

Comdasy FAQ: Mapping DID
Numbers in Survivable Mode

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1. Introduction

This HowTo describes the DID number mapping functions offered in the Comdasys Convergence Products. First a small introduction about what the feature is for and how it can be used / configured in the product.

The Comdasys Convergence support Survivability functionalities for Branch Offices. In those scenario it will take over the functionality of a central PBX / Softswitch in case this system has failed or is unavailable due to network problems (e.g. WAN Outages). In those cases the Convergence system will directly handle inbound and outbound calls. The internal numbers are automatically learned by the Convergence so that there is no need to administer any of this in Survivability Mode. The Convergence offers a number of different basic functionalities in order to cover a wide area of scenarios with some basic enhancements to the learned numbers. We will explain those in detail before going into the scenarios that cannot be covered by these basic mappings.

1.1. Own Number Mapping

The Own Number field is intended for entering the phone number of the branch office without the extension. Usually, the following scenario is assumed. Under normal operations, the phones can be reached via two different numbers, their complete PSTN number and internally by simply dialing an extension. An example will illustrate this. Let us assume that the branch office can be reached via the "+49 89 4711" from the outside. Internally you have the extensions "100" and "110". This means that from the PSTN you can reach the phones by dialing "+49 89 4711 100". It is your choice whether you use complete E.164 numbers here or work with e.g. area code only. Internally, the phones can be reached via their full number or via their extension only. The registration with the SIP server and the SIP Proxy in our case here is performed with the full number. This comes naturally since the central SIP server by handling multiple branches can have many phones with the extension "100". By knowing the Own Number of the branch, the Proxy upon receiving a call for an extension in Survivability mode can now prepend the number of the branch and hence find the phone in the Registration database. This means that extension dialing still works in survivability mode.

If you do not have such a scenario where you want to call the internal phones with a shortcut, simply leave this field blank, and the Proxy will only look for the learned numbers.

1.2. Call Forwarding in Survivability Mode

Another scenario is where you have multiple phone numbers for one user, or virtual phone numbers of e.g. Hunt Groups.

In order to do that you have to define a number as well as a target number. This functionality is very much alike the DID number mapping, but here it is just supported for a very limited amount of numbers.

1.3. Office Prefix Mapping

This feature is used for both survivability scenarios. It is most often used in pure telephony scenarios where the user part of a SIP URI is always a number. The Map to office prefix function consists of two fields that must both be filled in. The *Short Prefix* is a number that must match an incoming request. This is probably best explained by an example:

Assume that you have a number range 123456789xx for the phones connected to the Convergence where xx stands for an arbitrary extension. Since 123456789 is a very long

prefix, there might be additional prefixes configured in your central softswitch, that you also want to be considered correctly concerning survivability. So let us assume you have a second prefix configured, say 58000xx where the xx is the same suffix as above. The Convergence will then map this short prefix to the long version above, and only then perform all checks concerning CAC and survivability.

1.4. Remaining Problem DID Numbers

As you have seen above, you can already cover a lot of scenarios with the above described mechanisms, but there are exceptions. Those exceptions are large locations that have no pattern of any form to match incoming DID numbers with the numbers that the phones register with. In those cases, an explicitly configured mapping is required. Since those are typically complex scenarios, with a lot of users, Comdasys has opted to not offer such a mapping in the WebGUI, because we deemed this to be too complex to handle. We rather took an approach of an external CSV file, that is being used to do the mapping.

2. Configuration Instructions

This CSV file contains the DID numbers followed by the actual number the telephone registers with. The following example should make this clearer:

```
1234567;4300
1234568;4200
...
```

In these cases any incoming call to the number 1234567 would be mapped to the extension 4300 which would subsequently be looked up in the registry or dialed via the gateway. This file needs to be copied to:

```
/etc/sysconfig/numbermap
```

This file will automatically used by the SIP Proxy to map incoming numbers unknown to the SIP Proxy. This means that any number called either from a gateway or internally that is unknown to the SIP Proxy will be mapped against this file. If a match is found, the mapped number can in turn be looked up against the SIP Registry to send the message to the final destination.

All you need to do to activate this feature is copy the file to this location. This will automatically activate this feature. To copy the file an SCP such as WinSCP can be used. Please refer to the *Command Line Chapter* in the *User Manual* for more information on how to copy this file.

2.1. Multiple Locations with Contiguous Number Set

You can also map numbers that are subsequently sent across a gateway. This can be handy if you have a case where you for example have 2 sites that have a contiguous internal number set. In those cases you would dial an internal number in normal mode, and the connection would be made via IP. In Survivability mode, this of course does not work. Therefore, you would need to dial the number via PSTN. In order to do that, you could provide a mapping file looking like the following:

```
4300;045523454300
...
```

This would specify that an internal number is mapped to something with a PSTN prefix and

hence dialable through the gateway.