Binary for Solaris - ISUP

Release Notes for Version 6.00

1 Overview

This release is the first release since V5.00 and includes enhancements to the licensing mechanism to support new format tokens in license files.

This release also adds support for the formatting of ITU INR messages that contain no optional parameters and is fully backwards compatible with the previous release.

2 New Functionality

2.1 Option to control formatting of ITU INR message

A new per-circuit group option, ISPX1GOP_NO_EOOP (0x00080000, bit 19), has been added to the 'ext_1_options' field in the Configure Circuit Group Request (ISP_MSG_CNF_GRP, 0x7701) message.

The default behaviour of the module is to add an End of Optional Parameters octet to the end of messages (that may contain optional parameters) when no optional parameters are present. Setting the ISPX1GOP_NO_EOOP option will cause ITU INR messages containing no optional parameters to be transmitted to the network without the End of Optional Parameters octet. This option only applies to ITU INR messages and should only be enabled for ISUP variants where no optional parameters are permitted in the message.

Dialogic
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Updated 09-Apr-09

Binary for Solaris - ISUP

Release Notes for Version 6.01

1 Overview

This is a maintenance release with a number of enhancements and corrections as detailed below. It enhances support for German ISUP and includes an option to automatically reject certain CUG calls.

Additional new functionality includes support for configurations with a SIF length longer than 272 octets. This can be used, for example, with SIGTRAN systems using BICC over M3UA.

If configuring the extended SIF length support then the s7_mgt utility contained in the Development Package for Solaris V4.01 or later must be used. In addition, the system must be configured with an appropriate number of large message structures (LMSGs). See the Development Package documentation and release notes for further details.

This release is backwards compatible with the previous release.

2 New Functionality

2.1 Enhance support for German ISUP

This release extends support for German ISUP. When this variant (ISPGVAR_GER, 0x03) is selected in the Configure Circuit Group Request (ISP_MSG_CNF_GRP, 0x7701) message, the following additional parameters may now be used in the IAM message:

ITU parameters

- Call diversion treatment indicators
- Call offering treatment indicators
- Called IN number
- Conference treatment indicators
- CCSS
- CCNR possible indicator
- Display information

German ISUP specific parameters

Parameter Name	Parameter Value				Mandatory /Optional Parameter	Length		Message used
	German ISUP		API					
	Hex	Dec	Hex	Dec		Min	Max	
NP.FF [Nationaler Parameter in der IAM]	0xff	255	0x1f8	504	Optional	1	1	IAM
NP.SSP [Nationaler Parameter für den Service Switching Point]	0xf5	245	0x1f9	505	Optional	1	2	IAM
NP.UKK [Nationaler Parameter für die Ursprungskundenkennug]	0xfc	252	0x1fa	506	Optional	1	3	IAM

2.2 Auto reject CUG calls

A new per-circuit group option, ISP1GOP_NOCUG (0x00100000, bit 20), has been added to the ‘ext_1_options’ field in the Configure Circuit Group Request (ISP_MSG_CNF_GRP, 0x7701) message.

If this option is enabled, this will cause incoming calls to be automatically released with cause #29 when the ‘Closed user group call indicator’, in the Optional Forward Call Indicators parameter, is set to “closed user group call, outgoing access not allowed”.

2.3 Extended SIF length support

The module can now be configured to accept and output longer SIF lengths. This is necessary to support configurations which require a SIF length longer than the normal 272 octet limit.

The module configuration parameter ‘max_sif’ can now be set to longer sizes than the 272 (and 64) octet sizes previously recommended. The max_sif parameter can be set to values of up to 4200 octets, but this will be too large for most networks and typically a smaller value should be selected, e.g. 544 octets. The max_sif parameter limits the maximum size of message that can be sent to the network. Messages to and from the User Application are limited only by the size of the message structure.

A new Software Event code is added for the ISP_MSG_ERROR_IND message –

Status		Mnemonic	Id	Parameter 1	Parameter 2	Description
18	0x12	ISPe_NO_MSG	0	0	0	The pool of long messages has been exhausted. If this event occurs then correct operation of the module is not guaranteed.

This event will occur when the module cannot allocate a long message structure (LMSG). The user should consider re-configuring the GCTLOAD module to make more LMSGs available.

Note: No event is reported when there are no short GCT messages (since a short GCT message would be required to report the event).

When the module formats messages for the network layer, it will check that the message length does not exceed the 'max_sif' value. If the message would exceed the max_sif length the module will discard parameters until the message fits (as per the ISUP specification). The first time parameter discard happens (after module configuration) a Maintenance Event Indication (ISP_MSG_MAINT_IND) will be sent,

Status		Data	Mnemonic	Description
72	0x48	0	CCm_GEN_Param_discard	Parameters have been discarded from a message sent to the network layer due to message size limitations. This event will only be reported once.

The event is reported only once to avoid overwhelming the Maintenance module with these events.

2.4 No release on CUG allowed

Now allows CUG calls be conveyed provided that the Closed user group call indicator, in the Optional Forward Call Indicators parameter, is not set to "closed user group call, outgoing access not allowed".

2.5 Support for reception of Forward CPG

Support for the reception of a CPG in the forward direction can be enabled using the option ISPX1GOP_IC_CPG in the ext_1_options field of the Circuit Group Request configuration message (0c7701).

3 Faults Cleared

3.1 BICC: Zero length EAI field in Application Transport parameter is rejected

In previous releases, zero length data EAI fields in the Application Transport parameter caused the received IAM message to be rejected with maintenance event status CCm_APP_len_err_2 (0x42). The handling of this parameter has now been corrected to accept zero length data EAI fields.

3.2 Receipt of user RLC following local release

In previous releases, if it is determined that an incoming call must be locally released for instance if user to user service requests are not supported in the IAM and if ISUP subsequently receives an RLC in response from the User (instead of REL), the received RLC is no longer conveyed to the network. Under such conditions, on reception of the user RLC, this message is now ignored and a REL will be sent with the corresponding release cause to the network.

3.3 Receipt of user RLC following user REL

ISUP now guards against the sending of a User RLC, to the network, immediately after sending User REL. Previously, if received the RLC from the User was conveyed to the network.

3.4 Slow license validation

Some users have experienced problems with slow license validation on certain platforms. Previous releases worked around this problem but required licenses to be reactivated. With this release the problem is corrected without the need to reactivate the license.

Dialogic
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Binary for Solaris - ISUP

Release Notes for Version 6.02

1 Overview

This release enhances the ISUP binary to support up-to 512 remote destination point codes for circuit group configuration.

This release is backwards compatible with the previous release.

2 New Functionality

2.1 Support for 512 Remote Destinations point codes.

The circuit group configuration can now support up to 512 remote destination point codes.

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Binary for Solaris - ISUP

Release Notes for Version 6.03

1 Overview

This release enhances the ISUP application heartbeat mechanism so that it can be used in conjunction with BICC which does not support the concept of hardware blocking.

It also adds circuit utilisation measurements for ISUP circuit groups and support for 8-bit SLS values for use with 24-bit Point Codes. The release also includes enhancements to the operation of management resets to ensure circuits are fully returned to the idle state irrespective of the operational state of the application

The use of trial mode is now limited to one hour but in all other respects this release is backwards compatible with the previous release.

2 New Functionality

2.1 Application Heartbeat for BICC

Prior to this release, when the ISUP heartbeat timer expired ISUP would send a hardware-blocking message to the remote signaling point for each affected circuit group. As BICC does not support hardware-blocking the functionality has been modified such that on heartbeat timer expiry for BICC circuit groups will send a circuit group reset message followed by maintenance-blocking message.

2.2 Circuit Group Statistics

ISUP now gathers a number of call completion and circuit occupancy statistics on a per circuit group basis which can be read on-demand by the user and optionally reset. The following statistics are gathered:

- Number of Incoming call attempts
- Number of Outgoing call attempts
- Number of Incoming calls answered
- Number of Outgoing calls answered.
- Total call duration of completed calls.
- Maximum number of circuits active at one time.

These statistics can be assessed using the following new ISUP message:

MESSAGE HEADER	
FIELD NAME	**MEANING**
type	**ISP_MSG_R_GRP_STATS** (0x6719)
id	GID
src	Sending module_id
dst	**ISP_TASK_ID**
rsp_req	Sending layer's bit must be set
hclass	0
status	Set to 1 to reset the measurements or 0 to leave measurements unmodified
err_info	0
len	32

PARAMETER AREA		
OFFSET	**SIZE**	**NAME**
0	1	**version** – must be set to zero.
1	3	**Reserved**
4	4	**period –** The measurement period.
8	4	**ic_attempt** – Incoming call attempts
12	4	**og_attempt** – Outgoing call attempts
16	4	**ic_answered** – Incoming calls answered
20	4	**og_answered** – Outgoing calls answered
24	4	**duration –** Total accumulated call duration for completed calls in the group
28	4	**max_device –** Maximum number of devices busy at one time

2.3 8-bit SLS Support

This release introduces optional support 8-bit SLS values for use in US networks. Selection of 8 bit SLS values is achieved using a new per circuit group option, ISPX1GOP_SLS8 (bit 22, 0x00400000), in the ext_1_options field of the ISP_MSG_CNF_GRP message. This is bit 22 of the <options2> parameter in the ISUP_CFG_CCTGRP command in config.txt.

When ISUP has been configured for 24 bit point codes and the ISPX1GOP_SLS8 option has been set ISUP will set the SLS to the 8 least significant bits of the CIC otherwise it will set the SLS to 5 bits.

3 Other Changes

3.1 Management Reset

Operation of Circuit Group Supervision Management Reset requests has been enhanced to ensure that circuits are fully returned to the idle state irrespective of the operational state of the application.

Previously the circuit was not returned to the idle state until a valid RLC had been received from the application for any circuits that had been carrying active calls prior to the reset. Whilst under normal operating conditions this was fine it could lead to issues in situations where the reason for the management reset was that the application had crashed or had been restarted. Under such conditions the application would not have generated the RLC. The new mode of operation will ensure that in this scenario the restarted application can immediately start receiving calls.

3.2 Trial Mode

When operating in trial mode (using the –t command line option), the period of operation is now restricted to one hour after which the binary will terminate

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