

# Exchanging Data

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## Exchanging Data

protel uses protel I/O to route incoming and outbound data messages. Messages can be delivered to protel I/O from an HTTPS endpoint. protel I/O provides different endpoints for synchronous and asynchronous SOAP 1.2 messages to accommodate WSDL requirements. protel I/O is using the Version 'OTA 2011A' for the OTA messages.

## Security, Access, and Authentication

Security is important to you and protel. All messages must be authenticated using protel IO's secure authentication processes. To ensure the source of messages are valid, all messages flowing to and from protel are checked. Messages are verified by protel I/O. Access to the API is only permitted through SSL (secure sockets layer). For HTNG messaging, all messages will utilize the HTNG 1.2 SOAP header.

## Authentication of Inbound messages

**Direction Vendor to protel. All messages require a protel provided Bearer Token (whether RQ or RS!).**

The Authentication token must be submitted in HTTP headers.

Protel will provide you with your bearer token at the time we commence testing. When requesting a test environment protel will provide you with a token at that time.

## Format of HTTP Headers

In order to process your incoming requests, all of your messages must contain headers inside the HTTP headers

HTTP Header	Description	Occurrence
Content-Type	Fixed to "application/soap+xml"	Mandatory
SOAPAction	Please check the table below for the correct value	Mandatory
Authorization	The access token e.g. "Bearer C6MmpEFjRRSy288V1-DEMO-hGETMBImNJhFzv5"	Mandatory
CorrelationID	The CorrelationID of the message you are sending to identify the transaction	Optional

## Header Format

Content-Type: application/soap+xml  
SOAPAction: OTA\_HotelResNotifRQ  
Authorization: Bearer C6MmpEFjRRSy288V1-DEMO-hGETMBImNJhFzv5  
CorrelationID: RES#047616#UPDATE#000025#1594029290242#546D

## SOAPAction

Messages sent to Protel IO (ESB)

	OTA	HTNG	IO
Request	SOAPAction : " <a href="http://htng.org/PWSWG/2010/12/OTA_HotelResNotifRQ_SubmitRequest">http://htng.org/PWSWG/2010/12/OTA_HotelResNotifRQ_SubmitRequest</a> "	SOAPAction : " <a href="http://htng.org/PWSWG/2010/12/HTNG_HotelCheckInNotifRQ_SubmitRequest">http://htng.org/PWSWG/2010/12/HTNG_HotelCheckInNotifRQ_SubmitRequest</a> "	SOAPAction : "IO_StatsNotifRQ"
Response	SOAPAction : "OTA_HotelResNotifRS"	SOAPAction : "HTNG_HotelCheckInNotifRS"	SOAPAction : "IO_StatsNotifRS"

## Format of SOAP Environment

In order to process your incoming requests, all of your messages must contain headers inside the SOAP environment

Element	Namespace	Description	Occurrence
Envelope	<a href="http://www.w3.org/2003/05/soap-envelope">http://www.w3.org/2003/05/soap-envelope</a>	-	Mandatory
Envelope / Header	<a href="http://www.w3.org/2003/05/soap-envelope">http://www.w3.org/2003/05/soap-envelope</a>	Contains the SOAP headers of the message	Mandatory
Envelope / Header / Action	<a href="http://protel.io/soap">http://protel.io/soap</a>	The required action (Message name) e.g. "OTA_HotelResNotifRQ"	Optional
Envelope / Header / CorrelationID	<a href="http://protel.io/soap">http://protel.io/soap</a>	The CorrelationID of the message you are sending to identify the transaction (protel namespace)	Mandatory
Envelope / Header / Source	<a href="http://protel.io/soap">http://protel.io/soap</a>	The Source of the message (Only outbound from protel to vendor)	Optional
Envelope / Header / CorrelationID	<a href="http://htng.org/PWSWG/2007/02/AsyncHeaders">http://htng.org/PWSWG/2007/02/AsyncHeaders</a>	The CorrelationID of the message you are sending to identify the transaction (HTNG namespace)	Mandatory
Envelope / Header / Target	<a href="http://protel.io/soap">http://protel.io/soap</a>	The desired target service name of the message  For message/s to protel PMS the correct values are: <ul style="list-style-type: none"><li>io.protel.air - for protel Cloud PMS</li><li>io.protel.onpremise - for protel onPremise PMS</li><li>io.protel.pms - for either of the two above. The value is an alias that is valid for either of the PMSes</li></ul>	Mandatory
Envelope / Body	<a href="http://www.w3.org/2003/05/soap-envelope">http://www.w3.org/2003/05/soap-envelope</a>	The HTNG/OTA/IO message	Mandatory

## SOAP Env

```
<?xml version='1.0' encoding='utf-8'?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
  <env:Header>
    <p:Action xmlns:p="http://protel.io/soap">OTA_HotelResNotifRQ</p:Action>
    <p:CorrelationID xmlns:p="http://protel.io/soap">RES#047616#UPDATE#000025#1594029290242#546D</p:CorrelationID>
    <p:Source xmlns:p="http://protel.io/soap" Module="backline" ModuleVersion="2020-07-02T10:28:55 (PROD)" Product="protelAir" ProductVersion="
2027.1.56845-RELEASE" Service="io.protel.air"/>
    <htnga:CorrelationID xmlns:htnga="http://htng.org/PWSWG/2007/02/AsyncHeaders">RES#047616#UPDATE#000025#1594029290242#546D</htnga:CorrelationID>
    <p:Target xmlns:p="http://protel.io/soap">io.protel.air</p:Target>
  </env:Header>
  <env:Body>
    --OTA/IO/HTNG Message--
  </env:Body>
</env:Envelope>
```

## Format of the Acknowledgment (ASYNCR communication)

To communicate with an ASYNCR pattern, the receiver of the message needs to send an ACK with the HTTP status code 200 and the following payload back to the sender before the receiver starts the processing of the message.

The Content-Type needs to be added in the HTTP Header with the value "application/soap+xml".

Please note that depending on the message group used, the ACK has some differences between the standard OTA/HTNG and the protel extension IO message types:

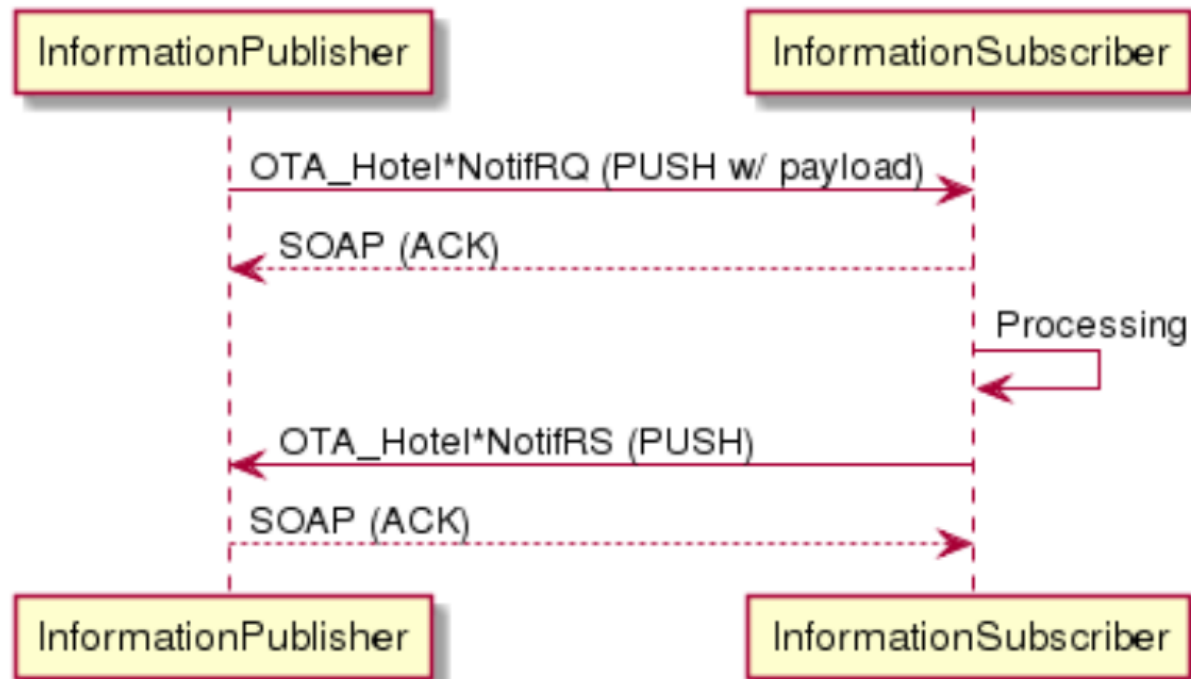
### Example ACK for HTNG/OTA message type

```
<?xml version='1.0' encoding='UTF-8'?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
  <env:Header>
    <htnga:CorrelationID xmlns:htnga="http://htng.org/PWSWG/2007/02/AsyncHeaders">%1$s</htnga:CorrelationID>
    <htnga:RelatesToCorrelationID xmlns:htnga="http://htng.org/PWSWG/2007/02/AsyncHeaders">%1$s</htnga:RelatesToCorrelationID>
  </env:Header>
  <env:Body>
    <ns:HTNG_AcknowledgeReceipt xmlns:ns="http://htng.org/2014B"/>
  </env:Body>
</env:Envelope>
```

#### Example ACK for IO message type

```
<?xml version='1.0' encoding='UTF-8'?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
  <env:Header>
    <htnga:CorrelationID xmlns:htnga="http://htng.org/PWSWG/2007/02/AsyncHeaders">%1$s</htnga:CorrelationID>
    <htnga:RelatesToCorrelationID xmlns:htnga="http://htng.org/PWSWG/2007/02/AsyncHeaders">%1$s</htnga:RelatesToCorrelationID>
  </env:Header>
  <env:Body>
    <io:IOAcknowledgeRS CorrelationID="%1$s" xmlns:io="http://protel.io/soap">
      <io:Success>true</io:Success>
    </io:IOAcknowledgeRS>
  </env:Body>
</env:Envelope>
```

### Asynchronous communication



## protel I/O Connection Endpoints

Connecting to TEST

System	Endpoint	Variant	URL	Comments
ESB	Asynchronous API	SOAP 1.2	<a href="https://service-test.protel.io/services/ProtelApiService.ProtelApiServiceHttpsSoap12Endpoint">https://service-test.protel.io/services/ProtelApiService.ProtelApiServiceHttpsSoap12Endpoint</a>	Default Endpoint
	Synchronous API	SOAP 1.2	<a href="https://service-test.protel.io/services/ProtelApiSyncService.ProtelApiSyncServiceHttpsSoap12Endpoint">https://service-test.protel.io/services/ProtelApiSyncService.ProtelApiSyncServiceHttpsSoap12Endpoint</a>	
	Asynchronous API (CD-Proxy)	SOAP 1.2	<a href="https://qa-pci.protel.net/cd-proxy-io/pci/1/io/reservations">https://qa-pci.protel.net/cd-proxy-io/pci/1/io/reservations</a>	Endpoint for all inbound OTA_HotelResNotifRQ messages
	WSDL	SOAP 1.2	<a href="https://wsdl-test.protel.io/services/ProtelApiService?wsdl">https://wsdl-test.protel.io/services/ProtelApiService?wsdl</a>	

Connecting to PROD

System	Endpoint	Variant	URL	Comments
ESB	Asynchronous API	SOAP 1.2	<a href="https://service.protel.io/services/ProtelApiService.ProtelApiServiceHttpsSoap12Endpoint">https://service.protel.io/services/ProtelApiService.ProtelApiServiceHttpsSoap12Endpoint</a>	Default Endpoint
	Synchronous API	SOAP 1.2	<a href="https://service.protel.io/services/ProtelApiSyncService.ProtelApiSyncServiceHttpsSoap12Endpoint">https://service.protel.io/services/ProtelApiSyncService.ProtelApiSyncServiceHttpsSoap12Endpoint</a>	
	Asynchronous API (CD-Proxy-Ireland)	SOAP 1.2	<a href="https://pci.protel.net/cd-proxy-io/pci/1/io/reservations">https://pci.protel.net/cd-proxy-io/pci/1/io/reservations</a>	Endpoint for all inbound OTA_HotelResNotifRQ messages
	Asynchronous API (CD-Proxy-Sydney)	SOAP 1.2	<a href="https://pci-sydney.protel.net/cd-proxy-io/pci/1/io/reservations">https://pci-sydney.protel.net/cd-proxy-io/pci/1/io/reservations</a>	Endpoint for all inbound OTA_HotelResNotifRQ messages for protel Customers located in Sydney
	WSDL	SOAP 1.2	<a href="https://wsdl.protel.io/services/ProtelApiService?wsdl">https://wsdl.protel.io/services/ProtelApiService?wsdl</a>	

## NAT Gateway IP Addresses

Environment	NAT Gateway - Out
ESB TEST	34.249.236.99
ESB PROD	34.248.234.12

## Circular Message Flow

The circular message flow prevents a message loop between Integration Partner and Protel.

It is applicable for message types which the PMS accepts in both directions In/Out (e.g. OTA\_ProfileModifyRQ, OTA\_HotelResNotifRQ, etc.)

### Sample:

The Integration Partner sends an OTA\_ProfileModifyRQ message to Protel. This profile is modified in the PMS and then sent again as OTA\_ProfileModifyRQ by the PMS. The Integration Partner will also modify the profile again and send it back to Protel, thus creating an endless loop.



To stop this endless loop, we have implemented the "Caused-By CorrelationID". The "Caused-By CorrelationID" is automatically added to the outbound messages by the PMS if a modification has been made due to an inbound message. Based on the "Caused-By CorrelationID", our ESB knows to which Integration Partner the message does not have to be sent.

