

Paragon Interface

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1 Paragon Interface

Note: This guide covers the direct Paragon API interface. There are other more manual interfaces to Aptean Routing & Scheduling - Paragon edition, but these are not covered here.

There are 2 types of direct Paragon APIs:

- Strategic - Fixed Drop Scheduling Engine
- Tactical - creating and optimising routes before or on the day of execution

These can be configured separately, so that either or both can be in use.

1.1 Configuration

1.1.1 System Parameters

System parameters enable the functionality of the Paragon API.

Name	Description	Usage
PAR_TENNANT_KEY1	Tenant KEY 1 for paragon API	SYSTEM
PAR_ENDPOINT_URL	URL for paragon API	SYSTEM
PAR_TENNANT	Tenant for paragon API	SYSTEM
PAR_FREQUENCY	Frequency for PAR Master keys	SYSTEM
PAR_START_DATE	Start Date for Master Keys	SYSTEM
PAR_KEY_FORMAT	PAR Master key format WKXX, DDMM, DAYX	SYSTEM
TK PAR_USE_PROXY	Paragon Use Proxy	SYSTEM
TK PAR_PROXY	Paragon Proxy Server	SYSTEM
PAR_GROUP_STAGING	Paragon Group Staging Level	SYSTEM
PAR_RUN_NUMBER	Is Paragon Planning based on Run Numbers?	SYSTEM
PAR_KEY_PROJECT	PAR Project name	SYSTEM
PAR_API	Create Control records for Paragon API	SYSTEM
PAR_SEND_ALL_LOCATIONS	Are locations sent out via API ('TACTICAL','STRATEGIC','BOTH')	SYSTEM
PAR_AUDIT	Include auditing of the import process in the STP version of the Paragon API (Y/N)	SYSTEM
HTTPS_WALLET_FILE		
HTTPS_PASSWORD		
AUTO_SCHED_INACTIVE_DEPOTS		
TRM_RETAIN_EMPTY_STOPS		

A full list of configurable parameters is available here:

- [System Parameters List](#)

1.1.2 Order and Location Details sent to Paragon

The content of each message sent to Paragon is controlled through internal configuration tables. These are maintained and configured by your Aptean implementation team.

These allow configuration of the various elements that are sent from CTMS to Aptean Routing and Scheduling - Paragon Edition.

Orders

- Any direct field from tables:
 - ◆ SCH_ORD - the order.
 - ◆ SCH_ORDER_LINE - the deliverable types such as Parcels, Tyres, etc.
 - ◆ SCH_ORD_ITEMS - the individual parcels, or quantity of each specific product.



- ♦ GEO_LOCATION GEO_TO - details of the final destination.
- ♦ GEO_LOCATION GEO_FROM - details of the origin.
- Functions can be called for other information:
 - ♦ DP_PAR_API_STP.GET_REF - retrieve any reference against the order.
 - ♦ DP_PAR_API_STP.GET_ORDER_TYPE - retrieve the order type.
 - ♦ DP_PAR_API_STP.GET_FROM_LOC - summarised details of the origin.
 - ♦ DP_PAR_API_STP.GET_TO_LOC - summarised details of the destination.
 - ♦ DP_PAR_API_STP.OPENING_TIMES - opening times of the destination.
 - ♦ DP_PAR_API_STP.CLOSING_TIMES - closing times of the destination.
 - ♦ DP_PAR_API_STP.GET_DROP_NUMBER - the specific drop number.
 - ♦ DP_PAR_API_STP.GET_TOTAL_TYRES - the total tyres (specific to tyre delivery - use the below function for more generic systems)
 - ♦ DP_PAR_API_STP.GET_QTY_BY_DU - the total quantity of a specific deliverable unit, e.g. pallets, parcels, tyres, etc.

Locations:

- Any direct field from the following tables:
 - ♦ GEO_LOCATION - details of the supplied location.

1.1.3 Run Key Configuration

Aptean Routing and Scheduling - Paragon Edition controls all planning through Runs. Runs are normally associated to a schedule within CTMS, but not always. In this case, there is a Run configuration that aligns the dates of jobs within CTMS to the appropriate Paragon run key.

This is achieved through the **Business Data Maintenance** screen, on the *Paragon Keys* tab.

The screenshot shows the 'Business Data Maintenance' window with the 'Paragon Keys' tab selected. The window has a toolbar at the top with buttons for navigation and search. Below the toolbar is a section with various tabs: Delivery T..., Service Le..., Transport..., Shift Patt..., Team Details, Storage Ty..., Note Types, Fixed Cost..., Booking St..., Route Prio..., and Paragon Keys. The 'Paragon Keys' tab is active, displaying a table with the following data:

Project Name	From Date	To Date	Master Key	Run Key	Year
Stapletons	18-FEB-2023	19-FEB-2023	0218	0218	2023
Stapletons	19-FEB-2023	20-FEB-2023	0219	0219	2023
Stapletons	20-FEB-2023	21-FEB-2023	0220	0220	2023
Stapletons	21-FEB-2023	22-FEB-2023	0221	0221	2023
Stapletons	22-FEB-2023	23-FEB-2023	0222	0222	2023
Stapletons	01-NOV-2022	02-NOV-2022	1101	1101	2023
Stapletons	02-NOV-2022	03-NOV-2022	1102	1102	2023
Stapletons	03-NOV-2022	04-NOV-2022	1103	1103	2023
Stapletons	04-NOV-2022	05-NOV-2022	1104	1104	2023
Stapletons	05-NOV-2022	06-NOV-2022	1105	1105	2023

At the bottom of the table, there are buttons for 'Create Keys', 'Delete Keys', and 'Close'.

Note that the enabled in **Access Control**, accessible tabs, for screen "BDM" tab "PAR_KEYS".

A full list of configurable tabs and functions is available here:

- **Access Control - Accessible Functionality**

1.1.4 Turning on the interface

The individual processes for Paragon are controlled through EDI Process Configuration in the **EDI Maintenance** screen.

Inbound



Inbound processes are split into 3

- Inbound Tactical Receive per depot
- Inbound Strategic Receive per depot
- Inbound Processing for all staged receipts above

Regardless of the components of the interface that are in use, the latter process must always be running.

Inbound Strategic Route

These processes get the information from Paragon and stage the information on inbound tables, ready for import

This can be configured for all depots or one per depot, depending on how Paragon is configured. For example, if Paragon is configured with different plans per regional depot, then each import process should be configured separately for each depot here. Therefore this should be named appropriately e.g. the name of the depot.

Process: DP_PAR_API_STP.get_paragon_route

Parameters

- DEPOT_KEY - the RDC Location ID

Report Values

- Package PROCESS DP_PAR_API_STP.get_paragon_route
- Process p_process_name the name of the EDI process that has been configured above.

Inbound Tactical

These processes get the information from Paragon and stage the information on inbound tables, ready for import

This can be configured for all depots or one per depot, depending on how Paragon is configured. For example, if Paragon is configured with different plans per regional depot, then each import process should be configured separately for each depot here. Therefore this should be named appropriately e.g. the name of the depot.

Process: DP_PAR_AP_STPI.get_paragon

Parameters

- DEPOT - the EDI Process Name

Report Values

- Package PROCESS DP_PAR_API_STP.get_paragon
- Process p_process_name Get_Paragon

Inbound Processing

This is the general inbound processing job.

This process processes the information from the inbound tables into the CTMS database.

- Name: paragon_in
- PROCESS: DP_PAR_API_STP.READ_PARAGON_IN

Report Values

- Package PROCESS DP_PAR_API_STP.READ_PARAGON_IN
- Process p_process_name paragon_in

Outbound



- Name: Paragon_Outbound
- Process: DP_PAR_API_STP.process_paragon

Parameters

- AUDIT_WS Y/N
- USE_RUN_DEPOT Y/N

Report Values


- Package PROCESS DP_PAR_API_STP.process_paragon_outbound
- Process p_process_name Paragon_Outbound

1.2 Strategic Interface

This interface allows definition of locations onto fixed routes at specific drop numbers.

 **Note:** This is applicable to Fixed Drop Scheduling engine only.

When imported, this deletes any previous configuration against locations and replaces it with the new network map.

 **Note:** Bank Holiday routes will NOT be deleted - these are expected to be managed manually in CTMS.

The data that is sent is configurable, as seen in the sections above.

1.3 Tactical

When orders are received into CTMS, they may be planned on temporary trips using the scheduling engine - these trips should be configured to be prefixed with "TMP" so that they can be easily distinguished.

Orders and Locations are sent to Paragon for planning.

The data that is sent is configurable, as seen in the sections above.

Paragon users then optimise and plans the orders.

When these Paragon routes are frozen, these are exported back to CTMS automatically. This remove any TMP trips, creates RTE trips and sets them to TENDERED status.

