

Application Note

March 2014

SnapServer DX-Series MOBOTIX MxRemotePreview Configuration



Summary

This application note describes how to configure MOBOTIX MxRemotePreview on a SnapServer DX.

Introduction

The MOBOTIX MxRemotePreview on the SnapServer has been developed to overcome one problem when using low bandwidth connections (such as when accessing recordings in a remote location with a slow DSL or UTMS/3G connection). In such a case, MxControlCenter retrieves the original (stored) video sequences, but since they are too large for the bandwidth, the images are transferred too slowly, making video searches nearly impossible. MxRemotePreview helps to overcome this problem by reducing ("recoding") the image size, quality, and other parameters on-the-fly without changing the stored recordings. Instead of getting the images via the camera or directly from the SnapServer, MxControlCenter gets the "recoded" video sequences from the MxRemotePreview SnapServer to accelerate image retrieval.

The MOBOTIX MxRemotePreview is included with SnapServer GOS 7.2.126 and higher.

Required Information, Tools, and Files

Before you begin these procedures, the following information, tools, and files are required.

Prerequisites

• Prior to performing procedures explained in this document, ensure that you have the following setup, general terminology, and understanding of using the MOBOTIX camera and supporting software with the SnapServer. A MOBOTIX IP network camera is installed and configured. Refer to the following website for specific details of supported cameras and configurations.

http://www.mobotix.com.

- The MOBOTIX MxControlCenter (MxCC) software is installed. This software is a comprehensive video management application specially designed to work with MOBOTIX cameras and local or remote video storage archives such as SnapServer systems. MxControlCenter software can be downloaded from the MOBOTIX website it is free of charge. MOBOTIX MxControlCenter is a free Windows application that displays and manages multiple MOBOTIX cameras. Additional detailed information about using the SnapServer and MxCC can be found in the *Overland Storage MOBOTIX White Paper* and *Configuring MOBOTIX Cameras with Overland SnapServer Application Note*.
- The SnapServer DX has already been installed and configured, for more information about basic configuration, please refer to the user guide that came with it. The SnapServer NAS, being a cross platform Network Storage File Server, can provide storage in several native formats. The SnapServer is capable of two key protocols supported and used by the MOBOTIX Cameras, which are CIFS/SMB (Microsoft) and NFS (UNIX/Linux).

Versions

The test environments used in this document are as follows:

- SnapServer DX GOS 7.2.126 or higher
- MOBOTIX MxControl Center (MxCC) software version 2.5.0.2
- MOBOTIX M22M-Secure Video Camera software version MX-V3.5.2.23.r3
- MOBOTIX S15D-Secure Video Camera software version MX-V4.1.9.29
- Windows Server 2008R2x64 SP1

Discovering MOBOTIX Cameras and SnapServers

- **1.** When you run the MxControlCenter for the first time, the **Add Video Sources** dialog opens and automatically scans the network for cameras and SnapServers.
- **2.** From the list of found sources, select the appropriate **SnapServer system** and **MOBOTIX camera** to configure.

Name	IP Address/Path	Туре	Version	Status
Snap2411034	172.10.17.60	Snap Server DX2	7.2.029	Bonjour
mx10-13-8-142	10.20.34.121	S15D-Sec	MX-V4.1.9.29	Known
Snap2300078	172.10.16.86	Snap Server DX1	7.1.023	Bonjour
Snap2413706	10.20.32.247	Snap Server DX2	7.2.125	Bonjour
ATSSnap210	10.20.32.241	Snap Server 210	6.5.023	Bonjour
Snap2300956-HCN	10.20.33.100	Snap Server DX1	7.2.117	Bonjour
D mx10-3-89-45	10.20.34.120	M22M-Secure	MX-V3.5.2.23.r3	Known
o sd-ae550	10.20.34.167	Snap Server 550	6.5.023	Bonjour
8 video sources found /	1 selected		b odd	-oloctod uidoo

- 3. Click Add selected video sources.
- 4. When the Create New Layout dialog box appears:



- a. Select Generate new grid layout for selected video sources.
- b. Provide a layout Name.
- c. Click OK.

The following screen appears with the configured cameras and storage devices listed in the left pane:



- 5. Additional cameras and SnapServers can be added to the current grid layout:
 - a. Right-click VIDEO SOURCES and select Add Video Sources.

⊒LAYOUTS	
🖻 🔒 S15_Layout	
M22M_Layout	
TYIDEO SOURCES	
mx10-13 Add Video Sources	
my10-3-1	

b. Select the appropriate camera, and click Add selected video sources.

d Video Sources				
Name	IP Address/Path	Туре	Version	Status
Snap2411034	172.10.17.60	Snap Server DX2	7.2.029	Boniour
mx10-13-8-142	10.20.34.121	S15D-Sec	MX-V4.1.9.29	Known

c. In the Create New Layout dialog box, select Generate new grid layout for selected video sources and click OK.



d. Right-click the SnapServer name, and select Configure.



e. From the Configure SnapServer dialog box, select Expert Setup and verify the General details.

onfigure Sna	p Server	
Quick Setup	Expert Setup	
General L	Isers Shares UP5 Time	
Server name:	VM-Snap4508704	
Comment:	SnapServer VirtualSnap	
Capacity	Volume1	
Total:	0 GB	Used capacity
Free:	6 GB	Free capacity

f. Switch to the **Users** tab and verify the **users**.

The discovered SnapServer user accounts are shown.

Configure Snap Server ?	×
Quick Setup Expert Setup Browser	-
General Users Shares UPS Time admin Name: Password: Password: Show passwords (only for users created here)	
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g. Switch to the **Shares** tab and select the **required share** that will be used for video storage.

SHARE1 is the default SnapServer share name.

nfigure Snap Ser	ver	
	=	
	₽ 2	
Quick Setup	pert Setup Browser	
General Users	Shares UPS Time	
SHAKEI	Name: SHARE1	
	Volume: Volume1	
	Path: /	
	N	
	N	

- h. Verify the details under the remaining tabs (UPS and Time).
 - **NOTE:** The **OK** button in the **Configure SnapServer** dialog box is enabled ONLY after reviewing details under ALL the tabs.

i. Click OK.

=	事 🔮		
Quick Setup	Expert Setup Browser		
General Users	Shares UPS Time		
 Set time and d 	ate		
1/1/00 12	2:00 AM	Copy Computer Time	
Synchronize w	th NTP server		
I Configure as N	ITP server		
Time zone:	(UTC) Coordinated Universal Time	•	

For more details on how to configure cameras and the SnapServer, access recordings, and verify events, refer to the document *An NAS Configuring MOBOTIX*.

MxRemotePreview Setup and Configuration

Use the following procedure in order to setup and configure MxRemotePreview:

- 1. Setup the SnapServer with either DynamicRAID or Traditional RAID, and select the Volume and Share options that will be used to store the camera images.
- 2. Setup the cameras to store images on the SnapServer by enabling Web Root:

	Server	Network	Storage	Security	Monitor	Maintenance	
			Charles	Cooking			
	Security Guides	Shares Local Us	ers Local Groups	Security Models	ID Mapping	Home Directories	
	Software u	pdates are available f	or this server. Tell m	ne more · Remind r	me later - <u>Hide t</u>	his message	
Lebarge Clicks	e hara name ta n	oodify a chara's props	rties or to delete a s	hara			
Share	Volume	P	ath	Access	NFS Access	Protocols	Attributes v
WebRoot	Volume1	AVV	ebRoot	Open	Default	SMB·NFS·AFP·HTTP·FTP	-
Share1	Volume1		1	Open	Default	SMB-NFS-AFP-HTTP	-
Director MxData	Volume1		1	Open	Default	SMB-NFS-AFP-HTTP-FTP	-
AMxBackup	Volume1		1	Open	Default	SMB-NFS-AFP-HTTP-FTP	-
Attributes: H=Hi	dden, S=Has Sna	pshot Share, W=Wel	Root				
Important Securit	y Note: Share acc	ess for the NFS protoc	ol is configured indepe	endently from share	access for all ot	her protocols. <u>View onlir</u>	ne help for
more information.							
			Crasta Chara Da	freeh Close			
			Create Share Re	rresh Close			

- a. Navigate to Network > Web.
- b. Select Enable Web Root and Allow Directory Listings.
- c. Under Use existing share, select the share for Web Root Share.

	Server	Network	Storage	Security	Monitor	Maintenance		
		TODAD Jased			STD ONIND	102-b 30510		
	mormation	ICF/IP WIND	ows/sime Apple/A	FF NFS NIS	FTF SNWF	ISNS		
	Software up	dates are availabl	e for this server. <u>Te</u>	<u>II me more</u> · <u>Remi</u>	<u>nd me later - Hic</u>	<u>de this message</u>		
E Re	quire Web Authentication							
✓ En	able (non-secure) HTTP /	Access						
🗹 En	able Web Root							
V	Allow Directory Listings							
(inc	Use existing share Web Root Share: sha Default Index File Jex.html	re1 Pro	Add Ad	dd an index file n	ame.			
			Delete D	elete index file na	imes.			
Not	te: "index.html" will be used	l if no index files a	re defined.					
Imp	portant: While web root is e	nabled, you can u	se the following UR	L to access this V	/eb Managemer	nt Interface: http://10.2	20.34.75/conf	ig
			ON	Canaal				

d. Click OK.

The Web Root is enabled as displayed.

	Server	Network	Storage	Security	Monitor	Maintenance	
	Security Guides	Shares Lo	ocal Users Local Groups	s Security Models	ID Mapping	Home Directories	
4 shares. Click a	software share name to	updates are ava modify a share's	ailable for this server. <u>Tell</u> 's properties or to delete a	<u>me more · Remind n</u> share.	<u>ne later · Hide t</u>	<u>his message</u>	
4 shares. Click a Share	Software share name to Volume	updates are ava modify a share's	ailable for this server. <u>Tell</u> 's properties or to delete a <u>Path</u>	me more · <u>Remind n</u> share. <u>Access</u>	NFS Access	his message Protocols	Attributes
4 shares. Click a <u>Share</u> 20 share1	Software share name to Volume Volume1	updates are ava modify a share's	ailable for this server. <u>Tell</u> 's properties or to delete a <u>Path</u> /	me more · Remind n share. <u>Access</u> Open	NFS Access Default	his message Protocols SMB·NFS·AFP·HTTP	Attributes
4 shares. Click a <u>Share</u> Share1 WebRoot	Software share name to Volume Volume1 Volume1	updates are ava modify a share's	ailable for this server. <u>Tell</u> 's properties or to delete a <u>Path</u> / /WebRoot	me more · Remind n share. <u>Access</u> Open Open	NFS Access Default Default	his message Protocols SMB-NFS-AFP-HTTP-FT SMB-NFS-AFP-HTTP-FT	Attributes
4 shares. Click a Share Share1 WebRoot	Software share name to Volume Volume1 Volume1 Volume1	updates are ava modify a share's	ailable for this server. <u>Tell</u> 's properties or to delete a <u>Path</u> / /WebRoot /	me more · Remind n share. <u>Access</u> <u>Open</u> <u>Open</u> <u>Open</u>	NFS Access Default Default Default	his message Protocols SMB-NFS-AFP-HTTP-FT SMB-NFS-AFP-HTTP-FT SMB-NFS-AFP-HTTP-FT	P -

- **3.** Connect to the SnapServer via **SSH** and login with the SnapServer **Admin** credentials. You can enable or disable the **MxRemotePreview** feature by using the following API commands that are used in conjunction with MxControlCenter:
 - mxpreview on
 - mxpreview off

```
[VM-Snap4508704]>mxpreview on
[VM-Snap4508704]>mxpreview status
enable=yes
[VM-Snap4508704]>mxpreview off
[VM-Snap4508704]>mxpreview status
enable=no
[VM-Snap4508704]>
```

4. Enable the **mxpreview** feature.

Once it is turned on, you can test the MxRemotePreview functionalities.

Testing the SnapServer with MxRemotePreview

Testing can be done in either CGI mode or using the MxControlCenter GUI.

Using the CGI mode

Use the following procedure to test the CGI module in the browser:

- 1. In a web browser, enter the **IP Address** of the SnapServer and press **Enter**. This will list the folders and files on the SnapServer share.
- 2. Navigate in the folder links to the JPG files folder.

Folders: 1, Files	s: 8			
2014-Jan-17	05:18	AM	Folder	Parent Folder
2014-Jan-15	02:42	AM	443.979 KB	E00000.jpg
2014-Jan-15	02:43	AM	4.16 KB	INFO.M
2014-Jan-15	02:42	AM	1.522 MB	M00001.jpg
2014-Jan-15	02:42	AM	1.964 MB	M00002.jpg
2014-Jan-15	02:42	AM	2.016 MB	M00003.jpg
2014-Jan-15	02:43	AM	2.065 MB	M00004.jpg
2014-Jan-15	02:43	AM	1.793 MB	M00005.jpg
2014-Jan-15	02:43	AM	1.795 MB	M00006.jpg

3. Click the E00000.jpg image file link to view it.



 Append the following attributes to the address bar and Enter: /?previewsize=320x240&quality=20



The change in the image resolution is displayed indicating that the CGI module is working properly.

Using the MxControlCenter GUI

Mxpreview can also be configured using the GUI. Use the following steps to configure it using the MxControlCenter (**MxCC**):

- 1. Turn on the **mxpreview** feature in SnapServer.
 - a. Connect to the SnapServer via SSH and login with the SnapServer Admin credentials.
 - b. Enable the MxRemotePreview feature with this command: mxpreview on
- 2. Open the MxControlCenter console.
- 3. Navigate to C:\MxControlCenter_2.5.0.2_x64\MxCC2.5.0.2x64 and double-click MxCC.exe.



4. In a web browser, enter the IP Address of the SnapServer and press Enter.

5. Navigate in the folder links to the JPG files folder.

Folders: 1, Files	:: 8				
2014-Jan-17	05:18	AM	Folder	<u>e.</u> ,	Parent Folder
2014-Jan-15	02:42	AM	443.979 KB	9	E00000.ipg
2014-Jan-15	02:43	AM	4.16 KB	6	INFO.MSI
2014-Jan-15	02:42	AM	1.522 MB	9	<u>M00001.jpg</u>
2014-Jan-15	02:42	AM	1.964 MB		<u>M00002.ipa</u>
2014-Jan-15	02:42	AM	2.016 MB		M00003.jpg
2014-Jan-15	02:43	AM	2.065 MB		M00004.jpg
2014-Jan-15	02:43	AM	1.793 MB		M00005.jpg
2014-Jan-15	02:43	AM	1.795 MB	Fi.	M00006.jpg

6. Click the E00000.jpg image file link to view it.



- **7.** Perform the following steps for configuration:
 - a. In MxCC, right-click Cameras under VIDEO SOURCES and select Properties.

MacOntrolCenter - Mobotix (Aut File View Layout Video Source Re	cogrid) - m. 🖉 cording Tools Help 🗄 🖽 🔎 🖓 - 🛟 .	
Navigator DLAYOUTS VIDEO SOURCES VIDEO SOURCES Cameras - VIDEO meras - VIDEO MARCES - VIDEO SOURCES - VIDEO SOURCES	Add Video Sources	2
Storage Devices Corage Devices Recording Folders BEVENT SEARCHES BLOCAL ARCHIVE	Properties Ctrl+1 User & Password Access Recordings Check Data Integrity Configure V Preview	I

b. In the Properties dialog, click Change.

Hame. Ju	×10-3-89-45	MOB
Access Data Infor	mation Display PTZ/Rotor	
Address:	10.20.34.120	Port: 80
	Secure connection (SSL)	
User name:	admin	
Password:	••••	
Access record	ings: \\10.20.34.75\share1}10_3_8	9_45 C[\vnge
Access record	ings: \\10.20.34.75\share1\10_3_8	9_45 Olynge

c. In the Access Recordings dialog box, click Use preview data for playback and Video Search feature, and then click Settings.

C Via camera		
C Default file server path (Factory IP address will be appended)	
• Specific file server path:	\\10.20.34.75\share1\10_3_89_45	More
 Use preview data for pla 	yback and Video Search	Servings

d. To configure MxRemotePreview Custom Settings, provide the following details:

MxRemotePreview Custom Settings		
ustomize any preview setting for this video sour	rce or use the defaults defined in	
Use custom connection data		
C Camera Preview		
C Event Streamer		
Remote Preview		
IP address: 10.20.34.75	Port: 80 F SSL	
User name: admin	Password: .	
Use custom JPEG quality 40%	7	
Use custom frame rate 1.0	F/s	
✓ Use custom resolution CIF (320×240)	Width: 320 Height: 240	
Use custom audio setting 🔽 Enable		
		ancel

- Check the Use custom connection data box.
- Select Remote Preview.
- Provide the **IP address** of the SnapServer.
- Provide the Admin User Name and Password for the SnapServer.
- Check the Use custom resolution box.
- Select the appropriate Width and Height for the image.
- Click OK.

8. At the Access Recordings dialog box, click OK.

Access Recordings		
🔿 Via camera		
C Default file server path (factory IP address will be appended)	
Specific file server path:	\\10.20.34.75\share1\10_3_89_45	More
Use preview data for pla	yback and Video Search	Servings

9. At the Properties dialog box, click OK.

Access Data	Inform	ation D	isplay F	TZ/Rotor		
Ade	dress:	10.20.34.12	20		Port: 80	-
	Г	Secure co	nnection (S	SL)		
User r	name: 🛛	admin				
Pass	word:	•••••	_	_		
Access	recordin	gs: \\10.20).34.75\sha	re1\10_3_8	9_45	
					Change	
					13	

- **10.** Verify the **resolution** of the image has changed:
 - a. In a web browser, enter the IP Address of the SnapServer and press Enter.
 - **b.** Navigate in the folder links to the **JPG files folder**.
 - c. Click the E00000.jpg image file link to view it.

