

X&YComm SIPSP V1.10 Database Instructions

1. SIPSP Database Overview

SIPSP supports MySQL database to provide web-based configuration and CDR records., as shown in Figure 1-1.

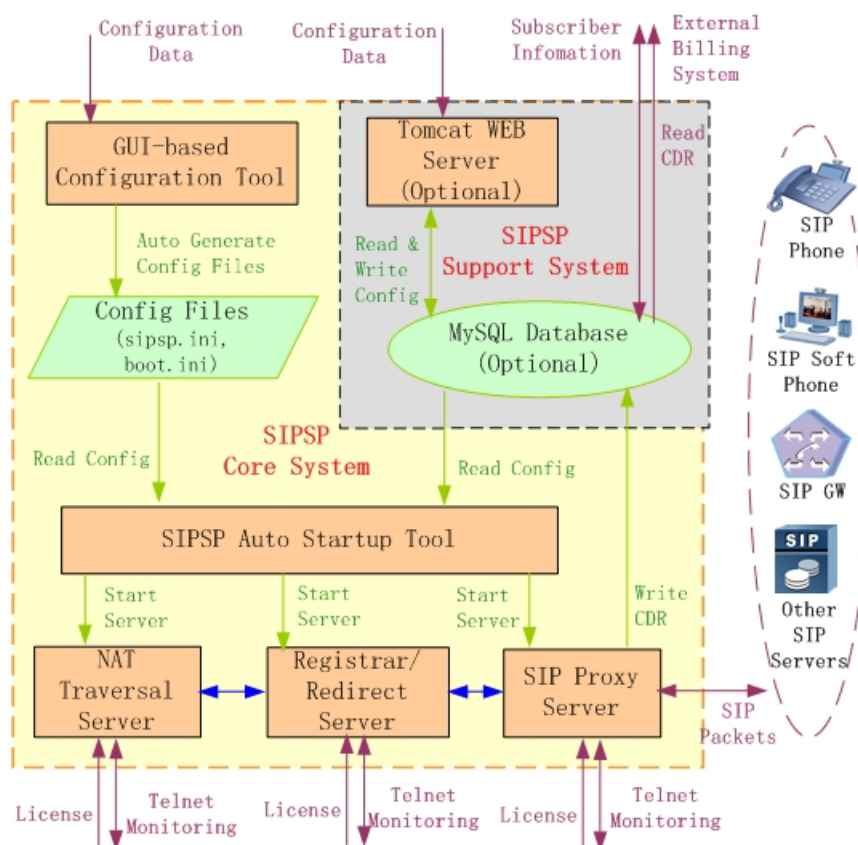


Figure 1-1 SIPSP System Architecture

This document will illustrate the SIPSP MySQL database interfaces for setting subscribers and getting CDR records.

1.1 SIPSP Database Setup

To install and setup MySQL database , take the following steps:

Step 1 : Download and install MySQL from its website, with the version 4.0.18 or later **but below 4.1.x**.

Step 2 : Execute the SQL command file "SIPSP-Db.sql", and it will create a database named "sipspdb".

1.2 SIPSP Database Tables

The SIPSP database "sipspdb" comprises a set of tables , described in Table 1-1.

Table 1-1 SIPSP Database Tables Overview

Table	Description	Remark
t_cdr	Store CDR enable/disable options.	Operated by web scripts
t_cdr_call_event	Store call event reports, including successfully established calls and unsuccessful calls.	Generated by SIPSP during real-time running
t_cdr_log	Store CDR records of successfully established calls.	
t_acl	Store ACL configuration data obtained from web pages.	Operated by web scripts during web-based configuration
t_ipplan	Store dial plans configuration data.	
t_manageruser	Store web managers configuration data.	
t_mdomain	Store web domains configuration data.	
t_proxy	Store proxy servers configuration data.	
t_proxy_nat	Store NAT traversal servers configuration data.	
t_rs	Store registrar/redirect servers configuration data.	
t_scallback	Store subscribers' detailed call-blocking features data.	
t_scalfowardall	Store subscribers' detailed call-forward-all features data.	
t_scalfowardbusy	Store subscribers' detailed call-forward-busy features data.	
t_scallscreen	Store subscribers' detailed call-screening features data.	
t_systemparam	Store system default parameters configuration data.	
t_telnet	Store telnet parameters configuration data.	
t_user	Store subscribers' configuration data.	

To read and write the subscribers information, you need operate the following tables in Table 1-2. For more information, see Chapter 2.

Table 1-2 SIPSP Database Tables for Subscribers Operation

Table	Relational Tables
t_user	--- Related with <i>t_scallback</i> , for detailed call-blocking features --- Related with <i>t_scalfowardall</i> , for detailed call-forward-all features --- Related with <i>t_scalfowardbusy</i> , for detailed call-forward-busy

	features --- Related with <i>t_callscreen</i> , for detailed call-screening features
t_scallback	--- Related with <i>t_user</i> , with the field "userid"
t_scalfoward all	--- Related with <i>t_user</i> , with the field "userid"
t_scalfoward busy	--- Related with <i>t_user</i> , with the field "userid"
t_callscreen	--- Related with <i>t_user</i> , with the field "userid"

To read the CDR information, you need operate the following tables in Table 1-3. For more information, see Chapter 3.

Table 1-3 SIPSP Database Tables about CDR Information

Table	Description
t_cdr	CDR enable/disable option settings.
t_cdr_call_event	With the key "id", records detailed events for all the calls.
t_cdr_log	With the key "id", records only the CDR of successfully established calls.

2. SIPSP Subscriber Tables

2.1 Table *T_user*

2.1.1 Creating Table *T_user*

The table *t_user* stores subscribers' configuration data, which is created by the following SQL command lines :

```
CREATE TABLE `t_user` (
  `id` int(12) unsigned NOT NULL default '0',
  `isenable` int(2) NOT NULL default '0',
  `usertype` int(2) NOT NULL default '0',
  `name` varchar(64) NOT NULL default "",
  `password` varchar(64) default NULL,
  `alaises` varchar(64) default NULL,
  `usergroup` varchar(64) default NULL,
  `authtype` int(3) NOT NULL default '0',
  `limitdialogtype` int(2) NOT NULL default '0',
  `limitdialogcount` int(10) NOT NULL default '0',
  `accesshostname` varchar(128) default NULL,
  `accessproxyname` varchar(128) NOT NULL default "",
  `isreguserstaitc` int(3) NOT NULL default '0',
  `reguserstaticcontact` varchar(128) NOT NULL default "",
  `description` varchar(128) NOT NULL default "",
  `iscallblockvalid` int(3) NOT NULL default '0',
  `iscallscreenvalid` int(3) NOT NULL default '0',
  `iscallforwardallvalid` int(3) NOT NULL default '0',
  `iscallforwardbusyvalid` int(3) NOT NULL default '0',
  PRIMARY KEY (`id`),
  UNIQUE KEY `name` (`name`),
  KEY `name_2` (`name`)
) TYPE=MyISAM;
```

2.1.2 Fields Description for *T_user*

Table 2-1 Table *t_user* Fields Description

Fields	Description
id	This field is the primary KEY of the table, and it is the unique internal identifying ID for a subscriber, which is generated by scripts.
isenable	This field specifies whether this user account is enabled or disabled.

	<p>If it is set to 0, this account is disabled, and this user is not able to register and call.</p> <p>If it is set to 1, this account is enabled.</p>
usertype	<p>This field specifies whether the user name is a wildcard user name.</p> <p>If it is set to 0, that means this user name just represent one unique account, and no wildcard characters are contained in the user name.</p> <p>If it is set to 1, that means this user name represents a group of accounts, not just one account, and the user name uses regular expressions , just the same as the Key of the dial plan, see “SIPSP user manual” 5.11.1 and 5.12.1.</p> <p>For more information, refer to “SIPSP User manual” 5.11.1.</p>
name	This field specifies the unique name of the user, e.g. 1000, without the domain name.
alaises	This field specifies another name for this user, You can also leave this field to be NULL.
usergroup	This field specifies the group name which this user belongs to, which can be used to classify users for management, especially when the number of users is large.
authtype	<p>This field specifies whether the user needs authentication when registering to SIPSP.</p> <p>If it is set to 0, no authentication is required for the user.</p> <p>If it is set to 1, the MD5 Digest authentication is required when the user is registering.</p>
password	If the field <i>authtype</i> is set to 1, this field records the password of the user, otherwise it is not used and just remains blank.
limitdialogtype	<p>This field specifies the way to set the maximum concurrent dialogs of this user.</p> <p>If it is set to 0, the global default value , “Default Max Dialogs Per User” is applied to this user, see “SIPSP user manual” 5.14.2.</p> <p>If it is set to 1, that means you can specify the value for this user through the field “limitdialogcount”.</p>

limitdialogcount	<p>This field specifies the maximum concurrent dialogs of this user, and it is valid only when the field “limitdialogtype” is set to 1.</p> <p>If this field set to 0, that means no limitation is applied for this user.</p>
accesshostname	This field is reserved for future use.
accessproxyname	This field is reserved for future use.
isreguserstaitc	<p>This field specifies whether this user is enabled to perform static registering.</p> <p>If it is set to 0, means this user is not permitted to static registering, and he must perform dynamic registering to SIPSP , and the following “reguserstaticcontact” field is invalid.</p> <p>If it is set to 1, means static registering is enabled for this user, and you must enter its fixed contact address through the field “reguserstaticcontact”.</p> <p>For more information, refer to “SIPSP User manual” 5.11.1.</p>
reguserstaticcontact	<p>This field specifies the fixed contact address for a static registering user.</p> <p>This field is valid only if the “isreguserstaitc” field is set to 1.</p> <p>The format of this field is like “name@ip-address[:port]”, where the “ip-address” is the own address of the user, and the “port” is the own port of the user.</p>
description	<p>This field specifies the user’s detailed description information, such as the user’s contact information, for management convenience.</p> <p>The max length is 128 characters.</p>
iscallblockvalid	<p>This field specifies whether the call-blocking feature is set for this user.</p> <p>If it is set to 0, this user has no privileges to call any long distance numbers, either domestic or oversea.</p> <p>If it is set to 1, this user has some privileges to call long distance numbers, and the detailed information is given in <i>t_scallblock</i> table, with the same “userid”.</p>
iscallscreenvalid	This field specifies whether the call-screening feature is

	<p>enabled for this user.</p> <p>If it is set to 0, it means this user has not set any screening numbers, and the call-screening feature is disabled.</p> <p>If it is set to 1, it means this user has set some screened numbers, and the detailed numbers are given in <i>t_scallscre</i> table, with the same "userid".</p> <p>Since a user can set multiple (max 6) screened numbers , so a user may have multiple corresponding records in <i>t_scallscre</i> table, with the same "userid".</p>
iscallforwardallvalid	<p>This field specifies whether the call-forward-all feature is enabled for this user.</p> <p>If it is set to 0, it means this user has not set the forwarding number for this feature.</p> <p>If it is set to 1, it means this user has set the forwarding number for the call-forward-all feature, thus this feature is enabled. The detailed number is given in <i>t_scallforwardall</i> table, with the same "userid".</p>
iscallforwardbusyvalid	<p>This field specifies whether the call-forward-busy /noanswer feature is enabled for this user.</p> <p>If it is set to 0, it means this user has not set the forwarding number for this feature.</p> <p>If it is set to 1, it means this user has set the forwarding number for this feature, thus this feature is enabled. The detailed number is given in <i>t_scallforwardbusy</i> table, with the same "userid".</p>

2.2 Table *T_scallblock*

2.2.1 Creating Table *T_scallblock*

The table *t_scallblock* stores subscribers' detailed call-blocking features data, which is created by the following SQL command lines :

```
CREATE TABLE `t_scallblock` (
```

```

`userid` int(12) unsigned NOT NULL default '0',
`IsLongDistanceCallValid` int(1) NOT NULL default '0',
`IsOtherCountryCallValid` int(1) NOT NULL default '0',
`id` int(12) unsigned NOT NULL default '0'
) TYPE=MyISAM;

```

2.2.2 Fields Description for *T_scallback*

Table 2-2 Table *t_scallback* Fields Description

Fields	Description
userid	This field is the unique internal identifying ID for a subscriber, which is the relational field with the table <i>t_user</i> .
IsLongDistanceCallValid	This field specifies whether the user with the <i>userid</i> has the privilege of calling domestic long distance numbers. If it is set to 0, it means this user can not call a domestic long distance number. If it is set to 1, it means this user has this privilege of calling a domestic long distance number.
IsOtherCountryCallValid	This field specifies whether the user with the <i>userid</i> has the privilege of calling overseas long distance numbers. If it is set to 0, it means this user can not call an overseas long distance number. If it is set to 1, it means this user has this privilege of calling an overseas long distance number.
id	This field is the unique internal identification for the records of <i>t_scallback</i> . Every time when a new record is generated, this field is increased by one.

2.3 Table *T_callscreen*

2.3.1 Creating Table *T_callscreen*

The table *t_callscreen* stores subscribers' detailed call-screening features data, which is created by the following SQL command lines :

```
CREATE TABLE `t_callscreen` (
```

```

`userid` int(12) unsigned NOT NULL default '0',
`userainfo` varchar(255) NOT NULL default "",
`id` int(12) unsigned NOT NULL default '0'
) TYPE=MyISAM;

```

2.3.2 Fields Description for *T_callscreen*

Table 2-3 Table *t_callscreen* Fields Description

Fields	Description
userid	This field is the unique internal identifying ID for a subscriber, which is the relational field with the table <i>t_user</i> .
userainfo	This field specifies one of the screened number of the user with the <i>userid</i> . The format of the screened number is like "user@domain" or "user" without "domain", and the format of domain is like "server address [: port]", with the port optional. If the domain is absent, the user is considered as that of this SIPSP system by default.
id	This field is the unique internal identification for the records of <i>t_callscreen</i> . Every time when a new record is generated, this field is increased by one.

2.4 Table *T_scalfwardall*

2.4.1 Creating Table *T_scalfwardall*

The table *t_scalfwardall* stores subscribers' detailed call-forward-all feature data, which is created by the following SQL command lines :

```

CREATE TABLE `t_scalfwardall` (
  `userid` int(12) unsigned NOT NULL default '0',
  `userainfo` varchar(255) NOT NULL default "",
  `id` int(12) unsigned NOT NULL default '0'
) TYPE=MyISAM;

```

2.4.2 Fields Description for *T_scalfwardall*

Table 2-4 Table *t_scalfwardall* Fields Description

Fields	Description
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userid	This field is the unique internal identifying ID for a subscriber, which is the relational field with the table <i>t_user</i> .
userainfo	This field specifies the redirecting number of the user with the <i>userid</i> for all incoming calls. The format of the alternate number is like "user@domain", and the format of domain is like "server address [:port]", with the port optional.
id	This field is the unique internal identification for the records of <i>t_scalforwardall</i> . Every time when a new record is generated, this field is increased by one.

2.5 Table *T_scalforwardbusy*

2.5.1 Creating Table *T_scalforwardbusy*

The table *t_scalforwardbusy* stores subscribers' detailed call-forward-busy/noanswer feature data, which is created by the following SQL command lines :

```
CREATE TABLE `t_scalforwardbusy` (
  `userid` int(12) unsigned NOT NULL default '0',
  `userainfo` varchar(255) NOT NULL default "",
  `id` int(12) unsigned NOT NULL default '0'
) TYPE=MyISAM;
```

2.5.2 Fields Description for *T_scalforwardbusy*

Table 2-5 Table *t_scalforwardbusy* Fields Description

Fields	Description
userid	This field is the unique internal identifying ID for a subscriber, which is the relational field with the table <i>t_user</i> .
userainfo	This field specifies the redirecting number of the user with the <i>userid</i> for all incoming calls, when the user is either busy or does not answer the call after a specified period of time. The format of the alternate number is like "user@domain", and the format of domain is like "server address [:port]", with the port optional.
id	This field is the unique internal identification for the records

	<p>of <i>t_scalforwardbusy</i>. Every time when a new record is generated, this field is increased by one.</p>
--	--

3. SIPSP CDR Tables

3.1 Table *T_cdr*

The table *t_cdr* stores CDR enable / disable options, which is set by web scripts during web configuration and do not need any manual edit.

The fields of *t_cdr* are described in Table 3-1.

Table 3-1 Table *t_cdr* Fields Description

Fields	Description
id	This field is the internal identifying ID for the record.
recordtype	This field specifies whether the CDR record function is enabled or disabled. If it is set to 0, the CDR function is disabled. If it is set to 1, the CDR function is enabled.
iscdrlogenable	This field specifies whether the CDR log for successfully established calls is enabled. If it is set to 0, the CDR log for successfully established calls is disabled. If it is set to 1, the CDR log for successfully established calls is enabled, and the table <i>t_cdr_log</i> will store the detailed logs.
iscdreventenable	This field specifies whether the CDR event log for all the calls is enabled. If it is set to 0, the CDR event log for all the calls is disabled. If it is set to 1, the CDR event log for all the calls is enabled, and the table <i>t_cdr_call_event</i> will store the detailed logs.
radiusgroupname	Reserved for future use.
frequency	Reserved for future use.
billforringtime	Reserved for future use.

3.2 Table *T_cdr_log*

3.2.1 Creating Table *T_cdr_log*

The table *t_cdr_log* stores CDR records of successfully established calls, which is created by the following SQL command lines :

```
CREATE TABLE `t_cdr_log` (
  `id` int(10) NOT NULL auto_increment,
  `callid` varchar(128) NOT NULL default "",
```

```

`fromtag` varchar(128) NOT NULL default "",
`totag` varchar(128) NOT NULL default "",
`iscallerregistered` int(1) NOT NULL default '1',
`callername` varchar(32) NOT NULL default "",
`fromurl` varchar(128) NOT NULL default "",
`fromcontact` varchar(128) NOT NULL default "",
`fromaccessaddr` varchar(128) NOT NULL default "",
`fromaccessport` int(10) NOT NULL default '0',
`iscalleeregisted` int(1) NOT NULL default '1',
`calleename` varchar(32) NOT NULL default "",
`touri` varchar(128) NOT NULL default "",
`tocontact` varchar(128) NOT NULL default "",
`toaccessaddr` varchar(128) NOT NULL default "",
`toaccessport` int(10) NOT NULL default '0',
`invitetime` datetime NOT NULL default '0000-00-00 00:00:00',
`200resptime` datetime NOT NULL default '0000-00-00 00:00:00',
`acktime` datetime NOT NULL default '0000-00-00 00:00:00',
`byetime` datetime NOT NULL default '0000-00-00 00:00:00',
`whoendcall` int(2) NOT NULL default '0',
`iscallendnormal` int(2) NOT NULL default '0',
`calllength` int(10) NOT NULL default '0',
PRIMARY KEY (`id`)
) TYPE=MyISAM;

```

3.2.2 Fields Description for *T_cdr_log*

Table 3-2 Table *t_cdr_log* Fields Description

Fields	Description
id	This field is the unique identifying ID for a CDR log, and this log records the detailed information of a successfully established call. This field is auto generated and increased by one.
callid	This field specifies the Call-ID of this call, e.g. "63e18dcdf3ec4d0384bcad66d0128b7c@192.168.0.188".
fromtag	This field specifies the From-tag of this call, e.g. "ff7f98029918457e87661642b7e3aaea".
totag	This field specifies the To-tag of this call, which is the tag of the To-url of this call, e.g. "50b99a492cdb413fbc14841bbd303f08".
iscallerregistered	This field specifies whether the caller is a local user, that is, he is registered to SIPSP. If it is set to 0, the caller is not a local user.

	If it is set to 1, the caller is a local user.
callername	This field specifies the username of the caller, without the domain suffix, e.g. "1000".
fromurl	This field specifies the From-url of this call, which is the whole abstract name of the caller, e.g. "1000@sip.xxx.net".
fromcontact	This field specifies the private contact address/port of the caller, e.g. "192.168.0.188:14633".
fromaccessaddr/ fromaccessport	These two fields specifies the actual IP address/port of the caller with which the call reaches SIPSP. In NAT cases, this address/port is usually a public address, not identical to the <i>fromcontact</i> , e.g. "202.1.2.3", "10000", that is, "202.1.2.3:10000" is the caller's actual reaching address.
iscalleeregisted	This field specifies whether the callee is a local user, that is, he is registered to SIPSP. If it is set to 0, the callee is not a local user. If it is set to 1, the callee is a local user.
calleename	This field specifies the username of the callee, without the domain suffix, e.g. "2000".
tourl	This field specifies the To-url of this call, which is the whole abstract name of the callee, e.g. "2000@sip.xxx.net".
tocontact	This field specifies the private contact address/port of the callee, e.g. "192.168.0.199:8234".
toaccessaddr/ toaccessport	These two fields specifies the actual IP address/port of the callee with which the call reaches SIPSP. In NAT cases, this address/port is usually a public address, not identical to the <i>tocontact</i> , e.g. "202.20.10.6", "4785", that is, "202.20.10.6: 4785" is the callee's actual reaching address.
invitetime	This field specifies the arrival time of the INVITE request of this call, e.g. "2004-11-21 10:14:36".
200resptime	This field specifies the arrival time of the 200 OK response for the INVITE request, e.g. "2004-11-21 10:14:43".
acktime	This field specifies the arrival time of the ACK request of this call, which is the confirmation for selecting the callee, e.g. "2004-11-21 10:14:43".
byetime	This field specifies the arrival time of the BYE request of this call, e.g. "2004-11-21 10:15:56".
whoendcall	This field specifies which side first sends out the BYE request. If it is set to 0, this means the caller sends out BYE first. If it is set to 1, this means the callee sends out BYE first. If it is set to 2, this means the SIPSP cuts off this call.
iscallendnormal	This field specifies the end cause of this call. If it is set to 0, this means the call is ended normally, with either the caller or the callee sending out BYE.

	<p>If it is set to 1, this means the call is cut off by SIPSP, and that it is automatically killed due to the dialog-hanging-timer timeout.</p> <p>If it is set to 2, this means the call is cut off by SIPSP, and that it is manually killed by the administrator from console or telnet-tty.</p>
calllength	This field gives the length of the call, which is calculated from <i>byetime</i> minus <i>200time</i> .

3.3 Table *T_cdr_call_event*

3.3.1 Creating Table *T_cdr_call_event*

The table *t_cdr_call_event* stores call event reports including successfully established calls and unsuccessful calls, which is created by the following SQL command lines :

```
CREATE TABLE `t_cdr_call_event` (
  `id` int(10) NOT NULL auto_increment,
  `callid` varchar(128) NOT NULL default "",
  `inorout` int(1) NOT NULL default '0',
  `callername` varchar(32) NOT NULL default "",
  `calleename` varchar(32) NOT NULL default "",
  `isrecvfinalresp` int(1) NOT NULL default '0',
  `invitetime` datetime NOT NULL default '0000-00-00 00:00:00',
  `finalresptime` datetime NOT NULL default '0000-00-00 00:00:00',
  `finalstatuscode` int(10) NOT NULL default '0',
  `finalstatusreason` varchar(64) NOT NULL default "",
  `redirectedurl` varchar(128) NOT NULL default "",
  PRIMARY KEY (`id`)
) TYPE=MyISAM;
```

3.3.2 Fields Description for *T_call_event*

Table 3-3 Table *t_cdr_call_event* Fields Description

Fields	Description
id	This field is the unique identifying ID for a call event. This field is auto generated and increased by one.
callid	This field specifies the Call-ID of this call, e.g. "63e18dcdf3ec4d0384bcad66d0128b7c@192.168.0.188" . This field is identical to the field <i>callid</i> of table <i>t_cdr_log</i> .
inorout	This field specifies the direction of the call, whether incoming to SIPSP or outgoing from SIPSP.

	<p>If it is set to 0, it means this call event is an incoming call to SIPSP.</p> <p>If it is set to 1, it means this call event is an outgoing call from SIPSP.</p>
callername	<p>This field specifies the username of the caller, without the domain suffix, e.g. "1000" .</p> <p>This field is identical to the field <i>callername</i> of table <i>t_cdr_log</i>.</p>
calleename	<p>This field specifies the username of the callee, without the domain suffix, e.g. "2000" .</p> <p>This field is identical to the field <i>calleename</i> of table <i>t_cdr_log</i>.</p>
isrecvfinalresp	<p>This field specifies whether this call has received a final response.</p> <p>If it is set to 0, this means the final response is not received.</p> <p>If it is set to 1, this means the final response is received.</p>
invitetime	<p>This field specifies the arrival time of the INVITE request of this call, e.g. "2004-11-21 10:14:36".</p>
finalresptime	<p>This field specifies the arrival time of the final response for the INVITE request, either 200 or 4xx or 5xx or 6xx.</p> <p>If <i>isrecvfinalresp</i> is set to 1, this field is set to an actual time, e.g. "2004-11-21 10:14:43".</p> <p>If <i>isrecvfinalresp</i> is set to 0, this field is set to zero.</p>
finalstatuscode	<p>This field specifies the final response code of this call, e.g. "200" or "403" or any others.</p> <p>If <i>isrecvfinalresp</i> is set to 0, this field is blank.</p>
finalstatusreason	<p>This field specifies the text reason description of the final response.</p>
redirectedurl	<p>This field specifies the redirecting url string , if the call is redirected , e.g. in the call-forwarding feature.</p> <p>If the call is not redirected, this field is blank.</p>