tyntec

Portability Check

Documentation (HTTP)

Deprecated Version

Interface information

tyntec's Global Number Portability (GNP) resolves number portability by obtaining data directly from local number portability databases and live network information from across the globe.

GNP is available with the Representational State Transfer Application Programming Interface (REST API).

This interface enables quick and easy access to tyntec's Number Information Services (NIS). The communication is established via Hypertext Transfer Protocol Secure (HTTPS) connections. The exchanged object type is JavaScript Object Notation (JSON). tyntec's application accepts and replies with "application/json" as "Content-Type" (and "charset=utf-8") in the HTTP header.

All of tyntec's Number Information Services (which also includes Global Number Verification) are accessible through the base Unique Resource Location (URL) (${baseURL}):

```
https://rest.tyntec.com/nis/v1/
```

Here's a basic example showing to resolve Global Number Portability:

```
curl -u username:password -X GET https://rest.tyntec.com/nis/v1/gnp?msisdn=+491622943176
```

Authentication is done during the setup of the REST API connection.
tyntec will provide a username (${username}) and password (${password}) to grant access to services:

```
https://${username}:${password}@rest.tyntec.com/nis/v1/
```

The Base64-encoded combination "${username}:${password}" is used as an authentication token for the Basic HTTP authentication and can also be given in the HTTP header:

```
Authorization: Basic ${authentication-token}
```

Connection steps

1. Query information on phone number

The number information on a specific Mobile Station International Subscriber Directory Number (MSISDN) can be queried from two resources:

Resource URL	Method
${baseURL}/gnp	GET

The MSISDN is provided in the respective parameter:

```
?msisdn=$msisdn
```

In this case, tyntec's application will return the requested number information on the given MSISDN ($msisdn).

To prevent incurring avoidable costs due to malformed requests, tyntec's application server performs a consistency check on the provided MSISDN and callbackUrl before processing the request.

2. Synchronous vs asynchronous responses

The time needed to retrieve number information is typically around ~350 ms. But sometimes it can take up to several seconds to receive the number information, e.g., when operators respond very slowly. Therefore, tyntec's Global Number Portability service can be queried for a synchronous or asynchronous response. The default response is synchronous and the requested number information is given in the body of the "HTTP 200 OK" response of tyntec's application server. The asynchronous response can be triggered with the request parameter:

```
?callbackUrl=$callbackUrl
```

In this case, tyntec's application will POST the requested number information to your webserver at the given URL ($callbackUrl).tyntec's application will retry for a maximum of 48 hours to POST the number information after 1, 5, 10, 20, 30, 60 minutes if your server does not answer '200 OK' within two seconds.

3. Code Examples

The following code blocks give examples of how to query number information on an MSISDN.

Example for Query GNP (synchronous response):

```
curl
-u username:password
-X GET
-H "Accept: application/json"
https://rest.tyntec.com/nis/v1/gnp?msisdn=+491622943176
```

Example for Query GNP (asynchronous response):

```
curl
-u username:password
-X GET
-H "Accept: application/json"
https://rest.tyntec.com/nis/v1/gnp?msisdn=+491622943176&callbackUrl=https://rest.customer.com/inbound/
```

Response to Query GNP containing the requested number information:


```
{
“requestId”:”12-86cfafba-8677-f42b-5050-ece6af6abf01”,
“msisdn”:”+491622943176”,
“mcc”:”262”,
“mnc”:”02”,
“ttId”:15,
“operator”:” Vodafone”,
“country”:”DEU”,
“timeZone”:”+0100”,
“technology”:”GSM”,
“ported”:”false”,
“price”:0.001,
“currency”:”EUR”,
“priceEffective”:”2010-11-01T00:00:00+0000”,
“errorCode”:”0”
}
```


In this request, there are a number of parameters that need to be defined, while others are optional:

Parameter	Possible Values	
requestID	UUID according to RFC 4122	The unique identifier provided for each request.
msisdn	Phone number according to ITU E.164	The phone number of interest given in international format.
MCC	UTF-8 encoded string according to ITU E.212	A representative MCC (Mobile Country Code) of the operator.
MNC	UTF-8 encoded strong according to ITU E.212	A representative MNC (Mobile Network Code) of the operator.
ttId	integer	The respective tyntec ID of the network.
operator	string	The human readable name of the operator.
country	Country code following ISO 3166-1 alpha-3	The three-letter country code where the operator is located.
timeZone	+HH:mm (according to ISO 8601)	The operator’s local time zone relative to UTC.
technology	UTF-8 encoded string	Technology used by the operator’s network. Possible values are: GSM, VNO GSM, GSM/CDMA, Satellite, CDMA, iDen, iDen/GSM, Pager, Fixed.
ported	boolean	An indication of the porting status (yes/no).
price	float	The price for the query.
currency	Currency code following ISO 4217	The currency in which the pricing is given; corresponding to the currency of the invoice.
priceEffective	Date in the format “yyyy-MM-ddTHH:mm:ss”	The date when “price” became effective.
errorCode	The reason for an unsuccessful attempts.	Possible values for error codes are given in a following table.

4. HTTP Status Codes

Error Code	Description
200 OK	Network information will be supplied within the response.
400 Bad Request	Any of the provided parameters is invalid or callbackUrl is not reachable.
401 Unauthorized	HTTP basic authentication parameters are invalid.
403 Forbidden	HTTP basic authentication parameters are missing.
405 Method Not Allowed	Request method is not support (this service only supports GET).
415 Not Acceptable	Media type is not supported.
500 Internal Error	