

Broadband Connectivity Service (BBCS)

Assurance Interface Specification

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Checklist of changes

Version	Date	Changed by	Comments / nature of the change
24	25.01.2011	HP	Version WSG-8.3 / Mar11 - Correction of Alarming.wsdl (soap action); no functional change
25	27.04.2011,	HP	Version WSG-8.4 / Jun11 - Added icaResult in line measurement Data - Removed Filetransfer
26	09.06.2011	HP	525,550 added to table error_category(lov)
27	21.10.2011	HP	ZIP removed from File
28	26.03.2012	Roland Staub	Version WSG-9.0 / Mai 12 - B2B Version V14
29	15.09.2012	Roland Staub	Version WSG-9.2 / Oct 12 B2B Version V15
30	06.05.2013	Roland Staub	Version WSG-9.4 / Mai13 B2B Version V16
31	15.07.2013	Roland Staub	Version WSG-9.5 / Aug13 B2B Version V17
32	11.10.2013	Roland Staub	Version WSG-9.6 / Nov13 B2B Version V18
33	20.01.2014	Roland Staub	Version WSG-9.7 / Feb14 B2B Version V19
34	25.04.2014	Roland Staub	Version WSG-9.8 / Mai14 B2B Version V20
35	19.04.2015	Roland Staub	Version WSG-9.12 / Jun15 B2B Version V21
36	22.07.2015	Roland Staub	Version WSG-9.13 / Aug15 B2B Version V22
36	29.10.2015	Roland Staub	Updated Classification
37	22.07.2015	Roland Staub	Version WSG-9.15 / Feb16 B2B Version V23
38	29.04.2016	Roland Staub	Version WSG-9.16 / May16 B2B Version V24

39	17.05.2017	Roland Staub	Version WSG-17.06 / June17 B2B Version V26
40	10.07.2017	Roland Staub	Version WSG-17.08 / Aug17 B2B Version V27
41	18.09.2017	Roland Staub	Version WSG-17.10 / Oct17 B2B Version V28

Release

Version	Date	Released by	Comments / nature of the change
10	20.07.2007	R. Seltmann	Released for WSG-6.6 (June 2007)
15	06.12.2007	R. Seltmann	Released for Contract Version 12.2
16	11.12.2007	R. Seltmann	Released for Contract Version 12.3
17	12.02.2008	R. Seltmann	Released for Contract Version 12.4
18	30.04.2008	R. Seltmann	Released for Contract Version 13
19	20.10.2008	R. Seltmann	Released for Contract Version 13-2
20	26.02.2009	R. Seltmann	Released for Contract Version 13-3
21	26.10.2009	R. Seltmann	Released for Contract Version 13-31
22	27.04.2010	R. Seltmann	Released for Contract Version 13-4
23	12.10.2010	H. Künzi	Released for WSG-8.2 (Nov 2010)
24	25.01.2011	H.Künzi	Released for WSG-8.3 (Mar2011)
25	03.05.2011	H.Künzi	Released for WSG-8.4 (Jun2011)
26	10.06.2011	P.Rosenberger	Released for WSG-8.5 (Jun2011)
27	25.10.2011	H.Künzi	Released for WSG-8.6 (Nov2011)
28	27.03.2012	H.Künzi	Released for WSG-9.0 (Mai2012)
29	20.09.2012	H.Künzi	Released for WSG-9.2 (Oct2012)
30	07.05.2013	H.Künzi	Released for WSG-9.4 (Mai2013)
31	16.07.2013	H.Künzi	Released for WSG-9.5 (Mai2013)
32	28.10.2013	H.Künzi	Released for WSG-9.6 (NOV2013)
33	10.02.2014	H.Künzi	Released for WSG-9.7 (NOV2014)
34	01.05.2014	H.Künzi	Released for WSG-9.68(MAI2014)

35	28.05.2015	H.Künzi	Released for WSG-9.12(JUN2015)
36	31.07.2015	H.Künzi	Released for WSG-9.13(Aug2015)
37	20.01.2016	H.Künzi	Released for WSG-9.15(Feb2016)
38	03.05.2016	H.Künzi	Released for WSG-9.16(Mai2016)
39	22.05.2017	H.Künzi	Released for WSG1706 (Jun2017)
40	17.07.2017	H.Künzi	Released for WSG-17.08 (Aug17)
41	26.09.2017	H.Künzi	Released for WSG-1710 (Oct17)

1 Introduction

1.1 Purpose

This document describes the business-to-business interface for broadband assurance services of the WSG application: it contains detailed technical specification for the implementation of web service (using the SOAP protocol) processes to execute tickets or information requests. This document addresses the user and the developer of a client application using the above mentioned interface.

1.2 Terms and abbreviations

BB	BroadBand
FAQ	Frequently Asked Questions
SPOC	Single Point of Contact
SSH	Secure Shell
TT	Trouble Ticket
WSG	Web Service Gateway

1.3 Referenced documents

- [1] WSG Messages
- [2] B2B BB Fulfillment Interface Specification
- [3] ISP BBCS Assurance User Manual
- [4] B2B Speed Profiles
- [5] Actual interface definition **wsgTt_v28.0.2.zip**
- [6] LOV document (LOV_ID_Definitions.XLS, included in the "Schema ZIP-files")

The actual documents are downloadable as PDF files from the WSG application.
The format of the file names is: <document-name>_V<nn>.pdf

1.4 Document updates

In case of changes of this interface Swisscom will provide the ISPs with the latest update of this document at least three weeks before the changes becomes effective.

Note: Sample records throughout this version of the document have not been updated to reflect the current record definition.

2 Business Processes

2.1 Overview of the possible Business Processes

The assurance business processes are provided based on a XML-File definition given by the following WSDL and XSD files. These files are packed in the ZIP-File

wsgTt_v28.0.2.zip

This ZIP-File contains:

- Readme.txt : general information on this file (contents)
- ChangeLog.txt : the details of the changes per released version (change-history).
- schema/* : the schema definition as well as the web-service definition
- doc/
 - wsgTtOutbound.wsdl.html : an HTML-based documentation of the outbound web-service.

The following table provides an overview of the available business processes for BB assurance, which are grouped into the 4 sub domains 'Access Tickets', 'Information Status' and 'Alarming' ("Alarming" is described in a separate wsdl, see chapter 3.8):

Business Process	Request Type	Response Type
CreateTrouble_Ticket	createTroubleTicketRequestType	createTroubleTicketAckType
Modify_PendingTrouble_Ticket	modifyPendingTroubleTicketRequestType	modifyPendingTroubleTicketAckType
Cancel_PendingTrouble_Ticket	cancelPendingTroubleTicketRequestType	cancelPendingTroubleTicketAckType
Get_DetailTrouble_Ticket	getDetailTroubleTicketRequestType	getDetailTroubleTicketAckType
Get_XDSL_Info	getXdslInfoRequestType	getXdslInfoResponseType
Get_ISP_Planned_Outage	getIspPlannedOutageRequestType	getIspPlannedOutageAckType
Get_DnNsn_Planned_Outage	getDnNsnPlannedOutageRequestType	getDnNsnPlannedOutageAckType
Get_ISP_Planned_Outage_Report	getIspPlannedOutageReport	getIspPlannedOutageReportResponse
Add_WorkLog	addWorkLog	addWorkLogResponse
Get valid Access Profiles	getValidAccessProfilesRequest	getValidAccessProfilesResponse
Modify Access Profile	modifyAccessProfileRequest	modifyAccessProfileResponse

2.2 Overview of supported Versions

2.2.1 WebServices

XML Schema Version	Namespace	Remark
WsgTtV28	http://www.swisscom.com/wsg/tt/v28	actual Assurance schema
WsgTtV27	http://www.swisscom.com/wsg/tt/v27	

WsgTtV26	http://www.swisscom.com/wsg/tt/v26	
WsgTtV25	http://www.swisscom.com/wsg/tt/v25	
WsgTtV24	http://www.swisscom.com/wsg/tt/v24	

2.2.2 Deprecated Versions

With this software release new versions of the Assurance B2B specification are provided (according the table above); all new development activities shall use the newest version.

The previous versions (version number one level lower than the newest one) remains valid, but will become deprecated in the near future.

3 Interface Description

Below is listed the generated documentation with the highlighted changes. You can use the HTML documentation which is in the archive [5] in the doc directory for better browsing capabilities.

3.1 Operations

3.1.1 createTroubleTicket

Description: This operation creates a new BBCS or BBCS-F trouble ticket.

Input message	Output message
createTroubleTicketRequest	createTroubleTicketResponse

[Top](#)

3.1.2 modifyPendingTroubleTicket

Description: This operation modifies a pending BBCS trouble ticket.

Input message	Output message
modifyPendingTroubleTicketRequest	modifyPendingTroubleTicketResponse

[Top](#)

3.1.3 addWorkLog

Description: Adds a work log entry to an existing BBCS-F ticket.

Input message	Output message
addWorkLogRequest	addWorkLogResponse

[Top](#)

3.1.4 cancelPendingTroubleTicket

Description: This operation cancel a pending BBCS trouble ticket.

Input message	Output message
cancelPendingTroubleTicketRequest	cancelPendingTroubleTicketResponse

[Top](#)

3.1.5 getDetailTroubleTicket

Description: This operation returns the details of an existing BBCS trouble ticket.

Input message	Output message
---------------	----------------

getDetailTroubleTicketRequest	getDetailTroubleTicketResponse
---	--

[Top](#)

3.1.6 getXdslInfo

Description: This operation returns the line state information of an xDSL access.

Input message	Output message
getXdslInfoRequest	getXdslInfoResponse

[Top](#)

3.1.7 getDnNsnPlannedOutage

Description: This operation returns the planned outages for a certain dn/nsn.

Input message	Output message
getDnNsnPlannedOutageRequest	getDnNsnPlannedOutageResponse

[Top](#)

3.1.8 getIspPlannedOutage

Description: This operation returns the planned outages for the dn/nsn of a certain ISP.

Input message	Output message
getIspPlannedOutageRequest	getIspPlannedOutageResponse

[Top](#)

3.1.9 getIspPlannedOutageReport

Input message	Output message
getIspPlannedOutageReportRequest	getIspPlannedOutageReportResponse

[Top](#)

3.1.10 getNetworkCustomerNotificationReport

Input message	Output message
getNetworkCustomerNotificationReportRequest	getNetworkCustomerNotificationReportResponse

[Top](#)

3.1.11 getValidAccessProfiles

Input message	Output message
getValidAccessProfilesRequest	getValidAccessProfilesResponse

[Top](#)

3.1.12 modifyAccessProfile

Input message	Output message
modifyAccessProfileRequest	modifyAccessProfileResponse

[Top](#)

3.1.13 getAttachmentDetail

Input message	Output message
getAttachmentDetailRequest	getAttachmentDetailResponse

[Top](#)

3.2 Messages

3.2.1 createTroubleTicketRequest

Element	Type	Occ	Comment
parameters	createTroubleTicket	1..1	

[Top](#)

3.2.2 createTroubleTicketResponse

Element	Type	Occ	Comment
parameters	createTroubleTicketResponse	1..1	

[Top](#)

3.2.3 modifyPendingTroubleTicketRequest

Element	Type	Occ	Comment
parameters	modifyPendingTroubleTicket	1..1	

[Top](#)

3.2.4 modifyPendingTroubleTicketResponse

Element	Type	Occ	Comment
parameters	modifyPendingTroubleTicketResponse	1..1	

[Top](#)

3.2.5 addWorkLogRequest

Element	Type	Occ	Comment
parameters	addWorkLog	1..1	

[Top](#)

3.2.6 addWorkLogResponse

Element	Type	Occ	Comment
parameters	addWorkLogResponse	1..1	

[Top](#)

3.2.7 cancelPendingTroubleTicketRequest

Element	Type	Occ	Comment
parameters	cancelPendingTroubleTicket	1..1	

[Top](#)

3.2.8 cancelPendingTroubleTicketResponse

Element	Type	Occ	Comment
parameters	cancelPendingTroubleTicketResponse	1..1	

[Top](#)

3.2.9 getDetailTroubleTicketRequest

Element	Type	Occ	Comment
parameters	getDetailTroubleTicket	1..1	

[Top](#)

3.2.10 getDetailTroubleTicketResponse

Element	Type	Occ	Comment
parameters	getDetailTroubleTicketResponse	1..1	

[Top](#)
3.2.11 getXdslInfoRequest

Element	Type	Occ	Comment
parameters	getXdslInfo	1..1	

[Top](#)
3.2.12 getXdslInfoResponse

Element	Type	Occ	Comment
parameters	getXdslInfoResponse	1..1	

[Top](#)
3.2.13 getDnNsnPlannedOutageRequest

Element	Type	Occ	Comment
parameters	getDnNsnPlannedOutage	1..1	

[Top](#)
3.2.14 getDnNsnPlannedOutageResponse

Element	Type	Occ	Comment
parameters	getDnNsnPlannedOutageResponse	1..1	

[Top](#)
3.2.15 getIspPlannedOutageRequest

Element	Type	Occ	Comment
parameters	getIspPlannedOutage	1..1	

[Top](#)
3.2.16 getIspPlannedOutageResponse

Element	Type	Occ	Comment
parameters	getIspPlannedOutageResponse	1..1	

[Top](#)
3.2.17 getIspPlannedOutageReportRequest

Element	Type	Occ	Comment
parameters	getIspPlannedOutageReport	1..1	

[Top](#)
3.2.18 getIspPlannedOutageReportResponse

Element	Type	Occ	Comment
parameters	getIspPlannedOutageReportResponse	1..1	

[Top](#)
3.2.19 getNetworkCustomerNotificationReportRequest

Element	Type	Occ	Comment
parameters	getNetworkCustomerNotificationReport	1..1	

[Top](#)
3.2.20 getNetworkCustomerNotificationReportResponse

Element	Type	Occ	Comment
parameters	getNetworkCustomerNotificationReportResponse	1..1	

[Top](#)

3.2.21 getValidAccessProfilesRequest

Element	Type	Occ	Comment
parameters	getValidAccessProfilesRequest	1..1	

[Top](#)

3.2.22 getValidAccessProfilesResponse

Element	Type	Occ	Comment
parameters	getValidAccessProfilesResponse	1..1	

[Top](#)

3.2.23 modifyAccessProfileRequest

Element	Type	Occ	Comment
parameters	modifyAccessProfileRequest	1..1	

[Top](#)

3.2.24 modifyAccessProfileResponse

Element	Type	Occ	Comment
parameters	modifyAccessProfileResponse	1..1	

[Top](#)

3.2.25 getAttachmentDetailRequest

Element	Type	Occ	Comment
parameters	getAttachmentDetailRequest	1..1	

[Top](#)

3.2.26 getAttachmentDetailResponse

Element	Type	Occ	Comment
parameters	getAttachmentDetailResponse	1..1	

[Top](#)

3.3 Root elements

3.3.1 createTroubleTicket

Element	Type	Occ	Comment
request	createTroubleTicketRequestType	1..1	Purpose: creates a new BBCS trouble ticket. The address of the enduser (is mandatory for SDSL where at least 'zip' and 'city' have to be provided)

3.3.2 createTroubleTicketResponse

Element	Type	Occ	Comment
response	createTroubleTicketAckType	1..1	Acknowledge response for the CREATE_TROUBLE_TICKET command.

3.3.3 modifyPendingTroubleTicket

Element	Type	Occ	Comment
request	modifyPendingTroubleTicketRequestType	1..1	Purpose: modifies an existing BBCS trouble ticket. The address of the

			enduser
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3.3.4 modifyPendingTroubleTicketResponse

Element	Type	Occ	Comment
response	modifyPendingTroubleTicketAckType	1..1	Acknowledge response for the MODIFY_PENDING_TROUBLE_TICKET command.

3.3.5 addWorkLog

Element	Type	Occ	Comment
request	addWorkLogRequestType	1..1	Purpose: adds a work log entry to an existing BBCS-F trouble ticket.

3.3.6 addWorkLogResponse

Element	Type	Occ	Comment
response	addWorkLogAckType	1..1	Acknowledge response for the ADD_WORK_LOG command.

3.3.7 cancelPendingTroubleTicket

Element	Type	Occ	Comment
request	cancelPendingTroubleTicketRequestType	1..1	Purpose: cancels an existing BBCS trouble ticket.

3.3.8 cancelPendingTroubleTicketResponse

Element	Type	Occ	Comment
response	cancelPendingTroubleTicketAckType	1..1	Acknowledge response for the CANCEL_PENDING_TROUBLE_TICKET command.

3.3.9 getDetailTroubleTicket

Element	Type	Occ	Comment
request	getDetailTroubleTicketRequestType	1..1	Purpose: returns the details of an existing BBCS trouble ticket.

3.3.10 getDetailTroubleTicketResponse

Element	Type	Occ	Comment
response	getDetailTroubleTicketAckType	1..1	Acknowledge response for the GETDETAIL_TROUBLE_TICKET command.

3.3.11 getXdslInfo

Element	Type	Occ	Comment
request	getXdslInfoRequestType	1..1	Purpose: returns the line state information of an xDSL access. mobile phone number eMail address for asynchronous responses with LQD results if choosen the measurement picture will be delivered as eMail attachment

3.3.12 getXdslInfoResponse

Element	Type	Occ	Comment
response	getXdslInfoResponseType	1..1	LIST-response for the GET_XDSL_INFO command. Returns the line state information of an xDSL access.

3.3.13 getDnNsnPlannedOutage

Element	Type	Occ	Comment
request	getDnNsnPlannedOutageRequestType	1..1	Purpose: returns the planned outages for a certain DN/NSN.

3.3.14 getDnNsnPlannedOutageResponse

Element	Type	Occ	Comment
response	getDnNsnPlannedOutageAckType	1..1	Acknowledge response for the GET_DN_NSN_PLANNED_OUTAGE command.

3.3.15 getIspPlannedOutage

Element	Type	Occ	Comment
request	getIspPlannedOutageRequestType	1..1	Purpose: returns the planned outages for all customers of a certain ISP. Stammnrtyp for planned work request, if empty no UMSA elements will be returned. Stammnrtyp for planned work request, if empty no PW elements will be returned.

3.3.16 getIspPlannedOutageResponse

Element	Type	Occ	Comment
response	getIspPlannedOutageAckType	1..1	Acknowledge response for the GET_ISP_PLANNED_OUTAGE command. The information request ID.

3.3.17 getIspPlannedOutageReport

Element	Type	Occ	Comment
request	getIspPlannedOutageReportRequestType	1..1	Purpose: returns the planned outages report of a certain ISP which was previously requested by getIspPlannedOutage.

3.3.18 getIspPlannedOutageReportResponse

Element	Type	Occ	Comment
response	getIspPlannedOutageResponseType	1..1	response for the GET_ISP_PLANNED_OUTAGE_REPORT command. Returns the list of planned outages prior requested by getIspPlannedOutage.

3.3.19 getNetworkCustomerNotificationReport

Element	Type	Occ	Comment
request	getNetworkCustomerNotificationReportRequestType	1..1	Purpose: returns the network customer notification report of a certain ISP.

3.3.20 getNetworkCustomerNotificationReportResponse

Element	Type	Occ	Comment
t		c	

response	getNetworkCustomerNotificationReportResponseType	1..1	response for the GET_NETWORK_CUSTOMER_NOTIFICATION_REPORT command. Returns the list of network customer notifications.
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3.3.21 getValidAccessProfilesRequest

Element	Type	Occ	Comment
request	getValidAccessProfilesRequestType	1..1	Purpose: returns the valid access profiles.

3.3.22 getValidAccessProfilesResponse

Element	Type	Occ	Comment
response	getValidAccessProfileResponseType	1..1	response for the GET_VALID_ACCESS_PROFILES_RESPONSE command. Returns the list of valid Access Profiles.

3.3.23 modifyAccessProfileRequest

Element	Type	Occ	Comment
request	modifyAccessProfileRequestType	1..1	Purpose: modify the access profile.

3.3.24 modifyAccessProfileResponse

Element	Type	Occ	Comment
response	modifyAccessProfileResponseType	1..1	response for the GET_MODIFY_ACCESS_PROFILES_RESPONSE command. .

3.3.25 getAttachmentDetailRequest

Element	Type	Occ	Comment
request	getAttachmentDetailRequestType	1..1	Purpose: get the Detail about a Attachment

3.3.26 getAttachmentDetailResponse

Element	Type	Occ	Comment
response	getAttachmentDetailAckType	1..1	Acknowledge response for the getAttachmentDetail command.

3.4 Types

3.4.1 createTroubleTicket

Element	Type	Occ	Comment
request	createTroubleTicketRequestType	1..1	Purpose: creates a new BBCS trouble ticket. The address of the enduser (is mandatory for SDSL where at least 'zip' and 'city' have to be provided)

3.4.2 createTroubleTicketResponse

Element	Type	Occ	Comment
response	createTroubleTicketAckType	1..1	Acknowledge response for the CREATE_TROUBLE_TICKET command.

3.4.3 modifyPendingTroubleTicket

ElementType		Occ	Comment
request	modifyPendingTroubleTicketRequestType	1..1	Purpose: modifies an existing BBCS trouble ticket. The address of the enduser

3.4.4 modifyPendingTroubleTicketResponse

Element Type		Occ	Comment
response	modifyPendingTroubleTicketAckType	1..1	Acknowledge response for the MODIFY_PENDING_TROUBLE_TICKET command.

3.4.5 addWorkLog

ElementType		Occ	Comment
request	addWorkLogRequestType	1..1	Purpose: adds a work log entry to an existing BBCS-F trouble ticket.

3.4.6 addWorkLogResponse

Element	Type	Occ	Comment
response	addWorkLogAckType	1..1	Acknowledge response for the ADD_WORK_LOG command.

3.4.7 cancelPendingTroubleTicket

ElementType		Occ	Comment
request	cancelPendingTroubleTicketRequestType	1..1	Purpose: cancels an existing BBCS trouble ticket.

3.4.8 cancelPendingTroubleTicketResponse

Element	Type	Occ	Comment
response	cancelPendingTroubleTicketAckType	1..1	Acknowledge response for the CANCEL_PENDING_TROUBLE_TICKET command.

3.4.9 getDetailTroubleTicket

ElementType		Occ	Comment
request	getDetailTroubleTicketRequestType	1..1	Purpose: returns the details of an existing BBCS trouble ticket.

3.4.10 getDetailTroubleTicketResponse

Element	Type	Occ	Comment
response	getDetailTroubleTicketAckType	1..1	Acknowledge response for the GETDETAIL_TROUBLE_TICKET command.

3.4.11 getXdslInfo

ElementType		Occ	Comment
request	getXdslInfoRequestType	1..1	Purpose: returns the line state information of an xDSL access. mobile phone number eMail address for asynchronous responses with LQD results if choosen the measurement picture will be delivered as eMail attachment

3.4.12 getXdslInfoResponse

Element	Type	Occ	Comment
response	getXdslInfoResponseType	1..1	LIST-response for the GET_XDSL_INFO command. Returns the line state information of an xDSL access.

3.4.13 getDnNsnPlannedOutage

Element	Type	Occ	Comment
request	getDnNsnPlannedOutageRequestType	1..1	Purpose: returns the planned outages for a certain DN/NSN.

3.4.14 getDnNsnPlannedOutageResponse

Element	Type	Occ	Comment
response	getDnNsnPlannedOutageAckType	1..1	Acknowledge response for the GET_DN_NSN_PLANNED_OUTAGE command.

3.4.15 getIspPlannedOutage

Element	Type	Occ	Comment
request	getIspPlannedOutageRequestType	1..1	Purpose: returns the planned outages for all customers of a certain ISP. Stammnrtyp for planned work request, if empty no UMSA elements will be returned. Stammnrtyp for planned work request, if empty no PW elements will be returned.

3.4.16 getIspPlannedOutageResponse

Element	Type	Occ	Comment
response	getIspPlannedOutageAckType	1..1	Acknowledge response for the GET_ISP_PLANNED_OUTAGE command. The information request ID.

3.4.17 getIspPlannedOutageReport

Element	Type	Occ	Comment
request	getIspPlannedOutageReportRequestType	1..1	Purpose: returns the planned outages report of a certain ISP which was previously requested by getIspPlannedOutage.

3.4.18 getIspPlannedOutageReportResponse

Element	Type	Occ	Comment
response	getIspPlannedOutageResponseType	1..1	response for the GET_ISP_PLANNED_OUTAGE_REPORT command. Returns the list of planned outages prior requested by getIspPlannedOutage.

3.4.19 getNetworkCustomerNotificationReport

Element	Type	Occ	Comment
request	getNetworkCustomerNotificationReportRequestType	1..1	Purpose: returns the network customer notification report of

			a certain ISP.
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3.4.20 getNetworkCustomerNotificationReportResponse

Element	Type	Occ	Comment
response	getNetworkCustomerNotificationReportResponse	1..1	response for the GET_NETWORK_CUSTOMER_NOTIFICATION_REPORT command. Returns the list of network customer notifications.

3.4.21 getValidAccessProfilesRequest

Element	Type	Occ	Comment
request	getValidAccessProfilesRequestType	1..1	Purpose: returns the valid access profiles.

3.4.22 getValidAccessProfilesResponse

Element	Type	Occ	Comment
response	getValidAccessProfileResponseType	1..1	response for the GET_VALID_ACCESS_PROFILES_RESPONSE command. Returns the list of valid Access Profiles.

3.4.23 modifyAccessProfileRequest

Element	Type	Occ	Comment
request	modifyAccessProfileRequestType	1..1	Purpose: modify the access profile.

3.4.24 modifyAccessProfileResponse

Element	Type	Occ	Comment
response	modifyAccessProfileResponseType	1..1	response for the GET_MODIFY_ACCESS_PROFILES_RESPONSE command. .

3.4.25 getAttachmentDetailRequest

Element	Type	Occ	Comment
request	getAttachmentDetailRequestType	1..1	Purpose: get the Detail about a Attachment

3.4.26 getAttachmentDetailResponse

Element	Type	Occ	Comment
response	getAttachmentDetailAckType	1..1	Acknowledge response for the getAttachmentDetail command.

3.4.27 createTroubleTicketRequestType

Description: Purpose: creates a new BBCS trouble ticket.

Used by: [createTroubleTicket](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits:6)	1..1	The ISP id
ispTtRef	xs:string (minLength:1, maxLength:30)	1..1	An external reference (an ID)

			assigned by the ISP) identifying the TT.
ispPhoneNr	xs:string (pattern:(\+)?([0-9]){7,15})	0..1	The phone number of the ISP (business hours)
endUser	endUser	0..1	
contactInfo	contactInfoType	0..1	Contact Person (Must not be the same as the end user. It can be for instance a Facility Manager or a Care Taker)
dnType	xs:int (totalDigits:3)	1..1	
bbType	xs:int (totalDigits:3)	1..1	[LOV-ID: 0276] The BB type.
stnrDdi	xs:string (pattern:0[1-9]\d{8})	0..1	The "Stammnummer" (DDI) .
cableBox	cableBoxType	0..1	The cable box data (aka. "Ueberfuehrungspunkt", "UP").
problemDescription	xs:string (maxLength:2048)	1..1	Description of the problem
problemDateTime	xs:dateTime	1..1	The date and time of the problem.
lastLoginDateTime	xs:dateTime	0..1	The date and time of the last login.
comment	xs:string (minLength:1, maxLength:256)	0..1	A comment (free text)
appointmentId	xs:string (maxLength:32)	0..1	Appointment ID referencing an existing agreement.
serviceProblem	serviceProblemType	1..1	A service problem item.
ispApplicationId	xs:string (maxLength:40)	0..1	Used for the ISP's routing.
ispApplicationEntityId	xs:string (maxLength:40)	0..1	Used for the ISP's routing.
measuredIspValue	xs:string (maxLength:65536)	0..	The measuerd

s		1	values from ISP
saSlaRequested	xs:int (totalDigits: 3)	0..1	For future use.
workLog	workLogRequestType	0..1	A work log entry
neverWorked	xs:boolean	0..1	Indicates if the connection never worked before
- choice:	Element	Type	Occ Comment
	dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	1..1 The DN, VN or NSN.
	oto	otoType	1..1 Optical Termination Outlet
	preOrderActivationCode	xs:string	1..1 The activation code for preOrders

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3.4.28 modifyPendingTroubleTicketRequestType

Description: Purpose: modifies an existing BBCS trouble ticket.

Used by: [modifyPendingTroubleTicket](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
ttIdWsg	xs:decimal (totalDigits: 10)	1..1	Ticket id assigned by WSG
ispTtRef	xs:string (minLength: 1 , maxLength: 30)	0..1	An external reference (an ID assigned by the ISP) identifying the TT.
ispPhoneNr	xs:string (pattern:(\+)?([0-9]){7,15})	0..1	The phone number of the ISP (business hours)
endUser	endUser	0..1	
contactInfo	contactInfoType	0..1	Contact Person (Must not be the same as the end user. It can be for insdtance a Facility Manager or a Care Taker)
dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	0..1	The DN, VN or NSN.
dnType	xs:int (totalDigits: 3)	0..1	

bbType	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0276] The BB type.
stnrDdi	xs:string (pattern: 0[1-9]\d{8})	0..1	The "Stammnummer" (DDI) .
cableBox	cableBoxType	0..1	The cable box data (aka. "Ueberfuehrungspunkt", "UP").
problemDescription	xs:string (maxLength: 2048)	0..1	Description of the problem
problemDateTime	xs:dateTime	0..1	The date and time of the problem.
lastLoginDateTime	xs:dateTime	0..1	The date and time of the last login.
comment	xs:string (minLength: 1 , maxLength: 256)	0..1	A comment (free text)
appointment	appointment	0..1	Appointment data.
addOnInformation	xs:string (maxLength: 256)	0..1	Add-on information for the ticket (send as 'comment' to ticketing system and used for information exchange between all parties).
serviceProblem	serviceProblemType	0..1	A service problem item.
ispApplicationId	xs:string (maxLength: 40)	0..1	Used for the ISP's routing.
ispApplicationEntityId	xs:string (maxLength: 40)	0..1	Used for the ISP's routing.
measuredIspValues	xs:string (maxLength: 65536)	0..1	The measuerd values from ISP

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3.4.29 addWorkLogRequestType

Description: Purpose: adds a work log entry to an existing BBCS-F trouble ticket.

Used by: [addWorkLog](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
ttIdWsg	xs:decimal (totalDigits: 10)	1..1	Ticket id assigned by WSG
workLog	workLogRequestType	1..n	The binary content of the file, please limit the summary size of all the contents to 2Mb. Otherwise perform mutiple files and use addWorklog

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3.4.30 cancelPendingTroubleTicketRequestType

Description: Purpose: cancels an existing BBCS trouble ticket.

Used by: [cancelPendingTroubleTicket](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id

ttIdWsg	xs:decimal (totalDigits: 10)	1..1	Ticket id assigned by WSG
comment	xs:string (minLength: 1 , maxLength: 256)	0..1	A comment (free text)
neverWorked	xs:boolean	0..1	Indicates if the connection never worked before

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3.4.31 getDetailTroubleTicketRequestType

Description: Purpose: returns the details of an existing BBCS trouble ticket.

Used by: [getDetailTroubleTicket](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
ttIdWsg	xs:decimal (totalDigits: 10)	1..1	Ticket id assigned by WSG

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3.4.32 getIspPlannedOutageRequestType

Description: Purpose: returns the planned outages for all customers of a certain ISP.

Used by: [getIspPlannedOutage](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
startDateTime	xs:dateTime	1..1	
endDateTime	xs:dateTime	0..1	
dnTypeUMSA	xs:int (totalDigits: 3)	0..n	Stammnrtp for planned work request, if empty no UMSA elements will be returned.
dnTypePW	xs:int (totalDigits: 3)	0..n	Stammnrtp for planned work request, if empty no PW elements will be returned.

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3.4.33 getIspPlannedOutageReportRequestType

Description: Purpose: returns the planned outages report of a certain ISP which was previously requested by [getIspPlannedOutage](#).

Used by: [getIspPlannedOutageReport](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment												
ispId	xs:int (totalDigits: 6)	1..1	The ISP id												
- choice:	<table> <tr> <th>Element</th><th>Type</th><th>Occ</th><th>Comment</th></tr> <tr> <td>irIdWsg</td><td>xs:decimal (totalDigits:10)</td><td>1..1</td><td>Information request id.</td></tr> <tr> <td>fileName</td><td>xs:string (maxLength:128)</td><td>1..1</td><td>name of file</td></tr> </table>	Element	Type	Occ	Comment	irIdWsg	xs:decimal (totalDigits: 10)	1..1	Information request id.	fileName	xs:string (maxLength: 128)	1..1	name of file	1..1	
Element	Type	Occ	Comment												
irIdWsg	xs:decimal (totalDigits: 10)	1..1	Information request id.												
fileName	xs:string (maxLength: 128)	1..1	name of file												

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3.4.34 getDnNsnPlannedOutageRequestType

Description: Purpose: returns the planned outages for a certain DN/NSN.

Used by: [getDnNsnPlannedOutage](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	1..1	The DN, VN or NSN.

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3.4.35 getXdslInfoRequestType

Description: Purpose: returns the line state information of an xDSL access.

Used by: [getXdslInfo](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
fetchMeasurementHistoryData	xs:boolean	0..1	A flag to indicate if measurement history data is to be fetched or not (default is false).
fetchAlarmData	xs:boolean	0..1	A flag to indicate if alarm data is to be fetched or not (default is false).
startCommand	xs:int (totalDigits: 3)	0..1	[LOV-ID: 1314] LOV_START_COMM AND: 1 = start LQD 24hrs; 2 = start LQD 3min; 3 = start Profile Change Standard; 4 = start Profile Change with potential Service Impact. This attribute can only be set from the ISP managing the requested access.
mobileNumber	xs:string (pattern:(\+)?([0-9]){7,15})	0..1	mobile phone number
eMailAddress	xs:string (maxLength: 100)	0..1	eMail address for asynchronous responses with LQD results
pictureRequired	xs:boolean	0..1	if chosen the measurement

				picture will be delivered as eMail attachment
- choice:	Element	Type	Occ	Comment
	dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	1..1	The DN, VN or NSN.
	oto	otoRequestedType	1..1	Optical Telecommunications Outlet (OTO); Request Type
			1..1	

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3.4.36 getNetworkCustomerNotificationReportRequestType

Description: Purpose: returns the network customer notification report of a certain ISP.

Used by: [getNetworkCustomerNotificationReport](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
- choice:	Element	Type	Occ
	irIdWsg	xs:decimal (totalDigits: 10)	1..1
	fileName	xs:string (maxLength: 128)	1..1
			1..1

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3.4.37 getValidAccessProfilesRequestType

Description: Purpose: returns the valid access profiles.

Used by: [getValidAccessProfilesRequest](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	1..1	The DN, VN or NSN.

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3.4.38 modifyAccessProfileRequestType

Description: Purpose: modify the access profile.

Used by: [modifyAccessProfileRequest](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	1..1	The DN, VN or NSN.

accessSpeedProfileNr	xs:int (totalDigits: 3)	0..1	[LOV-ID: 1134] Access Speed profile number
psdClass	xs:int (totalDigits: 3)	0..1	[LOV-ID: 1061] BB_PSD_CLASS, Power Spectral Density Class
interleaveMode	xs:int (totalDigits: 3)	0..1	[LOV-ID: 1008] The interleave mode.
bbType	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0276] The BB type.
technologyType	xs:int (totalDigits: 3)	0..1	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)
comment	xs:string (minLength: 1 , maxLength: 256)	0..1	A comment (free text)

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3.4.39 getAttachmentDetailRequestType

Description: Purpose: get the Detail about a Attachment

Used by: [getAttachmentDetailRequest](#)

Extension of: [requestType](#)

Element	Type	Occ	Comment
ispId	xs:int (totalDigits: 6)	1..1	The ISP id
fileId	xs:int	1..1	id of file

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3.4.40 requestType

Description: The abstract generic request message type.

Extended by: [createTroubleTicketRequestType](#), [modifyPendingTroubleTicketRequestType](#), [addWorkLogRequestType](#), [cancelPendingTroubleTicketRequestType](#), [getDetailTroubleTicketRequestType](#), [getIspPlannedOutageRequestType](#), [getIspPlannedOutageReportRequestType](#), [getDnNsnPlannedOutageRequestType](#), [getXdslInfoRequestType](#), [getNetworkCustomerNotificationReportRequestType](#), [getValidAccessProfilesRequestType](#), [modifyAccessProfileRequestType](#), [getAttachmentDetailRequestType](#)

Extension of: [messageType](#)

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3.4.41 createTroubleTicketAckType

Description: Acknowledge response for the CREATE_TROUBLE_TICKET command.

Used by: [createTroubleTicketResponse](#)

Extension of: [bbcsTroubleTicketAckType](#)

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3.4.42 modifyPendingTroubleTicketAckType

Description: Acknowledge response for the MODIFY_PENDING_TROUBLE_TICKET command.

Used by: [modifyPendingTroubleTicketResponse](#)

Extension of: [bbcsTroubleTicketAckType](#)

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3.4.43 addWorkLogAckType

Description: Acknowledge response for the ADD_WORK_LOG command.

Used by: [addWorkLogResponse](#)

Extension of: [bbcsTroubleTicketAckType](#)

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3.4.44 cancelPendingTroubleTicketAckType

Description: Acknowledge response for the CANCEL_PENDING_TROUBLE_TICKET command.

Used by: [cancelPendingTroubleTicketResponse](#)

Extension of: [bbcsTroubleTicketAckType](#)

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3.4.45 bbcsTroubleTicketAckType

Description: Acknowledge response for specific BBCS-TroubleTicket upload commands.

Extended by: [createTroubleTicketAckType](#), [modifyPendingTroubleTicketAckType](#), [addWorkLogAckType](#), [cancelPendingTroubleTicketAckType](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
ttIdWsg	xs:decimal (totalDigits: 10)	0..1	Ticket id assigned by WSG
ttIdSys	xs:string (maxLength: 30)	0..1	Ticket id assigned by TT system
ttState	xs:int	0..1	The state of a trouble ticket.
dnType	xs:int (totalDigits: 3)	0..1	
bbType	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0276] The BB type.
contrEleId	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0320] A contract element ID
saSla	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0283] The service level assurance level of the trouble ticket.

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3.4.46 listTroubleTicketAckType

Description: Acknowledge response for the LIST_TROUBLE_TICKET command.

Extension of: [ackType](#)

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3.4.47 getDetailTroubleTicketAckType

Description: Acknowledge response for the GETDETAIL_TROUBLE_TICKET command.

Used by: [getDetailTroubleTicketResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
ticket	atType	0..1	An access trouble ticket and its details. Contact informations Indicates whether the problem processing is being suspended or not. Total material costs in CHF. (example: '12.25'; pattern: '10d.2d') Flat rate code in CHF. (E.g. 7 = xxx CHF) Number of flat rates per TT. (Generally 1) Expense ratio code. (E.g. 01=140 CHF, 02=120 CHF) Work expense in minutes.

		(Conversion into hours and multiply with STD_ID rate not done) A history entry of the ticket
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3.4.48 createConnectivityTroubleTicketAckType

Description: Acknowledge response for the `CREATE_CONNECTIVITY_TROUBLE_TICKET` command.

Extension of: [connectivityTroubleTicketAckType](#)

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3.4.49 connectivityTroubleTicketAckType

Description: Acknowledge response for specific Connectivity-TroubleTicket- upload commands.

Extended by: [createConnectivityTroubleTicketAckType](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
ttIdWsg	xs:decimal (totalDigits: 10)	0..1	Ticket id assigned by WSG

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3.4.50 listConnectivityTroubleTicketAckType

Description: Acknowledge response for the `LIST_CONNECTIVITY_TROUBLE_TICKET` command.

Extension of: [ackType](#)

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3.4.51 informationServiceAckType

Description: Acknowledge response for all upload Information-Service-commands.

Extension of: [ackType](#)

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3.4.52 getDnNsnPlannedOutageAckType

Description: Acknowledge response for the `GET_DN_NSN_PLANNED_OUTAGE` command.

Used by: [getDnNsnPlannedOutageResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
plannedOutage	PlannedOutage	0..n	

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3.4.53 getIspPlannedOutageAckType

Description: Acknowledge response for the `GET_ISP_PLANNED_OUTAGE` command.

Used by: [getIspPlannedOutageResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
irId	xs:string	0..1	The information request ID.
fileName	xs:string (maxLength: 128)	0..1	name of file

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3.4.54 getAttachmentDetailAckType

Description: Acknowledge response for the `getAttachmentDetail` command.

Used by: [getAttachmentDetailResponse](#)

Extension of: [ackType](#)

Element	Type				Occ	Comment
attachment	Element	Type	Occ	Comment	0..1	
	fileName	xs:string (maxLength:128)	1..1	name of file		
	fileContent	xs:base64Binary	1..1	The binary content of the file		

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3.4.55 `getIspPlannedOutageResponseType`

Description: response for the `GET_ISP_PLANNED_OUTAGE_REPORT` command. Returns the list of planned outages prior requested by `getIspPlannedOutage`.

Used by: [getIspPlannedOutageReportResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
aihpw:PlannedOutageElements	PlannedOutageList	0..1	

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3.4.56 `getNetworkCustomerNotificationReportResponseType`

Description: response for the `GET_NETWORK_CUSTOMER_NOTIFICATION_REPORT` command. Returns the list of network customer notifications.

Used by: [getNetworkCustomerNotificationReportResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
ncn:networkCustomerNotification	networkCustomerNotificationType	0..1	The network customer notification

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3.4.57 `getValidAccessProfileResponseType`

Description: response for the `GET_VALID_ACCESS_PROFILES_RESPONSE` command. Returns the list of valid Access Profiles.

Used by: [getValidAccessProfilesResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
validAccessProfile	validAccessProfileType	0..n	Valid Access Profiles Item Item

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3.4.58 `modifyAccessProfileResponseType`

Description: response for the `GET_MODIFY_ACCESS_PROFILES_RESPONSE` command. .

Used by: [modifyAccessProfileResponse](#)

Extension of: [ackType](#)

Element	Type	Occ	Comment
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orderNr	xs:string (pattern:[1-9]\d{ 25 })	0..1	Order Nr.
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3.4.59 ackType

Description: The generic acknowledge response type.

Extended by: [bbcsTroubleTicketAckType](#), [listTroubleTicketAckType](#), [getDetailTroubleTicketAckType](#), [connectivityTroubleTicketAckType](#), [listConnectivityTroubleTicketAckType](#), [informationServiceAckType](#), [getDnNsnPlannedOutageAckType](#), [getIspPlannedOutageAckType](#), [getAttachmentDetailAckType](#), [getIspPlannedOutageResponseType](#), [getNetworkCustomerNotificationReportResponseType](#), [getValidAccessProfileResponseType](#), [modifyAccessProfileResponseType](#)

Extension of: [responseType](#)

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3.4.60 getXdslInfoResponseType

Description: LIST-response for the GET_XDSL_INFO command. Returns the line state information of an xDSL access.

Used by: [getXdslInfoResponse](#)

Extension of: [responseType](#)

Element	Type	Occ	Comment
xdslInfo	xdslInfoType	0..n	The information on the xDSL access. The date/time of the request. The date/time of the response. The response message. The information-light (line state) of the xDSL access. The description of the underlying problem. The proposed 'repair' action. irIdWsg references the id for the reconfigureLine in case of asked for in the request.

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3.4.61 responseType

Description: The generic response message type.

Extended by: [ackType](#), [getXdslInfoResponseType](#)

Extension of: [messageType](#)

Element	Type	Occ	Comment
success	xs:boolean	1..1	The result code for the transaction ("true" if request was successful, "false" otherwise).
reason	xs:string (pattern:[\dA-Z]{3})	0..1	A 3-letter error code (aka messageId) where "000" means "ok".
reasonComment	xs:string (minLength:1, maxLength:256)	0..1	Some additional textual description for the reason.

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3.4.62 messageType

Description: The abstract generic message type.

Extended by: [requestType](#), [responseType](#)

Attribute	Type	Use	Comment
correlationId	xs:string	optional	A unique ID to correlate a request .

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3.4.63 addressWithSubjectType

Description: An address containing as well first- and lastname.

Extension of: [addressType](#)

Element	Type	Occ	Comment
firstName	xs:string (minLength:1, maxLength:30)	0..1	The First Name
lastName	xs:string (minLength:1, maxLength:30)	0..1	The subject's last name.

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3.4.64 addressType

Description: A (geographical) address entity.

Extended by: [addressWithSubjectType](#), [endUser](#)

Element	Type	Occ	Comment
street	xs:string (minLength:1, maxLength:30)	0..1	A street name.
houseNr	xs:string (minLength:1, maxLength:12)	0..1	A house number.
building	xs:string (minLength:1, maxLength:30)	0..1	A house- or building-description.
zip	xs:int (minInclusive:1000, maxInclusive:99999)	0..1	A zip code.
city	xs:string (minLength:1, maxLength:25)	0..1	A city name.

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3.4.65 endUser

Description: Information on the enduser (address, phone numbers, login, etc)

Used by: [atType](#), [createTroubleTicketRequestType](#), [modifyPendingTroubleTicketRequestType](#)

Extension of: [addressType](#)

Element	Type	Occ	Comment
endUserName	xs:string (maxLength:60)	0..1	The name of the enduser (firstname,lastname).
endUserLogin	xs:string (maxLength:30)	0..1	The login name of the enduser.
endUserCompany	xs:string (maxLength:20)	0..1	The company name of the enduser.
endUserPhoneNr	xs:string (pattern:(\+)?([0-9]){7,15})	0..1	The phone number of the enduser.

3.4.66 contactInfoType

Description: Contact Person (Must not be the same as the end user. It can be for insdtance a Facility Manager or a Care Taker)

Used by: [contactInfo](#)

Element	Type	Occ	Comment
firstName	xs:string (minLength:1, maxLength:30)	0..1	First name of the contact
lastName	xs:string (minLength:1, maxLength:30)	0..1	Last name of the contact (only for BBCS-F optional, this element replaces the element endUserName)

phoneNr	xs:string (pattern:(\+)?([0-9]){7,15})	0..1	Phone number of the contact (only for BBCS-F optional)
notificationType	xs:int (totalDigits:3)	1..1	[LOV-ID: 3011] LOV_NOTIFICATION_TYPE: 1:None, 2:SMS, 3:eMail, 4:Mobile, 5:Fixnet
notificationAddress	xs:string (maxLength:50)	0..1	eMail or Mobilenummer

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3.4.67 otoType

Description: Optical Telecommunications Outlet (OTO)

Used by: [oto](#)

Element	Type	Occ	Comment
otoId	xs:string (minLength:13, maxLength:19)	1..1	An Optical Telecommunications Outlet (OTO) ID (e.g. A.123.456.789).
plugNr	xs:int (totalDigits:3)	0..1	A plug number (1..4).
partnerLabel	xs:string (maxLength:20)	0..1	The OTO Label of the swisscom partner

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3.4.68 cableBoxType

Description: The cable box (aka. "ueberfuehrungspunkt", "UP").

Used by: [cableBox](#)

Element	Type	Occ	Comment
boardNr	xs:int (totalDigits:6)	1..1	UP "Baugruppennummer".
switchingPlaceNr	xs:int (totalDigits:6)	1..1	UP "Schaltstellenelementnummer". In the GUI, this attribute is called "Switching Place Nr".
contactType	xs:int (totalDigits:3)	1..1	[LOV-ID: 0115] Kind of contact for UP. (LOV APV-WB115) (only in case of DN_TYPE=11 Business Line) (if known).
contactNr	xs:int (totalDigits:6)	1..1	Contact number for UP. (only in case of DN_TYPE=11 Business Line) (if known). (name in older versions: "clipboardNr")
coordinateX	xs:int (totalDigits:6)	0..1	X coordinate of UP.
coordinateY	xs:int (totalDigits:6)	0..1	Y coordinate of UP.

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3.4.69 serviceProblemType

Description: A service problem item.

Used by: [createTroubleTicketRequestType](#), [modifyPendingTroubleTicketRequestType](#)

Element	Type	Occ	Comment
contrEleId	xs:int (totalDigits:3)	1..1	[LOV-ID: 0320] A contract element ID

serviceSpeedProfileNr	xs:int (totalDigits: 3)	1..1	Service speed profile number.
bbcsEquipment	xs:string (maxLength: 256)	0..1	The BBCS equipment.
errorCategory	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3010] An error category.

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3.4.70 appointment

Description: Appointment data.

Used by: [modifyPendingTroubleTicketRequestType](#)

Element	Type	Occ	Comment
appointmentId	xs:string (maxLength: 32)	1..1	Appointment ID referencing an existing agreement.
appointmentAction	xs:string (Enumeration: New, Update, Cancel)	1..1	Specific appointment-action which is to be triggered. New Update Cancel

3.4.71 workLogExtendedType

Extension of: [workLogResponseType](#)

Element	Type	Occ	Comment
workLogDateTime	xs:dateTime	1..1	Creation DateTime of the Work Log Entry
createdByBackendSystem	xs:boolean	1..1	True if the worklog entry was created by the backend system

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3.4.72 workLogResponseType

Used by: [atType](#)

Extended by: [workLogExtendedType](#)

Extension of: [workLogSimpleType](#)

Element	Type				Occ	Comment
attachment	Element	Type	Occ	Comment	0..1	
	fileName	xs:string (maxLength: 128)	1..1	name of file		
	fileId	xs:int	1..1	id of file		

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3.4.73 workLogRequestType

Used by: [workLog](#), [addWorkLogRequestType](#)

Extension of: [workLogSimpleType](#)

Element	Type				Occ	Comment
attachment	Element	Type	Occ	Comment	0..1	The binary content of the file, please limit the summary size of all the contents to 2Mb. Otherwise perform multiple files and use addWorklog
	fileName	xs:string (maxLength:128)	1..1	name of file		
	fileContent	xs:base64Binary	1..1			

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3.4.74 workLogSimpleType

Extended by: [workLogResponseType](#), [workLogRequestType](#)

Element	Type	Occ	Comment
workLogSummary	xs:string (minLength: 1 , maxLength: 100)	1..1	A summary of the work log entry.
workLogNotes	xs:string (maxLength: 32768)	0..1	An additional comprehensive description.

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3.4.75 atType

Description: An access trouble ticket and its details.

Used by: [getDetailTroubleTicketAckType](#)

Extension of: [ttType](#)

Element	Type	Occ	Comment
contrEleId	xs:int (totalDigits: 3)	1..1	[LOV-ID: 0320] A contract element ID
errorCategory	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3010] An error category.
problemDateTime	xs:dateTime	1..1	The date and time of the problem.
endUser	endUser	1..1	Information on the enduser (address, phone numbers, login, etc)
contactInfo	contactInfoType	0..1	
dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	0..1	The DN, VN or NSN.
dnVnNsnReq	xs:string (pattern: 0[1-9]\d{8})	0..1	The requested DN, VN, or NSN.
dnType	xs:int (totalDigits: 3)	0..1	
bbType	xs:int (totalDigits: 3)	1..1	[LOV-ID: 0276] The BB type.
serviceSpeedProfileNr	xs:int (totalDigits: 3)	0..1	Service speed profile number.
serviceSpeedProfileNrReq	xs:int (totalDigits: 3)	0..1	Requested service speed profile number.
stnrDdi	xs:string (pattern: 0[1-9]\d{8})	0..1	The "Stammnummer" (DDI) .
cableBox	cableBoxType	0..1	The cable box data (aka. "Ueberfuehrungspunkt", "UP").
oto	otoType	0..1	Optical Termination Outlet
lastLoginDateTime	xs:dateTime	0..1	The date and time of the last login.
ttSaSla	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0283] The service level assurance level of the trouble ticket.
ispSaSla	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0283] The service level assurance level of the ISP.
wsgSaSla	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0283] The service level assurance level calculated by WSG.
bbcsEquipment	xs:string (maxLength: 256)	0..1	The BBCS equipment.
suspended	xs:boolean	0..1	Indicates whether the problem

			processing is being suspended or not.
nrOfWires	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0268] The number of wires.
matCost	xs:decimal (totalDigits: 10)	0..1	Total material costs in CHF. (example: '12.25'; pattern: '10d.2d')
ppId	xs:int (totalDigits: 3)	0..1	Flat rate code in CHF. (E.g. 7 = xxx CHF)
ppCount	xs:int (totalDigits: 3)	0..1	Number of flat rates per TT. (Generally 1)
stdId	xs:int (totalDigits: 3)	0..1	Expense ratio code. (E.g. 01=140 CHF, 02=120 CHF)
expense	xs:int (totalDigits: 5)	0..1	Work expense in minutes. (Conversion into hours and multiply with STD_ID rate not done)
appointmentId	xs:string (maxLength: 32)	0..1	Appointment ID referencing an existing agreement.
lineMeasurementData	lineMeasurementData	0..1	A set of line measurement data.
opStatus	xs:int (totalDigits: 3)	0..1	[LOV-ID: 1014] The op status.
ispApplicationId	xs:string (maxLength: 40)	0..1	Used for the ISP's routing.
ispApplicationEntityId	xs:string (maxLength: 40)	0..1	Used for the ISP's routing.
endUserNotificationLevel	xs:int (totalDigits: 3)	0..1	For future use.
ttOutOfSla	xs:boolean	0..1	Flag if the appointment date is out of SA SLA.
ttOutOfSlaReason	xs:string (maxLength: 50)	0..1	The reason why the appointment date is out of SA SLA.
bbAdslEmulated	xs:int (totalDigits: 3)	0..1	[LOV-ID: 0401]: ADSL emulated flag..
measuredIspValues	xs:string (maxLength: 65536)	0..1	The measuerd values from ISP
workLogList	workLogResponseType	0..n	
reasonOfPotential	reasonOfPotential	0..1	Reason of Potential - why is the Current Access Speed lower then the maximum
historyItem	ttBaseType	0..n	A history entry of the ticket
detailedWorkReport	xs:string (maxLength: 4096)	0..1	the detailed work report
endPoint	endPointType	0..1	Current End Point Data
cpeInfo	cpeInfo	0..1	Information about the CPE (Customer Modem).
vectorized	xs:boolean	0..1	true if current technology type is VDSL Vectoring

technologyType	xs:int (totalDigits: 3)	0..1	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)
preOrderActivationCode	xs:string	0..1	The activation code for preOrders
siteDevelopment	siteDevelopment	0..1	site development information, quantity of basic connectivities and utilized units
bepSiteCategory	xs:string (maxLength: 32)	0..1	possible values are: "standard", "remote_fan_fibre_spot"

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3.4.76 ttType

Description: A base type for trouble tickets with the common attributes.

Extended by: [atType](#)

Extension of: [ttBaseType](#)

Element	Type	Occ	Comment
ttIdWsg	xs:decimal (totalDigits: 10)	1..1	Ticket id assigned by WSG
ttIdSys	xs:string (maxLength: 30)	0..1	Ticket id assigned by TT system
ispTtRef	xs:string (minLength: 1 , maxLength: 30)	0..1	An external reference (an ID assigned by the ISP) identifying the TT.
ispId	xs:int (totalDigits: 6)	0..1	The ISP id
ispName	xs:string (minLength: 1 , maxLength: 30)	0..1	The ISP name
ispPhoneNr	xs:string (pattern:(\+)?([0-9]){7,15})	0..1	The phone number of the ISP (business hours)
comment	xs:string (minLength: 1 , maxLength: 256)	0..1	A comment (free text)
closedDateTime	xs:dateTime	0..1	The date and time when the entity has been closed.

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3.4.77 lineMeasurementData

Description: A set of line measurement data.

Used by: [atType](#)

Element	Type	Occ	Comment
noiseMarginUp	xs:decimal	0..1	The noise margin upstream value.
noiseMarginDown	xs:decimal	0..1	The noise margin downstream value.
actualBitrateUp	xs:decimal	0..1	The actual bitrate upstream value.
actualBitrateDown	xs:decimal	0..1	The actual bitrate downstream value.
attainableBitrateUp	xs:decimal	0..1	The attainable bitrate upstream value.
attainableBitrateDown	xs:decimal	0..1	The attainable bitrate downstream value.
attenuationUp	xs:decimal	0..1	The attenuation upstream value.
attenuationDown	xs:decimal	0..1	The attenuation downstream value.

nrSpontaneousResyncs	xs:int	0..1	The number of spontaneous resyncs.
calculatedLineLength	xs:int	0..1	The calculated line length.
correctionDbLineLength	xs:int	0..1	The correction DB line length.
xdslLineState	xs:string	0..1	[LOV-ID: 3007] The line state.
lastStatusChange	xs:dateTime	0..1	The date/time of the last status change.
icaResult	icaResultType	0..1	Inhouse Copper Analysis Result.
neverWorked	xs:boolean	0..1	Indicates if the connection never worked before

3.4.78 potential

Description: Description of Potential

Used by: [reasonOfPotential](#)

Element	Type	Occ	Comment
potentialCode	xs:int (minInclusive:-9999, maxInclusive:9999)	1..1	Potential Code negative value: reason why the maximum speed is lower then the current access profile. -1000: Pending downgrooming without service impact -1001: Pending downgrooming with service impact -1100: Pending devloc change (lengthing order) -1200: The profile is set manually -1300: -1400: The access is unstable -1501: ICA problem – impact on stability: BridgeTap -1502: ICA problem – impact on stability: Degraded Contact -1503: ICA problem – impact on speed: Missing Splitter -1504: ICA problem – impact on stability: Missing Splitter on alarm system (Business Decision) -1505: ICA problem – impact on stability: External Interference detected -1506: ICA problem – impact on stability: Intermittent contact -1507: ICA problem – impact on stability: Loop unbalanced -1508: ICA problem – impact on stability: Untwisted in-house wiring -1509: ICA problem – impact on stability: Time varying noise (crosstalk and RFI) -1510: ICA problem – impact on stability: CPE interoperability problem -1511: ICA problem – impact on stability: Black-listed CPE -1517: ICA problem – impact on stability: Abnormal crosstalk -1518: ICA problem – impact on stability: Defect switched power supply -1519: ICA problem – impact on speed: BridgeTap on overhead line -1600: Stability reached with downgrade positive value: reason why the maximum speed is higher then the current access profile +1000: outstanding

			upgrooming +1100: pending devloc change (short order) +1200: the profile is set manually +1300: Old CPE hardware +1301: CPE hardware doesn't support Vectoring. +1302: CPE firmware doesn't support Vectoring tbd
potentialDescription	xs:string	1..1	Potential Description

3.4.79 reasonOfPotential

Description: Reason of Potential - why is the Current Access Speed lower then the maximum

Used by: [atType](#), [netDrivenInfo](#)

Element	Type	Occ	Comment
potential	potential	1..n	Description of Potential Potential Code negative value: reason why the maximum speed is lower then the current access profile. -1000: Pending downgrooming without service impact -1001: Pending downgrooming with service impact -1100: Pending devloc change (lengthing order) -1200: The profile is set manually -1300: -1400: The access is unstable -1501: ICA problem – impact on stability: BridgeTap -1502: ICA problem – impact on stability: Degraded Contact -1503: ICA problem – impact on speed: Missing Splitter -1504: ICA problem – impact on stability: Missing Splitter on alarm system (Business Decision) -1505: ICA problem – impact on stability: External Interference detected -1506: ICA problem – impact on stability: Intermittent contact -1507: ICA problem – impact on stability: Loop unbalanced -1508: ICA problem – impact on stability: Untwisted in-house wiring -1509: ICA problem – impact on stability: Time varying noise (crosstalk and RFI) -1510: ICA problem – impact on stability: CPE interoperability problem -1511: ICA problem – impact on stability: Black-listed CPE -1517: ICA problem – impact on stability: Abnormal crosstalk -1518: ICA problem – impact on stability: Defect switched power supply -1519: ICA problem – impact on speed: BridgeTap on overhead line -1600: Stability reached with downgrade positive value: reason why the maximum speed is higher then the current access profile +1000: outstanding upgrooming +1100: pending devloc change (short order) +1200: the profile is set manually +1300: Old CPE hardware +1301: CPE hardware doesn't support Vectoring. +1302: CPE firmware doesn't support Vectoring tbd Potential Description

3.4.80 ttBaseType

Description: A base type for trouble tickets (used for history-items).

Used by: [atType](#)

Extended by: [ttType](#)

Element	Type	Occ	Comment
ttState	xs:int	1..1	The state of a trouble ticket.
ttStateReason	xs:int (totalDigits:3)	0..1	[LOV-ID: 5107] LOV_TT_ITSM_INCIDENT_STATE_REASON:

			The reason for that the trouble ticket is in this state (only set for BBCS-F Tickets).
entryDateTime	xs:dateTime	0..1	The creation date and time of the corresponding entity.
lastModifiedDateTime	xs:dateTime	1..1	The last modification date and time of the corresponding entity.
lastModifiedUsername	xs:string (minLength:1, maxLength:30)	1..1	The username of the modifying user.
responseComment	xs:string (minLength:1, maxLength:256)	0..1	A response comment (used for information exchange between all parties; ref. also to 'addonInformation' provided in Create- or Modify- request)
responseCommentCode	xs:int (totalDigits:3)	0..1	[LOV-ID: 3003] The response comment code.
problemDescription	xs:string (maxLength:2048)	1..1	Description of the problem
progressComment	xs:string (minLength:1, maxLength:256)	0..1	An information about progress
progressCommentCode	xs:int (totalDigits:3)	0..1	[LOV-ID: 3001] The code of the progress information.
progressDateTime	xs:dateTime	0..1	The date and time of the progress
billingAction	xs:int (totalDigits:3)	0..1	[LOV-ID: 1502] Billing actions.

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3.4.81 availableTechnologyTypes

Used by: [endPointType](#)

Element	Type	Occ	Comment
technologyType	xs:int (totalDigits:3)	1..n	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)

3.4.82 endPointType

Description: The information on the xDSL access.

Used by: [endPoint](#)

Element	Type	Occ	Comment
dnOffice	xs:string (minLength:1, maxLength:20)	0..1	The DN office ID string. (example: "62AES")
site	xs:string (maxLength:4)	0..1	Site of the Broad Band Device Location.
bbDeviceLocation	xs:string (minLength:1, maxLength:20)	0..1	The broad band device location. (e.g. "AES")
siteCategory	xs:int (totalDigits:3)	0..1	[LOV-ID: 9008] The site

			categorization.
availableTechnologyTypes	availableTechnologyTypes	0..1	

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3.4.83 dslamTypeAllowed

Description: DSLAM Type(s) which are supported from the cpe - only current Technologie is in focus

Used by: [cpeInfo](#)

Element	Type	Occ	Comment
technology	xs:int (totalDigits: 3)	1..1	[LOV-ID: 1307] The technology (ADSL, VDSL2, BX ...).
dslamType	xs:int (totalDigits: 3)	0..n	[LOV-ID: 1064]: DSLAM Type.

3.4.84 cpeCapabilityType

Description: CPE Capability, used in case of VDSL2 qualification to shows the TechnologyType (VDSL2 Legacy, Vectoring, g.fast) capability.

Used by: [cpeInfo](#)

Element	Type	Occ	Comment
technologyType	xs:int (totalDigits: 3)	1..1	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)
capabilityOverall	xs:int (totalDigits: 3)	1..1	[LOV-ID: 9009] LOV_CPE_CAPABILITY_OVERALL (1 = Capable; 2 = Friendly; 3 = Forced Friendly; 4 = Disturber....)
capabilityHardware	xs:int (totalDigits: 3)	1..1	[LOV-ID: 1350] LOV_CPE_CAPABILITY Does this CPE Hardware or Firmware support the declared TechnologyType? (0 = no; 1 = yes; 2 = yes, but SFP needed)
capabilityFirmware	xs:int (totalDigits: 3)	1..1	[LOV-ID: 1350] LOV_CPE_CAPABILITY Does this CPE Hardware or Firmware support the declared TechnologyType? (0 = no; 1 = yes; 2 = yes, but SFP needed)

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3.4.85 cpeInfo

Description: Information about the CPE (Customer Modem).

Used by: [atType](#), [xdslInfoType](#)

Element	Type	Occ	Comment
cpeName	xs:string (maxLength: 100)	1..1	CPE (Customer Modem) Name
dslamTypeAllowed	dslamTypeAllowed	0..n	DSLAM Type(s) which are supported from the cpe - only current Technologie is in focus
capability	cpeCapabilityType	0..n	CPE Capability, used in case of VDSL2 qualification to shows the TechnologyType (VDSL2 Legacy, Vectoring, g.fast) capability. [LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST) [LOV-ID: 9009]

			LOV_CPE_CAPABILITY_OVERALL (1 = Capable; 2 = Friendly; 3 = Forced Friendly; 4 = Disturber....) [LOV-ID: 1350] LOV_CPE_CAPABILITY Does this CPE Hardware or Firmware support the declared TechnologyType? (0 = no;1 = yes; 2 = yes, but SFP needed) [LOV-ID: 1350] LOV_CPE_CAPABILITY Does this CPE Hardware or Firmware support the declared TechnologyType? (0 = no;1 = yes; 2 = yes, but SFP needed)
comment	xs:string (minLength: 1 , maxLength: 256)	0..1	A comment (free text)

3.4.86 siteDevelopment

Description: site development information, quantity of basic connectivities and utilized units

Used by: [atType](#)

Element	Type	Occ	Comment
fullyDeveloped	xs:boolean	1..1	indicates if the site is fully developed (GVE Flag)
nrOfBasicConnectivities	xs:int	0..1	Nr of basic connectivities (AlwaysOn lines)
nrOfUtilisationUnits	xs:int	0..1	Nr of utilisation units (Usages on the site)

3.4.87 otoRequestedType

Description: Optical Telecommunications Outlet (OTO); Request Type

Used by: [getXdslInfoRequestType](#)

Element Type					Occ	Comment
- choice:	Element	Type	Occ	Comment	1..1	
	otoId	xs:string (minLength: 13 , maxLength: 19)	1..1	An Optical Telecommunications Outlet (OTO) ID (e.g. A.123.456.789).		
	partnerLabel	xs:string (maxLength: 20)	1..1	The OTO Label of the swisscom partner		
plugNr	xs:int (totalDigits: 3)				1..1	A plug number (1..4).

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3.4.88 service

Description: The service details.

Used by: [xdslInfoType](#)

Element	Type	Occ	Comment
contrEleId	xs:int (totalDigits: 3)	1..1	[LOV-ID: 0320] A contract element ID
serviceType	xs:int	0..1	[LOV-ID: 3004] The service type.
effectiveSpeedDescription	xs:string	0..1	The description of the effective speed.

serviceSpeedDescription	xs:string	0..1	The description of the service speed.
speedProfileNr	xs:int (totalDigits:3)	1..1	Speed profile number
serviceSpeedValueDown	xs:string	0..1	The 'down' value of the service speed.
serviceSpeedValueUp	xs:string	0..1	The 'up' value of the service speed.
shapingSpeedValueDown	xs:int	0..1	The 'down' value of the shaping speed.
shapingSpeedValueUp	xs:int	0..1	The 'up' value of the shaping speed.

3.4.89 accessSpeed

Description: The access details.

Used by: [xdsInfoType](#)

Element	Type	Occ	Comment
speedProfileDescription	xs:string	0..1	Speed profile description
speedProfileName	xs:string	0..1	Speed profile name
accessSpeedProfileNr	xs:int (totalDigits:3)	1..1	[LOV-ID: 1134] Access Speed profile number
technologyType	xs:int (totalDigits:3)	0..1	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)

3.4.90 stabilityInfo

Used by: [xdsInfoType](#)

Element	Type	Occ	Comment
overallStability	xs:int (totalDigits:3)	1..1	[LOV-ID: 1351] LOV_STABILITY_CLASS (1 = schlechte Stabilität/Qualität; 2 = mittlere Stabilität/Qualität; 3 = gute Stabilität/Qualität)
codingViolationDownstreamStability	xs:int (totalDigits:3)	1..1	[LOV-ID: 1351] LOV_STABILITY_CLASS (1 = schlechte Stabilität/Qualität; 2 = mittlere Stabilität/Qualität; 3 = gute Stabilität/Qualität)
codingViolationUpstreamStability	xs:int (totalDigits:3)	1..1	[LOV-ID: 1351] LOV_STABILITY_CLASS (1 = schlechte Stabilität/Qualität; 2 = mittlere Stabilität/Qualität; 3 = gute Stabilität/Qualität)
severelyErrorSecondsDownstreamStability	xs:int (totalDigits:3)	1..1	[LOV-ID: 1351] LOV_STABILITY_CLASS (1 = schlechte Stabilität/Qualität; 2 = mittlere Stabilität/Qualität; 3 = gute Stabilität/Qualität)
severelyErrorSecondsUpstreamStability	xs:int (totalDigits:3)	1..1	[LOV-ID: 1351] LOV_STABILITY_CLASS (1 = schlechte Stabilität/Qualität; 2 = mittlere Stabilität/Qualität; 3 = gute Stabilität/Qualität)

			Stabilitaet/Qualitaet; 3 = gute Stabilitaet/Qualitaet)
spontaneousResyncsStability	xs:int (totalDigits: 3)	1..1	[LOV-ID: 1351] LOV_STABILITY_CLASS (1 = schlechte Stabilitaet/Qualitaet; 2 = mittlere Stabilitaet/Qualitaet; 3 = gute Stabilitaet/Qualitaet)
attainableActualBitrateRatio	xs:int (totalDigits: 3)	1..1	[LOV-ID: 1352] LOV_ATTAINABLE_ACTUAL_BITRATE_RATIO ATIO Low ratio means small security bandwidth between used and possible bitrate - risky (1 = Low Margin; 2 = High Margin)

3.4.91 icaProblemType

Description: Inhouse Copper Analysis Problem

Used by: [icaResultType](#)

Element	Type	Occ	Comment
description	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3014] Problem code
descriptionText	xs:string (maxLength: 200)	1..1	Problem description
confidence	xs:int	1..1	Problem probability in percent
impact	xs:string (maxLength: 200)	1..1	Impact description
impactAttainBitrateDown	xs:int	1..1	Potential impact on the attainable downstream bitrate
impactAttainBitrateUp	xs:int	1..1	Potential impact on the attainable upstream bitrate
remainTime	xs:int	0..1	remaining time in minutes during which the line remains blocked

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3.4.92 icaResultType

Description: Inhouse Copper Analysis Result

Used by: [icaResult](#)

Element	Type	Occ	Comment
analysisDate	xs:dateTime	1..1	Date of last analysis
analysisDate24h	xs:dateTime	1..1	Date of last analysis
analysisState	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3012] State of last analysis (Finished, Cancel, Abort, Error, ErrorCAN, ...)
analysisType	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3013] Type of last analysis (SELT, LQD)
problemDetected	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3017] Problem detected in last analysis (Yes Impact, Yes Noimpact, No)

potentialAttainBitrateDown	xs:int	1..1	Potential new downstream bitrate after problem fix
potentialAttainBitrateUp	xs:int	1..1	Potential new upstream bitrate after problem fix
potentialAccessProfileNr	xs:int (totalDigits: 3)	1..1	Potential access profile after problem fix ([LOV-ID: 1134] speed profile number)
accessSpeedGainDown	xs:int	1..1	Potential net access downstream bitrate gain
accessSpeedGainUp	xs:int	1..1	Potential net access upstream bitrate gain
accessProblemType	xs:int (totalDigits: 3)	1..1	[LOV-ID: 3015] Calculated stability problem of the access
bbrSocketInstalled	xs:boolean	1..1	BBR socket installed
bbrSocketInstallationDate	xs:dateTime	1..1	BBR socket installation date
icaProblems	icaProblemType	0..n	Inhouse Copper Analysis Problem

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3.4.93 dslamAlarm

Description: A DSLAM alarm.

Used by: [xdslInfoType](#)

Element	Type	Occ	Comment
dslamAlarmType	xs:string	1..1	The type of a DSLAM alarm. (e.g. ASAM, ASAM_CARD, ISAM, ISAM_CARD, FAN, FAN_CARD, OTHER)
startDateTime	xs:dateTime	0..1	The start date/time of the alarm.
endDateTime	xs:dateTime	0..1	The end date/time of the alarm.
expectedRepairTime	xs:int	0..1	The approximated expected repair time.

3.4.94 measurementHistoryItem

Description: A history item of an NA-measurement.

Used by: [xdslInfoType](#)

Element	Type	Occ	Comment
date	xs:dateTime	1	The date of the measurement.
nrSpontaneousResyncs	xs:int	0..1	The number of spontaneous resyncs.
codingViolationsUp	xs:decimal	0..1	The coding violations upstream value.

codingViolationsDown	xs:decimal	0 · 1	The coding violations downstream value.
noiseMarginUp	xs:decimal	0 · 1	The noise margin upstream value.
noiseMarginDown	xs:decimal	0 · 1	The noise margin downstream value.
noiseMarginUnit	xs:string	0 · 1	The noise margin unit.
actualBitrateUp	xs:decimal	0 · 1	The actual bitrate upstream value.
actualBitrateDown	xs:decimal	0 · 1	The actual bitrate downstream value.
actualBitrateUnit	xs:string	0 · 1	The actual bitrate unit.
attainableBitrateUp	xs:decimal	0 · 1	The attainable bitrate upstream value.
attainableBitrateDown	xs:decimal	0 · 1	The attainable bitrate downstream value.
attainableBitrateUnit	xs:string	0 · 1	The attainable bitrate unit.
attenuationUp	xs:decimal	0 · 1	The attenuation upstream value.

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	length :100 0)	
codingViolationsUp15Minutes	xs:string (minLength:1, maxLength:1000)	0 upstream coding violations per 15 minutes. 15 minute counters of a day, semicolon separated
severelyErrorSecDown15Minutes	xs:string (minLength:1, maxLength:1000)	0 severely downstream errors per 15 minutes. 15 minute counters of a day, semicolon separated
severelyErrorSecUp15Minutes	xs:string (minLength:1, maxLength:1000)	0 severely upstream errors per 15 minutes. 15 minute counters of a day, semicolon separated
accessSpeedProfileNr	xs:int (totalDigits:3)	0 [LOV-ID: 1134] Access Speed profile number
interleaveMode	xs:int (totalDigits:3)	0 [LOV-ID: 1008] The interleave mode.
psdClass	xs:int (totalDigits:3)	0 [LOV-ID: 1061] BB_PSD_CLASS, Power Spectral Density Class

3.4.95 portConfigType

Used by: [netDrivenInfo](#)

Element	Type	Occ	Comment
---------	------	-----	---------

technology	xs:int (totalDigits:3)	1..1	[LOV-ID: 1307] The technology (ADSL, VDSL2, BX ...).
psdClass	xs:int (totalDigits:3)	1..1	[LOV-ID: 1061] BB_PSD_CLASS, Power Spectral Density Class
technologyType	xs:int (totalDigits:3)	0..1	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)
accessSpeedProfileNr	xs:int (totalDigits:3)	0..1	[LOV-ID: 1134] Access Speed profile number
interleaveMode	xs:int (totalDigits:3)	0..1	[LOV-ID: 1008] The interleave mode.
shapingSpeedValueUp	xs:int	0..1	The 'up' value of the shaping speed.
shapingSpeedValueDown	xs:int	0..1	The 'down' value of the shaping speed.

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3.4.96 netDrivenInfo

Description: The access details.

Used by: [xdsInfoType](#)

Element	Type	Oc	Comment
reasonOfPotential	reasonOfPotential	0..1	Reason of Potential - why is the Current Access Speed lower then the maximum
lqsMaxTechnologyType	xs:int (totalDigits:3)	1..1	aka VDSLType [LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)
lqsMaxAccessProfileNr	xs:int (totalDigits:3)	0..1	[LOV-ID: 1134] Access Speed profile number.
naFailureType	xs:int (totalDigits:3)	0..1	[LOV-ID: 1060] The Network Analyser FailureType: 0 = OK - NaResult available; 2 = NOK- No NA data; 11 = OK - but ADSL NAmix in Case of Port mismatch and CPE

			OK; 12 = OK - but ADSL NAmax in Case of Port mismatch and CPE nok / na; 13 = OK - but ADSL NAmax in Case of Port match but CPE na / nok; 14 = OK - but ADSL NAmax in Case of Port match, CPE match but the upgrooming is missing; 15 = OK - but ADSL2+ Upgrooming Process is Running	
naMaxTechnologyType	xs:int (totalDigits: 3)	1..1	aka VDSLType [LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)	
naMaxAccessProfileNr	xs:int (totalDigits: 3)	0..1	[LOV-ID: 1134] Access Speed profile number.	
lastNetDrivenAction	Element	Type	Occ	Comment
	netDrivenProcess	xs:string (maxLength: 30)	1..1	Netdriven Process Name: BulkFastProfileChange, PortConfigChange, Vstab, FirstCheck, QuickStabStep, SyncInFlex, Adsl2PlusGroom, dslToAdsl2Plus
	runDateTime	xs:dateTime	1..1	The date and time

	inputReason	xs:string (maxLength: 30)	1..1	Input Reason: Manual, FPC, Bulk, etc.
	action	xs:string (maxLength: 30)	1..1	Action: Upgrooming, Downgrooming, INPChange, ShappingSpeedC hange
	initiator	xs:string (maxLength: 30)	1..1	Initiator: User account name or system or generic user
	portConfigBefore Action	portConfigT ype	0..1	
	portConfigAfterA ction	portConfigT ype	0..1	
runningNetDriven Action	Element	Type	Occ	Comment
	netDrivenPro cess	xs:string (maxLength: 30)	1..1	Netdriven Process Name: BulkFastProfileCh ange, PortConfigChange , Vstab, FirstCheck, QuickStabStep, SyncInFlex, Adsl2PlusGroom, dslToAdsl2Plus
	startDateTim e	xs:dateTime	1..1	
	inputReason	xs:string (maxLength: 30)	1..1	Input Reason: Manual, FPC, Bulk, etc.
	currentStep	xs:string (maxLength: 100)	1..1	Current Step: Receive WSG Order Status etc.
	initiator	xs:string (maxLength: 30)	1..1	Initiator: User account name or system or generic user

3.4.97 xdslInfoType

Description: The information on the xDSL access.

Used by: [getXdslInfoResponseType](#)

Element Type		O c c	Comment
actualBi trateUp	xs:deci mal	0 . 1	The actual bitrate upstream value.
actualBi trateDo wn	xs:deci mal	0 . 1	The actual bitrate downstream value.
actualBi trateUni t	xs:strin g	0 . 1	The actual bitrate unit.
attainab leBitrat eUp	xs:deci mal	0 . 1	The attainable bitrate upstream value.
attainab leBitrat eDown	xs:deci mal	0 . 1	The attainable bitrate downstream value.
attainab leBitrat eUnit	xs:strin g	0 . 1	The attainable bitrate unit.
attenua tionUp	xs:deci mal	0 . 1	The attenuation upstream value.
attenua tionDow n	xs:deci mal	0 . 1	The attenuation downstream value.
attenua tionUnit	xs:strin g	0 . 1	The attenuation unit.
capacity Occupat ionUp	xs:deci mal	0 . .	The capacity occupation upstream value.

		1	
capacityOccupationDown	xs:decimal	0 . 1	The capacity occupation downstream value.
capacityOccupationUnit	xs:string	0 . 1	The capacity occupation unit.
bbType	xs:int (totalDigits:3)	0 . 1	[LOV-ID: 0276] The BB type.
contrEleId	xs:int (totalDigits:3)	0 . 1	[LOV-ID: 0320] A contract element ID
calculatedLineLength	xs:int	0 . 1	The calculated line length.
correctionDbLineLength	xs:int	0 . 1	The correction DB line length.
dnType	xs:int (totalDigits:3)	0 . 1	
dnVnNs	xs:string (pattern: 0[1-9]\d{8})	0 . 1	The DN, VN or NSN.
interleaveMode	xs:int (totalDigits:3)	0 . 1	[LOV-ID: 1008] The interleave mode.
ispId	xs:int (totalDigits:6)	0 . 1	The ISP id
ispIdPro	xs:int	0	The provider ISP id.

vider	(totalDigits:6)	. .1	
lastStatusChange	xs:date Time	0 .1	The date/time of the last status change.
lineStateId	xs:long	0 .1	The line state id.
noiseMarginUp	xs:decimal	0 .1	The noise margin upstream value.
noiseMarginDown	xs:decimal	0 .1	The noise margin downstream value.
noiseMarginUnit	xs:string	0 .1	The noise margin unit.
nrSpontaneousResyncs	xs:int	0 .1	The number of spontaneous resyncs.
orderNr	xs:string (pattern: :[1-9]\d{25})	0 .1	Order Nr.
requestDate	xs:date Time	0 .1	The date/time of the request.
responseDate	xs:date Time	0 .1	The date/time of the response.
responseMessage	xs:string	0 .1	The response message.

		1	
service	service	0 . . n	The service details.
session Type	xs:int (totalDigits:3)	0 . . 1	[LOV-ID: 1005] The session type.
accessSpeed	accessSpeed	0 . . 1	The access details.
xdslInfo Light	xs:string (Enumeration: red, yellow, green)	0 . . 1	The information-light (line state) of the xDSL access.
xdslLine State	xs:string	0 . . 1	[LOV-ID: 3007] The line state.
opStatus	xs:int (totalDigits:3)	0 . . 1	[LOV-ID: 1014] The op status.
cpeType	xs:string	0 . . 1	The CPE type.
cpeInfo	cpeInfo	0 . . 1	Information about the CPE (Customer Modem).
stability Info	stabilityInfo	0 . . 1	[LOV-ID: 1352] LOV_ATTAINABLE_ACTUAL_BITRATE_RATIO Low ratio means small security bandwidth between used and possible bitrate - risky (1 = Low Margin; 2 = High Margin)
icaResult	icaResultType	0 . . 1	Inhouse Copper Analysis Result.

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ame	g (maxLength: 30)	. .1	
networkType	xs:int (totalDigits: 3)	0 .1	[LOV-ID: 1315] NETWORK_TYPE, the network type 1 - ATM, 2 - EAP, 3 - WARP, 4 - RAMPplus
psdClass	xs:int (totalDigits: 3)	0 .1	[LOV-ID: 1061] BB_PSD_CLASS, Power Spectral Density Class
userName	xs:string (minLength: 1 , maxLength: 30)	0 .1	The submitter of the getXdslInfo request
vectorized	xs:boolean	0 .1	true if current technology type is VDSL Vectoring
bbPortLineType	xs:int (totalDigits: 3)	0 .1	[LOV-ID: 1353] bb Port Line Type
bepSiteCategory	xs:string (maxLength: 32)	0 .1	possible values are: "standard", "remote_fan_fibre_spot"
netDrivenInfo	netDrivenInfo	0 .1	The access details.
irIdWsg	xs:decimal (totalDigits:10)	0 .1	

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3.4.98 Customer

Used by: [PlannedOutage](#)

Element	Type	Occ	Comment
dnVnNsn	xsd:string (minLength: 1 , maxLength: 255)	1..1	Is NSN, wich is represented form

			DN or VN
services	xsd:string (Enumeration: internet, streaming, vobb)	1..n	

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3.4.99 PlannedOutage

Used by: [getDnNsnPlannedOutageAckType](#), [PlannedOutageList](#)

Element	Type	Occ	Comment
outage_id	xsd:string	1..1	
startDateTime	xsd:dateTime	1..1	
endDateTime	xsd:dateTime	1..1	
duration	xsd:int	1..1	
reason_id	xsd:int	0..1	
source	xsd:string (Enumeration: PW, UMSA)	1..1	
customer_list	Customer	1..n	

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3.4.100 PlannedOutageList

Used by: [PlannedOutageElements](#)

Element	Type	Occ	Comment
PlannedOutage	PlannedOutage	0..n	

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3.4.101 dnVnNsnList

Description: The list of affected customers

Used by: [networkCustomerNotificationType](#)

Element	Type	Occ	Comment
dnVnNsn	xs:string (pattern: 0[1-9]\d{8})	1..n	The DN, VN or NSN.

3.4.102 networkCustomerNotificationType

Description: The network customer notification

Used by: [networkCustomerNotification](#)

Element	Type	Occ	Comment
dnVnNsnList	dnVnNsnList	1..1	The list of affected customers
customerNotificationId	xs:string (minLength: 1 , maxLength: 200)	1..1	The customer notification id, e.g. STT ITSM 293452438655
customerNotificationType	xs:string (minLength: 1 , maxLength: 512)	1..1	The customer notification type, e.g. CAN-Change
networkElementType	xs:string (minLength: 1 , maxLength: 200)	1..1	The network element type, i.e. CAN
networkElementName	xs:string (minLength: 1 , maxLength: 200)	1..1	The network element name, i.e. ipd-05621-s-ca-01
startDateTime	xs:dateTime	1..1	The start date/time of the disruption

endDateTime	xs:dateTime	1..1	The end date/time of the disruption
duration	xs:int	1..1	The duration of the disruption in minutes

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3.4.103 validAccessProfileType

Description: Valid Access Profiles Item Item

Used by: [getValidAccessProfileResponseType](#)

Element	Type	Occ	Comment
accessSpeedProfileNr	xs:int (totalDigits:3)	0..1	[LOV-ID: 1134] Access Speed profile number
psdClass	xs:int (totalDigits:3)	0..1	[LOV-ID: 1061] BB_PSD_CLASS, Power Spectral Density Class
interleaveMode	xs:int (totalDigits:3)	0..1	[LOV-ID: 1008] The interleave mode.
bbType	xs:int (totalDigits:3)	0..1	[LOV-ID: 0276] The BB type.
technologyType	xs:int (totalDigits:3)	0..1	[LOV-ID: 9025] LOV_TECHNOLOGY_TYPE (1 = VDSL; 2 = VDSL vectoring; 3 = G.FAST)

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3.5 Web Services

3.6 Security

The following sections describe the implemented precautions aiming to improve the security of data transport in terms of confidentiality and non-repudiation.

3.6.1 Encryption

To meet the confidentiality aspect of information security the data transport between the web service client and its server is protected using the https schema.

Https is a URI scheme equivalent to the http scheme, originally intended to be used with the HTTP protocol, but with added encryption layer. The URI structure is the same, except that URIs begins with "https:" rather than "http:". The scheme was invented by Netscape Communications Corporation to provide authentication and encrypted communication and is widely used on the Web for security-sensitive communication, such as payment transactions.

Instead of using plain text socket communication, the session data is encrypted using either a version of the SSL (Secure Socket Layer) protocol or the TLS (Transport Layer Security) protocol, thus ensuring reasonable protection from eavesdroppers, and man in the middle attacks. The default TCP port of https: is 443.

3.6.2 Authentication, Authorization, and Accounting (AAA)

To meet the accountability and non-repudiation aspects of information security each Web Service requires username tokens according to the OASIS Web Service Security (WS-Security) definition.

Please consult 7 Appendix A for further details.

3.7 The WSG TT Outbound Web Service

The definition of the WSG TT Outbound Web Services in WSDL is based on the already described XML schema. Refer to the attached ZIP-file described above (section 2.1)

The Web-Service is published under the following URLs:

Platform	URL	Description
Production	https://webservices.swisscom.com/wsg/prod/tt/WsgTtV022	Prod. actual version
	https://webservices.swisscom.com/wsg/prod/tt/WsgTtV021	Prod. previous version
ISP-Test	https://webservices.swisscom.com/wsg/isp/tt/WsgTtV022	Test actual version
	https://webservices.swisscom.com/wsg/isp/tt/WsgTtV021	Test previous version

For details please refer to the WSDL and to the embedded resources provided by the attached file (refer to chapter 2.1).

3.7.1 Error Codes

The WSG outbound web-services may return general error codes (example: 808 with the meaning "Procedure called with invalid argument value" or specific error codes according to used function (example: 769 "No Assurance Service Level Agreement configured").

Please refer to document [1] WSG Messages for a complete list of possible error codes / messages.

3.7.2 Details for versions since V007

3.7.3 Success or Error status

All response messages contain a member named "**success**" which indicates if the operation has been successful or not and -- if not -- which error has been raised through its attributes "**reason**" (the error-code) and "**reasonComment**" (the error-text) (refer to the schema documentation for all details).

3.8 The WSG Alarming Outbound Web Service

The WSG Alarming Outbound Web is published under the following URLs:

Platform	URL	Description
Production	https://webservices.swisscom.com/wsg/prod/tt/WsgAlarming	Production environment
ISP-Test	https://webservices.swisscom.com/wsg/isp/tt/WsgAlarming	Test environment for ISPs

The WSG Alarming Outbound Web service implementation is based on the following definition (Remark: file attachment if this document is in PDF format)

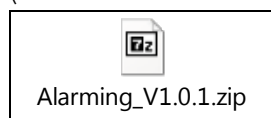


Figure 1 shows the static structure (object model) of the WSG Alarming Outbound Web service.

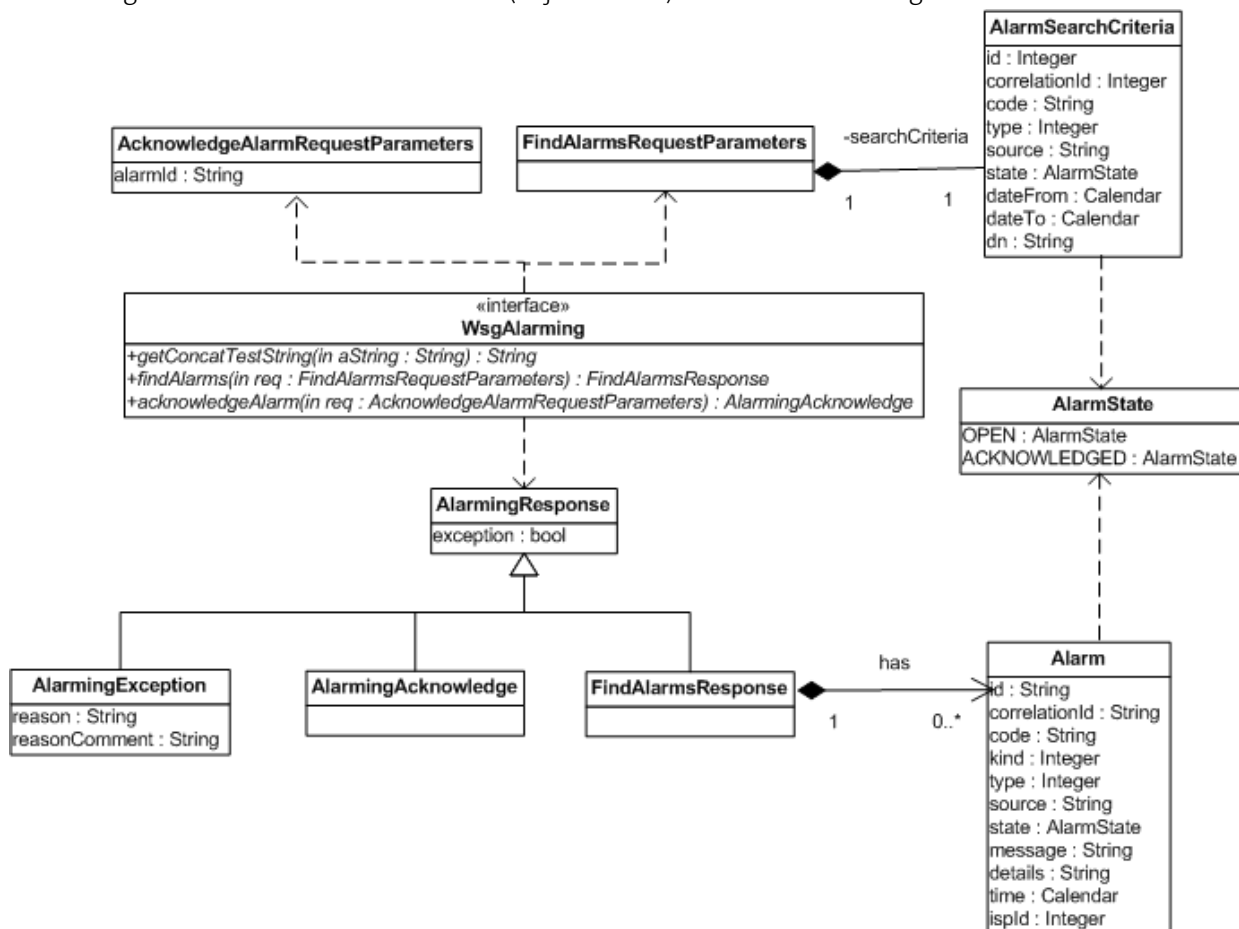


Figure 1: Static structure of the WSG Alarming Outbound Web service

3.8.1 Responses and Exceptions

All of the operations return the abstract base class `AlarmingResponse`, which is either a response (`AlarmingResponse.exception=false`) or an exception (`AlarmingResponse.exception=true`). Hence the `AlarmingResponse.exception` flag can be used for easy down-casting. This mechanism of exception reporting (instead of using SOAP faults) was chosen to minimize interoperability issues (→ best practice).

3.8.2 Operations

Operation	Description
<code>String getConcatTestString(String aString)</code>	This operation can be used to check whether the service is up and running.
<code>FindAlarmsResponse findAlarms(FindAlarmsRequestParameters parameters)</code>	This operation returns the Alarms which matches the provided search criteria.
<code>AlarmingAcknowledge acknowledgeAlarm(String alarmed)</code>	This operation acknowledges the Alarm referenced by 'alarmid'.

3.8.3 FindAlarmsRequestParameters

Field name	Type	Null	Pattern/ Range	Description
<code>searchCriteria</code>	<code>AlarmSearchCriteria</code>	N		The search criteria for the Alarms.

3.8.4 AcknowledgeAlarmRequestParameters

Field name	Type	Null	Pattern/ Range	Description
<code>alarmId</code>	<code>String</code>	N		The alarm-id (primary-key given by WSG) for the alarm to be acknowledged

3.8.5 Alarm

Field name	Type	Null	Pattern/ Range	Description
id	String	N	max-length:20	The alarm-id (its primary-key, generated and provided by WSG).
code	String	N	max-length:40	The alarm code
correlationId	String	Y	max-length:64	The eventually provided correlation id
kind	Integer	N	max-length:3	The alarm category/kind. (WSG-internal)
type	Integer	N	max-length:3	The alarm type.
state	AlarmState	N		The alarm state.
message	String	Y	max-length:1024	The alarm message
details	String	Y	max-length:4000	The alarm details
time	Calendar	N		The alarm-creation-date.
dn	String	Y	max-length:15	The optionally referred DN.
source	String	N	max-length:40	The originator system of the alarm.
ispld	Integer	N	max-length:6	The referred ISP-id.

3.8.6 AlarmSearchCriteria

Field name	Type	Null	Pattern/ Range	Description
id	String	Y	max-length:20	The alarm-id (its primary-key, generated and provided by WSG).
code	String	Y	max-length:40	The alarm code
correlationId	String	Y	max-length:64	The eventually provided correlation id
dateFrom	Calendar	Y		The lower-bound date to search against the alarm-creation-date.
dateTo	Calendar	Y		The upper-bound date to search against the alarm-creation-date.
dn	String	Y	max-length:15	The optionally referred DN.
source	String	Y	max-length:40	The originator system of the alarm.
type	Integer	Y	max-length:3	The alarm type.
state	AlarmState	Y		The alarm state.

3.8.7 AlarmingResponse

Field name	Type	Null	Pattern/ Range	Description
exception	boolean	N	true false	Indicates whether this AlarmingResponse is an exception (true) or not (false).

3.8.8 AlarmingException (extends AlarmingResponse)

Field name	Type	Null	Pattern/ Range	Description
Reason	String	N	\d{3}	WSG Reason if result is Not OK. (for 998, 999 see chapt. 3)
reasonComment	String	Y	.*	Additional comment or explanation

3.8.9 AlarmingAcknowledge (extends AlarmingResponse)

“Success” response without payload (no fields).

3.8.10 FindAlarmsResponse (extends AlarmingResponse)

Field name	Type	Null	Pattern/ Range	Description
alarms	Alarm[]	N		The found alarms.

4 Reports

Automatically generated reports by WSG will be stored in the “reports” Subdirectory. Monthly reports will be available for download at the first of each month at 08:00 am. The other reports may be present at any time.

4.1 Filename of reports file

Report file names have the following syntax:

<ISP_ID>_<RRR>_<PERIOD>_ [<XXXXXX>_] <NNN>.<ext>

where

<ISP_ID>	is the ID of the ISP assigned by Swisscom
<RRR>	is the report type: 001 Overdue Business Trouble Ticket 002 Accumulated Repair Time (Trouble Ticket) 003 IP Pool (This is an old report, no longer used.) 004 UMSA (FA) 005 Leitungswechsel (FA) 006 UMSA (Standalone) 007 UMSA Planned Outages Report (created by request „getIsplannedOutage“) 008 Grooming Report 009 - 012 n/a, reserved for internal use 013 ProKu Copper Report (pro active customer information for copper) 014 ProKu Fiber Report (pro active customer information for fiber)
<PERIOD>	is the period of the report. The period can have either of the following formats: YYYYMM Year and month (Report types 001, 002, 003) YYYYMMDD Year, month and day (Report types 004, 006, 013, 014) YYYYMMDD_YYYYMMDD Specific start and end date (Report type 005)
<NNN>	is a unique sequence number starting with 001 in case of several reports created of the same period. Remark: normally only the report with the 001 number exists, but in case of an error or recalculation, a newer version with a higher sequence number may exist. Remark: Report 003 (IP Pool) is usually created daily. NNN is used to create unique names within the current month. Remark for Report 007, 013 and 014. NNN is min. 1 and max. 10 digits representing the Information-Request-Id
[<XXXXXX>_]	is the notification Id, a number with max. 20 digits. This Id is only available in the file name of the reports 013 and 014.
<ext>	is the extension of the file (aka “file type”): xml XML format (report types 007, 013 and 014) csv Comma-separated-variable (all other report types)

Examples:

100800_002_200310_001.csv	<i>Accumulated Repair Time</i> Report of ISP 100800 for the month October 2003.
100800_004_20060814_001.csv	<i>UMSAFA</i> Report of ISP 100800 for the day 14.08.2006.
100800_005_20060802_20060822_001.csv	<i>Leitungswechsel</i> Report of ISP 100800 for the period 2.8.2006 to 22.8.2006
100800_006_20060814_001.csv	<i>UMSA Standalone</i> Report of ISP 100800 for the day 14.08.2006.
100800_013_20100217_28340908723_1.xml	is the 1st "ProKu Copper" Report of ISP 100800 with notificationId 28340908723 on February 17, 2010.
100800_014_20100217_28340908723_1.xml	is the 1st "ProKu Fiber" Report for ISP 100800 with notificationId 28340908723 on February 17, 2010.

4.2 Downloading report files

The ISP has to execute the following command to download the report files of a specific period:

```
scp2 ip<ISP_ID>@138.190.15.181:reports/<ISP_ID>_RRR_YYYYMM_*.csv .
```

for RRR and YYYYMM see above.

No .rdy file is necessary for acknowledge. The reports directory will be periodically purged.

If you don't want to wait until the directory is purged, you can use the following command for downloading:

```
scp2 -u ip<ISP_ID>@138.190.15.181:reports/<ISP_ID>_RRR_YYYYMM_*.csv .
```

The option -u removes source files after copying.

4.3 Format of the reports

The reports have the same format as the reports available on the WSG web interface for download. These (raw) reports provide data for further statistical evaluation as semicolon separated plain ASCII text files with *.csv extension. This feature enables the import of the raw data into spreadsheet applications in a very easy manner.

See the "ISP TT User Manuel" [3] for more information about the content and format of the reports.

5 Implementation hints for ISP

5.1 REASON codes

The document [1] WSG Messages contains a full list of the REASON codes and the corresponding message text.

Since WSG V6.3 REASON codes are numeric or alphanumeric values (A00 to ZZZ).

5.1.1 REASON 998

When REASON 998 (RESULT_CODE=1) is sent a communication failure occurred between the application and the DB.

5.1.2 REASON 999

In this case the hotline must be contacted immediately. This indicates that an error occurred in the DB.

6 List of Values

See document [2] for the list of LOVs. The Id's are referenced in Annex of the WSDL definition.

Sample:

"[LOV-ID: 4004] The requested additional installation support."

7 Appendix A

7.1 Securing a WEB-Service with Powergate

A WEB-Service can be secured by using WSS Security (ref. OASIS Standard <http://www.oasis-open.org/specs/index.php#wssv1.0>). WSS Security Tokens have to be included in the header of the SOAP Requests. Realizing this feature is dependent of the implementation of the WS Clients.

The header has to look as follows:

```
<soapenv:Header>
  <wsse:Security
    soapenv:actor="http://schemas.xmlsoap.org/soap/actor/next"
    soapenv:mustUnderstand="0"
    xmlns:wsse="http://docs.oasis-open.org/wss/2004/01/oasis-200401-wss-wssecurity-secext-1.0.xsd">
    <wsse:UsernameToken
      <wsse:Username>586221</wsse:Username>
      <wsse:Password>te3LsD43</wsse:Password>
    </wsse:UsernameToken>
    </wsse:Security>
  </soapenv:Header>
```

Concerning "Username" and "Password" please refer to 7.5 Login .

7.2 Setting up a new WEB-Service

1. Determining the URL for the WEB-Service
2. Implementing the client in such a way that the WSS Security Tokens are included in the SOAP (see following example).

7.3 Sample Client with wss4j

wss4j will be used for creating the WSS Header (ref. <http://ws.apache.org/wss4j/>). The called service offers the method "list()" which will return the received header as a string.

```
public String[] doCall(
    com.swisscom.powergate.ws.TestwsSoapBindingStub binding)
    throws Exception {

    String userName = "58622141964";
    String pwd = "tXVLsD43";

    Stub bindingStub = (Stub) binding;

    Document doc = DocumentBuilderFactory.newInstance()
        .newDocumentBuilder().newDocument();

    Element element = doc.createElementNS(WSConstants.WSSE_NS_OASIS_1_0,
        "wsse:" + WSConstants.USERNAME_TOKEN_LN);
```

```

WSSecurityUtil.setNamespace(element, WSConstants.WSSE_NS_OASIS_1_0,
    WSConstants.WSSE_PREFIX);

// create username element
Element elementUsername = doc.createElementNS(
    WSConstants.WSSE_NS_OASIS_1_0, "wsse:"
    + WSConstants.USERNAME_LN);
WSSecurityUtil.setNamespace(elementUsername,
    WSConstants.WSSE_NS_OASIS_1_0, WSConstants.WSSE_PREFIX);
elementUsername.appendChild(doc.createTextNode(userName));
element.appendChild(elementUsername);

// create password element
Element elementPassword = doc.createElementNS(
    WSConstants.WSSE_NS_OASIS_1_0, "wsse:"
    + WSConstants.PASSWORD_LN);
WSSecurityUtil.setNamespace(elementPassword,
    WSConstants.WSSE_NS_OASIS_1_0, WSConstants.WSSE_PREFIX);
elementPassword.appendChild(doc.createTextNode(pwd));
element.appendChild(elementPassword);

// set the header
bindingStub.setHeader(WSConstants.WSSE_NS_OASIS_1_0, "wsse:Security",
    element);
assertNotNull("binding is null", binding);

// Time out after a minute
binding.setTimeout(60000);

return binding.list();
}

public void testHeaders() throws Exception {

    com.swisscom.powergate.ws.TestwsSoapBindingStub binding;
    try {

        binding = (com.swisscom.powergate.ws.TestwsSoapBindingStub) new
com.swisscom.powergate.ws.TestWSServiceLocator()
        .gettestws(new URL(
            "https://www.zugang.ch:44300/bg/services/testws"));

        Stub bindingStub = (Stub) binding;

        // keep session
        bindingStub.setMaintainSession(true);

        System.out.println("\n\rCALL 1");
        String[] headers = doCall(binding);
        for (int i = 0; i < headers.length; i++) {
            System.out.println(headers[i]);
        }
    }
}

```

```

        System.out.println("\n\rCALL 2");
        headers = doCall(binding);
        for (int i = 0; i < headers.length; i++) {
            System.out.println(headers[i]);
        }

    } catch (javax.xml.rpc.ServiceException jre) {
        if (jre.getLinkedCause() != null)
            jre.getLinkedCause().printStackTrace();
        throw new junit.framework.AssertionFailedError(
            "JAX-RPC ServiceException caught: " + jre);
    }
    assertNotNull("binding is null", binding);

    // Time out after a minute
    binding.setTimeout(60000);
}

```

7.4 Errors

7.4.1 Authentication error

In case of an authentication error the system will return *HTTP Status 403 Forbidden*. The error will be returned inside the SOAP body as <SOAP-ENV:Fault>

```

<SOAP-ENV:Fault>
  <faultcode>SOAP-ENV:Client</faultcode>
  <faultstring>Authentication required (realm='soap')</faultstring>
</SOAP-ENV:Fault>

```

7.4.2 Backend Server not available:

```

HTTP/1.1 502 Bad Gateway
Date: Thu, 20 Apr 2006 11:49:22 GMT
Server: Apache
Pragma: no-cache
Connection: close
Cache-Control: no-cache
Content-Type: text/xml

```

```

<?xml version="1.0" encoding="utf-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Body>
    <SOAP-ENV:Fault>
      <faultcode>SOAP-ENV:Server</faultcode>
      <faultstring>Upstream server is not available</faultstring>
      <faultactor>https://wstest.swisscom.com/wsg/oms01/bb/WsgBb</faultactor>
      <detail>Upstream server is not available</detail>
    </SOAP-ENV:Fault>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>

```


7.4.3 Error on the Backend Server

Here an example in the form of a standard http error:

```
HTTP/1.1 500 Internal Server Error
Date: Wed, 19 Apr 2006 14:27:03 GMT
Server: Apache
Set-Cookie: Navajo=AUCAUVoasEVIDVm29EUVyRYuqxwWRG4ozwKJEewSpvKoVwVEz9mjclAEQ0goalH3ZnB9g/RXA-; path=/;
secure; HttpOnly
Set-Cookie: JSESSIONID=AEC47F88F1B35E4329C5C58F40841B4E; path=/wsg/e2e/bb/wsg-outbound; secure; HttpOnly
Content-Type: text/xml;charset=utf-8
Connection: close
```

```
<?xml version="1.0" encoding="utf-8"?>
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <soapenv:Body>
    <soapenv:Fault>
      <faultcode xmlns:ns1="http://xml.apache.org/axis/">
        ns1:Client
      </faultcode>
      <faultstring>No such operation 'list'</faultstring>
      <detail>
        <ns2:hostname xmlns:ns2="http://xml.apache.org/axis/">
          sbe18304.swissptt.ch
        </ns2:hostname>
      </detail>
    </soapenv:Fault>
  </soapenv:Body>
</soapenv:Envelope>
```

7.4.4 Wrong URL (Webservice not existing)

HTTP/1.1 404 Not Found
Date: Wed, 19 Apr 2006 14:30:38 GMT
Server: Apache
Pragma: no-cache
Connection: close
Cache-Control: no-cache
Content-Type: text/xml

```
<?xml version="1.0" encoding="utf-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Body>
    <SOAP-ENV:Fault>
      <faultcode>SOAP-ENV:Client</faultcode>
      <faultstring>mapping for request URI '/wsgdf/e2e/bb/WsgBb' not found</faultstring>
      <faultactor>https://wstest.swisscom.com/wsgdf/e2e/bb/WsgBb</faultactor>
      <detail>mapping for request URI '/wsgdf/e2e/bb/WsgBb' not found</detail>
    </SOAP-ENV:Fault>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

7.4.5 No authorisation for the service but valid Login

HTTP/1.1 403 Forbidden
Date: Wed, 19 Apr 2006 14:31:40 GMT
Server: Apache
Pragma: no-cache
Connection: close
Cache-Control: no-cache
Content-Type: text/xml

```
<?xml version="1.0" encoding="utf-8"?>
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/">
  <SOAP-ENV:Body>
    <SOAP-ENV:Fault>
      <faultcode>SOAP-ENV:Client</faultcode>
      <faultstring>Your are not authorized to access the requested resource</faultstring>
      <faultactor>https://wstest.swisscom.com/wsg/prod/bb/WsgBb</faultactor>
      <detail>Your are not authorized to access the requested resource</detail>
    </SOAP-ENV:Fault>
  </SOAP-ENV:Body>
</SOAP-ENV:Envelope>
```

7.5 Login from the user point of view

Two possibilities can be used for Login:

- Login with **PUI** (Personal User Identification: 11-digit number) and **Password** (see password policy). The PIU will be sent to the user by email or letter after registration. It has to be used for the first Login.

The password will be sent to the user by letter and can be changed arbitrarily by the user after the first Login.

- Login with username (unique alphanumeric identification) and **Password** (see password policy). The username (formerly also known as synonym) can be created by the user after the first login with the PUI. It must start with an alphabetic character, must be 7-20 characters in length and must be unique. Maybe the user needs several trials till a unique and not yet used name could be found. The password will be sent to the user by letter and can be changed arbitrarily by the user after the first Login.

Passwordpolicy

- Password must contain at least 8 characters and should be maximal 15 characters long.
- Password must contain at least one special character(.,;:%- _@#+/*?()&\$"!).
- Password must contain at least one number.
- Password must consist of both upper- and lowercase letters.

The 15 former passwords can't be reused