



## Introducing Dalcon Communication Manager 2.0

The Dalcon Communications Manager (DCM) is management software enabling non-technical users to use a single, browser-based interface to manage a sophisticated unified communications system on a software-driven IP PBX built from a combination of standard hardware and software from multiple vendors.

### The opportunity

Open source IP telephony has made it possible to assemble very powerful IP-PBXs that run on standard PC servers. Open Source Asterisk PBX software is widely used and a number of companies have provided various user interfaces to configure it. However, to have a system that truly competes with the proprietary IP PBX manufacturers typically requires a user to develop or integrate many additional hardware and software products, such as:

- Open source or proprietary add-ons to Asterisk for enhanced features
- Multiple PSTN interface hardware products
- Multiple choices in SIP phones and softphones
- Faxing software and hardware which can be integrated
- Products to integrate email, cell phones, text and instant messaging

In addition, once integrated and working, this multi-product solution is typically understood and supportable only by the person who assembled it, and it typically has minimal documentation for the complete, assembled solution.

### The DCM solution

Now, with DCM, these multiple, third party, hardware and software products can be configured and managed by non-technical users using a single, consistent, user interface and support documentation. For example:

- Integrate Sangoma PSTN interface cards and assign PRI channels
- Configure Polycom, Aastra, and other phones from the interface
- Allow download and use of free Snap Outlook integration software
- Configure for users to receive faxes via integrated Hylafax software
- Configure for users to send faxes from their desktops via Hylafax clients
- Configure Audiocodes gateways at remote sites for SIP/PSTN functionality
- Utilize Asterisk Stat to do detailed call reporting and graphs
- Support free download and use of Counterpath X-

### Current DCM Features

- Easy to use Graphical Interface
- Enhanced Site to Site Support
- Find Me / Follow Me
- MAC (Moves Adds Changes)
- Phone Management
- Client Management
- Voicemail Management
- Group-based Voicemail Boxes
- Mailbox Status Information
- Call Parking
- Conference Room Management
- IVR (Interactive Voice Response)
- Music On Hold
- Custom Menus
- Custom Call Queues
- Audio Prompt Management
- Audio File Management
- Upload Custom Audio
- Multiple Audio Formats Supported
- FTP access to CDR (Call Data Records)
- Soft-Phone
- PSTN/PRI/DID/Extension Management
- End-user Help System
- Self-service Password Recovery
- Voicemail to Email
- Standard Ethernet Network Interface
- Standard T-1 PRI Interface (recommended)
- Standard analog POTS Interface (legacy)
- Customization to most business needs
- Polycom IP Phone Ready
- Click-to-Dial
- Inbound Fax to Email
- Outbound Fax from Desktop
- Wi-Fi Phones
- Intercom—Individual or Group
- Shared Line Appearance
- Pro Active Monitoring
- Remote Phone Management
- Timeframe Management

Lite softphone for remote users

And much more as detailed in attached documentation. In addition, Dalcon provides complete support for the fully integrated system and all of its components.

DCM 2.0 is a software product which integrates proven industry hardware and software to provide a complete IP PBX communications solution. It utilizes a single, web-browser interface to manage the integration, configuration, and operation of the system for a non-technical administrator.

The screenshot shows the Dalcon Communications Manager 2.0 web interface. The browser window title is "DCM Dalcon Main - Mozilla Firefox". The interface includes a sidebar menu on the left with the following items: User Management, Group Management, Phone Management, Voicemail Management, Conference Management, Audio Management, Call Queue Management, IVR Management, Timeframe Management, PSTN Management, DID Management, Extension Management, MultiPBX Management, Global Settings, Voicemail, Queue, and General. The main content area displays a "Call Statistics" table with the following data:

Date	Incoming	Outgoing	Ext to Ext	Incoming Fax	Outgoing Fax
2007-11-25	0	0	0	0	0
2007-11-24	3	1	0	0	0
2007-11-23	12	13	0	0	0
2007-11-22	1	1	0	0	0
2007-11-21	60	203	19	2	2
2007-11-20	68	237	14	6	0
2007-11-19	77	120	20	6	0

The interface also features the Dalcon logo and the tagline "communicate. simply." in the bottom right corner, along with the version number "Version : 2.0.7".

*The entire system is manageable from this screen through menu access with hover "help bubbles" on all fields.*

## Documentation

- ❖ Complete Administrator manual providing detailed instructions and reference on DCM configuration and operation, including third party products integrated into the solution.
- ❖ Customized phone user guide describing the set-up, options, and use of Polycom phones with the DCM solution.

## Reporting and Monitoring

- ❖ Asterisk-Stat Call reporting offers detailed reports and graphs on calls handled by the system
- ❖ Call Queue monitoring allows real-time observation of activity in call queues
- ❖ System call volume statistics for past week summarized on home page of interface

## Maintenance

- ❖ Internal service monitoring guarantees services are running as they should be and sends email alerts on error.
- ❖ Administrator access to PBX services for maintenance as needed

- ❖ Administrator access to PBX configuration backup and restore function

## Support

Dalcon provides comprehensive support on the complete DCM 2.0 integrated system

*Administrator menu functionality is described in detail following.*


## User Management

### ❖ List all users

- Search based on name, extension and DID
- Allow user to customize their directory (specifically for Polycom and Aastra SideCars)

### ❖ Add/Edit a user

- Assign an extension to a user
- Assign a DID to a user
- Assign an Outbound CID to a user
- Customize a user's ringtone if using a Polycom phone
- Assign a phone to a user
- Assign up to two Follow Me numbers to a user with option to announce "trying to locate your party"
- Setup Voicemail with option to email voicemail file to the user as a WAV file
- Advanced email capabilities for voicemail and faxing to email works with servers designed to circumvent spam.
- Enable user to fax out from the desktop using Hylafax client as a printer
- Allow user to receive faxes incoming on their DID as a PDF file emailed to them
- Enable user to use Snap to click to dial from Outlook and enable caller id pop-ups on their PC.
- Give user permission to access "Maintenance" page
- Assign user to an Audiocodes gateway elsewhere on the network
- Allow user to "share" other user's lines (Shared Line Appearance)
- Ability to choose G729 low bandwidth codec usage by user


Maintenance Recordings Help Logout

User Management : Edit a User

User Management

Group Management

Phone Management

Voicemail Management

Conference Management

Audio Management

Call Queue Management

IVR Management

Timeframe Management

PSTN Management

DID Management

Extension Management

MultiPBX Management

Global Settings

Voicemail

Queue

General

**General Info**

First Name :

Last Name :

Username :

Email Address :

Password :

Re-type Password :

Record Calls :

**Phone Info**

Display Name :

Extension :

DID :

Outbound CID :

Ring Timeout :

Ringtone :

Phone :

Low Bandwidth Codec :

**Gateway Info**

Gateway :

Use Gateway :

**Follow Me**

Phone Number 1 :

Phone Number 1 Timeout :

Phone Number 2 :

Phone Number 2 Timeout :

Announce Locating Party :

**Voicemail**

Assign Voicemail :

Password :

Display Advanced Options :

Email Notification :

Attach to Email :

Delete Voicemails :

Say Caller ID :

Review :

Operator Anytime :

Envelope :

Hide from Directory :

Force Name :

Force Greeting :

**Groups**

**Current**

- Administrators
- Outbound Faxing
- Desktop Integration
- Page All
- Page Personal

← Move left

Move right →

**Available**

- Support Users

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- ❖ **Import a user list with detailed information from a CSV file**

## Group Management

- ❖ List all groups -Groups may be departments or other categories of users
- ❖ Add/Edit a group

## Phone Management

- ❖ List all phones
  - Determine which users are tied to phones
  - Search based on phone mac address, status, location, and phone type
  - Allow reboot of Polycom phones via the interface
- ❖ Add/Edit a phone
  - Can add a Local Phone
    - Must be a DCM supported VoIP phone located on the local LAN)
    - MAC Address allows Local Phone to be auto-configured
  - Can add a Remote Phone
    - Must be a DCM supported softphone.
    - Requires VPN or special firewall configuration
    - Mileage may vary with different softphones
  - Can add an Analog Phone
  - Can disable the Forward softkey on a Polycom
- ❖ Import a phone list from a CSV file
- ❖ Intercom via Polycom speaker phones
- ❖ Page-all via Polycom speaker phones

## Voicemail Management

- ❖ List all Voicemail boxes
  - Lists group and user's mailboxes
  - Displays mailbox size and message count for each box
- ❖ Add/Edit a Voicemail
  - Can edit a user's voicemail account.
  - Can assign a group to a voicemail box for group based email access (Not supported - future enhancement)

## Conference Management

- ❖ Unlimited conference rooms
- ❖ List all Conference Rooms
- ❖ Add/Edit a Conference Room
  - Assign an extension to a conference room
  - Assign an Admin Pin to the conference for administrative functionality
  - Assign a user pin to authorize users access

## Audio Management

- ❖ List all Audio files
  - Search for Audio files by name, category, and type
  - Playback a sample of the audio file within the web page
- ❖ Add/Edit Audio files

- Upload audio files directly through the interface.
- Audio files are converted into a GSM format that the PBX can understand.
- Possible audio formats include: GSM, mp3, wav
- Recommended/Supported format is WAV or GSM in 16 bit 8000 Hz mono
- ❖ List all Audio Categories
- ❖ Add/Edit an Audio Category

## Call Queue Management

- ❖ List all Call Queues
  - List all current members of a queue along with their extension
  - Add Permanent members to a queue
  - Queue Agents currently not supported
- ❖ Add/Edit a Call Queue
  - Name the queue
  - Customize audio within the queue
  - Set the type of Ring Strategy
    - Ring All, Round Robin, Least Recent, Fewest Calls, Random, Round Robin with Memory

## Interactive Voice Response (IVR) Management

Easy visual setup and management of unlimited IVRs

- ❖ List all menus
- ❖ Edit a menu
- ❖ Tie a DID to a menu for inbound callers to reach
- ❖ Tie an email address to a menu for inbound faxes to reach
- ❖ Add actions to the IVR Menu
  - send caller to a voicemail box
  - send caller to the voicemail login
  - play a sound
  - play a sound in the background so user can select an option
  - hang up the call
  - pause
  - wait for input
  - send the caller to a call queue
  - send the caller to a conference room
  - call an extension
  - forward the caller to another menu
  - forward the caller to another menu based on the time
  - edit the caller's caller ID information
  - set a custom ringtone for

**Dalcon communications manager** [Maintenance](#) [Recordings](#) [Help](#) [Logout](#)

### Interactive Voice Response : Edit

**General**

Name :

Can Dial Phones :

Extension :

DID :

Email :

**Menu Editor**

#	Call Actions (PBX to Caller) Action		#	Caller options (What #'s the Caller can dial) Option
1	Wait 1 second for user input	-	0	Go to the Real Person Menu menu
2	Play Main Menu Day in the background		1	Go to the Support Timeframe Menu menu
3	Wait 1 second for user input		2	Go to the Sales Menu menu
4	Play Main Menu Day in the background		3	Go to the Directory Menu menu
5	Wait 1 second for user input		9	Send caller to Voicemail login
6	Go to the Real Person Menu menu		<a href="#">Add new option</a>	

Version : 2.0.7

the callee to hear

- send this caller directly to the fax agent

#### ❖ Add options to the IVR Menu

- send caller to a voicemail box
- play a sound
- play a sound in the background so user can select an option
- send the caller to a call queue
- send the caller to a conference room
- call an extension
- call an external number
- forward the caller to another menu
- hang up the call
- send the caller to the voicemail login prompt
- send the caller to the company directory

- ❖ Add a menu - Give user ability to dial an extension from within the menu

## Timeframe Management

- ❖ List all timeframes
  - Search timeframes by name
- ❖ Add/Edit timeframes
  - Set begin time
  - Set end time (has to be later than begin time)
  - Select the days of the week

## Public Switched Telephone Network (PSTN) Management

Allows configuration of both digital (PRI) interface or analog ports via Sangoma interface cards.

## Direct Inward Dialing (DID) Management

- ❖ List all DIDs
  - Search by DID and Range name
  - DIDs which are part of a range can not be deleted so that the range remains untouched
- ❖ Add/Edit DIDs
  - add a single ID into the system with a description
- ❖ List all DID Ranges
  - search by description and DID (don't use dashes)
- ❖ Add/Edit DID Ranges
  - DID ranges can not be edited only deleted then re-added if the size of the range changes
  - DID ranges can not be deleted if any of the contained DIDs are in use within the system

## Extension Management

- ❖ List all Extensions
  - Search by Extension and Range name
  - Extensions which are part of a range can not be deleted so that the range remains untouched
- ❖ Add/Edit Extensions -add a single Extension into the system with a description
- ❖ List all Extension Ranges -search by description and Extension (don't use dashes)

- ❖ Add/Edit Extension Ranges
  - Extension ranges can not be edited only deleted then re-added if the size of the range changes
  - Extension ranges can not be deleted if any of the contained Extensions are in use within the system

## Global Settings

- ❖ Voicemail
  - Email Options -Setup email server options for proper delivery of voicemails to email
  - Other Settings
    - Set voicemail password from the interface
    - Can set whether voicemails are deleted from the PBX after they're sent to a user's email
- ❖ Queue
  - General Settings
  - Audio Settings
- ❖ General
  - Caller Parking
  - CDR Logs
  - General
  - NAT Network Address Translation
  - PSTN Analog Volume

## Multi-PBX Management

- ❖ DCM supports multiple servers running over a WAN at multiple locations
- ❖ Master PBX
  - Master options
    - Extension Sharing - This Master PBX will give out extension information to all slave servers that request it allowing the slave to dial extensions on this PBX remotely.
    - DID Sharing - This Master PBX will give out did information to all slave servers that request it allowing the slave to dial DIDs on this PBX remotely.
  - List slaves of this pbx
    - list all slaves that this master pbx is serving information to
    - search by description, sort on all fields
    - displays what services all slaves are providing (extension sharing, did sharing, toll bypass)
  - Add slave to this pbx - adds an 'account' for a remote slave to associate with.
- ❖ Slave PBX
  - List masters of this pbx
  - Add master to this pbx