

Timespace LANLink

Version 5.1.0 (Engine running)

Timespace DEMO SERVER
Logged in as jones [Log Out](#)

Current Status

Units

Jobs

Health History

Unit Admin

User Admin

Settings

Units

Add New Job

Clear Search

<input type="checkbox"/>	Health	Unit Name	Fleet	Hardware	Status	Serial	Last Updated	Latest Recording	IP Address	ID	
	<div></div>	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type	
HOME (11)											
<input type="checkbox"/>		BUILDING CAM		X300-04A (1.3.2.314)	home	124202	28/06/2015 12:18:03	28/06/2015 12:17:12	10.0.0.223	10	View Files
<input type="checkbox"/>		RYDE1115		TRANSVU AQUILA (05.0 (00.07))	home	TVU5516	28/06/2015 12:21:55	28/06/2015 12:07:15	10.0.0.238	13	View Files
<input type="checkbox"/>		Henry's X300		X300-04A (1.4.0.317)	home	122159	28/06/2015 12:21:37	28/06/2015 12:21:26	10.0.0.229	77	View Files
<input type="checkbox"/>		Old Spice	DEV BENCH	V400-16 (1.3.1.222)	home	107814	28/06/2015 12:20:05	28/06/2015 12:20:28	10.0.0.210	136	View Files
<input type="checkbox"/>		Vibration rig		V400-16 (1.3.1.222)	home	109570	28/06/2015 12:21:37	28/06/2015 12:24:16	10.0.0.247	139	View Files
<input type="checkbox"/>		Henry's X300 MK2	Henry's Office	X300-MK2 (1.4.0.323)	home	137267	28/06/2015 12:22:53	28/06/2015 12:23:00	10.0.0.175	173	View Files
<input type="checkbox"/>		SUPPORT X300-MK2		X300-MK2 (1.4.0.323)	home	137268	28/06/2015 12:21:10	28/06/2015 13:20:18	10.0.0.220	176	View Files
<input type="checkbox"/>		TEMP TEST V400	22ND JUNE 2015	V400-16 (1.3.1.222)	home	137131	28/06/2015 12:18:17	28/06/2015 12:17:56	10.0.0.228	182	View Files
<input type="checkbox"/>		SUPPORT X200		X200-04 (2.0.1.452)	home	111111	28/06/2015 12:22:12	28/06/2015 12:20:00	10.0.0.222	183	View Files
<input type="checkbox"/>		HENRY'S V400	OFFICE	V400-16 (1.3.1.222)	home	124816	28/06/2015 12:18:38	28/06/2015 12:17:58	10.0.0.148	184	View Files
<input type="checkbox"/>		SUPPORT V400		V400-16 (1.3.1.222)	home	114228	28/06/2015 12:20:06	28/06/2015 12:19:52	10.0.0.224	186	View Files
DISABLED (7)											
AWAY (8)											

Click to show help...

Designed and Manufactured in the UK



The latest version of the LANLink Manual is available online; www.tspace.co.uk

X200 Operating Software V2.0.1
 X300 Operating Software V1.3.2
 V400 Operating Software V1.3.1
 PCLink Suite V7.6
 PCLink200 V1.8.3
 PCPlayer V1.8.3
 RemoteLink V1.8.3
 X-Communicate V1.8.3
 LANLink V5.1.0

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INTRODUCTION

The LANLink system is designed to provide both Automatic Downloads and a Health Overview for Timespace Digital Video Recorders (X200, X300 & V400).

The DVR's may be connected either permanently or intermittently via LAN, WLAN (wifi) or 3G/4G IP networks. The most typical being wifi.

Each time a unit comes into contact with the LANLink system, the service log is interrogated to determine its health. A traffic light system is used to display the current status of each unit and a file list of recorded files is gathered from the DVR so that files can be selected for downloading.

LANLink is a database driven application with a web based front end which can be accessed using a web browser (Google Chrome recommended, Internet Explorer 9.0+ or Firefox also supported).

LANLink features include;

- Automatic, daily;
 - Health audit check of DVR, Cameras, Monitors and GPS.
 - Camera thumbnail images including Obscured camera detection.
 - Email reporting of Status and Service conditions.
- Video footage download via; Date / Time / GPS location.
- Multi-level Email reporting
- User login / permission system
- Vehicle Off Road facility

HARDWARE REQUIREMENTS

LANLink can be installed on a workstation PC, Laptop or Server. The minimum hardware requirement is a 2GHz Pentium processor, 1GB RAM however adding multiple DVRs will require a more powerful processor. The recommended minimum hardware is a multi-core processor with 4GB RAM.

Each DVR added to LANLink will require approximately 200MB of disk space storage for a 30 day period of Health/Directory/Snapshot information. LANLink by default overwrites this data after 30 days, but this can be configured accordingly. If LANLink is also used to download video footage, sufficient storage space needs to be considered. For video files that are downloaded using the Job system, it is down to the system administrator to manage the storage of downloaded files and available disk space / archiving.

SOFTWARE REQUIREMENTS

LANLink can be installed on Windows 7 and Windows Server platforms. It is recommended that the latest service packs for Windows are installed. **Local Administrative permissions are required** for the user that will be logged on whilst LANLink is running. Also Windows UAC should be set to a minimum.

The latest version of .NET 4 must be installed regardless of which version of Windows LANLink will be running on. If it isn't installed already then LANLink will install it as part of its setup.

MySQL V5.6 Server needs to be installed as a prerequisite.

If data from a previous LANLink installation is required, please see the UPGRADING section of this manual.

LANLINK Architecture

The user interface of LANLink is presented as a series of web pages served by the host PC.

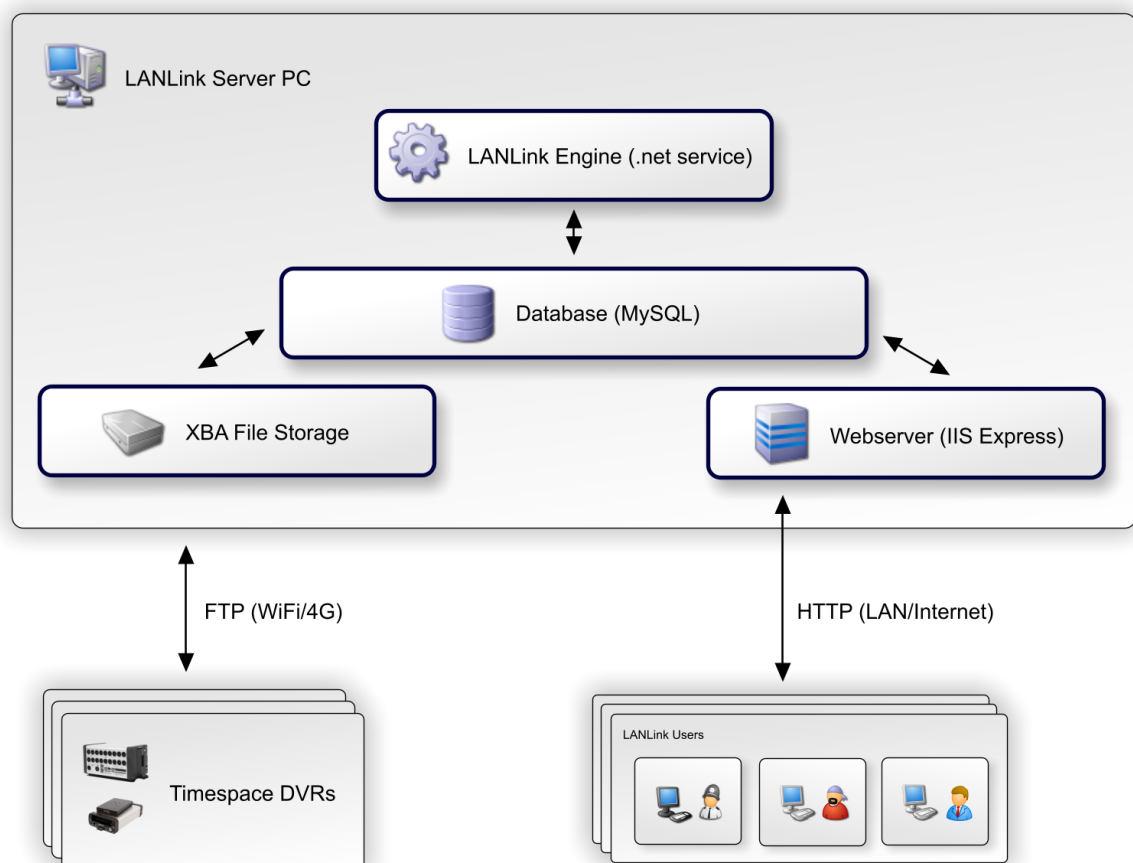
LANLink installs its Application Engine as a Windows Service which starts automatically and runs in the background to provide communication between the various parts of the LANLink system. This must be running in order to view units and download files. The LANLink engine is multi-threaded and can perform several different tasks against several different DVRs simultaneously.

LANLink also installs Internet Information Services Express as the backend web server that LANLink uses to serve web pages as the user interface. IIS Express is started automatically in the background when LANLink is opened. This must be running in order to view the LANLink interface.

The LANLink web service runs on port 9001 so any users of the LANLink system will require access to that port within their browser e.g. <http://mylanlinkserver.com:9001/>



LANLink 5.1 Architecture



INSTALLATION

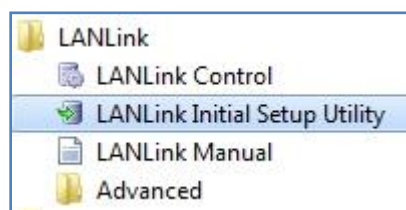
PREREQUISITES

- The latest version of .NET 4.0 - can either be installed via Windows update in advance or via LANLink CD image folder /DotNetFX40
 - LANLink versions V4.1.0 or higher are based on MySQL database and require MySQL V5.6 Server to be installed.
1. Install .NET 4.0
 2. Install MySQL Server 5.6
 - a. Run the installer
 - b. Select Install MySQL Products
 - c. Tick Skip the check for updates box and click Next
 - d. Select Server only and click Next
 - e. Pull down the Config Type: and select Server Machine and click Next
 - f. Enter a password for the Root database users access - this will be required after the install for the LANLink initialisation process, thereafter LANLink will use a non-admin level database user for accessing the database.
 - g. Click Next, Next, Finish.
 3. Run setup.exe* from the LANLink CD / Installation folder.
 4. Follow the on-screen instructions, choosing the installation folder.
 5. A reboot is required.
 6. Once the installer has finished, C:\lanlink\jobs must be shared to all users who will access the LANLink system (this is the default folder unless specified otherwise in the LANLink Settings page post installation).
 7. It is recommended that the latest version of PCLink Suite is also installed on the LANLink PC/Server.

* It may be necessary to right click setup.exe and *Run as Administrator* if Windows UAC or domain permission policies are in place. The installer will install .NET 4, IIS Express and the LANLink Engine as a Windows Service.

POST INSTALL

1. Run the LANLink Initial Setup Utility from the Start > Programs > LANLink menu;



2. If you wish to import multiple units, please read the next section before moving on to step 3 in order to prepare the import file. If units are to be entered manually to LANLink, this step can be skipped.
3. Enter the Root password at the bottom (as set during the MySQL installation).
4. Click **Run Scripts**
5. Click **Yes** to confirm - green ticks should appear next to each action as it progresses.
6. Close the Utility program once complete.
7. Right click the LANLink tray icon and select **Start Engine**
8. Right click the LANLink tray icon and select **Open LANLink** - the first time LANLink is run there will be an extended load time.
9. After LANLink loads in the browser, go to the Settings page to configure the system as required (site specific preferences).

IMPORT MULTIPLE UNITS

A list of units and IP addresses can be imported as part of the installation. If this is not required, skip this step and see the section **ADDING UNITS TO LANLink** within this manual.

To import units post install, a comma separated value text file can be loaded in to the LANLink initial Setup Utility. The format of the file is;

```
unitname,ipaddress,serialnumber,fleet,description.
```

If LANLink is configured for DHCP then the serialnumber field should be used instead of ipaddress. The fourth and fifth fields are optional. No commas or special characters should be used for any field and each IP address must be unique. Here is an example file without the optional fields;

```
unit1,172.16.1.10,,  
unit2,172.16.1.11,,  
unit3,172.16.1.12,,  
unit4,172.16.1.13,,  
unit5,172.16.1.14,,
```

Here is an example file where DHCP is being used;

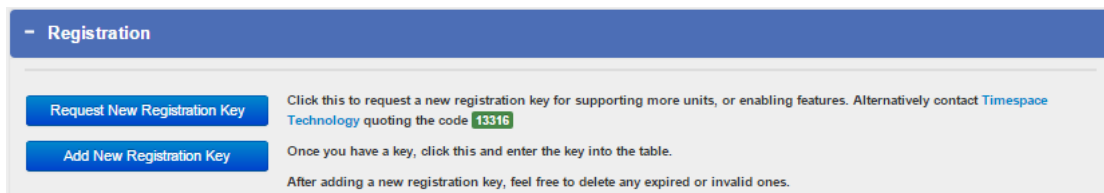
```
unit1,,01234,,  
unit2,,56789,,  
unit3,,11111,,  
unit4,,22222,,  
unit5,,33333,,
```

The import file should be saved to %LANLinkDataDir%\importunits.txt

REGISTRATION

LANLink can be run un-registered for the first 5 units that are added to the system. In order to enable LANLink for Unlimited units, a code must be obtained from Timespace Technology. The registration, renewably yearly, allows Timespace to provide support, development and free software upgrades.

Following installation, go to the LANLink Settings page and scroll down to the Licensing section. A unique code is displayed and will need to be provided to Timespace so that an unlock code can be given in return.



REMOTE ACCESS TO LANLINK

The LANLink web service runs on port 9001 so any users wishing to use the LANLink system on a device other than the server itself will require access to that port within their browser e.g. **http://mylanlinkserver.com:9001/**

By default IIS Express only allows access to the web service locally i.e. localhost:9001 therefore the IIS web config needs to be edited. The file can be edited in a text editor such as *notepad*:

1. Edit the file: *C:\Program Files (x86)\LANLink\Website.config*
2. Find the line that contains the port binding (find or ctrl+F "9001" without quotes):
<binding protocol="http" bindingInformation=":9001:localhost" />
3. Copy that line and paste underneath and replace "localhost" with the server ip:
<binding protocol="http" bindingInformation=":9001:192.168.0.3" />
4. Save/close the file.
5. Stop & Start the LANLink webserver by right clicking the LANLink tray icon and select **Stop webserver** then **Start webserver**.
6. From an *admin* cmd prompt, paste the following lines and press enter (after changing the IP address to the LANLink server IP);
netsh http add urlacl url=http://192.168.0.3:9001/ user=everyone

*netsh advfirewall firewall add rule name="IISExpressWeb" dir=in
protocol=tcp localport=9001 profile=private remoteip=localsubnet
action=allow*

LANLINK DIRECTORY STRUCTURES;

C:\lanlink\jobs
C:\lanlink\alarms
C:\lanlink\recycle
C:\lanlink\safetylink
C:\lanlink\external
C:\Program Files\LANLink (x86 dir where applicable)
C:\ProgramData\Timespace Technology\LANLink\LANLinkServer
C:\ProgramData\Timespace Technology\LANLink\Database
C:\ProgramData\Timespace Technology\LANLink\Database\logs
C:\ProgramData\Timespace Technology\LANLink\Database\snapshots

The following files and folders that are not removed during an uninstall;

C:\ProgramData\Timespace Technology\LANLink\Database\logs
C:\ProgramData\Timespace Technology\LANLink\LANLinkServer\llss.xml
C:\ProgramData\Timespace Technology\LANLink\Database\LANLinkData.mdb

PORT FORWARDING

If any DVRs added to LANLink are behind a firewall, the following ports will need to be allowed through;

All Timespace DVRs	UDP port 7	(ping/echo request)
X200	UDP port 69	(TFTP)
X300	TCP port 21	(FTP)
V400	TCP port 21	(FTP)

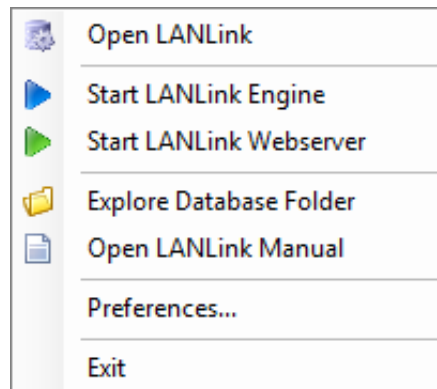
Optionally ports TCP 2055-2058 can be opened for X300/V400 to allow Live Video footage to be streamed in to PCLink (this is not a requirement for LANLink though).

RUNNING LANLINK

LANLink is controlled via a taskbar tray icon which automatically starts when Windows boots up. Alternatively it can be accessed from the Programs menu by selecting LANLink Control.



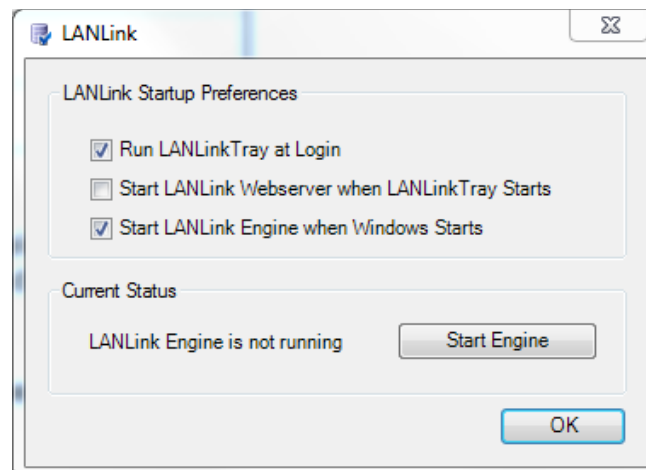
Right click the tray icon to display the options;



To start LANLink, right click the tray icon and select **Open LANLink** or double click on the tray icon. Alternatively LANLink can be controlled via the Programs menu shortcuts instead of the taskbar tray icon.

Once LANLink is open in a web browser, it can be bookmarked and opened just like any other web page.

The Preferences sub menu allows LANLink startup behaviour to be set;



LANLINK INTERFACE

LANLink consists of several web pages which display information about the DVR's and download Jobs. A simple navigation bar is available on each page in order to quickly switch between the three main areas of LANLink; **Units**, **Jobs** and **Health History**.

A **Current Status** page is available as a quick one page overview of the system.

The screenshot shows the Timespace LANLink interface. At the top is a blue header with the Timespace logo and 'LANLink Version 4.1.0 (Engine running)'. Below this is a navigation bar with four tabs: 'Current Status', 'Units', 'Jobs', and 'Health History'. The 'Units' tab is selected. Below the navigation bar is a table titled 'Units'. The table has columns: 'Health', 'Unit Name', 'Fleet', 'Hardware', and 'Status'. There are filter boxes for 'Unit Name', 'Fleet', 'Hardware', and 'Status'. Below the table is a blue bar with a help icon and the text 'Click to show help...'. On the left side of the screenshot, there are four callout boxes with red arrows pointing to specific parts of the interface: 'Navigation bar' points to the top navigation bar; 'Headings / filters' points to the table headers and filter boxes; 'Unit / Job / Health information area' points to the table rows; and 'Help information' points to the blue bar at the bottom.

FILTERING

Typing in any of the filter headings will filter the information shown in the list. Examples of filtering are;

- SUPPORT – this will filter the list for items that include “SUPPORT” in the Unit Name column.
- !SUPPORT – this will exclude anything that has “SUPPORT” in the Unit Name Column.

SORTING

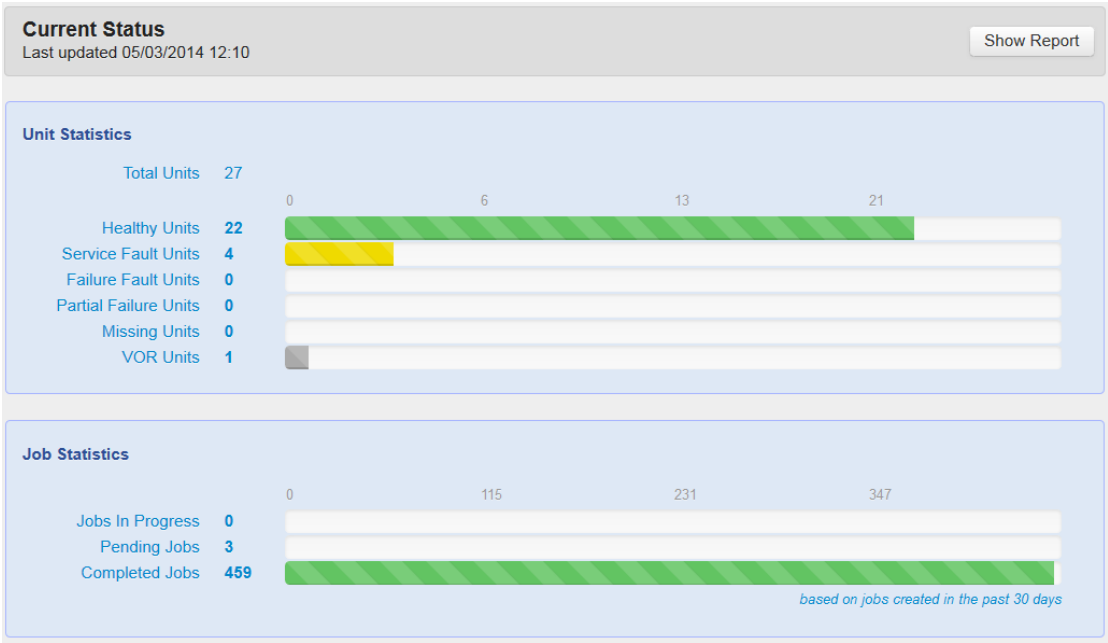
When sorting on certain columns, additional *Sections* will become visible in order to group items. A group section can then be collapsed or expanded as required. An example of grouping on Status is shown below;

<input type="checkbox"/>	Health	Unit Name	Fleet	Hardware	Status
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
▶ AWAY (8)					
▶ DISABLED (7)					
▲ GETTING FILE LIST (1)					
<input type="checkbox"/>		RYDE1115		TRANSVU AQUILA (05.0 (00.07))	getting file list
▶ GETTING HEALTH LOG (5)					
▲ HOME (5)					
<input type="checkbox"/>		BUILDING CAM		X300-04A (1.3.2.314)	home
<input type="checkbox"/>		Henry_s X300 MK2	Henry's Office	X300-MK2 (1.4.0.323)	home
<input type="checkbox"/>		SUPPORT X300-MK2		X300-MK2 (1.4.0.323)	home
<input type="checkbox"/>		TEMP TEST V400	22ND JUNE 2015	V400-16 (1.3.1.222)	home
<input type="checkbox"/>		HENRY'S V400	OFFICE	V400-16 (1.3.1.222)	home

CURRENT STATUS

The Current Status page give a quick overview of the LANLink system.

Clicking on any of the line items will navigate to a new page and filter based on the selection
e.g. display all units that have a Service condition.



ADDING UNITS TO LANLINK MANUALLY

DVRs are added to the LANLink System / Database by selecting the **Unit Admin** from the navigation bar, then click **Add New Unit**. Add details as required and click Confirm New Unit.

The diagram illustrates the 'Add New Unit' form with the following fields and annotations:

- Name:** Required. Annotation: Friendly name e.g. vehicle ID/ number plate.
- IP Address:** Required. Annotation: Unique IP address.
- Description:** Optional. Annotation: Optional text e.g. depot1.
- Fleet:** Optional. Annotation: Optional text e.g. vehicle type (single/double deck).

Buttons: Confirm New Unit (green), Cancel (red).

The unit Name will be displayed throughout the LANLink system.

Each IP address must be unique.

ADDING UNITS TO LANLINK AUTOMATICALLY (DHCP)

LANLink can discover DVRs on the network if the the infrastructure is setup for automatic IP address assignment (DHCP).

In LANLink Settings > Network, IP address range(s) can be added for LANLink to scan;

The screenshot shows the 'Network' settings page with the following details:

- Global IP Range (for DHCP):** 192.168.0.10-192.168.0.200
- Description:** A range (or list of ; seperated ranges) of IP addresses which will be checked in addition to any static unit IPs. (For example: 10.0.0.10-10.0.0.19;10.0.0.30-39 will have 20 addresses).
- Action:** Check and Show All IP Addresses in Range

As DVRs are detected, they will be added to the LANLink database and displayed on the Units page. DVRs that are discovered using DHCP are maintained within LANLink by the DVR serial number, so if re-assigned a different IP address from the network, the Health history and Snapshot information will still be related to the same DVR.

Where DVRs swap IP address in the DHCP pool, this can be shown on the Units page in the IP address column like so; 0.0.0.0 (was 10.0.0.200), which indicates the last address assigned to this DVR has been re-assigned to another DVR (this is informational only).

The text overlay on Camera1 from the DVR will be used to identify the unit in LANLink as the friendly name. Units detect automatically like this will be initially seen as; New Unit [CamText1] and then just CamText1.

WARNING – If a DVR is replaced with a new one on the same vehicle, it should be removed and re-added to LANLink as the serial number will be different.

UNIT ADMIN

Any units added to LANLink and be edited / removed as required;

Unit Admin

ID	Unit Name	Fleet	Description	IP Address	Hardware
Type to fi	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter
3	V400		support	10.0.0.224	V400-16 (1.2.1.108)
2	X200		support	10.0.0.222	X200-04 (2.0.0.451)
1	X300		support	10.0.0.221	X300-04 (1.1.1.252)

Automatic Downloads

FTP

VOR

Type to filter

Type to filter

False

False

Delete Unit

Edit

False

False

Delete Unit

Edit

VEHICLE OFF ROAD

VOR – Each unit can be set manually to Vehicle off Road if for example you do not wish LANLink to contact a certain unit. LANLink will not track any units marked as VOR. Units that are marked as VOR will continue to be displayed in the main Units page if the *Shows Units flagged as Off-Road in the main Units list* option is selected in Settings.

To delete units, click the **Delete Unit** button next to unit you wish to remove. A confirmation dialog will appear. There is no undo for this action although the unit could be re-added with the same details as before, a different internal LANLink id number will be assigned to the new unit.

Edit – allows the unit details to be changed. Unit name should only be edited when the LANLink Engine is stopped. ID cannot be edited.

FTP Mode - In some circumstances where a strict Firewall/NAT network is being used, it is necessary to change how LANLink' FTP communication mode. The options are Active and Passive. Passive is the default and is recommended for most cases. The FTP mode can be changed at any time after a unit has been added by toggling the Active or Passive buttons in the Unit Admin page.

FTP User / Pass – Allows a different user/password to be setup for LANLink to communicate to the DVR. This is a user configurable option on the DVR itself (where supported). Enter the details setup on the DVR in order for LANLink to FTP successfully. If these are not set, the default Timespace user/password will be used as published in the relevant DVR product manuals.

Once a unit has been contacted, some additional **Hardware** details are logged and displayed on the Unit Admin page.

NOTE – Only one LANLink server can communicate with a DVR at any one time and using LANLink simultaneously with PCLink or RemoteLink is not recommended.

VIEW UNITS

To view all of the DVRs currently added to LANLink, click the **Units** navigation link. The Units pages display the most up to date information for each DVR and is automatically refreshed on the page. Information columns can be sorted by clicking the header label. Columns include;

Health, Unit Name, Fleet, Hardware, Status, Last Updated, Latest Recording and IP Address.

Current Status Units Jobs Health History				
Units				
<input type="checkbox"/>	Health	Unit Name	Fleet	Hardware
	Healthy	Type to filter	Type to filter	Type to filter
<input type="checkbox"/>		X200 Soak3	PRODUCTION	X200-16 (2.0
<input type="checkbox"/>		X200 Soak2	PRODUCTION	X200-04 (2.0
<input type="checkbox"/>		X200 Soak1	PRODUCTION	X200-04 (2.0
<input type="checkbox"/>		X200	SUPPORT	X200-04 (2.0

UNIT STATUS

Home currently connected to the LANLink system but no actions are in progress.

Away currently not connected to the LANLink system.

The following status' indicate currently connected to the LANLink system and downloading files; **Downloading files, Downloading Alarm Files, Downloading ext Files, Getting Health Log, Getting file list.**

UNIT HEALTH

Clicking on a Units Health LED will navigate to the Health History page where more detailed information on the selected unit is displayed.

- Unit has a fail condition requiring immediate attention
- Unit has a partial fail condition that may indicate hardware issues but do not warrant immediate attention
- Unit has a non serious condition requiring servicing when convenient
- Unit is 100% healthy
- Unit has external log entries
- LANLink has been unable to download a file list or health log from the unit for more than *n* days

HEALTH HISTORY

The Health History matrix contains rows of DVRs and columns of history of health for each unit, with more detailed views including; **Health text**, **Daily snapshot images**, **Daily GPS route information**

DVR history information

Health, Snapshot and Route information

Click to expand/display

ID	Name	Fleet	Hardware	today	04 Mar	03 Mar	02 Mar	01 Mar	28 Feb	27 Feb	26 Feb	25 Feb
Type to fi	Type to filter	Type to filter	Type to filter									
5	X200	SUPPORT	X200-04 (2.0.1.452)									
6	X300	SUPPORT	X300-04 (1.3.0.283)									
7	V400	SUPPORT	V400-16 (1.2.3.134)									
8	Vibration Rig	PRODUCTION wifi	V400-16 (1.2.3.134)									
9	Henry's V400		V400-08 (1.2.2.113)									

Click to view or hide the health text display...

Click to view or hide the snapshot display...

Click to view or hide the map display...

Click to view or hide the help text...

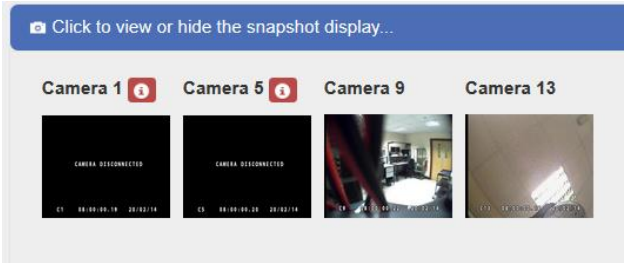
Icons on the health matrix include;

		Unit in good health and has no issues for this the column's date.
		Unit has issues and may need servicing.
		Unit has faults, but the fault count is under user-defined threshold, so is classed as a partial fail.
		Unit has faults and needs servicing as soon as possible.
		When this is present it means the unit has GPS for this day.
		When this is present it means the unit has snapshots for this day.
		When this is present it means the unit has snapshots for this day, and 1 or more are flagged as having possible issues.
		When this is present it means the unit has snapshots for this day, and 1 or more are flagged as having probable issues.

The *detailed* icon information can be toggled on/off depending on preference.

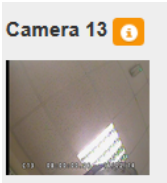
DAILY SNAPSHOT IMAGES

On a daily basis, LANLink will download an image from each camera and display it in the Health History page for that day, for that DVR. A image can be clicked on to enlarge it and controls to scroll through the images and download them are displayed. Any cameras with a reported fault are highlighted in the Health matrix and also in the snapshot area;



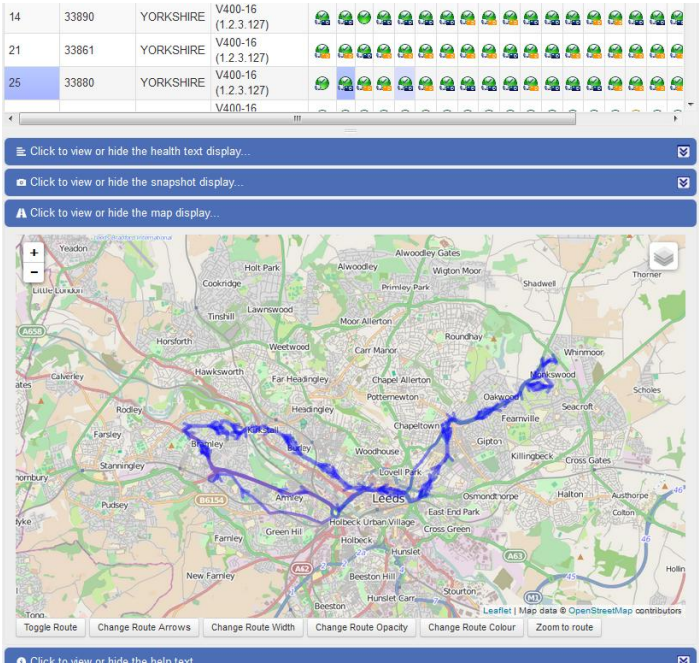
OBSCURED CAMERA DETECTION

LANLink analyses each daily snapshot image and tries to determine if there are any problems with the camera view. For example, a camera may be connected and working correctly however the view is obscured due to a dirty lenses or misalignment. This is not a service condition and is only highlighted for information/checking by the operator;



DAILY ROUTE INFORMATION

On a daily basis, LANLink will download and display route information recorded on a DVR for a particular day;

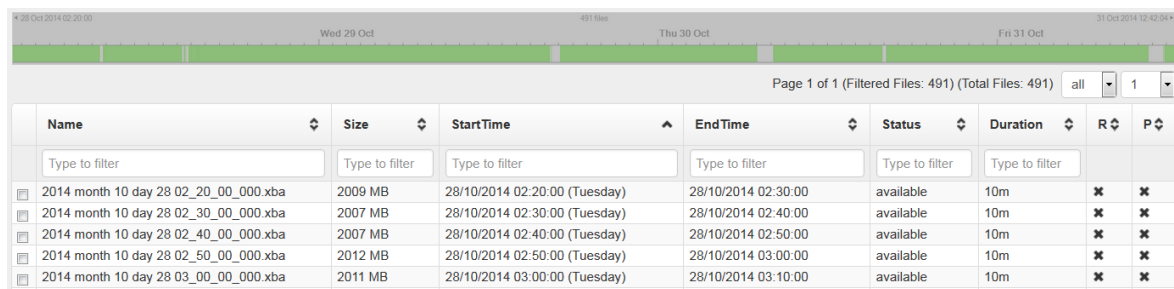


VIEW FILES

To view the file list of a particular unit, click the **View Files** button to the right of the unit on the Units page. This will display a list of all files on the DVRs disk. The file listing is generated from the last time the unit was contacted and the file list received.

If the DVR is currently Home or Downloading then the file list will match exactly with the files that are currently stored on the installed Hard Disk Cartridge. If the DVR is currently away then the list shown will consist of the files that were present on the cartridge the last time it was home. Some files may have been overwritten by the time it is next home and new files may have been added.

A graphical timeline is displayed that represents the file listing. Columns can be ordered and filtered to help find files;



Name	Size	StartTime	EndTime	Status	Duration	R	P
<input type="checkbox"/> 2014 month 10 day 28 02_20_00_000.xba	2009 MB	28/10/2014 02:20:00 (Tuesday)	28/10/2014 02:30:00	available	10m	✖	✖
<input type="checkbox"/> 2014 month 10 day 28 02_30_00_000.xba	2007 MB	28/10/2014 02:30:00 (Tuesday)	28/10/2014 02:40:00	available	10m	✖	✖
<input type="checkbox"/> 2014 month 10 day 28 02_40_00_000.xba	2007 MB	28/10/2014 02:40:00 (Tuesday)	28/10/2014 02:50:00	available	10m	✖	✖
<input type="checkbox"/> 2014 month 10 day 28 02_50_00_000.xba	2012 MB	28/10/2014 02:50:00 (Tuesday)	28/10/2014 03:00:00	available	10m	✖	✖
<input type="checkbox"/> 2014 month 10 day 28 03_00_00_000.xba	2011 MB	28/10/2014 03:00:00 (Tuesday)	28/10/2014 03:10:00	available	10m	✖	✖

The file Status will be displayed as;

available file is available to download
 available. new file has been added to the list and is available to download

Any **write protected** files will be indicated with by tick in the P column. Write protected files are set by LANLink whilst a file is being downloaded (ring fencing) and then removed once the download is complete.

Any **read only** files will be indicated with by tick in the R column. Read only files are generated by the DVR configuration e.g. Alarm events or manually by a using the Timespace Reviewer.

Each file has a tick box to the left of it for setting up a job to download. Simply select the file(s) required and click the **Add New Job** button (see Downloading Files section for more detail).

DOWNLOADING FILES

LANLink downloads files from Timespace DVRs using a job system. Each job is given a name and specifies the files to be downloaded with a priority level. The priority level ranges from 1 to 3, with 1 being the least important. This allows the LANLink system to decide which jobs to process first if multiple jobs exist for a unit.

Files to be downloaded can either be individually selected from the file list of a particular recorder or by specifying a start date and time and end date and time for the footage required.

If interrupted, files being downloaded will automatically pick up again where they left off and continue to download, with LANLink seamlessly joining the files together.

FILE BASED DOWNLOAD

To download files from the file list:

1. Click the **View Files** button of the DVR.
2. Select the tick the box next to any file(s) required.
3. Click **Add New Job**.
4. Click **Confirm Job***

*A confirmation screen will be shown;

Simple

New File Job Simple Advanced Confirm Job Cancel Job

Job Name

Priority 2 (Normal)

Unit Name	Filename	Status	Type	File Size
SUPPORT V400	2014 month 10 day 07 08_50_00_000.xba	active	file	1103MB
SUPPORT V400	2014 month 10 day 07 09_00_00_000.xba	active	file	1103MB
SUPPORT V400	2014 month 10 day 07 09_10_00_000.xba	active	file	1103MB

Confirm Job Cancel Job

or Advanced

New File Job Simple Advanced Confirm Job Cancel Job

Job Name

Custom Folder

Resulting Folder

Priority 2 (Normal)

Options ☐ Ringfence Only

Unit Name	Filename	Status	Type	File Size
SUPPORT V400	2014 month 10 day 07 08_50_00_000.xba	active	file	1103MB
SUPPORT V400	2014 month 10 day 07 09_00_00_000.xba	active	file	1103MB
SUPPORT V400	2014 month 10 day 07 09_10_00_000.xba	active	file	1103MB

Confirm Job Cancel Job

The Advanced Job confirmation allows a Custom Folder to be chosen and the option to Ringfence the files only (write project but not download - user to retrieve files manually).

DATE/TIME BASED DOWNLOAD

To download files from a specified period:

1. Tick the required DVR(s) from the **Units** page.
2. Click **Add New Job**.
3. Enter the Incident date/time and +/- minutes before/after.
4. Click **Confirm Job***

*A confirmation screen will be shown;

Simple

The 'Simple' job configuration interface shows a 'New Job' header with buttons for 'Confirm Job' (green), 'Cancel Job' (red), 'Simple' (selected), and 'Advanced'. The form includes fields for 'Units' (SUPPORT V400), 'Name' (Job), 'Priority' (2 (Normal)), 'Incident Time' (31/10/2014 12:20:00), 'Footage Before' (10 minutes), and 'Footage After' (10 minutes). A status message indicates: 'This will result in 20m worth of footage, providing the footage exists. There is currently 1 known file in this time-range.' The bottom section shows a timeline for 'SUPPORT V400' with a green bar representing the selected time range.

or Advanced

The 'Advanced' job configuration interface shows a 'New Job' header with buttons for 'Confirm Job' (green), 'Cancel Job' (red), 'Simple', 'Advanced' (selected), and 'XOS Update Job'. The form includes fields for 'Units' (SUPPORT V400), 'Name' (Job), 'Custom Folder' (c:\lanlink\jobs), 'Resulting Folder' (c:\lanlink\jobs\Job (5107)), 'When Complete' (do nothing special), 'Priority' (2 (Normal)), 'Incident Time' (28/06/2015 12:05:20), 'Footage Before' (10 minutes), 'Footage After' (10 minutes), 'Footage Start Time' (28/06/2015 11:55:20), 'Footage End Time' (28/06/2015 12:15:20), 'Only Run Job After' (Anytime), 'Only Run Job Before' (Anytime), and 'Options' (Ringfence Only). Status messages indicate: 'Leave both fields blank to run the job anytime' and 'This will result in 20m worth of footage, providing the footage exists. There are currently 3 known files in this time-range.' The bottom section shows a timeline for 'SUPPORT V400' with a green bar representing the selected time range.

Additional options are displayed on the Advanced Job confirmation page such as Job name, custom download folder and ringfence only (and not download) can be changed in the Advanced Job page.

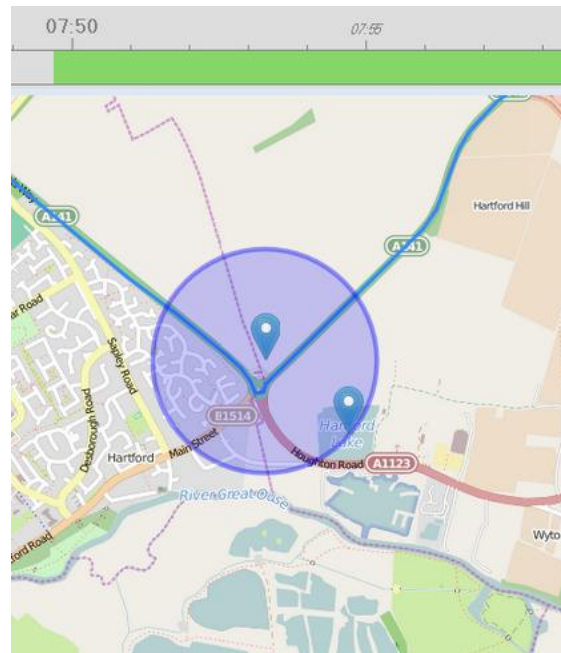
Multiple DVRs can be added to the same job using the Date/Time based method.

GPS BASED DOWNLOAD

To download files from a specified period:

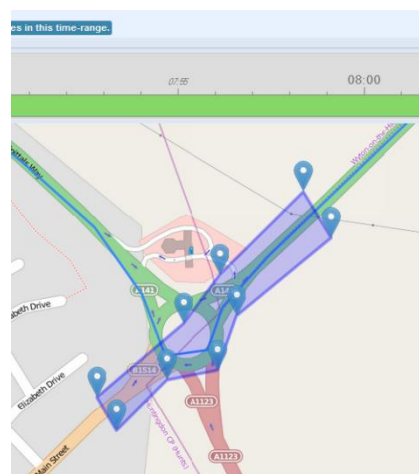
1. Tick the required DVR(s) from the **Units** page.
2. Click **Add New Job**.
3. Enter the incident date/time and +/- minutes before/after.
4. Place a point on the map and adjust the area around the point.
5. Click **Confirm Job**.

Job name, priority, custom download folder and ringfence only (write project but not download - user to retrieve files manually) can be selected before confirming the job.



Multiple DVRs can be added to the same job using this method - even *all* DVRs. This can be very useful when dealing with a large fleet.

By clicking the map and adding more points, a user can define the area in more detail;



NOTE - GPS based download jobs are only available on the Timespace X300 and V400 DVRs.

XOS UPDATE JOB

Setup a job to update a Timespace DVRs XOS software;

1. Tick the required DVR(s) from the **Units** page.
2. Click **Add New Job**.
3. Click **Advanced**.
4. Click **XOS Update Job**.
5. Select the software version to upgrade to (*this must be copied on to the LANLink server in advance in order to populate the pull down list).
6. Select a time to run the job (if left blank, it will run the next time the unit is seen).

XOS Update Job

New Job

Confirm Job Cancel Job Simple Advanced XOS Update Job

Units: SUPPORT V400

XOS Update

- This will create an XOS update job.
- The unit will only be updated if the selected XOS is the right XOS for the unit.
- The unit will only be updated if the selected XOS is newer than the already installed XOS.
- Currently only V400's support LANLink XOS updates.
- Current settings will be saved, and recording will resume after the unit has been updated.
- Powering down whilst the unit is updating is discouraged.
- The default locations for XOS files on the LANLink Engine PC are:
 - %APPDATA%\Timespace Technology\Updates (this is the default folder into which PCLink downloads updates)
 - C:\ProgramData\Timespace Technology\LANLink\Database\logs\xosupdate (this is a lanlink-local folder into which users can put xos files)

Select XOS from list

Only Run Job After: Anytime ... Leave both fields blank to run the job anytime

Only Run Job Before: Anytime ... Leave both fields blank to run the job anytime

* The default locations for XOS files on the LANLink Engine PC are:

- %APPDATA%\Timespace Technology\Updates (this is the default folder into which PCLink downloads updates)
- C:\ProgramData\Timespace Technology\LANLink\Database\logs\xosupdate (this is a lanlink-local folder into which users can put xos files)

AUTOMATIC FILE DOWNLOADS

Files can be setup to download automatically, on a per unit basis.

Step1 - Turn on Automatic Downloads in the Settings page.

Step2 - Setup a rule(s) on the unit you wish to automatically download from.

Rules

Enter a comma separated list of rules of the form shown below. If a file matches ANY of the rules, the engine will automatically download it;

- RO - ReadOnly files (this will be the default if left blank)
- SW:<string> - filename StartsWith <string>
- CT:<string> - filename ConTains <string>
- NC:<string> - filename does Not Contain <string>
- FG:<number> - Filesize Greater than <number>
- FL:<number> - Filesize Less than <number>
- TM:16:00:00-16:20:30 - startTime between 16:00:00 and 16:20:30

Example 1 - Automatically download ALARM files;

Rule; SW:ALARM

Example 2 - download a file between 09:00 and 09:10 everyday.

Rule; TM:09:00:00-09:10:00

JOBS

To view the status of current jobs, click the **Jobs** tab from the navigation area:

User Jobs								
<div>Clear Filters</div> <div>User Jobs</div> <div>System Jobs</div>								
ID	Job Name	Status	Priority	Created	User	Units Covered	Progress	
Type	Type to filter			Type to filter		Type to filter	Type to filter	
1631	Job	pending	Normal	05/03/2014 10:25:52	admin	X200	33% - 2 files remaining of 3	View Job
1437	Job	done	Normal	20/02/2014 09:26:47	admin	3G	100% - 1 file downloaded	View Job
1321	276 test	done	Normal	12/02/2014 08:39:07	admin	SOAK2	100% - 2 files downloaded	View Job
<div>Delete Jobs</div> <div>Toggle Delete All Buttons</div> <div>Page 1 of 1 (Total Jobs: 3)</div> <div>10</div> <div>1</div>								


An overall Job progress will be displayed as a percentage on the Jobs page.

To view more details of a specific job, click the **View Job** button to the right of the Job on the Jobs page.

JOB DETAIL

Job Detail (1429)							
<div>Delete Job</div>							
<div>Name Job</div> <div>Creation Time 31/10/2014 12:11:47</div> <div>Completion Time unknown</div> <div>Created by admin</div> <div>Job Type Time Based Job</div> <div>Status pending</div> <div>Job Path default</div> <div>Units Covered SUPPORT X300 [X300-04A]</div> <div>Priority 2 (Normal)</div> <div>Footage Start Time 31/10/2014 11:01:47</div> <div>Footage Stop Time 31/10/2014 11:21:47</div> <div>GPS Filter</div>							
Unit	Unit ID	Filename	File Status	Type	Downloaded Size	Size on Unit	Availability on Unit
SUPPORT X300	7	2014 month 10 day 31 11_00_00_000.region.xba	downloaded successfully	start	206MB	312MB	available
SUPPORT X300	7	2014 month 10 day 31 11_05_00_000.xba	pending - 25% downloaded	mid	76MB	317MB	available
SUPPORT X300	7	2014 month 10 day 31 11_10_00_000.xba	pending - 0% downloaded	mid	0MB	314MB	available
SUPPORT X300	7	2014 month 10 day 31 11_15_00_000.xba	pending - 0% downloaded	mid	0MB	296MB	available
SUPPORT X300	7	2014 month 10 day 31 11_20_00_000.xba	pending - 0% downloaded	end	0MB	314MB	available

The download progress % will update as the files are downloaded, navigate to **C:\lanlink\jobs\job#** to view the file(s). The default jobs folder location can be configured to another location. If using Internet Explorer, a link to the job folder will be shown.

The file status will be either **available** or **deleted**. This relates to the status of the file stored on the DVR. A file that has a ghost symbol  next to it has been deleted from the remote unit.

Sub folders inside the jobs folder will be created for each job and again for each unit which has been used in that job (if multiple units are selected). The downloaded files will be contained in these folders and once located the files can be moved and copied as required.

To delete a job from the system, click on the **Delete Job** button. This will stop the job from running and remove it from the list of jobs. It will not however remove downloaded files from the LANLink server's hard disk.

Where a job has been setup for multiple units, LANLink will go through an identification process to determine if files exist for the given job criteria e.g. in a certain GPS location. As DVRs come in to contact with LANLink, the Job Detail Identification Status section will automatically refresh and display whether or not files have been identified or not;

Refreshing...

Click to show file identification status...

Unit	Unit ID	File Identification Status
3G	32	Q Waiting for unit. No files have been identified yet.
Building CCTV	12	✖ Complete. No files on the unit matched the GPS area over the specified time span
Henry's V400	9	Q Waiting for unit. No files have been identified yet.
Henry's X300	11	Q Waiting for unit. No files have been identified yet.
SOAK1	20	✖ Complete. No files on the unit matched the GPS area over the specified time span
SOAK2	21	Q Waiting for unit. No files have been identified yet.
SOAK3	22	✖ Complete. No files on the unit matched the GPS area over the specified time span
Temp Test V400	10	✖ Complete. No files on the unit matched the GPS area over the specified time span
Testbench X200 1 (Bob)	26	Q Waiting for unit. No files have been identified yet.
Testbench X200 1 (John)	27	Q Waiting for unit. No files have been identified yet.
Testbench X300 1 (Fred)	23	✖ Complete. No files on the unit matched the GPS area over the specified time span
Testbench X300 2 (Dave)	24	Q Waiting for unit. No files have been identified yet.
Testbench X300 3 (Igor)	25	Q Waiting for unit. No files have been identified yet.
TV2	15	Q Waiting for unit. No files have been identified yet.
TVa	13	Q Waiting for unit. No files have been identified yet.
TVb	14	✖ Complete. No files on the unit matched the GPS area over the specified time span
V400	7	Q Waiting for unit. No files have been identified yet.
V400 - 210	16	✖ Complete. No files on the unit matched the GPS area over the specified time span
V400 - 212	17	Q Waiting for unit. No files have been identified yet.
V400 - 214	18	Q Waiting for unit. No files have been identified yet.
V400 - 216	19	Q Waiting for unit. No files have been identified yet.
Vibration Rig	8	✖ Complete. No files on the unit matched the GPS area over the specified time span
X200	5	Q Waiting for unit. No files have been identified yet.
X200 Soak1	28	Q Waiting for unit. No files have been identified yet.
X200 Soak2	29	Q Waiting for unit. No files have been identified yet.
X200 Soak3	30	Q Waiting for unit. No files have been identified yet.
X300	6	✖ Complete. No files on the unit matched the GPS area over the specified time span

EMAIL REPORTS

The LANLink system can automatically send out email reports on a **Daily, Weekly** or **Monthly** basis.

Different levels of details can be sent to single or multiple recipients at a set time.

The screenshot shows the 'Email Reporting' configuration page. It has several sections: 'Email Address' with a text input and 'Save'/'Cancel' buttons; 'Email Frequency' with a dropdown menu set to 'Daily'; 'Email Sections' with a list of checkboxes including 'Overview', 'Units', 'Jobs', 'Detailed - Healthy', 'Detailed - Service', 'Detailed - Fail', 'Detailed - Missing', and 'Detailed - VOR'; 'Time To Send' with a time input set to '01:00:00'; and 'Fleet Filter' with a text input set to 'All fleets'. At the bottom, there are radio buttons for 'Use LANLink eMail sender' and 'Use a custom eMail sender', with a 'Set Custom SMTP Details' button next to the latter. A 'Address Report' button is on the left, and a page indicator 'Page 1 of 1 (Total: 1)' is on the right.

The email reports section can be found on the **Settings** page.

LANLink uses its own internal mailer by default, however custom server details can be entered if required;

The screenshot shows the 'Custom SMTP Details' dialog box. It contains the following fields: 'SMTP Server URL' (smtp.mailhost.tspace.co.uk), 'Username' (masked with asterisks), 'Password' (masked with asterisks), 'Sender Email Address' (internalnoreply@tspace.co.uk), 'Timeout in ms' (150000), and 'Server Port' (25). There is a checkbox for 'Server Supports SSL' which is unchecked. At the bottom, it says 'The SMTP server is used for emailing reports.' and has a 'Save' button.

Here is a sample email report that shows the **Overview** followed by **Detailed Service**, **Detailed Fail**, **Detailed Missing** and **Detailed VOR**;

Units	
Total Units:	27
Healthy Units:	21
Service Fault Units:	5
Failure Fault Units:	0
Partial Failure Units:	0
Missing Units:	0
VOR Units:	1

All Units	
3G (32):	Unit has service faults Log last updated: 20/02/2014 10:31:17 X300-04A (1.1.1.279) At 9:30:40 20/02/2014 camera 1 was disconnected, please check cables
Building CCTV (12):	Unit has service faults Log last updated: 06/03/2014 07:29:59 X300-04A (1.1.1.283) At 3:22:27 06/03/2014 there was a non critical error (type 816)
Henry's V400 (9):	Unit has service faults Log last updated: 21/02/2014 14:52:37 V400-08 (1.2.2.113) At 13:51:49 21/02/2014 camera 1 was disconnected, please check cables At 13:51:31 21/02/2014 camera 2 was disconnected, please check cables At 13:47:22 21/02/2014 Unit serviced At 12:50:40 21/02/2014 camera 4 was disconnected, please check cables At 12:50:40 21/02/2014 camera 3 was disconnected, please check cables
TestBench X300 2 (Dave) (24):	Unit is flagged as Vehicle Off Road
TestBench X300 3 (Igor) (25):	Unit has failure faults Log last updated: 17/02/2014 16:45:20 X300-04A (1.1.1.277) Unit may not be recording. Unit not explicitly set to record at power up.
TV2 (15):	Unit has service faults Log last updated: 29/11/2013 12:52:41 Translu (6.3 (18.0197) MATP 2012-11-15 16:02) At 12:23:15 29/11/2013 camera 2 was disconnected, please check cables At 12:23:07 29/11/2013 Unit startup At 10:51:37 29/11/2013 camera 2 was disconnected, please check cables
V400 - 216 (19):	Unit has service faults Log last updated: 25/02/2014 13:14:03 V400-16 (1.2.3.127) At 9:45:00 19/02/2014 camera 8 was disconnected, please check cables At 9:45:00 19/02/2014 camera 7 was disconnected, please check cables At 9:45:00 19/02/2014 camera 6 was disconnected, please check cables At 9:45:00 19/02/2014 camera 5 was disconnected, please check cables At 9:45:40 19/02/2014 camera 8 was disconnected, please check cables

SETTINGS

All LANLink settings are configured from the Settings page. There are several section *ribbons* that can be expanded/collapsed to view and change settings. There is a floating *navigation* list on the right hand side for quick access;



All settings are saved as soon as they are entered with the exception of certain settings that have a specific Save button;



USER ADMIN

LANLink has a user / permissions system that by default is disabled and only has the **admin** user added (with all permissions).

From the user admin page, users can be added, deleted, change password and have their permissions set as follows;

User Rights for admin

Use the tick-boxes to set the user's rights, then click Save.

Save User Rights

Cancel Edit

Change User Password

<input type="checkbox"/>	ViewHealth
<input type="checkbox"/>	ViewFiles
<input type="checkbox"/>	ViewJobs
<input type="checkbox"/>	ViewUnits
<input type="checkbox"/>	ViewSummary
<input type="checkbox"/>	ViewLogs
<input type="checkbox"/>	AddJob
<input type="checkbox"/>	DeleteJob
<input type="checkbox"/>	AdminUnits
<input type="checkbox"/>	AdminConfig
<input type="checkbox"/>	AdminSecurity
<input type="checkbox"/>	AllowCustomJobPaths
<input type="checkbox"/>	AllowAdvancedJobs
<input type="checkbox"/>	AllowXOSJobs
<input type="checkbox"/>	ViewActivity
<input checked="" type="checkbox"/>	All

Fleet Filter

Keep empty to allow user to see units from all fleets. Otherwise enter a semi-colon ; separated list of fleets which the user is allowed to see. Adding a double semi-colon ;; to the list allows the user to see units with no fleet set.

FLEET FILTER

The Fleet Filter can be used to control which users can see which fleets of vehicles. The Fleet description field must be populated for each unit in the Unit Admin page that you wish to filter using this feature e.g. if you are running LANLink over multiple sites but want to split the administration between different users, userA may only see site1 vehicles and userB may only see site2 vehicles.

USER ACTIVITY

User activity is logged and can be viewed the User Admin page. Options to export and delete the log exist;

User Activity								Export CSV...	Delete All Activity
ID	Time	User Name	Activity	Details	Severity	UnitID	JobID		
Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter	Type to filter		
26	28/06/2015 13:05:20	james	Job Created	Time Job Created	Medium	0	5107		
25	28/06/2015 12:16:20	james	Login	Login Successful	Low	0	0		
24	27/06/2015 12:41:16	james	Job Confirmed	Time Job Confirmed - Job	Medium	0	5095		
23	27/06/2015 12:40:45	james	Job Created	Time Job Created	Medium	0	5095		
22	27/06/2015 12:40:26	james	Job Confirmed	Time Job Confirmed - James-Test-27-06-15-MULTIUNIT	Medium	0	5094		
21	27/06/2015 12:38:41	james	Job Created	Time Job Created	Medium	0	5094		
20	27/06/2015 12:37:47	james	Unit Updated	Unit Details Updated	Medium	169	0		
19	27/06/2015 12:37:19	james	Unit Updated	Unit Details Updated	Medium	168	0		
18	27/06/2015 12:35:59	james	Unit Deleted	Unit Deleted	High	171	0		
17	27/06/2015 12:35:58	james	Unit Deleted	Unit Deleted	High	152	0		
16	27/06/2015 12:35:56	james	Unit Deleted	Unit Deleted	High	178	0		
15	27/06/2015 12:35:54	james	Unit Deleted	Unit Deleted	High	177	0		
14	27/06/2015 12:35:51	james	Unit Deleted	Unit Deleted	High	179	0		
13	27/06/2015 12:35:50	james	Unit Deleted	Unit Deleted	High	151	0		
12	27/06/2015 12:35:48	james	Unit Deleted	Unit Deleted	High	150	0		
11	27/06/2015 12:35:46	james	Unit Deleted	Unit Deleted	High	149	0		
10	27/06/2015 12:32:40	james	Login	Login Successful	Low	0	0		
9	26/06/2015 22:02:57	james	Login	Login Successful	Low	0	0		
8	26/06/2015 14:06:03	james	Job Created	Time Job Created	Medium	0	5082		
7	26/06/2015 14:05:57	james	Login	Login Successful	Low	0	0		

Page 1 of 2 (Total Items: 26)