



# **XCENTRIC**

## **Release Notes**

System Software Release 5.1.4

19 April 2000



## **System Software Release 5.1.4**

These Release Notes describe the features, changes, bugfixes and unclarified points of Software Release 5.1.4 for **XCENTRIC**.

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# 1 New Features in Release 5.1.4

## 1.1 Name Resolution – DNS Proxy

Release 5.1.4 for **XCENTRIC** contains extended DNS features for name resolution by **XCENTRIC**.

The following name resolution features are offered:

- DNS Proxy, for passing DNS requests to the right DNS.
- DNS cache, for saving the results of DNS requests.
- Static name entries, for defining assignments of names to IP addresses.
- Filter function, to prevent the resolution of certain names.
- Monitoring via Setup Tool, to provide an overview of DNS requests in **XCENTRIC**.

You will find a detailed description of these features in the current version (version 1.2) of the **XCENTRIC** manual (chapter 14) on BinTec's web server.

## 1.2 PPP over Ethernet

To enable ADSL to be used over **XCENTRIC**, it is now possible to configure **XCENTRIC**'s LAN interface for PPP over Ethernet.

You will find a detailed description of this feature in the current version (version 1.2) of the **XCENTRIC** manual (chapter 10.2.4) on BinTec's web server.

## 1.3 PABX: Profiles

It is now possible to assign profiles to individual terminals (physical terminals and subsystems) in the PABX configuration for **XCENTRIC**. Profiles contain information about automatic external line access, reachability of terminals and their dialing permissions.

Profiles are created in the new **PROFILES** menu. The system profile, which contains the relevant default values for **XCENTRIC**, is configured in the basic PABX settings.

You will find a detailed description of this feature in the current version (version 1.2) of the **XCENTRIC** manual (chapter 11) on BinTec's web server.

## 1.4 ISDN Ties – Cascading **XCENTRICs**

### 1.4.1 Overview

It is possible to connect other **XCENTRICs** to a central **XCENTRIC** via the XCM-5S0 module for cascading purposes.

**XCENTRICs** are cascaded by setting up a connection between them that is based on the bottom two layers of the ISO OSI Model. A central **XCENTRIC** is fully configured and equipped with the external  $S_0$  interfaces. One or more additional **XCENTRICs** administrate a part of the extension numbers for physical terminals as subsystems.

This connection of two or more **XCENTRICs** needs special configuration of the ISDN interfaces, as described in [chapter 1.4.2, page 7](#).

The extension numbers configured on cascaded **XCENTRICs** must be divided. Special configuration of the prefixes (see [chapter 1.4.3, page 11](#)) ensures that calls from one **XCENTRIC** are forwarded to the other and calls from a second **XCENTRIC** are connected through to the exchange line via the central **XCENTRIC**.



If the extensions of physical terminals are distributed over two or more **XCENTRICs**, this causes limitations of the PABX functionality: For example, it is not possible to combine distributed extensions to form a call group or call pickup group.

## 1.4.2 Configuration of S<sub>0</sub> Interfaces

Two or more **XCENTRICs** are interconnected by connections called ties. There are two options for the configuration of ISDN interfaces – depending on how the jumpers are set (hardware):

- A unit whose jumper is set to external can be used as external S<sub>0</sub> (default setting) or *ISDN Tie S0 (Layer 1:TE)*.
- A unit whose jumper is set to internal can be used as internal S<sub>0</sub> (default setting) or *ISDN Tie S0 (Layer 1:NT)*.

The tie interfaces of two interconnected **XCENTRICs** must have opposite layer 1 settings. At one end, the jumper must be set to external for the S<sub>0</sub> interface that serves as the tie and the software must be set to *ISDN Tie S0 (Layer1:TE)*. At the other end, the jumper must be set to internal and the software to *ISDN Tie S0 (Layer1:NT)*. You will find detailed information on setting the jumpers on the XCM-5S0 module in the hardware installation chapter in the **XCENTRIC** User's Guide.

If two **XCENTRICs** are connected over several S<sub>0</sub> interfaces, it is necessary to make sure the prefixes for all S<sub>0</sub> interfaces are configured identically (see [chapter 1.4.3, page 11](#)).

The configuration for connecting two **XCENTRICs** is described below. First the configuration is shown for the **XCENTRIC** whose S<sub>0</sub> interfaces for the tie are set to internal (*ISDN Tie S0 (Layer1:NT)*).

The configuration is made in the Setup Tool under the XCM-5S0 module for the unit concerned.

- Go to **SLOTX: XCM-5S0, ISDN 5S0** (Slot 2 in our example).

```

XCENTRIC Setup Tool                               BinTec Communications AG
[SLOT 2 XCM-5S0]: Units                           Xcentric1

Unit 0:      ISDN External S0
Unit 1:      ISDN Internal S0
Unit 2:      ISDN Internal S0
Unit 3:      ISDN Internal S0
Unit 4:      ISDN Internal S0

Exit

```

- Use the cursor buttons to select the unit you wish to configure as ISDN tie for connections to another **XCENTRIC** (Unit 3 in our example) and press **Return**.

You change to the following menu:

```

XCENTRIC Setup Tool                               BinTec Communications AG
[SLOT 2 UNIT 3 ISDN BRI]:Configure ISDN Basic Rate Interface Xcentric1

Type of Interface:      ISDN Internal S0
ISDN Switch Type       Euro ISDN point to multipoint

Extension  User      Terminal Name  Destination  Primary Group

Extensions > ADD                                DELETE

                SAVE                                CANCEL

Use <Space> to select

```



- In the **Type of Interface** field, select the value *ISDN Tie S0 (Layer1: NT)* and press **Return**.

The menu window changes to the following:

XCENTRIC Setup Tool		BinTec Communications AG	
[SLOT 2 UNIT 3 ISDN BRI]:Configure ISDN Basic Rate Interface Xcentric1			
Type of Interface:		ISDN Tie S0 (Layer 1: NT)	
ISDN Switch Type		Euro ISDN point to point	
Prefixes:	Prefix	<none>	
Configure Prefixes >			
	SAVE		CANCEL
Use <Space> to select			

The menu contains the following fields:

Field	Meaning
<b>Type of Interface</b>	<p>Here you can set the type of interface.</p> <p>Possible values for jumpers set to internal:</p> <ul style="list-style-type: none"> <li>■ <i>ISDN Internal S0</i> (default setting)</li> <li>■ <i>ISDN Tie S0 (Layer1:NT)</i></li> </ul> <p>Possible values for jumpers set to external:</p> <ul style="list-style-type: none"> <li>■ <i>ISDN External S0</i> (default setting)</li> <li>■ <i>ISDN Tie S0 (Layer1:TE)</i></li> </ul> <p>For a connection to another <b>XCENTRIC</b>, select <i>ISDN Tie S0 (Layer 1: NT)</i> if the jumper of the corresponding S<sub>0</sub> interface is set to internal or <i>ISDN Tie S0 (Layer1: TE)</i> if the jumper of the corresponding S<sub>0</sub> interface is set to external. Two interconnected units for layer 1 must always be configured as opposites.</p>
<b>ISDN Switch Type</b>	<p>The configuration of the ISDN protocol.</p> <p>Displays <i>Euro ISDN point to point</i> as ISDN protocol if the value <i>ISDN Tie S0 (Layer1:TE)</i> or <i>ISDN Tie S0 (Layer1:NT)</i> is selected. An ISDN tie is always a point-to-point connection.</p>
<b>Prefixes</b>	<p>Here you can see the prefixes assigned to the ISDN tie under the <b>Prefix</b> field.</p>
<b>Configure Prefixes</b>	<p>Clicking <b>Configure Prefixes</b> opens a submenu in which you can assign prefixes to the ISDN tie or delete assigned prefixes. You can also configure new prefixes or delete prefixes.</p>

Table 1-1: **SLOTX: XCM-5S0, ISDN 5S0** ➔ **UNIT X: ISDN TIE S0 (L1:NT)**

Proceed as follows to configure the S<sub>0</sub> interface:

- Under **Type of Interface**, select *ISDN Tie S0 (Layer 1: NT)* for a unit whose jumpers are set to internal or *ISDN Tie S0 (Layer1: TE)* for a unit whose jumpers are set to external.



Note the following:

Two S<sub>0</sub> interfaces that interconnect two **XCENTRICs** must have opposite layer 1 settings. At one end, the jumper must be set to external for the S<sub>0</sub> interface that serves as the tie and the software must be set to *ISDN Tie S0 (Layer1:TE)*. At the other end, the jumper must be set to internal and the software to *ISDN Tie S0 (Layer1:NT)*.

- Configure the necessary prefixes under **Configure Prefixes**. The prefix configuration for cascading **XCENTRICs** is described in [chapter 1.4.3, page 11](#).
- Proceed as described above to configure all the S<sub>0</sub> interfaces (ties) that interconnect the **XCENTRICs**.

### 1.4.3 Prefix Configuration

A special prefix configuration for the ISDN ties that interconnect two **XCENTRICs** enables internal calls to be set up from one **XCENTRIC** to another without the need for separate dialing procedures. The prefix configuration of the **XCENTRIC** subsystem also ensures that external calls from a physical terminal (telephone) connected to the **XCENTRIC** subsystem can be forwarded externally via the central **XCENTRIC**.

The following diagram represents an example scenario for the connection of two **XCENTRICs**. The subsequent configuration examples refer to this scenario.

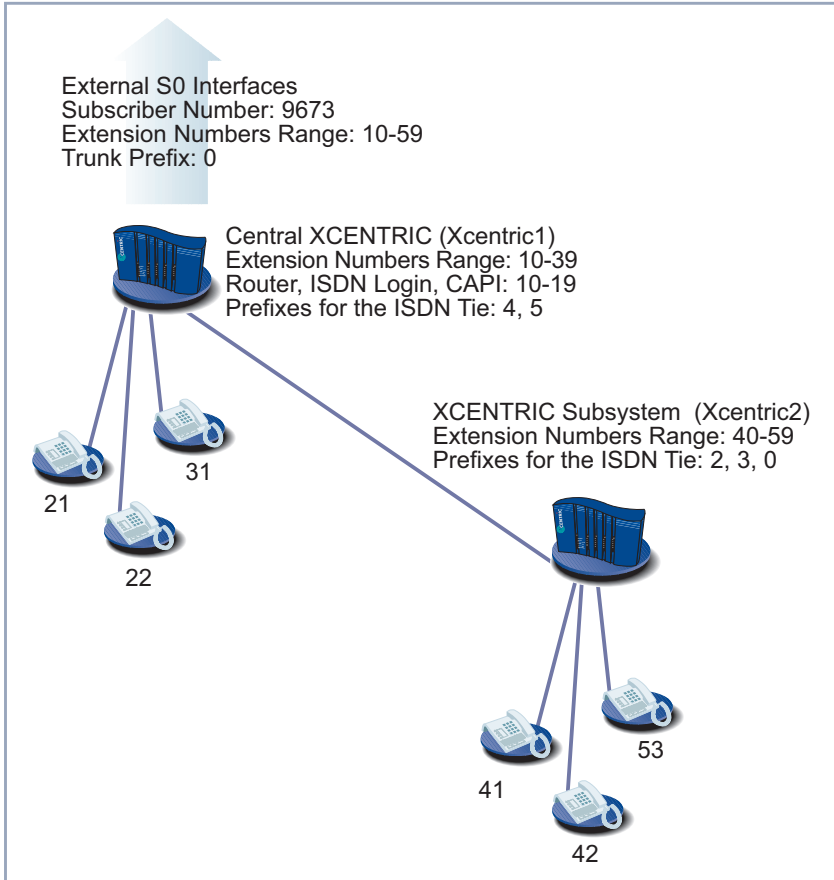


Figure 1-1: Scenario for the connection of two **XCENTRICs**

The prefixes are configured in the **PREFIXES** menu and in the prefix configuration menus under each of the units that have been configured as an ISDN tie (see [chapter 1.4.2, page 7](#)).



The configuration of prefixes is not described here. You will find a detailed description of operating the Setup Tool for prefix configuration in chapters 11.5 and 11.7 in the current **XCENTRIC** User's Guide (version 1.2).

- When configuring the prefixes for the ties, make sure the **Usage** field is set to *TIE*:

XCENTRIC Setup Tool		BinTec Communications AG	
[PABX][CONFIGURE PREFIXES]: Add Prefix		Xcentric1	
Prefix	4	Usage	TIE
Status	valid		
SAVE		CANCEL	
Enter string, max. length = 15 chars			



### **Usage:** *TRUNK* and *TIE*

Setting the **Usage** field to *TIE* when configuring prefixes for ISDN ties ensures that the extension is forwarded with the prefix for outgoing calls and that no prefix is attached to the incoming extension for incoming calls. In the default setting for external  $S_0$  interfaces – **Usage** field set to *TRUNK* – the prefix is removed from the extension for outgoing calls and attached to the incoming extension for incoming calls.

The setup for prefix configuration in the Setup Tool for the scenario in [Figure 1-1, page 12](#) would be as follows.

For the ISDN tie of the central **XCENTRIC**:

XCENTRIC Setup Tool		BinTec Communications AG
[SLOT 2 UNIT 3 ISDN BRI]: Configure ISDN Basic Rate Interface		
Xcentric1		
Type of Interface:	ISDN Tie S0 (Layer 1: NT)	
ISDN Switch Type	Euro ISDN point to point	
Prefixes:	Prefix	
	4	
	5	
Configure Prefixes >		
SAVE		CANCEL
Use <Space> to select		

For the ISDN tie of the **XCENTRIC** subsystem:

XCENTRIC Setup Tool		BinTec Communications AG
[SLOT 4 UNIT 0 ISDN BRI]: Configure ISDN Basic Rate Interface		
Xcentric2		
Type of Interface:	ISDN Tie S0 (Layer 1: TE)	
ISDN Switch Type	Euro ISDN point to point	
Prefixes:	Prefix	
	0	
	2	
	3	
Configure Prefixes >		
SAVE		CANCEL
Use <Space> to select		

The prefix *0* for the ISDN tie of the **XCENTRIC** subsystem is used for routing calls from a physical terminal at the **XCENTRIC** subsystem that are intended for an external destination. The prefix routes these calls to the outside via the external  $S_0$  interface of the central **XCENTRIC**.

#### 1.4.4 Connecting an **XCENTRIC** Subsystem to the LAN

To be able to use the physical terminals connected to an **XCENTRIC** subsystem for Remote TAPI and Remote CAPI as well, the **XCENTRIC** subsystem must be connected to the LAN (e.g. via a hub). The IP address (**Local IP Number**), Netmask (**Local Netmask**) and **Encapsulation** must be entered in the **CM-100.BT, FAST ETHERNET** menu.

### 1.5 Extension of Supplementary Services

The supplementary services of the CAPI interface have been extended as follows:

- HOLD (Call Hold, ETS 300 139), brokering
- CF (Call Forwarding, ETS 300 199-201)
  - Activating  
(CFU = always active, CFB = if busy, CFNR = if not reachable)
  - Deactivating
  - Requesting status
- CD (Call Deflection, ETS 300 202), call forwarding during calling phase
- ECT (Explicit Call Transfer, ETS 300 367), call transfer

## 2 Changes

### 2.1 Activity Monitor

You can now also use the Activity Monitor to monitor the internal physical interfaces of **XCENTRIC**.

### 2.2 Number of NAT Sessions Extended

The previous limit of 230 active NAT sessions over an interface has been increased to 4000. The limit of 230 active sessions was too low for certain situations, e.g. for calling up HTML pages.

### 2.3 New Prefix Configuration

Prefix configuration for automatic external line access and the local prefix have been changed and extended. The **PREFIXES** submenu has been added to the **PABX** menu.



After carrying out an update, it is necessary to check the settings for external line access (in **PABX** ► **STATIC SETTINGS**).

You will find a detailed description of prefix configuration in the current version (version 1.2) of the **XCENTRIC** manual (chapter 11.5 and 11.7) on BinTec's web server.



## 3 Bugfixes

### 3.1 Internet Access in Dynamic Client Mode

In Release 5.1.2, infinite IPCP negotiations occurred on setting up a connection to some Internet providers. These infinite IPCP negotiations could occur when **XCENTRIC** was assigned the DNS/WINS addresses in Client Mode.

This bug has been fixed in Release 5.1.4.

### 3.2 PABX: NoReply Timer in Call Forwarding Menu

If a lower value was set for the **NoReply Timer** for call forwarding on no reply or call forwarding on busy and no reply, the forwarded call was interrupted in some cases.

This bug has been fixed in Release 5.1.4.

### 3.3 PABX: Wrong D-Channel Message

An external call to an extension configured on **XCENTRIC** but for which no physical terminal (telephone) was configured produced the wrong message: `Cause is 0x90 normal call clearing` instead of `Cause is 0x29 no user responding`.

This bug has been fixed in Release 5.1.4.

### 3.4 PABX: Incorrect Rejection of a Call

If a call was directed to more than one far end terminal, e.g. to a telephone and a CAPI application or a call group, it was possible for the incoming call to be incorrectly interrupted (released) if one of the far end terminals actively rejected the call. Another far end terminal was then unable to accept the call.

This bug has been fixed in Release 5.1.4.

### 3.5 PABX: Call Forwarding on No Reply

If call forwarding on no reply was configured for forwarding a call to an extension with an international prefix, an extension with call-by-call prefix or some other specific extensions, call forwarding did not function in some situations.

This bug has been fixed in Release 5.1.4.

### 3.6 PABX: Group Call to Internal $S_0$ Connection

If three telephones were combined on an internal  $S_0$  bus to form a call group, problems occurred with calls to the group extension number. If a call was in progress at the same time on one of the telephones in the call group, the incoming call was signaled on the other two telephones (short ringing on telephones) and then immediately interrupted (cleared).

This bug has been fixed in Release 5.1.4.

### 3.7 PABX: Blocked B-Channels on Internal $S_0$

It was possible under various circumstances that no B-channels were available for communication on an internal  $S_0$  bus, although the corresponding LED still indicated free B-channels.

This bug has been fixed in Release 5.1.4.

### 3.8 Setup Tool: Unit 0 on XCM-5S0

If Unit 0 of the XCM-5S0 module was configured as internal, it was not possible to configure a new terminal with the Setup Tool.

This bug has been fixed in Release 5.1.4.

## 4 Known Problems

### 4.1 Malfunctioning with Mixture of XCM-5S0 and XCM-S04AB Modules

If you use both 5-S<sub>0</sub> modules (XCM-5S0) and ab modules (XCM-S04AB), it may occur that a 5-S<sub>0</sub> module in Slot 2 does not function at all or only to a limited extent.

To avoid this problem, first insert all the ab modules starting with Slot 2 and then the S<sub>0</sub> modules.