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Title: Proposed changes to 33.xxx NDS IP Security about interfaces
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This contribution proposes additional interfaces that are affected by the network domain security. It is edited with change markers against 33.xxx v. 0.5.0.

The proposed changes reflect the working assumption for protection of SIP signalling reached at the aSIP ad hoc meeting in Madrid.

4.4 Security domains

4.4.1 Security domains and interfaces

The UMTS network domain shall be logically and physically divided into security domains. These control plane security domains may closely correspond to the core network of a single operator and shall be separated by means of security gateways.

The specific network domain security interfaces is found in table 1. The definitions for Zd, Ze and Zf only apply to NDS/MAP (TS33.200, [8]).

Table 1: Network domain security specific interfaces

Interface	Description	Network type
Za	Network domain security interface between SEGs. The interface is used for both the negotiation of security associations and for the set-up of ESP protected tunnels between SEGs (no third party negotiation).	IP
Zb	Network domain security interface between SEGs and NEs within the same network. The interface is used for both the negotiation of security associations and for the set-up of an ESP protected tunnel.	IP
Zc	Network domain security interface between NEs within the same network. The interface is used for both the negotiation of security associations and for the set-up of an ESP protected tunnel.	IP
Zd	MAPsec inter-domain interface. The Zd-interface is defined for negotiation of MAP security associations between KACs.	IP
Ze	MAPsec interface between KAC and MAP-NE within the same network. The interface is security protected by means of an IPsec ESP tunnel.	IP
Zf	MAPsec interface between MAP-NEs engaged in security protected signalling (applies to MAP-NEs belonging to different or even to the same security domain)	SS7/MAP

The interfaces, which affects/is affected by the network domain security specification, are described in the table below. Notice that when security protection is employed over an interface, this specification will refer to the Z-interface name.

Table 2: Interfaces that are affected by NDS/IP

Interface	Description	Affected protocol	Security implication
Gn	Interface between GSNs within the same network	GTP	ESP shall be supported
Gp	Interface between GSNs in different PLMNs.	GTP	IPsec shall be supported. Security Gateways shall be present at the domain borders.
<u>Mw</u>	<u>Interface between CSCFs within the same network</u>	<u>SIP</u>	<u>IPsec shall be supported</u>
<u>Mm</u>	<u>Interface between CSCF and Multimedia IP network</u>	<u>SIP</u>	<u>IPsec shall be supported</u>

NOTE: NDS/IP is application layer protocol independent and other protocols than GTP may be supported in later version of this specification.