

MINT For Serialized Shipment

06 May 2025



After the training, You will be able to

- Define the OPUS terminology
- Understand why companies use MINT for Serialized Shipment
- How to configure your system to send Serialized Shipments from SOM to MINT
- Navigate to Opus Applications i.e. MINT, XTT, Company Administration



Agenda

- Opus Terminology
- MINT for Serialized shipment overview
- MINT for Serialized shipment use case – MINT Owner sending transaction to Partner
- Demo – Activity (Configurations)
- Testing
- Basic Troubleshooting
- Next Steps
- Useful Links



OPUS Terminology



OPUS Terminology

- The **network** provides the space for collaboration within your company and with specific Partners.
- The **solution** provides the user interface (UI), where you do your job.
- The **app** provides the APIs and business logic.

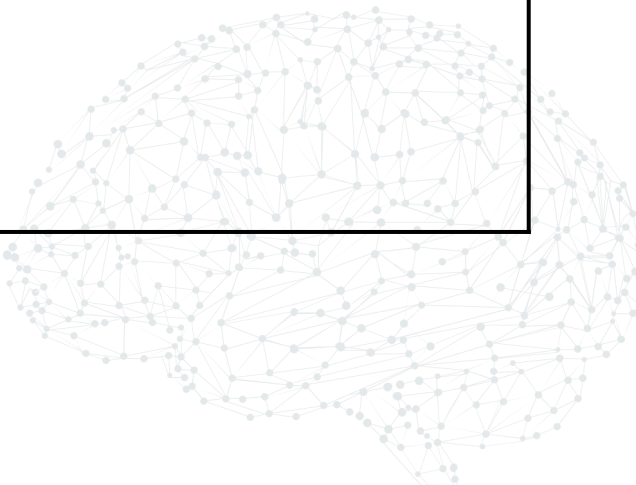


OPUS Application Types

Term	Description	Example
Enterprise Application	An app used only by the owning company. Enterprise apps do not have linked Partners, however they can be integrated with the company's other enterprise systems (e.g. SAP), if supported. Enterprise apps have one or more solutions available that can be customized.	Master Data, Serialized Product Intelligence (SPI), UAE Compliance, Uzbekistan Compliance
Multienterprise Application	An app used by the owning company that enables the company to share the app and data with supply chain Partners on the TraceLink Network. Multienterprise apps create a business ecosystem for a set of related processes, enabling the exchange of information between companies and functions. Multienterprise apps have one or more solutions available that can be customized.	Multi-Enterprise Process Connect, Agile Process Teams
System Application	System apps provide all the underlying functionality for the OPUS Platform that is not specific to a multienterprise, enterprise, or user app. These apps do not need to be licensed by any companies. System apps may or may not have a solution, but if they do, the solution cannot be customized.	B2B Transaction Processor, Secondary Transform Catalog Manager
User Application	User apps do not need to be licensed by any companies. These apps provide the underlying functionality for global UI elements and are automatically available to all users once they're registered on the OPUS Platform. User apps have only one solution that cannot be customized.	The Notifications panel, Inbox, My Profile panel

OPUS Key Concepts

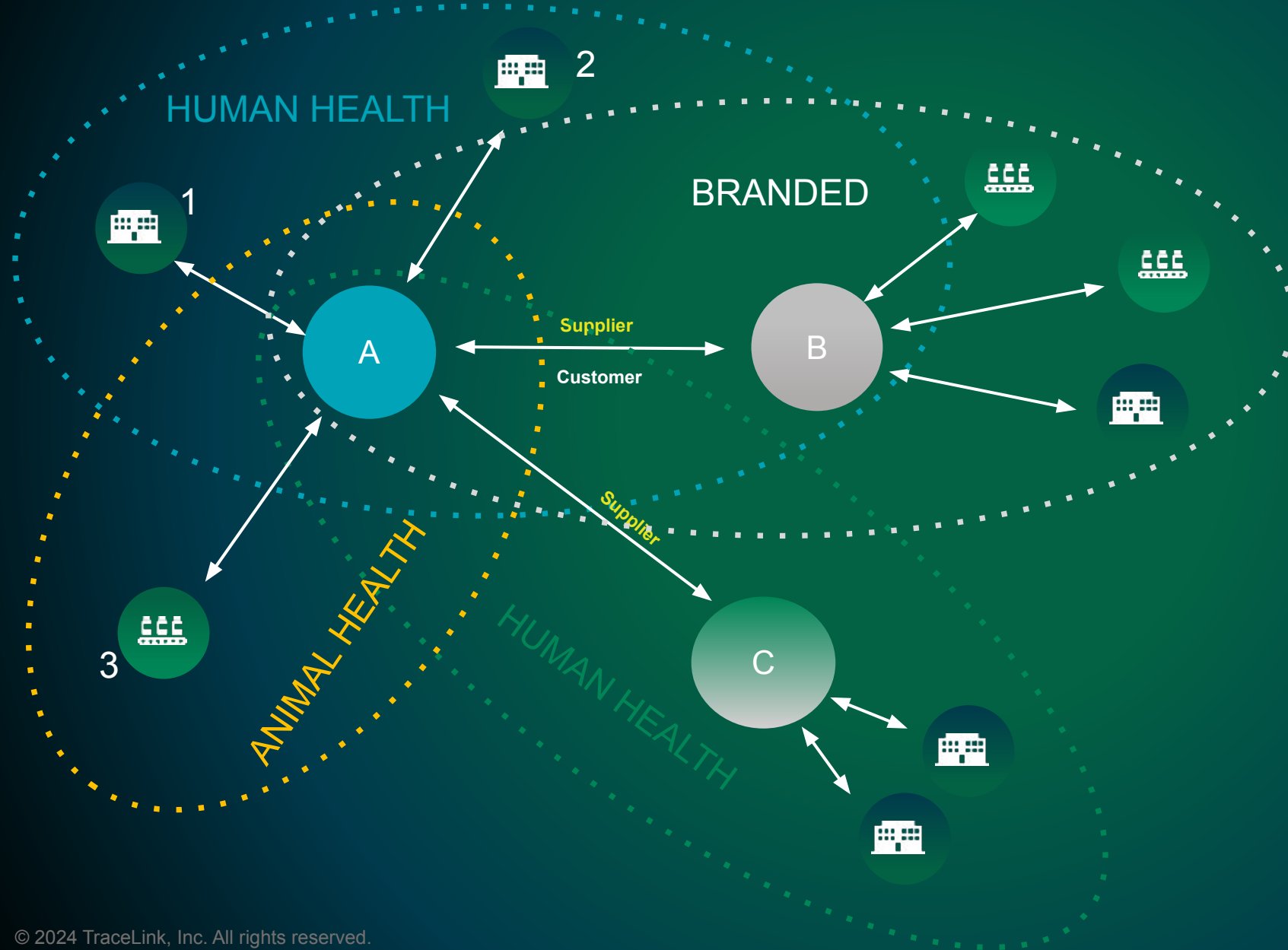
Term	Description	Example
Owner	A TraceLink customer that licenses a particular TraceLink app. The company that owns an app controls access to the app's data, even if they have Partners linked to the app.	Kendall Pharma (publisher)
Partner	A supply chain Partner on the TraceLink Network that is linked to an app owned by another company for the purpose of collaborating with the app Owner on a business process.	Wholesaler Partner (subscriber)
Link	A Link is the representation of the relationship between an Owner and a Partner within the context of an app. It creates the shared context within the app and defines the permissions for data exchange and access. A link can only have one partner.	ServiceLink



OPUS Key Concepts Cont.

Term	Description	Example
Network	A single network is owned by a company and enables the execution of one or more processes. It can contain one or more teams based on the nature of the business processes the app supports.	SCWM: Kendall Generics network vs. a Kendall Branded network
Team	A team is composed of users from the owner and linked company. Each Link within the network represents a single team.	Link: Kendall Generics Network & Supplier A
Process	A process represents the specific business objective that is shared by the members of the network and team.	SCWM: Compliance Exceptions

TraceLink Multienterprise Networks



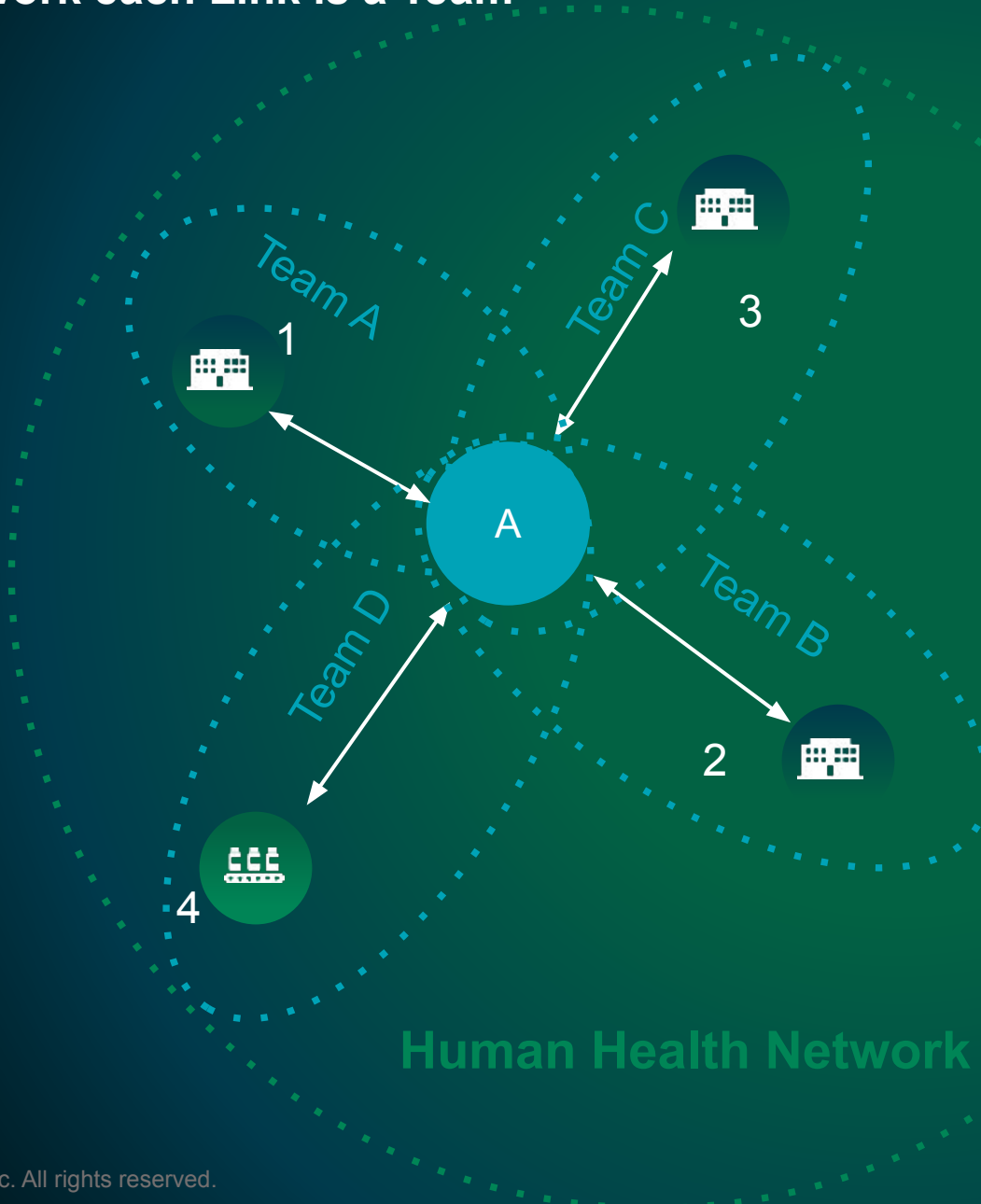
The Network Effect

A is both an “Owner and Partner” operating in different roles in multiple networks for:

- Their own Business “Human Health” & “Animal Health”
- For B as a supplier for their “Branded” network
- For C on their “Human Health” network

TraceLink Multienterprise Teams

Within a Network each Link is a Team



- 1** Team A: Company A
- Network for Human Health linked to company 1 who work for them as suppliers
- 2** Team B: Company A
- Network for Human Health linked to company 2 who work for them as suppliers
- 3** Team C: Company A
- Network for Human Health linked to company 3 who work for them as suppliers
- 4** Team D: Company A
- Network for Human Health linked to company 4 who work for them as suppliers

OPUS Ensemble

OPUS Navigation

- TraceLink Account drop-down
- Notifications, Support and Help
- Main Menu
- Tabs
- Network Composer
- Menus, Sub-Menus and Menu Items

Main Menu

- My Networks**: Select to choose your "multienterprise apps" (apps to which your partners can link) using the **network composer**.
- Partner Networks**: Select to choose your partners' "multienterprise apps" (apps to which you are linked) using the **network composer**.
- Administration**: Select an "enterprise app" (apps that only users at your company can see.) The network composer does not display.
- Extensible Tracelink Transfer A...**
- Master Data Exchange**
- Product Availability Intelligence**
- Serialized Product Intelligence**

TraceLink Account drop-down

- Settings**: Click to manage personal settings.
- Logout**
- My Company Name** (V): Environment indicator: V for validation.
- My Company Name** (P): Environment indicator: P for production. Check mark tells you where you are.

Environment indicator:

- V for validation
- P for production
- Check mark tells you where you are.

Network Composer

Pick the name of the network and a Partner (or all Partners) from the network composer. "Partner" was previously "Team."

Click for Notifications.

Click for Support.

Click for Help.

Tabs

Work in multiple apps at once. Tabs are saved when you log out.

My Company

Serialized Product Intelligence x | Extensible Tracelink Transfer A... x | Administration x | Work Management x

Work Management | All Partners | GO

Monitor Incidents

View the external manufacturing incidents that your company is currently investigating.

GENERAL | RECENT PERFORMANCE | YEAR TO YEAR | PARTNER PERFORMANCE | TOP ROOT CAUSES

Summary | By Due Date

Expand a sub menu and select a menu item from the side menu. (Previously the sub menus were in the network composer as "Processes.")

Task

- External Manufacturing Incident
- Monitor**
- Search
- Add
- Recalls
- Document Review

OPUS Administration Roles

Term	Description	TTS Example
System Administrator	A member of a company that has the permissions to perform system administration functions for apps to which the company has access (e.g. company configuration, adding users to the company).	Company Admin
Application Administrator	A member of an app that has the permissions to perform administration functions specific to an app (e.g. linking Partners and internal locations, adding networks).	Service Admin



MINT For Serialized Shipment Overview



MINT for Serialized Shipments

Who requires it

- Manufactures/Wholesalers needs to share electronic serialized shipment data with their Partners whom they are selling the Products to.

What customers are doing today

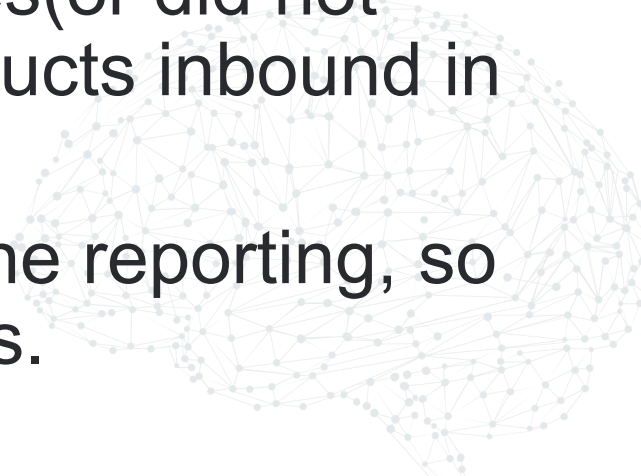
- Some customers have developed a home-grown system to generate the files or putting serial number information in a csv file and exchanging these files over emails.



MINT for Serialized Shipments

Why MINT-STE is needed

- Companies want to send the serialized data with the serialized goods-this allows them to manage their operations more efficiently.
- Manual operations like scanning each product or manually generating EPCIS files are error prone and time consuming.
- Uploading this data manually in systems is inefficient and there are high chances that receiver missed uploading the files(or did not receive it from Sender) while they need to take products inbound in the warehouse.
- Some countries like KR, allow the distributor to do the reporting, so the MAH has to get the serialized data to distributors.



MINT for Serialized Shipments

- MINT-STE allows companies to send and/or receive serialized data at scale with all trade partners. Using standard integrations to Serialized Operations manager, MINT-STE can then manage all the connections and data requirements of the partner in a secure manner that allows partners to receive data in their own format.
- MINT-STE is used to exchange this data and not SOM to ensure that the party connecting only has access to the data that aligns with the shipment they are sending/receiving.
- [TraceLink Best Practices: SOM Horizontal Data Exchange](#)



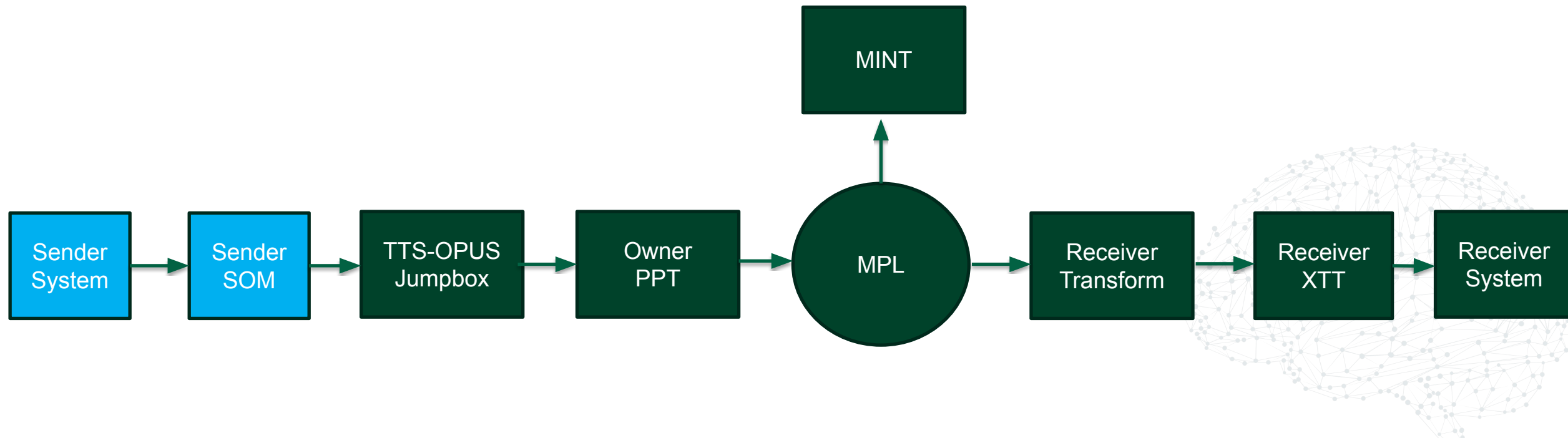
MINT for Serialized Shipments

How MINT is used to exchange serialized shipment data

- Seller **creates a SOM Sales Shipment** (Type - Sale-In Country/Sale-Export) into their SOM and based on **the Ship to Country** (Baharin, Indonesia, UAE, Uzbekistan, Saudi Arabia, South Korea, Kazakhstan, Krygystan) the shipment **message is sent to OPUS** (via LSC to OPUS Jumpbox) to MINT.
- The canonical from MINT is send to CTCM app on Receiver side which **converts the canonical to an outbound format** needed by the partner.
- Outbound file is then **placed on Partner's B2B gateway** (XTT application) from where partners can receive the files using their preferred B2B method (i.e. AS2, SFTP)

MINT for Serialized Shipment – Use Case 1

- SOM Owner is MINT Owner sending the serialized shipment to a partner.
- SOM/MINT Owner acts as a supplier and partner acts as a buyer.



Prerequisites

1. Owner and Partner companies must exist and have TL SSO enabled
2. Owner is licensed and routed for
 - Master Data
 - CTCM: Customer Transform Catalog Manager
 - MPC: Multienterprise Process Connect
 - Company Admin
3. Partner is licensed and routed for Solution Builder
 - XTT-AWS: eXtensible TraceLink Transfer
 - CTCM: Customer Transform Catalog Manager
 - Company Admin
4. Owner company must have Master Data migrated to OPUS
5. Access to user accounts with System Administrator rights for Owner and Partner
6. Post Processing Transform deployed in owner's CTCM



Supply Chain Orchestration



Use orchestrations

Orchestrations are the coordinated and seamless execution of multiple business processes across various transactions, each with its own defined workflow, to represent a broader business relationship. It connects supply networks by facilitating the flow of various business processes, across multiple companies, within the supply chain. By linking different systems and Partners on the TraceLink Network, it enhances digital collaboration, leading to improved supply chain efficiency and transparency.

The following orchestrations are available in Multienterprise Information Network Tower to send and receive different transactions across all areas of the supply chain.

1. External Manufacturing Orchestration -> Execution of business processes across transactions related to planning & production activities.
2. Commerce Orchestration -> Execution of business processes across transactions related to procurement and sales activities.
3. Logistics Orchestration -> Execution of business processes across transactions related to warehouse, fulfilment and distribution activities.

Merck's External Manufacturing Orchestration

Customer Details	Merck KGaAUF
Customer Role	MAH
Transaction	Forecast, PO, PO Acknowledgement, Batch Shipment ,Notification Inventory, Scheduled Receipt
ERP System	SAP Tempo & SAP Lean
Transform, Link Action, Custom	IDoc + Custom formats
B2B Connection Type (AS2, sFTP)	AS2
Partner Details	Rpharm (Germany), Altea (Columbia), Nanolek(Russia)
Partner Role	CMO
ERP	SAP
Transform, Link Action, Custom	IDoc + Custom formats
B2B Connection Type (AS2, sFTP)	AS2/SFTP

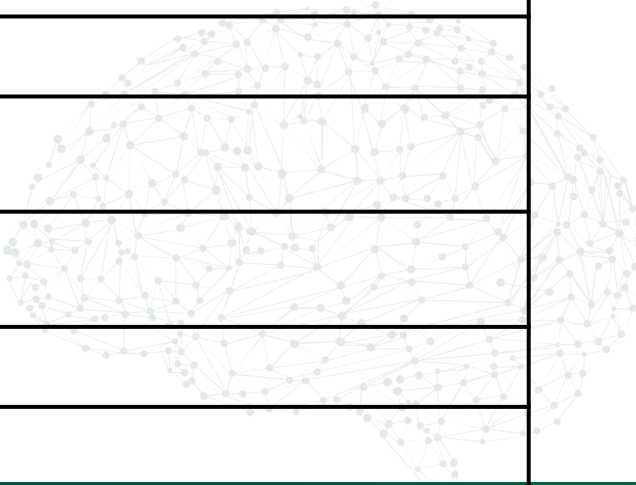
Merck's transactions

Transaction	Description	Direction
Forecast Plan	Merck communicate with their suppliers about quantities and the schedule of products they plan to purchase in the future	Merck to CMOs
Forecast Plan Response	CMOs communicate with Merck about quantities and the schedule of products they plan to deliver in the future.	CMOs to Merck
Purchase Order	Purchase orders allow Merck to communicate a request and commitment to pay the CMOs for the sale of specific products or services to be delivered in the future.	Merck to CMOs
Purchase Order Ack	Purchase order acknowledgments allow CMOs to communicate with Merck that they have received the purchase order and inform them if there are any required changes.	CMOs to Merck
Batch Creation	Batch creations records allow CMOs to exchange data with Merck about specific lots of product they produce for Merck.	CMOs to Merck
Advance Ship Notice	Advance shipment notices is used to inform Merck of the contents of a shipment.	CMOs to Merck
Inventory Balance	CMOs use inventory balances to communicate about available and upcoming inventory levels with Merck.	CMOs to Merck



Applications

Application Name	Description	Application Type
Extensible TraceLink Transfer AWS		
Extensible TraceLink Transfer Link Actions		
B2B Transaction Processor		
Transform Runtime		
STCM		
CTCM		
MINT		
OPUS Solution Enviornment		
OPUS Reports and Dashboards		
Master Data		
Company Admin		



Demo – Activities



Configuration Steps- Owner

1. [Create Process Network](#)
2. [Assign Roles to User](#)
 - For Process Network
 - For CTCM
3. [Create link](#)
4. [Configure Post Processing Transform Set](#)
5. [Create Inbound Message Settings](#)
6. [Create Outbound Message Settings\(For Partner\)](#)



Configuration Steps- Partner

1. Assign Roles to User
 - For Link
 - For CTCM
 - For XTT-AWS
2. Create B2B Connection
3. Configure Transform Set
 - Associate transform set to B2B connection
4. Connection Association
5. Link Settings



Testing

- Create a batch/Lot on TTS.
- Create SOM Sales Shipment(Outbound Delivery) with SALE TYPE – SALE-Export/SALE-In Country
- Ship to country Baharin, Indonesia, UAE, Uzbekistan, Saudi Arabia, South Korea, Kazakhstan, Krygystan
- Submit the transaction on TTS and go to Opus -> Process Network -> All Transactions -> Serialization Transaction



Troubleshooting

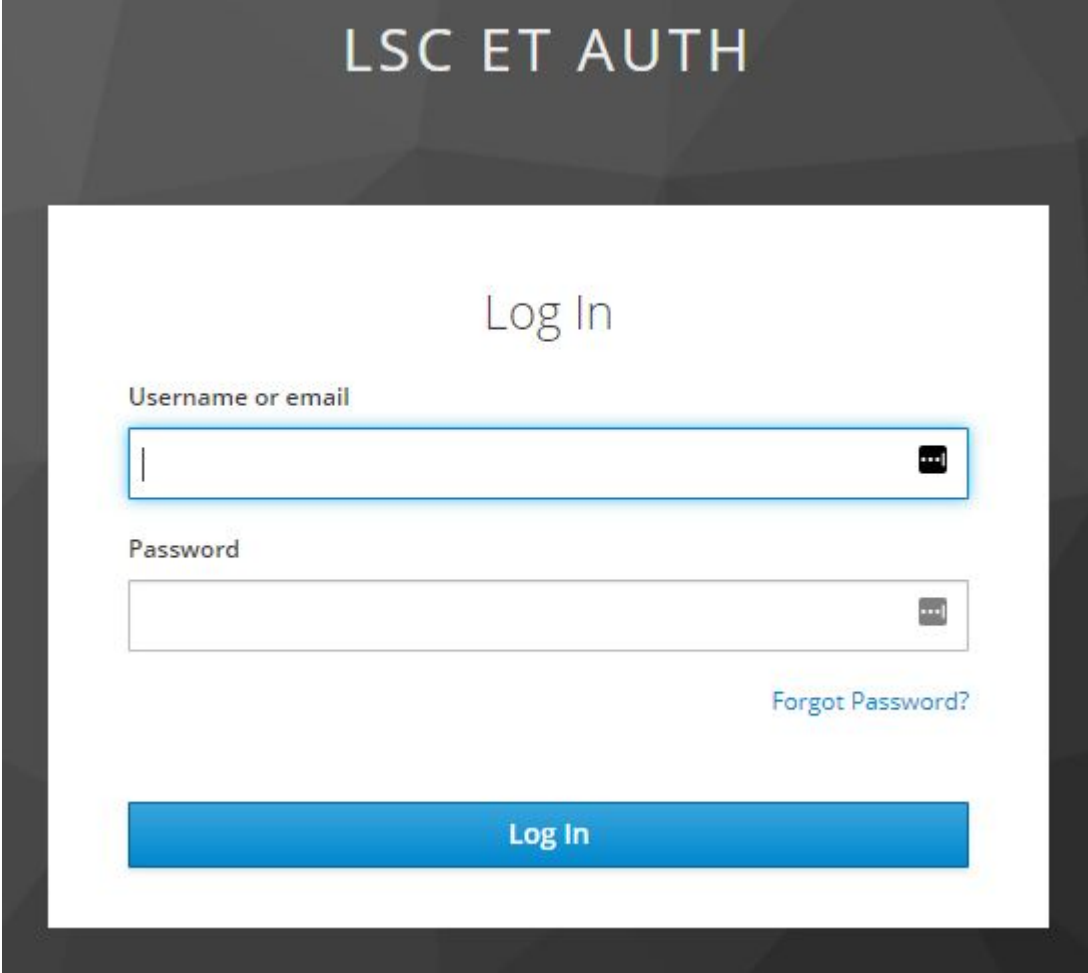
- [Opus Compliance Troubleshooting](#)
- Kibana is a visualization plugin for Elasticsearch, providing full-text query, time series data graphing, and RESTful search capabilities written in JavaScript.
- Logs are retained in TTS for 30 days
- Logs are retained in Opus for 14 days



Kibana Basics – URLs

- TTS Kibana
 - iTest:
<https://kibanaitest.tracelink.com/dashboards/app/discover>
 - Prod:
<https://kibanaitest.tracelink.com/dashboards/app/discover>

In TTS Kibana, you can access **Virginia and Frankfurt data together**. There are separate URLs for iTest and Prod

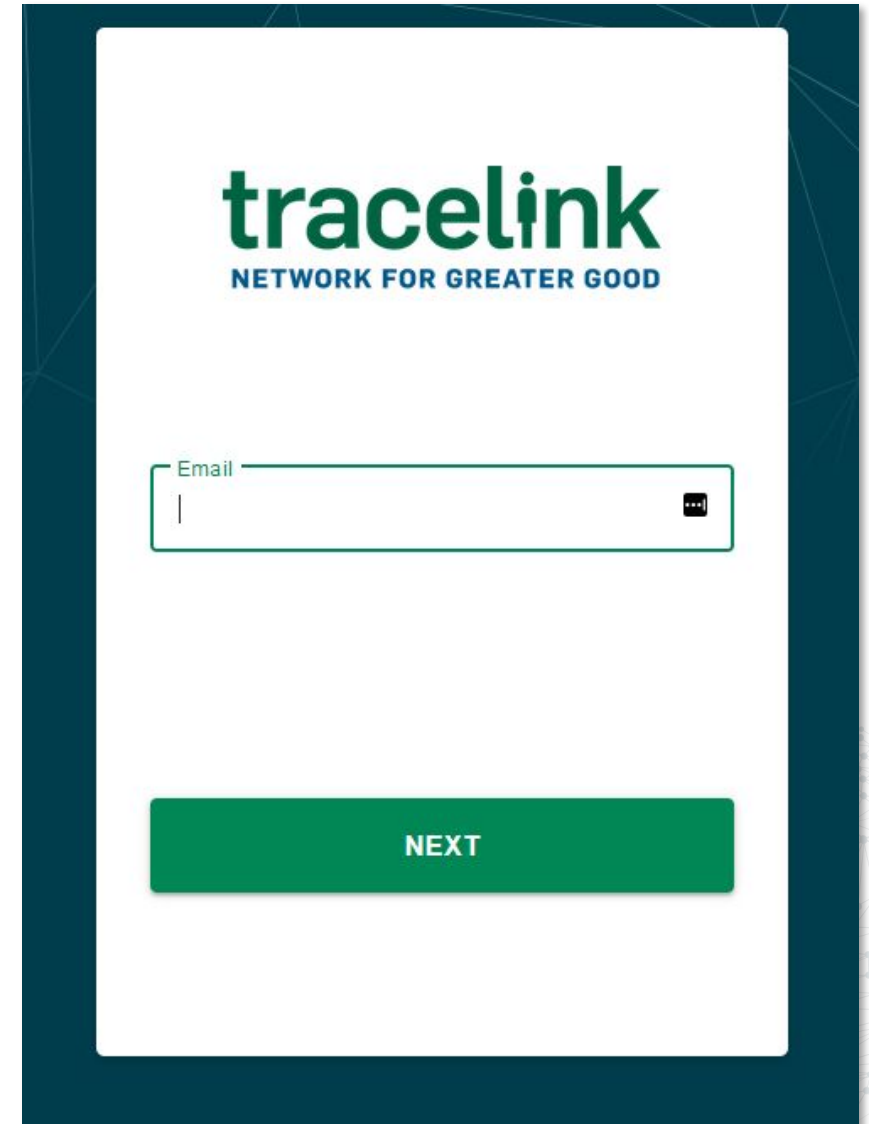


The screenshot shows a login interface for 'LSC ET AUTH'. It features a white login box on a dark background. Inside the box, the text 'Log In' is centered at the top. Below it, there are two input fields: 'Username or email' and 'Password'. Both fields have a small icon on the right side. A link labeled 'Forgot Password?' is positioned to the right of the password field. At the bottom of the box is a large blue button labeled 'Log In'.

Kibana Basics – URLs

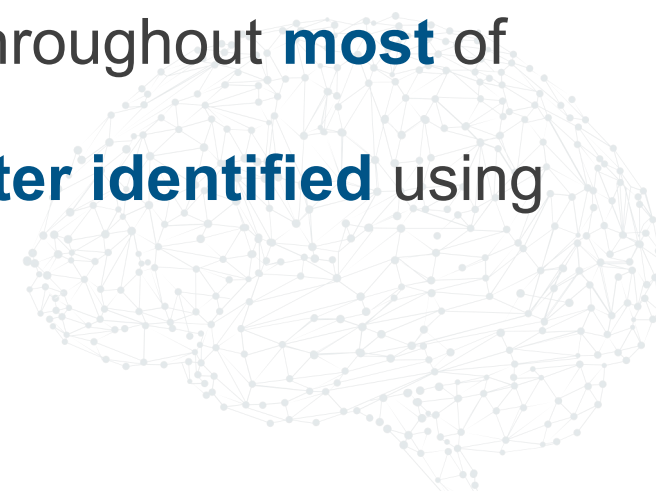
- Opus Kibana
 - Val/Prod VIR:
https://kibanadnpkubvir.tracelink.com/_dashboards/app/discover#/
 - Val/Prod FKT:
https://kibanadnpkubfkt.tracelink.com/_dashboards/app/discover#/

In Opus Kibana, you can **access Val and Prod data together**, but there are different URLs for data regions.

The image shows a login screen for Tracelink. At the top, the 'tracelink' logo is displayed in green, with the tagline 'NETWORK FOR GREATER GOOD' in blue below it. In the center, there is a white rectangular box containing an email input field. The input field has a green border and a small black icon on the right side. Below the input field is a green button with the word 'NEXT' in white capital letters. The entire login area is set against a dark teal background with a subtle geometric pattern.

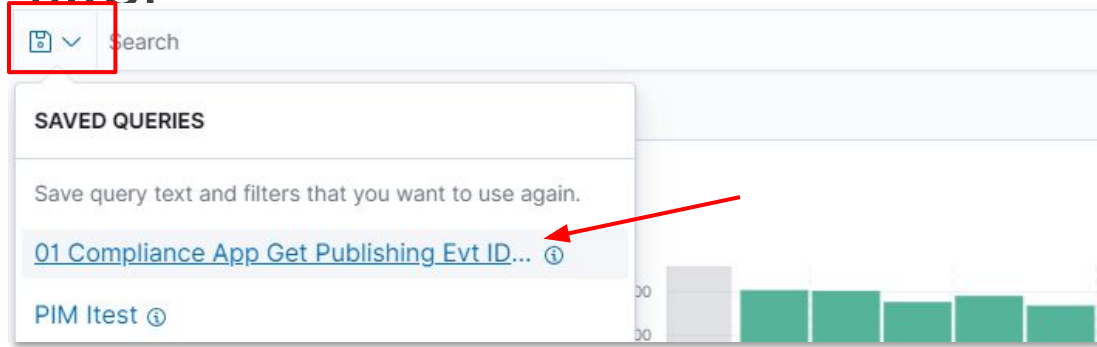
Key Kibana Terms

- **LicensePlate:** Each event has a License Plate that you can use to track the event.
 - As the file processes through TL, additional characters are added to the License Plate. E.g. Z5aoZp1f
 - The Opus License Plate is a **different** value than the TTS License Plate
- **Correlation ID/Publishing Event ID:** Similar to a LicensePlate, but used in Opus.
 - Referred to as either CorrelationID or Publishing evid.
 - If you know the Correlation ID, you can track the event throughout **most** of the processes.
 - Datamesh Pipeline Managers issues are sometimes **better identified** using LicensePlate instead of CorrelationID



Troubleshooting Example

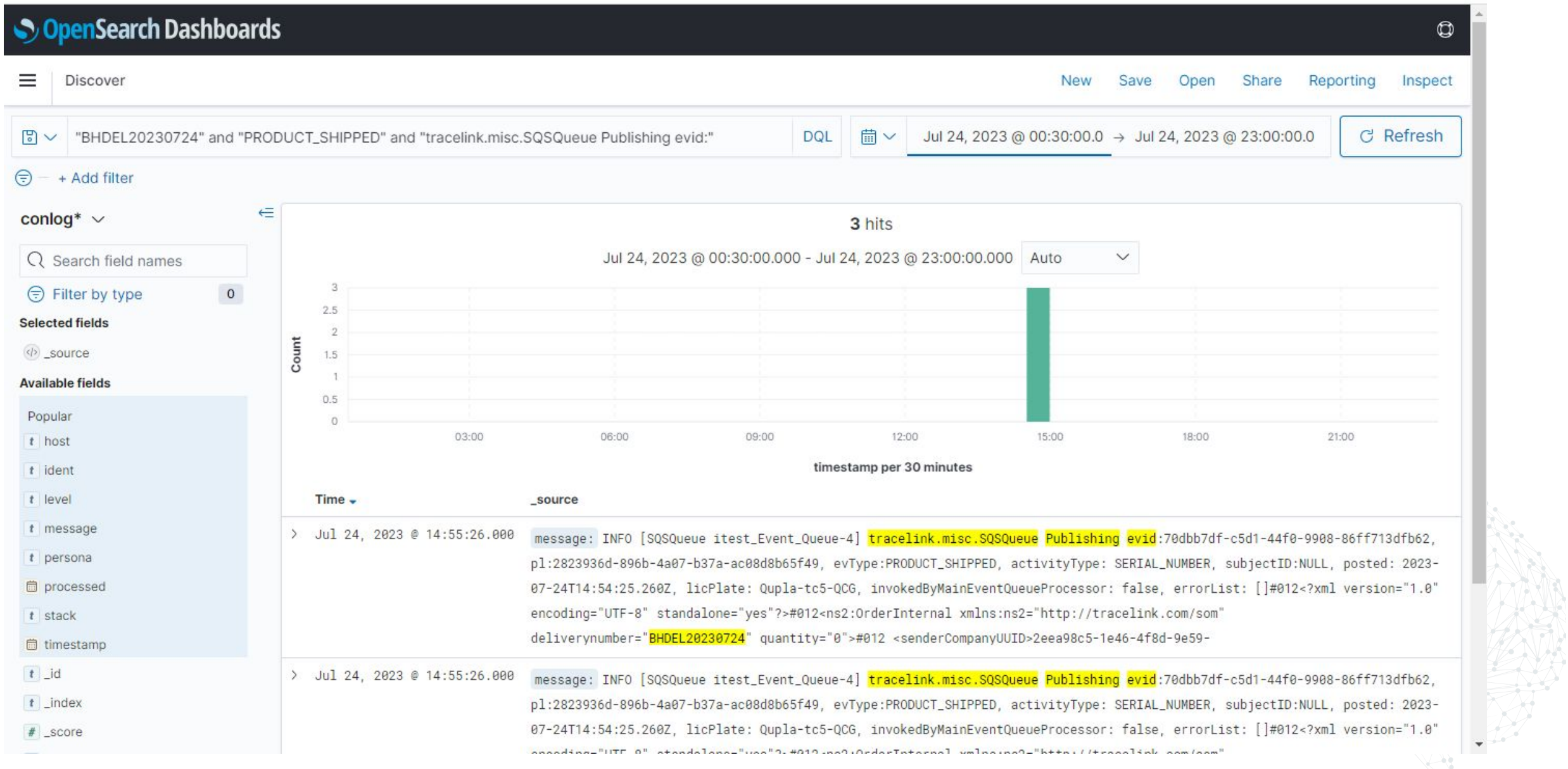
1. Select the pre-saved: *01 Compliance App Get Publishing Evt ID* filter



2. Enter in “YourDevNumber” which is TTS Delivery number
3. Modifying the dates Absolute Date for Start and Finish



Troubleshooting Example



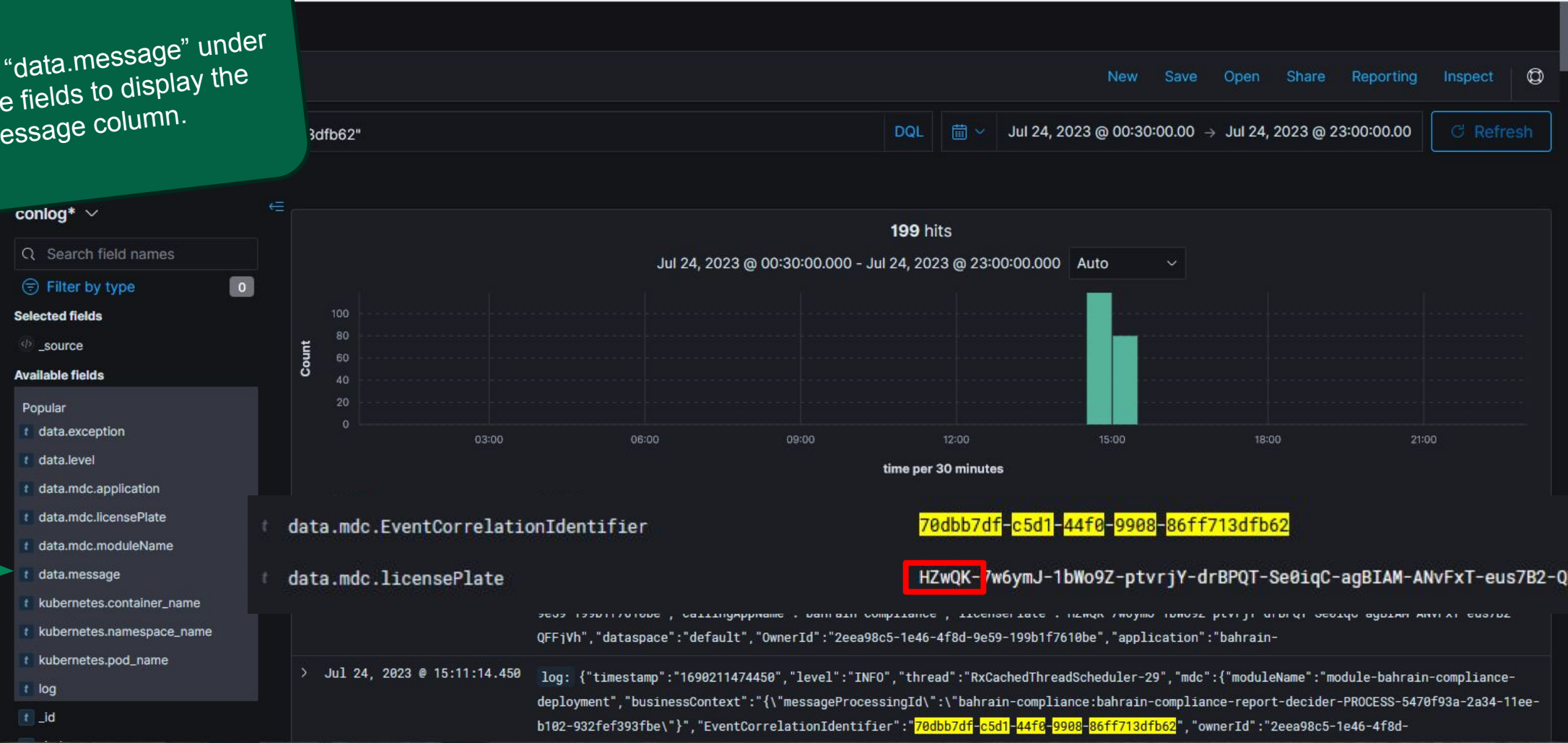
Troubleshooting Example

1. Launch Opus Kibana:
https://kibanadnpkubvir.tracelink.com/_dashboards/app/discover#/
2. Check if the Event was received by Opus by searching for the Correlation ID
3. Enter in the CorrelationID for the EventID (in quotes) and set the dates
 1. Absolute Date for Start and Finish
 2. July 24, 2023 00:00 to July 24, 2023 23:00
4. Click Refresh
 1. If the event made it to Opus, you'll see records



Troubleshooting Example

TIP: Click “data.message” under available fields to display the message column.



If Transaction Appears on MINT and fails for any unknown reason

- A MINT Object gets created corresponding to each transaction.
- Object ID is the unique ID of any MINT Object.
- Provide the Object ID to the engineering team for troubleshooting any issues.

MINT - MINT FOR DIRECT SUPPLY

All Partners

GO

All Transactions

Business Transactions

Serialization Transactions

Manufacturing - Customer

Serialized Traceability - Supplier

Search Serialization Transactions

Search all your serialized traceability transactions here.

State	Result	Type	Transaction ID	Sender	Receiver	Input File	Output File
Sent	Delivered	SHIPMENT	17APR_1	LifeBlend Ltd	BIOLINKSOL (0 bytes)	MPC_.....lqso.xml (0 byte)
Sent	Error	SHIPMENT	DEL_17APR25	LifeBlend Ltd	BIOLINKSOL (0 bytes)	

View Serialization Traceability Transaction

Draft

Submit

Processing

Processed

Preparing To Send

Sending

Sent

General

Type
SHIPMENT

Process Status
Done

Sender
LifeBlend Ltd

Transaction ID
17APR_1

Result
Delivered

Sender Location
LifeBlend Ltd



Next Steps

- Enable a Partner sending serialized shipment to MINT Owner.



Useful links

Wolfgang – Confluence!

[Link to the configuration page](#)

[Sample ATS ticket for Owner Services Enablement](#)

[Sample ATS ticket for Partner Services Enablement](#)

[Post Processing Transforms Details](#)

[Sample ATS ticket for Post Processing Transforms Deployment](#)

