

Panasonic

TAPI Service Provider (TSP)

Release Note

Panasonic Corporation.
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TSP Version 4.3.0.19

Fixed Problem

1. Fixed problem that GList Information on lineGetAddressStatus of ICD Group Line may have different between Telephone and Application when User operates ServiceIn.

Improvement

1. Supported Internet Explorer 10 and later version.

TSP Version 4.3.0.18

Fixed Problem

1. Fixed problem that Application may be slow if Application calls lineGetLineDevStatus/lineGetAddressStatus by LINEADDRESSSTATE_FORWARD when PBX is set FWD/DND.

TSP Version 4.3.0.17

New Feature

1. Supports KX-NSX1000/2000 Ver.1.01 as well as the existing PBXs such as KX-NS, NCP, TDE and TDA.

Refer to the following documents.

- TAPI Change Points to NSX from NS
- KX-Series TSP Installation Manual

Improvements

1. Naming rule of TSP log file is changed to show the logged date & time.
The log data retention period is extended from 4 days to 7 days.
Refer to the following document.
 - KX-Series TSP Installation Manual
2. Additionally supports Microsoft Windows 10.
Refer to the following document.
 - KX-Series TSP Installation Manual

TSP Version 4.2.1.2

Fixed Problems

1. Improved TSP stability of Call and Conference handling.
2. Improved TSP stability when TSP has plural Call.

TSP Version 4.2.0.2**New Feature**

1. Enabled KX_SETMW of Ext(SIP) is supported.
(Refer to Function-Device_Support_chart : LINE_DEVSPECIFIC Messages)

TSP Version 4.2.0.0**New Feature**

1. KX-NS1000 Ver.2.3 is supported.

Fixed Problems

1. Some of CALLINFO structure member values were wrong when an external incoming call is forwarded (Forward-All) to outside the PBX.
 - a. CO line for incoming call
CALLINFO.redirection was wrong
CALLINFO.connected was empty
 - b. CO line for outgoing call
CALLINFO.redirection was empty when the CO line is analog line
2. When an external outgoing call failed due to destination busy, lineGetCallInfo function did not set CalledID in LINECALLINFO structure.

TSP Version 4.1.0.0**New Feature**

1. Windows8(32-bit/64-bit) and Windows Server 2012(64-bit) are supported.

TSP Version 4.0.4.0**New Features**

1. KX-NS1000 is supported.
 - UT series phone is supported.
 - Unified Messaging System (UM) is supported.
 - Setting UM presence number with absent message is supported.
 - etc.

Refer to “PanasonicTAPI-NS1000-ChangePoints.pdf” for more detail.

2. New option for CallerID of transferred call is added.

Fixed Problems

1. Fixes of TSP crash.

- When target extension of message waiting is not opened, clearing message waiting caused TSP crash.
- Forwarding of an external incoming call to analog CO line by an ICD group caused TSP crash.
- When multiple TAPI applications are running, concurrent lineGetAddressCaps() calls sometimes caused TSP crash.

TSP Version 3.4.11.0

Fixed Problems

1. Fix of TSP internal deadlock

TSP caused internal deadlock when;

- lineGetCallStatus is called in certain timing
- During PBX connection recovery procedure.

2. Fix of TSP crash

TSP crashed when certain LAN conditions met.

3. Fix of lineMakeCall error return delay

Error return of lineMakeCall sometimes delayed for several minutes.

TSP Version 3.4.8.0

New Features

1. Conference Group Call Features are added

KX-TDE V4.1 supports conference group call features. lineDevSpecific function is used to support conference group call features. Refer to TAPI Specification V3.4 Annex B: Line Device Specific for more detail.

1.1 Conference Group Monitor On

This feature enables the PBX to start generating event reports relating conference group call. Refer to TAPI Specification V3.4 - "12.1.43 Conference Group Monitor On".

1.2 Conference Group Monitor Off

This feature is used to stop generating event reports relating conference group call. Refer to TAPI Specification V3.4 - "12.1.44 Conference Group Monitor Off".

1.3 Get Conference Group Call Mode

This feature is used to get mode of conference group call features. Refer to TAPI Specification V3.4 - "12.1.45 Get Conference Group Call Mode".

1.4 Get Conference Group

This feature is used to get conference group name, extension number of the caller and group status. Refer to TAPI Specification V3.4 - "12.1.46 Get Conference Group".

1.5 Get Conference Group Member

This feature is used to get members in a conference group from PBX system data. Refer to TAPI Specification V3.4 - "12.1.47 Get Conference Group Member".

1.6 Get Conference Group Attendees

This feature is used to get list of attendees in a conference group call. Refer to TAPI Specification V3.4 - "12.1.48 Get Conference Group Attendees".

1.7 Set Conference Group Name

This feature is used to set/delete conference group name into/from PBX system data. Refer to TAPI Specification V3.4 - "12.1.49 Set Conference Group Name".

1.8 Set Conference Group Member

This feature is used to set/delete members in a conference group into/from PBX system data. Refer to TAPI Specification V3.4 - "12.1.50 Set Conference Group Member".

1.9 Set Conference Flow Status

This feature allows the caller of a conference group call to change voice path status. Refer to TAPI Specification V3.4 - "12.1.51 Set Conference Flow Status".

1.10 Conference Group Status

This message indicates change of conference group call status. Refer to TAPI Specification V3.4 - "12.4.37 Conference Group Status".

1.11 Conference Group Flow Status

This message indicates change of call status of a conference group call member. Refer to TAPI Specification V3.4 - "12.4.38 Conference Group Flow Status".

1.12 lineGetCallInfo

dwConfGroupNo is added for CO line and EXT line. Instead dwReserve[4] is changed to dwReserve[3].

When a group is

- conference group mode, conference group number is set.
- broadcast mode, broadcast group number is set.

Refer to TAPI Specification V3.4 - "12.3 Extended Structures".

2. Support of Verification Code

Verification code is added to ACCOUNTINFO structure as a new parameter. chargedDevice in CSTA-CDReport message is used to fill verification code. When a value is set in chargedDevice, TSP sets verificationCode (new parameter) to ACCOUNTINFO structure with dwVerificationCodeSize and dwVerificationCodeOffset. dwTenantSize and dwTenantSize parameters are replaced with these parameters.

In current TSP, chargedDevice is referred only when callingDevice is not present. And in this case, value of chargedDevice is set to OrigNumber. This condition remains for compatible purpose. It means that when callingDevice is not present and chargedDevice is present, value of chargedDevice is set to both OrigNumber and VerificationCode.
chargedDevice could be set for external outgoing call only.
This new feature is applied to standard mode only.

Note

When verification code is set, total size of ACCOUNTINFO structure becomes bigger than previous version.

3. DID Data in ACCOUNTINFO

DID data (number only) is set to ACCOUNTINFO (Account Information structure - dwDDISize, dwDDIOffset). This parameter was not used in older version.

This feature is applied to standard mode only.

Note

When DID data is set, offset value of subsequent parameter is changed and total size of ACCOUNTINFO structure becomes bigger than previous version.

4. lineGenerateDigits Supports to Internal Call

TSP v3.4 supports lineGenerateDigits to an internal call (from extension to extension).

5. Support of VM Transfer

TSP v3.4 supports VM Transfer as a new feature of lineDevSpecific function.

For more detail, refer to TAPI Specification V3.4 - 12.1.52 VM Transfer

6. Support of lineBlindTransfer

Though PBX does not support single step transfer, TSP v3.4 simulates lineBlindTransfer by combination of CSTA-ConsultationCall and CSTA-TransferCall.

For more detail, refer to TAPI Specification V3.4 - 5.1.6 lineBlindTransfer.

Improvements

1. Detection of Disconnection

Time period to detect disconnection of CSTA communication between TSP and PBX becomes shorter.

When disconnection is detected, LINE_ LINEDEVSTATE (dwParam1 = LINEDEVSTATE_REINIT) is generated. If "Send KX_REINIT and KX_RETRIEVE" option is enabled on TSP configuration dialog, LINE_DEVSPECIFIC (dwParam1 = KX_REINIT) message is generated.

2. Log Improvement

Following information is written in KXTDAINI(x).txt.

- Show TSP run mode (standard or PMSI).
- Show whether TSP is 32-bit or 64-bit.
- Show PBX type name (not only TDA, but also TDE/NCP).

Fixed Problems

1. Fix of Call State for CO-Transferred Call

Call state was wrong in following scenario. It is fixed.

1. External in coming call is delivered to DISA or an extension.
2. DISA or extension answers and transfers to an extension.
-> call state of trunk line was ONHOLDPENDTRANSFER. CONNECTED is correct.

2. Fix of TwoWayRec Error Return

TSP does not return error when VMG number is empty.

TSP v3.4 returns LINEERR_INVALIDADDRESS when VMG number is invalid.

3. Fix of lineDevSpecific(EXT_REDIRECTCALL)

TSP v3.3.1 - lineDevSpecific(EXT_REDIRECTCALL) did not generate LINE_REPLY. This is fixed.

4. Memory leak of logging

Memory leak caused by writing log file is fixed. It was introduced in TSP v3.3.1.

TSP Version 3.3.1.18

New Features

(1) Following 64-bit Windows is supported.

Windows Server 2008

Windows 7

Windows Vista

Windows XP

Note : 64-bit TSP Installer is separate file from 32-bit TSP Installer.

Installer for 32-bit OS : panasonic_kx-tda_tsp_instx86_33118.exe

Installer for 64-bit OS : panasonic_kx-tda_tsp_instx64_33118.exe

Fixed Problems

(1) lineRedirect sometimes caused TAPI service crashed.

TSP Version 3.3.0.8

New Features

(1) Windows 7 (32-bit) is supported.

(2) Registration key for multi PBX settings became unnecessary.

(3) C# SDK becomes available from this version.

Fixed Problems

- (1) PBX Feature : DISA Call Transfer From Outside Destination is supported
- (2) Value of LINECALLINFO.dwOrigin was wrong for external outgoing call through analog CO line.
- (3) Extension number obtained by lineGetAddressCaps was missing in following categories of line.
 - ICD Group
 - Voice Mail Unit
 - PS Group
 - External Pager
- For park line, line name (e.g. "PARK0001") is obtained.
- (4) ICD group name returned from lineGetAddressStatus was sometimes wrong.
- (5) Maximum number of Phone Device was limited .

TSP Version 3.2.1.7

New Features

- (1) 8 PBX connections are supported (maximum 6000 calls/hour as total).
- (2) A new option – CallerID of Transferred Call is added.

Fixed Problems

- (1) DISA Call Transfer From Outside Destination scenario is supported.
- (2) lineUnhold while the line has an offering call was failed.
- (3) lineDevSpecific – SYS_GETSPEEDDIALLIST did not work under certain condition.
- (4) lineShurdown under heavy call traffic caused TSP crash.
- (5) phoneSetDisplay – LCD clear was not worked.
- (6) Call status information during CO-CO talk was sometimes wrong.
- (7) Check Location on configuration dialog – Abort/Cancel caused TSP crash

TSP Version 3.2.0.7

New Features

- (1) Windows Server 2008 32-bit version is supported.
- (2) lineSetLineDevStatus is partially support.
- (3) Retry option (infinite retry) is added to KX_REINIT option.
- (4) When connection between PBX and TSP is recovered with KX_RETRIEVE, TSP is changed to get call status. However there are some cases that call status is not shown correctly (e.g. conference call, RINGING state call).

TSP Version 3.1.1.1

New Features

(1) Call control features to Portable Stations become controllable. This feature is available in NCP500/1000 version 2. Supported call control features are listed below.

- lineMakeCall
- lineHold
- linePark
- linePickup
- lineRedirect
- lineSetupTransfer
- lineSetupConference
- lineCompleteTransfer
- lineAddToConference
- lineSwapHold
- lineCompleteCall (except LINECALLCOMPLMODE_INTRUDE)

Fixed Problems

(1) lineGetLineDevStatus caused TSP crash when this function is called to SYSTEM line or TR0001 line.

TSP Version 3.1.0.7

New Features

- (1) PBX Hospitality Features – Room Status Control Features (check in, check out, room clean up status) are supported.
- (2) Performance improvement while debug mode log files are generated.
- (3) phoneDevSpecific - PHONEEXT_BUTTONPRESS is available in PMSi mode.
- (4) Changing ACD mode does not require system data locking.

Fixed Problems

- (1) All of bug fixes from version 3.0.0.5 to 3.0.0.14 are included.
- (2) Sometimes behavior of TSP Connection Monitor was wrong.
- (3) No TAPI message was generated for CO-CO talk as a result of forward all.
- (4) Supported tenant number was restricted to 8. The maximum number of tenant is now 32. It is used in lineAddressStatus and lineDevSpecific.

TSP Version 3.0.0.4

New Features

- (1) TDE100/200 is supported.
- (2) New IP extension types are supported.
- (3) Windows Vista Business Professional is supported.

Fixed Problems

- (1) If lineGetAddressStatus is performed after set up FWD/DND of Call from CO and Extension to an extension, result of lineGetAddressStatus is wrong.

- (2) Execution of TSPI_lineAddressCaps failed sometimes for an Out of Service extension.
- (3) On some configurations of Microsoft Windows Server, TSP installation fails.
- (4) When an EXT line or CO line changes it's state from INS to OUS and then back to INS, TSP is no longer monitoring the calls on this line.
- (5) TSP sometimes stopped on dual core CPU or multi processor system.
- (6) TSP sometimes returns error when the PBX has certain type of PS, and the PS has a call.
- (7) lineDrop() function to CO-CO call fails when CO line did not provide callerID at the first incoming call.
- (8) Call status becomes wrong after originator of a conference call dropped from the conference call.

TSP Version 2.1.1.0

New Features

- (1) lineDevSpecific(EXT_MANUALCALLWAITING)
Call monitoring feature option is added.

Performance Optimization

- (1) lineInitializeEx
- (2) lineOpen
- (3) lineDevSpecific(EXT_SETNAME)

TSP Version 2.1.0.12

New Features

- (1) New Device Specific Functions
 - a. SYS_GETSPEEDDIALLIST
 - b. SYS_SETSPEEDDIAL
- (2) New Device Specific Events
 - a. KX_LOCALALARM
 - b. KX_EXTREADY
 - c. KX_EXTNOTREADY
 - d. KX_EXTWORKINGAFTERCALL
 - e. KX_EXTBUSY
- (3) KX-TDA600 Features
 - a. 5 digits extension number is supported.
 - b. CSTA new interface protocol is supported.
 - c. Some of GetSystemData request supports wild card.
- (4) Other Modifications
 - a. OHCA control is supported.
 - b. DDI/DID information in event is divided into number and name.
 - c. Multiple access of USB device from Multi PBXs is warned.

Fixed Problems

- (1) linePark does not fill VARSTRING parameter in case of that LINEPARKMODE_NONDIRECTED is specified.

TSP Version 2.0.3.1

New Features

- (1) SVM (Simplified Voice Message) device is supported. This device is added in TDA30 version 2.2.

Fixed Problems

- (1) phoneSetDisplay function sometimes failed to control LCD.
- (2) Re-try of CT Link connection request did not succeed.
- (3) TSP installer seemed to stop for two minutes.
- (4) CT Link connection request via USB sometimes failed.
- (5) lineMakeCall failed after extension is changed to INS from OUS when the extension line is connected to DLC card.

TSP Version 2.0.2.14

Fixed Problems

- (1) TAPI application cannot execute if PBX firmware is 1.1 or older.

TSP Version 2.0.2.13

New Features

- (1) Supports overwrite installation.
- (2) Adds extension number change feature.
(EXT_SETNUMBER function and KX_EXTNUMBER event.)
- (3) Supports Windows Server 2003 for Small Business Server.
- (4) Adds OS check feature at installation.

TSP Version 2.0.0.27

New Features (refer to “New feature of TSP for PBX Ver2.pdf” for detail.)

- (1) Supports Multiple PBX Connection.
- (2) Supports external sensor and IP-PT as new devices.

If TDA supports CTI Enhancement feature(If optional SD card is used), the following enhancement feature can be used.

- (3) New Phone Device Functions & Messages
- (4) TAPI extended telephony service (phoneDevSpecific)
- (5) New features of lineDevSpecific
- (6) New parameters of Extended structure
- (7) New Extended Messages (New parameter of LINE_DEVSPECIFIC message)

Fixed Problems

- (1) Last numeric character of Caller ID of Account Information was lacked when Caller ID notified with CallerID Name.

TSP Version 1.1.0.34(11 Jun 2004)

New Features

- (1) Supports Multiple PBX Connection.(Beta or for Development in third party)
- (2) Adds KX_REINIT, KX_RETRIEVE and KX_RECONFIGURATION events.

Fixed Problems

- (1) The value was not reflected when executing GRP_SETATTRIBUTE in "dwACDMode and dwGroupType" of LINEADDRESSSTATUS.LINEDEVSPECIFIC of the group device.
- (2) Group number obtained by calling lineDevSepcific(GRP_GETTOTALGROUP) was not Incoming Group number.
- (3) CallerID/CalledID was not notified to application when incoming call arrived to analog CO Trunk. This problem was fixed in Version 1.1.0.34; however, you need to use TDA MPR Firmware Version 1.1.
- (4) If USB connection was used as CTI Link and communication error occurred between PBX and PC in log output mode, the communication was stopped by Access Violation.

TSP Version 1.0.2.7:(19 Nov 2003):

New Features

- (1) Supports Windows Server 2003 Standard Edition.
- (2) If TSP is installed on Russian OS, TSP displays Russian EULA during installation. If TSP is installed on other OS, TSP displays English EULA during installation as the same as before.
- (3) Makes possible to obtain Group member list.
- (4) Makes possible to obtain PBX version information.
- (5) Makes possible to use Auto Park.
- (6) Distinguishes between the calling from MakeCall and the calling from MessageWaiting.

Fixed Problems

- (1) Installation failed when the rest of disk space is about 4 GB.
- (2) "repair" feature during installation was deleted because it was unnecessary.
- (3) If the call was received from CO line to extension line and then CallerIDName was notified from network, CallerID of CO line and extension line was not correct.

TSP Version 1.0.1.8(19 Sep 2003):

New Features

- (1) Makes possible to use lineGatherDigits function not only in "connected call state" but also in DIALTONE state.
- (2) Makes possible to use extension number of ACCOUNTINFO information, when a call is made from extension ISDN or received to extension ISDN.
- (3) Changes the place to save log as default :Files\Panasonic\KX-TDA TSP\logs.
<NOTE>When TSP is uninstalled, KX-TDA TSP folder is removed.
See "KX-TDA TSP Installation Manual" for more detail.

Fixed Problems

- (1) DID/DDI information was not set to LINEDEVSPECIFIC in the cases below.
 - (1) VM and DISA line for OFFERING state.
 - (2) Unparked line
- (2) When a CO call was answered by DSS key, UNKNOWN call was made and remained.
- (3) CallerID on TAPI was different from CallerID on the phone depending on the situation when receiving external call.
- (4) When call was transferred by "Transfer" button on the phone, DIALTONE call was not displayed on TAPI depending on the situation.
- (5) Call status was different in Conference by TAPI request or by phone operation. If Conference was set by lineSetConerence() or Conference was set by "CONF" button on the phone, the call state was different as follows.
 - By lineSetupConference():
CONNECTED, ONHOLDPENDCONF, DIALTONE
 - By pressing "CONF" button on the phone:
CONFERENCED, ONHOLDPENDCONF, DIALTONE
- (6) UNKNOWN call was made when executing lineMakeCall on HOLD line.

- (7) When log output was ON and lineMakeCall was executed a few times, the call on the line on which lineMakeCall was executed was UNKNOWN.
(This problem did not always occur on any PC.)
- (8) "msi" file for TDA-TSP remained under C:\WINDOWS\Downloaded Installations if installation was repeated.
- (9) When lineCompleteTransfer was executed with dwTransferMode = CONFERENCE, there was no CONNECTED call in the conference owner line.
(This problem occurred only LAN connection.)
- (10) When SecretBusyOverride was executed by phone(hand), a call remained.

TSP Version 1.0.0.5(14 Jun 2003):

Important

“New features (1) and (2)” and “Fixed Problems (1)” work properly with PBX Firmware Version 1.0053 or later. Therefore, Panasonic strongly recommends PBX Firmware Version 1.0053 or later.

New Features

- (1) Provides CALLRINGING event when a phone starts ringing.
LINE_LINEDEVSTATE(LINEDEVSTATE_RINGING)
LINE_DEVSPECIFIC(KX_CALLRINGING)
- (2) Supports lineUnhold, lineUnpark and linePickup for SLT.
- (3) Provides DID/DDI information in LINEDEVSPECIFIC area of LINECALLINFO.
- (4) Changed log format.
- (5) Changed the installer design.(See “Installation Manual” for more detail.)

Fixed Problems

- (1) If non-ASCII characters were sent from CO as caller ID or DDI/DID, the incoming call was not handled correctly.
- (2) dwAddressSize/Offset of LINEDEVSPECIFIC in account information was not correct.
- (3) Second lineMakeCall in a sequence of lineMakeCalls failed.
- (4) In case of TDA TSP was installed on Windows2000 Server (not professional), Shutdown Watcher did not work properly.
- (5) Under certain conditions, Unknown Call remained.

Additional Limitation

- If an external call is delivered to Voice Mail, Voice Mail Group and DISA, DID/DDI information is not set to CALLINFO on each one until a call is answered by each destination line device.
- If Pickup or Unpark is operated by hand, DID/DDI information is not set to CALLINFO on line device.

TSP Version 1.0.0.3:

New Features

- Supports PMS Interface software.

Panasonic KX-TDA TSP Limitations:

- If an extension user repeatedly adds other parties to establish a conference call with up to eight parties during a two-party conversation and reduces to a two-party conversation, a conference call may not be established. This problem will be fixed in TDA100/200 V1.1 release.
- If a call is active on the TDA PBX when KX-TDA TSP is started, the call info and call status structure reported will not be accurate.
- If a conference call is active on TDA PBX when KX-TDA TSP is started, the conference call will not be reported to TAPI.
- Full TAPI Call Control is supported only for PT Extension type. Other type of devices can be monitored and/or support limited TAPI Call Control functions.
- lineGenerateDigits function is available only for Central Office (CO) Lines.
- lineGenerateDigits function cannot be stopped until the end.
- More than one TSP cannot be installed on one computer.

- lineMonitorDigits, lineGatherDigits and lineGenerateDigits are not supported on PS and extension ISDN.
- LineDrop function cannot be executed to incoming call from CO line that the status is RingBack call.
- If an external call is delivered to Voice Mail, Voice Mail Group and DISA, DID/DDI information is not set to CALLINFO on each one until a call is answered by each destination line device. (Version 1.0.0.5)
- If Pickup or Unpark is operated by hand, DID/DDI information is not set to CALLINFO on line device. (Version 1.0.0.5)