

3CX Failover mit berofos

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- **Telefonie ist ein hoch sensibles Thema**
- **Ausfall der Telefonie wird oft unterschätzt**
- **Ausfallsicherheit teuer?**

- **Single Point of Failure**

3CX Server

berofix Gateway

berofos Failover Switch

zusätzliches Equipment

- **Beispiel Callcenter mit 100 Agents**

100 Agents a 10 € / h

Kostenl 1000 € / h

Bei einem Ausfall von 8h => 8000.- EUR Schaden

- **Beispiel Kosten Failover**

Redundanter 3CX Server 1500.-EUR

Redundantes Gateway 1000.-EUR

FailoverSwitch 700.-EUR

Gesamtkosten < 3000.-EUR

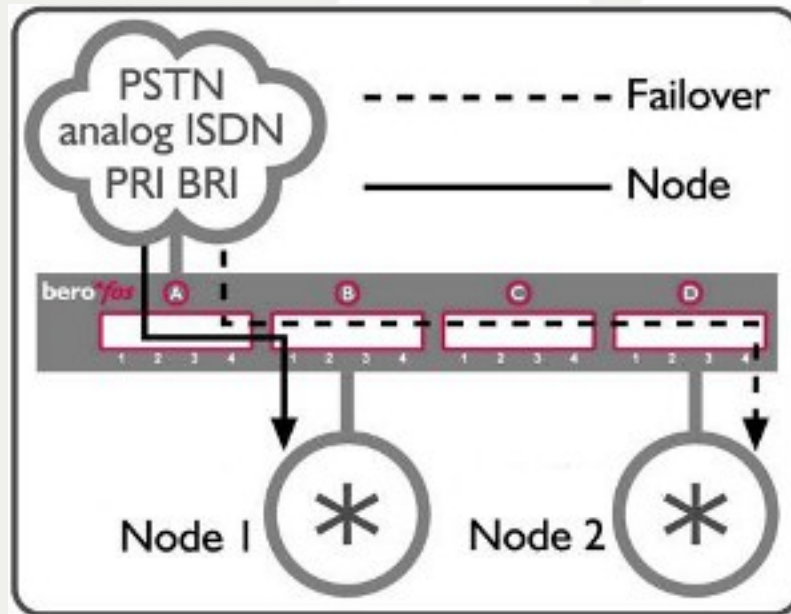
berofos Failover Switch

- PSTN Failover Gerät
- Bis zu 4 BRI oder 4 PRI umschaltbar
- WebInterface
- Onboard Watchdog für automatisches Failover
- Onboard email notifications
- 2 Szenarios (Failover und Bypass)
- 2 schaltbare Steckdosen

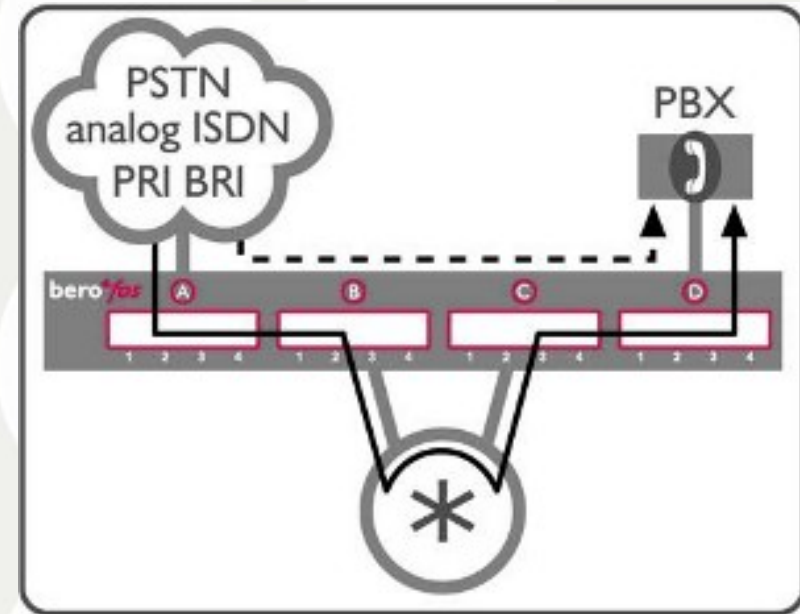


berofos Failover Switch

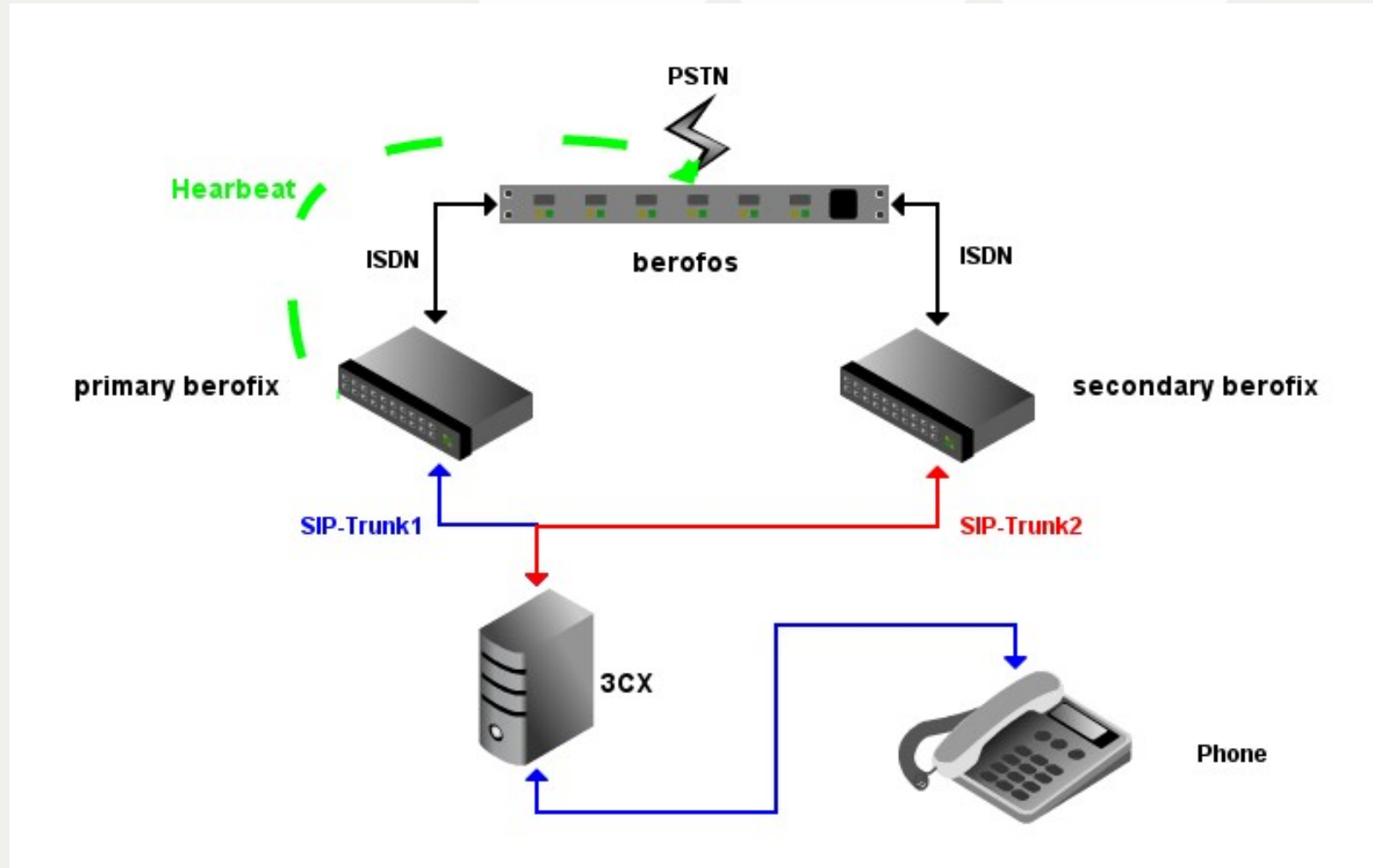
Failover Szenario



Bypass Szenario



3CX Failover mit berofos und berofix





3CX für 2 berofixe konfigurieren

- 2 neue PSTN devices erstellen
- 10000 bero 1 / 10001 bero 2

The screenshot shows the 3CX management interface. On the left is a navigation tree with the following items: 3CX IP-Telefonanlage, Port-/Trunk-Status, Nebenstellenstatus, Systemnebenstellen-Status, Remote-Verbindungen, Telefone, Server-Aktivitäten-Protokoll, Dienststatus, Nebenstellen, PSTN-Geräte (selected), and VoIP-Devices. Under 'PSTN-Geräte', there are two entries: 'bero1' with sub-items '10000' and '10001', and 'bero2' with sub-item '10001'. On the right, the 'PSTN-Geräte' table is displayed with the following data:

Gateway	Host/IP-Adresse	Typ
bero1	172.20.22.101	BRI
bero2	172.20.22.102	BRI

Below the table, there are icons for 'Gateway hinzufügen', 'Gateway bearbeiten', 'Gateway löschen', and 'Anmeldung aktualisieren'.

3CX für 2 berofixe konfigurieren

- Ausgehende Regel erstellen
- Route 1 -> bero 1
- Route 2 -> bero 2

The screenshot shows the 3CX configuration interface. On the left is a tree view with 'Ausgehende Regeln' selected. The main window is titled 'Ausgehende Anrufe durchführen über' and contains the following text: 'Legen Sie bis zu 3 Routen für ausgehende Anrufe fest. Die zweite und dritte Route dienen als Backup. Für je entfernt werden.' Below this is a table with three rows for Route 1, 2, and 3. Each row has a dropdown menu for the route name, a 'Ziffern entfernen' dropdown set to '1', and a 'Zi' field.

Route		Ziffern entfernen	Zi
Route 1	bero1	1	
Route 2	bero2	1	
Route 3		1	

OK

- bero 1 172.20.22.101 und bero 2 172.20.22.102 über den Wizard konfigurieren

3CX Wizard

PSTN options	
How many ISDN BRI lines are connected ?	Available Ports Lif0: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4
Are lines Point to Point (PTP) or Point to Multi Point (PMTP) ?	<input type="button" value="PTP"/> ▼
For wich country should the tonset be configured ?	<input type="button" value="[de]"/> ▼
Is the feature "CLIP No Screening" activated on the lines ?	<input type="radio"/> yes <input checked="" type="radio"/> no
Is the feature "Call Deflection Partion Rerouting" activated on the lines ?	<input type="radio"/> yes <input checked="" type="radio"/> no
3CX options	
IP-Address of the 3CX Phone System machine:	<input type="text"/>
Auth-ID of the port created for gateway (eg 10000):	<input type="text"/>
AuthPassword of this port:	<input type="text"/>
<input type="button" value="Save"/>	

berofix | Heartbeat Konfigurieren

- berofix 1 IP: 172.20.22.101

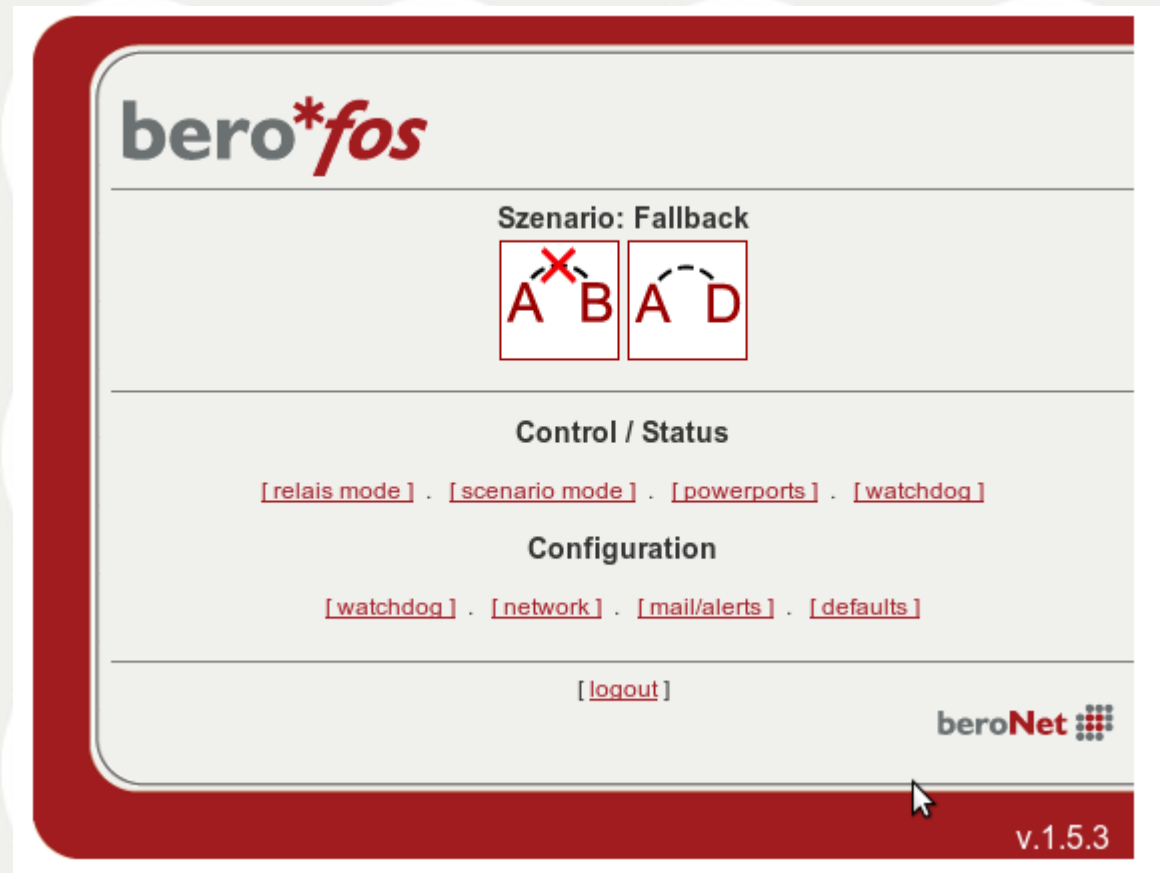
berofos Heartbeat



berofos Hearbeat settings	
IP-Address	<input type="text" value="172.20.22.103"/>
MAC-Address	<input type="text" value="00:19:32:00:03:8E"/>
Interval (sec.)	<input type="text" value="2"/>
Heartbeat on boot	<input checked="" type="checkbox"/>
<input type="button" value="Save"/>	
berofos Hearbeat state	
	<input type="button" value="Deactivate"/>

Konfiguration berofos

- berofos IP 172.20.22.103

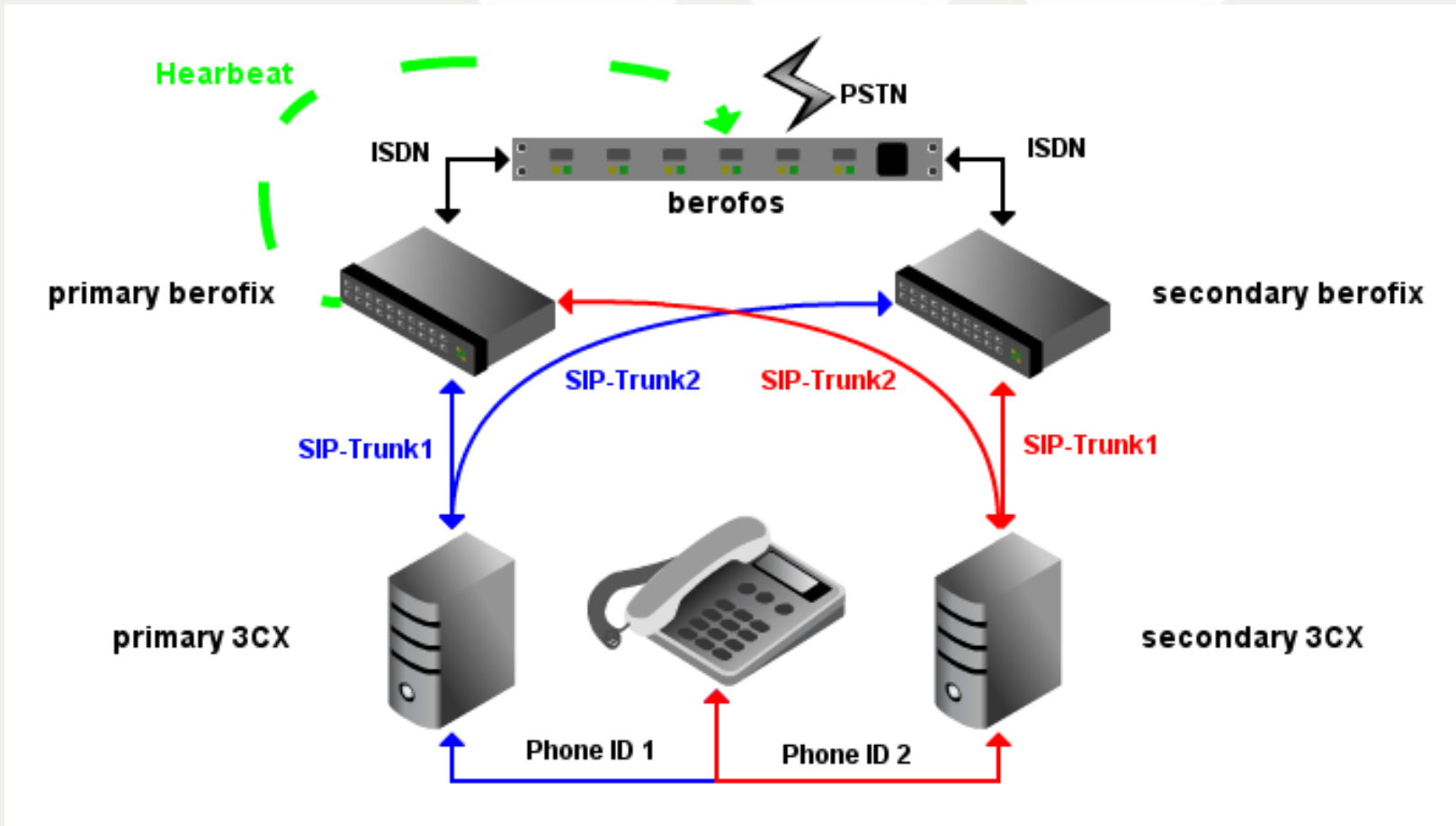


The screenshot displays the berofos web interface. At the top left is the logo 'bero*fos'. Below it, the scenario is set to 'Fallback', illustrated by two diagrams: the first shows a solid line between nodes A and B with a red 'X' over it, and the second shows a dashed line between nodes A and D. The interface is divided into sections: 'Control / Status' with links for '[relais mode]', '[scenario mode]', '[powerports]', and '[watchdog]'; 'Configuration' with links for '[watchdog]', '[network]', '[mail/alerts]', and '[defaults]'; and a '[logout]' link at the bottom center. The 'beronet' logo and version 'v.1.5.3' are in the bottom right corner.

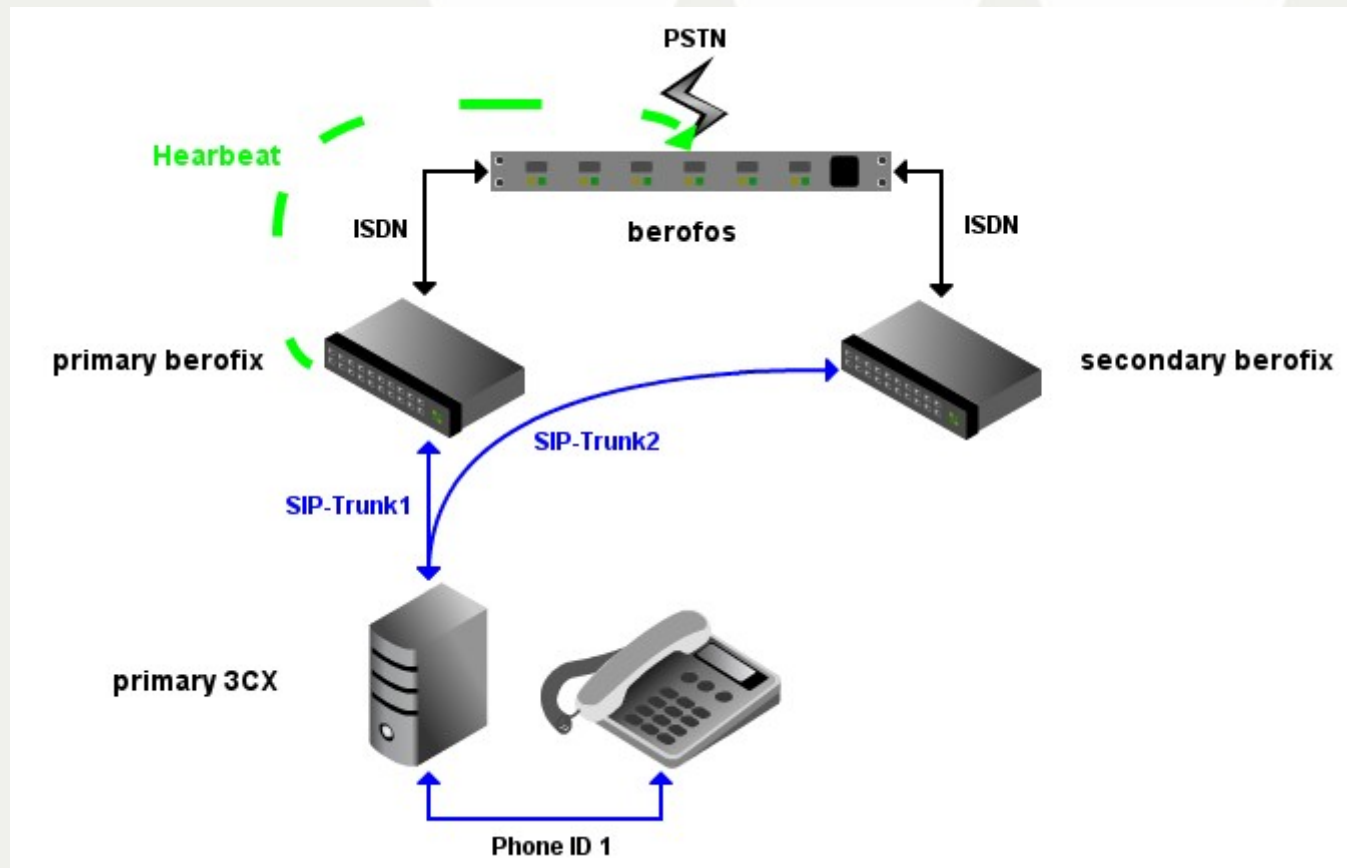
Konfiguration berofos

- Szenario auf Fallback
- Relais Mode auf A - D, A x B
- Watchdog Einstellungen (Intervall / default))
- E-Mail Einstellungen
- Defaults Zustände für PowerUP definieren
- Watchdog aktivieren

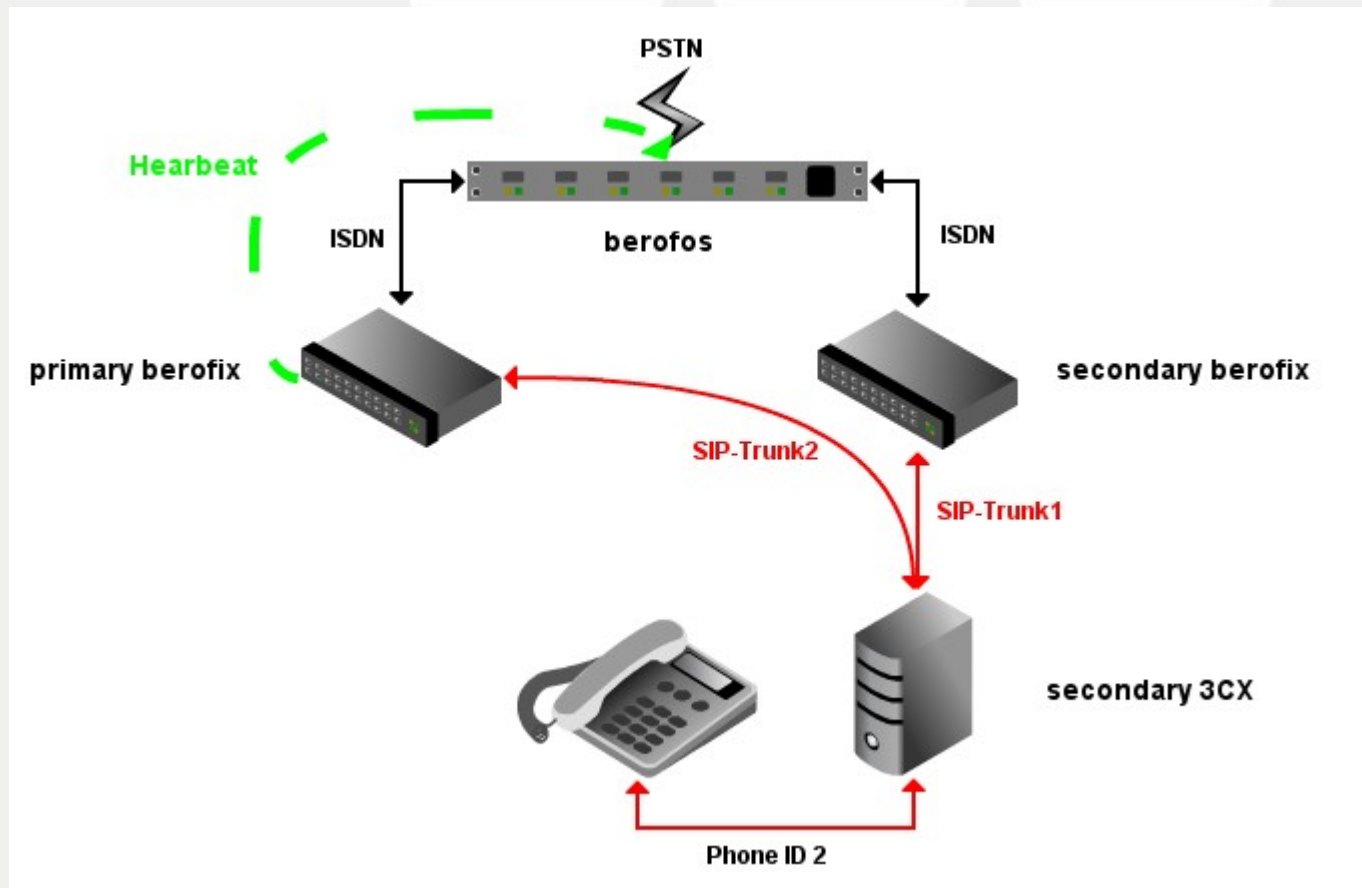
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bero*fix



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SIP

Name:	3CX1
Server Address:	172.20.22.100
User:	10000
Secret:	10000
Type:	Both
Default:	<input type="checkbox"/>
Registration intervall:	60
Failover:	3CX2

[more...](#)

Save Close

**Vielen Dank für Ihre
Aufmerksamkeit**

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