

[Supply Point Switching] API Technical Specification

1. Overview

The purpose of this API is to expose Supply Meter Point information, enabling subscribers to filter the data by MPRN, Address ID and Address details.

This REST API uses SAP API Management for traffic control and additional API security, which requires consumers to subscribe for this API Product in order to consume it with an API Key (mandatory).

2. API Parameters

2.1 Input Parameters (Address Search)

The following input parameters are required for the “Search Address” element of the API:

#	Name	Type	Length	Description
1	postcode	string	10	Postcode
2	house_no	String	10	House Number
3	house_name	String	60	House Name

2.2 Output Parameters (Address Search)

The following are the output parameters for the “Search Address” element of the API:

#	Field Name	Type	Length	Description
1	address_id	String	50	Internal ID that links MPRN to address data (internal use only)
2	Country	String	3	Country
3	County	String	3	County
4	delivery_point_alias	String	50	Delivery Point Alias
5	dependent_locality	String	40	Dependent Locality
6	dependent_street	String	40	Dependent Street
7	doub_dependent_locality	String	40	Double Dependent Locality
8	house_name	String	60	House Name
9	house_number	String	10	House Number
10	po_box_number	String	10	PO Box Number
11	Postcode	String	10	Postcode
12	Street	String	40	Street
14	sub_building_name	String	40	Sub Building Name

2.3 Input Parameters (Switch Gas Data)

The following input parameters are required for the “Switch Gas Data” element of the API:

#	Field Name	Type	Length	Description
1	address_id	String	30	Internal ID that links MPRN to address data (internal use only)
2	Mprn	String	50	Meter Point Reference Number (MRPN). A unique identifier for the point at which a meter is, has been or will be connected to the Gas Network.
3	Postcode	String	10	Postcode
4	house_no	String	10	House Number
5	house_name	String	60	House Name
6	flat_no	String	40	Flat Number
7	Street	String	40	Street
8	City	String	40	City

2.4 Output Parameters (Switch Gas Data)

The following are the output parameters for the “Switch Gas Data” element of the API:

#	Field Name	Type	Length	Description
1	address_id	String	30	Internal ID that links MPRN to address data (internal use only)
2	house_name	String	60	House Name
3	house_number	String	10	House Number
4	country	String	3	Country
5	county	String	3	County
6	current_supplier_id	String	40	A unique three character code used to identify the current supplier
7	delivery_point_alias	String	50	Delivery Point Alias
8	dependent_street	String	40	Dependent Street
9	dmq	Decimal	(16,7)	Daily Metered current annual offtake quantity (AQ) of a Supply Meter Point. Value in kWh
10	double_dependent_locality	String	40	Double Dependent Locality
11	gas_transport_id	String	40	Unique Identifier for the Gas Transporter Organisation. For large Transporters, this can also be used to identify the geographical area where a metering point is located
12	ldz_id	String	10	Unique reference code for the Local Distribution Zone (LDZ)
14	meter_capacity	String	15	The amount of gas that can be passed through the meter in a given time period. This is the manufacturer's maximum value
15	meter_mechanism_code	String	40	The coded value of the description of the Meter Mechanism, an industry identifier for the type of equipment fitted e.g. credit or prepayment meter

16	meter_serial_number	String	50	The manufacturer's meter serial number as held on the physical meter currently installed on the supply point
17	mpaq	Decimal	(16,7)	The current annual offtake quantity (AQ) of a Supply Meter Point. Value in kWh
18	mprn	String	50	Meter Point Reference Number (MRPN). A unique identifier for the point at which a meter is, has been or will be connected to the Gas Network
19	ndmq	Decimal	(16,7)	Non-Daily Metered current annual offtake quantity (AQ) of a Supply Meter Point. Value in kWh
20	po_box_number	String	10	PO Box Number
21	post_town	String	40	Post Town
22	postcode	String	10	Postcode
23	smart_equipment_technical_code	String	10	Specification ID of the smart meter
24	street	String	40	Street
25	sub_building_name	String	40	Sub Building Name

3. Error Codes and Descriptions

The following table contains the implemented error codes

HTTP Code	Error Code (Search Address)	Error Code (Switch Gas Data)	Fault String
400	-	e001	Request cannot be empty, please submit at least one unique identifier
200	-	e002	Requested address has twin stream meter device. You are not authorised to view this data.
200	-	e003	Requested address has shared supply meter device. You are not authorised to view this data.
200	-	e004	Requested address has twin stream and shared supply meter device. You are not authorised to view this data.
200	-	e005	Requested address has extinct meter point status. You are not authorised to view this data.
200	-	e006	Requested address has non domestic meter device. You are not authorised to view this data.
200	-	e007	Requested meter reference number is not found.
200	-	e008	Requested meter reference number has more than one matching records; data can only be provided for unique match.
200	-	e009	Submitted address details has multiple

			records; data is only provided for unique number.
500	-	e010	Unexpected error occurred while processing request
200	-	e011	Requested address has no matching record. This may be because, there is no gas meter at this property (or) full postcode with a space is not entered (or) the entered details are incorrect.
400	e101	-	Postcode cannot be empty.
200	e102	-	Requested address has no matching record. This may be because, there is no gas meter at this property (or) full postcode with a space is not entered (or) the entered details are incorrect.
500	e103	-	Unexpected error occurred while processing request
401	steps.oauth.v2.FailedToResolveAPIKey	steps.oauth.v2.FailedToResolveAPIKey	Application Key sent in API request is either empty or invalid.
500	policies.ratelimit.QuotaViolation	policies.ratelimit.QuotaViolation	Number of API requests for [product] has exceeded the allowed quota limit of [] per month.
500	policies.ratelimit.SpikeArrestViolation	policies.ratelimit.SpikeArrestViolation	Number of API requests for [product] has exceeded the allowed spike limit of [] per [minute].
500	policies.custom.config.1	policies.custom.config.1	Application creation process has not completed due to technical issues, please contact or raise a fault with the system administrator.
500	policies.custom.config.2	policies.custom.config.2	Application creation process has not completed due to technical issues, please contact or raise a fault with the system administrator.
500	policies.custom.config.3	policies.custom.config.3	Application creation process has not completed due to technical issues, please contact or raise a fault with the system administrator.
500	steps.regexprotection.ThreatDetected	steps.regexprotection.ThreatDetected	Regular expression threat is detected in the API request, please check the data entered.

4. Sample Request / Response

4.1 Requests “Search Address”

The following is an example for the “Search Address” API request:

#	Request	Request description
1	<code>https://xoserve.apimanagement.hana.ondemand.com:443/v1/ddress.svc?postcode='XXX XXX'&house_no=X</code>	Get Address Data by Postcode and House Number

4.2 Response “Search Address”

The following is an example of the “Search Address” API response:

#	Response	Response description
1	<code>https://xoserve.apimanagement.hana.ondemand.com:443/v1/address.svc?postcode='XXX XXX'&house_no=X</code>	<pre>{ "addresses": [{ "address_id": "XXXXXXXX", "country": "GB", "county": "", "delivery_point_alias": "", "dependent_locality": "", "dependent_street": "", "doub_dependent_locality": "", "house_name": "", "house_number": "15", "po_box_number": "", "postcode": "XXX XXX", "street": "NUTHURST AVENUE", "sub_building_name": "", "town": "LONDON" }] }</pre>
3	<code>https://xoserve.apimanagement.hana.ondemand.com:443/v1/address.svc?postcode='XXX XXX'&house_no=X [Error]</code>	<pre>{ "fault": { "faultstring": "Requested address has no matching record. This may be because, there is no gas meter at this property (or) full postcode with a space is not entered (or) the entered details are incorrect.", "detail": { "errorcode": "e102" } } }</pre>

4.3 Requests “Switch Gas Data”

The following is an example for the “Switch Gas Data” API request:

#	Request	Request description
1	<code>https://xoserve.apimanagement.hana.ondemand.com:443/v1/switchdata.svc/switchdata?address_id=XXXXXXXX</code>	Get Switch Data by Address Identifier
2	<code>https://xoserve.apimanagement.hana.ondemand.com:443/v1/switchdata.svc/switchdata?mprn=XXXXXXXXXX</code>	Get Switch Data by MPRN
3	<code>https://xoserve.apimanagement.hana.ondemand.com:443/v1/switchdata.svc/switchdata?postcode='XXX XXX'&house_no=X</code>	Get Switch Data by Postcode and House Number (Unique Record only)

4.4 Response “Switch Gas Data”

The following is an example of the “Switch Gas Data” API response:

#	Response	Response description
1	https://xoserve.apimanagement.hana.ondemand.com:443/v1/switchdata?address_id=XXXXXXXXXX	<pre>{ "mprn": [{ "address_id": "XXXXXXXX", "house_name": "", "house_number": "X", "country": "GB", "county": "", "current_supplier_id": "STH", "delivery_point_alias": "", "dependent_street": "", "dmq": "17799", "double_dependent_locality": "", "gas_transport_id": "Southern Gas Networks Plc.", "ldz_id": "SE", "meter_capacity": "1", "meter_mechanism_code": "NS", "meter_serial_number": "XXXXXXXXXX", "mpaq": "17799", "mprn": "XXXXXXXX", "ndmq": "18467", "po_box_number": "", "post_town": "LONDON", "postcode": "XXX XXX", "smart_equipment_technical_code": "BRG", "street": "NUTHURST AVENUE", "sub_building_name": "" }] }</pre>
2	https://xoserve.apimanagement.hana.ondemand.com:443/v1/switchdata.svc/switchdata?mprn=XXXXXXXXXX	<pre>{ "mprn": [{ "address_id": "XXXXXXXXXX", "house_name": "", "house_number": "15", "country": "GB", "county": "", "current_supplier_id": "STH", "delivery_point_alias": "", "dependent_street": "", "dmq": "17799", "double_dependent_locality": "", "gas_transport_id": "Southern Gas Networks Plc.", "ldz_id": "SE", "meter_capacity": "1", "meter_mechanism_code": "NS", "meter_serial_number": "XXXXXXXXXXXXXX", "mpaq": "17799", "mprn": "XXXXXXXX", "ndmq": "18467", "po_box_number": "", "post_town": "LONDON", "postcode": "XXX XXX", "smart_equipment_technical_code": "BRG", "street": "NUTHURST AVENUE", "sub_building_name": "" }] }</pre>

3	https://xserve.apimanagement.hana.ondemand.com:443/v1/switchdata.svc/switchdata?postcode='XXX XXX'&house_no=X	<pre> {"mprn": {{ "address_id": XXXXXXXXXXXX, "house_name": "", "house_number": "15", "country": "GB", "county": "", "current_supplier_id": "STH", "delivery_point_alias": "", "dependent_street": "", "dmq": "17799", "double_dependent_locality": "", "gas_transport_id": "Southern Gas Networks Plc.", "ldz_id": "SE", "meter_capacity": "1", "meter_mechanism_code": "NS", "meter_serial_number": "XXXXXXXXXXXX", "mpaq": "17799", "mprn": XXXXXXXX, "ndmq": "18467", "po_box_number": "", "post_town": "LONDON", "postcode": "XXX XXX", "smart_equipment_technical_code": "BRG", "street": "NUTHURST AVENUE", "sub_building_name": "" }} </pre>
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5. Test Steps

The following tests have been performed:

Test n°	Name	Description	Condition
1	Multiple Records By postcode	Postcode with multiple records	Response error code = e204
2	Unique input parameter mprn	MPRN with one single record	Response length = 1
3	Unique input parameter postcode	Postcode with one single record	Response length = 1
4	Check Response parameters	Standard record to check all the parameters	Check all fields exists in the response
5	Address not found	Response when the address is not found	Response error code = e206
6	MPRN not found	Response when the MPRN is not found	Response error code = e202
7	Unauthorized	Request without APIKey	Response error code = steps.oauth.v2.FailedToResolveAPIKey
8	Without parameter v1	Request without any parameter	Response error code = e202
9	Without parameter v2	Request with mprn in blank	Response error code = e201
10	Without parameter v3	Request with postcode in blank	Response error code = e201
11	SQL injection v1	Sql injection type 1	Response error code = steps.regexprotection.ThreatDetected
12	SQL injection v2	Sql injection type 2	Response error code = steps.regexprotection.ThreatDetected

13	SQL injection v3	Sql injection type 3	Response error code = steps.regexprotection.ThreatDetected
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6. Common Elements

5.1 Header Information [Request]

#	Header type	Header Options	Header Optionality
1	APIKey		Required
2	Cache-Control	"no-store"	Optional
3	content-type	"application/json" or "application/xml"	Optional