managing Carrier Assigned",

"statusCode": "MCA",

"message": "Managing Carrier Assigned",

"timestamp": "2020-11-06T21:58:02.000+0000"

},

"20201106215800MCA": {

"key": "20201106215800MCA",

"status": "Managing Carrier Assigned",

"statusCode": "MCA",

"message": "Managing Carrier Assigned",

"timestamp": "2020-11-06T21:58:00.000+0000"

}

}

}

},

"partnerLoads": {

"Four Kites": {

"partnerName": "Four Kites",

"lastMsgReceivedStop": "GBGRK",

"stops": {

"SG2": {

"siteName": "SG2"

},

"GBGRK": {

"siteName": "GBGRK"

},

"GBSOU": {

"siteName": "GBSOU"

},

"SGSIN": {

"siteName": "SGSIN"

},

"ZLCT\_SHX1": {

"siteName": "ZLCT\_SHX1"

}

}

}

},

"shipToAddress": {},

"shipmentState": "In Transit",

"loadCreationDate": "2020-11-11T13:40:18.961+0000",

"refObjects.shipFromSites@0.participantName": "Diageo",

"deliverySiteDescription": "LF Logistics Services Pte Ltd",

"lineExceptionStatus": "Delayed",

"shipToSiteDescription": "LF Logistics Services Pte Ltd",

"preStopCarrierName": "1000020172",

"lineSubState": "",

"realFourkitesLoadId": "85348768",

"placeOfBilling": "SG2",

"placeOfDelivery": "SG2",

"fourkitesLoadId": "776499",

"trackingError": "trackingReference(s) containerNumber or externalCarrierReferenceId should be present",

"fourkitesTrackingStartDate": "2020-11-06T21:57:59.000+0000",

"shipToSiteOwnerName": "9000006250",

"shipFromSiteOwnerName": "Diageo",

"loadingPoint": "SH1A",

"lastPartnerUpdateDate": "2020-11-24T14:09:26.521+0000",

"billingRule": "2",

"shipmentMode": "Ocean",

"operationName": "TRACKING\_UPDATE",

"shipFromSiteDescription": "Diageo Scotland Ltd",

"shipDate": "2020-11-11T12:00:00.000+0000",

"billingSiteDescription": "LF Logistics Services Pte Ltd",

"shipFromSiteType": "Factory",

"noOfDeliveries": 2,

"trackingServiceMessageType": "TRACKING\_UPDATE\_TO\_IN\_TRANSIT",

"lineUntrackedReason": null,

"shipToSiteType": "Customer",

"preStopScacCode": "MALM"

},

"lineStates": [

"In Transit"

],

"lineExceptionStatus": [

"Delayed",

],

"hawbNo": "LPL0992197",

"mbolNo": "CMDULPL0992197",

"segment": "pre",

"salesOrg": "CE01",

"scacCode": "CMDU",

"bookingNo": "LPL0992197",

"orderType": "standardOrder",

"carrierDesc": "CMA CGM UK LTD (USD)",

"carrierName": "1000027247",

"customerName": "9000006250",

"erpOrderType": "YSTD",

"shipperRefNo": "3003422997",

"supplierName": "Diageo",

"partnerSystem": "Four Kites",

"erpCreationDate": "2020-10-19T12:00:00.000+0000",

"exceptionStatus": "PTA Unknown",

"maxDelayInHours": 0,

"plannedShipDate": "2020-11-17T12:00:00.000+0000",

"erpTransactionId": "0000000245822240",

"lastKnownMilestone": "GBGRK",

"nextKnownMilestone": "GBSOU",

"hasDetachedDelivery": null,

"plannedDeliveryDate": "2020-12-28T12:00:00.000+0000",

"noOfContainersCustom": 2,

"lastPartnerUpdateDate": "2020-11-24T14:09:26.521+0000",

"predictedDeliveryDate": "2020-12-28T12:00:00.000+0000",

"currentLocationLatitude": 55.8679,

"currentLocationLongitude": -4.3601,

"vesselName": "GREETJE",

"totalBoLineCount": 2

}

],

"typeCounts": null,

"highlights": {}

}