37- SHDSL Configuration Commands

37.1 SHDSL Configuration Command Tree

Description

This chapter gives an overview of nodes that are handled by "SHDSL Configuration Commands".

Command Tree

----configure
----shdsl
----span
- (if-index)
- [no] active
- [no] admin-up
- [no] repeaters
- [no] op-mode
- [no] spectral-profile
- [no] wire-mode
- [no] mgmt-by-stu-r
- [no] regi-set
- [no] min-line-rate
- [no] max-line-rate
- [no] margin-down-worst
- [no] margin-down-curr
- [no] margin-up-worst
- [no] margin-up-curr
- [no] probe
- [no] tc-pam-sele
- [no] efm-hs-sele
- [no] bonding-rate-mode
- [no] min-rate-link1
- [no] max-rate-link1
- [no] min-rate-link2
- [no] max-rate-link2
- [no] min-rate-link3
- [no] max-rate-link3
- [no] min-rate-link4
- [no] max-rate-link4
- [no] tc-pam-link1
- [no] tc-pam-link2
- [no] tc-pam-link3
- [no] tc-pam-link4
- [no] ctc

----unit
- (if-index)
- unit-id
- [no] loop-attenuation
- [no] snr-margin
- [no] loopback-timeout

----segment
- (if-index)
- unit-id
- side

- [no] loopback
- [no] pbo-mode

37.2 SHDSL Span Configuration Command

Command Description

This command allows the operator to manage the SHDSL span profile.

*The lines, which you can configure, are calculated via the next formula: m*n + 1*

o where m is the number of pairs per modem

o where n is from 0 till 24/m - 1

Mixing of different "wire mode" on the same LT is possible as long as the lines are not occupied yet.

User Level

The command can be accessed by operators with xdsl privileges, and executed by operators with xdsl privileges.

Command Syntax

The command has the following syntax:

> configure shdsl span (if-index) [[no] active] [[no] admin-up] [no repeaters | repeaters <Shdsl::SpanConfNumRepeaters>] [no op-mode | op-mode <Shdsl::SpanOperationalMode>] [no spectral-profile | spectral-profile <Shdsl::SpanSpectralProfile>] [no wire-mode | wire-mode <Shdsl::SpanWireMode>] [[no] mgmt-by-stu-r] [no regi-set | regi-set <Shdsl::SpanRegionalSetting>] [no min-line-rate | min-line-rate <Shdsl::BitRate>] [no max-line-rate | max-line-rate <Shdsl::BitRate>] [no margin-down-worst | margin-down-worst <Shdsl::NoiseMarginWC>] [no margin-down-curr | margin-down-curr <Shdsl::NoiseMarginCC>] [no margin-up-worst | margin-up-worst <Shdsl::NoiseMarginWC>] [no margin-up-curr | margin-up-curr <Shdsl::NoiseMarginCC>] [no probe | probe <Shdsl::SpanLineProbeEnable>] [no tc-pam-sele | tc-pam-sele <Shdsl::SpanTCPAMSelection>] [no efm-hs-sele | efm-hs-sele <Shdsl::SpanEFMHandshakeSelection>] [no bonding-rate-mode | bonding-rate-mode <Shdsl::SpanBondingRateControlMode>] [no min-rate-link1 | min-rate-link1 <Shdsl::BitRate>] [no max-rate-link1 | max-rate-link1 <Shdsl::BitRate>] [no min-rate-link2 | min-rate-link2 <Shdsl::BitRate>] [no max-rate-link2 | max-rate-link2 <Shdsl::BitRate>] [no min-rate-link3 | min-rate-link3 <Shdsl::BitRate>] [no max-rate-link3 | max-rate-link3 <Shdsl::BitRate>] [no min-rate-link4 | min-rate-link4 <Shdsl::BitRate>] [no max-rate-link4 | max-rate-link4 <Shdsl::BitRate>] [no tc-pam-link1 | tc-pam-link1 <Shdsl::SpanTCPAMSelection>] [no tc-pam-link2 | tc-pam-link2 <Shdsl::SpanTCPAMSelection>] [no tc-pam-link3 | tc-pam-link3 <Shdsl::SpanTCPAMSelection>] [no tc-pam-link4 | tc-pam-link4 <Shdsl::SpanTCPAMSelection>] [no ctc | ctc <Shdsl::SpanCTCEnable>]

Command Parameters

Table 37.2-1 "SHDSL Span Configuration Command" Resource Parameters

Resource Identifier	Type	Description
(if-index)	Format: <Eqpt::RackId> / <Eqpt::ShelfId> / <Eqpt::SlotId> / <Eqpt::PortId> Field type <Eqpt::RackId> - the rack number Field type <Eqpt::ShelfId>	interface index of the port

Resource Identifier	Type	Description
	- the shelf number Field type <Eqpt::SlotId> - the LT slot number Field type <Eqpt::PortId> - the port number	

Table 37.2-2 "SHDSL Span Configuration Command" Command Parameters

Parameter	Type	Description
[no] active	Parameter type: boolean	*optional parameter* set the span-profile active
[no] admin-up	Parameter type: boolean	*optional parameter* admin status is up
[no] repeaters	Parameter type: <Shdsl::SpanConfNumRepeaters> Format: - the number of SRUs to be configured for this span - range: [0...8]	*optional parameter with default value: 0* number of repeaters
[no] op-mode	Parameter type: <Shdsl::SpanOperationalMode> Format: (native | ima | efm | tdm) Possible values: - native : the operational mode is native - ima : the operational mode is ima - efm : the operational mode is efm - tdm : the operational mode is tdm	*optional parameter with default value: "native"* span operational mode
[no] spectral-profile	Parameter type: <Shdsl::SpanSpectralProfile> Format: (symmetric | asymmetric) Possible values: - symmetric : the spectral mode is symmetric - asymmetric : the spectral mode is asymmetric	*optional parameter with default value: "symmetric"* spectral mode
[no] wire-mode	Parameter type: <Shdsl::SpanWireMode> Format: (two-wire | four-wire | six-wire | eight-wire) Possible values: - two-wire : the M-pair operation is one-pair - four-wire : the M-pair operation is two-pair - six-wire : the M-pair operation is three-pair - eight-wire : the M-pair operation is four-pair	*optional parameter with default value: "two-wire"* M-pair operation wire mode
[no] mgmt-by-stu-r	Parameter type: boolean	*optional parameter* enable the STU-R initiated management flow
[no] regi-set	Parameter type: <Shdsl::SpanRegionalSetting> Format: (annex-a/f | annex-b/g) Possible values: - annex-a/f : Annex A/F Region 1 - annex-b/g : Annex B/G Region 2	*optional parameter with default value: "annex-b/g"* the number specifies regional setting
[no] min-line-rate	Parameter type: <Shdsl::BitRate> Format:	*optional parameter with default value: 192*

Parameter	Type	Description
	- bitrate - unit: kbits/sec	the minimum requested data rate
[no] max-line-rate	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 5696* the maximum requested data rate
[no] margin-down-worst	Parameter type: <Shdsl::NoiseMarginWC> Format: - a noise margin value of worst conditions - unit: db - range: [-11...10]	*optional parameter with default value: -11* target relative margin in dwnstrm for worst case noise
[no] margin-down-curr	Parameter type: <Shdsl::NoiseMarginCC> Format: - a noise margin value of current conditions - unit: db - range: [-11,0...10]	*optional parameter with default value: 5* relative margin in dwnstrm for current noise condition
[no] margin-up-worst	Parameter type: <Shdsl::NoiseMarginWC> Format: - a noise margin value of worst conditions - unit: db - range: [-11...10]	*optional parameter with default value: -11* target relative margin in upstrm for worst case noise
[no] margin-up-curr	Parameter type: <Shdsl::NoiseMarginCC> Format: - a noise margin value of current conditions - unit: db - range: [-11,0...10]	*optional parameter with default value: 5* relative margin in upstrm for current noise conditions
[no] probe	Parameter type: <Shdsl::SpanLineProbeEnable> Format: (disable | enable) Possible values: - disable : disable the line probe - enable : enable the line probe	*optional parameter with default value: "enable"* the number enable/disable line probe
[no] tc-pam-sele	Parameter type: <Shdsl::SpanTCPAMSelection> Format: (auto | tc-pam32 | tc-pam16) Possible values: - auto : auto-tcPam selection - tc-pam32 : tcPam32 selection - tc-pam16 : tcPam16 selection	*optional parameter with default value: "auto"* the TC-PAM modulation selection for the span
[no] efm-hs-sele	Parameter type: <Shdsl::SpanEFMHandshakeSelection> Format: (auto | ieee | itu | not-applicable) Possible values: - auto : auto select ieee/itu according to cpe - ieee : ieee 2base-tl - itu : itu-t g.991.2 ptm 64/65otc - not-applicable : not-applicable for atm/ima mode	*optional parameter with default value: "not-applicable"* the handshake mode selection for the span
[no] bonding-rate-mode	Parameter type: <Shdsl::SpanBondingRateControlMode> Format: (span-level | link-level)	*optional parameter with default value: "span-level"* the bonding rate control mode on the span

Parameter	Type	Description
	Possible values: - span-level : bonding rate control mode is span level - link-level : bonding rate control mode is span level	
[no] min-rate-link1	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 192* the minimum requested data rate of link 1
[no] max-rate-link1	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 5696* the maximum requested data rate of link 1
[no] min-rate-link2	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 192* the minimum requested data rate of link 2
[no] max-rate-link2	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 5696* the maximum requested data rate of link 2
[no] min-rate-link3	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 192* the minimum requested data rate of link 3
[no] max-rate-link3	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 5696* the maximum requested data rate of link 3
[no] min-rate-link4	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 192* the minimum requested data rate of link 4
[no] max-rate-link4	Parameter type: <Shdsl::BitRate> Format: - bitrate - unit: kbits/sec	*optional parameter with default value: 5696* the maximum requested data rate of link 4
[no] tc-pam-link1	Parameter type: <Shdsl::SpanTCPAMSelection> Format: (auto | tc-pam32 | tc-pam16) Possible values: - auto : auto-tcPam selection - tc-pam32 : tcPam32 selection - tc-pam16 : tcPam16 selection	*optional parameter with default value: "auto"* the TC-PAM modulation selection for the link 1
[no] tc-pam-link2	Parameter type: <Shdsl::SpanTCPAMSelection> Format: (auto | tc-pam32 | tc-pam16) Possible values: - auto : auto-tcPam selection - tc-pam32 : tcPam32 selection - tc-pam16 : tcPam16 selection	*optional parameter with default value: "auto"* the TC-PAM modulation selection for the link 2
[no] tc-pam-link3	Parameter type: <Shdsl::SpanTCPAMSelection> Format: (auto | tc-pam32	*optional parameter with default value: "auto"* the TC-PAM modulation selection for the link 3

Parameter	Type	Description
	| tc-pam16) Possible values: - auto : auto-tcPam selection - tc-pam32 : tcPam32 selection - tc-pam16 : tcPam16 selection	
[no] tc-pam-link4	Parameter type: <Shdsl::SpanTCPAMSelection> Format: (auto | tc-pam32 | tc-pam16) Possible values: - auto : auto-tcPam selection - tc-pam32 : tcPam32 selection - tc-pam16 : tcPam16 selection	*optional parameter with default value: "auto"* the TC-PAM modulation selection for the link 4
[no] ctc	Parameter type: <Shdsl::SpanCTCEnable> Format: (disable | enable) Possible values: - disable : disable the cross-talk cancellation - enable : enable the cross-talk cancellation	*optional parameter with default value: "disable"* enable the cross-talk cancellation for the span

37.3 SHDSL Unit Configuration Command

Command Description

This command allows the operator to manage the SHDSL unit profile in one SHDSL span.

User Level

The command can be accessed by operators with xdsl privileges, and executed by operators with xdsl privileges.

Command Syntax

The command has the following syntax:

> configure shdsl unit (if-index) unit-id <Shdsl::UnitId> [no loop-attenuation | loop-attenuation <Shdsl::UnitLoopAttenThreshold>] [no snr-margin | snr-margin <Shdsl::UnitSnrMarginThreshold>] [no loopback-timeout | loopback-timeout <Shdsl::UnitLoopbackTimeout>]

Command Parameters

Table 37.3-1 "SHDSL Unit Configuration Command" Resource Parameters

Resource Identifier	Type	Description
(if-index)	Format: <Eqpt::RackId> / <Eqpt::ShelfId> / <Eqpt::SlotId> / <Eqpt::PortId> Field type <Eqpt::RackId> - the rack number Field type <Eqpt::ShelfId> - the shelf number Field type <Eqpt::SlotId> - the LT slot number Field type <Eqpt::PortId> - the port number	interface index of the port
unit-id	Parameter type: <Shdsl::UnitId> Format: (stu-c | stu-r | sru-1 | sru-2 | sru-3 | sru-4 | sru-5 | sru-6 | sru-7 | sru-8) Possible values: - stu-c : the SHDSL unit is STU-C - stu-r : the SHDSL unit is STU-R - sru-1 : the SHDSL unit is SRU-1	unit identifier in an SHDSL span

Resource Identifier	Type	Description
	- sru-2 : the SHDSL unit is SRU-2 - sru-3 : the SHDSL unit is SRU-3 - sru-4 : the SHDSL unit is SRU-4 - sru-5 : the SHDSL unit is SRU-5 - sru-6 : the SHDSL unit is SRU-6 - sru-7 : the SHDSL unit is SRU-7 - sru-8 : the SHDSL unit is SRU-8	

Table 37.3-2 "SHDSL Unit Configuration Command" Command Parameters

Parameter	Type	Description
[no] loop-attenuation	Parameter type: <Shdsl::UnitLoopAttenThreshold> Format: - a loop attenuation threshold value for an SHDSL unit - unit: db - range: [0...127]	*optional parameter with default value: 0* the loop attenuation threshold value
[no] snr-margin	Parameter type: <Shdsl::UnitSnrMarginThreshold> Format: - an SNR margin threshold value for an SHDSL unit - unit: db - range: [0...15]	*optional parameter with default value: 0* the snr margin threshold value
[no] loopback-timeout	Parameter type: <Shdsl::UnitLoopbackTimeout> Format: - a loopback timeout duration value for an SHDSL unit - unit: min - range: [0...4095]	*optional parameter with default value: 0* the loopback timeout value

37.4 SHDSL Segment Configuration Command

Command Description

This command allows the operator to manage the SHDSL segment points on either sides of an SHDSL unit.

User Level

The command can be accessed by operators with xdsl privileges, and executed by operators with xdsl privileges.

Command Syntax

The command has the following syntax:

> configure shdsl segment (if-index) unit-id <Shdsl::UnitId> side <Shdsl::SegmentSide> [no loopback | loopback <Shdsl::SegmentTermLoopbackConf>] [no pbo-mode | pbo-mode <Shdsl::SegmentTermPowerBackoff>]

Command Parameters

Table 37.4-1 "SHDSL Segment Configuration Command" Resource Parameters

Resource Identifier	Type	Description
(if-index)	Format: <Eqpt::RackId> / <Eqpt::ShelfId> / <Eqpt::SlotId> / <Eqpt::PortId> Field type <Eqpt::RackId> - the rack number Field type <Eqpt::ShelfId> - the shelf number Field type <Eqpt::SlotId> - the LT slot number Field type <Eqpt::PortId> - the port number	interface index of the port
unit-id	Parameter type: <Shdsl::UnitId> Format: (stu-c | stu-r | sru-1 | sru-2 | sru-3 | sru-4 | sru-5 | sru-6 | sru-7 | sru-8) Possible values: - stu-c : the SHDSL unit is STU-C - stu-r : the SHDSL unit is STU-R - sru-1 : the SHDSL unit is SRU-1 - sru-2 : the SHDSL unit is SRU-2	unit identifier in an SHDSL span

Resource Identifier	Type	Description
	- sru-3 : the SHDSL unit is SRU-3 - sru-4 : the SHDSL unit is SRU-4 - sru-5 : the SHDSL unit is SRU-5 - sru-6 : the SHDSL unit is SRU-6 - sru-7 : the SHDSL unit is SRU-7 - sru-8 : the SHDSL unit is SRU-8	
side	Parameter type: <Shdsl::SegmentSide> Format: (network | customer) Possible values: - network : the network side - customer : the customer side	the particular side of an SHDSL unit in an SHDSL segment

Table 37.4-2 "SHDSL Segment Configuration Command" Command Parameters

Parameter	Type	Description
[no] loopback	Parameter type: <Shdsl::SegmentTermLoopbackConf> Format: (none | normal) Possible values: - none : no loopback - normal : normal loopback	*optional parameter with default value: "none"* the loopback mode for the associated side
[no] pbo-mode	Parameter type: <Shdsl::SegmentTermPowerBackoff> Format: (default | selected | disabled) Possible values: - default : the default mode - selected : the selected mode - disabled : disable PBO	*optional parameter with default value: "default"* the power backoff mode for the associated side