

eDisc

A valued added service offering a virtualized "cloud based" storage, with advanced sharing and access control features.

June 2010







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1. Executive Summary

This paper discusses the unique and powerful benefits of CommuniGate Systems' **eDisc** feature which is available across the entire product portfolio.

The ability to store, share and access files from anywhere, for personal, business, or shared use, has become one of the key requirements of modern communications.

eDisc is a secured, server side, subscriber storage area in the cloud that is accessible via the network from any device (Desktop / Mobile) with access control sharing capabilities.

eDisc enables collaborative work on shared documents, instant file sharing with selected individuals, mobile backups, automatic mobile picture, video and music synchronization, network storage, all in a single platform.

eDisc is available in CommuniGate Pro, MobileOffice, UC Centrex, MessagePlus and VoicePlus products.

2. Architecture





3. Accessing eDisc files

eDisc is accessible via the following methods:

- Directly in Pronto! from file explorer
- Directly from Pronto! from picture/video/music embedded players
- Via clients that support the WebDAV Protocol.¹²
- Via the FTP protocol²

¹ WebDAV Clients are built in OSX and Windows, enabling the subscriber to automatically map an eDisc as a network drive at the OS Level, also achievable via ftp.

²Access is controlled via user authentication and the access control list (ACL) features

4. Controlling eDisc access (Access Control List)

eDisc Access Control Lists (ACL) enable subscribers to securely share files and directories with other users giving them read, write or administration access.

ACLs are based on WebDAV Access Control List mechanisms and can be managed directly from Pronto!, or any other WebDAV client that offers a WebDAV ACL management interface.

Important note: Access Control List is only usable between users and domains that are hosted within the same CommuniGate installation.

5. From the administrator point of view

eDisc is available for users of CommuniGate Pro, MobileOffice, MessagePlus, VoicePlus and UC Centrex products. The eDisc feature can be controlled (enabled/disabled) and administered (quotas) by each domain administrator.

The administrator can control:

- Total quota size per subscriber
- Maximum number of files per subscriber
- Maximum size of a single file per subscriber

5.1 Administering eDisc in CommuniGate Pro

From the CommuniGate Pro Web Administration Interface: (default http://<server>:8010)

Default value for all subscribers of all domains



Users -> Account Default -> Settings -> Files

<u>Default value for all subscribers of a single domain</u> Users -> Domains -> <Domain Name> -> Account Default -> Settings -> Files

Value for each subscriber of a domain

Users -> Domains -> <Domain Name> -> Objects -> <Users> Settings -> Files

5.2 Administering eDisc in VoicePlus / UC Centrex

Select an account, then set:

File Storage Limit, Files Limit and File Size Limit.

	Real Name:			Member of groups:
Accounts	Username:	What is it? Some User		S test
Groups Billing		What is it?		
Conferences	Password:	******		
Extensions	SIP Password:	What is it?	Generate	Additional information:
Devices	Service Access PIN:		1	Example: department or position
Gateways	Extensions	Add extension	1	Alternative contact:
Phone Numbers		What is it?		
Voice Menu	Phone	No available numbers	-	📄 admin rights
Rules	number	What is it?		Account Limits
Settings	📃 Activate voice mail afte	er no timeout	-	Mail Storage Limit:0 / unlimited File Storage Limit: 2K / 100M
	Language	default (English)	-	Files Limit: 3 / 1000
	IVR Language	default (English)		
	Transcript Voicemail	💿 default 🔵 No	Yes	
	🖵 🗹 Custom account lim	its		
	Mail Storage Limit:	default (unlimite 💌		Roster Limit: default (20)
	Outgoing Size Limit:	default (unlimite 💌		File Storage Limit: default (100M)
	Send Notice if (% full):	default (90) 💌		Files Limit: default (1000)
	Registered Devices:	default (10)		File Size Limit: 1024M
				OK Cancel



6. From the user perspective

6.1 Accessing eDisc from Pronto!

Once logged into Pronto!, subscribers can navigate to either My Photos, My Videos, My Music or the Files area, all items in this area are stored on, and available through, eDisc.

By selecting "upload" on the menu the subscriber has the ability to upload new files onto eDisc.

A right click menu on a file or directory offers the ability to share, move, copy, remove or "send access" as a link via an email.

6.2 Accessing eDisc from a Mobile

Any mobile client application supporting WebDAV protocol will enable users to access their eDisc. Example applications include OneDisk and e-Dav available in the iTunes store for the iPhone, iPad or iPod Touch

On some mobile devices, applications that run in the background have the possibility to monitor a local directory on the mobile device and perform an automatic upload on eDisc for backup and real-time synchronization sharing.

An example of this is WebDAV Uploader for Android. Here we see it configured to monitor for new camera images, and upload to the users eDisc automatically.

WebDAV Uploader			
About this application			
2:16:30 ĂM Is up-loaded. Uploaded directory			
/sdcard/dcim/camera/ WebDAV URL(ex https://hoge.com/)			
https://hogehoge.com/dav/ webDAV ID			
hogehoge			
WebDAV Password			
The setting is initialized.			

VebDAV Uploader		
About this application		
ON The file generated after Jan 27, 2010 2:16:30 AM is up-loaded.		
Uploaded directory /sdcard/dcim/camera/		
WebDAV URL(ex https://hoge.com/)		
https://hogehoge.com/dav/		
WebDAV ID		
hogehoge		
WebDAV Password		
Setting		



6.3 Adding eDisc in Microsoft Windows

Windows offers two possible ways to connect to the eDisc, via "Network Places" and "Map network drive"

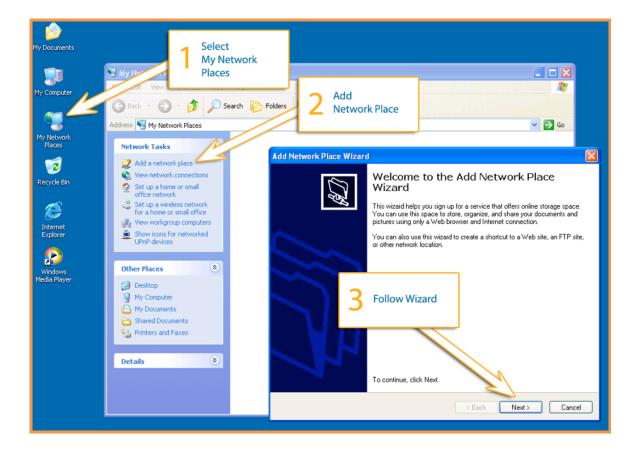
6.3.1 Adding eDisc as a "Network Place"

To add an eDisc as a network place in WinXP/Win2k SP3:

Support is restricted in Win2kSP3 and you must use the installer package Webfldrs.msi to enable the Web Extender Client for either Windows 2000 or XP installation. More Info is available in the article "MS KB 888123" on the Microsoft website.

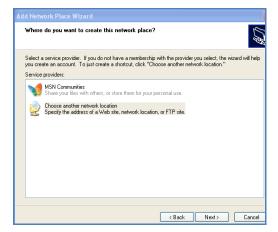
Procedure to add eDisc as a "Network Place" in Windows XP

- Under See Also, click My Network Places.
- Click Add a network place. The Add Network Place Wizard starts. Click Next to continue





• Click Choose another network location, and then click Next.



• Enter the address of the remote server http://<CommuniGate Server>/WebDAV (or https://<CommuniGate Server>/WebDAV for a Secured SSL connection)

Add Network Place Wizard	×
What is the address of this network place?	(J)
Type the address of the Web site, FTP site, or network location that this shortcut will open.	
Internet or network address:	
https://host.mobileoffice.biz/WebDAV V Browse	
<u>View some examples</u> .	
<back next=""></back>	Cancel



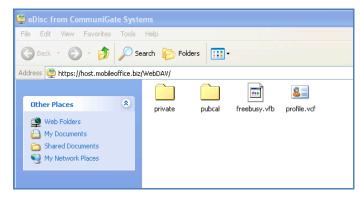
• Enter user credentials



• Click Next and give the network place a name and click Next again and then Finish.

dd Network Place Wizard	Σ
What do you want to name this place?	B.
Create a name for this shortcut that will help you easily identify t	his network place:
https://host.mobileoffice.biz/WebDAV.	
Type a name for this network place:	
eDisc from CommuniGate Systems	
	<back next=""> Cancel</back>
	Coack Next> Cancel

Then access your eDisc files:





Procedure to add a Web Folder as a network place in Vista / Windows 7

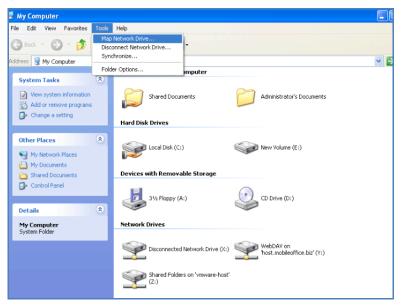
- Click on the Start menu and choose Computer.
- Click the Map network drive button in the toolbar.
- Click the blue link Connect to a Web site that you can use to store your documents and pictures.
- The Add Network Location starts. Click Next to continue.
- Select the Choose a custom network location option and click Next.
- Enter the location http://<CommuniGate Server>/WebDAV or https://<CommuniGate Server>/WebDAV for SSL
- Uncheck the tick-box and enter the credentials
- Give the new network place a name (it will become the name shown in the Computer window), and click Finish.

6.3.2 Mounting eDisc as a "Network drive" in Microsoft Windows

Windows XP

Windows XP allows one to mount an **eDisc** as a mapped network drive using the following procedure:

• Select "My Computer" on the desktop, then menu Tools, Map Network Drive:





- Choose Drive Letter
- Enter WebDAV URL http://<CommuniGate Server>/WebDAV (HTTP only, HTTPS not supported in Windows XP)
- Select Connect Using Different User Name, enter your eDisc credentials

🕃 My Computer				
File Edit View Favorites Tools Help				
🔇 Back 🔹 🕥 🔹 🏂 🔎 Search 🎼 Folders 🔛 -				
Address Address Map Network Drive				
View and assi access to Specify	is can help you connect to a shared network folder ign a drive letter to the connection so that you can the folder using My Computer. the drive letter for the connection and the folder uwant to connect to:			
Other F Folder:	W: http://host.mobileoffice.b Browse W Volume (E;)			
My My Sha Con	Example: \\server\share Connect using a different user name. Signu of for online storage or connect to a			
Details My Cor System Földer	Detworkserver Connect As < Back			
	Disconnecte User name: Password:			
	Shared Folde (Z:) OK Cancel			

• Click Finish and Use as a local Drive:

📽 WebDAV on 'host.mobile				
File Edit View Favorites	Tools Help			
🚱 Back 🝷 🕥 🕤 🏂	😮 Back 🔹 🌍 🔹 🏂 Search 🎼 Folders 🔛 -			
Address 😹 W:\				
File and Folder Tasks	Private	pubcal		
Support of the Web	freebusy.vfb VFB File 1 KB	VCard File 6 KB		
Other Places	8			
Image: Wry Computer Image: Wry Documents Image: Shared Documents Image: Wry Network Places				
Details	*			

Note 1 (port 80 Windows limitation). Windows XP can only connect to port 80 and can only map to a sub folder and not the root directly.



Note 2 (no HTTPS Windows limitation): Windows offers the possibility to setup a HTTPS secure connection from Windows XP folder to eDisc (Network Place), but it is not possible to Map eDisc to a local drive letter over HTTPS connection (only HTTP).

6.3.3 Windows Vista and Windows 7

Use the same procedure as adding eDisc as a "network place" (see 6.3.1).

6.3.4 Earlier Version of Windows

If using Windows 2000 or earlier, then one must use a 3rd party utility to map an **eDisc** as a network drive.

6.3.5 Known Limitations with Windows

Note there is an update available for Windows XP/Vista for better support of WebDAV folders (part of XP SP3 and from Vista SP1). More Info MS KB 907306.

The latest version of the Web Folders update (2.0) doesn't support Windows 98, Me or 2000. Instead one should use version 11.0.6715.15 Download Webfldrs-KB892211-ENU.exe.

Windows Vista SP1 (and older) has a known bug where it cannot access sub-folder unless it has readaccess to the parent folders. More Info MS KB942392



6.4 Mounting eDisc as a volume in Apple OSX

The screenshots on the following page describe how to create an eDisc volume on Apple OSX

- Open the Finder
- Select menu "Go"
- Select menu item "Connect to Server"

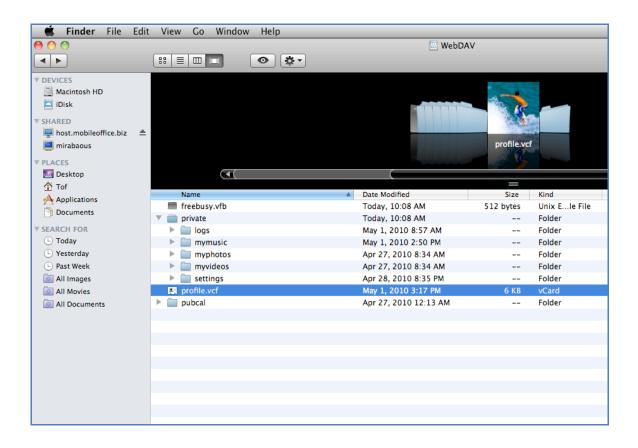
🛒 Finder File Edit	View Go Window Help			
	Back Forward	#[#]	🔄 Macintosh HD	Q
VEVICES Macintosh HD Jolsk SHARED PLACES Desktop Applications Documents private Windows_2008.dmg HTMULTSteshtml	Select Startup Disk on Desktop Computer Computer Computer Postop Network Dosk Appl Overwork Documents Utilities Recent Folders Co to Folder	☆ # 1 ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C ☆ # C	User Guides And Information	Users
H Mc S les. Hum Topbox SEARCH FOR Today Yesterday Yesterday Past Week Al Images Al Movies Al Movies Al Documents	Connect to Server	#K	Select Connect to Server	
			5 items, 44.68 GB available	

- Then enter the URL of eDisc:
 - http://<CommuniGate Pro Server>/WebDAV for unencrypted connection
 - https://<CommuniGate Pro Server>/WebDAV for encrypted (SSL) connection

0 0	Connect to Server
Server Address:	
https://host.mobileoffic	e.biz/WebDAV + 💽 🔻
Favorite Servers:	
(?) Remove	Browse Connect



Enter your name and password to connect to "host.mobileoffice.biz". Connect as: O Guest		
• Registered User		
Name: myusername		
Password: •••••		
☑ Remember this password in my keychain		
Cancel Connect		





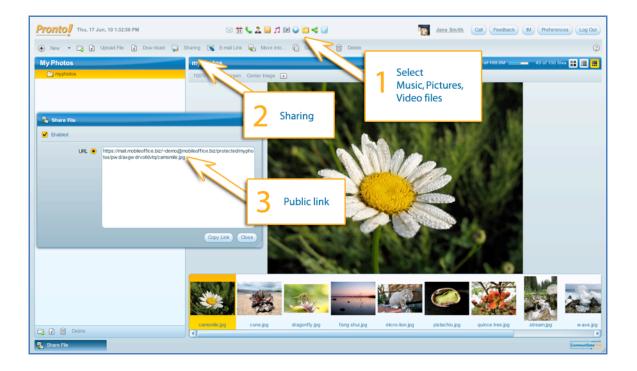
6.5 Sharing eDisc files and directories from Pronto!

6.5.1 Public Sharing

Public Sharing enables anybody that is given the link to the resource (file or directory) to access the resource in read mode.

Public Sharing is available for Music, Video, Pictures and Files

- Select the resource (File or Directory)
- Click on Sharing
- Send the public link





6.5.2 Restricted Sharing via Access Control List

Sharing can be restricted to a set of specified users with different access rights. This is done through the Access Control List.





An email with the subscription information will be sent automatically to the designated users.



6.6 Accessing other users eDisc files and directories

6.6.1 Accessing a Public Share

Open the public link of the share in a Web Browser

6.6.2 Accessing a restricted area

Users that have been granted access to a restricted area via an Access Control List will receive an email with sharing details.

To access the restricted area open this invite email, click on "Edit Subscription" button, and choose which resource to subscribe to.

Prontol Thu, 17 Jun, 10 3:12:	ه مع الله الله الله الله الله الله الله الل	Jane Smith Call Feedback M Preferences Log Out
•	Reply & Reply to All Proward Move into NBOX 0 Prom Subject Mary Synth Access Control List, private/myphotos Pronto/ Thank You for Registering! Vice Mail Select the	Navigate to File Explorer to Access shared eDisc resources Subscription O
G A	2 resource to subscribe to Access Control List: private/myphotos "Mary Smith" - demo2@mobiledfice biz> To:	Park Import Status Status (International Status S
1 Subscription		Communities



7. Capacity Planning

eDisc storage space is physically residing on the "shared storage" of a clustered CommuniGate Pro Cluster installation (All details in "Dynamic Cluster Feature Focus" from CommuniGate Systems)

As such CommuniGate Pro offers the possibility to associate a special file system, or set of file systems dedicated to eDisc functionality.

It leaves the opportunity to the service provider to propose different level of services, and to isolate eDisc storage from the rest of the features (type of technology, backup strategy, capacity planning, etc). It is also possible to leverage SAN/NAS infrastructure.

For example it is possible to use the Solid State Drive technology (SSD) for eDisc, whereas all the remaining data subscribers (email, account settings, calendar ...) could remain on a standard storage.