

Configure an ISDN Overflow Route with a CPL Script on the VCS



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Introduction

This document describes how to configure an overflow route on a Cisco Video Communications Server (VCS) when you have limited IP bandwidth capacity between sites, or when you desire to protect against IP network failure. The overflow route via an ISDN gateway is used if a new call is made and the call cannot be placed over the IP network connection.

Prerequisites

Requirements

Cisco recommends that you have knowledge of the Cisco VCS.

Components Used

The information in this document is based on the Cisco VCS.

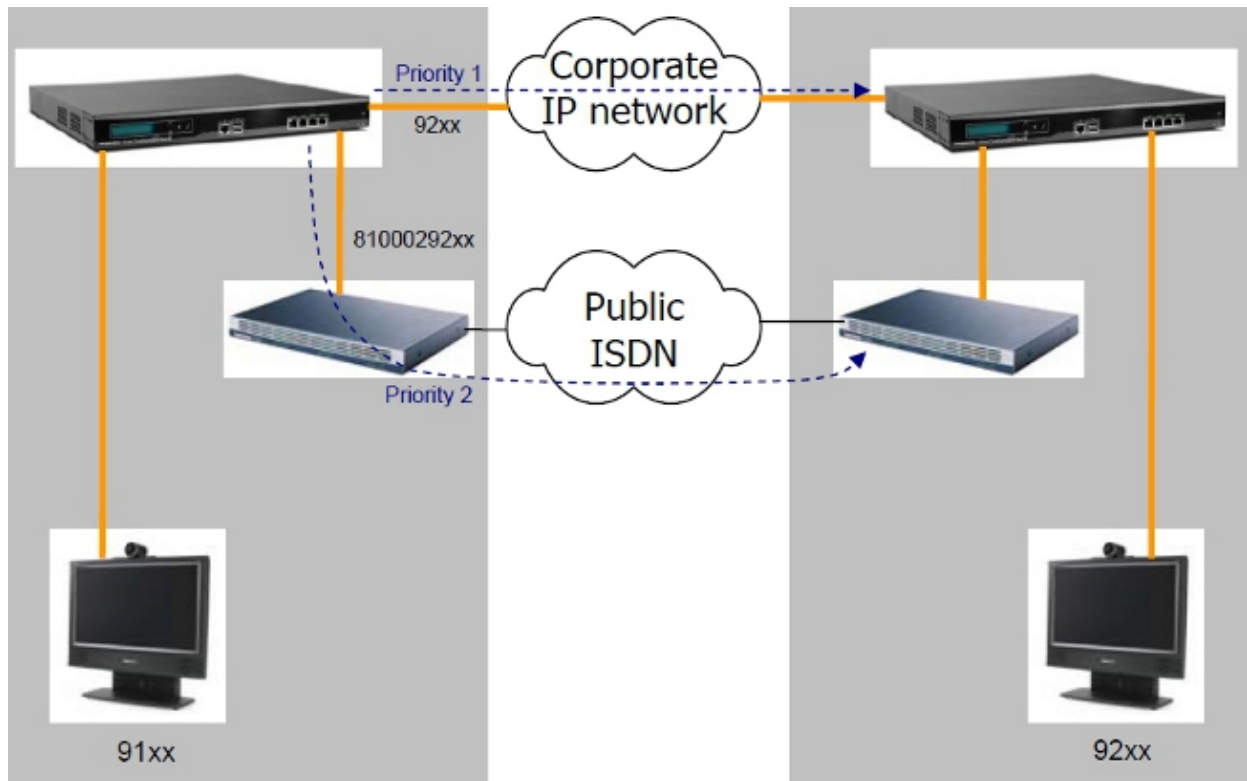
The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background Information

This document explains how to use a Call Processing Language (CPL) script in order to prioritize call routes such that:

- If there is enough IP bandwidth for the call, the Cisco VCS routes the call over IP.
- If there is insufficient IP bandwidth for the call, the Cisco VCS routes the call via an ISDN gateway.

This diagram illustrates the Cisco VCS route decisions in accordance with the aforementioned behaviors:



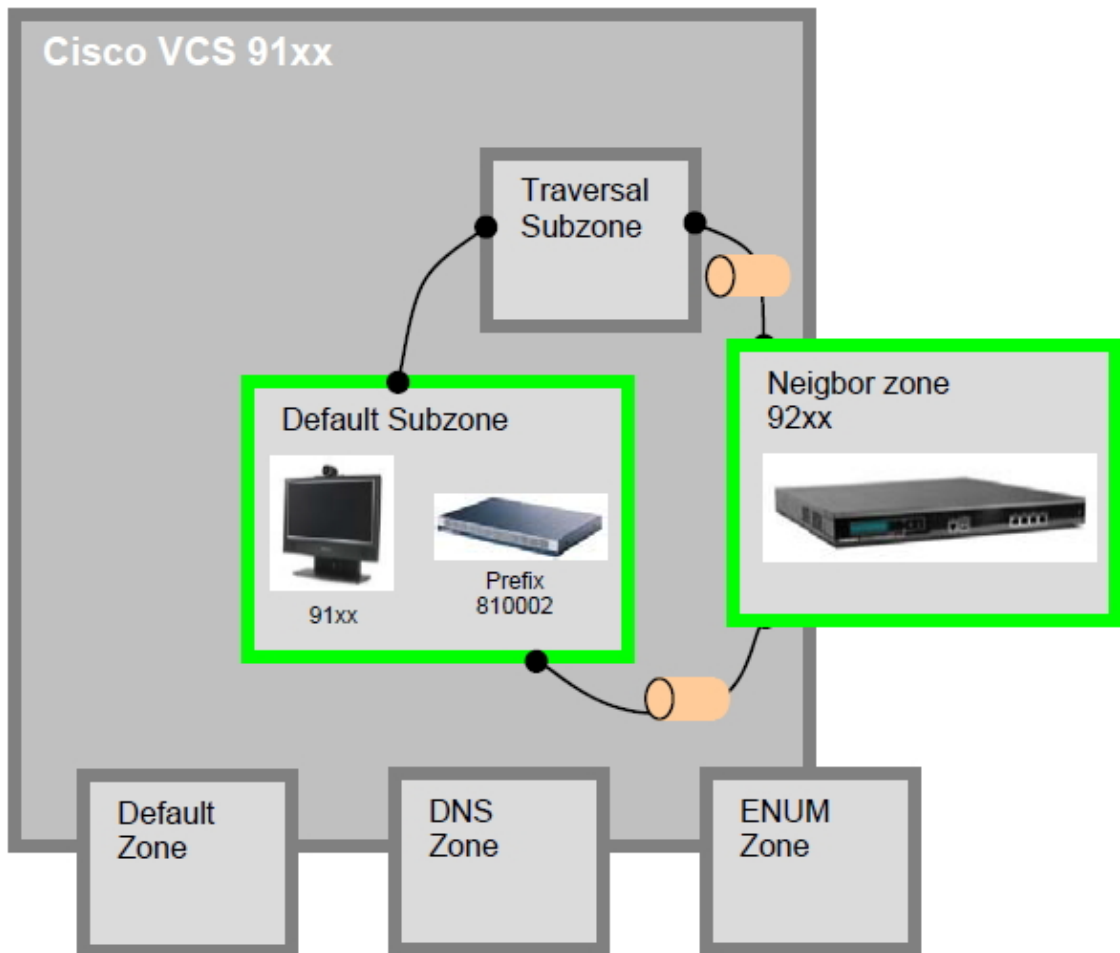
These assumptions are used for the example that is described in this document:

- There is one Cisco VCS to which endpoint **91xx** is registered (VCS 91xx).
- There is another Cisco VCS to which endpoint **92xx** is registered (VCS 92xx).
- In order to access endpoint **92xx** via the ISDN gateway, VCS 91xx must prefix the **92xx** number with **810002**.

Configure

In this scenario, VCS 91xx is configured with a Neighbor Zone that matches VCS 92xx and routes calls via the IP network to VCS 92xx. Here is the process that occurs in this scenario:

1. The ISDN gateway registers with the VCS 91xx gateway via a prefix registration of **810002**:



2. A pipe is defined that specifies the total bandwidth capacity of the IP link from VCS 91xx to VCS 92xx. This pipe is applied to all of the links that can provide calls to Neighbor Zone 92xx. If calls are made to Neighbor Zone 92xx that exceed the *total bandwidth limit*, they fail. Additionally, if calls are made to Neighbor Zone 92xx and the IP link is down, the calls fail.
3. A CPL script is applied to the Cisco VCS that adds the **810002** prefix to the **92xx** number, and then the call is placed again if a call to Neighbor Zone 92xx fails.
4. The gateway receives calls with the **810002** prefix and forwards them based on its own dial plan configuration.

Here is the CPL script that routes calls via the IP link if capacity exists and via the gateway if the call fails to be routed via the IP link:

```
<?xml version="1.0" encoding="UTF-8" ?>
<cpl xmlns="urn:ietf:params:xml:ns:cpl"
xmlns:taa="http://www.tandberg.net/cpl-extensions"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="urn:ietf:params:xml:ns:cpl cpl.xsd">
<taa:routed>
<address-switch field="destination">
<address regex="92..">
<!-- Proxy call to original 92xx destination -->
<proxy>
<failure>
<!-- Call failed for some reason, try again using
the locally registered gateway -->
<taa:location clear="yes" regex="(92..)" replace="810002\1">
</proxy/>
```

```

</taa:location>
</failure>
</proxy>
</address>
</address-switch>
</taa:routed>
</cpl>

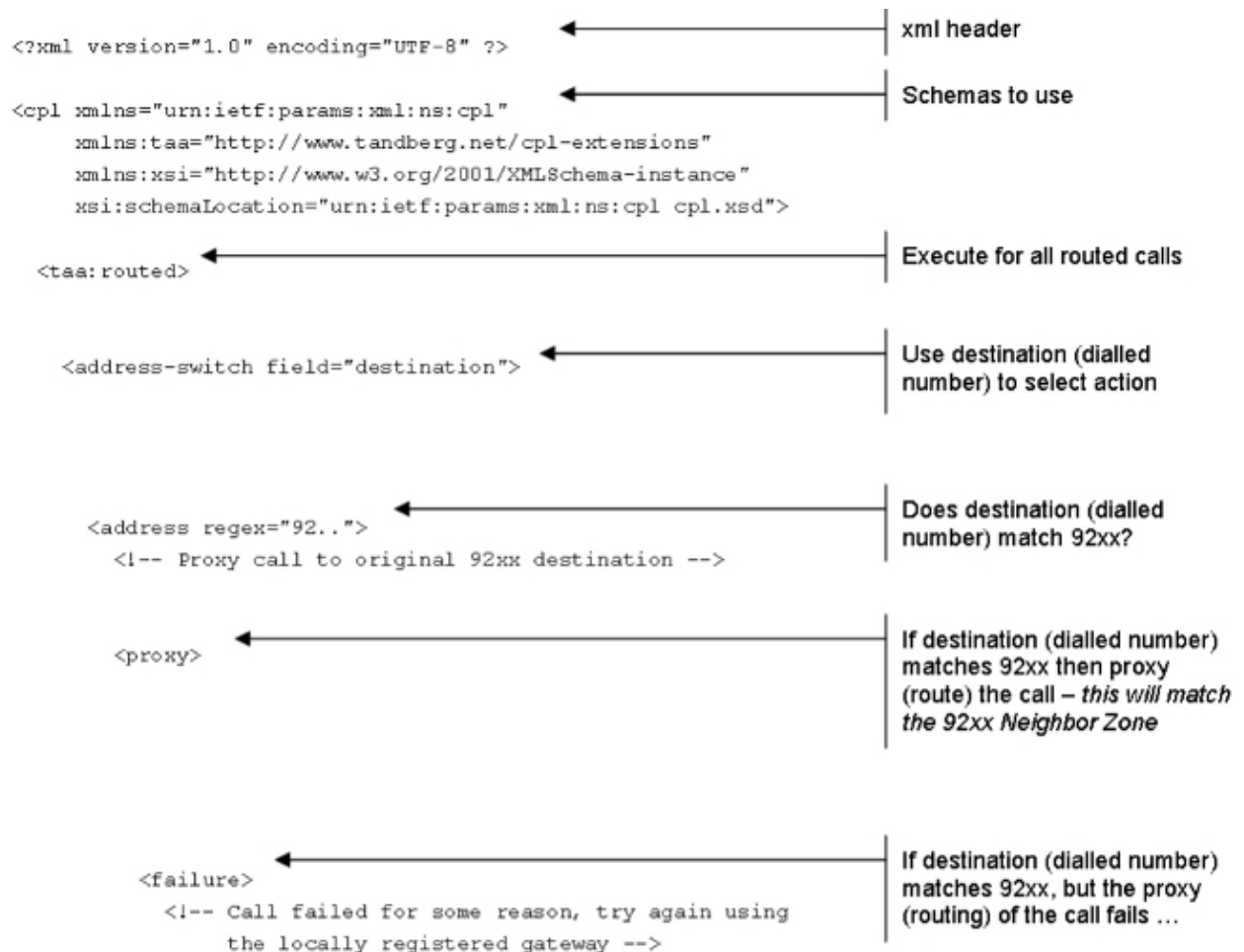
```

This CPL file should be loaded via the web interface. Complete these steps in order to load it:

1. Navigate to **VCS configuration > Call policy > Configuration**.
2. Browse to this CPL file in the **Policy Files** section.
3. Click **Upload File**.

CPL Script Explanation

Here is a detailed explanation of the CPL script:



```
<taa:location clear="yes" regex="(92..)" replace="810002\1">
```

... clear the routing information and take the destination and prefix the destination number with 810002

```
</proxy/>
```

proxy (route) the call with the prefix 81002 – this will match the gateway's prefix registration and so will be routed to the gateway

```
</taa:location>  
</failure>  
</proxy>  
</address>  
</address-switch>  
</taa:routed>  
</cpl>
```

Tip: For additional information about the use of CPL scripts, refer to the appropriate Cisco VCS Administrator Guide for your specific version and look for the CPL reference in the Appendices section.

Downspeed Bandwidth Configuration

In a scenario that involves an IP link that has 128 kbps available, for example, and a new call requests a bandwidth of 384 kbps, you can adjust the Cisco VCS bandwidth configuration in order to decide whether the call is downspeeded to 128 kbps and routed over the IP link or overflowed to the gateway.

In order to reach the bandwidth configuration, use the web browser interface and navigate to **VCS configuration > Bandwidth > Configuration**.

If the *Downspeed total mode* is set to **On**, then the call in the previous scenario is downspeeded and placed over the IP link. If the *Downspeed total mode* is set to **Off**, then the call to the IP link fails, the dialed number is prefixed, and the call is forwarded via the ISDN gateway.

Tip: For additional information about the Cisco VCS configuration, refer to the appropriate Cisco VCS Administrator Guide for your specific version.

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.