

mobile**cube**

Customer Account Management Services API

Mobile Cube is a framework that provides an API to be used by third-party applications (especially mobile apps) to connect to an ATG-based commerce application.

For an overview of the framework, see the document Introduction to Mobile Cube.

This document outlines the Customer Account Management services supported by the framework.

This document covers Mobile Cube Release 1.0 for ATG 9.4.

Table of Contents

1	NEW CUSTOMER REGISTRATION	3
1.1	REGISTRATION	3
1.1.1	SUCCESSFUL REGISTRATION	3
1.1.2	DUPLICATE USER	4
1.1.3	INVALID REGISTRATION REQUESTS	4
2	CUSTOMER AUTHENTICATION AND SESSION CREATION	6
2.1	CUSTOMER LOG IN	6
2.1.1	SUCCESSFUL LOGIN	6
2.1.2	INVALID LOGIN REQUEST	7
2.1.3	INVALID CREDENTIALS	7
2.2	CUSTOMER LOG OUT	8
2.2.1	SUCCESSFUL LOGOUT	8
3	CUSTOMER ACCOUNT DETAILS	9
3.1	GET CUSTOMER ACCOUNT DETAILS	9
3.1.1	SUCCESSFUL CUSTOMER ACCOUNT RETRIEVAL	9
3.1.2	UNKNOWN CUSTOMER	9
3.1.3	UNAUTHORISED REQUEST	10
3.2	GET CUSTOMER ADDRESS	10
3.2.1	SUCCESSFUL ADDRESS RETRIEVAL	11
3.2.2	UNKNOWN ADDRESS	11
3.2.3	UNAUTHORISED REQUEST	11
3.3	GET CUSTOMER PAYMENT CARD	11
3.3.1	SUCCESSFUL PAYMENT CARD RETRIEVAL	12
3.3.2	UNKNOWN PAYMENT CARD	12
3.3.3	UNAUTHORISED REQUEST	12
3.4	EDIT BASIC CUSTOMER ACCOUNT DETAILS	12
3.4.1	SUCCESSFUL CUSTOMER ACCOUNT DETAILS UPDATE	12
3.4.2	UNKNOWN CUSTOMER	13
3.4.3	UNAUTHORISED UPDATE ATTEMPT	13

3.4.4	INVALID UPDATE CUSTOMER REQUEST	14
3.5	CHANGE CUSTOMER ACCOUNT PASSWORD	14
3.5.1	SUCCESSFUL CUSTOMER PASSWORD UPDATE	15
3.5.2	UNKNOWN CUSTOMER	15
3.5.3	UNAUTHORISED UPDATE ATTEMPT	16
3.5.4	INVALID UPDATE PASSWORD REQUEST	16
4	INSTANT ORDER DEFAULTS	17
4.1	SET DEFAULT SHIPPING ADDRESS	17
4.1.1	SUCCESSFUL SET DEFAULT SHIPPING ADDRESS	17
4.1.2	UNKNOWN CUSTOMER	18
4.1.3	UNAUTHORISED REQUEST	18
4.1.4	INVALID REQUEST	19
4.2	SET DEFAULT SHIPPING METHOD	19
4.3	LIST AVAILABLE SHIPPING METHODS	20
4.3.1	SUCCESSFUL GET AVAILABLE SHIPPING METHODS	20
4.4	SET DEFAULT PAYMENT METHOD	20
4.4.1	SUCCESSFUL SET DEFAULT PAYMENT METHOD	20
4.4.2	UNKNOWN CUSTOMER	21
4.4.3	UNAUTHORISED REQUEST	21
4.4.4	INVALID REQUEST	22
5	APPENDIX A: DATA TRANSFER FORMATS	23
5.1	SESSION	23
5.2	ERROR	23
5.3	LOGIN REQUEST	23
5.4	REGISTRATION REQUEST	23
5.5	CUSTOMER	24
5.6	ADDRESS	25
5.7	CREDIT CARD	26
5.8	SHIPPING METHODS	26

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1 New Customer Registration

1.1 Registration

This covers the act of a new customer registering to use the application for the first time.

The Mobile Cube framework requires customers to be registered before being able to use most of the commerce functions.

The Mobile Cube REST API represents registration as the creation of a new Customer¹ resource. This is accomplished by sending a POST request to the `/customer/new` URI with a Registration Request² resource as the body of the request.

Content Types

When using the REST API, resources can be represented using either XML or JSON as the data transfer format.

When sending data, client requests must specify the appropriate Content-Type header of `application/xml` or `application/json`.

The request must include the appropriate Accept header of `application/xml` or `application/json` to allow the Mobile Cube service to return responses in an acceptable format.

1.1.1 Successful Registration

If the registration request is valid and the customer was not already registered, Mobile Cube will register the new customer, and will return a `201 (Created)` HTTP response with the newly created Customer resource as the body of the response.

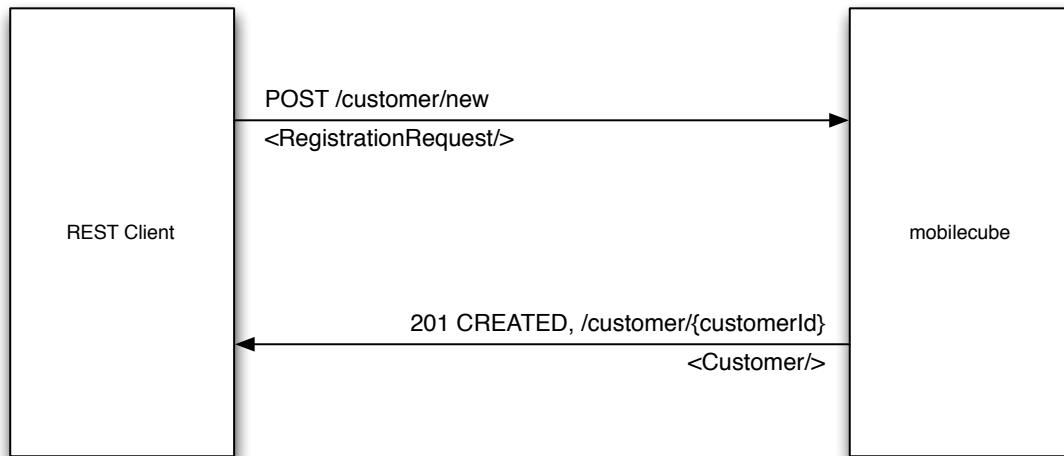
Although the Customer resource is returned in the response, the requested URI (`/customer/new`) is not the canonical location of this resource. The actual location of the resource will be of the form `/customer/{customerId}`. This is reflected in the `Content-Location` response header specifying the canonical URI for the newly created Customer resource.

The Mobile Cube REST API is a stateful API, and the location of the current active Customer resource, during any authenticated session, will also always be available at the `/customer/current` URI.

¹ See the Data Transfer Formats Appendix for details on the structure of the Customer resource

² See the Data Transfer Formats Appendix for details on structure of the Registration Request resource.

Successful Registration Flow

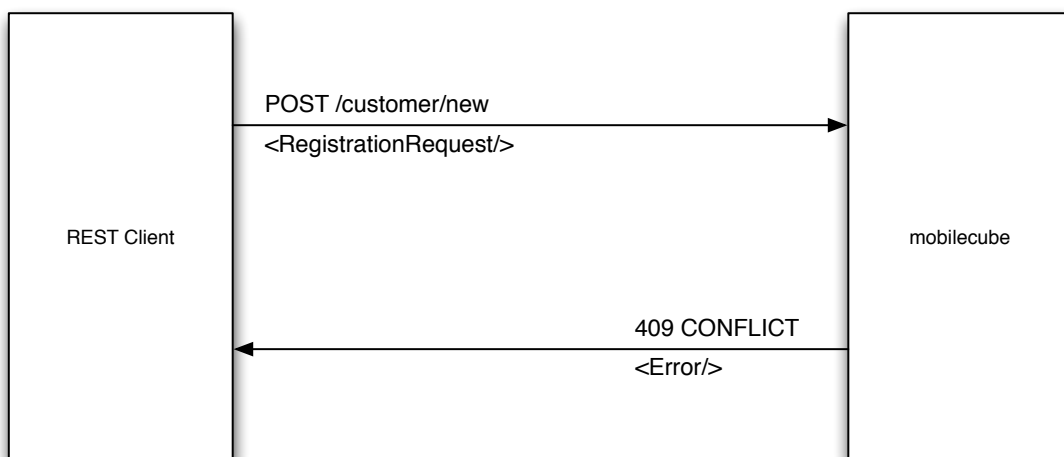


There are two possible error conditions handled by Mobile Cube during Registration – either the requested user is already registered in the system, or the Registration Request is not valid.

1.1.2 Duplicate User

If the user being registered is already registered in the system (identified uniquely by email address), then Mobile Cube will respond with a **409 (Conflict)** HTTP Response. An **Error³** resource with further details will be included as the body of the response.

Duplicate User Flow



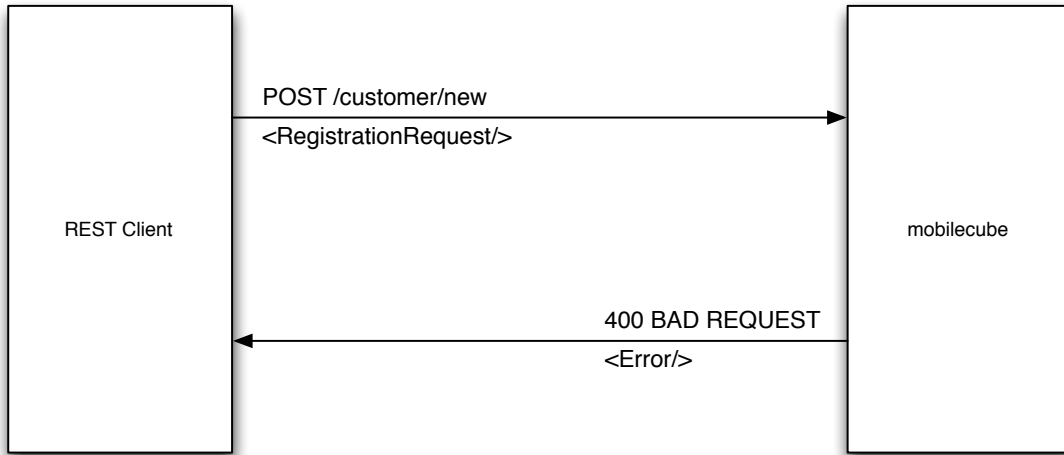
1.1.3 Invalid Registration Requests

A Registration Request can be considered invalid either because mandatory fields have not been specified, or the values that have been specified violate some business rules in the system. In such cases, Mobile Cube will respond with a **400 (Bad Request)** HTTP response,

³ See the Data Transfer Formats Appendix for details on structure of the Error resource.

and will include an Error resource in the body with further details explaining why the request is considered invalid.

Invalid Request Flow



2 Customer Authentication and Session Creation

2.1 Customer Log In

This covers the act of a registered user authenticating against the system, and creating an active session.

Mobile Cube is a stateful system, and the framework requires most activity with the system to be in the context of a valid authenticated session.

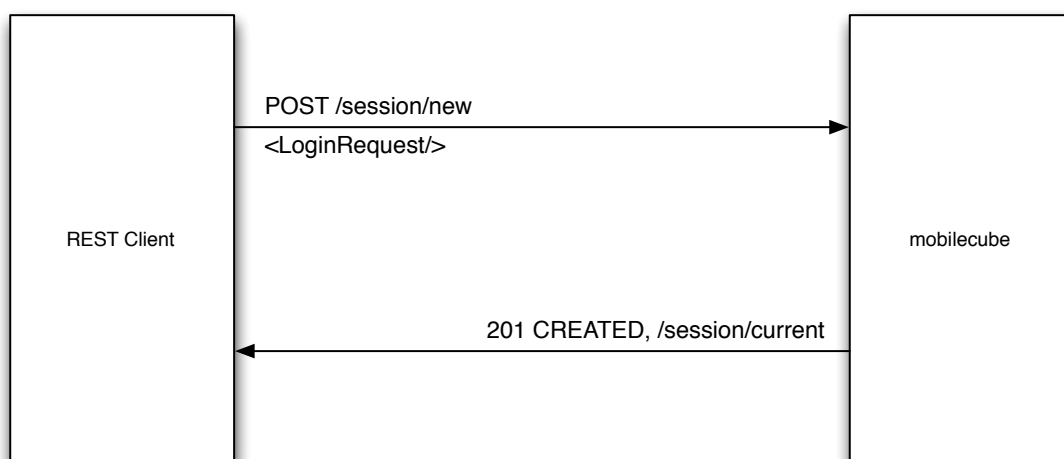
The Mobile Cube REST API represents authentication as the creation of a new Session⁴ resource. This is accomplished by sending a POST request to the `/session/new` URI with a Login Request⁵ resource as the body of the request.

2.1.1 Successful Login

Mobile Cube will validate the credentials passed in the login request. If the login request is valid, mobilecube will create a new Session, and will return a 201 (Created) HTTP response with the newly created Session resource as the body of the response.

Although the Session resource is returned in the response, the requested URI (`/session/new`) is not the canonical location of this resource. The actual location of the resource will be of the form `/session/current`. This is reflected in the `Content-Location` response header specifying the canonical URI for the newly created Customer resource.

Successful Login Flow



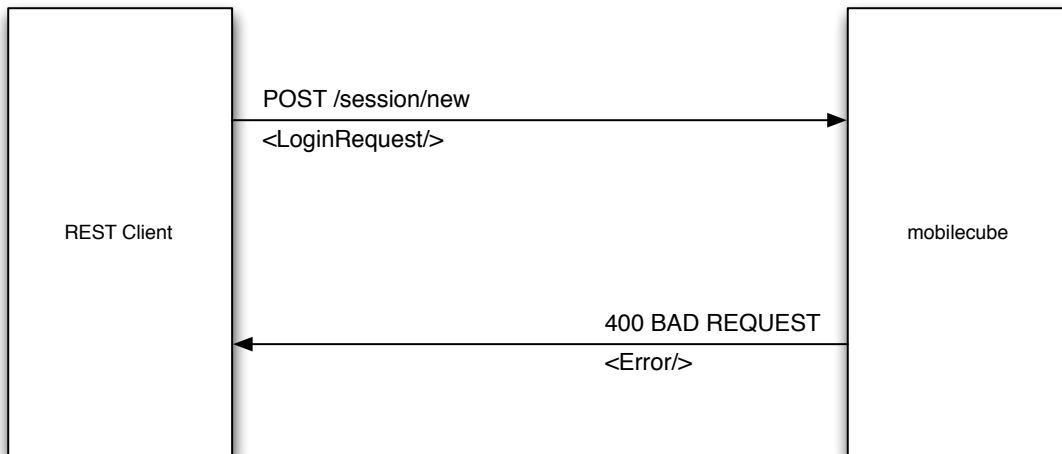
⁴ See the Data Transfer Formats Appendix for details on the structure of the Session resource

⁵ See the Data Transfer Formats Appendix for details on structure of the Login Request resource.

2.1.2 Invalid Login Request

A Login Request can be considered invalid if all the mandatory fields have not been specified. In such cases, Mobile Cube will respond with a 400 (Bad Request) HTTP response, and will include an Error resource in the body with further details explaining why the request is considered invalid.

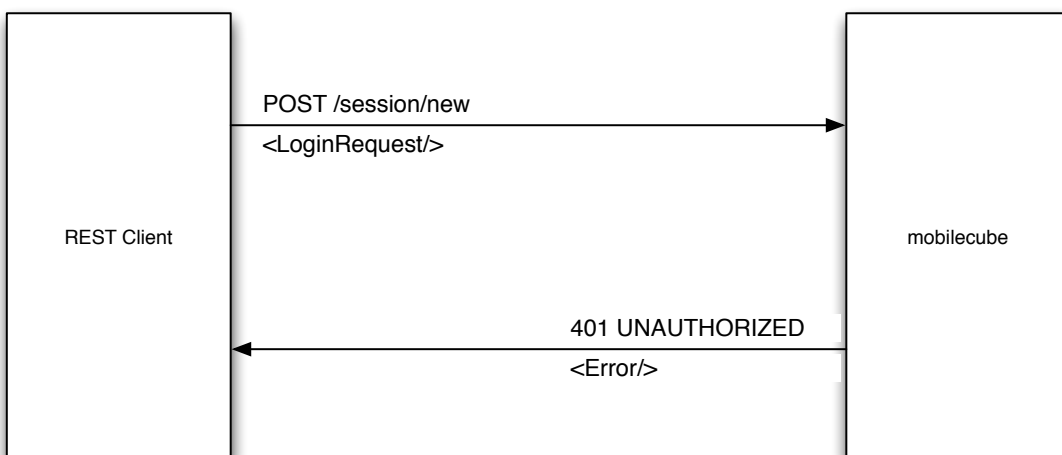
Invalid Login Request Flow



2.1.3 Invalid Credentials

If the credentials passed in the login request are incorrect (i.e. they do not match the credentials stored in the system), then Mobile Cube will respond with a 401 (Unauthorized) HTTP Response. An Error⁶ resource with further details will be included as the body of the response.

Invalid Credentials Flow



⁶ See the Data Transfer Formats Appendix for details on structure of the Error resource.

2.2 Customer Log Out

This covers the act of a logged-in user terminating the active session.

Mobile Cube is a stateful system, and the framework requires MOST activity with the system to be in the context of a valid authenticated session.

The Mobile Cube REST API represents logout as the deletion of the current Session resource.

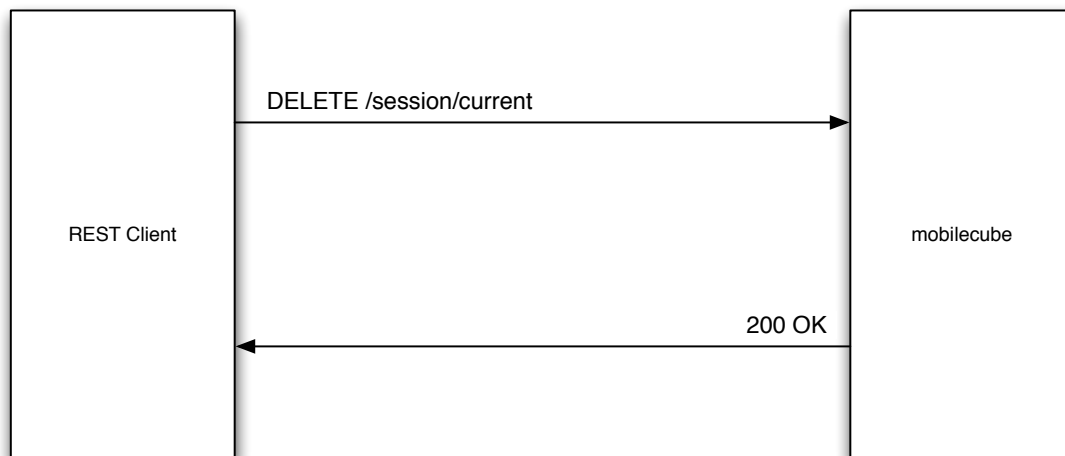
This is accomplished by sending a DELETE request to the `/session/current` URI with no request body.

2.2.1 Successful Logout

On receiving a logout message, Mobile Cube will terminate the current session and respond with a `200 (OK)` HTTP Response, with no response body.

Although logout can only be actioned against an active session, due to the nature of HTTP sessions, all logout requests will be considered successful. Thus, there are no expected error conditions in this story.

Successful Logout Flow



3 Customer Account Details

3.1 Get Customer Account Details

This covers the act of a logged in user requesting their account details.

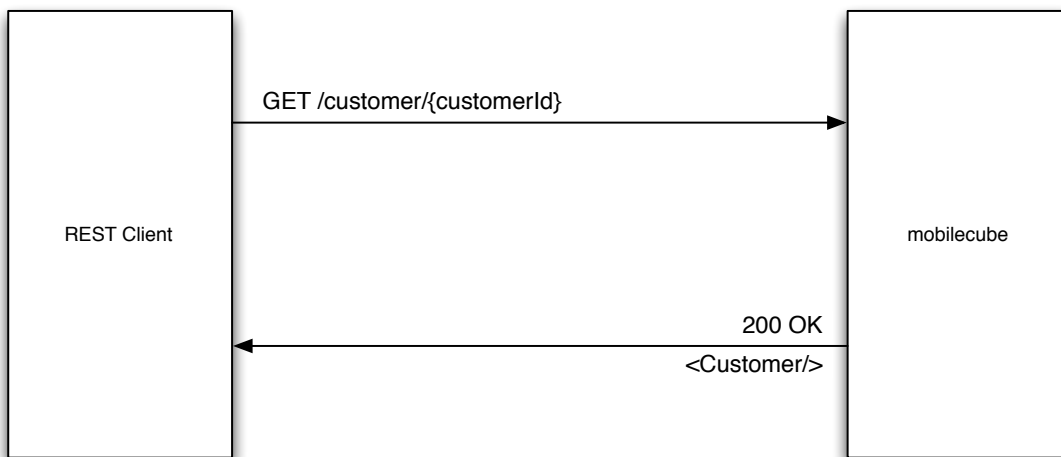
Customer Account retrieval can only be done in the context of an authenticated session, and is restricted to the authenticated customer only being able to retrieve their own customer account details.

The Mobile Cube REST API represents the customer entity as a resource at the URI `/customer/{customerId}`. Getting the customer details is accomplished by sending a GET request with no request body to the customer URI.

3.1.1 Successful Customer Account Retrieval

If the requested customer exists, and the request is being made in the context of an authenticated session for the customer, then Mobile Cube will respond with a `200 OK`, and the response body will include the Customer⁷ entity containing the account details of the customer.

Successful Retrieve Customer Account Flow



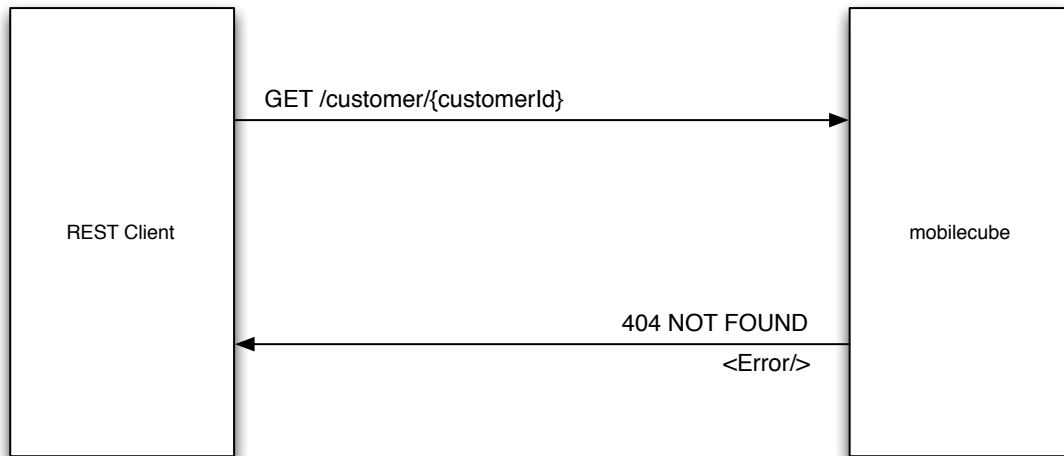
The Mobile Cube REST API is a stateful API, and the location of the current active Customer resource, during any authenticated session, will also always be available at the `/customer/current` shortcut URI.

3.1.2 Unknown Customer

If a customer resource for the Customer requested does not exist, Mobile Cube will respond with a `404 NOT FOUND` HTTP Response, and will include an error response in the body.

⁷ See the Data Transfer Formats Appendix for details on structure of the Customer resource.

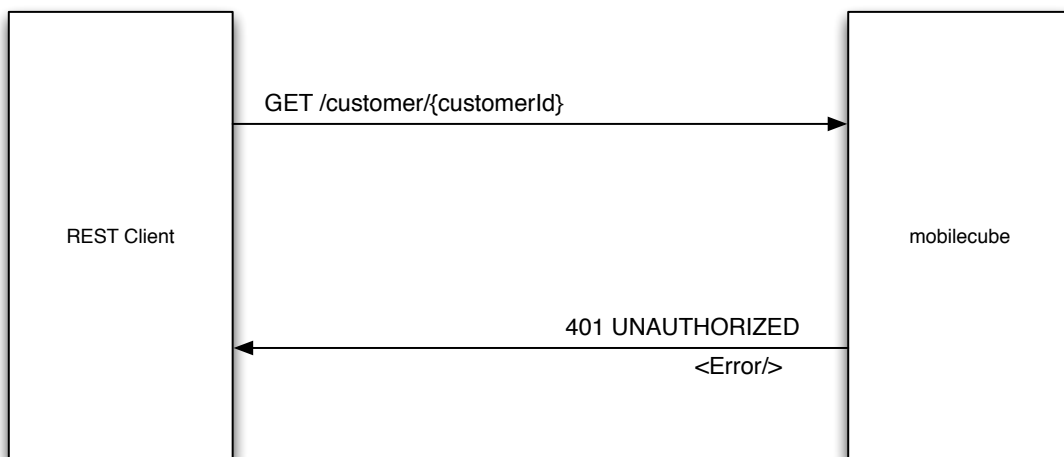
Unknown Customer



3.1.3 Unauthorised Request

If the request is not being made in the context of an authorised session, or if the customer details being requested do not belong to the authenticated customer for the current session, then Mobile Cube will respond with a 401 UNAUTHORISED HTTP Response.

Unauthorised Request



3.2 Get Customer Address

The Customer resource represents customer addresses on the customer profile (such as Shipping Address, Billing Address etc.) as Address Summary⁸ elements. These specify an Address Id and some basic information to help identify the address, but not the full address details.

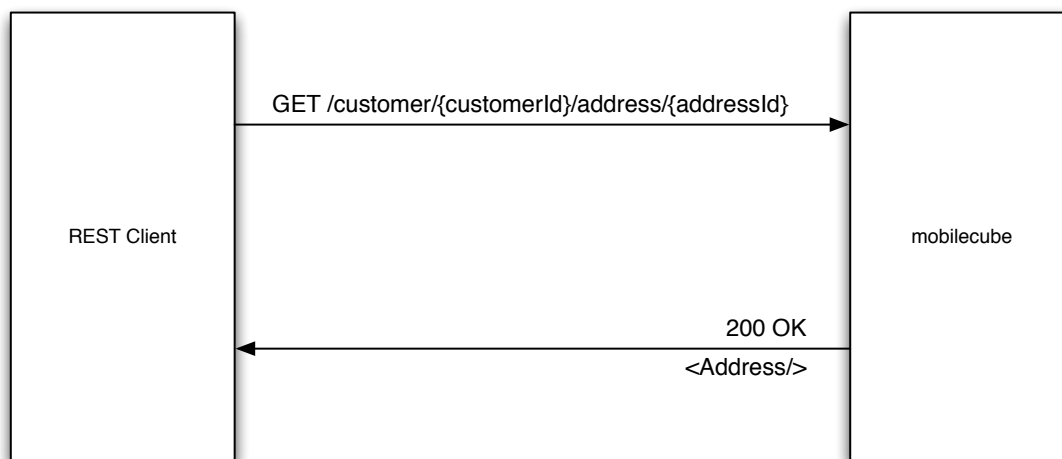
⁸ See the Data Transfer Formats Appendix for details on structure of the Address Summary resource.

Mobile Cube represents the full address details as an Address resource, at the URI `/customer/{customerId}/address/{addressId}`. Retrieving the customer address details is accomplished by sending a GET request with no request body to the address URI.

3.2.1 Successful Address Retrieval

If the requested address exists, and the request is being made in the context of an authenticated session for the customer, then Mobile Cube will respond with a 200 OK, and the response body will include the Address⁹ entity containing the address details of the customer's address.

Successful Retrieve Customer Address Flow



3.2.2 Unknown Address

If a address resource for the Address requested does not exist, Mobile Cube will respond with a 404 NOT FOUND HTTP Response, and will include an error response in the body.

3.2.3 Unauthorised Request

If the request is not being made in the context of an authorised session, or if the address details being requested do not belong to the authenticated customer for the current session, then Mobile Cube will respond with a 401 UNAUTHORISED HTTP Response.

3.3 Get Customer Payment Card

The Customer resource represents the customer's credit card on the customer profile as a Credit Card Summary¹⁰ element. This specifies a Credit Card Id and some basic information to help identify the credit card, but not the full credit card details.

⁹ See the Data Transfer Formats Appendix for details on structure of the Address resource.

¹⁰ See the Data Transfer Formats Appendix for details on structure of the Credit Card Summary resource.

Mobile Cube represents the full credit card details as an Address resource, at the URI `/customer/{customerId}/payment/{paymentId}`. Retrieving the customer credit card details is accomplished by sending a GET request with no request body to the payment URI.

3.3.1 Successful Payment Card Retrieval

If the requested credit card exists, and the request is being made in the context of an authenticated session for the customer, then Mobile Cube will respond with a 200 OK, and the response body will include the Credit Card¹¹ entity containing the payment details of the customer.

3.3.2 Unknown Payment Card

If a credit card resource for the Credit Card requested does not exist, Mobile Cube will respond with a 404 NOT FOUND HTTP Response, and will include an error response in the body.

3.3.3 Unauthorised Request

If the request is not being made in the context of an authorised session, or if the credit card details being requested do not belong to the authenticated customer for the current session, then Mobile Cube will respond with a 401 UNAUTHORISED HTTP Response.

3.4 Edit Basic Customer Account Details

This covers the act of a logged in user updating their account details.

Account details can only be updated in the context of an authenticated session, and only for the authenticated customer's own customer account details.

The Mobile Cube REST API represents the customer entity as a resource at the URI `/customer/{customerId}`.

Updating the customer details is accomplished by sending a POST request to the customer URI with an Update Customer Request¹² in the request body.

3.4.1 Successful Customer Account Details Update

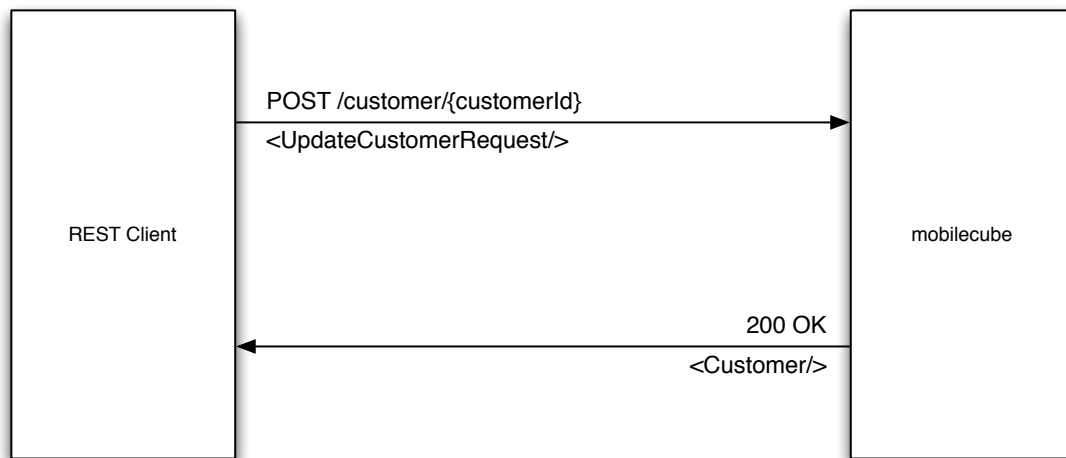
If the requested customer exists, and the request is being made in the context of an authenticated session for the customer, then Mobile Cube will respond with a 200 OK, and the response body will include the updated Customer¹³ entity.

¹¹ See the Data Transfer Formats Appendix for details on structure of the Credit Card resource.

¹² See the Data Transfer Formats Appendix for details on structure of the Update Customer Request resource.

¹³ See the Data Transfer Formats Appendix for details on structure of the Customer resource.

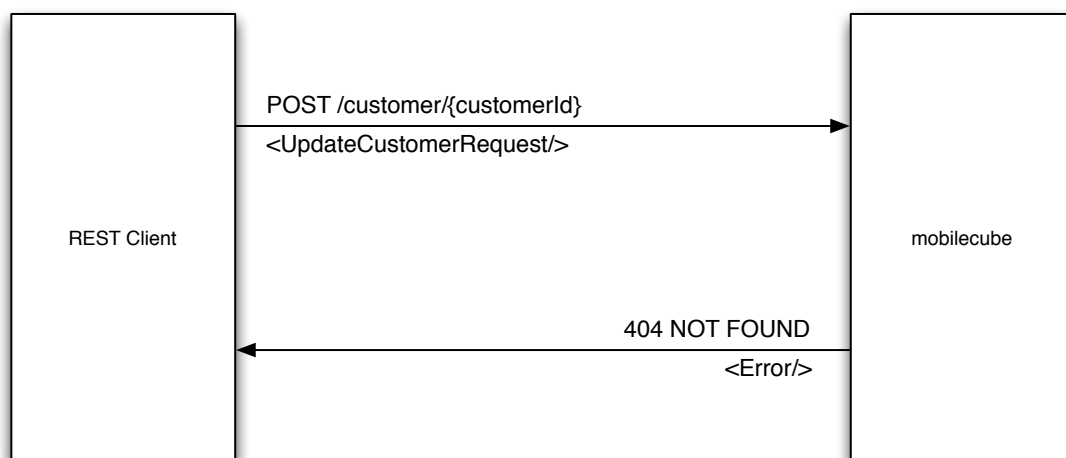
Successful Update Customer Account Flow



3.4.2 Unknown Customer

If a customer resource for the Customer requested does not exist, Mobile Cube will respond with a `404 NOT FOUND` HTTP Response, and will include an error response in the body.

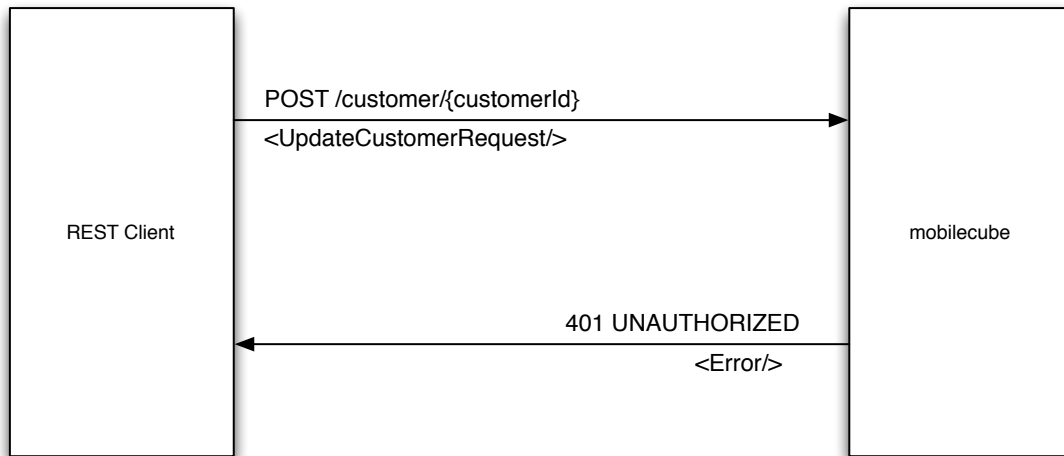
Unknown Customer



3.4.3 Unauthorised Update Attempt

If the request is not being made in the context of an authorised session, or if the customer details being updated do not belong to the authenticated customer for the current session, then Mobile Cube will respond with a `401 UNAUTHORISED` HTTP Response.

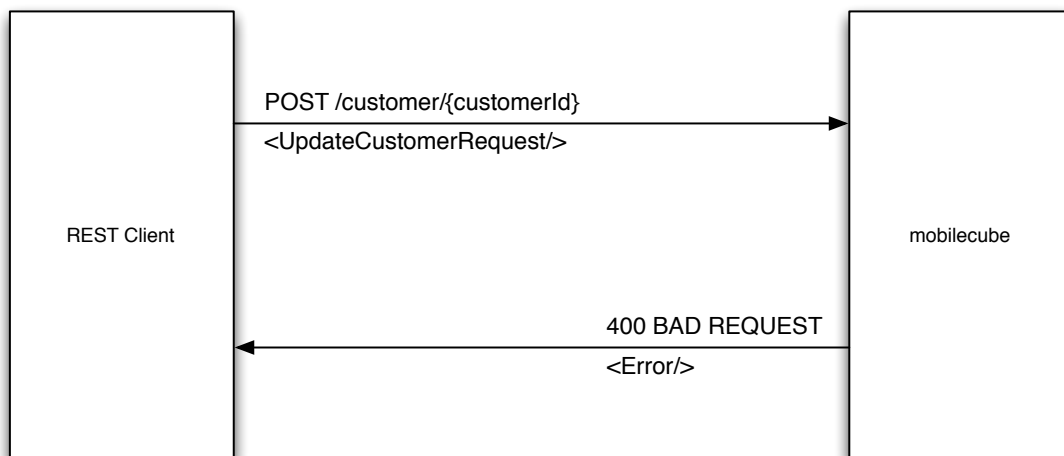
Unauthorised Request



3.4.4 Invalid Update Customer Request

An Update Customer Request can be considered invalid if all the mandatory fields have not been specified. In such cases, Mobile Cube will respond with a 400 (Bad Request) HTTP response, and will include an Error resource in the body with further details explaining why the request is considered invalid.

Invalid Request Flow



3.5 Change Customer Account Password

This covers the act of a logged in user changing their password.

A password can only be changed in the context of an authenticated session, and is restricted to the authenticated customer only being able to change their own password.

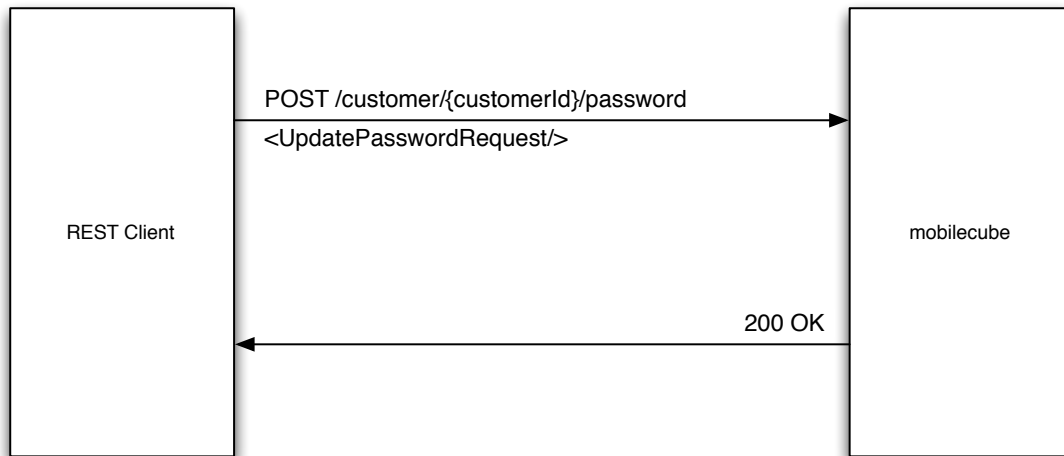
The Mobile Cube REST API represents changing the password as a request to a resource at the URI `/customer/{customerId}/password`.

Changing the customer's password is accomplished by sending a POST request with an Update Password Request¹⁴ in the request body.

3.5.1 Successful Customer Password Update

If the requested customer exists, and the request is being made in the context of an authenticated session for the customer, then Mobile Cube will respond with a 200 OK, and an empty response body.

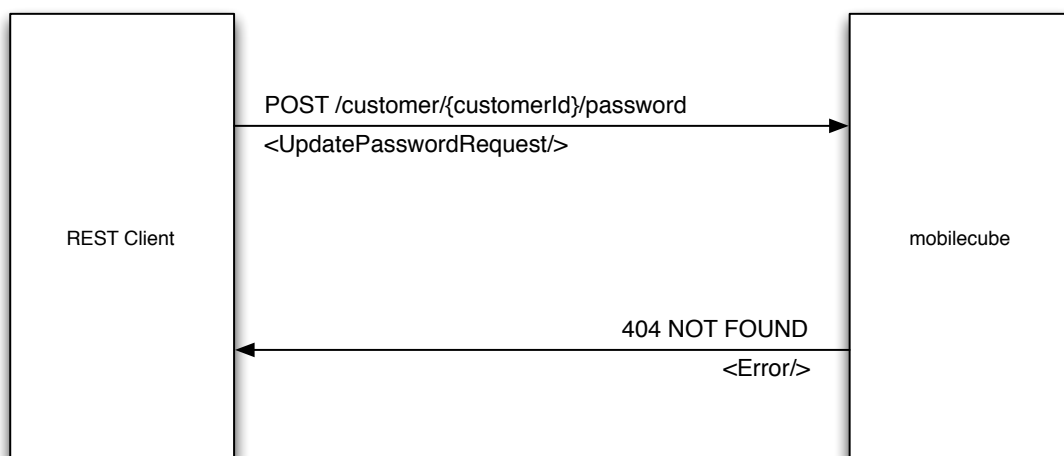
Successful Change Password Flow



3.5.2 Unknown Customer

If a customer resource for the Customer requested does not exist, Mobile Cube will respond with a 404 NOT FOUND HTTP Response, and will include an error response in the body.

Unknown Customer

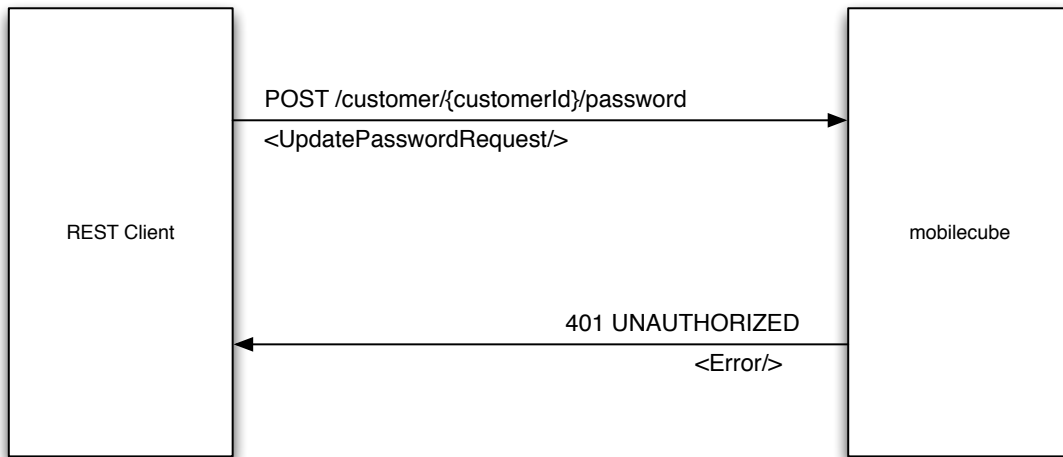


¹⁴ See the Data Transfer Formats Appendix for details on structure of the Update Password Request resource.

3.5.3 Unauthorised Update Attempt

If the request is not being made in the context of an authorised session, or if the customer details being updated do not belong to the authenticated customer for the current session, or if the current password specified does not match, then Mobile Cube will respond with a 401 UNAUTHORIZED HTTP Response.

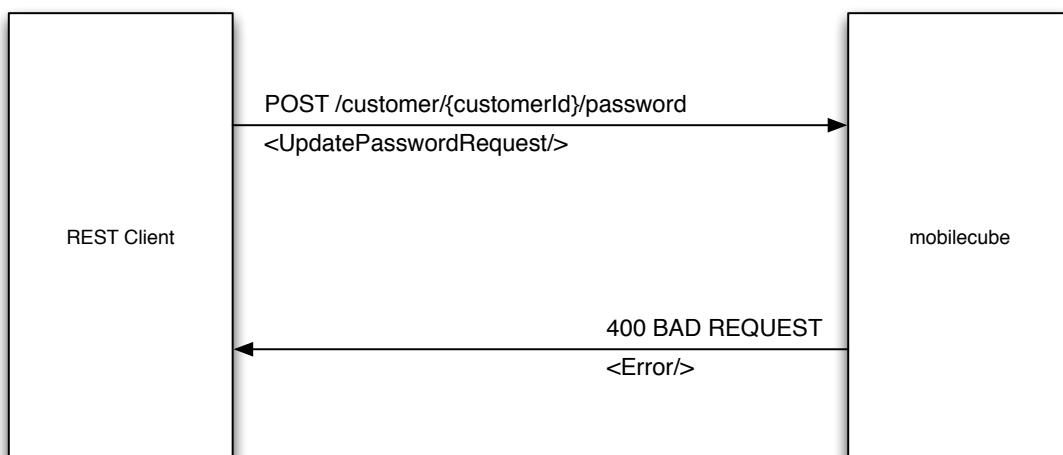
Unauthorised Request



3.5.4 Invalid Update Password Request

An Update Password Request can be considered invalid if all the mandatory fields have not been specified, or if the two new passwords provided (New Password and Confirm New Password) do not match. In such cases, Mobile Cube will respond with a 400 (Bad Request) HTTP response, and will include an Error resource in the body with further details explaining why the request is considered invalid.

Invalid Request Flow



4 Instant Order Defaults

Mobile Cube Release 1.0 for ATG 9.4 introduces the ability for a customer to place an instant order. This relies on the customer having a default Shipping Address, default Shipping Method and default Payment Method set on the Customer's profile.

4.1 Set Default Shipping Address

This covers the act of a logged in user setting or updating (replacing) their default shipping address.

The default shipping address can only be updated in the context of an authenticated session, and only for the authenticated customer's own shipping address.

Updating the default shipping address is accomplished by sending a PUT request to an address URI `/customer/{customerId}/address/default` with an Address¹⁵ entity in the request body.

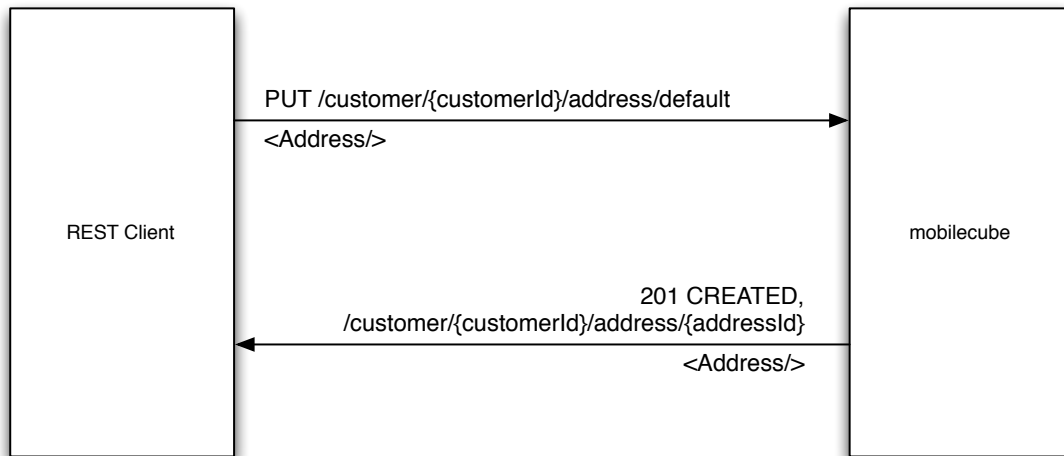
4.1.1 Successful Set Default Shipping Address

If the set address request is valid, Mobile Cube will set the customer's default shipping address to be the provided address. If one already exists, it will be replaced. Mobile Cube will return a 201 (Created) HTTP response with the newly created Address resource as the body of the response.

Although the Address resource is returned in the response, the requested URI (`/customer/{customerId}/address/default`) is not the canonical location of this resource. The actual location of the resource will be of the form `/customer/{customerId}/address/{addressId}`. This is reflected in the Content-Location response header specifying the canonical URI for the newly created Address resource.

¹⁵ See the Data Transfer Formats Appendix for details on structure of the Address resource.

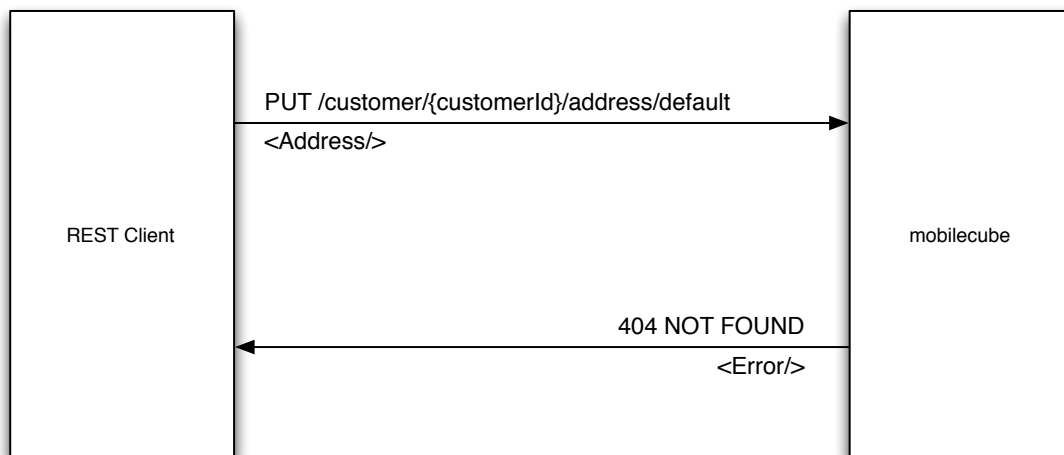
Successful Set Default Shipping Address Flow



4.1.2 Unknown Customer

If the customer resource for the URI requested does not exist, Mobile Cube will respond with a `404 NOT FOUND` HTTP Response, and will include an error response in the body.

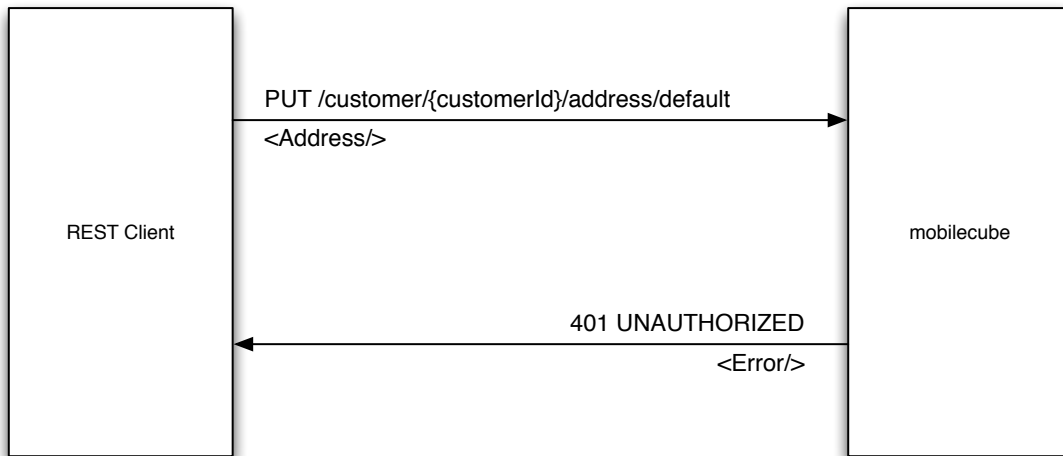
Unknown Customer



4.1.3 Unauthorised Request

If the request is not being made in the context of an authorised session, or if the customer for which the address is being set is not the authenticated customer for the current session, then Mobile Cube will respond with a `401 UNAUTHORISED` HTTP Response.

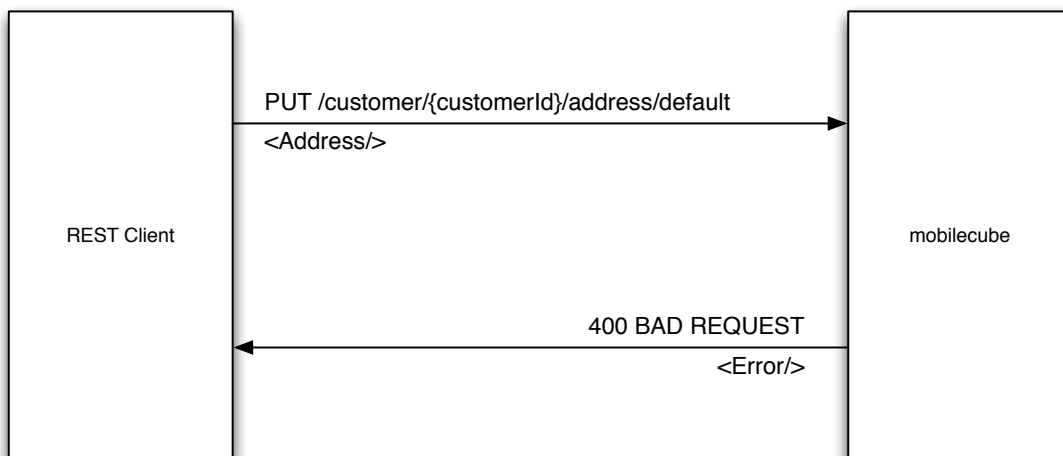
Unauthorised Request



4.1.4 Invalid Request

A request to set the default shipping address can be considered invalid if all the mandatory fields have not been specified. In such cases, Mobile Cube will respond with a 400 (Bad Request) HTTP response, and will include an Error resource in the body with further details explaining why the request is considered invalid.

Invalid Request Flow



4.2 Set Default Shipping Method

This covers the act of a logged in user setting or updating (replacing) their default shipping method.

The default shipping method can only be updated in the context of an authenticated session, and only for the authenticated customer's own shipping address.

Updating the default shipping address is accomplished by editing the customer account details (see Edit Basic Customer Account Details).

4.3 List Available Shipping Methods

In order to set the customer's default shipping method, it may be necessary to retrieve the list of available shipping methods first.

This is accomplished by sending a GET request with an empty request body to the URI `/order/shipping/availableMethods`.

4.3.1 Successful Get Available Shipping Methods

Mobile Cube will respond with a 200 OK response code, and the response body will include Shipping Methods¹⁶ entity containing a list of available shipping methods.

4.4 Set Default Payment Method

This covers the act of a logged in user setting or updating (replacing) their default payment method.

The default payment method can only be updated in the context of an authenticated session, and only for the authenticated customer's own account.

Updating the default payment method is accomplished by sending a PUT request to an address URI `/customer/{customerId}/payment/default` with a Credit Card Request¹⁷ entity in the request body.

4.4.1 Successful Set Default Payment Method

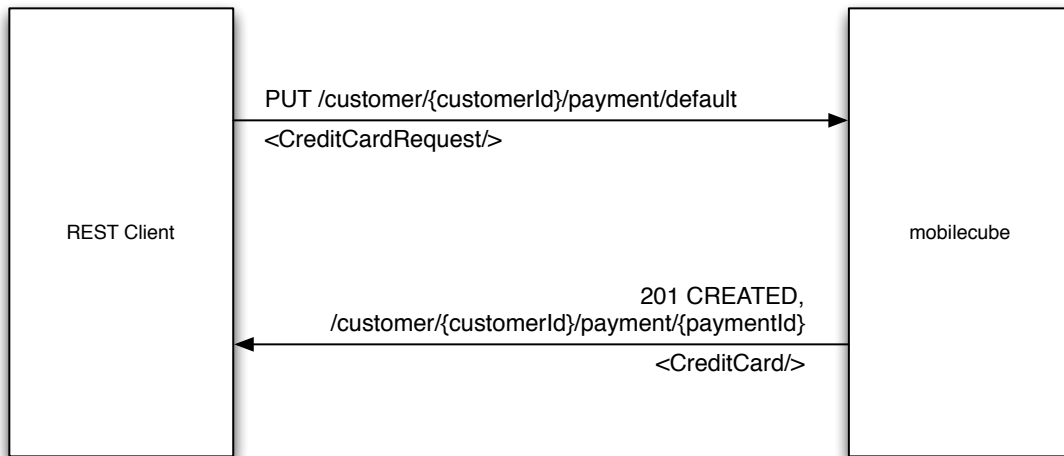
If the registration request is valid, Mobile Cube will set the customer's default payment method to be the provided Credit Card. If one already existed, it will be replaced. Mobile Cube will return a 201 (Created) HTTP response with the newly created Credit Card resource as the body of the response.

Although the Credit Card resource is returned in the response, the requested URI (`/customer/{customerId}/payment/default`) is not the canonical location of this resource. The actual location of the resource will be of the form `/customer/{customerId}/payment/{paymentId}`. This is reflected in the `Content-Location` response header specifying the canonical URI for the newly created Credit Card resource.

¹⁶ See the Data Transfer Formats Appendix for details on structure of the Shipping Methods entity.

¹⁷ See the Data Transfer Formats Appendix for details on structure of the Credit Card Request entity.

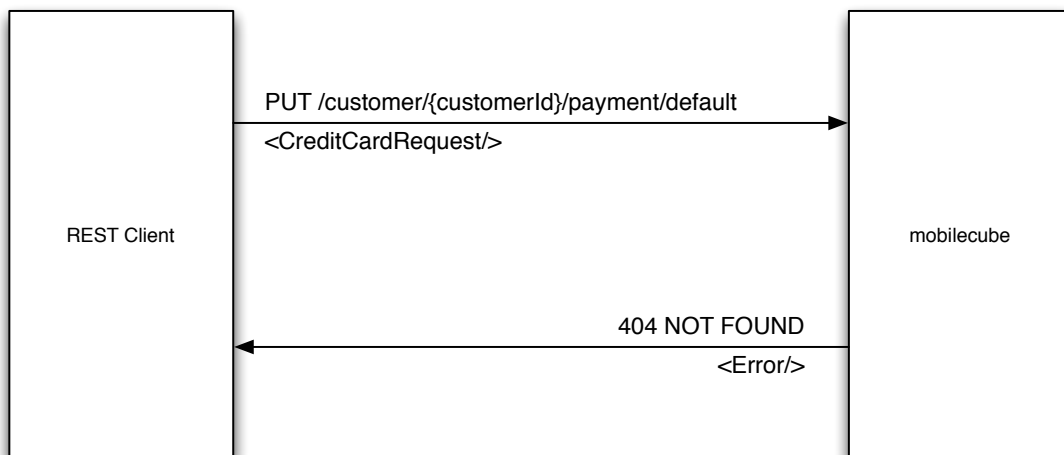
Successful Set Default Payment Method Flow



4.4.2 Unknown Customer

If the customer resource for the URI requested does not exist, Mobile Cube will respond with a `404 NOT FOUND` HTTP Response, and will include an error response in the body.

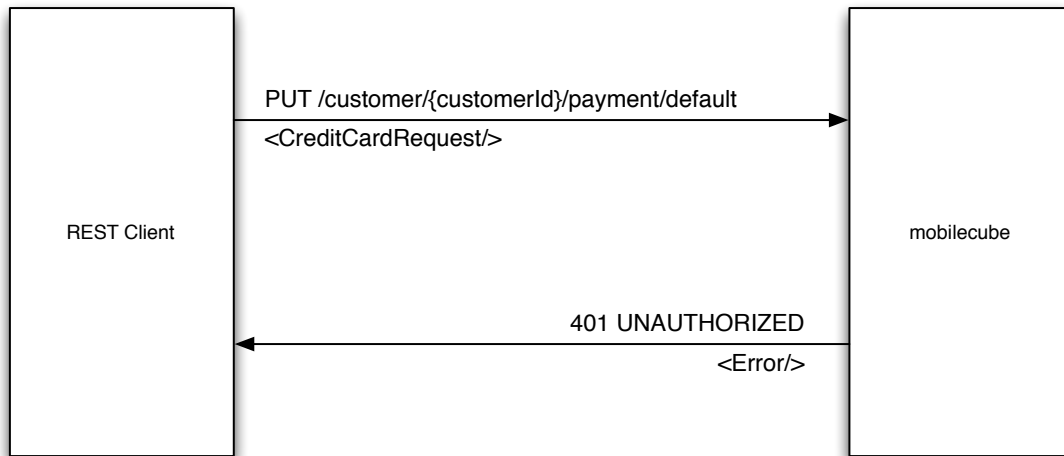
Unknown Customer Flow



4.4.3 Unauthorised Request

If the request is not being made in the context of an authorised session, or if the customer for which the payment method is being set is not the authenticated customer for the current session, then Mobile Cube will respond with a `401 UNAUTHORISED` HTTP Response.

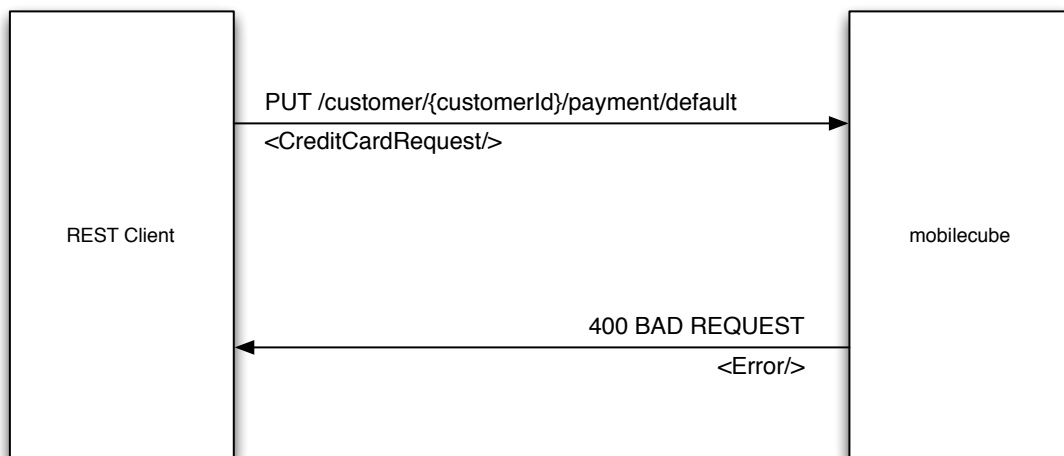
Unauthorised Request Flow



4.4.4 Invalid Request

A request to set the default payment method can be considered invalid if all the mandatory fields have not been specified. In such cases, Mobile Cube will respond with a 400 (Bad Request) HTTP response, and will include an Error resource in the body with further details explaining why the request is considered invalid.

Invalid Request Flow



5 Appendix A: Data Transfer Formats

5.1 Session

Session			
Property Name	Property Type	Cardinality	Validation
Customer Id	String	1	Mandatory. The id of the customer for the current authenticated session

5.2 Error

Error			
Property Name	Property Type	Cardinality	Validation
Error Code	String	1	Mandatory. The system identifier of the error.
Error Message	String	1	Mandatory. A human-friendly error message
Error Type	String	1	Mandatory. The Mobile Cube specific error type. This loosely corresponds to the Exception name in the Mobile Cube Service interface. Provided for extra information

5.3 Login Request

Login Request		
Property Name	Property Type	Validation
Username	String	Mandatory Field, Must be a valid email address
Password	String	Mandatory Field

5.4 Registration Request

Registration Request			
Property Name	Property Type	Cardinality	Validation
Email	String	1	Mandatory Field. Must be a valid email address
Password1	String	1	Mandatory Field
Password2	String	1	Mandatory Field
Firstname	String	1	Mandatory Field

Lastname	String	1	Mandatory Field
Gender	Gender	0..1	Optional. Enumerated – one of (“male” ”female”)
Postcode	String	0..1	Optional. Post Code of the customer’s home address

5.5 Customer

Mobile Cube has two representations of a customer resource. The Customer Summary entity provides basic properties sufficient to identify and display a summary of the customer, while the Customer entity provides full details of the customer.

Customer Summary			
Property Name	Property Type	Cardinality	Validation
Customer Id	String	1	Mandatory
Email	String	1	Mandatory. Must be a valid email address
First Name	String	1	Mandatory
Last Name	String	1	Mandatory

Customer			
Property Name	Property Type	Cardinality	Validation
Customer Id	String	1	Mandatory
Email	String	1	Mandatory. Must be a valid email address
First Name	String	1	Mandatory
Last Name	String	1	Mandatory
Gender	Gender	0..1	Optional. Enumerated - one of (“male” ”female”)
Date of Birth	Date	0..1	Optional
Home Address	Address Summary	0..1	Optional
Default Shipping Method	String	0..1	Optional
Default Shipping Address	Address Summary	0..1	Optional
Default Credit Card	Credit Card Summary	0..1	Optional
Orders	Order List	0..Many	Optional. List of previously placed orders. See Order Management Services API for more information

The Update Customer Request entity represents a request to update one or more fields from the basic customer account.

Update Customer Request			
Property Name	Property Type	Cardinality	Validation
Email	String	0..1	Optional
First Name	String	0..1	Optional
Last Name	String	0..1	Optional

Default Shipping Method	String	0..1	Optional
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The Update Password Request entity represents a request to update the customer's password.

Update Password Request			
Property Name	Property Type	Cardinality	Validation
Old Password	String	1	Mandatory. The current password
New Password	String	1	Mandatory. The new password to set
Confirm New Password	String	1	Mandatory. A confirmation (repeat) of the new password to set

5.6 Address

Mobile Cube has two representations of an address resource. The Address Summary entity provides basic properties sufficient to identify and display a summary of the address, while the Address entity provides full details of the address.

Address Summary			
Property Name	Property Type	Cardinality	Validation
Address Id	String	1	Mandatory. The unique system identifier for this address
Postal Code	String	1	Mandatory. The postal code of the address

Address			
Property Name	Property Type	Cardinality	Validation
Address Id	String	1	Mandatory. The unique system identifier for this address
Nick Name	String	1	Mandatory. A customer-friendly name for the address
Prefix	String	0..1	Optional. The Title of the contact person at the address
First Name	String	1	Mandatory
Last Name	String	1	Mandatory
Company Name	String	0..1	Optional
Address Line 1	String	1	Mandatory
Address Line 2	String	0..1	Optional
Address Line 3	String	0..1	Optional
City	String	1	Mandatory
State	String	0..1	Optional
Country	String	1	Mandatory

Postal Code	String	1	Mandatory
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5.7 Credit Card

Credit Card Summary			
Property Name	Property Type	Cardinality	Validation
Credit Card Id	String	1	Mandatory
Credit Card Number	String	1	Mandatory

Credit Card			
Property Name	Property Type	Cardinality	Validation
Credit Card Id	String	1	Mandatory
Billing Address	Address	1	Mandatory
Credit Card Number	String	1	Mandatory
Credit Card Type	String	1	Mandatory
Expiration Day of Month	Integer	0..1	Optional
Expiration Month	Integer	1	Mandatory
Expiration Year	Integer	1	Mandatory

New Credit Card Request			
Property Name	Property Type	Cardinality	Validation
Credit Card Number	String	1	Mandatory
Credit Card Nick Name	String	1	Mandatory. A customer-specified friendly name for the payment card
Credit Card Type	String	1	Mandatory
Expiration Month	Integer	1	Mandatory
Expiration Year	Integer	1	Mandatory
Address Nick Name	String	1	Mandatory. A customer-specified friendly name for the billing address
Billing Address	Address	1	Mandatory

5.8 Shipping Methods

Shipping Methods			
Property Name	Property Type	Cardinality	Validation
Available Shipping Method	String	1..Many	Mandatory