https://automate.cn.ca

Automated Shipment Tracking

Implementation Guide

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http://www.cn.ca/

CN e-Business
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Introduction

In This Document

This document describes how to track your shipments using the Shipment Tracking (STI) function of Automate.cn.ca.

Other functions available on Automate.cn.ca are:

- Fleet Tracking (FTI) – Shipments are grouped in a customized fleet to facilitate tracking.
- Railcar Release (uses Web Services and XML) – Release empty and loaded railcars to CN for pickup.

For more information, go to http://www.cn.ca/automate.

What is Automate.cn.ca?

Automate.cn.ca allows you to track your CN shipments without having to navigate through the CN e-Business website, or without the need for a web browser.

It uses the HTTPS protocol to ensure security of information between parties.

It also allows you to release your empty and loaded railcars to CN for pickup using Web Services and XML.

Accessing Automate.cn.ca

To access Automate.cn.ca, you must be a registered user of the CN e-Business site.

If you are already a registered user, read this document to learn how to use Automate.cn.ca now.

To register for access to CN e-Business, go to http://www.cn.ca/register.

Shipment Tracking Request

The automated shipment tracking request consists of a secure URL string that includes a combination of mandatory and optional parameters.

Enter the complete URL in the site location or address field of your internet browser to submit an automated shipment tracking request, or use a non-browser application to submit the request.

    Base URL →   https://automate.cn.ca/ECquery?
  Parameters →   &UserID=MyUserid&Password=MyPassword &Function=STI
                   &Format=HL&EquipmentID=CNA385401

Note: The URL must be on a single line without spaces or breaks.

Parameters

Parameters in URLs use the following format: &*ParameterName*=*ParameterValue*

Each parameter must be separated by '&' and spaces are not permitted.

Parameter	Mandatory / Optional	Description
&UserID=	**Mandatory**	The unique userid that you use to login to the CN e-Business website. Example: **&UserID=Mary1234**
&Password=	**Mandatory**	**Case-sensitive.** The password that you use to login to the CN e-Business website. Example: **&Password=Xc56t44M**
&Function=	**Mandatory**	The function being used. Use 'STI' for shipment tracking. Use **&Function=STI**
&EquipmentID=	**Mandatory**	This is the initials and number of the railcar, trailer, or container to be traced. When tracking multiple equipment ids, enter the equipment ids one after another, without any spaces, or separate using '+'. Accepts a maximum of 240 equipment IDs. There will be a report record returned for each equipment id entered. Example 1: **&EquipmentID=CNA385401CNA385408** Example 2: **&EquipmentID=CNA385401+CNA385408**

&Format=	Optional	If omitted, the report format will be 'HL' (Location). The format of the report that will be returned. There are four different report formats. Some of the formats can be returned as different file types. This results in ten possible format code values that can be used. Example: **&Format=HH**

Formats:

Format Code	Format Description	Type	Mime/Type
H	ETA	Flatfile	text/CN-automate-ftp
L	Location *(default)*	Flatfile	text/CN-automate-ftp
S	SPLC	Flatfile	text/CN-automate-ftp
W	Weight	Flatfile	text/CN-automate-ftp
C	Location	Comma Delimited	text/CN-automate-comma
T	Location	Tab Delimited	text/CN-automate-tab
HH	ETA	HTML	text/html
HL	Location	HTML	text/html
HS	SPLC	HTML	text/html
HW	Wieght	HTML	text/html

Note: Format Code L is the same as the CLM 'F' format. S is the same as CLM 'G' format. W is the same as CLM 'W' format (CLM = **C**ar **L**ocation **M**essage).

&Language=	Optional	If omitted, the language of the response will correspond to the language preference in your eBusiness profile. Used for requesting English or French column headers. Not supported under the C and T formats. Example: **&Language=E**

Languages:

Language Code	Description
E	English *(default)*
F	French

Request Example

The following is an example of an automate.cn.ca shipment tracking request.

https://automate.cn.ca/ECquery?&Function=STI&UserID=yyyyyyyy
&Password=zzzzzzzz&Format=HH&EquipmentID
=CN56001CN56002CN56002CN56003CN56004CN56005

In this example, the user requested shipment tracking information (&Function=STI) for 5 equipment ids (&EquipmentID=CN56001CN56002CN56002CN56003CN56004CN56005), in html ETA format (&Format=HH) with column headings in English (default when &Language parameter not included in URL).

Shipment Tracking Response

Response File Types

The following response file types are available, specified using the format parameter.

- **Flat File**: All data fields are delimited by a blank (space) character.

- **Comma Delimited**: The Comma delimited file type is an L or F report format with commas replacing the Blank fields and between all other fields.

- **Tab Delimited**: The Tab delimited format is an L or F report format with tab (ASCII 09) replacing the Blank fields and between all other fields.

- **HTML**: The HTML format returns data that can be included in a web page of your design. The response is sandwiched between the preformatted html tags.

Response Format C, L (default), LH, or T – Location with Conveying Flatcar

Response Example

The following is an example of the Format C, L, LH, or T response.

```
CLM F FR CN   2008/08/06 16:28

EQUIPMENT   LOCATION  PR DATE  TIME L E   TRAIN/ DESTINED  PR FLAT CAR
INIT NUMBER         ST MM DD HHMM E V   BO/HLD         ST INIT NUMB. SCAC
--------------------------------------------------------------------------------
CNA  385400 PARWEST   ON 08 06E1533 L A   35603 STLAMLEVI PQ         CN
EOM

REC_COUNT 00000001
```

Data Elements & Descriptions

The following data elements are included in the Format C, L, LH, or T response.

Equipment initials and number

The marks stencilled on the railcar, trailer or container.

Location (PR/ST)

The most recent reported location of the unit.

Date (MMDDHHMN)

The month, date and time of the event

Load/empty (L/E)

Indicates whether the unit is a load or an empty.

Event (E/V)

The latest event reported.

Train/BO/hold

Depending on the event, this will indicate:

- The train on which the unit is travelling,
- The bad order (repair condition),
- The hold (delay) reason, or
- The track on which the equipment is located.

Destined (PR/ST)

The destination of the current shipment.

Flat Car Initials Number

The marks stencilled on the railcar.

SCAC

The reporting road.

Record Layout

The following table contains the record layout for the Format C, L, LH, or T response.

Segment	Field Name	Type	Value	Length	Start	End
Header	Response Type	ID	CLM	3	1	3
Header	Format	Character	F, G, W, or H	1	5	5
Header	From	ID	FR	2	7	8
Header	CLM_SCAC		CN	4	10	13
Header	Response Date	Date/Time	YYMMDDHH	8	15	22
Data	Equipment Initials	Character		4	1	4
Data	Blank	Character		1	5	5
Data	Equipment Number	Character		6	6	11
Data	Blank	Character		1	12	12
Data	Location Pr/St	Character		2	23	24
Data	Estimate Flag	Character		1	25	25
Data	Event Month	Character		2	26	27
Data	Blank	Character		1	28	28
Data	Event Day	Character		2	29	30
Data	Time Zone	Character		1	31	31
Data	Event Hour	Character		2	32	33
Data	Event Minute	Character		2	34	35
Data	Blank	Character		1	36	36
Data	Load/ Empty	Character		1	37	37
Data	Blank	Character		1	38	38
Data	Event	Character		1	39	39
			See Appendix for listing of events descriptions.			
Data	Blank	Character		3	40	42

Data	Train/ Bad Order Code	Character		6	43	48

Event	Train/ Bad Order Code Field Contains
A or P	The train on which the unit is travelling
B	The bad order (mechanical failure) code
H	The hold (delay) code
W or Z	The track on which the unit is located

See Appendix for listing of bad order and hold reasons.

Type	Field	Data Type	Description	Length	Start	End
Data	Blank	Character		1	49	49
Data	Destination	Character		9	50	58
Data	Blank	Character		1	59	59
Data	Destination Province/State	Character		2	60	61
Data	Blank	Character		1	62	62
Data	Flatcar Initials	Character		4	63	66
Data	Flatcar Number	Character		6	67	72
Data	Reporting Railroad	Character		4	73	76
End of Message	EOM	ID	EOM	3	1	3
End of Message	REC_COUNT	Zero-Fill Number	Count of detail records	8		

Response Format H or HH – ETA (Estimated Time of Arrival)

Response Example

The following is an example of the Format H and HH response.

```
CLM H FR CN   2008/08/06 16:29

EQUIPMENT   LOCATION PR  DATE  LETRAIN/DESTINED PRSCAC   ETA    E ETA
INIT NBR         STMMDDHHMNEVBO/HLD       ST   CITY  PR/ST V MMDDHH
-----------------------------------------------------------------------
CNA  385400 PARWEST  ON08061533LA 35603STLAMLEVIPQCN  JOFFRE   PQ J 081114
EOM

REC_COUNT 00000001
```

Data Elements & Descriptions

The following data elements are included in the Format H and HH response.

Equipment initials and number

The marks stencilled on the railcar, trailer or container.

Location (PR/ST)

The most recent reported location of the unit.

Date (MM DD)

The month and the day of the reported event.

Time (HH MM)

The day and the hour that the unit was last reported.

Load/empty (L/E)

Indicates whether the unit is a load or an empty.

Event (E/V)

The latest event reported.

Train/BO/hold

Depending on the event, this will indicate:

- The train on which the unit is travelling,

- The bad order (repair condition),

- The hold (delay) reason, or

- The track on which the equipment is located.

Destination (PR/ST)

The destination of the current shipment.

SCAC

The reporting road.

ETA City (PR/ST)

Location of the estimated time of arrival.

ETA Event (E/V)

Event associated with the ETA.

ETA (MMDDHH)

The month, the day and the hour in which the equipment is scheduled to arrive.

Response Format S or HS – SPLC (Standard Point Location Code)

Response Example

The following is an example of the Format S and HS response.

```
CLM G FR CN   2008/08/06 16:29

EQUIPMENT  LOCATION   DATE  LE TRAIN/DESTINATION FLAT CAR  SCAC
INIT NBR   SPLC SUF   MMDDHHMNEV BO/HLD SPLC SUF   INIT NBR
-----------------------------------------------------------------
CNA 385400048317000   08061533LA  35603021701000          CN
EOM

REC_COUNT 00000001
```

Data Elements & Descriptions

The following data elements are included in the Format S and HS response.

Equipment initials and number

The marks stencilled on the railcar, trailer or container.

Location SPLC

Standard Point Location Code defined by the National Motor Freight Tariff Association (NMFTA) in the U.S.A and the National Transportation Agency (NTA) in Canada. The SPLC is 6 positions in length plus 3 position subfield (normally blank or 000). The SPLC is a hierarchical code representing 2 position province/state, 2 position county, 2 position municipality.

Date (MMDDHHMN)

The month, date and time of the event

Load/empty (L/E)

Indicates whether the unit is a load or an empty.

Event (E/V)

The latest event reported.

Train/BO/hold

Depending on the event, this will indicate:

- The train on which the unit is travelling,
- The bad order (repair condition),
- The hold (delay) reason, or
- The track on which the equipment is located.

Destination SPLC

Standard Point Location Code defined by the National Motor Freight Tariff Association (NMFTA) in the U.S.A and the National Transportation Agency (NTA) in Canada. The SPLC is 6 positions in length plus 3 position subfield (normally blank or 000). The SPLC is a hierarchical code representing 2 position province/state, 2 position county, 2 position municipality.

Flat Car Initials Number
The marks stencilled on the railcar.

Response Format W or HW – Scale or Shipper's Weights

Response Example

The following is an example of the Format W and HW response.

CLM W FR CN   2008/08/06 16:29

```
EQUIPMENT GROSS  TARE   NET  DATE WEIGH LOCATION     DATE ALLOW
INIT NBR   WGHT  WGHT  WGHT  MMDD CITY         PR/STYYMMDD
---------------------------------------------------------------
CNA 385400255900 59900 196000                 080802    L
EOM

REC_COUNT 00000001
```

Data Elements & Descriptions

The following data elements are included in the Format W and HW response.

Equipment initials and number

The marks stencilled on the railcar, trailer or container.

Weights (Gross, Tare, Net)

The Gross weight = total weight of shipment + unit The Tare weight = the empty weight of the trailer, container, or railcar Net weight = the weight of the goods in the unit (Gross - Tare = Net)

Date (MMDD)

The month and date of the scale weight if the Scale Code = 8.

Location city (PR/ST)

The location where the unit was scaled if the Scale Code = 8.

Waybill date (MM DD)

The date of the current waybill.

Allowance (ALW)

Indicates any weight subtracted by the railroad from the GROSS to correct for weighing conditions, such as several inches of snow on the top of the car.

Kilograms/pounds (K)
An indication as to whether the weights are in kilograms (K) or pounds (L).

Security

Automate.cn.ca uses the encrypted HTTPS and SSL protocols to help ensure security of the information being transmitted between parties.

Only registered users of the CN e-Business site can use Automate.cn.ca. Each request for information undergoes a security verification of the userid and password provided in the request.

Errors

If an error is encountered while a request is being processed, an error code with a brief description will be returned:

- **400** - Indicates that some information might be missing or misspelled on the URL; user should verify that they have given the proper information.

- **500** - There has been a server or communication error; CN eBusiness support should be notified if error persists (ebusiness@cn.ca or 1-800-361-0198).

Non-Browser Applications

You can create your application in any language and platform that supports socket connections. Follow the SSL protocol specification or use an SSL toolkit on the market to connect to our server.

Please read the licensing agreement carefully before using any of the products.

Supported SSL Protocols

The following SSL protocols are supported.

SSL 2.0 with cyphers:
- RC4 with 40 bit encryption and MD5 message authentication
- RC2 with 40 bit encryption and MD5 message authentication

SSL 3.0 with cyphers:
- RC4 with 40 bit encryption and MD5 message authentication
- RC2 with 40 bit encryption and MD5 message authentication

Appendix

Event Codes and Descriptions

Code	Last Reported Event
A	Arrived at location
B	Bad order (needs repair)
C	Came in the gate of an intermodal terminal
D	Arrived at final destination yard or terminal
E	Exit the gate of an intermodal terminal
F	Flat Car has been reported in bad order (needs repair)
G	Released from bad order (repair) and returned to service
H	Hold status
J	Junction delivery (interchange to another railroad)
K	Intermodal Interchange
M	Motor carrier move
P	Passed a station on a train (departure)
Q	Flat Car released from bad order (repair)
R	Received at junction interchange from another railroad
S	Stored
U	Ramped, intermodal unit loaded onto a flatcar
V	Deramped, intermodal unit removed from a flatcar
W	Release by shipper (OK to move)
X	Departed shipper, pickup or pull
Y	Notification or constructive placement
Z	Placement or delivery to consignee

Bad Order Reason Codes

Code	Mechanical Defect
A	Body, including floor, roof, sides, and multi-level racks
B	Brakes
C	Cleanout in preparation for loading
D	Derailment or accident
E	Doors, including hopper gates, hatches, domes
F	Draft system, including couplers, yokes, etc.
G	Interior, including linings or coatings
H	Load attention requiring measurement, transloading, or containment of leaking product
I	Load restraint, including tiedowns, bulkheads, trailer hitches, or pedestals
J	Mechanical inspections resulting from early warning letters or maintenance advisory notices
K	Refrigeration equipment, including pre-trip inspection, precooling, or defective components
L	Safety appliances, including ladders, handholds, or running boards
M	Trucks, including sideframes and bolsters
N	Underframe, including centre sills, side sills and body bolsters
O	Wheel assembly, including axles, wheel bearings, or hot boxes

Hold Reason Codes

Code	Hold / Delay Reason
CC	CC - Customs clearance
CW	Equipment in wrecked train (derailment)
DI	Disposition, awaiting customer instructions
EM	Embargo, shipment cannot proceed via its original route. Awaiting additional instructions from customer
HI	Heating/icing
LI	Lading inspection for load-shift or dimensional measurement
MI	Mechanical inspection
NB	No bill, awaiting original shipping instructions
OC	Operating conditions
OT	Other
WG	Weighing, shipment held until scaled