

# Nets Database Schema

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The standard Nets database schema.  
For Nets Revision 2.5

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## 1.0 Introduction

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This document describes the database schema underlying Nets. The database is designed to be compatible with a wide range of SQL databases, and the description of the objects is designed to be independent of any specific database.

The database is intended to provide a firm foundation for Nets and other applications, yet still be extensible for site-specific purposes.

You can extend and alter the schema by editing the file Nets/Schema.pm in the Nets distribution.

## 2.0 Object Relationships

FIGURE 1. Database Entity-Relationship Diagram

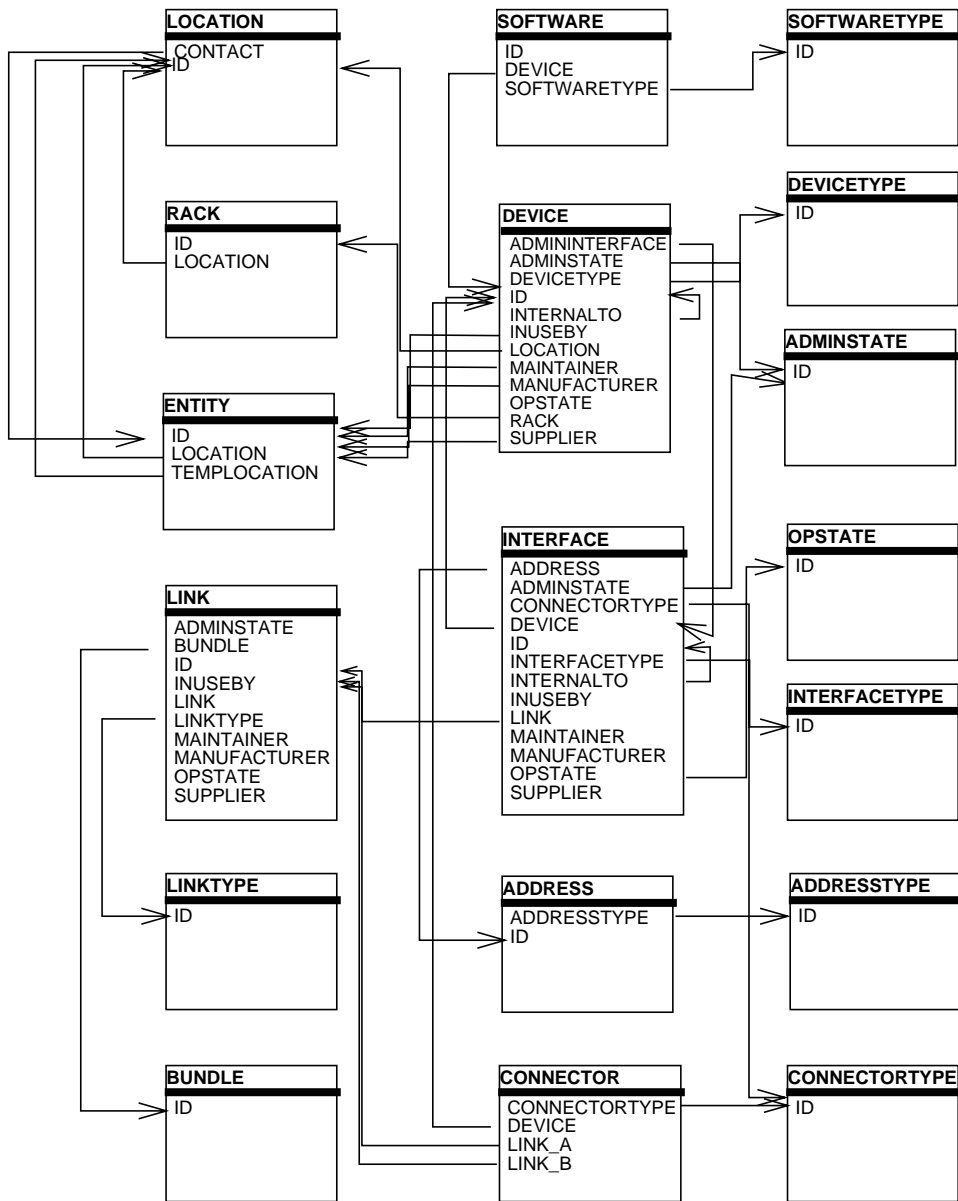


FIGURE 2. Database Entity-Relationship Diagram (continued)

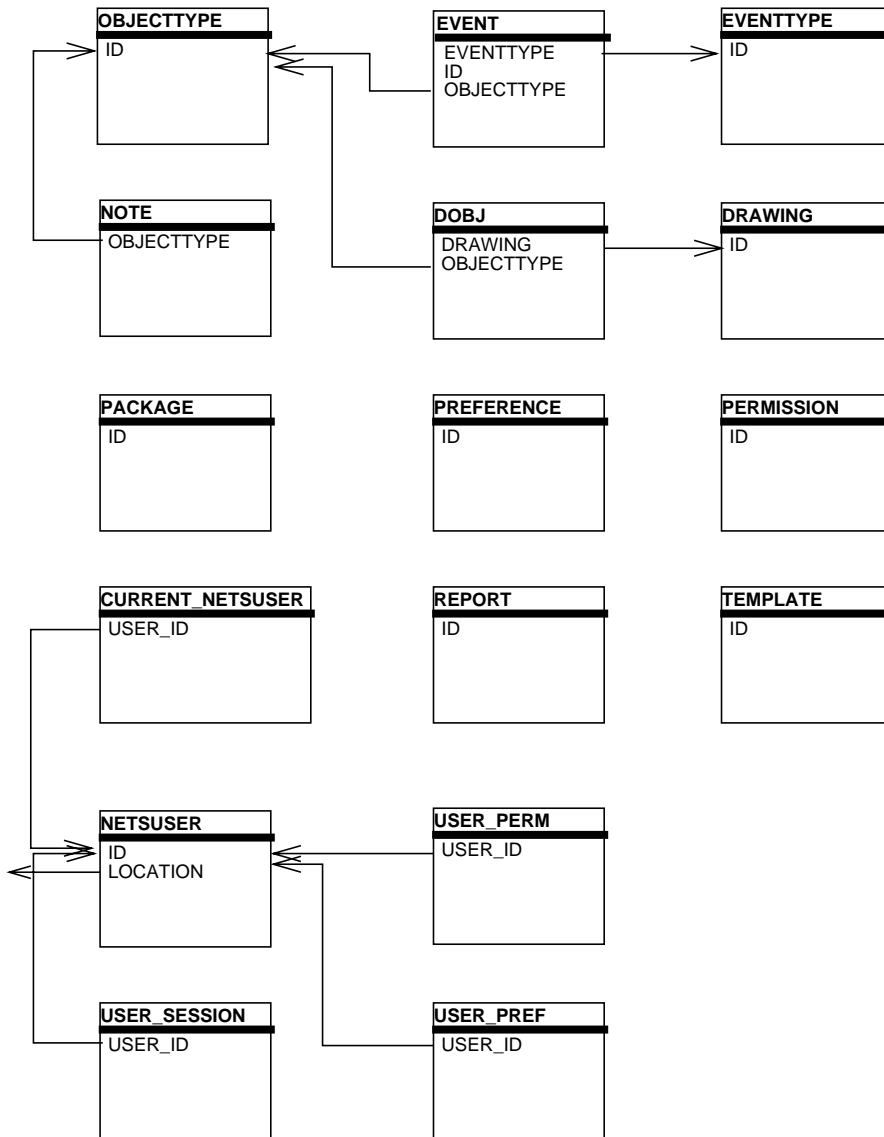
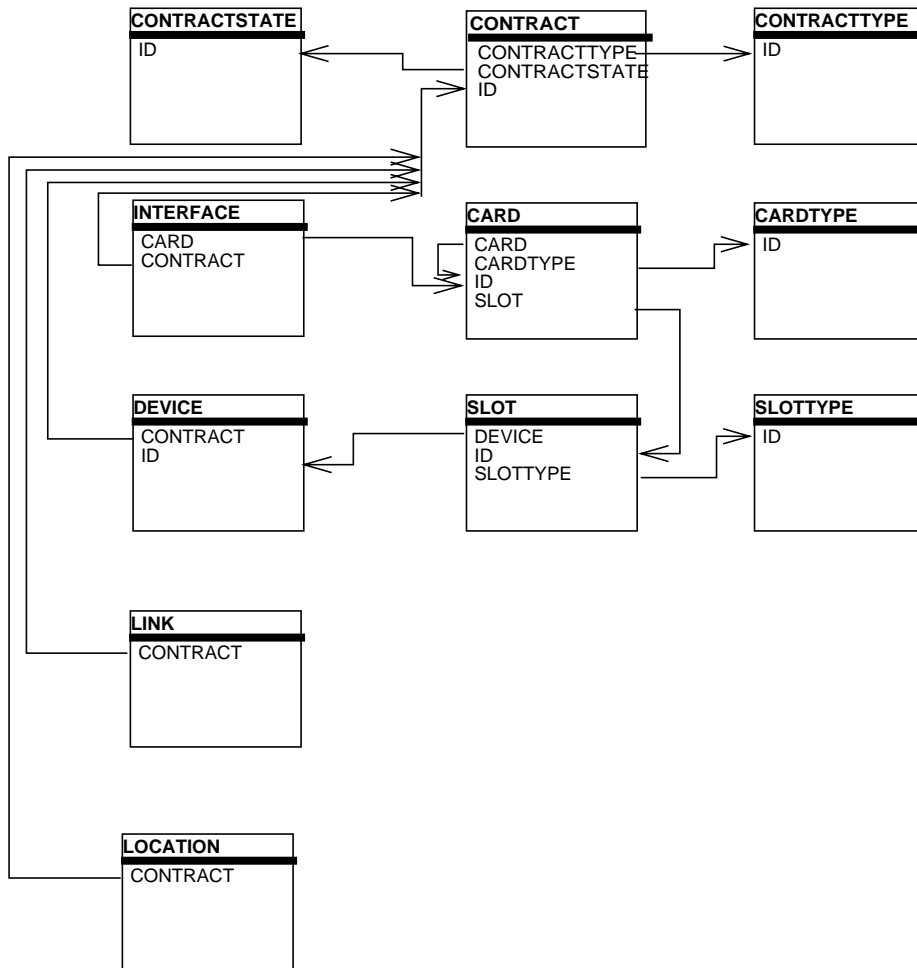


FIGURE 3. Database Entity-Relationship Diagram (continued)



### 3.0 Object Descriptions

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#### 3.1 ADDRESS

Describes a network address

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**TABLE 1.** ADDRESS

Column Name	Data Type	Description
ADDRESSTYPE	FK	Address Type Foreign Key
DESCRIPTION	varchar	Description of this address
DNSNAME	varchar	DNS name associated with this address (if it makes sense)
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this address
NETMASK	varchar	Netmask for this address (if it makes sense)
OVERSION	version	Auto-maintained version number

#### 3.2 ADDRESSSTATE

Describes an address state.

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**TABLE 2.** ADDRESSSTATE

Column Name	Data Type	Description
DESCRIPTION	int	Description of this address state
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this address state
OVERSION	version	Auto-maintained version number

### 3.3 ADDRESSTYPE

Describes an address type.

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**TABLE 3.** ADDRESSTYPE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
FAMILY	int	Address family
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this address type
OVERSION	version	Auto-maintained version number

### 3.4 ADMINSTATE

Describes an administrative state.

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**TABLE 4.** ADMINSTATE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	varchar	Description of this administrative state
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this administrative state
OVERSION	version	Auto-maintained version number

### 3.5 BUNDLE

Describes a cable bundle.

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**TABLE 5.** BUNDLE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	varchar	Description of this bundle
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this bundle
OVERSION	version	Auto-maintained version number

**3.6 CARD**

Describes a card.

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**TABLE 6.** CARD

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
ADMINSTATE	FK	Administrative state Foreign Key
ASSET	varchar	Asset number
CARD	FK	Card Foreign Key
CARDTYPE	FK	Card type Foreign Key
COMMISSIONDATE	datetime	Commission date
CONTRACT	FK	Contract Foreign Key
DEPRECIATION_RATE	float	Depreciation rate
DESCRIPTION	varchar	Description of this card
FIXED_RECUR_COST	float	Fixed recurring costs
ID	int PK	Auto-generated Primary Key
INSTALLDATE	datetime	Install date
INSTALL_COST	float	Install cost
INUSEBY	FK	Entity Foreign Key
MAINTAINER	FK	Entity Foreign Key
MANUFACTURER	FK	Entity Foreign Key
NAME	varchar	Name for this connector
OPSTATE	FK	Operating state Foreign Key
OVERSION	version	Auto-maintained version number
PURCHASEDATE	datetime	Purchase date
PURCHASE_COST	float	Purchase cost
SERIAL	varchar	Serial number
SLOT	FK	Slot Foreign Key
SUPPLIER	FK	Entity Foreign Key
TRACKING	varchar	Tracking number
VAR_RECUR_COST	float	Variable recurring costs

### 3.7 CARDTYPE

Describes a card type

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**TABLE 7.** CARDTYPE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this card type
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this card type
OVERSION	version	Auto-maintained version number

### 3.8 CONNECTOR

Describes a connector.

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**TABLE 8.** CONNECTOR

Column Name	Data Type	Description
CONNECTORTYPE	FK	Connector type Foreign Key
DESCRIPTION	varchar	Description of this connector
DEVICE	FK	Device Foreign Key
ID	int PK	Auto-generated Primary Key
LINK_A	FK	Link A Foreign Key
LINK_B	FK	Link B Foreign Key
NAME	varchar	Name for this connector
OVERSION	version	Auto-maintained version number

### 3.9 CONNECTORTYPE

Describes a connector type.

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**TABLE 9.** CONNECTORTYPE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this connector type
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this connector type
OVERSION	version	Auto-maintained version number

### 3.10 CONTRACT

Describes a contract.

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**TABLE 10.** CONTRACT

Column Name	Data Type	Description
BEGINDATE	datetime	Date this contract begins
CONTRACT	FK	Parent contract (if this is a subcontract)
CONTRACTID	varchar	Identifier for this contract
CONTRACTSTATE	FK	Contract state Foreign Key
CONTRACTTYPE	FK	Contract type Foreign Key
COST	float	Cost of this contract
DESCRIPTION	varchar	Description of this contract
ENDDATE	datetime	Date this contract ends
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this connector
OVERSION	version	Auto-maintained version number
RENEWDATE	datetime	Date this contract is to be renewed
SUPPLIER	FK	Supplier Foreign Key

### 3.11 CONTRACTSTATE

Describes a contract state.

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**TABLE 11.** CONTRACTSTATE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this contract state
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this contract state
OVERSION	version	Auto-maintained version number

### 3.12 CONTRACTTYPE

Describes a contract type.

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**TABLE 12.** CONTRACTTYPE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this contract type
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name for this contract type
OVERSION	version	Auto-maintained version number

### 3.13 CURRENT\_NETSUSER

Describes the current Nets user.

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**TABLE 13.** CURRENT\_NETSUSER

Column Name	Data Type	Description
EXPIRES	datetime	Date this user expires
HOSTNAME	varchar	The hostname where this user is
LOGGED_IN	datetime	When the user logged in
OVERSION	version	Auto-maintained version number
PID	int	Process ID for this user
USER_ID	FK	User Foreign Key

### 3.14 DEVICE

Describes the characteristics of a device.

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**TABLE 14.** DEVICE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
ADMININTERFACE	FK	Interface Foreign Key
ADMINSTATE	FK	Administrative state Foreign Key
ASSET	varchar	Asset number
COMMISSIONDATE	datetime	Commission date
CONTRACT	FK	Contract Foreign Key
DEPRECIATION_RATE	float	Depreciation rate
DESCRIPTION	varchar	Description
DEVICEROLE	FK	Device role Foreign Key
DEVICETYPE	FK	Device type Foreign Key
FIXED_RECUR_COST	float	Fixed recurring costs
ID	int PK	Auto-generated Primary Key
INSTALLDATE	datetime	Install date
INSTALL_COST	float	Installation cost
INTERNALTO	FK	Device Foreign Key
INUSEBY	FK	Entity Foreign Key
LOCATION	FK	Location Foreign Key
MAINTAINER	FK	Entity Foreign Key
MANUFACTURER	FK	Entity Foreign Key
NAME	varchar	Name
OPSTATE	FK	OpState Foreign Key
OVERSION	version	Auto-maintained version number
PURCHASEDATE	datetime	Purchase date
PURCHASE_COST	float	Purchase cost
RACK	FK	Rack Foreign Key
RACK_HEIGHT	int	Rack height
RACK_POS	int	Rack position
SERIAL	varchar	Serial number
SUPPLIER	FK	Entity Foreign Key
TRACKING	varchar	Tracking number
VAR_RECUR_COST	float	Variable recurring costs

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## Object Descriptions

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**TABLE 14.** DEVICE

Column Name	Data Type	Description
VOLTS	int	Volts
WATTS	int	Watts

### 3.15 DEVICEROLE

Define a Device Role.

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**TABLE 15.** DEVICEROLE

Column Name	Data Type	Description
DESCRIPTION	vchar	Description of this device role
ID	int PK	Auto-generated Primary Key
NAME	vchar	Name of this device role
OVERSION	version	Auto-maintained version number

### 3.16 DEVICETYPE

Define a Device Type.

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**TABLE 16.** DEVICETYPE

Column Name	Data Type	Description
DESCRIPTION	vchar	Description of this device type
ID	int PK	Auto-generated Primary Key
NAME	vchar	Name of this device type
OVERSION	version	Auto-maintained version number

### 3.17 DOBJ

Describes a drawing object: an icon, line etc that appears on a drawing.

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**TABLE 17.** DOBJ

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	varchar	Description of this drawing object
DRAWING	FK	Drawing this object is on Foreign Key
FG_COL	varchar	Foreground colour
FONT	varchar	Font used for text
FORMAT	varchar	Format of text
ICON	FK	Icon used for this object Foreign Key
ID	int PK	Auto-generated Primary Key
OBJECTTYPE	FK	Object type Foreign Key
OBJ_ID	int	Object ID of the object referred to
OVERSION	version	Auto-maintained version number
STYLE	int	Style used for text
X1	int	Screen co-ordinates
X2	int	Screen co-ordinates
Y1	int	Screen co-ordinates
Y2	int	Screen co-ordinates

### 3.18 DRAWING

Describes a drawing.

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**TABLE 18.** DRAWING

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
BG_COL	varchar	Background colour
DESCRIPTION	varchar	Description of this drawing
FILENAME	varchar	Filename of the file containing the drawing (optional)
ID	int PK	Auto-generated Primary Key
LRLATITUDE	float	Lower right latitude
LRLONGITUDE	float	Lower right longitude
NAME	varchar	Name of this drawing
OVERSION	version	Auto-maintained version number

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## Object Descriptions

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**TABLE 18.** DRAWING

Column Name	Data Type	Description
ULLATITUDE	float	Upper left latitude
ULLONGITUDE	float	Upper left longitude

### 3.19 ENTITY

Describes a legal entity like a person, company, organisation, etc.

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**TABLE 19.** ENTITY

Column Name	Data Type	Description
EMAIL_ADDRESS	vvarchar	Email address for the person, service or organisation
FOREIGN_KEY	int	Foreign key into some other system
ID	int PK	Auto-generated Primary Key
LOCATION	FK	Location Foreign Key
MOBILEPHONE	vvarchar	Mobile phone number
NAME	vvarchar	Name of this entity
OVERSION	version	Auto-maintained version number
PHONE	vvarchar	Phone number
TEMPLOCATION	FK	Temporary location Foreign Key

### 3.20 EVENT

Describes an event. Used to record Update history, Fault history etc. This table could become very large.

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**TABLE 20.** EVENT

Column Name	Data Type	Description
BY_WHO	vvarchar	User who caused the event
DESCRIPTION	vvarchar	Description of this event
EVENTTYPE	FK	Event type Foreign Key
ID	int PK	Auto-generated Primary Key
OBJECTID	int	
OBJECTTYPE	FK	

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## Object Descriptions

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**TABLE 20.** EVENT

Column Name	Data Type	Description
OCCURRED	datetime	When this event occurred
OVERSION	version	Auto-maintained version number

### 3.21 EVENTTYPE

Defines the set of available event types.

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**TABLE 21.** EVENTTYPE

Column Name	Data Type	Description
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this event type
OVERSION	version	Auto-maintained version number

### 3.22 INTERFACE

Defines an Interface: the part of a Device that connects to a Link.

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**TABLE 22.** INTERFACE

Column Name	Data Type	Description
ADDRESS	FK	Address Foreign Key
ADMINSTATE	FK	Administrative state Foreign Key
ASSET	varchar	Asset number
CARD	FK	Card Foreign Key
COMMISSIONDATE	datetime	Date commissioned
CONNECTORTYPE	FK	Connector type Foreign Key
CONTRACT	FK	Contract Foreign Key
DEPRECIATION_RATE	float	Depreciation rate
DESCRIPTION	varchar	Description of this interface
DEVICE	FK	Device Foreign Key
FIXED_RECUR_COST	float	Fixed recurring costs
ID	int PK	Auto-generated Primary Key
INSTALLDATE	datetime	Date installed

**TABLE 22.** INTERFACE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
INSTALL_COST	float	Installation cost
INTERFACETYPE	FK	Interface type Foreign Key
INTERNALTO	FK	Sub-interface parent
INUSEBY	FK	Entity Foreign Key
LINK	FK	Link Foreign Key
MACADDRESS	vchar	MAC address (optional)
MAINTAINER	FK	Entity Foreign Key
MANUFACTURER	FK	Entity Foreign Key
NAME	vchar	Name of this interface
OPSTATE	FK	Operational state Foreign Key
OVERSION	version	Auto-maintained version number
PURCHASEDATE	datetime	Date purchased
PURCHASE_COST	float	Purchase cost
SERIAL	vchar	Serial number
SUPPLIER	FK	Entity Foreign Key
TRACKING	vchar	Tracking number
VAR_RECUR_COST	float	Variable recurring costs

### 3.23 INTERFACETYPE

Defines an Interface type.

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**TABLE 23.** INTERFACETYPE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	vchar	Description of this interface type
ID	int PK	Auto-generated Primary Key
NAME	vchar	Name eg Ethernet, TR, FDDI, Serial, ISDN etc
OVERSION	version	Auto-maintained version number

### 3.24 LINK

Defines a point-to-point or multipoint communications link. A Link is a communications medium connecting to 0 or more Interfaces.

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**TABLE 24.** LINK

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
ADMINSTATE	FK	Administrative state Foreign Key
BANDWIDTH	FK	Bandwidth Foreign Key
BUNDLE	FK	Bundle Foreign Key
CIRCUIT	varchar	Circuit identifier
COMMISSIONDATE	datetime	Date commissioned
CONTRACT	FK	Contract Foreign Key
DEPRECIATION_RATE	float	Depreciation rate
DESCRIPTION	varchar	Description of this link
FIXED_RECUR_COST	float	Fixed recurring costs
ID	int PK	Auto-generated Primary Key
INSTALLDATE	datetime	Date installed
INSTALL_COST	float	Installation cost
INUSEBY	FK	Entity Foreign Key
LINK	FK	Virtual circuit parent
LINKTYPE	FK	Link type Foreign Key
MAINTAINER	FK	Entity Foreign Key
MANUFACTURER	FK	Entity Foreign Key
NAME	varchar	Name of this link
OPSTATE	FK	Operational state Foreign Key
OVERSION	version	Auto-maintained version number
PURCHASEDATE	datetime	Date purchased
PURCHASE_COST	float	Purchase cost
SUPPLIER	FK	Entity Foreign Key
VAR_RECUR_COST	float	Variable recurring costs

### 3.25 LINKTYPE

Defines the types of links available.

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**TABLE 25.** LINKTYPE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this link type
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name - eg. Ethernet, Leased Line, ISDN, FR etc
OVERSION	version	Auto-maintained version number

### 3.26 LOCATION

This object defines a physical location.

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**TABLE 26.** LOCATION

Column Name	Data Type	Description
ADDRESS1	varchar	Address line 1
ADDRESS2	varchar	Address line 2
CITY	varchar	City
CONTACT	FK	Entity Foreign Key
CONTRACT	FK	Contract Foreign Key
COUNTRY	varchar	Country
DESCRIPTION	varchar	Description of this location
ID	int PK	Auto-generated Primary Key
LATITUDE	float	Latitude for map co-ordinates
LONGITUDE	float	Longitude for map co-ordinates
NAME	varchar	Name of this location
OVERSION	version	Auto-maintained version number
POSTCODE	varchar	Postcode
SITE	varchar	Site
STATE	varchar	State, province, department, etc.

### 3.27 NETUSER

Defines the users who are authorised to use Nets.

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**TABLE 27.** NETUSER

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	varchar	Description of this user
EMAIL_ADDRESS	varchar	User's email address
FULL_NAME	varchar	User's full name
ID	int PK	Auto-generated Primary Key
LOCATION	FK	Location Foreign Key
MOBILE_PHONE	varchar	User's mobile phone number
NAME	varchar	Name of this user in the system
OVERSION	version	Auto-maintained version number
PHONE	varchar	User's phone number
USER_PASSWORD	varchar	User's password

### 3.28 NOTE

Describes the Note objects used throughout the system.

---

**TABLE 28.** NOTE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
BY_WHO	varchar	User who created this note
ID	int PK	Auto-generated Primary Key
NOTE	varchar	Contents of this note
OBJECTID	int	Object number this note attaches to
OBJECTTYPE	FK	Object type Foreign Key
OCCURRED	datetime	When this note was created
OVERSION	version	Auto-maintained version number

### 3.29 OBJECTTYPE

Defines all the tables in this database. This is meta-data. There is one entry for each table in the database (including itself!)Its mostly used as a foreign key for ObjectExtension, to define what table the object being extended is in.

---

**TABLE 29.** OBJECTTYPE

Column Name	Data Type	Description
CURR_ID	int	Current identifier for this object type
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this object type

### 3.30 OPSTATE

Defines the operational states for the system.

---

**TABLE 30.** OPSTATE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this operational state
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this operational state
OVERSION	version	Auto-maintained version number

### 3.31 PACKAGE

Describes the Nets packages installed in the system.

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**TABLE 31.** PACKAGE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this package
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this package
OCCURRED	datetime	When the package was installed
OVERSION	version	Auto-maintained version number
REVISION	varchar	Revision of this package
VENDOR	varchar	Vendor of this package

### 3.32 PERMISSION

Defines the available Nets user permissions.

---

**TABLE 32.** PERMISSION

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this permission
HELP	varchar	Help text
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this permission
OVERSION	version	Auto-maintained version number
PROMPT	varchar	Prompt text

### 3.33 PREFERENCE

Defines the available Nets user preferences.

---

**TABLE 33.** PREFERENCE

Column Name	Data Type	Description
DATATYPE	int	Not used yet
DESCRIPTION	varchar	Description of this preference
HELP	varchar	Help text
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this permission
OVERSION	version	Auto-maintained version number
PROMPT	varchar	Prompt text

### 3.34 RACK

Describes the racks in use.

---

**TABLE 34.** RACK

Column Name	Data Type	Description
DEPTH	int	Depth of this rack
DESCRIPTION	varchar	Description of this rack

**TABLE 34.** RACK

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
HEIGHT	int	Height of this rack
ID	int PK	Auto-generated Primary Key
LOCATION	FK	Location Foreign Key
NAME	varchar	Name of this rack
OVERSION	version	Auto-maintained version number
POWER	varchar	Available supply voltages in this rack
WIDTH	int	Width of this rack

### 3.35 REPORT

Describes a report that can be run to extract data from the database.

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**TABLE 35.** REPORT

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	varchar	Description of this report
FORMAT	varchar	Format for this report
HELP	varchar	Help text
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this report
OPTIONS	varchar	Options for this report
OVERSION	version	Auto-maintained version number
QUERY	varchar	SQL query for this report

### 3.36 SLOT

Describes a slot in a device.

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**TABLE 36.** SLOT

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	varchar	Description of this slot
DEVICE	FK	Device this slot is in Foreign Key
ID	int PK	Auto-generated Primary Key

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
NAME	vchar	Name of this slot
OVERSION	version	Auto-maintained version number
SLOTTYPE	FK	Slot type Foreign Key

### 3.37 SLOTTYPE

Describes a slot type.

---

**TABLE 37.** SLOTTYPE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
DESCRIPTION	vchar	Description of this slot type
ID	int PK	Auto-generated Primary Key
NAME	vchar	Name of this slot type
OVERSION	version	Auto-maintained version number

### 3.38 SOFTWARE

Describes the software installed on a device.

---

**TABLE 38.** SOFTWARE

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
CONFIGURATION	vchar	Configuration file for this software
DESCRIPTION	vchar	Description of this software
DEVICE	FK	Device this software runs on Foreign Key
ID	int PK	Auto-generated Primary Key
INTERFACE	FK	Interface for this software Foreign Key
NAME	vchar	Name of this software
OVERSION	version	Auto-maintained version number
PORTNUMBER	int	Port number used by this software
PORTTYPE	int	Port type used by this software
REVISION	vchar	Revision of this software
SOFTWARETYPE	FK	Software type Foreign Key

### 3.39 SOFTWARETYPE

Defines the types of software in use.

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**TABLE 39.** SOFTWARETYPE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this software type
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this software type
OVERSION	version	Auto-maintained version number

### 3.40 TEMPLATE

Describes a template for creating multiple objects in the database.

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**TABLE 40.** TEMPLATE

Column Name	Data Type	Description
DESCRIPTION	varchar	Description of this template
FILENAME	varchar	Filename of the file containing the template
ID	int PK	Auto-generated Primary Key
NAME	varchar	Name of this template
OVERSION	version	Auto-maintained version number

### 3.41 USER\_PERM

Defines a user's permissions.

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**TABLE 41.** USER\_PERM

Column Name	Data Type	Description
PERM_NAME	varchar	User permission
USER_ID	FK	User Foreign Key

### 3.42 USER\_PREF

Defines a user's preferences.

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**TABLE 42.** USER\_PREF

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
PREF_NAME	varchar	User preference name
PREF_VALUE	varchar	User preference value
USER_ID	FK	User Foreign Key

### 3.43 USER\_SESSION

Defines a user's session, their standard set of windows, sizes, positions etc

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**TABLE 43.** USER\_SESSION7

<b>Column Name</b>	<b>Data Type</b>	<b>Description</b>
SESSION_DESC	varchar	User's session description
USER_ID	FK	User Foreign Key

### 3.44 Yet to be defined

TroubleTicket, Alarm, Statistics, Configuration File, Routing Domain etc.