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# TeleSign REST API Documentation

*Release*

**TeleSign**

October 28, 2015



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# Overview

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**TeleSign Web Services** conform to the [REST Web Service Design Model](#). Services are exposed as URI-addressable resources through the set of *RESTful* procedures in our **TeleSign REST API**.

The **TeleSign Python SDK** is a set of software development tools; a *Python Library* that wraps the TeleSign REST API, and it simplifies TeleSign application development in the [Python programming language](#). The SDK software is listed in the [Python Package Index \(PyPI\)](#), as the **telesign** Python package.

**telesign** Instructions on how to get the package.

**telesign.api** The complete API documentation, organized by module.

**telesign.exceptions** Exception classes for error handling.



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**Getting Help**

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If you're having trouble, or have questions about TeleSign, please contact our customer support team:

Email: [support@telesign.com](mailto:support@telesign.com)





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## About This Documentation

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This documentation contains information on how to download and install the **TeleSign Python SDK**, and it contains a comprehensive set of Python language reference pages that detail the TeleSign Python classes and methods that wrap the TeleSign REST API.

This documentation was generated using the [Sphinx](#) documentation generator. The source files for the documentation are located in the *doc/* directory of the **telesign** distribution. You can regenerate the docs locally by running the following command from the root directory of the **telesign** source:

```
$ python setup.py doc
```



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## Documentation Map

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### 4.1 telesign

The **telesign** Python Package contains the **TeleSign Python SDK** software, and it is registered with the [Python Package Index \(PyPI\)](#).

#### 4.1.1 Installing the SDK

There are three approaches you can use to install the SDK:

##### Using *pip*

On platforms other than Windows, we recommend using *pip* to install **telesign**, using the following command:

```
$ pip install telesign
```

To install a specific version of **telesign**, simply add the version number to the command line, as in the following example:

```
$ pip install telesign==1.0.0
```

To upgrade an existing telesign installation, use the *-upgrade* switch, as in the following example:

```
$ pip install --upgrade telesign
```

##### Using *easy\_install*

On Windows-based Python deployments, you can use *Easy Install* to install **telesign**, using the following command:

```
$ easy_install telesign
```

To upgrade an existing telesign installation, use the *-U* switch, as in the following example:

```
$ easy_install -U telesign
```

## Using our *source*

If you would like to try-out the *latest* bits, you can clone a local version of our public source code repository on [GitHub](#), and then install from your enlistment, as in the following example:

```
$ git clone git://github.com/TeleSign/python_tesign.git tesign
$ cd tesign/
$ python setup.py install
```

## 4.2 `tesign.api`

The `tesign.api` module contains Python classes and methods that allow you to use the Python programming language to programmatically access the **Verify** and the **PhoneId** TeleSign web services.

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*Verify*    The **Verify** class exposes several services for sending users a verification token.

*PhoneId*    The **PhoneId** class exposes three services that each provide detailed information about a specified phone number.

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### 4.2.1 Verify

**class** `tesign.api.Verify` (*customer\_id*, *secret\_key*, *ssl=True*, *api\_host='rest.tesign.com'*,  
*proxy\_host=None*, *timeout=None*)

The **Verify** class exposes several services for sending users a verification token. You can use this mechanism to simply test whether you can reach users at the phone number they supplied, or you can have them use the token to authenticate themselves with your web application.

This class also exposes a service that is used in conjunction with the first two services, in that it allows you to confirm the result of the authentication.

You can use this verification factor in combination with username & password to provide two-factor authentication for higher security.

<b>At-tributes</b>	
<i>customer_id</i>	A string value that identifies your TeleSign account.
<i>secret_key</i>	A base64-encoded string value that validates your access to the TeleSign web services.
<i>ssl</i>	(optional) Specifies whether to use a secure connection with the TeleSign server. Defaults to <i>True</i> .
<i>api_host</i>	(optional) The Internet host used in the base URI for REST web services. The default is <i>rest.tesign.com</i> (and the base URI is <a href="https://rest.tesign.com/">https://rest.tesign.com/</a> ).
<i>proxy_host</i>	(optional) The host and port when going through a proxy server. ex: "localhost:8080. The default to no proxy.
<i>timeout</i>	(optional) A timeout value to use in requests - float or tuple (see requests documentation for details). Defaults to None.

**Note:** You can obtain both your Customer ID and Secret Key from the [TeleSign Customer Portal](#).

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### Methods

<i>sms</i>	Sends a text message containing the verification code, to the specified phone number (supported for mobile phones only).
<i>call</i>	Calls the specified phone number, and using speech synthesis, speaks the verification code to the user.
<i>status</i>	Retrieves the verification result.

**sms ()**

Verify.**sms** (*phone\_number*, *verify\_code=None*, *language='en'*, *template=''*, *use\_case\_code=None*, *originating\_ip=None*, *extra=None*, *timeout=None*)

Sends a text message containing the verification code, to the specified phone number (supported for mobile phones only).

Parameters	
<i>phone_number</i>	The phone number to receive the text message. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>verify_code</i>	(optional) The verification code to send to the user. If omitted, TeleSign will automatically generate a random value for you.
<i>language</i>	(optional) The written language used in the message. The default is English.
<i>template</i>	(optional) A standard form for the text message. It must contain the token <code>\$\$CODE\$\$</code> , which TeleSign auto-populates with the verification code.
<i>use_case_code</i>	(optional, recommended) A four letter code (use case code) used to specify a particular usage scenario for the web service.
<i>originating_ip</i>	(optional) An IP (v4 or v6) address, possibly detected by the customer's website, that is considered related to the user verification request
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPf</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import Verify
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaU
phone_number = "13107409700"

verify = Verify(cust_id, secret_key) # Instantiate a Verify object.

try:
    phone_info = verify.sms(phone_number, use_case_code="ATCK")
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to execute the Verify service, check the API response for details
    ...

# When the user inputs the validation code, you can verify that it matches the one that you
if (phone_info != None):
    try:
        status_info = verify.status(phone_info.data["reference_id"], verify_code=phone_info.
    except AuthorizationError as ex:
        ...
    except TelesignError as ex:
        ...

```

**call()**

`Verify.call(phone_number, verify_code=None, use_case_code=None, verify_method='', language='en', extension_type='', redial='', originating_ip=None, pressx=None, extra=None, timeout=None)`

Calls the specified phone number, and using speech synthesis, speaks the verification code to the user.

Parameters	
<i>phone_number</i>	The phone number to receive the text message. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>verify_code</i>	(optional) The verification code to send to the user. If omitted, TeleSign will automatically generate a random value for you.
<i>language</i>	(optional) The written language used in the message. The default is English.
<i>verify_method</i>	(optional)
<i>extension_type</i>	(optional)
<i>redial</i>	(optional)
<i>use_case_code</i>	(optional, recommended) A four letter code (use case code) used to specify a particular usage scenario for the web service.
<i>originating_ip</i>	(optional) An IP (v4 or v6) address, possibly detected by the customer's website, that is considered related to the user verification request
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization. Note that this is not a timeout for the actual phone call, just for the http request.
<i>extra</i>	(optional) Key value mapping of additional parameters.

### Use-case Codes

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

### Example:

```

from telesign.api import Verify
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgSnCehZaOYldPJdmFh6NeX8kUNZ2zU1YWaUw

verify = Verify(cust_id, secret_key) # Instantiate a Verify object.

phone_number = "13107409700"

```

```

try:
    phone_info = verify.call(phone_number, use_case_code="ATCK")
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to execute the Verify service, check the API response for details
    ...

# When the user inputs the validation code, you can verify that it matches the one that you
if (phone_info != None):
    try:
        status_info = verify.status(phone_info.data["reference_id"], verify_code=phone_info.
    except AuthorizationError as ex:
        ...
    except TelesignError as ex:
        ...

```

**status()**

Verify.**status** (*ref\_id*, *resource\_uri=None*, *verify\_code=None*, *extra=None*, *timeout=None*)

Retrieves the verification result. You make this call in your web application after users complete the authentication transaction (using either a call or sms).

Parameters	
<i>ref_id</i>	The Reference ID returned in the response from the TeleSign server, after you called either <b>call</b> or <b>sms</b> .
<i>verify_code</i>	(optional) The verification code received from the user.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Example:**

```

from telesign.api import Verify
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgnsCehZaOYldPJdmFh6NeX8kunZ2zU1YWaUw
phone_number = "13107409700"

verify = Verify(cust_id, secret_key) # Instantiate a Verify object.

phone_info = verify.sms(phone_number) # Send a text message that contains an auto-generated

# When the user inputs the validation code, you can verify that it matches the one that you
if (phone_info != None):
    try:
        status_info = verify.status(phone_info.data["reference_id"], verify_code=phone_info.
    except AuthorizationError as ex:
        ...
    except TelesignError as ex:
        ...

```



## 4.2.2 PhoneId

```
class telesign.api.PhoneId(customer_id, secret_key, ssl=True, api_host='rest.telesign.com',
                           proxy_host=None, timeout=None)
```

The **PhoneId** class exposes three services that each provide detailed information about a specified phone number.

<b>At-tributes</b>	
<i>customer_id</i>	A string value that identifies your TeleSign account.
<i>secret_key</i>	A base64-encoded string value that validates your access to the TeleSign web services.
<i>ssl</i>	(optional) Specifies whether to use a secure connection with the TeleSign server. Defaults to <i>True</i> .
<i>api_host</i>	(optional) The Internet host used in the base URI for REST web services. The default is <i>rest.telesign.com</i> (and the base URI is <a href="https://rest.telesign.com/">https://rest.telesign.com/</a> ).
<i>proxy_host</i>	(optional) The host and port when going through a proxy server. ex: "localhost:8080. The default to no proxy.
<i>timeout</i>	(optional) A timeout value to use in requests - float or tuple (see requests documentation for details). Defaults to <i>None</i> .

**Note:** You can obtain both your Customer ID and Secret Key from the [TeleSign Customer Portal](#).

### Methods

<i>standard</i>	Retrieves the standard set of details about the specified phone number.
<i>score</i>	Retrieves a score for the specified phone number.
<i>contact</i>	In addition to the information retrieved by <b>standard</b> , this service provides the Name & Address associated with the specified phone number.

### Methods

<i>standard</i>	Retrieves the standard set of details about the specified phone number.
<i>score</i>	Retrieves a score for the specified phone number.
<i>contact</i>	In addition to the information retrieved by <b>standard</b> , this service provides the Name & Address associated with the specified phone number.
<i>live</i>	In addition to the information retrieved by <b>standard</b> , this service provides actionable data associated with the specified phone number.

### **standard()**

```
PhoneId.standard(phone_number, use_case_code=None, extra=None, timeout=None)
```

Retrieves the standard set of details about the specified phone number. This includes the type of phone (e.g., land line or mobile), and it's approximate geographic location.

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	(optional, recommended) A four letter code (use case code) used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

### Use-case Codes

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
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<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

### Example:

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgSnCehZaOYldPJdmFh6NeX8kUNZ2zU1YWaUw"
phone_number = "13107409700"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    phone_info = phoneid.standard(phone_number, use_case_code="ATCK")

except AuthorizationError as ex:
    # API authorization failed. Check the API response for details.
    ...

except TelesignError as ex:
    # Failed to completely execute the PhoneID service. Check the API response
    # for details. Data returned might be incomplete or invalid.
    ...

```

**score ()**

PhoneId.**score** (*phone\_number*, *use\_case\_code*, *extra=None*, *timeout=None*)

Retrieves a score for the specified phone number. This ranks the phone number's "risk level" on a scale from 0 to 1000, so you can code your web application to handle particular use cases (e.g., to stop things like chargebacks, identity theft, fraud, and spam).

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	A four letter code used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes (*use\_case\_code*), and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
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<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgnsCehZaOYldPJdmFh6NeX8kunj2zU1YWaUw"
phone_number = "13107409700"
use_case_code = "ATCK"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    score_info = phoneid.score(phone_number, use_case_code)
except AuthorizationError as ex:
    ...
except TelesignError as ex:
    ...

```

**contact ()**

PhoneId.**contact** (*phone\_number, use\_case\_code, extra=None, timeout=None*)

In addition to the information retrieved by **standard**, this service provides the Name & Address associated with the specified phone number.

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	A four letter use case code used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes (*use\_case\_code*), and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
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<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaUw"
phone_number = "13107409700"
use_case_code = "LEAD"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    phone_info = phoneid.contact(phone_number, use_case_code)
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to completely execute the PhoneID service, check the API response
    # for details; data returned may be incomplete or not be valid
    ...

```

`live()`

`PhoneId.live` (*phone\_number*, *use\_case\_code*, *extra=None*, *timeout=None*)

In addition to the information retrieved by **standard**, this service provides actionable data associated with the specified phone number.

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	A four letter use case code used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see <code>timeout</code> in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaUw"
phone_number = "13107409700"
use_case_code = "RXPF"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    phone_info = phoneid.live(phone_number, use_case_code)
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to completely execute the PhoneID service, check the API response
    # for details; data returned may be incomplete or not be valid
    ...

```

### 4.2.3 `telesign.api.Verify`

<code>call</code>	Calls the specified phone number, and using speech synthesis, speaks the verification code to the user.
<code>sms</code>	Sends a text message containing the verification code, to the specified phone number (supported for mobile phones only).
<code>status</code>	Retrieves the verification result.

### 4.2.4 `telesign.api.PhoneId`

<code>standard</code>	Retrieves the standard set of details about the specified phone number.
<code>score</code>	Retrieves a score for the specified phone number.
<code>contact</code>	In addition to the information retrieved by <b>standard</b> , this service provides the Name & Address associated with the specified phone number.
<code>live</code>	In addition to the information retrieved by <b>standard</b> , this service provides actionable data associated with the specified phone number.

## 4.3 `telesign.exceptions`

You need the `telesign.exceptions` module to handle the exception conditions raised by the functions in the **`telesign.api`** module.

<code>TelesignError</code>	The <b>exceptions</b> base class.
<code>AuthorizationError</code>	Either the client failed to authenticate with the REST API server, or the service cannot be executed using the specified credentials.
<code>ValidationError</code>	The submitted data failed the initial validation, and the service was not executed.

### 4.3.1 `TelesignError`

**class** `telesign.exceptions.TelesignError` (*data*, *http\_response*)  
 The **exceptions** base class.

Attributes	
<i>data</i>	The data returned by the service, in a dictionary form.
<i>http_response</i>	The full HTTP Response object, including the HTTP status code, headers, and raw returned data.

### 4.3.2 `AuthorizationError`

**class** `telesign.exceptions.AuthorizationError` (*data*, *http\_response*)  
 Either the client failed to authenticate with the REST API server, or the service cannot be executed using the specified credentials.

Attributes	
<i>data</i>	The data returned by the service, in a dictionary form.
<i>http_response</i>	The full HTTP Response object, including the HTTP status code, headers, and raw returned data.

### 4.3.3 `ValidationError`

**class** `telesign.exceptions.ValidationError` (*data*, *http\_response*)  
 The submitted data failed the initial validation, and the service was not executed.

Attributes	
<i>data</i>	The data returned by the service, in a dictionary form.
<i>http_response</i>	The full HTTP Response object, including the HTTP status code, headers, and raw returned data.

## 4.4 telesign.api

The **api** module contains Python classes and methods that allow you to use the Python programming language to programmatically access the **Verify** and **PhoneId** TeleSign web services.

### Classes

<i>Verify</i>	The <b>Verify</b> class exposes several services for sending users a verification token.
<i>PhoneId</i>	The <b>PhoneId</b> class exposes three services that each provide detailed information about a specified phone number.

### 4.4.1 Verify

```
class telesign.api.Verify(customer_id, secret_key, ssl=True, api_host='rest.telesign.com',
                          proxy_host=None, timeout=None)
```

The **Verify** class exposes several services for sending users a verification token. You can use this mechanism to simply test whether you can reach users at the phone number they supplied, or you can have them use the token to authenticate themselves with your web application.

This class also exposes a service that is used in conjunction with the first two services, in that it allows you to confirm the result of the authentication.

You can use this verification factor in combination with username & password to provide two-factor authentication for higher security.

Attributes	
<i>customer_id</i>	A string value that identifies your TeleSign account.
<i>secret_key</i>	A base64-encoded string value that validates your access to the TeleSign web services.
<i>ssl</i>	(optional) Specifies whether to use a secure connection with the TeleSign server. Defaults to <i>True</i> .
<i>api_host</i>	(optional) The Internet host used in the base URI for REST web services. The default is <i>rest.telesign.com</i> (and the base URI is <a href="https://rest.telesign.com/">https://rest.telesign.com/</a> ).
<i>proxy_host</i>	(optional) The host and port when going through a proxy server. ex: "localhost:8080. The default to no proxy.
<i>timeout</i>	(optional) A timeout value to use in requests - float or tuple (see requests documentation for details). Defaults to None.

**Note:** You can obtain both your Customer ID and Secret Key from the [TeleSign Customer Portal](#).

### Methods

<i>sms</i>	Sends a text message containing the verification code, to the specified phone number (supported for mobile phones only).
------------	--

Continued on next page

Table 4.9 – continued from previous page

<i>call</i>	Calls the specified phone number, and using speech synthesis, speaks the verification code to the user.
<i>status</i>	Retrieves the verification result.

**sms ()**

Verify.**sms** (*phone\_number*, *verify\_code=None*, *language='en'*, *template=''*, *use\_case\_code=None*, *originating\_ip=None*, *extra=None*, *timeout=None*)

Sends a text message containing the verification code, to the specified phone number (supported for mobile phones only).

Parameters	
<i>phone_number</i>	The phone number to receive the text message. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>verify_code</i>	(optional) The verification code to send to the user. If omitted, TeleSign will automatically generate a random value for you.
<i>language</i>	(optional) The written language used in the message. The default is English.
<i>template</i>	(optional) A standard form for the text message. It must contain the token <code>\$\$CODE\$\$</code> , which TeleSign auto-populates with the verification code.
<i>use_case_code</i>	(optional, recommended) A four letter code (use case code) used to specify a particular usage scenario for the web service.
<i>originating_ip</i>	(optional) An IP (v4 or v6) address, possibly detected by the customer's website, that is considered related to the user verification request
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**



```

from telesign.api import Verify
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaUw"
phone_number = "13107409700"

verify = Verify(cust_id, secret_key) # Instantiate a Verify object.

try:
    phone_info = verify.sms(phone_number, use_case_code="ATCK")
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to execute the Verify service, check the API response for details
    ...

# When the user inputs the validation code, you can verify that it matches the one that you
if (phone_info != None):
    try:
        status_info = verify.status(phone_info.data["reference_id"], verify_code=phone_info.
    except AuthorizationError as ex:
        ...
    except TelesignError as ex:
        ...

```

**call()**

`Verify.call(phone_number, verify_code=None, use_case_code=None, verify_method='', language='en', extension_type='', redial='', originating_ip=None, pressx=None, extra=None, timeout=None)`

Calls the specified phone number, and using speech synthesis, speaks the verification code to the user.

Param-eters	
<i>phone_number</i>	The phone number to receive the text message. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>verify_code</i>	(optional) The verification code to send to the user. If omitted, TeleSign will automatically generate a random value for you.
<i>language</i>	(optional) The written language used in the message. The default is English.
<i>verify_method</i>	(optional)
<i>extension_type</i>	(optional)
<i>redial</i>	(optional)
<i>use_case_code</i>	(optional, recommended) A four letter code (use case code) used to specify a particular usage scenario for the web service.
<i>originating_ip</i>	(optional) An IP (v4 or v6) address, possibly detected by the customer's website, that is considered related to the user verification request
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization. Note that this is not a timeout for the actual phone call, just for the http request.
<i>extra</i>	(optional) Key value mapping of additional parameters.

### Use-case Codes

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

### Example:

```

from telesign.api import Verify
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgSnCehZaOYldPJdmFh6NeX8kUNZ2zU1YWaUw"

verify = Verify(cust_id, secret_key) # Instantiate a Verify object.

phone_number = "13107409700"

```

```

try:
    phone_info = verify.call(phone_number, use_case_code="ATCK")
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to execute the Verify service, check the API response for details
    ...

# When the user inputs the validation code, you can verify that it matches the one that you
if (phone_info != None):
    try:
        status_info = verify.status(phone_info.data["reference_id"], verify_code=phone_info.
    except AuthorizationError as ex:
        ...
    except TelesignError as ex:
        ...

```

### status()

Verify.**status**(*ref\_id*, *resource\_uri=None*, *verify\_code=None*, *extra=None*, *timeout=None*)

Retrieves the verification result. You make this call in your web application after users complete the authentication transaction (using either a call or sms).

Parameters	
<i>ref_id</i>	The Reference ID returned in the response from the TeleSign server, after you called either <b>call</b> or <b>sms</b> .
<i>verify_code</i>	(optional) The verification code received from the user.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

### Example:

```

from telesign.api import Verify
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunZ2zU1YWaUw"
phone_number = "13107409700"

verify = Verify(cust_id, secret_key) # Instantiate a Verify object.

phone_info = verify.sms(phone_number) # Send a text message that contains an auto-generated

# When the user inputs the validation code, you can verify that it matches the one that you
if (phone_info != None):
    try:
        status_info = verify.status(phone_info.data["reference_id"], verify_code=phone_info.
    except AuthorizationError as ex:
        ...
    except TelesignError as ex:
        ...

```

## 4.4.2 PhoneId

```
class telesign.api.PhoneId(customer_id, secret_key, ssl=True, api_host='rest.telesign.com',
                           proxy_host=None, timeout=None)
```

The **PhoneId** class exposes three services that each provide detailed information about a specified phone number.

Attributes	
<i>customer_id</i>	A string value that identifies your TeleSign account.
<i>secret_key</i>	A base64-encoded string value that validates your access to the TeleSign web services.
<i>ssl</i>	(optional) Specifies whether to use a secure connection with the TeleSign server. Defaults to <i>True</i> .
<i>api_host</i>	(optional) The Internet host used in the base URI for REST web services. The default is <i>rest.telesign.com</i> (and the base URI is <a href="https://rest.telesign.com/">https://rest.telesign.com/</a> ).
<i>proxy_host</i>	(optional) The host and port when going through a proxy server. ex: "localhost:8080. The default to no proxy.
<i>timeout</i>	(optional) A timeout value to use in requests - float or tuple (see requests documentation for details). Defaults to <i>None</i> .

**Note:** You can obtain both your Customer ID and Secret Key from the [TeleSign Customer Portal](#).

### Methods

<i>standard</i>	Retrieves the standard set of details about the specified phone number.
<i>score</i>	Retrieves a score for the specified phone number.
<i>contact</i>	In addition to the information retrieved by <b>standard</b> , this service provides the Name & Address associated with the specified phone number.

### Methods

<i>standard</i>	Retrieves the standard set of details about the specified phone number.
<i>score</i>	Retrieves a score for the specified phone number.
<i>contact</i>	In addition to the information retrieved by <b>standard</b> , this service provides the Name & Address associated with the specified phone number.
<i>live</i>	In addition to the information retrieved by <b>standard</b> , this service provides actionable data associated with the specified phone number.

### **standard()**

```
PhoneId.standard(phone_number, use_case_code=None, extra=None, timeout=None)
```

Retrieves the standard set of details about the specified phone number. This includes the type of phone (e.g., land line or mobile), and it's approximate geographic location.

Parameters	
<code>phone_number</code>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<code>use_case_code</code>	(optional, recommended) A four letter code (use case code) used to specify a particular usage scenario for the web service.
<code>timeout</code>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<code>extra</code>	(optional) Key value mapping of additional parameters.

### Use-case Codes

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

### Example:

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgnsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaUw"
phone_number = "13107409700"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    phone_info = phoneid.standard(phone_number, use_case_code="ATCK")

except AuthorizationError as ex:
    # API authorization failed. Check the API response for details.
    ...

except TelesignError as ex:
    # Failed to completely execute the PhoneID service. Check the API response
    # for details. Data returned might be incomplete or invalid.
    ...

```

**score ()**

PhoneId.**score** (*phone\_number*, *use\_case\_code*, *extra=None*, *timeout=None*)

Retrieves a score for the specified phone number. This ranks the phone number's "risk level" on a scale from 0 to 1000, so you can code your web application to handle particular use cases (e.g., to stop things like chargebacks, identity theft, fraud, and spam).

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	A four letter code used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes (*use\_case\_code*), and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgnsCehZaOYldPJdmFh6NeX8kunj2zU1YWaUw"
phone_number = "13107409700"
use_case_code = "ATCK"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    score_info = phoneid.score(phone_number, use_case_code)
except AuthorizationError as ex:
    ...
except TelesignError as ex:
    ...

```

**contact ()**

PhoneId.**contact** (*phone\_number, use\_case\_code, extra=None, timeout=None*)

In addition to the information retrieved by **standard**, this service provides the Name & Address associated with the specified phone number.

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	A four letter use case code used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see timeout in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes (*use\_case\_code*), and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaUw"
phone_number = "13107409700"
use_case_code = "LEAD"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    phone_info = phoneid.contact(phone_number, use_case_code)
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to completely execute the PhoneID service, check the API response
    # for details; data returned may be incomplete or not be valid
    ...

```

`live()`

PhoneId.`live` (*phone\_number*, *use\_case\_code*, *extra=None*, *timeout=None*)

In addition to the information retrieved by `standard`, this service provides actionable data associated with the specified phone number.

Parameters	
<i>phone_number</i>	The phone number you want details about. You must specify the phone number in its entirety. That is, it must begin with the country code, followed by the area code, and then by the local number. For example, you would specify the phone number (310) 555-1212 as 13105551212.
<i>use_case_code</i>	A four letter use case code used to specify a particular usage scenario for the web service.
<i>timeout</i>	(optional) Timeout for the request (see <code>timeout</code> in the requests documentation). Will override any timeout set in the initialization.
<i>extra</i>	(optional) Key value mapping of additional parameters.

**Use-case Codes**

The following table list the available use-case codes, and includes a description of each.

Code	Description
<b>BACS</b>	Prevent bulk account creation + spam.
<b>BACF</b>	Prevent bulk account creation + fraud.
<b>CHBK</b>	Prevent chargebacks.
<b>ATCK</b>	Prevent account takeover/compromise.
<b>LEAD</b>	Prevent false lead entry.
<b>RESV</b>	Prevent fake/missed reservations.
<b>PWRT</b>	Password reset.
<b>THEF</b>	Prevent identity theft.
<b>TELF</b>	Prevent telecom fraud.
<b>RXPF</b>	Prevent prescription fraud.
<b>OTHR</b>	Other.
<b>UNKN</b>	Unknown/prefer not to say.

**Example:**

```

from telesign.api import PhoneId
from telesign.exceptions import AuthorizationError, TelesignError

cust_id = "FFFFFFFF-EEEE-DDDD-1234-AB1234567890"
secret_key = "EXAMPLE----TE8sTgg45yusumoN6BYsBVkh+yRJ5czgsnCehZaOYldPJdmFh6NeX8kunjZ2zU1YWaUw"
phone_number = "13107409700"
use_case_code = "RXPF"

phoneid = PhoneId(cust_id, secret_key) # Instantiate a PhoneId object.

try:
    phone_info = phoneid.live(phone_number, use_case_code)
except AuthorizationError as ex:
    # API authorization failed, the API response should tell you the reason
    ...
except TelesignError as ex:
    # failed to completely execute the PhoneID service, check the API response
    # for details; data returned may be incomplete or not be valid
    ...

```



## 4.5 telesign.exceptions

The **exceptions** module contains exception classes for handling the error conditions that can be thrown by procedures in the **api** module.

### Exceptions

<i>TelesignError</i>	The <b>exceptions</b> base class.
<i>AuthorizationError</i>	Either the client failed to authenticate with the REST API server, or the service cannot be executed using the specified credentials.
<i>ValidationError</i>	The submitted data failed the initial validation, and the service was not executed.

### 4.5.1 TelesignError

**class** `telesign.exceptions.TelesignError` (*data*, *http\_response*)

The **exceptions** base class.

Attributes	
<i>data</i>	The data returned by the service, in a dictionary form.
<i>http_response</i>	The full HTTP Response object, including the HTTP status code, headers, and raw returned data.

### 4.5.2 AuthorizationError

**class** `telesign.exceptions.AuthorizationError` (*data*, *http\_response*)

Either the client failed to authenticate with the REST API server, or the service cannot be executed using the specified credentials.

Attributes	
<i>data</i>	The data returned by the service, in a dictionary form.
<i>http_response</i>	The full HTTP Response object, including the HTTP status code, headers, and raw returned data.

### 4.5.3 ValidationError

**class** `telesign.exceptions.ValidationError` (*data*, *http\_response*)

The submitted data failed the initial validation, and the service was not executed.

Attributes	
<i>data</i>	The data returned by the service, in a dictionary form.
<i>http_response</i>	The full HTTP Response object, including the HTTP status code, headers, and raw returned data.



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