

Gamma Limited

Inbound Web Services: Provisioning User Documentation



This document provides the user documentation for using the Inbound Provisioning Web Services

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Author	David Haasz
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Change History

Version	Date	Author	Sections Changed	Summary of Changes
1.7.0	27/03/2015	Chris Bath	All	1.7.0 Web Service Release
1.8.0	01/08/2018	David Haasz	None	Update documentation to match Gamma branding
1.9.0	09/10/2018	David Haasz	Xml based transactions	Updated QA URL

Related Documents

Document Name	File Name
Inbound XSD Document	Inbound.xsd
Inbound Types XSD Document	InboundTypes.xsd

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Introduction

The following documentation is intended to help the developer integrate their systems neatly with Gamma's Inbound Web Service. This will allow the reseller to take advantage of Gamma's highly flexible Inbound service and create call plans with advanced call handling features which can be tailored and adapted instantly.

XML based transactions

All communication between Gamma and the reseller will be made via XML transactions. The following section sets out standards for the developer to use when operating Gamma's Web Service interface.

- Information needs to be encoded within every piece of XML using UTF-8 encoding.
- Tag elements are case sensitive
- The order of the tags must remain consistent with the XSD
- Information for UAT should be sent using the http post method to the following URL: <https://ws-test.gammaoperations.com/InboundService/Inbound/> (Gamma will provide URL for Live environment)
- Appendix B includes the response codes and response messages.
- Gamma receives transactions from the TDPG system and sends a confirmation message back, verifying that the transaction was successful or unsuccessful.

Authorisation and Authentication

The developer will have to send the following credentials, which will be supplied by Gamma, within every transaction because authentication is transaction-based:

- Username - Username to access the Gamma web service
- Password - Password to access Gamma web service
- ClientId - Gamma provide a unique identifier to all resellers.
- CompanyRef - The company name for which the Inbound services are associated
- WSUserName – Username to access Inbound Services.

Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundRequest xmlns="http://www.gammatele.com/callplansetup"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <Username>ABC</Username>
  <Password>password123</Password>
  <ClientId>1089</ClientId>
  <CompanyRef>CompanyABC</CompanyRef>
  <WSUserName>ABCUser</WSUserName>
  --Request will go here. See Usage Details section for types of request that can be placed --
</InboundRequest>
```

Response XML

Every returned piece of XML is based on the request XML and can be very simple like a CallPlan setup or it can be more complex like GetCallPlan.

Success Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundResponse xmlns="http://www.gammatele.com/callplansetup"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <CompanyRef>CompanyABC</CompanyRef>
  <CallSetupResponse>
    <ErrorNum>0</ErrorNum>
    <Result>
      <ResponseCode>0</ResponseCode>
      <ResponseMessage>Successful</ResponseMessage>
    </Result>
  </CallSetupResponse>
</InboundResponse>
```

Failed Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundResponse xmlns="http://www.gammatele.com/callplansetup"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <CompanyRef>CompanyABC</CompanyRef>
  <CallSetupResponse>
    <ErrorNum>1</ErrorNum>
    <Result>
      <ResponseCode>1</ResponseCode>
      <ResponseMessage>User authentication failed</ResponseMessage>
    </Result>
  </CallSetupResponse>
</InboundResponse>
```

Additionally the returned XML can be an XML error message. In this case the returned XML is encapsulated within XmlError tags. When the response is an XML based error, the response tags for the request that was placed will not be included. For example below the CallSetupResponse tag is not supplied.

XmlError Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundResponse xmlns="http://www.gammatele.com/callplansetup"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <CompanyRef>CompanyABC</CompanyRef>
  <XmlError>
    <ResponseCode>101</ResponseCode>
    <ResponseMessage>XML Parse failure</ResponseMessage>
  </XmlError>
</InboundResponse>
```

Gamma Web Service Technology

XSD

The Inbound Web Service will conform to the schema set out in the Inbound.xsd and inboundTypes.xsd. These xsd's will be supplied with this documentation. The XSD provides the syntax and defines a way in which elements and attributes can be represented in an XML document. It also advocates that the given XML document should be of a specific format and specific data type.

XSD is fully recommended by W3C consortium as a standard for defining an XML Document. To know more about latest information on XSD, please refer the W3C site (www.w3.org).

Future Development

As the Inbound web service is currently in the development stage, the XSD will change as the interface advances. However, this should not affect the current implementation; Gamma will only be adding additional features in the future.

Usage Details

Types of Web Service Requests

- Search Numbers
- Reserve Numbers
- Delete Numbers

Search Number

The first step against provisioning a number against the inbound platform is to find a number which is available for provisioning.

Searching numbers attempts to return unique results for recently repeated queries but this behaviour isn't guaranteed.

Search Request

This web service call takes a full or partial number and will attempt to find a similar available NTS number.

Attribute Name	Data Type	Mandatory	Description
Provisioning	-	Yes	Transaction tag name
SearchNumber	-	Yes	Transaction sub-tag name
Number	String	Yes	Full or partial number

Search Request XML Layout

```
<Provisioning>
  <SearchNumber>
    <Number></Number>
  </SearchNumber>
</Provisioning>
```

Search Response

Attribute Name	Data Type	Mandatory	Description
ProvisioningResponse	-	Yes	Transaction tag name
ErrorNum	int	Yes	The amount of errors that are within the results. If there are no errors it will default to 0.
Result	-	Yes	Result sub-tag name.
ResponseCode	Int	Yes	See Appendix C for possible response codes
ResponseMessage	String(255)	Yes	See Appendix C for possible response messages
Number	String	No	Available number.

Search Response XML Layout

```
<ProvisioningResponse>  
  <ErrorNum></ErrorNum>  
  <Result>  
    <ResponseCode></ResponseCode>  
    <ResponseMessage></ResponseMessage>  
  </Result>  
  <Number></Number>  
</ProvisioningResponse>
```

Reserve Number

Reserving a number will take a previously searched number and attempted to reserve it against a given inbound account. Upon a successful response the number is available for normal API calls (e.g. call plan creation) with assigned callplans taking effect shortly after.

Reserve Number Request

This web service call takes in a NTS number and reserve under a specific company.

Attribute Name	Data Type	Mandatory	Description
Provisioning	-	Yes	Transaction tag name
Reserve	-	Yes	Transaction sub-tag name
NTSNum	String(64)	Yes	The NTS number to reserve onto this account. Please remove the leading zero.

Reserve Number Request

```
<Provisioning>
  <Reserve>
    <NTSNum></NTSNum>
  </Reserve>
</Provisioning>
```

Reserve Response

Attribute Name	Data Type	Mandatory	Description
ProvisioningResponse	-	Yes	Transaction tag name
ErrorNum	int	Yes	The amount of errors that are within the results. If there are no errors it will default to 0.
Result	-	Yes	Result sub-tag name.
ResponseCode	Int	Yes	See Appendix C for possible response codes
ResponseMessage	String(255)	Yes	See Appendix C for possible response messages
Number	String	No	Reserved number.

Reserve Response XML Layout

```
<ProvisioningResponse>  
  <ErrorNum></ErrorNum>  
  <Result>  
    <ResponseCode></ResponseCode>  
    <ResponseMessage></ResponseMessage>  
  </Result>  
  <Number></Number>  
</ProvisioningResponse>
```

Delete Number

Deleting a number will attempt to remove an allocated number against a given inbound account, any active call plans will be deactivated.

Delete number request

This web service call takes in a NTS number and delete under a specific company.

Attribute Name	Data Type	Mandatory	Description
Provisioning	-	Yes	Transaction tag name
Delete	-	Yes	Transaction sub-tag name
NTSNum	String(64)	Yes	The NTS number to reserve onto this account. Please remove the leading zero.

Delete Number XML Layout

```
<Provisioning>
  <Delete>
    <NTSNum></NTSNum>
  </Delete>
</Provisioning>
```

Delete Number Response

Attribute Name	Data Type	Mandatory	Description
ProvisioningResponse	-	Yes	Transaction tag name
ErrorNum	int	Yes	The amount of errors that are within the results. If there are no errors it will default to 0.
Result	-	Yes	Result sub-tag name.
ResponseCode	Int	Yes	See Appendix C for possible response codes
ResponseMessage	String(255)	Yes	See Appendix C for possible response messages
Number	String	No	Deleted number.

Delete Number XML Response

```
<ProvisioningResponse>  
  <ErrorNum></ErrorNum>  
  <Result>  
    <ResponseCode></ResponseCode>  
    <ResponseMessage></ResponseMessage>  
  </Result>  
  <Number></Number>  
</ProvisioningResponse>
```

Appendix A – Request Examples

Search Number Examples

Request full number

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundRequest xmlns="http://www.gammatele.com/callplansetup"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <Username>UsernameHere</Username>
  <Password>PasswordHere</Password>
  <ClientId>0000</ClientId>
  <CompanyRef>CompanyHere</CompanyRef>
  <WSUserName>WSUserHere</WSUserName>
  <Provisioning>
    <SearchNumber>
      <Number>1249005555</Number>
    </SearchNumber>
  </Provisioning>
</InboundRequest>
```

Request Partial number

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundRequest xmlns="http://www.gammatele.com/callplansetup"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <Username>UsernameHere</Username>
  <Password>PasswordHere</Password>
  <ClientId>0000</ClientId>
  <CompanyRef>CompanyHere</CompanyRef>
  <WSUserName>WSUserHere</WSUserName>
  <Provisioning>
    <SearchNumber>
      <Number>12490</Number>
    </SearchNumber>
  </Provisioning>
</InboundRequest>
```


Response

```
<InboundResponse>  
  <ProvisioningResponse>  
    <ErrorNum>0</ErrorNum>  
    <Result>  
      <ResponseCode>0</ResponseCode>  
      <ResponseMessage>SUCCESS</ResponseMessage>  
    </Result>  
    <Number>1249909996</Number>  
  </ProvisioningResponse>  
</InboundResponse>
```

Reserve Number Examples

Request

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundRequest xmlns="http://www.gammatele.com/callplansetup"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <Username>UsernameHere</Username>
  <Password>PasswordHere</Password>
  <ClientId>0000</ClientId>
  <CompanyRef>CompanyHere</CompanyRef>
  <WSUserName>WSUserHere</WSUserName>
  <Provisioning>
    <Reserve>
      <NTSNum>1249900000</NTSNum>
    </Reserve>
  </Provisioning>
</InboundRequest>
```

Response

```
<InboundResponse>
  <ProvisioningResponse>
    <ErrorNum>0</ErrorNum>
    <Result>
      <ResponseCode>0</ResponseCode>
      <ResponseMessage>SUCCESS</ResponseMessage>
    </Result>
    <Number>1249900000</Number>
  </ProvisioningResponse>
</InboundResponse>
```

Delete Number Examples

Request

```
<?xml version="1.0" encoding="UTF-8"?>
<InboundRequest xmlns="http://www.gammatele.com/callplansetup"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.gammatele.com/callplansetup Inbound.xsd ">
  <Username>UsernameHere</Username>
  <Password>PasswordHere</Password>
  <ClientId>0000</ClientId>
  <CompanyRef>CompanyHere</CompanyRef>
  <WSUserName>WSUserHere</WSUserName>
  <Provisioning>
    <Delete>
      <NTSNum>1249900000</NTSNum>
    </Delete>
  </Provisioning>
</InboundRequest>
```

Response

```
<InboundResponse>
  <ProvisioningResponse>
    <ErrorNum>0</ErrorNum>
    <Result>
      <ResponseCode>0</ResponseCode>
      <ResponseMessage>SUCCESS</ResponseMessage>
    </Result>
    <Number>1249900000</Number>
  </ProvisioningResponse>
</InboundResponse>
```

Appendix B - Web Service Response Statuses

The following list includes the current responses which the web service can return

Response Code	Response Message
0	Success
101	The XML sent is Invalid
102	Internal system error. Please contact Gamma
103	Username and/or password supplied is incorrect
104	User does not have access to client
105	Announcement File not found in system
106	Intro File not found in system
107	No active call plan found for NTS Number
108	Web service user credentials do not match the NTS number supplied. Please contact Front Desk
109	Web service user credentials do not match. Please contact Front Desk
110	The user does not have permission to use international destination numbers
111	The user does not have permission to use non-geographic destination numbers
112	The termination number is not a valid UK destination. Please ensure it begins with 01, 02 or 07
114	The email address supplied is not valid
115	User does not have permission to use call recording
116	This partner has no announcements
210	Please check that the frequency of the distribution elements equals to 100
211	A distribution callplan cannot have another distribution element nested within it
212	A sequence number in the serial distribution element has been set multiple times
213	Sequence number for distribution element must begin with 1
214	The sequence numbers used for serial distribution are not sequential
215	A Default Area element cannot have an AreaName defined
216	Area Range not found in system. Please check backend
217	Call Queue cannot be used as an endpoint for breakout or overflow
218	Please check that the divert type matches the divert tag
219	No Answer and Busy divert cannot be used within the destination type when call queue is present
220	There can be only 3 levels of nested diverts under a single destination. Please remove the excess diverts
221	Please check that the dates are in the correct format
222	Start date and the end date must not be set to older than 90 days
223	Start date cannot be set after the end Date
224	The day ranges must be unique. Please amend to ensure that the day ranges do not overlap
225	The time ranges must be unique. Please amend to ensure that the time ranges do not overlap
226	Only one default(empty) Days tag can be used
227	Only one default(empty) Time tag can be used
228	The Days tag must have a Default specified if it does not cover all seven days. Please add a Default(empty) Days tag or amend the Days tag to cover all days of the week

229	For Date based routing the date ranges must be unique. Please amend to ensure that the Date ranges do not overlap
230	For Date based routing the start date must be before the end date. Please amend
231	Please check that the Date based routing dates are in the correct format. It should be yyyy-mm-dd
232	A dial digit within the IVR menu option has been used multiple times. Please amend
233	The following prefix is already set for another area:
234	Area control destination cannot be another area control element
235	Day and time element cannot have another day and time element as the destination
236	The following sequence number in the Hunt Group element has been set multiple times
237	Sequence number is required for Serial or Prioritised Hunting
238	The sequence numbers used for Hunt Group elements are not sequential
239	Please check that the total frequency of the Hunt elements equals to 100
240	Non zero frequency is required for Random hunting
241	The Start Date must come before the End Date
242	Frequency or Sequence is not allowed for parallel hunting
243	Only EndPoint Destination or Hunt Groups allowed for AnnounceAndCall
244	For Date-Time based routing the date ranges must be unique. Please amend to ensure that the Date ranges do not overlap
245	For Date-Time based routing the start date must be before the end date. Please amend
246	Please check that the Date-Time based routing dates are in the correct format. It should be yyyy-mm-dd HH:mm in 24Hr format
247	You cannot use a date which is in the past. Please amend
257	The Callplan is not valid and cannot be activated
258	The requested call plan does not exist
259	Call plan with supplied name already exists
260	Supplied call plan is already active
261	There are no stored call plans for this number
262	The following NTS number does not belong to the user
263	Could not copy call plan, the following NTS number does not belong to the user:
264	This number is too short for a UK destination:
266	The destination number is another Inbound number, this routing is not permitted. Please contact your reseller for advice
270	ANN to ANN routing not allowed.
271	A TimeControl element cannot have another Time Control as the destination.
272	Missed Call Notification settings cannot exist at global and destination level.
273	Call Recording settings cannot exist at global and destination level
274	Whisper settings cannot exist at global and destination level
275	The call plan is invalid. Please check that the routing is correct
277	Number was not found for the request.
278	Number was not found for the request.
279	Number was not found for the requested company.
280	Unable to remove active call plan from requested number.
281	Unable to remove number, one number must remain.
500	Internal system error. Please contact Gamma
501	Internal system error. Please contact Gamma
502	Internal system error. Please contact Gamma
503	Internal system error. Please contact Gamma