API - Shipping

Documentation

Version 1

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Introduction

The Cerasis XML Web Service Interface provides a subset of capabilities by way of XML web services. By using the web services, customers can integrate their existing systems with our LTL rating engine. While not all features are available, the following functionality is currently supported:

- **Shipping**
  - **VoidShipment**
  - **ProcessShipment**

Who is this document for?

- This document is meant as a programmer-to-programmer document. This document assumes you are familiar with XML, web services, SOAP architecture, and other computer-related technologies.

What is required to interface with Cerasis Web Services?

- To interface with the web services, customers are required to know their ShipperID, Username, and Password. In addition, each shipper will be assigned an XML Access Key that is required when communicating with any Cerasis web service.

How does the process works?

- Initially, a customer wanting to use the XML web services will be established in our development environment. This allows the customer to write all the applicable interfaces as well as test the integration. Once testing is complete and certification has been completed, the customer will be set up in production and can begin using the XML web services.

What web service technologies are supported?

Cerasis currently supports SOAP 1.1 and 1.2.

Common Structures

AccessRequest

All webservice calls will require the AccessRequest object. This object is used as authentication to the XML engine.

```
<AccessRequest>
  <ShipperID>string</ShipperID>
  <Username>string</Username>
  <Password>string</Password>
  <AccessKey>string</AccessKey>

</AccessRequest>
```

Field Name	Data Type	Req/ Opt	Description
ShipperID	String	Req	Your ShipperID, the same used to log into the LTL Rater
Username	String	Req	Your Username, the same used to log into the LTL Rater
Password	String	Req	Your Password, the same used to log into the LTL Rater
AccessKey	string	Req	The AccessKey is a unique ID used only by your shipper. Cerasis currently uses a GUID as the AccessKey. The AccessKey is also unique to each environment: one key is used for development and a different one for production.

Accessorials

The Accessorials object is a collection of accessorials used by the LTL Rater.

```
<Accessorials>
  <Accessorial>
    <AccessorialCode>string</AccessorialCode>
  </Accessorial>
  <Accessorial>
    <AccessorialCode>string</AccessorialCode>
  </Accessorial>
</Accessorials>
```

Field Name	Data Type	Req/ Opt	Description
Accessorial	Object	Opt	
- AccessorialCode	String	Req	Code of Accessorial

Address

The OriginAddress and the DestinationAddress objects are used throughout the XML API. These structures apply to Origin and Destination address fields respectively. For documentation purposes, the OriginAddress, rather than DestinationAddress, is used here.

```xml
<DestinationAddress>
  <Name>string</Name>
  <Address1>string</Address1>
  <Address2>string</Address2>
  <Address3>string</Address3>
  <City>string</City>
  <State>string</State>
  <PostalCode>string</PostalCode>
  <Country>string</Country>
  <Contact>string</Contact>
  <EmailAddress>string</EmailAddress>
  <Fax>string</Fax>
  <Phone>string</Phone>
  <Reference>string</Reference>
  <ResidentialDelivery>boolean</ResidentialDelivery>
  <EmergencyContactName>string</EmergencyContactName>
  <EmergencyContactNumber>string</EmergencyContactNumber>
  <EmergencyAgentContractNumber>string</EmergencyAgentContractNumber>
</DestinationAddress>
```

Field Name	Data Type	Req/ Opt	Description
Name	String	Opt	Name, typically the business name
Address1	String	Req	Address Line 1
Address2	String	Opt	Address Line 2
Address3	String	Opt	Address Line 3
City	String	Req	City
State	String	Req	State
PostalCode	String	Req	Postal Code, must be 5 digits for US addresses and 6 digits for Canadian addresses. Currently, Zip+4 is not supported
Country	String	Req	Country, US or CA
Contact	String	Opt	Name of contact person at address
EmailAddress	String	Opt	Email address of contact
Phone	String	Opt	Phone of location
Reference	String	Opt	Any reference for location.
ResidentialDelivery	Boolean	Opt	Whether the address is residence. True is a residence, False is not a residence.

EmergenyContactNumber	String	Opt**	Phone# of their emergency response provider
EmergencyContactName	String	Opt**	Name of their emergency response provider
EmergencyAgentContactNumber	String	Opt**	Contract number for the contract with their emergency response provider

** Only need to be entered for the OriginAddress

Details

The Details Object contains the line item details needed to rate or ship a shipment. When submitting a rating request, the Commodity portion will be ignored.

```xml
<Details>
  <Detail>
    <Class>string</Class>
    <Weight>double</Weight>
    <Quantity>int</Quantity>
    <Height>int</Height>
    <Length>int</Length>
    <Width>int</Width>
    <Unit>string</Unit>
    <Hazmat>boolean</Hazmat>
    <Commodity>
      <Description>string</Description>
      <NMFCCode>string<NMFCCode>
      <Class>double</Class>
      <HazardousMaterial>boolean</HazardousMaterial>
      <HazmatDescription1>string</HazmatDescription1>
      <HazmatDescription2>string</HazmatDescription2>
      <HazmatDescription3>string</HazmatDescription3>
      <HazmatClass>string</HazmatClass>
      <HazmatSubClass>string</HazmatSubClass>
      <HazMatPackagingClass>string</HazMatPackagingClass>
      <HazmatTechnicalName>string</HazmatTechnicalName>
      <HazmatZone>string</HazmatZone>
      <HazmatDetailDescription>string</HazmatDetailDescription>
      <HazmatSpecialProvision>string</HazmatSpecialProvision>
      <HazmatSpecialProvExpDate>string</HazmatSpecialProvExpDate>
      <UNIdentificationNumber>string</UNIdentificationNumber>
      <ERGGuidePage>string</ERGGuidePage>
      <ContactName>string</ContactName>
      <ContactNumber>string</ContactNumber>
      <BolDescription1>string</BolDescription1>
```

```
        <BolDescription2>string</BolDescription2>
        <BolDescription3>string</BolDescription3>
      </Commodity>
    </Detail>
  </Details>
```

Field Name	Data Type	Req/ Opt	Description
Class	String	Req	Class of shipment. Classes are: - 50 - 55 - 60 - 65 - 70 - 77.5 - 85 - 92.5 - 100 - 110 - 125 - 150 - 175 - 200 - 250 - 300 - 400 - 500
Weight	Double	Req	Weight of item
Quantity	Int	Req	Quantity of line item
Height*	Integer	Opt	Height of the item
Length*	Integer	Opt	Length of the item
Width*	Integer	Opt	Width of the item
Unit	String	Opt	Packaging type: can include Pallet, Box, Drum, etc.
Hazmat	Boolean	Req	True **if one or more items in the** shipment is hazardous; False if not.
Commodity	Object	Opt	
- Description	String	Req	Description of Commodity
- NMFCCode	String	Req	NMFC code
- Class	String	Req	Commodity Class
- HazardousMaterial	Boolean	Opt	True if hazardous, false if not

-	HazmatDescription1	String	Opt	Hazmat description field
-	HazmatDescription2	String	Opt	Hazmat description field
-	HazmatDescription3	String	Opt	Hazmat description field
-	HazmatClass	String	Req**	Hazardous Class or Division
-	HazmatSubClass	String	Opt	Subsidiary Hazardous class
-	HazmatPackagingClass	String	Req**	Packaging Group
-	HazmatTechnicalName	String	Opt	Technical name of commodity
-	HazmatZone	String	Opt	Hazardous Zone (If Applicable)
-	HazmatDetailDescription	String	Req**	Detailed Description
-	HazmatSpecialProvision	String	Opt	Special Permits or Provisions
-	HazmatSpecialProvExpDate	String	Opt	Permit/Provision expiration date
-	UNIdentificationNumber	String	Req**	UN Identification Number
-	BOLDescription1	String	Opt	BOL Description
-	BOLDescription2	String	Opt	BOL Description
-	BOLDescription3	String	Opt	BOL Description

* *Not* used for rating. These are informational only on the BOL for each line.

** Field is required only if HazardousMaterial field is True. These fields are required by the Department of Transportation to be filled in correctly. It is the responsibility of the shipper to properly document all hazardous material.

<p align="center">Dimensions</p>

The Dimension object is used when volume rating is needed. Volume rating only applies to certain carriers within the LTL Rater. The dimension object is used for giving the dimensions of all units with a given shipment. For example, regulations for shipping Hazmat material requires each item be placed on a separate detail line, even if all items fit on one pallet. In this case, the dimension object is used to specify the dimensions of the pallet.

```xml
<Dimensions>
  <Dimension>
    <Quantity>int</Quantity>
    <Height>double</Height>
    <Width>double</Width>
    <Length>double</Length>
  </Dimension>
  <Dimension>
    <Quantity>int</Quantity>
    <Height>double</Height>
    <Width>double</Width>
    <Length>double</Length>
  </Dimension>
</Dimensions>
```

Field Name	Data Type	Req/ Opt	Description
Dimension	Object	Req	
- Quantity	Int	Req	Quantity of items meeting HxWxL
- Height	Double	Req	Height of item
- Width	Double	Req	Width of item
- Length	Double	Req	Length of item

Web Services

VoidShipment

VoidShipment allows the user to void a previously created shipment. Shipments can only be voided if they have not been invoiced or if they have not been tendered to the carrier.

Request

```
<VoidRequest>
  <AccessRequest>
    <ShipperID>string</ShipperID>
    <Username>string</Username>
    <Password>string</Password>
    <AccessKey>string</AccessKey>
  </AccessRequest>
  <ShipmentBillNumber>string</ShipmentBillNumber>
</VoidRequest>
```

Field Name	Data Type	Req/ Opt	Description
AccessRequest	Object	Req	Please refer to the AccessRequest section of this document.
ShipmentBillNumber	String	Req	The Shipment Bill Number to be voided.

Response

```
<VoidResponse>
  <Error>
    <Code>int</Code>
    <Message>string</Message>
  </Error>
  <ShipmentBillNumber>string</ShipmentBillNumber>
  <ShipmentVoided>boolean</ShipmentVoided>
</VoidResponse>
```

Field Name	Data Type	Description
Error	Object	The Error object will return 0 if successful, otherwise it will return an error code along with an error message. (See Below)
ShipmentBillNumber	String	Should match Shipment Bill Number in request

ShipmentVoided	Boolean	True if shipment was voided, False if not voided

Error Codes

Error Code	Error Message
1051	Invalid XML Access Credentials
1061	Shipment Bill Number not found
1062	Error voiding shipment
1063	Shipment Bill Number already voided
1064	Shipment Bill Number already invoiced
1065	Shipment Bill Number has been tendered to carrier
1498	This shipper has been suspended
1499	Transaction Limit Exceeded

ProcessShipment

This web service allows customers to process shipments via the XML interface. When processing via the interface, attention must be paid to certain elements of the data structure.

Request

```
<ProcessShipment>
  <AccessRequest>
    <ShipperID>string</ShipperID>
    <Username>string</Username>
    <Password>string</Password>
    <AccessKey>string</AccessKey>
  </AccessRequest>
  <ShippingRequest>
    <Direction>string</Direction>
    <BillingType>string</BillingType>
    <Carrier>string</Carrier>
    <ShipDate>dateTime</ShipDate>
    <CODShipment>boolean</CODShipment>
    <CODShipmentCharge>boolean</CODShipmentCharge>
    <CODAmount>double</CODAmount>
    <CODCheckExpected>boolean</CODCheckExpected>
    <TotalPallets>double</TotalPallets>
    <Pronumber>string</Pronumber>
    <ShipperReference>string</ShipperReference>
    <ConsigneeReference>string</ConsigneeReference>
    <InternalBillingReference>string</InternalBillingReference>
    <AlternateShipper>string</AlternateShipper>
```

```xml
<AlternateCarrier>string</AlternateCarrier>
<AlternateBillTo>string</AlternateBillTo>
<PackagingUnit>string</PackagingUnit>
<SpecialInstructions>string</SpecialInstructions>
<BOLType>string</BOLType>
<BOLEmailAddress>string</BOLEmailAddress>
<GuaranteedServiceRequested>bool</GuaranteedServiceRequested>
<Origin>
  <Name>string</Name>
  <Address1>string</Address1>
  <Address2>string</Address2>
  <Address3>string</Address3>
  <City>string</City>
  <State>string</State>
  <PostalCode>string</PostalCode>
  <Country>string</Country>
  <Contact>string</Contact>
  <EmailAddress>string</EmailAddress>
  <Fax>string</Fax>
  <Phone>string</Phone>
  <Reference>string</Reference>
  <ResidentialDelivery>string</ResidentialDelivery>
  <EmergencyContactName>string</EmergencyContactName>
  <EmergencyContactNumber>string</EmergencyContactNumber>
  <EmergencyAgentContractNumber>string</EmergencyAgentContractNumber>
</Origin>
<Destination>
  <Name>string</Name>
  <Address1>string</Address1>
  <Address2>string</Address2>
  <Address3>string</Address3>
  <City>string</City>
  <State>string</State>
  <PostalCode>string</PostalCode>
  <Country>string</Country>
  <Contact>string</Contact>
  <EmailAddress>string</EmailAddress>
  <Fax>string</Fax>
  <Phone>string</Phone>
  <Reference>string</Reference>
  <ResidentialDelivery>string</ResidentialDelivery>
</Destination>
<LookupThirdParty>boolean</LookupThirdParty>
<ThirdPartyInformation>
  <Name>string</Name>
  <Address1>string</Address1>
  <Address2>string</Address2>
  <Address3>string</Address3>
  <City>string</City>
  <State>string</State>
  <PostalCode>string</PostalCode>
  <AdditionalInformation>string</AdditionalInformation>
```

```
            <AccountNumber>string</AccountNumber>
            <Country>string</Country>
        </ThirdPartyInformation>
        <Details>
            <Detail />
            <Detail />
        </Details>
        <Accessorials>
            <Accessorial />
            <Accessorial />
        </Accessorials>
        <Dimensions>
            <Dimension />
            <Dimension />
        </Dimensions>
    </ShippingRequest>
</ProcessShipment>
```

Field Name	Data Type	Req/ Opt	Description
AccessRequest	Object	Req	Please refer to the AccessRequest section.
ShippingRequest	Object	Req	Shipping Request (see below)

ShippingRequest Object

Field Name	Data Type	Req/ Opt	Description
Direction	String	Req	Direction of shipment, three choices - Inbound - Outbound - Dropship

BillingType	String	Req	How the shipment would be billed: - Prepaid - PPA : Prepaid & Add - Collect - HotShot - ThirdPartyBill

Carrier	String	Req	The carrier to rate. Can be either a single carrier's SCAC code to get the rate for that one carrier, or Rateshop to rate all carriers
ShipDate	DateTime	Req	Date shipment will be tendered. For best rate results, this date should match the expected day of shipment.
CODShipment	Boolean	Opt	Determines if the shipment is a COD shipment. If not sent, the system will default to False.
CODShipmentCharge	Boolean	Opt	Determines if Freight charge is added to COD amount. Only applies if CODShipment is True. If not sent, the system will default to False.
CODAmount	Double	Opt	Amount to collect if shipment is a COD shipment. If not sent, system will default to $0.00.
CODCheckExpected	Boolean	Opt	Determines if the carrier is picking up a check for COD.
TotalPallets	Double	Opt	Number of pallets with shipment. Must be present if pallet pricing is needed. If not sent, system will default to 0.
Pronumber	String	Opt	The Pronumber assigned by carrier. Used if carrier has preassigned pronumbers.
ShipperReference	String	Opt	Reference for origin of shipment.
ConsigneeReference	String	Opt	Reference for destination of shipment.
InternalBillingReference	String	Opt	Used for Internal reference only.
AlternateShipper	String	Opt	Alternate name that will be displayed on the BOL.

AlternateCarrier	String	Req**	Carrier Name for shipment when Carrier field is Other.
AlternateBillTo	String	Opt	Alternate bill to ShipperID. The AlternateBillTo must be setup in the system prior to use.
PackagingUnit	String	Opt	Any additional information needed for shipment. This text will show on the BOL after all detail lines next to the Total Weight.
SpecialInstructions	String	Opt	Any special instructions to be placed on the BOL
BOLType	String	Opt	Return type of BOL: • None – No BOL wanted • Email – BOL will be emailed • Inline – BOL will be returned in the response as a Base64 encoded PDF
BOLEmailAddress	string	Req***	EmailAddress you want BOL emailed to. Used only when BOLType is email.
GuaranteedServiceRequested	bool	Opt	When set to true will ship using the guaranteed service if the carrier supports it.
Origin	Object	Req	OriginAddress structure; please refer to common structure section of this document.
Destination	Object	Req	DestinationAddress structure; please refer to common structure section of this document.

LookupThirdParty	Boolean	Opt*	When set to true the third party billing information will be looked up using the third party name provided.
Details	Collection	Req	Collection of Detail objects. In order to rate, 1 detail object must be present in the collection. Please refer to Common Structures for more detail.
Accessorials	Collection	Opt	Collection of AccessorialCode objects. While not required, for best results accessorials needed for shipment should be passed with request. Please refer to Common Structures for more detail.
Dimensions	Collection	Opt	Collection of Dimension objects. Dimensions are used when volume rating is needed. Not all carriers require volume rating. Please refer to Common Structures for more detail.

* If set to true and the billing type is ThirdPartyBill the name of the Third Party will be used to lookup the third party to bill for the shipment.

** Required when Carrier field is Other, otherwise the field is optional.

*** Required when BOLType is Email

Third Party Information Object

Field Name	Data Type	Req/ Opt	Description
Name	String	Req **	Name of third party company
Address1	String	Req **	First line of the Third Party Address
Address2	String	Req**	Second line of the Third Party Address
Address3	String	Req**	Third line of the Third Party Address
City	String	Req**	City of the Third Party Address
State	String	Req**	State of the Third Party Address
PostalCode	String	Req**	Postal Code of the Third Party Address
Country	String	Req**	Country of the Third Party Address
AccountNumber	String	Opt	Not used in the Request

AdditionalInformation	String	Opt	Not used in Request

** Required if billing type is ThirdPartyBill or Name only is required if lookupThirdParty is true and billing type is ThirdPartyBill.

Response

```xml
<ShippingResponse>
  <Error>
    <Code>int</Code>
    <Message>string</Message>
  </Error>
  <ShipmentRate>double</ShipmentRate>
  <ShipmentBillNumber>string</ShipmentBillNumber>
  <ProNumber>string</ProNumber>
  <Carrier>string</Carrier>
  <CarrierSCAC>string</CarrierSCAC>
  <CarrierTollNumber>string</CarrierTollNumber>
  <CarrierTollFreeNumber>string</CarrierTollFreeNumber>
  <BOLNotification>string</BOLNotification>
  <BOLDocument>string</BOLDocument>
  <OriginTerminal>
    <Name>string</Name>
    <Code>string</Code>
    <Address1>string</Address1>
    <Address2>string</Address2>
    <City>string</City>
    <State>string</State>
    <PostalCode>string</PostalCode>
    <Contact>string</Contact>
    <PhoneNumber>string</PhoneNumber>
    <TollFreeNumber>string</TollFreeNumber>
  </OriginTerminal>
  <DestinationTerminal>
    <Name>string</Name>
    <Code>string</Code>
    <Address1>string</Address1>
    <Address2>string</Address2>
    <City>string</City>
    <State>string</State>
    <PostalCode>string</PostalCode>
    <Contact>string</Contact>
    <PhoneNumber>string</PhoneNumber>
    <TollFreeNumber>string</TollFreeNumber>
  </DestinationTerminal>
  <ThirdPartyInformation>
    <Name>string</Name>
    <Address1>string</Address1>
    <Address2>string</Address2>
    <Address3>string</Address3>
```

```xml
          <City>string</City>
          <State>string</State>
          <PostalCode>string</PostalCode>
          <AdditionalInformation>string</AdditionalInformation>
          <AccountNumber>string</AccountNumber>
      </ThirdPartyInformation>
    </ShippingResponse>
```

Field Name	Data Type	Description
Error	Object	The Error object will return 0 if successful, otherwise it will return an error code along with an error message. (See Below)
ShipmentRate	Double	The cost of the shipment
ShipmentBillNumber	String	Shipment Bill Number for the shipment
ProNumber	String	ProNumber for the shipment
Carrier	String	The carrier chosen for the shipment
CarrierSCAC	String	The SCAC code of the chosen carrier
CarrierTollNumber	String	Toll Number of carrier
CarrierTollFreeNumber	String	Toll Free number of carrier
BOLNotification	String	Short message for success or failure of BOL
BOLDocument	String	If Inline was chosen, this field will contain a Base64 encoded string of the BOL in a PDF format.
ThirdPartyInformation	Object	Holds Thrird Party Billing Information (See Below)
OriginTerminal	Object	The terminal information for the Origin (See Below)
DestinationTerminal	Object	The terminal information for the Destination (See Below)

ThirdPartyInformation Object

Field Name	Data Type	Description
Name	String	This is the name of the terminal
Address1	String	First line of the Third Party address
Address2	String	Second line of the Third Party address
Address3	String	Third line of the Third Party address
City	String	Third Party city location
State	String	Third Party state location

PostalCode	String	Third Party location postal code
Country	String	Third Party location Country
Additional Information	String	Third Party additional information
Account Number	String	Phone number to contact the terminal

TerminalInfo Object

Field Name	Data Type	Description
Name	String	This is the name of the terminal
Code	String	Standard code used to refer to this terminal
Address1	String	First line of the address, usually street address
Address2	String	Second line of the address
City	String	Terminal city location
State	String	Terminal state location
PostalCode	String	Terminal location postal code
Contact	String	Name of the contact
PhoneNumber	String	Phone number to contact the terminal
TollFreeNumber	String	Toll free number to contact the terminal

Error Codes

Error Code	Error Message
1051	Invalid XML Access Credentials
1074	Origin country not supplied
1075	Origin Postal Code not supplied
1076	Destination Country not supplied
1077	Destination Postal Code not supplied
1078	Direction not supplied
1079	Carrier not supplied
1086	Invalid Billing Type Specified
1087	Guarantee service not supported
1088	There was a problem generating the BOL
1089	BOL type EMAIL chosen but no email address provided or email is invalid.
1090	Error Accessing Shipper Information

1091	Unsupported Accessorial
1092	Error Processing Details
1093	No carriers available for this shipment
1094	Error accessing mileage
1095	Could not ship with this carrier
1096	Alternate Carrier cannot be blank when Carrier is Other
1097	Shipment must have at least 1 detail item
1098	DIM Weight required for the selected carrier: CarrierName
1101	Unsupported Direction
1102	Invalid Ship Date supplied
1103	Billing Type not Supported
1104	Destination address does not match shippers address
1105	Origin address does not match shippers address
1106	Detail Class not supplied
1107	Detail Weight not supplied
1108	Dimension Length not supplied
1109	Dimension Width not supplied
1110	Dimension Height not supplied
1111	Commodity Description not supplied
1112	Commodity NMFC Code not supplied
1113	Commodity Hazmat Class not supplied
1114	Commodity Hazmat Packaging Class not supplied
1115	Commodity Hazmat Detail Description not supplied
1116	Commodity UNIdentificationNumber not supplied
1117	Error: Unable to load or save Thrid Party Information for name
1398	You cannot Alternate Bill To this shipper
1498	Shipper is currently suspended
1499	Transaction Limit Exceeded

Website Location

Web Service Addresses

https://dev.ltlship.com/API/Shipping/V1/Shipping.asmx	- VoidShipment - ProcessShipment