

DialPlan For DVSwitch Tune

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Contents

1	DialPlan For DVSwitch Tune	3
1.1	Use Format:	3
1.2	The DialPlan	3
1.3	Summary	7
1.4	Contributors	8
2	Contributors	9
	List of Figures	11
3	Licenses	15
3.1	GNU GENERAL PUBLIC LICENSE	15
3.2	GNU Free Documentation License	16
3.3	GNU Lesser General Public License	17

1 DialPlan For DVSwitch Tune

This is a example asterisk/app_rpt dialplan for tuning the DVSwitch MMDVM system. Please note that there is no perfect way to tune dvs in all modes with dtmf... YET ! This is a workaround.

We make use of a modified autopatch entry. Please read this page before you start. / How To Pass DTMF To Shell Scripts¹

Assuming you have created the special autopatch context dialer command as described in that page and given it a unique context to dial into, that we will use here as

[dvs-set] ; this context needs to be unique in the system & match your dialing context.

1.1 Use Format:

(AP command prefix) + (dvs mode 1-5) + (dvs tg) Requires that you set dvs mode each time with the leading digit 1-5. So, a command here of *97 1 3100 would set dmr 3100 And *97 2*2xxx would tune dstar dcsxxx2xxxx tunes dstar adhoc number only 2*1xxx tunes dstar REFxxx2*2xxx tunes dstar DCSxxx2*3xxx tunes dstar XLSxxx2*4xxx tunes dstar XRFxxx2*5x tunes dstar mem # or ## from file3xxxxx tunes YSF xxxxx4xxxxx tunes P25 xxxxx5xxxxx tunes NXDN xxxxx ** disconnects from any mode

1.2 The DialPlan

In extensions.conf

[dvs-set] ; this context needs to be unique in the system and match the dialing context

exten = _1.,1,Wait,1 ; The following for dmr

exten = _1.,2,NoOp() ; room for you to insert a command without renumbering anything

exten = _1.,3,SayAlpha(dmr,\${EXTEN:1}) ; speak dmr tg before execution

exten = _1.,4,Wait,4 ; wait with time to cancel (autopatchdn)

¹ https://wiki.allstarlink.org/wiki/Passing_DTMF_to_shell_scripts

```
exten = _1.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DMR) ; set mode
exten = _1.,6,Wait,1 ; allow some time to return from the shell
exten = _1.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune ${EXTEN:1}) ; set TG
exten = _1.,8,Hangup ; done/hangup
```

```
exten = _2x.,1,Wait,1 ;The following for dstar-XXLX
exten = _2x.,2,NoOp()
exten = _2x.,3,SayAlpha(d*,$${EXTEN:1}) ; speak dstar & tg before execution
exten = _2x.,4,Wait,4
exten = _2x.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DSTAR)
exten = _2x.,6,Wait,1
exten = _2x.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune ${EXTEN:1})
exten = _2x.,8,Hangup
```

```
exten = _2*1.,1,Wait,1 ;The following for dstar-REF
exten = _2*1.,2,NoOp()
exten = _2*1.,3,SayAlpha(d*,ref${EXTEN:2}) ; speak dstar & tg before execution
exten = _2*1.,4,Wait,4
exten = _2*1.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DSTAR)
exten = _2*1.,6,Wait,1
exten = _2*1.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune ref${EXTEN:2})
exten = _2*1.,8,Hangup
```

```
exten = _2*2.,1,Wait,1 ;The following for dstar-DCS
exten = _2*2.,2,NoOp()
exten = _2*2.,3,SayAlpha(d*,dcs${EXTEN:2}) ; speak dstar & tg before execution
exten = _2*2.,4,Wait,4
exten = _2*2.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DSTAR)
exten = _2*2.,6,Wait,1
```

```
exten = _2*2.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune dcs${EXTEN:2})
exten = _2*2.,8,Hangup
```

```
exten = _2*3.,1,Wait,1 ;The following for dstar-XLS
exten = _2*3.,2,NoOp()
exten = _2*3.,3,SayAlpha(d*,xlx${EXTEN:2}) ; speak dstar & tg before execution
exten = _2*3.,4,Wait,4
exten = _2*3.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DSTAR)
exten = _2*3.,6,Wait,1
exten = _2*3.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune xls${EXTEN:2})
exten = _2*3.,8,Hangup
```

```
exten = _2*4.,1,Wait,1 ;The following for dstar-XRF
exten = _2*4.,2,NoOp()
exten = _2*4.,3,SayAlpha(d*,xrf${EXTEN:2}) ; speak dstar & tg before execution
exten = _2*4.,4,Wait,4
exten = _2*4.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DSTAR)
exten = _2*4.,6,Wait,1
exten = _2*4.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune xrf${EXTEN:2})
exten = _2*4.,8,Hangup
```

```
exten = _2*5.,1,Wait,1 ;The following for dstar memory file /opt/mmdvm/dstar.mem
exten = _2*5.,2,NoOp()
exten = _2*5.,3,SayAlpha(d*,m${EXTEN:3}), ; speak dstar & mem# before execution
exten = _2*5.,4,Wait,3
exten = _2*5.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode DSTAR)
exten = _2*5.,6,Wait,1
exten = _2*5.,7,System(/opt/MMDVM_Bridge/dstarmem.sh ${EXTEN:3}) ; calls a secondary shell that hands off info to dvs tune
```

exten = _2*5.,8,Hangup

exten = _3.,1,Wait,1

exten = _3.,2,NoOp()

exten = _3.,3,SayAlpha(ysf,\${EXTEN:1}) ; speak YSF & tg before execution

exten = _3.,4,Wait,4

exten = _3.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode YSF)

exten = _3.,6,Wait,1

exten = _3.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune \${EXTEN:1})

exten = _3.,8,Hangup

exten = _4.,1,Wait,1

exten = _4.,2,NoOp()

exten = _4.,3,SayAlpha(p25,\${EXTEN:1}) ; speak p25 & tg before execution

exten = _4.,4,Wait,4

exten = _4.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode P25)

exten = _4.,6,Wait,1

exten = _4.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune \${EXTEN:1})

exten = _4.,8,Hangup

exten = _5.,1,Wait,1

exten = _5.,2,NoOp()

exten = _5.,3,SayAlpha(nxdn,\${EXTEN:1}) ; speak nxdn & tg before execution

exten = _5.,4,Wait,4

exten = _5.,5,System(/opt/MMDVM_Bridge/dvswitch.sh mode NXDN)

exten = _5.,6,Wait,1

exten = _5.,7,System(/opt/MMDVM_Bridge/dvswitch.sh tune \${EXTEN:1})

exten = _5.,8,Hangup

```

exten = _**.,1,Wait,1
exten = _**.,2,NoOp()
exten = _**.,3,SayAlpha(disc)
exten = _**.,4,Wait,3
exten = _**.,5,System(/opt/MMDVM_Bridge/dvswitch.sh tune disconnect) ; set TG dis
exten = _**.,6,Hangup

```

1.2.1 DStar Memory File

The intention here was just a method to connect systems that can not be entered into a 15 usable dtmf digit string reasonably. But you could just store your favorite 10 for ease of dialing. To use dstar memory calls, you need to create a file in `/opt/MMDVM_Bridge/dstar.mem` and populate it one dstar connection of any valid call that can be made through DVS per line. Do not put anything else in the file as it begins reading from line 1 (no comments or blank lines). An extra command in the dialplan of `" 2*5 xx "` will call the line# of the memory file. **EXAMPLE**

`dcs006fDCSSATDCSUS1DCSUS2DCSUS4` Requires one additional batch file in the `/opt/mmdvm_bridge/` directory called `dstarmem.sh` with these contents

1. `!/bin/bash`

```

/opt/MMDVM_Bridge/dvswitch.sh      tune      $(sed      "$1q;d"
/opt/MMDVM_Bridge/dstar.mem)

```

(for some reason I could not execute this inside the dialplan and suspect it's our older version of asterisk or some bad syntax... so, using alt method) Don't forget to set ownership and permissions of the `dstarmem.sh` file

1.3 Summary

While this is not a perfect model of operation, it is a functional example for which allows you to develop your own methods beyond it using methods and principles you see.

The intention here was the old KISS rule and to keep it all in one place as much as possible for easy understanding. Obviously, this will challenge your memory if you do not use it often.

For those of you who require such functionality, make a cheat sheet to carry with you mobile/portable etc.

Perhaps you will devise something better we can post here ?

Since we are dialing by context, and to keep my extensions.conf file a bit cleaner (it's big),

I set this in a file in /etc/asterisk/custom named dvs.conf and call it at the end of extensions.conf

```
'#includeifexists custom/dvs.conf' .
```

1.4 Contributors

- KB8JNM²
- This page was last edited on 4 January 2022, at 01:50.

² <https://wiki.allstarlink.org/index.php?title=User:KB8JNM&action=edit&redlink=1>

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¹ Chapter 3 on page 15

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