

IntelliNet[®] Network Control Center (INCC)

Installation, Configuration, and Operations Manual

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Contents

1.	Introduction	7
2.	Product Compliance Statements	8
3.	Hardware and Software Requirements	8
	Server	8
	Software Requirements	9
	Virtual Machine	10
	Other Hardware Considerations	10
4.	INCC Software Installation	12
	Prerequisites	
	Software Distribution Media	
5.	INCC Software Installation	14
	Installing Ubuntu Operation System	
	Installing the Package Files	21
	Logging in to the INCC Web Interface	
	Upgrade/Rollback Procedure	26
	Troubleshooting	
6.	Exploring the IntelliNet Control Center	
	Overview	
	Search by Unit	
	Incoming Alarm	
	Sound Off Button	
	Software Receiver Identification	
	System Status & Alerts	
	Alerts	
	View Profile	
	Alarms Dashboard	35
7.	INCC Navigation Pane	
	Dashboard	
	Kingk made	
	NIUSK IIIUUE	
	Business Units	
	Business Units	
	Business Units Introduction Create a Business Unit	

	Sorting and Filtering	. 41
	Viewing Individual Business Units	. 42
	Faults Tab	. 43
	Dashboard Tab	. 44
	General Info Tab	. 44
	Subscribers Tab	. 45
	Mesh Tab	. 49
	IP Links Tab	. 49
	Hybrids	.51
	Non_AES Units	.51
	Import/Export Units	. 53
	Stats	. 54
	IP Link/Hybrid Load	. 55
	Live Traffic	. 56
	RF Settings	. 56
	TTL Settings	. 57
	NetCon Settings	. 59
	Bad Packets	. 60
	Notifications	. 60
IP Li	inks	. 64
	Faults Tab	. 65
	General Tab	. 66
	Events History Tab	. 66
	Notification Tab	. 67
	Activating Notifications	. 67
Sub	scribers	. 68
	Sorting and Filtering	. 68
	Faults Tab	. 70
	General Tab (Buttons and Icons)	. 71
	General Tab (Settings)	. 72
	Turn NCT on	. 74
	Authority Having Jurisdiction (AHJ) Report	. 74
	Settings Tab	. 77
	Messages Tab	. 78
	Live Traffic Tab	. 78
	Zone Configuration Tab	. 79

Event History	
Notifications	
Hybrids	82
Users	
All Users Tab	
Users History Tab	
Import/Export Tab	
Export Users	
View User Details	
Create a User Account	
Edit a User Account	
Delete a User Account	
Dealers Page	
To Add a Dealer Manually	
To Add a Dealer Using CSV	91
To Add Users	
To Add Business Units	
To Add IP Links	
Settings	
System Tab	
Server Tab	
Network Tab	
Alarm Automation Tab	
Tech Options Tab	97
Subtools Tab	
Check-in Grace Period	
Antenna	
FCC	
Maintenance	
Live Traffic	
Geography	
Configuration	
Help	
Light mode	
Hide menu	
Processing Alarms	

8.

10.	Version Control Schema	119
9.	Glossary	113
	Exporting Reports	111
	Onscreen Messages	111
	Silencing Alarms	110
	Clearing Alarms Manually	110

NOTICE TO USERS, INSTALLERS, AUTHORITIES HAVING JURISDICTION, AND OTHER INVOLVED PARTIES

This product incorporates field-programmable software. In order for the product to comply with the requirements in the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864, certain programming features or options must be limited to specific values or not used at all as indicated below.

Program Feature or Option	Permitted in UL 864 (Y/N)	Possible Settings	Settings Permitted in UL 864
Alarm Automation (Heartbeat Signal Frequency: Serial or IP)	Y	0–90	As configured by UL 1981, Central-Station Automation Systems Requirements
Data Type	Y	Security, GPS, USDI (others in pull-down menu)	Security
Old Alarm Delivery Options	Y	All, Subscriber controlled, Never	All
Radio Packet Life	Y	0–99	0 (No Time Out for Alarm, Trouble or Restoral)

Software Version

The instructions in this manual correspond to version 10.00.01 of the INCC software. To verify which version of the software you have, go to <u>Software Receiver Identification</u>.

Notes

- 1. INCC operates with alarm mode and in manual mode.
- 2. For Alarm Automation references throughout this manual, Alarm Automation output must be connected to a UL 1981 Listed Alarm Automation System. Automation system must have a redundant system.
- 3. For UL Central Station Burglar Alarm applications, opening/closing signals shall be sent using an alternate communication means that provides for premises acknowledgement (ring back).
- 4. Alarm Automation is not allowed for proprietary monitoring centers, manual mode only. (According to UL 2610.)
- 5. This product shall be installed in accordance with NFPA 72, NEC (NFPA 70 National Electric Code), UL 827 and all applicable local codes.

6. For compliance with UL Central Station Fire/ Burglar Alarm applications, a computer workstation is required to be able to determine subscriber status. The workstation shall be UL-listed ITE equipment.

1. Introduction

The AES IntelliNet is a patented two-way data radio network used for monitoring alarms and transmitting specialized data packets. The system is faster and more reliable than telephone and cellular systems, both of which are subject to tampering and general failure. Phone lines may still be used for backup.



The system's unique "smart" radio communicators, called subscriber units, are each connected to an alarm panel or specialized data port. Alarm information or data is transmitted by radio to the central receiver. If a subscriber unit is too far away to reach the central station directly, its message is relayed by another subscriber unit closer to or in better communication with the central station or other closer units. This unique built-in "repeater" capability creates a highly rugged, adaptive security network. The system self-adjusts to ensure that messages are forwarded via the shortest and best available route. This "smart routing" capability is automated, requiring no special programming. Also, the AES system eliminates the need for dedicated repeaters and towers, significantly reducing setup and operating costs.

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

2. Product Compliance Statements

AES IntelliNet Network Control Center software, version 10.00.xx, meets UL 864 and UL 2610 when used with UL 60950 or UL 62368 listed ITE equipment, meeting the minimum hardware requirements.

California State Fire Marshall Listing Number	Please visit AES Website for latest listing #
City of New York Fire Department Certificate of	Please visit AES website for
Acceptance (COA) Number	latest certificate #

All AES products are compatible with the INCC receiver, but applications that have been tested to be compliant with UL 864 and UL 2610 are limited to the following:

Model Number	Туре
7744F	Fire
7788F	Fire
7706 ULF	Fire
7707	Fire
7007	Burg
7177	Hybrid
7170	IP Link

3. Hardware and Software Requirements

Server

Minimum Hardware Requirements

The minimum hardware requirements for operating the AES software receiver system are as follows:

- 1 TB disk drive storage
- Intel[®] Xeon[®] quad core microprocessor with minimum speed of 2.4 GHz, or similar specification x64 Intel[®] compatible microprocessor
- 8 GB RAM
- USB Type-A or Type-C (USB 2.0/3.0)
- 100 Mb Ethernet connection
- Operating System Ubuntu 20.04,

Ubuntu 22.04, 23.04, 23.10, 24.04

Other requirements that must be considered for the installation:

- Primary and secondary servers are redundant machines.
- All servers must be operating non-stop, including monitors.
- Every workstation requires a keyboard, mouse, monitor, and network connected to the primary/secondary server.
- Do not use a screen saver on any INCC server.

All network switches, routers, hubs, and the like, shall be Listed Information Technology Equipment in accordance with UL 60950 and/or UL 62368.

Software Requirements

The customer is responsible for installing Ubuntu on either a server or virtual machine.

Install Ubuntu 20.04 LTS (64 bit), which is available at https://releases.ubuntu.com/20.04/.

Important: No other software other than the operating system software and anti-virus/security protection software shall be installed on the primary and backup computer/servers.

Note: Customers can use a cloud server if it adheres to UL 872A, "Hosted Central Station Services," as shown below.



Virtual Machine

The hardware requirements for each server installation are as follows:

- 8 GB RAM
- 512 GB Hard Drive
- 4 CPU's per VM
- Intel[®] Xeon[®] quad core microprocessor with minimum speed of 2.4 GHz, or similar specification x86 Intel[®] compatible microprocessor

The software requirements are as follows:

- Ubuntu server 20.04.4 (64 bit), 22.04, 23.04, 23.10, 24.04
- Compatible software alarm automation system for signal processing
- Web-enabled device for browser access to the AES software receiver

Note: The INCC does not support Internet Explorer.

Other Hardware Considerations

• Supply line transient protection is required that complies with the Standard for Surge Protective Devices, UL 1449, with a maximum marked rating of 330V. This applies to 120/220 V AC single-phase systems.

- The source of power for the equipment shall be within the rated voltage range of the signal processing equipment.
- Network (Ethernet) cabling requires transient protection complying with the Standard for Protectors for Data Communications and Fire Alarm Circuits, UL 497B, with a maximum marked rating of 50V.
- The communication circuits and network components connected to the telecommunications network must be protected by secondary protectors for communication circuits. These protectors must comply with the Standard for Secondary Protectors for Communications Circuits, UL 497A, with a marked rating of 150V or less. These protectors must be used only on the protected side of the telecommunications network.
- Supervising station processing control equipment or the enclosure housing the control equipment be provided with a permanent means for connection to the branch-circuit supply which shall include provision for installing the supply conductors in conduit.
- Any telecommunication interface lines must be protected by secondary protectors that comply with the Standard for Secondary Protectors for Communications Circuits, UL 497A, with a maximum marked rating of 150V.
- The equipment used must be installed in a temperature-controlled environment that can be maintained between 13–35°C (55–95°F) by the HVAC system. The monitoring station must have an HVAC maintenance contract for the equipment providing the controlled environment.
- Twenty-four hours of standby power must be provided for the HVAC system, which may be supplied by an engine-driven generator alone. A standby battery is not required to be used.
- In addition to the main power supply and secondary power supply (120V AC/240V AC), an uninterruptable power supply (UPS) with sufficient capacity to operate the computer equipment for a minimum of 15 minutes is required. If more than 15 minutes is required for the secondary power supply to supply the UPS input power, the additional UPS required must be capable of providing input power for at least that amount of time.
- The UPS used must comply with the Standard for Uninterruptible Power Systems, UL 1778, or the Standard for Control Units and Accessories for Fire Alarm Systems, UL 864.
- To allow for maintenance and repair service, a means for disconnecting the input to the UPS while maintaining continuity of power to the receiving equipment must be provided.
- If a power conditioner is used, the receiving equipment must comply with the applicable requirements in the Standard for Power Units Other Than Class 2, UL 1012.

• To allow for maintenance and repair service, a means for disconnecting the input to a power conditioner and output from a power conditioner while maintaining continuity of power to the automation system shall be provided.

4. INCC Software Installation

The following instructions describe how to install a new AES central station system. Upgrades and replacements are not covered in this document.

Important: AES customers are provided with a Linux installation package file **only** and are required to build and prepare a virtual machine prior to the installation.

Note: Please pay attention to partition allocation when installing the operating system. All space required to root a partition must be allocated. You will modify this allocation when checking the LVM group.

When changing the IP address for the INCC, please verify that the IP addresses are not currently being used inside your network scope.

Prerequisites

Software Distribution Media

: The INCC software is available from AES as a web download or USB.

Note: Estimated completion time to install a new AES central station system is approximately 20–30 minutes, depending on the Internet service provider (ISP).

Before installing the INCC software, complete the following steps so that the virtual machine can access the VNET PC transfer application:

1. Ensure that the software and hardware for the virtual machine meets the minimum requirements specified in Section 3, Hardware and Software Requirements.

Model Number	Туре
7744F	Fire
7788F	Fire
7706 ULF	Fire
7707	Fire
7007	Burg
7177	Hybrid
7170	IP Link

- 2. Configure static IP addresses for both the primary and secondary servers, then run both servers (<u>https://en.wikipedia.org/wiki/Private_network</u>).
- 3. Network connectivity between VMs must be configured.



AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

5. INCC Software Installation

Installing Ubuntu Operation System

1. Please select a language of your choice:

Wilikommen: Blenvenue: Welcome: Добро пожаловать)	NelKom) [Help]
Use UP, DDWN and ENTER keys to select your languag	e.
<pre>6 Set 0, come and center respired setect goar language</pre>	 1 1<

It is recommended that you continue without updating:



2. Select a keyboard language from the Layout and Variant dropdown lists:



 Configure at least one interface the server can use to communicate with other machines. Start by clicking eth > Edit IPv4.

Network connections	(Help)
Configure at least one interface th and which preferably provides suffi NAME TYPE NOTES [ension eth - • • DHCPV4 10.0.3.39/8 DODDC1281D7345:60 / VMWare / VMX [Create bond •]	is server can use to talk to other machines, clent access for updates. <pre>(close) Info Edit IPv4 Edit IPv6 Add a VLAN tag</pre>
	Done] Back]

4. Define the IP address by selecting Manual:

in the international states in the		t next a
onfigure at least or and which preferably	ne interface this server can use to taik to oth provides sufficient access for updates.	
NAME TYPE NOTES ens160 eth - DHEPV4 10.0.3,39/9 0010c:29:c7:45:66	S 8 / VMware / VMXNET3 Ethernet Controller	
Create bond =		
	Edit Chistoo in ve Connigaration	
IPv4 Method:	Automatic (DHCP)	
IPv4 Method:	Automatic (DHCP) < Manual Disabled	
IPv4 Method:	Automatic (DHCP) Manual Disabled	
IPv4 Method:	Automatic (DHCP) Manual Disabled [Cancel]	
IPv4 Method:	Automatic (DHCP) Manual Disabled [Cancel]	
IPv4 Method:	Automatic (DHCP) Manual Disabled [Cancel]	

5. Add your static network values into the form, then click **Save** and **Done**:

Net	work connections		[Help]
		— Edit ens160 IPv4 configuration ————	
	IPv4 Method: [Manual 🔻]	
	Subnet:	10.0.0/8	
	Address:	10.0.74.151	
	Gateway:	10.0.1.7	
	Name servers:	8.8.8.8 IP addresses, comma separated	
	Search domains:	Domains, comma separated	
		[Save] [Cance1]	

6. Keep the default proxy settings, then click **Done**:



7. Keep the default mirror values, then click **Done**:

Configure Ubuntu) archive mirror	[Heip]
If you use an al	ternative mirror for Ubuntu, enter its deta	ails here.
Mirror address:	http://us.archive.ubuntu.com/ubuntu You may provide an archive mirror that wil the default.	ll be used instead of
	[<u>D</u> one] [Back]	

8. In the Guided Storage section, set up the disk as an LMV group. Keep all other settings in default mode.



9. In the FILE SYSTEM SUMMARY section, you will need to define a maximum volume for the server. Begin by selecting **ubuntu-lv** under USED DEVICES, then click **Edit**.

ETLE SYSTEM SUMMA				неір]
THE BIOTER BOTH	RY			
HOLWI POINT [/ 1 [boot	512E TIPE 00.000G new ext4 2.000G new ext4	new LVM logical volume new partition of local dis	.k ►]	
AVAILABLE DEVICES				
I ubuntu-vg (new) free space		LVM volume group	509.996G 409.996G	÷1
L Create Solt and I cheate y lune y	PETO (mt) E Cose (LVH) E I			
USED DEVICES				
Levice Lubuntu-vg (new)	w, to be formatten	LVM volume group as ext4, mounted at /	509.9966 100.0006	• (clos
<pre>[/dev/sda partition 1 ne partition 2 ne partition 3 ne</pre>	w, BIOS grub space w, to be formatted w. PV of LVM volum	local disk r as ext4, mounted at ∕boot e group ubuntu−vg	512.000G 1.000M 2.000G 509.997G	Edit Delet

10. In the Size field, enter the maximum size, then click Save:

Storage contigu	ration			(Heip)
FELE SYSTEM SUM	MARY			
Мацит ғадит /////	STZE 100,0000 E.0006	TYPE nem ext4 new ext1	NEVICE TYPE New 1944 Howical volum New new 1110m 01 Joca	e e i L'alia, e i
i e	— Editing	logical v	∕olume ubuntu−lv of ubu	ntu-vg
	Name:	ubuntu-	-1v	
Size (max	509.9966)	509.996	5G	
	Format	: [ext4		
	Mount	e itz	* 1	
		C.	Save j Cancel l	
			1 00m	
			1 And	

11. Confirm the storage space and click **Done**. Then approve the format and click **Continue**.

Storage config	uration					[Heip]
FILE SYSTEM SU	IMMARY					
MEUNT POINT [/ [/boot	812E 509.996G 2.000G	new ext4 new ext4	nevice typ new LVM lo new partit	E gical volume ion of local	►] disk ►]	
AVAILABLE DEVI	CES					
No available	06%1065					
		a) e i				
I Create yolun	e shorb (fw	M) # 1				
USED DEVICES			1	VPE	877	
USED DEVICES DEVICE [ubuntu-vg (n ubuntu-1v	iew) new, to be	formatted	L 1 as ext4, m	vor VM volume gro pounted at /	oup 509.996 509.996	iG ►] iG ►
USED DEVICES DEVICE [ubuntu-vg (n ubuntu-lv [/dev/sda	ew) new, to be	formatted	L 1 as ext4, m 1	vpF VM volume gro ounted at / ocal disk	509.996 509.996 509.996	iG ►] iG ►]
USED DEVICES netire [ubuntu-vg (n ubuntu-1v [/dev/sda partition 1 partition 2	ew) new, to be new, BIOS ∶ new, to be	formatted grub space formatted	l as ext4, m ar l as ext4, m ar l as ext4, m	ver VM volume gro nounted at / nocal disk nounted at /bo	oup 509.996 509.996 512.000 1.000 1001 2.000	G ►] G ►] M ► G ►
USED DEVICES DEVICE [ubuntu-vg (n ubuntu-lv [/dev/sda partition 1 partition 2 partition 3	new) new, to be new, BIOS new, to be new, to be	formatted grub space formatted LVM volum	L d as ext4, m ar d as ext4, m me group ubu	ve⊨ VM volume gro ounted at / ocal disk ounted at /bo ntu−vg	oup 509.996 509.996 512.000 1.000 1001 2.000 509.997	iG ►] iG ►] iG ►] iG ►] iG ►
USED DEVICES DEVICE Ubuntu-vg (n ubuntu-lv (/dev/sda partition 1 partition 2 partition 3	ew) new, to be new, BIOS new, to be new, PV of	formatted grub space formatted LVM volum	t as ext4, m i as ext4, m i en i as ext4, m i as ext4, m	ve⊏ VM volume gro oounted at / ocal disk oounted at /bo ntu–vg	bup 509.996 509.996 512.000 1.000 10t 2.000 509.997	G ►] G ►] M ► G ► G ►
USED DEVICES perfect [ubuntu-vg (n ubuntu-lv [/dev/sda partition 1 partition 2 partition 3	ew) new, to be new, BIOS new, to be new, PV of	formatted grub space formatted LVM volum	t l as ext4, m ar l as ext4, m ne group ubu	v⊃⊨ VM volume gro nounted at / nocal disk nounted at /bo ntu−vg	509.996 509.996 512.000 1.000 100t 5.000 509.997	G ►] G ►] M ► G ► G ►
USED DEVICES neutre [ubuntu-vg (n ubuntu-lv [/dev/sda partition 1 partition 2 partition 3	ew) new, to be new, BIOS ; new, to be new, PV of	formatted grub space formatted LVM volum	l as ext4, m l as ext4, m l as ext4, m l as ext4, m ne group ubu	vo⊨ VM volume gro nounted at / ocal disk nounted at /bo ntu−vg	oup 509.996 509.996 512.000 1.000 509.997	G •] G •] G •] G • G • G

12. On the Profile page, enter your VM profile information:

configure SSH access or sudo.	the next screen but a password is still needed for
Your name:	AES DEVOPS
Your server's name:	incc-primary The name it uses when it talks to other computers.
Pick a username:	aesadmin
Choose a password:	yelekelelek
Confirm your password:	selected by the second s

13. On the SSH Setup page, check Install OpenSSH server and click Done:

[Help
stall the OpenSSH server package to enable secure remote r.
Install OpenSSH server
[No
Allow postuary authorized in over 2001
C bone 1

14. Click **Done** *without* making any selections (the INCC does not have any additional packages).

Featured Server Snaps	[Неір	1
These are popular snaps press ENTER to see more available.	in server environments. Select or deselect with SPACE details of the package, publisher and versions	,
<pre>[] microk8s [] nextcloud [] wekan [] kata-containers [] docker [] canonical-livepatch [] rocketchat-server [] mosquitto [] etcd [] powershell [] ashrzbd [] wormhole [] aws-cli [] gogle-cloud-sdk [] slcli [] doctl [] conjure-up [] postgresql10 [] heroku [] keepalived [] juju</pre>	Kubernetes for workstations and appliances Nextcloud Server - A safe home for all your data Open-Source kanban Build lightweight VMs that seamlessly plug into the c Docker container runtime Canonical Livepatch Client Rocket.Chat server Eclipse Mosquitto MQTT broker Resilient key-value store by CoreOS PowerShell for every system! SABnzbd get things from one computer to another, safely Universal Command Line Interface for Amazon Web Servi Google Cloud SDK Python based SoftLayer API Tool. The official DigitalOcean command line interface Package runtime for conjure-up spells PostgreSQL is a powerful, open source object-relation CLI client for Heroku High availability VRRP/BFD and load-balancing for Lin The Prometheus monitoring system and time series data Juju - a model-driven operator lifecycle manager for	

15. Once the installation and update are finished for the Ubuntu Operating System, the **Reboot Now** button will appear. When ready, click **Reboot Now**.

Install complete!	[Help]
<pre>configuring apt configuring apt installing missing packages configuring iscsi service configuring raid (mdadm) service installing kernel setting up swap apply networking config writing etc/fstab configuring multipath updating packages on target system configuring target system bootloader installing grub to target devices finalizing installation running 'curtin hook' curtin command hook executing late commands final system configuration configuring target system bootloader installing system bootloader installing system bootloader curtin command hook executing late commands final system configuration configuring cloud-init calculating extra packages to install installing openssh-server curtin command system-install downloading and installing security updates curtin command in-target restoring apt configuration curtin command in-target subiquity/Late/run</pre>	A V V
[View full log] <mark>[<u>R</u>eboot Now]</mark>	

Installing the Package Files

Requirements for installing the INCC software are as follows:

- PuTTY or other third-party SSH client
- WinSCP or other file transfer client
- Install package file (File will be provided by AES in incc-instal-xx.xx.xx.xx. vxx.run format.)
- Sudo user in Ubuntu The sudo user should be created while the operating system is
 installed, or you can create a new sudo user with the following command (you must replace
 the bold text aesadmin with your new user):

USERNAME=**aesadmin** && sudo useradd -m -d /home/\${USERNAME} \${USERNAME} && sudo usermod -aG sudo \${USERNAME} && sudo usermod -s /bin/bash \${USERNAME} && sudo passwd \${USERNAME}

Note: The INCC installation requires that the primary instance be installed first. Once the primary instance has been successfully installed, the secondary instance can be installed. Currently, the INCC supports only two instances—primary and secondary.

1. Before starting the installation, update and upgrade Ubuntu using the following commands on all Ubuntu operating systems:

sudo apt-get update && sudo apt-get upgrade -y

2. Transfer the install package file with WinSCP (or other tools) to the home folder of sudo users for all instances (if you created **aesadmin** user, the folder will be /home/aesadmin).



3. Make the install package file executable using the following command:

sudo chmod +x instal-xx.xx.xx.xxx.run

4. Install the primary instance using the following command:

sudo ./ instal-xx.xx.xx.xxx-vxx.run



While installing the primary instance, you will be asked the following questions:

• Do you accept AES Corp Software License Agreement? (yes/no):

Type **yes** and press the **Enter** key.

• Is this VM primary? (yes/no):

Type **yes** and press the **Enter** key.

• Is this VM replacement with old one? (yes/no): (syntax needs to be adjusted)

If you installed the INCC primary first, type **no**.

If your INCC primary instance corrupted and you want to replace it with a new one, type **yes** and press the **Enter** key.

 Do you want to define port ranges for IP Links, IP Subscribers and AA manually? (yes/no):

Default ports have been set for IP Links, IP Subscribers, and AA. If you wish to go with default ports, you can type **no**; otherwise, type **yes** to define it manually.

- IP Link default port: **7070**
- IP Link default port ranges: 7000-7099
- IP Subscriber default port: 9090
- IP Subscriber default port ranges: 9000-9099

AA default port ranges: 6050-6099



Note: Keep in mind that your firewall should allow ports 80, 443, and the ports that you defined above for IP Links, IP subscribers, and AA.

• Please provide Secondary VMs sudo user:

Enter **sudo user** that you created on secondary instance.

• Please provide Secondary VM IP:

Enter the **IP address** of the secondary instance. Press the **Enter** key and accept the SSH connection, then enter the secondary instance sudo user's password.



Wait until you see the success message, as shown below:

P aesadmin@incc-primary: ~	—	\times
		^
==> Start SymmetricDS		
incc_symmetric scaled to 1		
overall progress: 1 out of 1 tasks		
1/1: running		
verify: Service converged		
==> Wait until Tables will be ready		
==> Import SymmetricDS configuration		
==> Stop SymmetricDS		
incc_symmetric scaled to 0		
overall progress: 0 out of 0 tasks		
verify: Service converged		
==> Start SymmetricDS		
incc_symmetric scaled to 1		
overall progress: 1 out of 1 tasks		
1/1: running		
Verify: Service converged		
==> Update Primary DB with new IP address		
==> installation completed successfully		
aesadmin@incc-primary:~> 🗌		\sim

Note: Installing package files may take time, depending on the speed of your host (VM) resources.

You are now ready to install the secondary instance. (Before running the install package file, you need to update and upgrade the Ubuntu operating system, as you did for the primary instance.) While installing the secondary instance, you will be asked the following questions:

• Do you accept AES Corp Software License Agreement? (yes/no):

Type **yes** and press the **Enter** key.

• Is this VM primary? (yes/no):

Type **no** and press the **Enter** key.

• Is this VM replacement with old one? (yes/no):

If you installed the INCC secondary first, type **no** and press the **Enter** key.

If your INCC secondary instance corrupted and you want to replace it with a new one, type **yes** and press the **Enter** key.

• Please provide VM sequence number [2,3..8]:

Since the INCC supports only two instance at this time, type 2

Please provide a Primary VM IP:
 Provide the primary instance's IP address and press the Enter key.

 Do you want to define port ranges for IP Links, IP Subscribers and AA manually? (yes/no):

We have set default ports for IP Links, IP Subscribers, and AA. If you wish to go with default ports, type **no**; otherwise, type **yes** to define it manually.

- IP Link default port: 7070
- IP Link default port ranges: 7000-7099
- IP Subscriber default port: 9090
- IP Subscriber default port ranges: 9000-9099

AA default port ranges: 6050-6099



Once the success message is displayed, as shown below, the installation is complete.



AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

Logging in to the INCC Web Interface

Once the installation is complete, you can access the receiver's INCC web interface using HTTPS.

1. Enter the IP address of the primary server into a web browser.

Example: <u>https://10.0.77.220</u>

7. Click Advanced, then proceed to the IP address.



- 8. Enter the default credentials:
 - Username: Admin
 - Password: peabody



Upgrade/Rollback Procedure

Requirements for upgrading (rollback) the INCC software are as follows:

- PuTTY or other third-party SSH client
- WinSCP or other file transfer client
- Upgrade (rollback) package file (the file will be provided by AES in incc-upgradexx.xx.xxxxxvxx.run format)

Note: Upgrade (rollback) package file must be run *only* from the primary instance, and it will upgrade (rollback) all instances.

Before starting the upgrade, go to the **sudo user's home folder** that was used during the INCC software installation. Create a new directory inside it (creating a directory name with the current date is recommended) using the following command:

mkdir 01.01.2023

Transfer the upgrade package file with WinSCP (or other tools) to the new folder of the primary instance's sudo user that was created (e.g., the folder will be home/aesadmin/01.01.2023 if you created a "01.01.2023" folder and you have a sudo user named aesadmin).

Navigate to the new folder:

cd /home/aesadmin/01.01.2023

Make the upgrade package file executable using the following command:

sudo chmod +x upgrade-xx.xx.xx.xxx.run

You are now ready to upgrade instances:

sudo ./ upgrade-xx.xx.xx.xx.run



After running the upgrade package file, you will be asked to perform several actions on the console to proceed:

• Please type **start** to start upgrade/rollback process:

You must type **start** to start the process.

• Do you want to roll back? (yes/no):

For doing the upgrade, you must type **no** here. If you finish the upgrade process and see that the software doesn't work as expected, you will need to run the upgrade package file again and type **yes** in this section. It will roll back both instances.

• AA state is down on primary. Do you want to continue? (yes/no):

You will be asked to confirm if AA is down.

- UnAcknowledged Events are present on primary. Do you want to continue? (yes/no):
 You will be asked to confirm if UnAcknowledged Events are present on primary
- AA state is down on secondary. Do you want to continue? (yes/no): You will be asked to confirm if AA is down
- UnAcknowledged Events are present on secondary. Do you want to continue? (yes/no):

You will be asked to confirm if UnAcknowledged Events are present on secondary

• Is everything fine on secondary? (yes/no):

The upgrade package will upgrade secondary first and when upgrade on secondary completed, you will be asked to check the secondary instance and confirm the health. If you type **yes** here, it will continue the upgrade. If you type **no**, it will start the rollback process for the secondary instance

• Is everything fine on primary? ((yes/no):

The upgrade package will upgrade the primary after you confirm that everything is fine with secondary, and when the upgrade on the primary is completed, you will be asked to check the primary instance and confirm the health. If you type **yes** here, it will complete the upgrade process. If you type **no**, it will start the rollback process for all instances.

After you confirm that everything is fine with the primary, the upgrade process is finished:



Note: For keeping the INCC software up and running, the upgrade (rollback) package will upgrade the secondary instance first, then it will upgrade the primary. If you see any issues after the upgrade, you can run the package file again and go with the **rollback** step.

Troubleshooting

If you see any issue while doing installing INCC software, you can navigate to the install package file location and run the following script:

sudo ./clean.sh

This script will clear the corrupted install, and you may run the install package file to start the install process again.

Run this "clean.sh" file twice if you see any error.

While transferring package files through WinSCP (or other third-party tools), you may see some errors like "permission denied". This means that you have lost the permission to the user's home folder. To fix this issue, navigate to the home folder and correct the permissions:

cd /home

sudo chown -R aesadmin aesadmin/

The INCC software primary and other instances will communicate with each other with specific ports, so keep in mind that the following ports must be allowed between the instances from the firewall:

- 22 (SSH)
- 3306 (MySQL)
- 31415 (SymmetricDS)

Note: AES recommends the use of a firewall and that only the necessary ports be allowed.

6. Exploring the IntelliNet Control Center

Overview

The Control Center dashboard is used for configuring the IntelliNet system, viewing information about the system, viewing your profile, and processing alarms. Detailed information about each component of the dashboard is described on the following pages.



Search by Unit

The search box at the top left can be used to search for IP links, subscribers, and hybrids across the system.

*		Search by U Q. 1234 Search Soun	d off Sot Apr 6 2024 21:24:22	Server IP Version 172,31,21,1 10.00.03.00		^{Admin} 💛
88	Dashboard	1				
Q	Kiosk mode	Fire 19 9999 18 E115 50 C0C5 Su	bscriber D004 Acknowledge	CPU Automation		
Å.	Business Units	Thu Apr 4 10:35:59 2024 Elapsed	2 days ago Silence	Ethernet RF Interfere	nce 5 Act., 3	15990 A 0 Up / 4 D
රා	IP Links	Dashboard				Export Report
Ò	Subscribers	(Inclusive design at an	Antonio de la polícia de la factoria de			
Ċ.	Hybrids	Unacknowledged 20990	Acknowledged 22189 Alerts 5	Connectivity 4		
8	Users	O Pull Station	Alarms count Address New Unacknow	wledged Alarms (4) X	Silence	Ack
-9 ₁₀	Dealers	🛆 Zone Trouble	Alarms count Address		Ack All Silend	e Ack
20	Settings		235 Independence Way,	Danver MA		

Incoming Alarm

 	Alarm Type	CID Code	Unit Triggering Alarm	- 						
1	Supervisory ala	m P307 00 C807	Subscriber 1554		Acknowledge	CPU	Automation	Alertz		
l.	Mon Sep 13 11:05	3:20 2021 GMT-4 Elc	ipsed 04:50:02		Silence	Ethernet	 RF Interference 	0	45 Active	0
1	i									
1	I			1						
1	Date the		Elapsed Time	1						
I	Event		-							
1	Occurred									
L _				_						

This panel provides detailed information about the most recent alarm, including the alarm type, the alarm ID code, and the subscriber associated with the alarm. The date and time zone of the subscriber, as well as how much time has elapsed, are also displayed. The **Acknowledge** and **Silence** buttons are used for processing incoming alarms manually.

Sound Off Button

The **Sound Off** button is a visual indicator of the **System sound in OFF** (or ON) setting in the system settings. Refer to the description in the <u>System Tab</u>.



Software Receiver Identification

The Software Receiver Identification banner provides information about the software and the server.

v10.01.	00.4116
Official Release IntelliNet Product	System-Generated
Designator Code	ID Number
Significant Changes	Minor Changes
New features	Bug fixes (P2 or lower)
Bug fixes (P0 or P1) Noticeable UI chanαes	Insignificant UI changes

• Server Time: The current time and time zone of the location of the servers. (The server can be manually adjusted using the **Settings** option in the left navigation bar.)

• Server IP: The IP address for the primary instance of the server.

- Version: The current version of the software; see the <u>Version Control Schema</u> on page 119 for a detailed explanation on the versioning control syntax for the INCC software.
- INCC Instance: This field reflects the software receiver that is currently supporting the system. (If the primary receiver goes down, the secondary receiver automatically takes over.)

Server Time	Server ID V I	ersion	INCC Instar	ice 		
Server Time	Server IP	Version	INCC Instance		Admin	
Sun Jan 8 10:35:20 2023	10.0.1.61	10.00.01.0011	Primary		Admin Admin	

System Status & Alerts

The four LED lights in the System Status & Alerts panel convey information about the status of the system. The alert indicators at the right of this panel provide information about alarm activity and connectivity issues.

Note: Status LEDs that turn red indicate a failure. Once the failure has been corrected, the LED returns to its normal state (green).

Fire 19 9999 18 E115 0B C0C2 Subscriber D004	Acknowledge	• CPU	Automation			
Wed Mar 27 11:25:27 2024 Elapsed 3 days ago	Silence	Ethernet	RF Interference	5 Ac	83396	1Up/3

LED	Issues That Trigger Red	Result
CPU	Server issues (e.g., buffering issues, catastrophic failure with the server)	The INCC stops processing signals.
Ethernet	Missing check-in from a 7170 IP-Link	No connection between the INCC to the Model 7170 IP Link; the INCC will not receive subscriber signals.
		The time next to each issue indicates how long it will be before the LED is triggered.
		 Default IP Link: 60 seconds Default IP Subscriber: 180 seconds Default AA: 30 seconds
Automation	Unable to get Acknowledgements from a designated alarm monitoring system	Alarms must be processed in manual mode due to alarm automation not processing.
RF Interference	An RF interference condition exists	Signals may not be received.

Alerts

Fire 19 9999 18 E115 0B C0C2 Subscriber D004	Acknowledge	• CPU	 Automation 	Alerts	UnacknowL_	Connectivity
Wed Mar 27 11:25:27 2024 Elapsed 3 days ago	Silenco	Ethernet	RF Interference	5 Ac	83396	1Up/3-

- *Alerts* are incoming signals that require immediate attention.
- Unacknowledged refers to alerts that have not been acknowledged.
- Connectivity refers to IP Links that are not connected.

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

View Profile

Weekly reports can be enabled from within the profile page (click the top right corner at any time from within the INCC).

	Server Time Search Sound Off Sat Mar 30 2024 21:13:30	Server IP Version INCC 172.31.21.1. 10.00.03.00. Instance Primary Robyn W
B Dashboard		
🕕 Kiosk mode	Fire 19 9999 18 E115 0B C0C2 Subscriber D004 Acknowledge	CPU Automation Alerts Unacknow Cannectivity
A Business Units	Wed Mar 27 11:25:27 2024 Elapsed 3 days ago Silence	Ethernet • RF Interference 5 Ac. 83461 A 1 Up / 3 _
👘 IP Links	Profile	
Subscribers		
📋 Hybrids	General Information Change Password	License Details
R Users		Tier 2 Unlimited
P Dealers		
% Settings		
Julie Traffic		Add-ons
Geography	First Name × Last Name ×	Self Monitoring: inactive Request
(?) Help	Émail 🕺	
O Light mode	Time Zone	
K Hide menu	Display time in 24h format	
1		
Software Receiver 35PB	Save	

Provide the recipient's name and email address. The report will be sent as a CSV file to the provided email address.

Name	Last modified	File size
Jerry Seinfeld_events.csv	Mar 23, 2024	3 MB

Alarms Dashboard

The Alarms Dashboard is the default view of the INCC Control Center dashboard (see image below).

Alarms that haven't been processed due to a failure in alarm automation are displayed in the Alarms Dashboard. These alarms will remain active until they are acknowledged. Once alarm automation restarts, alarms will automatically be moved and cleared from the system and will be visible from the Acknowledged tab. See <u>Processing Alarms</u> for more information on processing alarms.

Note: No alarms will be present on the Alarms Dashboard if alarm automation is active.

	Dashboard					Export	Report
1	Unacknowledged 37672	Acknowledged 11	Alerts 0	Connectivity 1			
	🖄 General Alarm	Alarmis count 6268			Date & Time Sun Feb 13 11:39:39 2022 GMT-5	Silence	~ *
	🛆 General Alarm	Alarms count 6268			Dote & Time Sun Feb 13 11:39:39 2022 GMT-5	Silence	-
	🛆 General Alarm	Marme count 6268			Date & Time Sun Feb 13 11:39:38 2022 GMT-5	Silence	
	🛆 General Alarm	Alarms count 6268			Dote & Time Sun Feb 13 11:39:38 2022 GMT-5	Silence	-
	🛆 General Alarm			Business Unit default bu	Date & Fime Sun Feb 13 07:37:00 2022 GMT-5	Silence	

7. INCC Navigation Pane

	Sound Off	Server Time Sun Dec 4	10:03:50 202		Server IP Version INCC Instance 0.0.1.61 10.00.01.0008 Primary	Admic Rob	
Dashboard Kiosk mode Business Units	Supervisory 19 BA09 18 P307 00 C801 Sub Fri Nov 18 09:19:50 2022 Elapsed 16 days o	oscriber BA09 go	Acknowl	edge •	CPU • Automation Ethernet • RF Interference	Aler_ Unacknow 0 41378 A	ledg_ Connectivity cti 0 Up / 1 Do
IP Links	Dashboard	ledged 1	Alerts 0	Connectiv			Export Report
Hybrids	△ Diagnostic Fault / Low battery	Alarms count	Subscriber BAD9	Business Unit.	Date & Time Sun Dec 4 08:51:16 2022	Silence Ackn	owledge
Settings	▲ Watchdog or PBS reset				Dote & Time Thu Dec 1 03:56:32 2022	Silence	owledge
Live Traffic	▲ Diagnostic Fault / RAM Chip R/				Date & Time Wed Nov 30 12:53:26 2022	Silence	owledge
 Geography Help 	🛆 Diagnostic Fault / RAM Chip R/	Alarms count 19	Subscriber 5056	Business Unit orphan	Date & Time Thu Nov 24 02:54:56 2022	Silence	owledge
Ó Light mode	△ No Faults or Restore of all prior	Alarms count 2028			Date & Time Thu Nov 24 02:47:41 2022	Silence	owledge
Hide menu	🛆 Charger Fault	Alarms count 128	Subscriber 5056	Business Unit-	Date & Time Thu Nov 24 01:48:10 2022	Silence	iowledge

Dashboard

The Alarms Dashboard is the default view of the INCC Control Center dashboard (the <u>alarms</u> <u>dashboard</u> is described on page 39).

Kiosk mode

The information included on the kiosk is pulled from other areas of the INCC interface.

- The first three screens (Current alert, Recent alarm, and LED panel) are pulled from the top of the screen (the header).
- The Network Pulse and Network Health Score (yellow boxes below) are pulled from the business unit selected from the Business Unit Name dropdown.
 - The Network Health Score is a quick indicator of network performance. The score is calculated based on the number of Ack Delays, IP Link and subscriber faults, and the number of late check-in messages.
 - The Health Score range is a number from 1–100. A higher score suggests a healthy network, and a lower score suggests that improvements can be made to the network.



To view the network pulse and network health score for a business unit, navigate to Business Unit, select the business unit, then select the Dashboard tab.
AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual



Business Units

Introduction

Business units are a collection of common subscribers grouped together for the purpose of controlling them via a specific cipher code access. Dealers and other people using the business unit can control the system and manage it through this interface.

Due to site-specific particulars, you will need to create at least one business unit to continue. The Multi-Net receiver does not come with business units from the factory.

Note: To view the details of a business that has already been created, click the business unit name. See <u>Business Units</u> for detailed information.

*	AES	🤗 Search by Unit ID 🔗 🚺	arch Sound On	Sarvar Time Sat Mar 2 2	024 11:16:09	5arver P 172.31,21.1_	Version NCC 10.00.03.00_ Print Print	ary	
間 (1) 人	Dashboard Klosk mode Business Units	Fire 43 9999 18 E115 08 C0C2 Subscrit Wed Feb 21 13:4726 2024 Elapsed 10 d	oer D004 ays ago	Act	nowledge. Slice of	CPU Autor Ethernet RF Int	mation terference	Aloris unacknowledg. Conve 5 Acti 92045 Acti 1 Up	
0 E	IP Links Subscribers	Business units						🔄 Sort 🕆 Filters 🗖	dd new
白。	Hybrids	Jur Marmi Orphon	Down			AA Conteguration IP: 50.221.173.139, Port: 6050			
100	Dealers	BUI-Peobody MA	Stotus Down			M. Centiguration IP: 50.221.173.139, Port: 6066		Natwork Rositil (ddra 100	
10	Settings Live Traffic	BU2 / TS	sterui Down			44 Contiguration IP: 50.221.173.139, Port: 6050		Hetwork health source 100	

Note: Some systems have only one type of application data and one access point, and thus require only one business unit. If you have multiple types of data and need multiple remote access locations, define a business unit for each data type and/or remote user. For example, if you have subscriber units that send GPS data and subscriber units that send alarm data, define two business units.

Note: Business units can also be used to separate elements of your operation. If you have networks that are independent, you may find it helpful to create separate business units for them.

Create a Business Unit

1. Click **Business Units** from the left navigation pane and select **Add new**.

W	AES		Sound Off	Surver Time Sun Oct 30 16:2	6:36 2022 GM	Sanual IV Star 17-4 10.0.1.57 10.1	son indone 00.01.0008 Primary	n San San San San San San San San San Sa	uslina
16	Dashboard Klosk mode	Supervisory 19 8023 18 6307 Fri Oct 28 13:01:20 2022 GMT-4	00 C807 Subscriber B023 Elapsed 2 days ago	Ackr	ilence	CPU Aut Ethernet RF II	omation nterference		
A	IP Links	Business units						译 Sort 丁 Filters	Add new
n,	Hybrids	orphan	Down	w or resource though 0/0	subjections 60	AA Configuration IP: null, Port: null		- History backs of a	
(P.) 22	Users Setting s	J. BUtest	Stoler Down			Al Configuration IP: null, Port: null		Nederark (neditiv score- 100	

- 2. Populate the General settings:
 - **Business Unit Name**: Create an alphanumeric string that you will use to refer to the business unit. The string must be less than 32 characters and can include spaces as well as characters that are considered invalid in Linux directory names (the string is casein sensitive).

AES	Sound Off Sun Oct 30 1710:50 2022 GM	Art-4 10.0.1.57 10.00.01.000B Primary Or Jone Augusting				
20 Dashboard	Supervisory 19 8023 18 6307 00 C807 Subscriber 8023	CPU Automation				
Klosk mode	Fri Oct 28 13:01:20 2022 GMT-4 I Elopsed 2 days ogo Silence	Ethernet + RF Interference 0 4527 Active N/A				
Å, Ilusiness Units						
IP Links	< Add Business Unit	Save				
Subscribers						
📋 Hybrids	General	Alarm automation settings				
P, Users	Business Unit Nome	TCP Server Parameters				
🔆 Settings	BU Name *					
Elve Traffic	Set business unit as default.	Create a new AA Configuration				
(ji) Geography	Universal IP Links/IP Groups					
Help	Enable Universal IP Links/IP Groups					
C Light mode		Ademos - I				
Hide menu		Old Alarm Delivery				
		Oeliver all ald alarms for this Business Unit. (default)				
		O Individual Subscriber Unit settings control delivery of old alarms.				
		O Nerver deliver old plarms for this Business Unit.				
 Help Ught mode Hide menu 	Enable Universal IP Units/IP Groups	Automatic Control Control Partings Adematic Adematic Adematic Adematic Did Alarm Delivery O Deliver oil old alarms for this Business Unit. (detault) O Individual Subscriber Unit settings control delivery of old alarms Never deliver old alarms for this Business Unit.				

• Enable Universal IP Links/IP Groups (checkbox): Check this option if you have only one business unit and want all subscribers to be associated with this business unit (even if you do not manually add them to a subscriber database).

- If the checkbox is *not* checked, you will need to manually add each new subscriber to a subscriber database assigned to a business unit. Any signals received from a subscriber not in a database will force it to be handled by the pre-configured business unit named "orphan."
- If the checkbox *is* checked, any new subscriber not in a database that sends data will automatically use this business unit.



Note: Once the **Enable Universal IP Links/IP Groups** has been checked, the screen at the left is displayed.

Enter the ID of the IP-Link transceiver that will handle all subscribers.

3. Populate the Alarm Automation settings:

Alarm automation settings TCP Server Parameters TCP Server	Add Alarm Automation Configuration
Create a new AA Configuration Alarm Automation Settings Automation format: Receiver number Automation format: Automation format:	Port pumber O Allowed range: 6050 - 8099 Primary IP address *
Ademco I Old Alarm Delivery Deliver all old alarms for this Business Unit. (default) I Individual Subscriber Unit settings control delivery of old alarms I Nove deliver all a determs for this Business Unit.	Add IR Address Cancel Submit

• **TCP Server Parameters**: For the TCP server, enter the IP address of the Alarm Automation system. The default is blank and should have an entry only if communication to Alarm Automation via TCP/IP is desired.

Port Number: The IP port that the INCC receiver sends alarm automation messages on (default is blank).

 Automation Format: Select the emulation to use for messages using these settings. Select either Ademco or Radionics according to the configuration of the alarm monitoring system. See the AES website (AES-Corp.com) for a listing of generated messages. **Receiver Number**: Select the number to place within the character(s) that represent the receiver number in the Alarm Automation message (default is 1). Range is Blank, 0 to 9 and A to F (0 and Blank are selectable options but may not be valid entries for all alarm Automation systems). Some Alarm Automation systems may ignore or be set to ignore this parameter.

Unless you know that you need or want something different, use the default and suggested value of 1.

Old Alarm Delivery

• Alarms are reported by AES subscribers when a zone that has gone into alarm in the past has not yet restored to its non-alarm condition at the time the subscriber is sending a Check-In or a Status report.

Note: Compliant configuration to UL 864 requires the setting to be "Deliver all old alarms for this Business Unit." See <u>NOTICE TO USERS, INSTALLERS,</u> <u>AUTHORITIES HAVING</u> JURISDICTION at the beginning of this document for details.

Some Alarm Automation systems may not be configured to properly report these types of messages. There may be reasons not to send these signals to automation but be aware that these messages may indicate important conditions such as zone inputs that are possibly stuck, improperly configured, improperly wired, or in an alarm condition and may not be able to report a new event. Options are:

- Deliver all old alarms for this Business Unit (default)
- Individual Subscriber Unit settings control delivery of old alarms (configuration for each subscriber set in the subscriber unit setting)
- Never deliver old alarms for this Business Unit (ignores subscriber configuration and will not report all old alarms to automation)

Business Units Dashboard

Business units that have been created on the system are displayed on the Business Units dashboard, along with a snapshot of information for each business unit, including:

- The status of the business unit
- Number of IP Links, IP groups, and subscribers associated with the business unit
- The business unit's alarm automation receiver number
- The network health score

-				Sound Off	Server Tin Sun Jul	10 10:06:3:	Ve 2 2022 GMT-4 10	nsion .00.01.0007	Tech supp	
	Dashboard Kiosk mode				Acknowld	idge v	CPU Auto Ethernet RF In	omation	Alerts Unlock	nowL Connectivi. 1 Up / 1_
4 13	IP Links	Busi	iness units					LF Sol	rt T Filter:	Add new
	Subscribers	4	BU Name	Status	# ot IP Links/IP_	# of Subs.	AA Configuration	AA Receiver Nu	Network healt	h soore
	Hybrids		orpnan	• Up	0/0	9	IP: 10.0.3.59, POIC. 6	11	U	
	Users	,å,	BUI	Down			IP: 121.5.3.3, Port: 6		100	
	Users Settings	۵. ۵	BUI BUI Name	Storus Storus			IP: 121.5.3.3, Port: 6		Network healt	
	Users Settings Live Traffic	۵ ۵	BUI BUI BU Name TOI-700 d-Planet	Down Status Up			IP: 121.5.3.3, Port: 6 AA Configuration IP: 10.0.3.59, Port: 6		Network healt	

Sorting and Filtering

Business units can be sorted and filtered from the dashboard.

• To sort, click **Sort** to display the sorting options, then select your criteria and click **Ok**. The selected sort criteria are displayed at the top left of the list of business units.

Sort selection	Result				
5 0	Business units	× Clear all		17	Sort T Filters Add new
by Business Unit Name 🕼		X			
by Status	al norm	Stania	w ar M Configuration Execution IP: 10.0.3.105, Port:	IIA Alecselvar Mambel	
by # of IP Links	Tony	• Down	3 6066		
by # of IP Groups	BU Name		# of Subscribert: 4A Cantiguration		
by # of Subscribers	orphan	 Down 	5 IP: 10.0.3.59, Port: 6051		
by AA Configuration	Al Norm		War M Contgareon Subscribers IP:10.0.3.59, Port:	Ad Receiver Number	
by AA Receiver number	Local Ioniy	Down	12 6088		0
by Health Score	Bi Name				
	evi evi	 Down 	B IP: 10.0.3.59, Port: 6051		0
Reset		Postus Down	H of Rubectbers AA Configuration 11273 IP: null, Port: null		

To filter out some of the business units, click Filter, then enter your data into the desired • filtering fields. Click Apply Filters at the bottom right.



Viewing Individual Business Units

To view detailed information	tion about a specific	business unit, c	click the name of the	e business unit.

W			Sound Off	Server Tin Sun Jul	10 10:06:32	2 2022 GMT-4 1	ersion 0.00.01.0007	Jane Augustina
98	Dashboard			Acknowle	edge	CPU AU	tomation	
0	Kiosk mode			Şilone	0	• Ethernet • RF	Interference	1Ac. 0 1Up/1-
ዲ	Business Units	Pueiness units						
	IP Links	Business units					45	Add new
e a	Subscribers	A sul Name orphan	Status • Up			AA Configuration IP: 10.0.3.59, Port: 6_		
- Car - Car	line	eu Norme						

Each individual business unit has 17 tabs. (To view the tabs further to the right, click into any one of the other tabs and you will see an arrow icon at the right.)

	Search by Unit ID Search Sound Off Sat Mar 18 2023	licerveir IP Version 10:39:12 10.0.1 10.00.02.00	Noce Instance Primary AES Corp =
Dashboard	Anna and a state of the state o	and the second	
() Kiosk mode	Supervisory 11 1111 18 P307 00 C801 Subscriber 1111	owledge • CPU • Automation	
👌 🛛 Business Units	Fri Mar 17 09:15:50 2023 Elapsed I day ago	e Ethernet • RF Interferei	nce 0 4803 Active 0 Up / 6 Do
IP Links	< orphan		T Filters 😅 Refresh
Subscribers	Equite Deshibered Capacellate Subserilere	Mash ID Links Unhelds	Non-APP Units Immed/Supert Units
📋 Hybrids	Fouris Dashboard General Into Sabschuers	Mesit in this Hybrids	MOIT-AES OTHES IMPORT EXPORT OTHES \$
A Users	Modem Chip E307 00 C805 0524	Deceler(s) # of Dependents Date & 1 N/A 0 / 0 Thu Fe	hone bb 9 13:26:37 2023
Declare			/

Faults Tab

The Faults screen allows you to view faults based on product type. Use the toggle buttons at the bottom right to switch between **Subscribers & Hybrids** and **IP Links**.

Ŵ		역, Search by Unit. Search	Sound On	Server Time Sat Mar 2 2024 11:3	11:52	Server IP Versi 172.31.21.1 10.0	ion iNCC 10.03.00 Instance Primary	Aamin Justin M	itchell
111 () &	Dashboard Klosk mode Business Units	Fire 43 9999 18 E115 0B COC2 Wed Feb 21 13:47:26 2024 Ela	Subscriber D004 psed 10 days ago	Ack	nowledge Silence	• CPU • Au • Ethernet • RF	itomation Interference	Alerts Unacknowia. 5 Act 52094 A	Connectivity O Up / 10 D
di Li	IP Links	< orphan						T Filters	C Refresh
Ċ	Subscribers	Faults Dashboard	General info	Subscribers	Mesh	IP Links Hyb	orids Non-AES Ur	nits Import/Exp	ort Units 🔉
R	Users	Subscribers & Hybrids						Subscribers & Hy	brids IP Links
鬼	Dealers	Panel Interface	Event code P307 00 C815	Subscriber ID 5043	Dealer(s)	# of Dependents 0 / 0	Date & Time Fri Mar 1 04:45:05 202	24	
3°	Settings	户 户 NetCon							
ġ.	Live Traffic		P354 00 C915	FB01	N/A	0/0	Tue Dec 19 13:56:03 2	023	

Both types of faults include the following information:

- Event code: Event code associated with each fault (the event code triggers the fault)
- Subscriber ID:
- Dealer(s):
- # of Dependents: The number of dependent subscribers
- Date & Time: The occurrence of the fault

*	AES	9. Search by Unit. Gaarch	Sound On	Sarver Time Sat Mar 2 2024 11:3	1:52	Server P Viel 172.31.21.1. 10.0	00.03.00 WED Primary	Justin Mite	
18 () &	Dashboard Klosk mode Business Units	Fire 43 9999 18 E115 08 COC2 Wed Feb 21 13:47:26 2024 Elaj	Subscriber 19004 psed 10 days ago	Ack	nowledge	• CPU • Ai • Ethernet • Ri	utomation F Interference	sam Machana	Селивстику 0 Up / 10 D
d 0	IP Links	< orphan						T Filters	C Refresh
Ó	Subscribers Hybrids	Faults Dashboard	General info	Subscribers	Mesh	IP Links Hy	brids Non-AES Un	its Import/Export	
÷.	Users	Subscribers & Hybrids						Subscribers & Hybri	ds IP Links
-34	Dealers	Panel Interface	P307 00 C815	5043	N/A	e of Dependents	Pater & Time Fri Mar 1 04:45:05 202	4	
100 10	Settings	NetCon	P354 00 C915	Hydriada FBOI	Dealer(s) N/A	e al Depandants 0 / 0	Date & Time Tue Dec 19 13:56:03 20	223	
1201	Live framic								

Dashboard Tab

The **Dashboard** tab displays a color-coded line graph (i.e., the network pulse) that depicts network operation information, a network health score, and fault messages for subscribers.

- To switch between daily, monthly, or yearly data for the network pulse history, toggle between **10d**, **1mon**, and **1y**.
- Use the **Settings** dropdown to select the data to include in the network pulse grapic.
- The network health score ranges from 0–100 and is based on four event categories. For more details on the network health score, please refer to the AES website.
 - IP Link/hybrid subscriber fault
 - Subscriber fault
 - Subscriber late check-in
 - Subscriber Ack delay



General Info Tab

The **General info** tab displays information that was populated at the time the business unit was created, including the status of the business unit, the name of the business unit, any IP Links and groups associated with the business unit, and alarm automation (refer to <u>Alarm Automation</u>)

In addition, the Geography Page Center Location Coordinates setting (at the bottom right in the image below) allows you to specify where each BU is geographically located. For example, the coordinates for the BU shown below (QA BU1) correspond to those same coordinates on a map.

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

AES	Second by Units Second On Second On Second On Second On	172.31.21.1. 10.00.03.00. Primary Of Admin
Dashboard Klosk mode Business Linits	Fire 43 9999 18 E115 08 COC2 Subscriber D004 Wed Feb 21 13:47:26 2024 Elopsed 10 days ago	CPU = Automation Airs Inconsent Conversity Ethernet = RF Interference 5 Act_ 53791 Act_ 1 Up / 9 D_
 IP Links Subscribers Hybrids 	C orphan Faults Dashboard General Infa Subscribers Mesh	Delates Joit
Dealers	General Stotui + Down	Alarm automation settings TCP Server Parameters
Live Traffic		TCP Server *
 Ught mode Hide menu 	ti / James - orphan	old Alarm Delivery Deliver all old alarms for this Business Unit. (detault)
Software Receiver 35PB		Geography Page Center Location Coordinates

Subscribers Tab

The Subscribers tab displays a list of all subscribers associated with a business unit.

Subscribers can be filtered based on signal activity: top talkers, top repeaters, late check-ins, frequent check-ins, service log, and others (see Table 1, <u>Network Analysis Tools</u> for more details).

The **Subscribers** tab displays missed check-in alerts, which are notifications of faults on the subscribers. If subscribers don't check in at the set interval time, faults are triggered. Refer to the Radio Check-in Interval setting in the subscriber's <u>Settings Tab</u> to view the timing settings that impact faults.

W	AES	Sound Off	erver Time Si ue Nov 8 18:21:32 2022 GMT-5 10	erver IP Version INCC Instance 0.0.1.61 10.00.01.0008 Primary	AES-CORP							
	Dashboard											
0	Kiosk mode	Supervisory 62 5055 18 R307 00 C800 Subscribe	r 5055 Acknowledge	CPU • Automation								
<u>"Å</u> "	Business Units	Tue Nov 8 10:09:03 2022 GMT-5 08:12:28		Ethernet 🧧 RF Interference	0 2923 Active 0 Up / 4 Do							
đ	IP Links											
白	Subscribers											
山	Hybrids	Faults Dashboard General info	Subscribers Mesh IP	Links Hybrids Non-AES Un	its Import/Export Units >							
я	Users	All Subscribers	All Top Talkers	Top Repeaters Late Check-ins (RF)	Frequent Check-ins Service Log							
20	Settings	Sub ID Sub Type Status	t check-in Tue Nov 1 08:48:59 2022 GMT-4	Missed Check-in								
Ś	Live Traffic	Sub ID Sub Type Status	Last check-in									
m	Geography	1002 Burg • Normal	Tue Nov 1 08:49:25 2022 GMT-4	Missed Check-in								
0	Help	Sub ID Sub Type Status 5055 Fire • Normal	Last check-in Tue Nov 1 08:52:30 2022 GMT-4	Missad Chack-m								
.Q.	Light mode	Sub ID Sub Type Status 5057 Burg Normal	Last check-in Tue Nov 8 09:20:03 2022 GMT-5									
C	Hide menu											

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

*		. Search by Units. Search Sound On	Server Time Sat Mar 2 2024 19:30:	Sarver IP 34 172.31.21.1	Version 	INCC Instance Primary		lugustina	*
13日 ① 人	Dashboard Kiosk mode Business Units	Fire 43 9999 18 E115 0B C0C2 Subscriber Wed Feb 21 13:47:26 2024 Elapsed 10 day	rD004 Acknow s ago Sila	wledge • CPU nce • Ethern	Automatio et RF Interfere	n Ince	Alerts Unacknow		uvity 10 D
đ	IP Links	< orphan							
E	Subscribers	Faulta Dathbarrd Conord		Moch ID Links	Hubride	Non-AEC III	nite Import/E	voort Unite	
Ó	Hybrids	Faults Dashbourd Genera	subscribers	Mesti IF LITIKS	Hybrids	NOT-AES U	nits importation	ipon onns	<i>,</i>
8	Users	Subscribers All Tokers Rep	rop Late Check-ins leaters (RF)	Frequent Check- ins	Service Log	Recently Added	Non- Recommended	Inactive	NCT
Pa	Dealers	Sub ID Sub Type Status							
H.	Settings	5043 Fire Offin	ormal N/A						

To access a specific subscriber, click the subscriber from the list of subscribers. Subscribers are described in detail on page 68 (<u>Subscribers</u>).

AES	Sound Diff Sun Nov 13 11:08:06 2022 GMT-5 10.0.161 10.00.010008 Primary Ricovyn Wrighe
Dashboard Klosk mode <u>A</u> <u>Husiness Units</u> IP Links	Supervisory I 62 5055 18 8307 00 C800 Subscriber 5055 4.ctrowlodge • CPU • Automation • Mare • Unconnected to • CPU • Automation • CPU • CPU • Automation • CPU • Automation • CPU • Automation • CPU • CPU • Automation • CPU • CPU • Automation • CPU • Automation • CPU • Automation • CPU • Automation • CPU • CPU • Automation • CPU • Automation • CPU • Automation • CPU • Automation • CPU • CPU • CPU • CPU •
Subscribers Hybrids Users Settings	Poults Dashboard Generat info Subsetibers Mesh IP Links Hybrids Non-ASS Units Import/Export Units IP Link / Hybrid Load Live Traf y All Subactibors All Top Tolkers Top Tolkers Top Tolkers Isle Check-ins (87) Prequent Check-ins Service Ling Sist Top Sist Top Service Isle Check-ins N/A Service Ling
Covernment Geography Help Light mode Hide menu	Image: State of the state
	Puines Subscribers Faults General Settings Messages Live Traffic Zone Configuration Event History Hybrids Veers

Table 1. N	letwork Analysis Tools
Top Talkers	Ideally, all subscribers in the network should generate roughly equal numbers of RF packets. Excess RF traffic from a single subscriber may reduce network efficiency by consuming airtime.
	To reduce excess activity on a subscriber:
	Ensure the subscriber is installed properly.
	Ensure the subscriber is free of faults.

Table 1. N	letwork Analysis Tools
	 Ensure the alarm panel connected to the subscriber is configured and connected properly.
	 Ensure the alarm panel connected to the subscriber is free of faults.
	 Ensure all zone, power, and communication wires are secured properly.
Top Repeaters	Repeating the packets of other subscribers is a normal function of the mesh network; however, excessive packet forwarding by a single subscriber may reduce network efficiency and cause delays, although unlikely. To improve efficiency:
	 Install an IP Link or a hybrid near any subscriber that repeats packets for many dependent subscribers.
	 Consider changing the antenna height or replacing with a higher or lower gain antenna.
Late Check-ins (RF)	Late Check-ins displays the list of subscribers currently late checking in, the length of time each is late, and the last time it checked in.
	Each subscriber normally transmits check-in messages at regular, pre-set intervals. If the INCC does not receive a check-in message at the expected time, there might be a problem with the subscriber; alternatively, there might be a problem with network performance, which may be explained by an environmental factor such as weather conditions. Once subscribers transmit three check-ins on schedule, they are removed from the Late Check-ins list.
	To improve network performance:
	Ensure the subscriber is installed properly.
	Ensure the subscriber is free of faults.
	 Ensure the subscriber is connected to the network by watching the LEDs on the subscriber PCB.
	 Ensure the <u>subscriber settings</u> on page 75 are up to date.
	 Consider changing the antenna height or replacing with a higher or lower gain antenna.
	Consider installing an IP Link to improve network performance.
Frequent Check-ins	Frequent Check-ins displays the list of subscribers currently transmitting frequent check-ins and the number of check-ins per the recommended 24-hour period.

Table 1. N	etwork Analysis Tools
	Each subscriber normally transmits check-in messages at regular, pre-set intervals. The recommended number of check-ins per 24 hours is one; this meets the requirements of UL 864 for Commercial Fire and is appropriate for virtually all applications. A higher number of check-ins per 24-hour period can unnecessarily increase RF traffic on the network. AES recommends setting the subscriber Check-in interval to 23:45. A shorter time interval increase RF traffic in the network.
	To improve network performance:
	 Ensure that the subscriber is installed properly.
	Ensure that no subscribers have mis-configured check-in intervals.
Service Log	Subscribers may occasionally require service; the service log identifies all subscribers that are currently in need of service.
Recently Added	Subscribers that have been added to the network within the last 10 days are displayed in the Recently Added list.
	Foults Dashboard General info Subscribers Mesh IP Links Hybrids Non-AES Units Import/Export Units > I Recently Added All Top Top Top Late Check- Ins Prequent Check- Ins Service Recently Added Nan- Ecommended Inactive NcT Mon / State Men / India Inactive Inactive Inactive NcT Mon / State Men / India Inactive Inactive NcT Mon / State Men / India Inactive NcT Material Men / India India India India Material Men / India India Ind
Non- Recommended	Subscribers that fall outside the default TTL settings (referenced in the 7707 User Manual) are displayed in this list, triggering a notification so that customers are aware that these subscribers could potentially be harming the network.
Inactive	Subscribers are considered inactive if more than 10 days have lapsed since the subscriber's last check-in. This page is helpful for troubleshooting changes that have occurred on the network. These changes also appear on the Geography page, which can be used as confirmation.
NCT	NCT (an abbreviation for Network Connectivity Tool) is a diagnostic tool that lets you check whether a radio has two active paths at a particular site. This tool is used for setting up subscribers only. Customers use NCT when checking sites for NetCon 5. It does this by
	creating traffic by ID. If this option is enabled, it will block the ID from impacting health scores or run jobs. For example, late to check reports.

AND I		Sound	off Sun	r Time Jan 8 10:44:50 2023	Sorver IP 10.0.1.61	Version 10.00.01.0011	INCC Instance Primary	•	^{Admin} Admin Admin	*
	Dashboard Kiosk mode	Supervisory Subscriber C Tue Jan 3 10:	11 CC03 18 E307 (CC03 :48:26 2023 Elap	00 C801 sed 5 days ago	Acknowledge Silence	CPU Ethernet	Automation RF Interference	Alorts 2 A	Unacknowl 244206	Connecti_ 0 Up /
а. С	IP Links	< orpha	n							
ē ċ	Subscribers Hybrids	Faults	Dashboard	General info	Subscribers	Mesh	IP Links Hybi	rids Ack-De	Non-AES Units	S >
名 殆	Users Dealers						1			
Z	Settings									

Mesh Tab

- Ack-Delay: When any subscriber transmits an RF packet, the subscriber recipient of the
 packet returns a message to the sender acknowledging receipt of the packet. An Ack
 Delay is triggered if a subscriber does not receive an acknowledgement message of a
 transmitted signal within the configured Communication Timeout Delay period. Ack
 Delays could indicate a service requirement for a subscriber or may be explained by
 some environmental factor such as the weather. It may be advisable to locate or install
 additional IP links near subscribers that remain on the list for extended periods.
- Hops: When a subscriber transmits an RF packet, that packet travels through the mesh
 network to an IP Link or a hybrid subscriber before reaching a MultiNet receiver. If the IP
 Link is within direct reach, the subscriber sends the packet to the IP Link; otherwise, it
 sends the packet to another subscriber along a route leading to the IP Link.

Each step in the route from subscriber to IP Link or hybrid subscriber is called a hop. As network conditions evolve, the route, and consequently the number of hops from a given subscriber to an IP Link, can change.

 Net-Con: Net-Con is an abbreviation for Network Connectivity and is a rating of the number of radio frequency (RF) paths from a subscriber to other subscribers installed in the mesh network. The mesh refers to all the subscriber units on a network of the same frequency and cipher code. Only fire subscribers report their Net-Con statuses, as either high or low, in messages sent to the MultiNet/INCC receiver.

IP Links Tab

The IP Links tab displays a list of all IP Links associated with a subscriber. Each IP Link displays general information:

- IP Link ID
- Model
- Revision

- Dealer name
- Address
- Last connection time

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

To expand the details for an IP Link, click the dropdown at the right. The additional information includes:

- Status
- The number of current faults
- Supervision interval
- Dependent subscribers in the last 24 hours
- Dependent subscribers in the last 10 days
- PP packet count
- State/province
- ZIP/postal code
- Latitude
- Longitude
- Antenna

To view further information about the IP Link, click the name of the IP Link (see Name below).



This takes you to the **IP Links** page, which is accessible from the navigation menu. See <u>IP Links</u> to view this information.

W	AES	Sound Off Sound	ight
88 ©	Dashboard Kiosk mode	Supervisory 62 5055 18 R307 00 C800 Subscriber 5055 Actnowledge • CPU • Automation Alerts Lincolnowledge Fri Nov 11 04:22:13 2022 GMT-5 Elapsed 2 days ago Silence • Ethernet • RF Interference 30 Acti 16708 Acti	Connectivity 0 Up / 4 Do
ö	IP Links Subscribers	C IP Link ID 0077 Faults General	C Refresh
0 2 2	Hybrids Users Settings	Event code # of Dependents Date & Trine E354 00 C906 1746 / 0 Sat Nov 12 2kl4:18 2022 GMT-5	Restore

Hybrids

A hybrid fire subscriber offers dual functionality, combining full data module with IP Link. It also helps improve network health and makes it easy to expand and start a new network. See Hybrids section for detailed information on INCC configurations.



Non_AES Units

A non-AES unit is a unit that is not on the AES network. Adding your non-AES equipment gives you the ability to track the equipment from the **Geography** tab.



To add a non-AES piece of equipment, click Add new.

*	AES	Sound Off Sativer Time Sat Nov 19 21:34-20 2022	sterver # Version MCC Instance Tech support
盟 ①	Dashboard Kiosk mode	Supervisory 19 5056 18 P370 00 C009 Subscriber 5056 Acknowledge Fri Nov 18 07:12:33 2022 Elapsed 1 day ago Silence	CPU Automation Alec. Unactively. Connectivity Ethernet RF Interference O 11830 Acti. OUp / 1 Do
4	Business Units	< orphan	Add new
自白	Subscribers Hybrids	Faults Dashboard General Info Subscribers Mesh	n IP Links Hybrids Non-AES Units Import/Export U >
R	Users		

The information on this screen enables you to track where this unit is located.

Note: A unit ID can consist of any character type (e.g., number, alpha, free text).

Sound Off Sat Nov 19 21:45:10 2022	Server IP Version INCC Instance Tech support 10.0.1.61 10.00.01.0008 Primary Jane Augustina
Supervisory 19 5055 18 P307 00 C805 Subscriber 5055 Acknowledge	CPU Automation Aler. Unacknowled. Connectivity
Fri Nov 18 07:12:30 2022 Elapsed 1 day ago	• Ethernet • RF Interference 0 11886 Acti 0 Up / 1 Do
< Add Non-AES Unit	Save
Non-AES Unit Details	
Unit ID	
Unit ID * × Unit ID is required	
Other Details	
City X State/Province X	
Latitude X Longitude X	
Elevation (m.) X Antenna X	
Notes	
Notes(up to 250 characters)	
	Sound Off Supervisiony 119 5055 18 P307 00 C805 [Subscriber 5055 Acknowledge Fit Nov 18 07:12:30 2022 1 Elapsed 1 day ago Silence Add Non-AES Unit Silence Unit ID V Unit ID X Other Details X City State/Province ZiP/Postal code Country Latitude Longitude X Antenna Notes Notes(up to 250 characters)

Import/Export Units

To import addresses for units:

- 1. Click **Download XLS template** to download the Address File template.
- 2. Populate columns A through N of the template. Save the file.
- 3. Export the Excel file to CSV.
- 4. Upload the CSV file by clicking Select CSV file.

Search by Unit 10 5 Tourns on Sat Mar 9 2024 19:16:49	10.0.741_ 10.00.03.00_ Primary Stoppin W
Supervisory F) 4321 IS E305 00 C901 Subscriber 4321	CPU Automation
Thu Mar 7 13:38:15 2024 Elapsed 2 days ago	Ethernet • RF Interference 28 ActL 1248 Active 1 Up / 2 Do_
< orphan	
Foulte Doshbolard General Info Subscribers Mesh IP	
Import Addresses for AES Units	Export Addresses for AES Units
	Select Unit Type
Download XLS template Open QS template	Subscriber D IP Link D Hybrid
Address File Template	Export Address File
Salars dSV file to upload	Export CS9 No
Select CSV file	
Import Addresses for Non-AES Units	Export Addresses for Non-AES Units
	Export Address File
Download XLS template Open QS template	Export CSV file
Address File Template	
second days like to updown	
Select CSV file	
	Search by Unit 2 Sear

To export addresses for units:

- 1. Check each box next to the unit types you would like to export.
- 2. Click the **Export CSV file** button to download the file. The Excel file consists of the data that was selected:

Export Addresses for Select Unit Type Subscriber I IP Link	port Addresses for Units lect Unit Type Subscriber 📄 IP Link 📄 Non-AES Unit 🥃 Hybrid														
Export Address File		А	В	с	D	E	F	G	н	I	J	к	L	м	N
Export CSV file	1	Unit ID,Un	it Type,Add	dress 1,Ad	dress 2,Cit	y,State/Pr	ovince,Zip	/Postal Co	de,Countr	,Dealer,Cu	ustomer,La	titude,Lon	gitude,Ele	vation (ft)	Antenna
	2	1388	Subscriber												
	3	5022	Subscriber							Α					
	4	5023	Subscriber												
	5	BA09	Subscriber												
	6	5024	Hybrid												

The Import Unit's Notification settings allows you to pull the options that are available on the NMS and bring them into the INCC.

File	Download XLS template	
Select CSV file to upload		
Select CSV file		
Import Recipients File	Download XLS template	

Stats

The Stats tab displays the total signals received based on filter selections:

- 1. To view the total signals received based on time period, select **24 hrs**., **15 days**, or **30 days**.
- 2. To limit the results to IP Links or hybrids, click **Settings** and check the appropriate option (IP Links or Hybrids).
- 3. To limit the results to specific IP Link(s), enter each IP Link ID into the search box.

The legend below the graph indicates which signals are being received by the IP Links and hybrids.



Subscriber activity can also be displayed based on different periods: 30 days, 1 year, and 3 years. Click **Settings** to limit the results to IP Links or hybrids.



IP Link/Hybrid Load

The **IP Link/Hybrid Load** view displays a list of IP Links at the left. Analytical details include the number of packets received by each IP Link and the distribution of packets among all the IP Links on the network. Ideally, all IP Links in the network should handle roughly equal volumes of RF traffic. This generalization does not apply when the antennas of two IP Links are deliberately placed within RF range of each other such as at a Central Monitoring Station.

	🤍 Search by Unit ID	<u>*</u> 1	Search	Sound On	Server Time Sun Mar 3 2024 11:	35:50	Server IP V 172.31.21.125 1	ursion // 0.00.03.0001 P	rimary	Admin Jane August	ina
Dashboard											
🕕 Klosk mode	Fire 43 9999 18 E11	5 0B C0C2 Subs	criber D004		Acknowledge	• CPU	Automation				
్లన్లి Business Units	Wed Feb 21 13:47:26	3 2024 Elapsed 1	l days ago			• Ethernet	RF Interference			8 Active 0 Up	
D IP Links	< BU3 - TR										
Subscribers											
Hybrids		iboard Ge	neral info	Subscribers Mest	n IP Links	Hybrids	Non-AES Units	Import/Expo	rt Units Stats	IP Link / H	ybrid Lot
Q Users	IP Link / Hybrid Lo	oad ())									
Dealers		/ypei	Dealer(s)	Address /	Address 2		city	21P/Postal Code	Country	Packets count	Distribution
Settings		IP LINK	N/A	285 Newbury St	N/A		Peddody	MA	United States	368945	20.90%
Julie Traffic		Type IP Link	Deoler(s) N/A	Address 1 500 Broadway	Address 2 N/A		chy Chelsea	JIP/Postal Cade	Country United States	Packets count 347(6)	Distribution 47.95%
Geography										Packets	
·⑦ Help		Hybrid		11 Newbury ST	N/A		Danvers	01923	United States	7869	1.09%
O Light mode	E 0990									Packets	Dist/ibution
Hide menu		Hybrid	N/A	N/A	N/A		N/A	N/A	N/A	N/A	0.00%

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

*	AES				Sound Off	Sun Jul 10 10:50:27 2022 GMT-4	10.00.01.0007	nusser Augustina
10	Dashboard Klosk mode				Anne a	CPU Automotion Ethernet RF Interforence		Lup/IDown
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	IP Links Subscribers	< orphan	Icon General Into	Subscribers			Stats Live Indillo	KF Settings 5.
ЪĘ В	Hyti Color	- 0 в_снки	7095	Same and Service Supplaars	Sam Jul 10 10:50:23 2022 GMT-	4		
26	Settings	D_CHKIN	Total 7094	orphon	Sun Jul 10 10:50:22 2022 GMT-			
P	Live Traffic	© p_chkin	7054	erchan	San Jul 10 10:50:20 2022 GMT-			
0	ныр				000 5 700 Sun Jul 10 10:50:19 2022 GMT-4			
9	Light mode	∆ р_снки	100000000 17094	orphism	Sun Jul 10 10:5018 2022 GMT-4			
Œ	Hide menu	D CHUN						

Live Traffic

The **Live Traffic** tab provides a live visual representation of the traffic load across subscriber links.

Alarm indications (colors and icons) are shown below:

Color	lcon	Alarm/Event			
Red	S	Fire alarm			
Orange	⊕	Burglary alarm			
Green	\land	Restoral event from devices			
Grey	(j	All other cases			

RF Settings

Subscribers can be turned on or off based on their RF status. Subscribers with no RF status can be changed via the checkboxes at the right.

4	AES		Sound Off Sun Jul 10 10:51:52 2022 OM	17-4 10.00.01.0007 (1) Long Augustina
- 98	Dashboard			
0	Klosk mode		+ Ethernet + Rf Interferen	
.4	Business Lints			
dk		< orphan		C Refresh Since
白	Subscribers			iters Uwa Traffic AF Settings Thi Settings
0	Hybrids			
-8				
3.	Settings			
÷.	Live Traffic		1	Turn Mandolat dit
.m	deography			Eelect all
(D)	Help			D 2005 D 2009 D 2009
D	Light mode			□ 7000 □ CH03 □ CFD3
9	Hide menu	S.	Y.	

TTL Settings

Subscribers include the "Time-To-Live" (TTL) function. Like the Internet, AES IntelliNet uses a packet-based technology. The Time-to-Live concept in the Internet is based on the fact that all data has a useful life.



The benefits of TTL are best exhibited when the IP-Link goes off-line due to a lightning hit or some other unlikely, catastrophic event. While the IP-Link is off-line, messages traveling through the system are stored in the individual subscriber units for later delivery. Under the default TTL settings, unimportant test timer messages (typically 95+% of the traffic) are deleted from the subscriber unit memory after 30 minutes of being delayed in the network. Thus, the system will not have to handle the message when the IP-Link Receiver comes back on-line. All other messages, such as alarm, etc., speed their way to the IP-Link as they normally do.

Important: UL864 requires a setting of 0 for Alarm, Trouble, and Restoral.

	Sound Off	Server Time Version Frich support Sun Jul 10 1k14:11 2022 GMT-4 10.00.01.0007 The Augustina
Dashboard Kiosk mode C Business Units	Acknowledge No Data Silance	CPU Automation Alerts Unactrowninkters Connectivity Ethernet RF Interference IActive 0 Up/IDown
IP Links	Corphan General Info Subscribers IP Links Hybrids Non-AES Units	Save
Users Users Settings	Subscribers Selection List 🖉	TTL of selected Subscribers <i>G</i> TTL Time (minutes): Ttl Greact-in TTl Status TTL Alarm
 Geography Help Light mode 	C Select all 5156 7093 7094 7095 7096 7099 7100 CB13 CFD3	10 × 10 × 180 × 10-1440 min 10-1440 min 10-1440 min 10-1440 min 10-1440 min TR. Freudelik TR: Instance TR: Instance TR: Instance 10 180 × 180 × 180 × 10-1440 min 10-1440 min 10-1440 min 10-1440 min
Hide menu		Tht Specesb 10 10-440 min Time range: from 10 00.00

The default Time-to-Live can be customized and assigned to specific subscriber(s). Defaults are shown in the TTL Time box at the right. To customize these settings, enter new values, then select the subscriber(s) you want to update from the subscribers list at the left. Once these settings have been saved, all subscribers will use the new time.

Notes

• TTL Check-in: Note that even when a check-in packet is deleted due to a delay, the objective of that message has already served its purpose: the late or missing signal should have been flagged at the central station (see Automatic Test Supervision section).

- Under the default (factory) settings, only test timer messages are subject to the TTL function. If you want TTL for other message types, YOU must activate it when you program the subscriber unit.
- The TTL time is included in packets generated by TTL capable subscribers. This feature is available in subscribers with firmware Version 2.1 and later which was first released in late 2000.
- The timeout function works when a packet is stored for forwarding in any subscriber with TTL capability, which will decrement the TTL time for the packet it is storing. When TTL time has expired, the packet is aborted. This function does not work with non-TTL (pre-Version 2.1) subscribers. The TTL feature works best when the majority of subscribers, or the subscribers that are most heavily used, have the feature in the firmware. Call your AES representative for upgrade information.
- Default time for Check-In Packets is 00 hours, 30 minutes. DO NOT enter a value greater than 24 hours 00 minutes. Entering a time of 00 hours and 00 minutes deactivates the time-to-live function for that packet type. The shortest allowed TTL time is 00 hours, 10 minutes. TTL can also be set for other packet types:
 - TTL Alarm
 - TTL Trouble
 - TTL Restoral
 - TTL IntelliTap
 - TTL Specials
- The default time for the five packet types above is 00, i.e., the time-to-live function is deactivated for these packets. Entering anything greater than 00 hours and 10 minutes enables the Time-to-Live function. Enter the data for each type, then click **Save**.
- To confirm the data, press **<Alt>+<N>** to query the subscriber for Packet Life settings. Once the TTL parameters packet has been received back, check this screen again.

NetCon Settings

NetCon is a measurement calculated by a subscriber to determine the confidence level that transmissions will reach an IP Link. Only fire subscribers report NetCon status, as either high or low, in messages sent to the INCC. To modify the NetCon data, click the icon at the bottom right (see image below).

	NES IPOTRATION	Search, Sound Off Search, Sound Off
	ishboard	
🕕 Kio	osk mode	Supervisory 11 111 18 P307 00 C801 Subscriber 1111 Acknowledge • CPU • Automation Me. Unicidimenter Connectivity
"Å, Bus	siness Units	Fri Mar 17 09:15:50 2023 Elapsed 1 day ago Silience Ethernet RF Interference 0 4874 Act 0 Up / 5 D
d) IPL	Links	< orphan
🖻 Sut	ibscribers	
🗋 ну	/brids	c vort/Export Units IP Link / Hybrid Load Live Traffic RF Settings TTL Settings NetCon Settings Notifications
R Use	ers	Subscriber NetCon Overview
B Dec	alers	ID Model Metricon Metricon Failure threshold T
2 Set	ottings	

From here, you can enable or disable NetCon on a subscriber and make other adjustments.

4	AES		Sound Off Sat				·	
12 A	Dashboard Niask mode Quijiness Units			Acknowledge stillence				
đ.								
			Modify 5043 NetCo	on Data				NetiCon Settin
R			Business Lint					
			Model 7707					
2	Settings		NetCon Supervis	ion enabled				
			The second second second					
\overline{D}_{0}			Method 1					
13								
10.								
(tec				Cancel	Modify			

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

Subscribers with a NetCon value of 6 or higher are displayed in the **Faults** tab of the business unit.

	AES		× Search	Sound Off	Server Time Sat Apr 6 2024	111:46:45	Server IP Version 172.31.21.125 10.00.03.0002	INCC lostance Primary	Admin Robyn W	
88 0	Dashboard									
0	Kiosk mode	Fire 19 9999 18 E115 50 COCE	Subscriber D004		Acknow	nedge CPU	Automation			
<u>م</u> گي 5		Thu Apr 4 10:35:59 2024 Elaj	osed 2 days ago		Silen	ice Ethe	rnet 🧯 RF Interference			
đ I	P Links	< orphan							T Filters	C Refresh
ē s	Subscribers									
0.	Hybrids	Faults Dashboard	General info	Subscribers	Mesh	IP Links Hyb	irids Non-AES Units	Import/Export Uni		IP Link >
. <i>R</i> 1	Jsers	Subscribers & Hybrids							Subscribers & Hyb	rids IP Links
Ag. 1	Dealers	NetCon	Event code P354 00 C915	Subscriber ID 5043	Dealer(s) N/A	# of Dependents 0 / 0	Date & Time Sat Apr 6 07:15:45 2024			
Sp S	Settings	B RF Comm	Event code	Subscriber ID	Dealer(s)	# of Dependents	Date & Time			
ைப	ive Traffic		P356 00 C903	5043	N/A	0/0	Sat Apr 6 07:15:45 2024			
	Geography	🖹 Modem Chip	E307 00 C805		N/A	# of Dependents 0 / 0	Date & Time Fri Apr 5 07:35:22 2024			
() I	Help	Timing	Event code P307 00 C806		Dealer(s) N/A	# of Dependents 0 / 0	Date & Time Thu Apr 4 08:32:35 2024			
o i	ight mode	E IP Comm	Event code E356 00 C904		Deoter(s) N/A	# at Dependents 0 / 0	Date & Time Thu Apr 4 08:15:47 2024			
	Hide menu									

Note: When a fire subscriber reports low NetCon, it's important to ensure that the other subscribers communicating with it are operating normally and are free of faults. In may be advisable to relocate the subscriber or to relocate or change its antenna.

Bad Packets

The Bad Packets tab displays events that involve the rejection of a bad packet (e.g., bad check stub, corrupt data, non-deciphering data).

1		C Search by Unit ID X Search Sound On Sat Variation Search Sound On Sat Variation Search Search Sound On Sat Variation Search Se	Server IP Version MCC 172.31.21.1. 10.00.03.00. Primary Jane Augustina
88	Dashboard		
Ð	Kiosk mode	Fire 43 9999 18 E115 0B C0C2 Subscriber D004	CPU Automation Alerts Unacknowledg_ Connectivity
,ð.,	Business Units	Wed Feb 21 13:47:26 2024 Elapsed 17 days ago	Ethernet • RF Interference 5 Acti 45414 Acti 1 Up / 9 Do
茚	IP Links	< orphan	
Ē	Subscribers		
ġ	Hybrids	 Vits stats IP LINK / Hybrid Load Live Traffic RF Settings 	NetCon Settings Baa Packets Notifications Units Notifications
8	Users	Bad Packets	
P _B	Dealers		
20	Settings		

Notifications

The Notification function enables users to monitor their AES-*IntelliNet* network from anywhere at any time. Users can configure automatic alerts based on a change to the network health score, a fault with any subscriber or IP links, or when traffic drops on IP links.

Separate dropdown menus enable users to easily create the list of personnel to be notified by both SMS and email, define the fault criteria to be reported, and create associations between the alert triggers and personnel to optimize response.

-		Sound Off Sun Jan 15 09:39:01 2023 10.0.01.59 10.00.01.0014 Primary Jone Augustino	
88 (C)	Dashboard Kiosk mode	Supervisory Cl 5056 18 P370 00 C009 Subscriber 5056 Acknowledge • CPU • Automation Amr. Undername Commentary Thu Dec 29 18:33:12 2022 Elapsed 17 days ago Silence • Ethernet • RF Interference 0 265973 Act. 0 Up / 10 Up	
众 前	IP Links	< orphan	
自由	Subscribers Hybrids	Hybrids Non-AFS Units Import/Export Units IP Link / Hybrid Load Live Traffic RF Settings TTI Settings Notificatio	gers
-名 -元	Users Dealers	1	

To create a list of Recipients:

1. Click the **Recipients** button, then click **Add New**.

4	AES	Sound Off Sun Jan 15 10:06:36 2023 10:01:59 10:00:01:04 Primary Off Algustina
98 D	Dashboard Kiosk mode	Supervisory C1 5055 18 P370 00 C009 Subscriber 5056 Acknowledge • CPU • Automation Automation
<u>لم</u> ات	Business Units IP Links	< orphan
南	Subscribers	Faults Dashboard General info Subscribers Mesh IP Links Hybrids Non-AES Units Import/Export Units IP 5
ġ A	Hybrids Users	Recipients Add New Recipients Triggers

2. Enter the recipient's name and email address, then enter a description.

W	AES		Sound Dff Sun Ja	n 15 10:08:27 2023	Server in Vierson indicina 10.0.1.59 10.00.01.0014 Prima	ny Jane Augustina
Ξ£	Dashboard	Supervisory Cl 5056 18 F	370 00 C009 Subscriber 5056	Acknowledge	CPU Automation	
- CD	Klosk mode	Thu Dec 29 18:33:12 2022	Elapsed 17 days ago	Slience	• Ethernet • RF Interference	
*	Business Units					
œ	IP Links	< Recipient cred	ite			Create
直	Subscribers					
۵	Hybrids	General			Additional details	
18	Users	and and			Description	
1	Dealers	First Nome *	< Last Name *		Up to 200 choracters	
30	Settings	Email <u>*</u>	Phone Number	<u></u>	100	
<u>A</u>	Live Traffic				Status	
(11)	Geography	Construction of the local distribution of th		1	Disable	

To define the fault criteria to be reported:

- 1. Click the **Triggers** button, then click **Add New**.
- 2. Click the **Notify when** dropdown at the right, then select a trigger from the list.

A	AES	sound Off Sun Jan 15 10:32:33 2023	Lanver et Nation Victor Instance et al. 10.00.01.001 Primary Joine Augustina
	Dashboard Klosk mode Business Units	Supervisory Ci 5056 8 P370 00 C008 Subscriber 5056 Activewiedge Thu Dec 29 18:3312 2022 Elapsed 17 days ago	CPU Automation Mec. Unacrossedge Consumery Ethernet = RF Interference 0 2854471 Actil = 0 Up / 10 Do
	IP Links Subscribers	< Trigger create	Create
	Hybrids	General	Trigger settings
	Dealers	Warne	
	Settings Live Traffic		Subscriber Fvent
	Geography		IP/Hybrid Traffic

Once a trigger has been selected, the **Name** and **Description** fields on the left side of the screen automatically become populated.

*	AES	Surver Time Sun Jon 15 12:51:58 2023	Miller III Million IIIC Instance III funt apport 10.0.159 10.00.01.0014 Primary inter Augustina
15 6	Dashboard Klosk mode	Supervisory I CI 5056 IB 9370 00 C009 Subscriber 5056 Attroubledge Thu Dec 26 IB:3312 2022 (Elapsed 1/ days ago Silance	CPU + Automation // Incommence: Connectent Fithermat + RF Interference 0 284645 Act. 0 Up / 10 Do.
A (1)	Business Units IP Links	< Trigger create	Create
1 8	Hybrids Users	General	Trigger settings
10 10	Dealers Settings	Subscriber remote A Subscriber	Subscriber Event
660 100	Live Traffic Geography		

3. From the **type** dropdown, select the fault criteria to be reported.

W	AES	Sound Dff Sun Jan 15 10:51:58 2023	Lavier III Vervion RECEIVentatice. S fact support 10.01.059 10.00.01.0014 Primary John Augustina
10 0 8	Dashboard Klosk mode Business Units	Supervisory I CI 5056 18 P370 00 C009 Subscriber 5056 Actificateogy Thu Dec 29 18:3312 2022 Elapsed 17 days ago Silence	CPU + Automation Allow Understanding Comparison Ethernet + RF Interference 0 284648 Act. 0 Up / 10 Doc
四 四	IP Links Subscribers	< Trigger create	Create
ŵ	Hybrids	General	Trigger settings
.R	Users	superiber	Subscriber Fuent
be:	Dealers		
3	Settings		of type ×
(Ko	Live Traffic		assus in receptore
m	Geography		

Important: Only the **Subscriber Event** and **IP Link Event** triggers have an additional dropdown. The triggers for **Network Health Score** and **IP/Hybrid Traffic** do not rely on data associated with faults.



4. When finished, click **Create**.

Triggers are listed on the Triggers page.

*	AES	Server Time Sainye # Version witch Instance Statistics
81 ()	Dashboard Kiosk mode	Supervisory C1 5056 18 P370 00 C009 Subscriber 5056 Acknowledge CPU Automation Mile Undeficienting Connectivity Thu Dec 29 18:3312 2022 Elopsed 17 days ago Silence Ethernet RF Interference 0 284615 Acti. 0 Up / 10 Do
4	Business Units IP Links Subscribers	< orphan
0 0 0	Hybrids Users	Faults Dashboard General Into subscribers Mesh IP Links Hybrids Non-AES Units Import/Export Units IP 5
94 26	Dealers	None Descriptor Remote Annunciator* > Descriptor Addcostent Ad

5. To edit or delete a trigger, click the trigger. The **Edit** and **Delete** butons are at the top right.

W	AES	Server Final Sound Off. Sun Jon 15 11:04:51 2023	Service # Vanisatio ACC Institution Service # Vanisation ACC Institution U.O.1.59 10.00.01.0014 Primary Joine Aug	
四 ① ▲	Dashboard Klosk mode Business Units	Supervisory C1 5056 18 P370 00 C009 Subscriber 5088 Astnowtedge Thu Dec 29 18:33:12 2022 Elapsed 17 days ago slience	CPU Automotion Alto CPU CPU Constructed Constructed CPU Constructed CPU C	
	IP Links Subscribers	< Subscriber "Remote Annunciator" > 0	Edit	Delète
D A	Hybrids Users	General Nome Subscriber "Remate Annunciator" > 0	Trigger settings	
an - 35	Dealers Settings	épisetelen A Subscriber "Remate Annunciatar" Event has occurred an more than Q unit.	of new Remote Annunciator	
т Ш	Live Traffic Geography		0	

IP Links

IP Links displays a list of all IP Links on the system. Active links are marked by a green bar, and offline links are marked in red. To view faults and general information for an IP Link, click the name of the IP Link.

	AES	Sound Off Su	Ner Tarne Server (* Version RCC Pretance Admin n Nov 13 12:42:57 2022 GMT-5 10.0.1.61 10.00 01.0008 Primary Robyn Wright *
	Dashboard Kiosk mode	Supervisory 62 5055 18 8307 00 C800 Subscriber 6055 Fri Nov 11 04:22,13 2022 GMT-5 Elapsed 2 days ago	Altrowiedge • CPU • Automation 4kins Unacknowledge Connectively Silence • Ethernet • RF Interference 30 Acti 16885 Acti 0 Up / 4 Do
đ	IP Links	IP Links	j∄ Sort ⊤ Filters
	Subscribers Hybrids	P Unk ID Model Deviaion Deater Norme Addring O029 N/A \$1.6.23YS N/A N/A P Unk ID Model Nevision Deater Norme Address	Addwes 2 City Lost Connector Time N/A N/A Mon Jan 19 22:21:28 1970 GMT-5
84 D	Users Settings	Image: Constant of the state of th	N/A N/A Mon Jan 19 22:19:58 1970 GMT-5 # Assess 2 City List Conjunction Time N/A N/A Mon Jan 19 22:28:45 1970 GMT-5

Faults Tab

The Faults screen shows the type of fault, the event code, the number of dependents, and the date and time the event occurred.

	Q. Search. Search Sound	off Sun Mar	9 2023 07:47:16	Server IP 10.0.1	Version 10.00.02.00	INCC Instance Primary	0	Tech support
🔡 Dashboard	Supervisory 11 1111 18 P307 00	C801 Subscriber	Acknowledge	• CPU	Automation			
👌 🛛 Business Units	Fri Mar 17 09:15:50 2023 Elap	osed 2 days ago	Silence	Ethernet	RF Interference	e O	8609 A	0 Up / 6
D Links	< IP Link ID 0039							C Refresh
🗋 Hybrids	Faults General	Event History	Notifications				_	
A Users	е́) тср/ір	EVent code E354 00 C906	# of Dependents 0 / 0	Date & Time Thu Dec 8 21:	01:53 2022		R	estore

IP Link fault types include:

Fault Name	Event Code
A-D Converter	E307 00 C804
AC	E307 00 C912
Antenna Cut	E357 00 C916
Battery	E302 00 C911
Charger	E309 00 C910
Duplicate ID	E353 00 C906
Loopback	E307 00 C808
NVRAM Battery	E307 00 C803
PSTN Modem	E354 00 C908

Fault Name	Event Code	1
Radio Silence	E355 00 C906	1
RAM Clip	E307 00 C807	
RAM Data	E307 00 C802	
RF Interference	E350 00 C906	
RF Modem	E307 00 C805	
RF Offline	E354 00 C907	
Tamper	E145 00 C906	
TCP/IP	E354 00 C906	Se
Timing	E307 00 C806	

See example above

General Tab

- **General**: Displays the IP Link ID, status (online/offline), Business Unit affiliation, model, and software version.
- **Details**: Provides details on the IP Link dealer, geographic location, and installed antenna.
- **Dependents and Connection**: Displays IntelliNet subscribers that have used the IP Link. Other message packet-related statistics are also displayed.
- Notes: Information on the IP Link can be stored here in free form text.

*		O, Searci Search	Server Sound Off Sun N	Time Aar 19 2023 07:53:56	Server IP Version INCC 10.0.1 10.00.02.00 Instance Primary	Tech support AES Corp
	Dashboard					
	Kiosk mode	Supervisory 11 1111 18 P3	07 00 C801 Subscriber	IIII Acknowledge	CPU Automation	
	Business Units	Fri Mar 17 09:15:50 2023	Elapsed 2 days ago	Silence	Ethernet • RF Interference	0 8627 Acti 0 Up / 6 D
đ	IP Links	< IP Link ID 003	9			Reset Delete
	Subscribers					
	Hybrids	Faults General	Event History	Notifications		
8	Users	General 🖉			Dependents and Connection	on C
.9 <u>.</u>	Dealers	IP Link ID 0039	Status Offline	Business Unit VancouverPortla	Dependent Subscribers in the last 10 days	View All
2ª	Settings				Dependent Subscribers in the last 24 hours	
ð	Live Traffic	N/A	\$1.6.23YS		0 as of Sat Mar 18 22:00:01 2023	View All
m	Geography					Supervision Interval 60 sec
	Help	Details 🖯		Edit		iet First connection or stats reset
105	Light mode				0	Tue Jun 9 17:19:38 2020
					Fri May 27 09:59:48 2022	Sat Mar 18 22:00:01 2023
6	Hide menu					
-						
Soft	ware Receiver 35PB					
		02155			Notes 🖯	Edit

Events History Tab

Event history enables users to receive a 10- or 30-day event history. Click **Export** to download a CSV file.

	D. Socroc. Search Sound Off Sot Mar 18 2023 11:28:42	10.0.1 OAYS_Event_History.csv has been avoided
Dashboard		
1 Klosk mode	Supervisory 11 111 18 P307 00 C801 Acknowledge	CPU Automation AL Unacknews: Commeet/Wity
Business Units	Fri Mar 17 09:15:50 2023 Elapsed 1 day ago	Ethernet RF Interference O 4952 A O Up / 6
D IP Links	< IP Link ID 0038	Export 10-Days 30-Days
Subscribers		1
📋 Hybrids	Faults General <u>Event History</u> Notifications	
TEN_DAYS_Event_Hcsv		

Notification Tab

The Notification function enables users to monitor their INCC network from anywhere, anytime. Users can configure automatic alerts based on a fault with any subscriber or IP Link.



Activating Notifications

- 1. Define the fault criteria by clicking the fault(s) from the list of faults at the right.
- 2. Enter the email address of the user monitoring these triggers.
- 3. Click Save.

	Sever //: Version //CCC // Italia Sever //: Version //CCC // Italia Sever //: Version // CCC // Italia Sever //: Version //: Version //: Versi
 Dashboard Klosk mode Business Units 	Supervisory 11 1111 18 P307 00 C801 Subscriber 1111 Actnowledge: • CPU • Automation //le
D IP Links	K IP Link ID 0038 Save Faults General Event History Notifications
🖇 Users Dealers	General Fault Trigger List
Settings	RF Interference Tamper

Subscribers

Subscribers automatically appear in the subscriber view once signals are sent to the AES IntelliNet network (subscribers do not need to be manually added).

- The status of a subscriber is indicated by the green and red vertical lines to the left of each row.
- Subscriber types include fire/burg products (please see the AES website for full list of AES supported products by the INCC).

-	AES		Sound	Sarver Tan-	7 16:21:27 2022 GMT-4 10	nslon 1.00.01.0007	Tech support
	Dashboard	Supervisory 72 C00 19 P207	00 CR01 Subscriber C001	-	A CRI A Automatic	a atom	
Ō	Kiosk mode	Subscriber type	4 Elapsed 22 days ago	Silence	• Ethernet • RF Interfere	ance 5 Act.	37 Active 1 Up / 1 D_
$_{\tau}\breve{\Delta}_{\tau}$	Business Units						
曲	IP Links	Subscribers					Sort T Filters
自	Subscribers	Sup II Noter 1					
ġ.	Hybride	0990 7788 :	2.64Z -		N/A		
8	Users	0 0991 Name 3	Aurasian Address (*) 2.642 -		N/A		
3p	Settings	0 0992 7788	Research Address 1		P Chaine-in Inter-		25
ã.	Live Traffic	Sub 10 Model					
m.	Geography	O 0993 7788 :	2.64Z -		N/A		
0	ныр	6 0994 7788	Rovusan Aadness I 2.642 –		P RF Charle-vn Inter: N/A		4

Sorting and Filtering

Subscribers can be sorted and filtered from the dashboard.

• To sort, click **Sort** to display the sorting options, then select your criteria and click **Ok**. The selected sort criteria is displayed at the top left of the list of subscribers.

l≓ Son:	Subscriber	S X Clear all			j₽ Sort ⊤ Filters
by Status 15	1 100 100 100 100 100 100 100 100 100 1	Unknown Unknown		N/A	
by Model by Revision	E #103	Mose Bernert Unknow Unknown		N/A	
by Address I		Mooe Ferrer Unknow Unknown		IV Charle in Interest N/A	
by City by ZIP	E moz	Unknow_ Unknown		N/A	
by RF Check-In Interval	C 1003	7707 v7.2.04		D Shuck in Interval N/A	

• To filter out some of the subscribers, click **Filter**, then enter your data into the desired filtering fields. Click **Apply Filters** at the bottom right.



 Subscribers

 Sert by Subscriber ID: [F x)
 Subscriber ID: FF03 x)
 x Clear all

 Subscriber
 Model
 Revision
 Address /
 City

 FF03
 Unknown
 Unknown

 Subsrip:
 Model
 Revision
 Address /
 City

 FF03
 Unknown
 Unknown

 Unknown
 Unknown

Note: Filters can be cleared using either **Clear all** from the subscriber dashboard (shown above) or **Reset Filters** from the Filters dropdown (shown at left).

Viewing Subscriber Details

Click the name of the subscriber to view subscriber details (e.g., faults, general, settings, messages, live traffic, zone configuration, and event history).

AES	Sound	011 Sun Aug 7 16:21:27 2022 GMT-4 10	.00.01.0007
18 Dashboard	Supervisory 72 C001 18 P307 00 C801 Subscriber C001 Sun Jul 17 00:08:00 2022 GMT-4 Elapsed 22 days ago	Asknowledge CPU Automation Silonce Ethernet RF Interform	n Aerr (nochowa: convenity noo 5 Act. 37 Active 10p/10_
Business Units	Subscribers		j∓ Sort ⊤ Filters
 Subscribers Hybrids 		OPy 5P M Check-in John N/A	-
S Users	0991 Name ³ 2.64Z -	N/A	hi -
	0992 7788 2.64Z -	N/A	

Faults Tab

The Faults view shows the type of fault, the event code, the number of dependents, and the date and time the event occurred. The Faults view can simplify planning for routine service of subscribers, enabling it to be scheduled cost effectively within normal workflows.

W	AES	Server Tryne Server IP Version INCC Instance Sound Off Sat Oct 22 06:46:53 2022 GMT-4 10.01.01 10.00.01.0008 Primary	Jane Augustina
88 O	Dashboard Kiosk mode	Supervisory 12 BA09 18 P307 00 C801 Subscriber BA09 Acknowledge • CPU • Automation Aler- Fri Oct 7 05:49:16 2022 GMT-4 Elapsed 15 days ago Silience • Ethernet • RF Interference 0	Unactinaviedg. Connectivity 26113 Active D Up / 5 Do.,
4 53 6	IP Links	< Subscriber ID 0008	C Refresh
D D R	Hybrids Users	Faults General Settings Messages Live Trattic Zone Configuration Event History Image: NetCon Event code # of Dependents Date & Time E354 00 C915 0 / 0 Thu Oct 6 07:51:41 2022 GMT-4.	
SP.	Settings		

Subscriber fault types include:

Fault Name	Event Code
A-D Converter	E307 00 C804
AC	E307 00 C809
Antenna Cut	E357 00 C916
Battery	E307 00 C801
Charger	E370 00 C009
Ground	E370 00 C010
IP Check-in Failure	E354 00 C902
IP Comm	E356 00 C904
Loopback	E307 00 C808
NetCon	E354 00 C915
Panel Interface	E307 00 C815
Radio Silence	E355 00 C906

Fault Name	Event Code
RAM Chip	E307 00 C807
RAM Data	E307 00 C802
Redundant Comm	E350 00 C915
Remote Annunciator	E307 00 C813
RF Check-in Failure	E354 00 C906
RF Comm	E356 00 C903
RF Interference	E350 00 C906
RF Modem	E307 00 C805
Tamper	E145 00 C906
Timing	E307 00 C806
Zone Module	E307 00 C817

General Tab (Buttons and Icons)

AES	C Search by UL Search Sound Off Sun Mar 31 2024 19:52:28	Server IP Version IACC 172.31.21.1 10.00.03.00 Instance Primary Robyn W.
Dashboard		🕑 Subscriber general info updated 🛛 🗙
Kiosk mode	Fire 19 9999 18 E115 0B C0C2 Subscriber D004 Acknowledge	CPU Automation Alerts Unacknowle Connectivity
Business Ur	Wed Mar 27 11:25:27 2024 Elapsed 4 days ago Silance	Ethernet • RF Interference 5 Act 88111 ActL 1 Up / 3 D
IP Links	 ✓ Subscriber ID 0367 	Turn NCT on Inactivate Delete AHJ Report
Subscribers	and a second second second	
Hybrids	Faults General Settings Messages Live Traffic	Zone Configuration Event History Notifications
Q Users	Canada d	
Dealers	Last Upp2 wed Feb 14 05:50:43 2024	Last Updated: Fri Jul 13 15:47:32 2018
Settings	Wheel Subscriber ID Strius Business Unit	Madel Revision Settial number Type
S. Income	0367 • Off normal AES Sales Demo	7707 5.1.09 N/A Fire

	Descriptions of Buttons and Icons
Refresh (wheel) icon	If the refresh icon is clicked, the INCC pings the subscriber with an outbound request for the most recent information. The green callouts at the top right indicate that the request has been acknowledged (first image). As the subscriber information is updated, notifications appear at the top right (second image).
Turn NCT on	Assigns a subscriber/hybrid as inactive to prevent impacting the <u>network</u> <u>health score</u> . Once Turn NCT on has been enabled, the subscriber ID is removed from all business unit dashboard calculations (e.g., signals and health score), and signals are no longer sent to the dashboard page or alarm automation. This tool is for setting up subscribers only.
Inactivate	Inactivates the subscriber ID.
Delete	Deletes the subscriber ID.
AHJ Report	Submits a request to receive an AHJ report via email within minutes. For a sample of the report, see <u>Authority Having Jurisdiction (AHJ) Report.</u>

As subscriber information is updated, notifications appear at the top right (green box).

General Tab (Settings)

The General tab provides access to the following information:

- General Subscriber ID and business unit affiliation.
- Details Information on the dealer and location of the subscriber.
- Notes A space for adding free-form text about the subscriber.
- Hardware Subscriber model and panel interface information.
- Radio Status Link layer and NetCon information.
- Zones Zone and restoral status information.
- IP Configuration Information on the IP configuration associated with the subscriber. The IP Configuration pane displays the IP addresses and ports for the primary and secondary receiver, as well as the MAC address of the primary server and the business unit group that the subscriber belongs to. For reporting routing, 2.0 subscribers can deliver signals using five different reporting options (legacy subscribers are limited to radio only).
 - Radio Only
 - Radio and Internet
 - Radio and Internet Backup
 - Internet and Radio Backup
 - Internet Only


Routes – A total of four display screens are available to show the routing table. Up to eight peers, subscribers, or IP Links may be listed in the table. Each screen displays two subscribers. The total number of display screens varies depending on the total number of peers listed (a number from 1 to 8). Press the MENU button once to advance to the next routing table screen.

	Source by Unit ID Source Source M Sourc
Dashboard	
Klosk mode	Fire 43 9999 18 El15 08 COC2 Subscriber D004
👌 Business Units	Wed Feb 21 13:47:26 2024 Elapsed II days ago Ethernet • RF Interference 5 Active 57363 Active 1 Up / 9 Down
iP Links	Subscriber ID 0356
Subscribers	
Hybrids	
A Users	Routes <i>G</i>
R Dealers	Connect Connect Connect Connect Use could belie & Think
% Settings	0.555 H 0.057 H 19001 H CC05 3 Sun Feb 25 09:20.08 2024
Juve Traffic	0356 7409 1022 CC05 1 Sot Feb 24 09:51:53 2024
Geography	0356 (0378 (CC06)) 564 6 1/me
Help	Progra (2
O Light mode	Last Updatod: Thu sep 26 17.2648 2022
E Hide menu	1 Init kayer Init kayer Audity 1 0357 2 5 • Good (3)
	2. 85556 2 6 Quality Quality Good (3)

• Peers – Displays all subscribers in communication with the subscriber. Peers are pulled from the AES mesh packet structure. The INCC lists up to eight peers. A peer is any subscriber or IP Link that can communicate with a single path from a single subscriber.

Routing Table ID#: A routing table lists up to eight other subscriber ID#'s or IP Links. The purpose of the list is to select a peer for passing off data packets. The table is sorted with the best quality subscriber placed at preference location 1 (see image below). Quality is a measure of the neighbor subscriber's ability to pass data packets.

- L: Link Layer as reported by last transmission from the peer ID# shown.
- N: NetCon (NETwork CONnectivity) An internal rating used in the automatic positioning of this unit in the network. A NetCon value of 5 is required for a subscriber that is compliant with UL-864, 10th Edition.
- Q: Signal Quality The first digit is either an 8 or a 0 (zero). The second digit is a measure of how old the data is (a 3 is assigned to the newest data; a 1 is assigned to older data). Routing preference is given to strong, recently heard subscribers (3) versus weaker subscribers heard a long time ago (131).

Peers 🖯 .ast Updated:	Thu Sep 29 11:26:48 2022			
		link Layer	NetCon 5	Quality Good (3)
2				Quality Good (3)
				Quality Marginal (131)

Turn NCT on

- Navigate to the subscriber page (General tab) and enable NCT mode.
- Once enabled, the subscriber ID will be removed from all business unit dashboard calculations (e.g., signals and health score), and signals will no longer be sent to the dashboard page or alarm automation.

	Search by Unit ID X Search Sound On Sun Mar 10 2024 11:53:54	Server IP Version ACC 172.31.21.1. 10.00.03.00 Primary State Jone Augustina
Dashboard		
C Kiosk mode	Fire 43 9999 18 E115 0B COC2 Subscriber D004	CPU Automation Allerts Unackripwiedg_ Connectivity
ွစ်, Business Units	Wed Feb 21 13:47:26 2024 Elapsed 18 days ago	Ethernet • RF Interference 5 Acti 48593 Act 1 Up / 9 Do
i IP Links	< Subscriber ID 0230	Turn NCT on Inactivate Delete AHJ Report
Subscribers	Faults General Settings Messages Live Traffic Zone Co	infiguration Event History Natifications
Hybrids		
R Users	General C	Hardware C
Dealers	Last Updated: Wed Feb 14 05:50.43 2024	Last Updated: Mon Mar 11 17:31:54 2019
🎇 Settings		Madel Revision Serial number Type
Live Traffic	0230 Off normal AES Sales Demo	7744F 2.64ZK N/A Fire
[]]] Geography	Last chieck-in Sun Mar 3 22:40:27 2024	Panal Interface Reporting route N/A Radio Only
Help		
AES	Server Time Search by Unit ID Security Sound On Sun Mar 10 2024 11:49:41	Server II" Version INOC 172.31.21.1_ 10.00.03.00_ Instance Primary Jone Augustina ~
Dashboard		
Kiosk mode	Fire 43 9999 18 El15 0B COC2 Subscriber D004	CPU Automation Alerts Unsicknowledg_ Connectivity
مْنْ Business Units	Wed Feb 21 13:47:26 2024 Elapsed 18 days ago	• Ethernet • RF interference 5 Acti. 48580 Act 1 Up / 8 Do
IP Links	< Sample - Municipality	
Subscribers		
Hybrids	vits Stats IP Link / Hybrid Load Live Traffic RF Settings	NetCon Settings Bad Packets Notifications Units Notifications
A Users	Subscriber NetCon Overview ①	
Dealers	Subscriber NetCon Overview	
Settings	NETCON: (NETwork COnnectivity) is an internal rating	g used in the automatic
Live Traffic	5-7,5 being best and validates a minimum of 2 acti communications from the specific radio site to the e	amergency dispatch
()]) Geography	(monitoring) center. Note that while a low number is 7 may indicate problem with this unit or a unit in its p raceiver.	s better, any NetCon fram path to the central
Help		
Q Light mode		Dk
E Hide menu		

Authority Having Jurisdiction (AHJ) Report

The AHJ (Authority Having Jurisdiction) report includes relevant AES subscriber settings to provide to the AHJ. To request a copy of the report, navigate to the subscriber's General tab, click the **AHJ Report** button, then enter an email address.

	Server Time Server II" Velion Micc Server II"
Dashboard	
() Kiosk mode	Fire 43 9999 I8 E115 0B COC2 Subscriber D004
Business Units	
IP Links	C Subscriber ID 0356
Subscribers	
Hybrids	Faults <u>General</u> Sattings Messages Live Traffic Zone Configuration Event History Notifications
Users	
Dealers	General Constant Cons
Settings	Subscriber ID Stotu Emotil Address *
Live Traffic	0356 0 DILDY N/A Fire
🗐 Geography	Item Electric After submission, you will receive AHJ report email in few minutes. Mappending route Sun Feb 25 03 2008 2 Rádio Only Rádio Only
() Help	
Light mode	Cancel Submit
Hide menu	Laul Updated: Sun Dec 17 09:20:08 2023

A sample of the AHJ report is shown below:

	CORPORATION
The following constant	
The following report incl	udes relevant AES Subscriber settings to provide to the Authority Having Jurisdiction (AHJ):
Subscriber ID:	1234
Address:	
Reporting Route:	Radio and Internet (2024-02-09T15:18:22-05:00[America/New York])
NetCon:	5 (2024-02-09T16:57:26-05:00[America/New York])
Routing Table:	4321 (2024-02-09T16:57:26-05:00[America/New York])
RF Check-in Interval:	N/A
IP Check-in Interval:	N/A
Check-in TTL:	N/A
Status TTL:	N/A
Alarm TTL:	N/A
Restoral TTL:	N/A
IntelliTap TTL:	N/A
Special TTL:	N/A
Faults:	N/A

Settings Tab

The **Settings** tab provides access to the following information:

Timing	Radio check-in interval, communication timeout delay, secondary alarm delay, and acknowledgement delay settings
RF TX Settings	Allows RF transceiver turn on and off
Radio Packet TTL	Packet time to live settings
Modes	On/off status for IntelliTap messages, subscriber repeater function, and telephone line card function

The **Auto Test Supervision** setting enables the INCC to monitor automatic test timer check-ins. When enabled, it alerts an operator if a subscriber unit fails to check in within the programmed interval, plus 10% + 2 minutes as programmed in the subscriber's timing parameters function (see the **Radio Clock in interval** setting in the image below). A missed check-in is reported to alarm automation if the Auto Test Supervision is enabled.



Messages Tab

The **Messages** tab provides an interface for sending a text message to a subscriber configured to receive text messages.



Live Traffic Tab

The **Live Traffic** tab provides information on the type of message traffic and details about the subscriber traffic.

W		Sound Off Sound Off Sun Aug 7 16:49:17 2022 GMT-4 10:00.01.0007 Jane Augustina
	Dashboard Kiosk mode	Supervisory 72 C001 18 P307 00 C801 Subscriber C001 Acknowledge • CPU • Automation Alerts Unacknowle_ Connectivity Sun Jul 17 00:08:00 2022 GMT-4 Elapsed 22 days ago Sillence • Ethernet • RF Interference 5 Act 37 Active 1 Up / 10
~ 6	IP Links	Subscriber ID 0990
ц С А	Hybrids Users	
38 G	Settings Live Traffic	

Zone Configuration Tab

The **Zone Configuration** tab allows for subscriber zone assignment. Zone usage is account or ID specific and enables users to receive a 10- or 30-day event history, including CID events that are set by a subscriber.

Following is a list of INCC fault statuses and trouble zone assignments that can be used during configuration. This information helps to explain or clarify received messages. You can also use this information to create templates in your alarm automation specifically for subscribers. (These AES custom codes can be found in the CID document on the AES website.)

Fault Statuses	Description	Event Code
918	Symmetric Failure Between Primary & Secondary.	E307
919	Hard-disk Full.	E623
920	IP Compromise, Duplicate IP Packets Detected.	E145
921	Peer IP Ping Failure.	E997
922	CPU Trouble	E307
923	Memory Issue.	E307



To configure the parameters for subscriber zones:

- 1. Click the **Subscriber Zone** dropdown and select from the following options:
 - Supervised
 - Bypassed
 - Normally Open
 - Normally Closed

re Zones Lisone						
se Fire Zanes	Use Inverted fire Zones					
	No No					
No	No No					
one l	No No	C Restoral				
one I Supervised	INCC Zane	C Restoral				

- 2. Click the INCC Zone dropdown, and select from the following options:
 - Burglary

- Fire
- System Trouble
- Supervisory

Normal

• A/C Failure

Fire Zones Usage		
Use Fire Zones	Use Inverted Fire Zo	
No No	No No	
Zone I	1	Burglary
Subscriber Zone		System Trouble
Bypassed	<u> </u>	Normal
Zone 2		Fire
Subscriber Zone		Supervisory
Bungeend		A/C Failure

Event History

Event history enables users to receive a 10- or 30-day event history, including CID events that are set by a subscriber. Click **Export** to download a CSV file.

-		Q Searck.	Search Sound Off	Server Ti	^{mo} ir 18 2023 12:05	:20	Sorver IP 10.0.1	Version 10.00.02.00	INCC Instance Primary		
	Dashboard										
0	Kiosk mode	Supervisory	11 1111 18 P307 00 C8	801 Subscriber	Acknowled	ige 🌼 🤇	CPU	Automation			
Å.,	Business Units	Fri Mar 17 09	:15:50 2023 Elapsed	d 1 day ago	Silence		thernet	RF Interference	0 9	5063 Ac	0 Up / 6
卣	IP Links	< Subsc	riber ID 398	9				Exp	ort	10-Days	30-Days
e.	Subscribers										
白	Hybrids	Faults	General Se	ettings M	essages	Live Traffic	Zone	Configuration	Even	t History	Notifications
R	Users										

Notifications

The Notifications tab displays a list of fault triggers. To add a phone number, select the carrier (the carrier will depend on which server is used for sending messages to the phone), then enter a phone number.



Hybrids

The Hybrids tab displays a list of all hybrid subscribers associated with a business unit. Each hybrid displays general information about the unit.

Sub ID •

Address

Model •

RF check-in interval •

Revision •

Notes (text entry) •



A hybrid is a fire unit with the ability to switch to IP and act as an IP Link, enabling the unit to send an alarm from the customer premises to the central monitoring station (CMS) via RF and/or IP and transmit peer signals via IP.

*	CORPORATION			Sound Off	Server Time Sun Jan 15	08:04:23 202	3	Server IP 10.0.1.59	Version 10.00.01.0014	INCC Instan		Tech support	stina	*
	Dashboard Kiosk mode	Supe Thu I	arvisory Cl Dec 29 18:3	5056 18 P370 00 C009 3:12 2022 Elapsed 17 da	Subscriber 5056 ys ago	Acknow	ledge	CPU Etherne	 Autome t RF Inter 	ation ference		nacknowledg 163087 Ac	Connectivity 0 Up / 10	D
4. Ö	Business Units IP Links	Hyb	rids											
	Subscribers Hybrids	0	5056	Business Unit	Model 7177	Revision a8.2.02	Address I				Check-in Interval	RF Check-i	in Interval	ž
名后	Users Dealers	0	5059	ENG BU	7177	v8.1.2						xpand deta	ils	Ŷ

To expand the details for a hybrid, click the dropdown at the right. The additional information includes:

Comm timeout delay

Customer

Check-in TTL

Status TTL

•

•

•

• Status

•

- Business unit •
- Current faults
- Last check-in
- Alarm panel ID Dealer name
- Alarm TTL
- Trouble TTL •

To view the details about a specific unit, click the name of the hybrid.

W				Sound Off	Server Time Sun Jan 15	08:04:23 202:	3	Server IP 10.0.1.59	Version 10.00.01.0014	INCC Instance Primary		Toch support Jane Augustina	*
	Dashboard Kiosk mode	15056 18 P370 00 C009 3:12 2022 Elapsed 17 do	Subscriber 5056 ays ago	riber 5056 Acknowledge • C Silence • E		CPU Ethernet	CPU Automation Ethernet RF Interference		Ale_ Unacknowledg_ Connectivity 0 263087 Ac 0 Up / 10 D				
4 10 10	IP Links	Hyb	rids										
Ċ	Hybrids	0	sub ID 5056 Sub ID	Business Unit ENG BU Business Unit	Model 7177 Model	Revisian a8.2.02 Revisian						RF Check-in Interval - RF Check-in Interval	
名后	Users Dealers	0	5059			v8.1.2							

Hybrid units share the same settings as subscribers. For configuration details, go to Viewing Subscriber Details.

	Server time Server te Version evCC Instance Tech support. Sun Jan 15 09:02:51 2023 10.01.59 10.00.01.0014 Primary Jane Augustina
Dashboard	Supervisory Cl 5056 18 P370 00 C009 Subscriber 5056 Acknowledge • CPU • Automation Mail Unacknowled_ Connectivity Thu Dec 29 18:33:12 2022 Elapsed 17 days ago Silence • Ethernet • RF Interference 0 263631 Ac 0 Up / 10 D
Dusiness onics	K Hybrid ID 5056
Subscribers	Faults General Settings Messages Live Traffic Zane Configuration Event History
9 Users Dealers	Charger P370 00 C009 0 / 0 Sun Jan 15 09:02:06 2023

Users

All Users Tab

The **All Users** tab displays general information about users who have access to the INCC software. It also shows when a user last logged on and the length of the session. The **Force logout** button allows you to log a user out:

- Username: The red/green color coding to the left of the username indicates whether a user is logged on or off.
- *Email*: You can email a user by clicking the email link.
- *Role*: Tiers 1, 2, and 3.
- Business units: Indicates which business unit the user has access to.
- Last login and Last session duration provides login history.
- To log a user out of the INCC software, click **Force logout**.

W	AES		Sound Off	Sarver 19ma Sat Oct 15 17:41:	57 2022 GMT-4 10	erver II ⁿⁱ Version IVI.20 0.0.1.61 10.00.01.0008 Prin	nary	lach support Jane Augustina	
50	Dashboard	Fire 19 FFFF 18 F110 01 C0	01 Subscriber 5022		Astronutarios	CPU Automation			
0	Klosk mode	Thu Oct 6 09:55:57 2022	GMT-4 Elopsed 9 da	ys ago	Silence	Ethernet RF Interference		3 Active 0 Up / 2 Do	
,Å.,	Business Units								
ø	IP Links	Users						Create	
B	Subscribers All Users Users History Import/Export IF Sort T Filters								
Ó	Hybrids							1	
R	Users	Admin		Admin		Frl Oct 14 10:27:11 2022 GMT-4	Last setsion duration	Force logout	
20	Settings								
de.	Live Traffic	A lg	N/A	Admin		Fri Oct 14 11:28:03 2022 GMT-4	3 hours 31 minutes 4	Force logout.	
άū	Geography	-					seconas	1	
0	Help	Viacheslav	Brindil N/A	Admin		Thu Oct 13 08:31:11 2022	Last basision duration N/A	Force logout	
0	Light mode					GMT-4			

Users History Tab

The **Users History** tab displays a list of actions the user performed (e.g., logging in, adding a business unit) and the date and time on which these actions occurred.

W	AES		Sound Off Sat Oct	no 15 17:57:21 2022 GMT-4	Sarval IF Version WCC In 10.0.1.61 10.00.01.0008 Primo	stance Pry Jane Augustina
間の	Dashboard Kiosk mode	Fire 19 FFFF 18 E110 01 C0 Thu Oct 6 09:55:57 2022	01 Subscriber 5022 GMT-4 Elapsed 9 days ago	Acknowledge	CPU Automation Ethernet RF Interference	Aur. Undetrievitéd.: Correctivity 0 B192 Active 0 Up / 2 Do
di la	IP Links	Users				
0	Subscribers Hybrids	All Users Users I	History Import/Export			l≅ Sort ♥ Filters
8	Users	AES_Admin	Login		Sat Oct 15 17:30:49 2022	CMT-4
64 100	Live Traffic	AES_Admin	Login Action Add Business Unit		Sat Oct 15 17:27:52 2022 Date & Time Fri Oct 14 11:44:39 2022 C	GMT-4 IMT-4

Import/Export Tab

To import a list of users:

- 1. Click **Download XLS template** to download the template.
- 2. Populate columns A through N in the template. Save the file.
- 3. Export the Excel file to CSV.
- 4. Upload the CSV file by clicking **Select CSV file**.

	ES Sound Off	Server Time Sat Oct 15 18:05:52 2022 GMT-4	Server IP Version I 10.0.1.61 10.00.01.0008 F	NCC Instance Tech support. Primary Jane Augustina
🔠 Dash	hboard		Automation	
() Kiosi	sk mode Thu Oct 6 09:55:57 2022 GMT-4 Elapsed 9 days	s ago	Ethernet RF Interferen	nce 0 8215 Active 0 Up / 2 Do
"ŏ. Busi	iness Units			
ii IP Lin	nks Users			
E Subs	scribers All Users Users History Import/E	xport		
Hybr	rids			
A User	rs Import Users		Export Users	
% Setti	ings Users List Template		Select User role(s)	
d Live	Traffic Download XLS template		🗋 Admin 📋 Tier 1 🗌) Tier 2 🔲 Tier 3
Geog	graphy Upload Users List		Export Users List	
⑦ Help	Select CSV file to upload		Export CSV file	
O Light	t mode Select CSV file			
Hide	e menu			

Export Users

To export user data:

- 1. Check each box next to the roles you would like to collect data for.
- 2. Click the **Export CSV file** button to download the file. The Excel file consists of the data that was selected:



View User Details

To view details about a specific user, click the username.

퍫	Dashboard	Supervisory alarm 12 5151 18 P	140 00 C002 Subscriber		Acknowledge	· CPU	Automation		
,Å,	Business Units	Sun Feb 13 16:49:37 2022 GMT-	Sun Feb 13 16:49:37 2022 GMT-5 00:01:01				Silence • Ethernet • RF Interference		0 Up / 1 Down
ø	IP Links								
E	Subscribers	Users							Create
8	Users	Usemame							
The second	Settings	🦉 jaugustina		Admin				N/A	Force logout
3	Live Traffic								

- General: Displays user details, the user's role, and the business units that the individual has access to.
- 1. Permissions: Contains a set of user-toggleable operations. Many of these operations are implemented as special permissions.

< Jane Augustina		Detter
General	Permissions	
Unar particle Languating		ann achroniatha
The series Augustives		Inport report
jougustinagitiet.com		Change ket/fort were
Figure 4		Ucertrei deitore
elefant fyl, option		Addunt

Create a User Account

1. Click the **Create** button.

Fire 19 FFFF 18 R110 01 C001 Subscriber 5022 Thu Oct 6 09:55:45 2022 GMT-4 Elapsed 4 days ago			Acknowledge Silence	CPU Automation Ethernet RF interference	Alerts 24 Act	Unacknowled_ Connectivity 3542 Acti 0 Up / 1 D
Users All Users Users Hist	tory Import/Expc				-	Create
Admin		^{Rola} Admin		Lost login N/A	Last session duration	Force logout
Username Ig	Email N/A	_{Role} Admin		Last login Fri Oct 7 08:52:52 2022 GMT-4	Last session duration 3 minutes 31 seconds	Force logout

2. Fill out the user information and select a role.

Note: Each user role provided by the INCC has a specific set of access. The actions associated with a user role were chosen to match the tasks that different team members may be responsible for. To view an overview of each role, click the **Role** icon.

3. Add a business unit to the tier-level users by clicking **Add Business Unit** at the bottom left and selecting a business unit from the dropdown list.

AES	- Swanch by Unit 10 ×	Soomt On Sun Mar 3 202	4 15-03:50 172:31:21:125 10.00.03:0001	Primary Jone Augusting
Dashboard				
Kiosk mode	Fire 43 9999 18 El15 06 COC2 Subs	criber D004 Acknowled	ge CPU Automotion	
L Business Units	Wed Feb 2113:47:26 2024 I Elapsed II	days ago	Ethernet • RF Interference	5 Active 58054 Active 1 Up / 9 Down
D P Links	K Add User			Save
Subscribers		User Role		
Hybrids				
A users	User antalis	Admin users can create, read, update, delete users can see all fusiness linits and all equipme	ant Tier 2, Tier 3. Admin	
Dealers		Tier I (CMS Admin) users can create, read, up I users can see assigned Business Units and ass	odate, delete Tier 2, Tier 3. Tier bigned equipment.	Acknowledge
Settings	alice kelly	Tier 2 (Manager) users can create, read, updi can see assigned Rusiness Units and assigned e	ate, delete Tier 3. Tier 2 users equipment.	
Live Traffic	Alice	Tier 3 (Operator) users can not create, read, i susers can see assigned Butiness Unit (one con	update, delete any users. Tier	Export report
Geography	alice kelly@company.com	equipment.	an an stà an san an anna da anna da anna an	
(i) Help	/			
C Light mode	tota O		Ok ju	Change last/first name
E Hide menu		0 O Tire 2 O Mark made	Storage settings	License details
	O Martin O Herr O Her	2 O Hera O Klosk mode	Change password	
		View All Equipment		
Software Receiver 35PB	Baserian Level 1.4			and the second sec
	AES BUI	Add Business Unit	View page	Add unit
	/ 10 million /	Assign Units	Edit unit	View live traffic tab
		Assign IP Links	Cat rietruit Duringer unit	
		Assign Dealer	and benduit outsiness unit.	

4. To add subscriber(s) to the business unit, click the subscriber icon, as shown below, then select the subscribers that you would like to associate with this business unit.

5. When you are finished setting up the business unit, click **OK**.



6. When you're finished setting up the user account, click **Save** at the top right (see main image above). Once the user account has been saved, an onscreen message alerts you that the user will be forced to change the password upon initial login. INCC#2023 is the default password for the initial login.



Edit a User Account

To edit the information in a user account, click the **Edit** button.



To restrict the user's access to specific business units and subscribers to prevent users from viewing other business units and subscribers, follow these steps:

- 1. Click the business unit dropdown to view a list of business units.
- 2. Click the subscriber icon to view a set of subscribers. Click the subscribers you would like to add, then click **OK**.

Edit Jane Au	ugustina			Silva
General User details Usemane * jaugustina		Permiss Dashboar	ions d v page	Acknowledge
First name Jane Email address jaugusting@test.co	Las nome Augustina	× Profile	ncə	Export report
Role O Admin O Ti Buainess units	ier1 () fier2 () fier3	5000 20514 20	515 20516 4	7625
Business Unit) * uusiness Unit 3 * BUI	Role O Admin O Tier 1 O T Business unit Business Unit 1*	ier 2 O Tier 3 Business Unit 2 * ALARMCENTER	-80	View live traffic tab
	Businiess Unic 3 - BUI	🗇 💮 Add Business I	Unit Pset Password]

Delete a User Account

Click the user from the list of users, then click the **Delete** button.

Users					Create
All Users Users Histor	y Import/Expo	ort			∏F Sort T Filters
Admin		_{Role} Admin	Last login N/A	Last session duration	Force logout
Jaugustina		^{Role} Tier 1	Last login N/A	Last session duration	Force logout



Dealers Page

A dealer is an aggregation entity that consists of a set of subscribers. You can add dealers to the INCC either by importing them via a CSV file or by manually adding them to the system. The dealer can then be assigned to a user, in which case the user will be able to access all subscribers belonging to that dealer.

To Add a Dealer Manually

1. Click Add new.

W	AES	Q Searce Search Sou	Server Time nd Off Sun Mar 19 2023 09:1	Server IP Ve 19:21 10.0.1 10	nsion INCC .00.02.00 Instance Primary	AES Corp	~
	Dashboard Kiosk mode Business Units	Supervisory 11 1111 18 P307 Fri Mar 17 09:15:50 2023 E	00 C801 Subscriber 1111 Ac	knowledge • CPU Silence • Etherne	Automation FInterference	Ale Utracknowle O 8885 Act	Connectivity O Up / 6 D
in İ	IP Links Subscribers	Dealers				Import	Add new
	Hybrids		Business:Unit temp_bu_18740	Account # 552		Assigned Active IP Li Users 0	inks 🔶
A	Dealers	Pe BU44		Account # 552		Assigned Active IP Li Users 0	nks
91 85	Settings Live Traffic	A Name Hybrids				Assigned Active IP Li Users 0	nks

- 2. Enter the deal name and account number.
- 3. Click the **Business Unit** dropdown, and select a business unit.
- 4. Click Save.

W		Sector: Sector Sound Off Sun Mar 19 2023 09:30:27	Server IP Version INCC 10.0.1 10.00.02:00 Instance Primary Tech support AES Corp
	Dashboard		
	Kiosk mode	Supervisory 11 111 18 P307 00 C801 Subscriber 1111	CPU Automation Ale. Unscknowle. Connectivity
	Business Units	Fri Mar 17 09:15:50 2023 Elapsed 2 days ago	Ethernet • RF Interference 0 8918 Acti 0 Up / 6 D
ġ.	IP Links	< Add Dealer	Sove
	Subscribers		1
	Hybrids	General	
	Users	Dealer details	
A	Dealers	Dealer Name +	
	Settings	Dealername Account #	Salala
	Live Traffic	12345	Muscat VancouverPortland
	Geography	Business Unit	sswwi
	Help	Business Unit	TBUI
jo'	Light mode		temp_bu_11378

To Add a Dealer Using CSV

- 1. Click the **Import** button.
- 2. Click **Select file**, then navigate to the Excel file and double-click it.
- 3. Click **Import** to upload the file.

A	AES		Server Time Sound Off Sun Mar 19 2023 09	Sarver III vie 3:42:03 10.0.1 10.			
35							
۵			307 00 C801 Subscriber IIII	cknowledge CPU			
A.							
gn.		Dealers				a la companya de la c	nport Add new
Ð							
Ċ.							Active IP Unks
R			mport Dealers				L Destroyer
2							Active IP Links
38		o. Narra	Dealers.xlsx X Select file				Aptive IP Links
ŝ.			_/				0
m				Cancel	mport		Autive IP Units
(7)	Help					ų.	

To Add Subscribers to the Dealer

1. From the **Dealer** page, click the name of the dealer.

W	AES	Q, Sec	Sound Off	Server Time Sun Mar 19 2023 09:58	:11	Server IP Version 10.0.1 10.00.	NCC 02.00 Instance Primary		Tech support AES Corp	÷
部 ① 人。	Dashboard Kiosk mode Business Units	Supe Fri Me	rvisory 11 1111 18 P307 00 C80 ar 17 09:15:50 2023 Elapsed	1 Subscriber 1111 Ackn 2 days ago Si	owledge	CPU Ethernet	 Automation RF Interference 		Unacknowle. Col 9002 Act 0 L	nectivity Jp / 6 D.,
ů e	IP Links Subscribers	Deal	lers						mport	dd new
Ċ	Hybrids	දු	Name BUI	^{Business Unit} temp_bu_18740	Account #			Assigned Users O		
8	Dealers	ዲ	Name BU44		Account # 552			Assigned Users Ö		-
29 BB	Settings Live Traffic	ዲ	Name DealerName		Account # 12345		Active Units O	Assigned Users O		

From the dealer main page, you can add users, business units, and IP Links.

Note: Assigning a user to the dealer will drop all previously assigned subscribers and link the dealer's subscribers list to the user.



To Add Users

Assigning a user to a dealer drops all previously assigned subscribers and links the dealer's subscribers list to the user.

- 1. Click Add.
- 2. Click **Find** to locate the user (the user list is generated from the user list in the INCC), then click **Assign**.

Note: You can also add users via a CSV file.

C DealerName		Dalate
Commercal Gradier Generation Development Development Totals Francesant Links	Assigning User to the Dealer will drop all assigned there proviously Subscribers and link Dealer's Subscribers List to the User Search referenced Provide CSV USE Provide CSV USE Provide CSV USE	
Bent	Cancel	CADO

The user appears in the Assigned Users list.

< DealerName			Delete
General	() () () () () () () () () ()	Assigned Users	Add
Dealer details			
Coder Name DealerName Happort # 12345			
Business Unit			
illeansalak kalay * temp_bu_ll378			

To Add Business Units

- 1. Click Add.
- 2. Click **Find** to locate the business unit, then click **Assign**.

Note: You can also add business units via a CSV file.

Businees Unit Businees Unit	Assign Unit(s)	
temp_bu_11378	C Search by ID × Find	
unita	Upload CSV life Please plot one-column file with IX Select from list	
	Cancol	

To Add IP Links

- 1. Click Add.
- 2. Click **Find** to locate the IP link, then click **Assign**.

Note: You can also add IP links via a CSV file.

Business Unit	Assign IP Link(s)	
	Search by ID Find Upload CSV file Flease pick one-column file with D'x Select from list	aat 📝
	Cancel	

Settings

System Tab

- Unit Settings: Toggle between metric and imperial.
- Import Addresses for Units: Data from the NMS will be imported into the INCC.
- Sound Settings: The Sound off button can no longer be used to control the sound of the INCC. The button is just a visual indicator of the System sound in OFF (or ON) setting (as shown below). This gives the admin full control and prevents other users from accidentally turning the sound off with a single click.

AES	10, Search by Millio 😒 Search Sound On Survey Fine	13:10:54 172:31:21:125 10:00:03:0001 Primary Same Augustina
Dashboard Kiosk mode Business Units	Fire 43 9999 18 E115 08 COC2 Subscriber 1004	CPU + Automotion Autor Development Ethernet + AF Interference B Active 48876 Active 1 Up / 9 Down
Subscribers Hybrids Users Dealers	System Server Network Alarm Automation Tech Options Subtools	Check-in Brace Period Antenna FCC Maintenance Database migration To migrate the database from existing MN8 instance please click the button below:
Settings	Import Addresses for Units	Migrate data
Light mode	Select CSV Me Buyboad Select CSV Me	Create now
Software Receiver 35PB	Sound Settings	

• Database Migration: Database migration allows a seamless transition from an existing MNR to the INCC. During migration, the MNR database dump data is transformed and entered into the INCC database.

• Database Dumps: A database dump can be shared with technical support to solve an issue. It can also be used to import the data to another VM by sharing the database dump with yourself.

Server Tab

The Server tab contains server software parameters:

- Server ID number the identification number for the server instance associated with the installation.
- Receiver number the customer-defined identification number.
- IP Link port number the port number for the INCC IP Link associated with the installation. This number must be within the 7000 7099 range.
- IP Subscriber port number the port on the 2.0 Hybrid. This number must be within the 9000 9099 range.
- Default Business Unit the name of the business unit orphan.



Network Tab

Network connectivity settings include the local IP Address, netmask, gateway address, and the DNS server address. This information is automatically populated.

W	AES			50	and Off	Sun Jul 24 18:24:40 2022 GMT-4	10.00.01.0007	Jane Augustina	
10 10	Dashboard Klosk mode	Supervisory 72 C002 18 E305 00 C96 Sun Jul 17 00:07:53 2022 GMT-4 Elop	2 Subscriber C002 sed 8 days aga	Acknowledge	CPU Ethernet	Automation RF Interference			
0 0	IP Links Subscribers	Network Settings	k Alarm Automation Tech D	ofions Subtools					
і я	Hybrids Users	Network settings		Aunus annous					
22	Settings Live Troffic								
80 00	Geography Help		DNS Server Address						
10 E	Light mode Hide menu								

Alarm Automation Tab

This tab displays the status information for alarm automation software that the INCC is configured to use.

W	AES				1	Sound Off	Sumar June Sun Jul 24 18:25:44 2022 GMT-4	10.00.01.0007	1	h upport ne Augustina
111 (1)	Dashboard Klosk mode Business Linits	Supervisory 72 C002 H Sun Jul 17 00:07:53 2022	3 F305 00 C902 S GMT-4 Elopsed	ubscriber (2009) 8 days ogo	Acknowledge Transf	CPU Ethemet	Automation RF Interference			Carried With 1 Up / 1 Down
۵ L	IP Links	Alarm Automat	ion Setting	S	_					Add new
	Subscribers Hybrids	System Server	Network	Alarm Automation	Tech Options Subtool					Delate
*	Users Settings	6051 Vert Alumbel 6052	Stote Up	121.5.3.3 Triantary # Address 10.0.3.59		1657643011, Oman				Delete
inte Alter	Live Traffic Geography									
0	Help									
	Hide menu									

To enter information for configuration settings for an alarm automation system, click the **Add new** button.

Alarm Au	tomati	on Setting	S		Add new
System		Network	Alarm Automotion	Subtools	
Port Number 6050		Status Down	Primary IP Address 10.0.3.137	ausiness Unita orphan, default bu	Delete

Enter the port number and primary IP address. Additional IP addresses may be entered if the automation software supports this. Use the **Add IP** address control. Click **Save** to store the information.



Important: The allowable range for port numbers is 6050-6099.

Tech Options Tab

Listed below are all the options available on the ...



Options	Enable?					
Enabled emitting only E602 code for ALL checkins						
This feature will eliminate E603 & E608 and combine to only #E602						
Enabled Automatically resending alarms to AA when AA is restored after an outage						
This feature allows the INCC/MultiNet Receiver to automatically resend messages to Automation when Automation is restored after a connection loss or outage. On previous INCC/MultiNet versions, all messages reported on the LCD screen were acknowledged manually one after the other and were never offered to Automation again.						
The Automation LED on the front panel of the MultiNet turns on if a message does not reach Automation. This indicates that Automation is down. The Automation LED turns off only when a new message is acknowledged by Automation after a connection has been restored. A new message coming in after automation is restored is required to recognize or test its return to operation. When this feature is set as Yes, any queued messages that are one day old (24 hrs.) or less are resent. All older queued messages are discarded. Messages are resent at a maximum rate of 30 messages per minute to help control a possible runaway condition.						
Enabled legacy blanket fault restorals (R307 C800) instead of individual restorals						
This Feature will not send individual restoral. Enable and Disable this feature for subscriber faults						
Enabled E602 code for Check-in, instead of E603						
By default E603 and this feature will enable E602						
Enabled Suppression of R356 (ACK delay) messages						
Suppress R356 ACK delay						
Enabled signals from orphan to go to Alarm Automation	Optional					
By default, the Orphan Business Unit (BU) does not deliver messages to automation or to the printer. Messages are only displayed in IPCtrl accessed using VNC Viewer for Orphan on Display :1. With this option set to Yes, the Orphan Business Unit becomes a "catch all" and delivers any messages to automation. To allow a distinction between an Orphan Subscriber and a normal Main BU Subscriber, Orphan messages will be sent to automation, using the main BU number, using Line Card 9.	Yes or No					
Enabled Resending ALL old alarms, regardless of age	No					
With this Tech Option set to Yes, all old messages will be resent to automation, regardless of how old they are. Not recommended to use this option especially if resend to AA is enabled.						
Enabled Symmetry for R356 (ACK delay) messages						
Enable and Disable Feature E/R. By default system will only generate R, this feature will add E						
Deduplication						
Enabled IP packet deduplication	Yes/No					

Options	Enable?
2.0 MCT Subscribers will receive RF and IP packets. Enable/Disable receiving single or dual packets	
Line Card	
Enabled LC==1 for Tap message account takeovers	
Several versions of the INCC/MultiNet suite of software attempted to address the incorrect reporting of Line Card from IntelliTap/Pro generated messages. The primary issue is that when the IntelliPro/Tap reports that it detected a line cut, the Line Card should be reported as 1 because the detection is from an AES device or module but is reported as a 3 indicating that the AP is reporting the line cut.	
Setting this option to Yes corrects the Line Card for Line Cut from the Tap/Pro to 1. A message from the AP reports as 3 in suite 1067. Problem introduced is that using Account Override on an IntelliPro will cause all CID messages with the Account Override marker to also report on Line Card 1 instead of the correct Line Card 3.	No
If Account Override is never used, this Option set to Yes will result in the IntelliPro Line Cut detection to be correctly reported. Since you can never for sure know that Account Override is used, the safest option is to leave this at No and understand that an IntelliPro Line Cut message will look like it is being reported by the alarm Panel.	
Enabled IPSub packet using different receiver linecard group	
Setting this to Yes will result in different line cards being used for signals received by RF and TCP/IP.	
Default Line Card Assignments for origin of message.	
1 = AES Device, Subscriber, IP-Link, Receiver	
3 = Alarm Panel through IntelliTap Protocol in CID	
4 = Alarm Panel through IntelliTap Protocol in 4+2	
Selecting (Yes) will result in the following Line Card assignment for messages that are received from Subscribers directly over TCP/IP.	
2 = AES Device, Subscriber, IP-Link, Receiver	
5 = Alarm Panel through IntelliTap Protocol in CID	
6 = Alarm Panel through IntelliTap Protocol in 4+2	
Supervision	
Enabled IP Link events to emit on Line Card 8	
Will enable IP Link Faults to line card 8	
Enabled sending all IP Link faults to default Business Unit	
Enable all IP Links Faults to be sent to default Business Unit	
NetCon Filtering	
Enabled Bad NetCon Filtering for selected models and firmware revisions	No

Options	Enable?
The filtering of Bad or corrupted packets is on by default in versions that offer this feature. The filter examines IntelliTap Type I packet data. Packet data that fails the criteria of the filter is sent to the Bad Packet Log and not sent to Automation, Printer or IPCtrl. The filter is examining the CID or 4+2 Tap data strings.	
There are instances where legitimate IntelliTap Packets are being filtered. If after reviewing the Bad Packet Log, it is determined that legitimate data is filtered, the filter would need to be disabled or turned off to allow these through. This will expose the system to rare and real bad packets should they ever occur.	

Subtools Tab

The **Subtools** tab includes a set of subscriber maintenance tools for executing automated maintenance operations, allowing you to retrieve subscriber configuration information on all or select subscribers in an AES network. The information is reported back to the INCC through the IntelliNet network.



Configuring first-time data from unknown subscribers

These settings are associated with subscribers that come onto the network for the first time.

- 1. Select a time range for getting and refreshing data.
- 2. Select the data that you would like to get from the subscribers, all or single types of data.

This tool queries every subscriber in all business units for the following data. This is useful for NMS since it displays the above data for each subscriber on the dashboard.

- Model and Revision
- Timing Settings
- TTL Settings
- Mode Settings
- Zone Configuration
- 3. Select how frequently you would like the query to run, every 24 or 48 hours.
 - Every 24 hours
 - Every 48 hours
 - Never

Every 24 or 48 hours, outbound packets will be sent to subscribers with unknown data. During this process, there will be 2 packets sent out every 60 seconds. If there are no subscribers with unknown data, then no packets will be sent out.

4. Click Execute.

Refresh data from all subscribers

When a subscriber comes onto the network for the first time (refer to the configuration settings), the only details that are automatically populated from the alarm table are as follows:

- Unit ID
- BU

You can utilize the individual general settings under subpage to ping data for each unit.

The **Refresh data from all subscribers** option in the **Subtools** tab gives customers the ability to ping all subscribers to grab additional data.



Check-in Grace Period

The **Check-in Grace Period** tab has two settings (minutes and percentage) that allow the user to set the grace period for supervising check-ins from the MultiNet receiver. Although the use of this feature is not recommended, if it is used, a grace period is needed. The suggested grace period is 20, which is 20 x 0.1 minutes (this equates to two minutes plus Check-In Percentage of 10%). The default is 20 and 0%, so this should be modified to 10% on any configuration unless the user has specific alternate needs.

	Server Time Server IP Version MCC Instance Server IP Tech support				
Dashboard	Supervisory 11 CC03 18 E307 00 C801 Subscriber CC03 Acknowledge • CPU • Automation Auerts Unactivisionities Connectivity Tue Jan 3 10:48:26 2023 Elapsed 16 days ago Silence • Ethernet • RF Interference 2 Act. 305508 A 0 Up / 1 D				
 IP Links Subscribers Hybrids 	Check-in Grace Period Settings System Server Network Alarm Automation Tech Options Subtools Check-in Grace Period				
A Users Bealers B Settings	Edit Check-in Grace Period				
 Live Traffic Geography Help 	20 D Supervised units will now be allowed a 20 minute grace period.				
Uight mode	grace period (of programmed check-in interval) after expiry, before being declared dead. Inter Check-In Percen. 10 Supervised units will now be				
Software Receiver 35PB	C allowed 10 percent extra grace period, in addition to the 20 minute grace period.				

Antenna



FCC

AES	Second by Unit ID Second Off Second Off Second Off Second Off Second Off	Server (P) Version Nucc Admin 172:31:21.L. 10.00.03:00 Instance Robyn W ~
Dashboard		
🕜 Kiosk mode	Supervisory 31 1234 18 P307 00 C801 Subscriber 1234 Acknowledge	CPU Automation Allerts Linacknowledg_ Connectivity
👌 🛛 Business Units	Thu Mar 14 11:00:06 2024 Elapsed 10 days ago Silence	Ethernet • RF Interference 5 Acti 53219 Acti 1 Up / 3 Do
D IP Links	FCC Settings	
Subscribers		
Hybrids	System Server Network Alarm Automation Tech Options	Subtools Check-in Grace Period Antenna FCC Maintenance
A Users	FCC Data	
P _B Dealers		
% Settings		
J Live Traffic		
(III) Geography		
(?) Help		
O Light mode		
Hide menu		
1		
Software Receiver 35PB	Cpen FCC.gov	

Maintenance

	Search by Unit ID Search Sound Off Search Search Search Mice Mice	
B Dashboard		
(i) Kiosk mode	Supervisory 31 1234 18 P307 00 C801 Subscriber 1234 Acknowledge • CPU • Automation Alerts Unocknowledg Correct	
👌 🛛 Business Units	Thu Mar 14 11:00:06 2024 Elapsed 10 days ago Silence 5 Acti 53220 Acti 0 Up	
📋 IP Links	Maintenance Settings	
Subscribers		
Hybrids	System Server Network Alarm Automation Tech Options Subtools Check-in Grace Period Antenna FCC Maint	enance
A Users	Install SSI Certificate	
P _{EI} Dealers	SSL Certificate signing kequest	
% Settings	Country * State/Province (Full Name) * Select Certificate file to upload (*.crt format only)	
Juve Traffic	Select CRT file	
()) Geography	Location Name (City) * X Organization Name (Company) * X SSL Key File	
() Help	Select SSL*key file to upload (if needed)	
Light mode	Unit Name (Department) × Email Address × Select Key file	
I Hide menu		
1	Common Name (Fully Qualified Domain Name) • 💦	ad
Software Receiver 35PB	Create CSR	

Live Traffic

Live Traffic shows real-time information on communications between the INCC application and the installed AES subscribers. The traffic information and IP Link/Subscriber/Business Unit identification show where the traffic originated.

AES				Source Time Present Present	
Dashboord				CPU + Automation CPU + Automation Commence S Active 0 I Up / 3 Down	
Subscribers	Live Traffic				
Settings	О П О 99	8899	BB99	Nov 8 Free 7 215331 2022 GMT-5 Mon Feb 7 215331 2022 GMT-5 Trode 3 Tree Mon Feb 7 215331 2022 GMT-5	
 Geography Help 	TT ()		Bapp	Point & Trees Mon Feb 7 2153:06 2022 GMT-5	
 Ught mode Hide menu 	() qq () qq	8099 9009 8090	8800	Mon Feb 7 2153:06 2022 GMT-5	

Geography

The **Geography** tab has the option for Earth or satellite view. The **Street** view enables you to view and navigate through 360 degree horizontal and 290 degree vertical panoramic street level images. You can also view the types of faults, the routes, the link layers involved, or the dependencies.





Faults

To view the active faults, click Faults then click the dropdown icon to view the codes.

Basiness unit AES Sales Demo	· 土 A		
Street	Sotellite		
All Faults Route	s Link Layet Dependency	By Unit Type	
		前 IP Link 5	
By Unit Type	0	E CC01	tcp/ip 🕑
🚺 IP Link 5		📄 CC02	tcp/ip 🔽
😑 Burg 2	6	E CC03	TCP/IP
👌 Fire 103		CC04	tcp/ip 🔽
		<u>⊨</u> cc06	TCP/IP
By Code	0	By Code	D

Routes

Click Routes to view the routes of the faults.





Link Layer

Link layer 2 indicates that it is directly connected. Link layers 3, 4, 5, and 6 refer to the number of hops required to get from the subscriber to the IP links.



Configuration

To view the Visualization feature of the INCC on Google Earth, you must first load the addresses of the Subscribers and IP Links (see steps below).

1. This step is done during the migration process. Click the download icon to download the .klm file with the Business Unit map information. (KML is a file format used to display geographic data in an Earth browser such as Google Earth.)

*	AES	Secure Envir Sun Jun 22 10 15 381 2023 10.0.1.61 10.00.01.003 Primary Secure Augustino
1	Dashboard Klosk mode	Supervisory (II CC03 18 6307 40 C501 [Subscriber C003 Attracting - CPU = Automation Atem (Statistic-equilibrium) Converting
*	Business Units	triende and a monocolo dota i popped is dolar d
12	IP Links Subscribers	
۵	Hybrids	Street Socialities
R	Users	

2. Click the business unit .klm file at the bottom left of the screen.

O Light mode	the second s		P Link
E Hide menu			Jnknown
-			Ion-AES
W /	e e	A H	ligh Gain Antenna
Software Receiver 35P	C mapbox	@ Mapbox @ OpenSt	restMap Improve this map
SUtest.kml	~		Show all X

As Google Earth begins to launch, you will be asked to enter a user name and password. The user name is the name of the business unit, and the password is the same password used for the *Operator Dashboard* password for that business unit.

3. Enter user name and password and click Sign In.

Invalid addresses – When addresses are not in the correct format, they will need to be adjusted.

AES	2010 01 2010 100 2010 00 00 00 00 00 00 00 00 00 00 00 00	naton HCC Indone State Augustina -
Dashboard	Supervisory II CC03 18 5307 00 C801 Subscriber CC03 Addresser Tue Jan 3 10:48/26 2023 Elepsed 19 days ogo Silanca Ethernet = 8F b	amation Awals Encoderowerig. Currendwry hterference 2 Acti_ 321762 Act_ 0 Up / 105-
👃 Business Units	Autore of	VINI
Subscribers	Butest	IIIA
R Users	VI LI	

Help

The Help page allows access to technical assistance resources.

- User Manual: online access to the INCC user manual
- Frequently Asked Questions: questions and answers about INCC and AES IntelliNet.
- AES YouTube Channel: videos on technical material and configuration of AES IntelliNet products
- AES Technical Support: contact information for AES support services.

Light mode

The INCC user interface can be viewed in either light or dark mode.

AES	Search by Unit ID × Control	Seven Off Sun Mar 17 2024 19:08:05	Information Net Industries Contraction Information Informatio Information Information Information Info							
Dashboard Concentration Business Units	Supervisory 12 HB01 8 R307 00 CB00 Subscriber 1110 Fri Feb 16 102926 2024 Elopsed about 1 month ago	Ethonology CPU + Self Monitoring Stenon + Ethernet + 2F interference								
 IP Links Subscribers Hybrids 	Dashboard unocknowledged 7/ Acknowledged 0 Alerts 0		Export Report							
A, Users	Atomic court Address Atomic court Address Address Address 285 Peobody St, Peot	body MA N/A	state state							
Settings	Watchdog or PBS 1 285 Peabody St, Peak	Dody MA N/A	Act full stience act 1							
Uve Traffic	Radio Silence I7 285 Peabody St, Peat Addmit	body MA N/A Decrease	ACY AIT							
 Help 	10 NetCon 5 or 7 rep	body MA Test Smoke Alarm	Ack All Stience Ack							
Ught mode Hide menu	Periodic transmis Automic courres Automic Auto	body MA N/A	entile stance det 4							
AES Self Monitoring	Off Normal Check Alarmi courte Assistant A	body MA N/A	ACK AR							
AES	Q. Search by Unit ID	Search		Sound Off	lliner (me Sun Mar 17 2024 19:08:51	172.31.80.35	0.00.03.0001	Primary	8 Robyn	w ~
---	--	--	--	------------------------	---	--------------	--------------	-----------	-------------	---------------
Dashboard Klosk mode Business Units	Supervisory 12 FB01 8 R307 Fri Feb 6 10 29:26 2024 Elap	00 CB00 Subscribe sed about 1 month	r (80) ogo	Acknowledge Silence	CPU Solf Monito Ethernet RF Interfere	nce		71 Active	o up / 1 be	wn
IP Links	Dashboard	Acknowledged	a Alerts a Test Mode a						1	Export Report
Users	A No Faults of Resta	-lamii coint 1	285 Peabody St. Peabody MA		N/A				Silence	Ack
Settings	A Watchdog or PBS _	Alarma court T	285 Peabody St, Peabody MA		Dissorticitien N/A			Acij Ali.	Silence	Ack ~
Uve Traffic	() Radio Silence	17	285 Peabody St, Peabody MA		N/A			Ack All	Sillence	Ack
 Geography Help 	NetCon 8 or 7 rep_	18 Alarms spanit	285 Peabody St, Peabody MA		Test Smoke Alarm			Ack All	Silance	Ack
Dark mode	Acknowledge Del_ (i) Periodic transmis_	17 Accret court	285 Peabody St, Peabody MA		N/A Direct (SSRP)			Ack All	Silence	Ack -
AES Self Monitoring	Off Normal Check	Alams court 16	285 Peabody St, Peabody MA 285 Peabody St, Peabody MA		N/A Classrysian N/A			Ack All	Silence	Act

Hide menu

Clicking **Hide menu** hides the text portion of the navigation bar, leaving just the icons.

4	AES	Sound Off	Server Time Thu Jan	⊭ 19 08:15:02 2023	Server IP 10.0.1.61	Version 10.00.01.0013	NCC Instance Primary		Tech support	tina
88	Dashboard	Supervisory 11 CC03 18 F307 00 C801 Subscrib	er CC03	Acknowledge	• CPU	Automation				
Ø	Kiosk mode	Tue Jan 3 10:48:26 2023 Elapsed 16 days ago		Silence	• Ethernet •	RF Interference	ə		305427 Ac	0 Up / 1 D
Å	Business Units									
ø	IP Links	Dashboard							Ex	port Report
自	Subscribers	Unacknowledged 305427 Acknowled	iged 20		nectivity 1					
ò	Hybrids									-
8	Users	A Diagnostic Fault / Low battery 4	638 (New Unacknowledg	jed Alarms (24) >	08:11:31 2023		Silence	Acknowledge	
Â	Dealers	A Diagnostic Fault / Low battery 2	larms count 5	Subscriber Business Unit BAO9 orphon	Date & 71m Thu Jan	∉ 19 04:16:16 2023		Silence	Acknowledge	
She was	Settings	▲ No Faults or Restore of all prior	larms count 5	Subscriber Business Unit	Date & Tim	e 17 01-10-20 0003		Silence	Acknowledge	
Ť	Live Traffic		larme count 5	Subscription Business Linit	Date & Tex	-				
W	Geography	🛆 Charger Fault 2	12 F		Tue Jan	17 09:17:54 2023		Silence	Acknowledge	
0	Help	A No Faults or Restore of all prior 2		Subscriber Business Unit 1056 BUtest	Date & fim Mon Jar	e 16 10:24:52 202	3	Silence	Acknowledge	
Ø.	Light mode	A Charger Fault	larms count s	Subscriber Business Unit	Date & Tim	e	2	Silence	Acknowledge	
2	Hide menu 🔶		hume count	autonubo: Bucinees I Init	Date & Tim					

To expand the navigation bar to its default state, click the **Hide menu** icon.

	🛆 No Faults or Restore of all prior		Subscilber F056	Date & Time Mon Jan 16 10:24:52 2023	Silence
	Expand	Alarms count 4196		Date & Time Mon Jan 16 09:54:30 2023	Silence
U					

8. Processing Alarms

Clearing Alarms Manually

When alarm automation is enabled, no alarms display on the dashboard.

To clear an alarm manually, click the **Acknowledge** button. Once an alarm has been cleared, a green pop-up displays "Alarm has been acknowledged" as confirmation.

Note: The number next to the alarm indicates the number of times the alarm has been triggered.



Silencing Alarms

To silence an alarm, enable **System sound in OFF** (as shown below). Alarms can no longer be silenced by clicking **Sound Off**.

AES	Security by Unit ID Secure Secure 2014 States Secur
Dashboard	
Kiosk mode	Fire 43 9999 18 EI5 08 COC2 Subscriber DU04
Business Units	Wed Feb 2113-47:26 2024 Elopsed IT days ago inco S Active 10p / 8 Down
IP Unks	System Settings
Subscribers	
Hybrids	System Server Network Alarm Automotion Tech Options Subtools Check-in Grace Period Antenna FCC Maintenance
R. Users	Unit Settings Database migration
Dealers	To migrate the database from existing MNR instance please click the button below.
🌮 Settings	Show Elevation in Feet
Live Traffic	
Geography	Import Addresses for Units
(2) Help	Import Address File Database Dumps
💬 Light mode	Select CSV file to upload Create now
Hide menu	Select CSV file :
0	
Software Receiver 35PB	sound setungs
	System sound in OFF

Onscreen Messages

While using the INCC application, the following messages may be displayed. These messages will help you understand the software operating status and the actions you can take.



Exporting Reports

Reports can be exported to CSV, PDF, and XLS and can be customized based on the business unit and subscriber ID. A date range can also be set.

- 1. Click Export Report.
- 2. Use the **Business Unit** and **Subscriber ID** dropdown to specify what to include in the report.
- Use the calendar icon to specify how far back the report should go. To make your selection, click any earlier date. The days between that date and the current date will be included in the report. Click OK.



4. Select a document type, then click **Download**. The download file displays at the top right of the browser.



9. Glossary

Name	Definition
Admin	Admin users can create, read, update, and delete Tier 1, Tier 2, and Tier 3. Admin users can see all data in all BUs.
AES Admin	AES Admin users can create, read, update, and delete Admin, Tier 1, Tier 2, and Tier 3. AES Admin users can see all data in all BUs.
Alarm	A signal from a subscriber or hybrid displayed on the Alarms tab of Dashboard. Can be either Acknowledged or Unacknowledged that splits Alarms between corresponding Dashboard tabs.
Alert	A signal from IP Link displays on the Alerts tab of Dashboard.
BU Statistics	Analysis tools under a particular business unit:
	 Error! Hyperlink reference not valid. Error! Hyperlink reference not valid. Error! Hyperlink reference not valid.
Business Unit	An aggregation entity that keeps and proceeds data for the set of assigned units: subscribers, IP Links, hybrids, and Non-AES.
Check-In	Each AES unit performs "check-ins" with the INCC at least once every 24 hours, which complies with the UL 864 standard for commercial alarm communications. The supervision check-in time can be set to as often as needed for the application.
CID Event Code	Unique code for every event received with Alarm/Alert. A CID code contains info about the unit ID, event type, zone configuration, and other data required for event recognition.
Connectivity	Dashboard tab that displays status of alarm automation.
Dashboard	Dashboard provides visibility into radio signal traffic and overall operation of business unit to ensure a high quality of service on a real-time basis. This dashboard displays critical business unit information in a dynamic and intuitive format to enable a quick assessment of the network's performance and to quickly identify faults that could affect network operation and growth.
DB	Data Base that keeps all data for a particular INCC instance. DB data can be migrated from NMS/MNR.
Dealer	Aggregation entity that keeps a set of subscribers. The dealer can be assigned to a user, and then this user will have access to all subscribers belonging to that dealer.

Name	Definition
Default Business Unit	INCC instance should have at least two business units: Default to proceed data from assigned units, and Orphan to proceed data from unassigned units.
Check-in Grace Period	If set, supervised units checking in will be allowed the grace period after the expiry—before being declared dead.
Fault	Event sent by unit that has issues (antenna cut, battery, and so on).
Frequent Check-Ins	Each subscriber normally transmits check-in messages at regular, pre-set intervals. AES recommends setting the subscriber check-in interval to 23:45. A shorter time interval increases RF traffic in the network, which is why the INNC provides list of check-ins for all units.
Geo Page	Interactive map that displays all units that have coordinates. Geo Page can display data for one BU at a time.
Geocoding	INCC automatically checks and updates the units that have an address, but don't have latitude and longitude coordinates. Also, INCC can validate addresses (on demand).
Health Score	The Network Health Score quantifies overall network operational quality on a scale between 0–100.
Hybrid	An AES unit that can work as a subscriber and as an IP Link.
INCC	Intellinet Control Center. AES Application that can replace MNR and NMS both.
Installer	A software installation package that deploys INCC to a new instance.
IP Link	An AES unit that gets radio signals from subscribers and transmits them to the Internet.
IP Links / Hybrids Load	Ideally, all IP Links in the network should handle roughly equal volumes of RF traffic. (This generalization does not apply when the antennas of two IP Links are deliberately placed within RF range of each other; for example, at a Central Monitoring Station.) Tips for increasing RF traffic handled by an under-utilized IP Link are locate <u>here</u> .
IP Control	IP Control is an internal tool for viewing routing tables.
Kiosk Mode	A set of predefined widgets to visualize the current state of a business unit, usually on large screens.
Late Check-ins	Each subscriber normally transmits check-in messages at regular, pre-set intervals. If the MultiNet Receiver does not receive a check-in message at the expected time, there might be a problem with the

Name	Definition
	subscriber; alternatively, there might be a problem with network performance.
License	INCC license is provided for one instance (for both primary and secondary). A tier 1 license can keep up to 5000 units; a tier 2 license is unlimited.
Line Card	AES's Ademco 685 emulated output format can provide output using at least nine line cards. For example, the INCC can receive signals directly from subscribers via TCP/IP. This is referred to as MCT or Multiple Communication Technologies. To distinguish between messages that arrived via RF through an IP Link and directly through IP, a different line card is assigned.
Link Layer	The link layer defines how many hops a subscriber takes to reach an IP Link. A link layer of two indicates there is one subscriber between the subscriber the reading is being taken from and the IP Link.
Live Traffic	Live Traffic is a constantly updated list of all events produced by all units under an INCC instance. Also, every particular unit has a Live Traffic tab that displays its own events.
Mesh	Mesh networks built using patented AES-IntelliNet technology consist of many subscriber units installed in concentric rings around an IP Link, which is a major component.
Mesh Ack-Delay	Normally, after a subscriber transmits an RF packet, the recipient of the packet returns a message to the sender, acknowledging receipt of the packet. If the issuing subscriber does not receive the acknowledgement message within the configured Communication Timeout Delay period, then it indicates in a subsequent message that an Ack Delay has occurred.
Mesh Hops	When a subscriber transmits an RF packet, that packet travels through the mesh network to an IP Link or a hybrid subscriber before reaching a INCC/MultiNet receiver. If the IP Link is within direct reach, the subscriber sends the packet to the IP Link; otherwise, it sends the packet to another subscriber along a route leading to the IP Link.
	Each step in the route from subscriber to IP Link or hybrid subscriber is called a hop. As network conditions evolve, the route, and consequently the number of hops from a given subscriber to an IP Link, can change.
Mesh NetCon	NetCon is a measurement calculated by a subscriber to determine the level of confidence that its transmissions will reach an IP Link. Only fire

Name	Definition
	subscribers report their NetCon statuses, as either high or low, in messages sent to the INCC/MultiNet receiver.
	In general, NetCon is an abbreviation for Network Connectivity. It is a rating of the number of radio frequency (RF) paths from a subscriber to other subscribers installed in the mesh network. The mesh refers to all the subscriber units on a network of the same frequency and cipher code.
Migration	Database migration allows a seamless transition from an existing MNR to the INCC. During migration, MNR DB dump data is transformed and put into the INCC database.
MNR	AES MultiNet receivers are built to receive all alarm signals from the AES mesh network via IP Links, hybrid subscribers, and MCT subscribers. The receiver's robust hardware processes and forwards all alarm information to the central station alarm automation software.
Network Pulse	The Network Pulse dynamically tracks key performance indicators including subscriber check-ins and Acknowledgment delays over the most recent 10-day period.
NMS	Network Management System interfaces with the MNR to provide a complete end-to-end mesh radio network monitoring and management platform. Unlike other communication technologies, the NMS tool was developed to give users full visibility of a network and its performance via real-time dashboards, notification alerts, and map visualizations.
Non-AES Unit	Custom object that can be added under a particular business unit by the admin. Non-AES units can be displayed on Geo Page, but the INCC is not able to process any data from non-AES units.
Orphan	An INCC instance should have at least two BUs: Default to proceed data from assigned units, and Orphan to proceed data from unassigned units.
Path	Alarm signals transmitted from a subscriber will be repeated and acknowledged by other subscribers within its routing table. The signals will travel through the mesh network via the shortest path available to an IP Link. The IP Link receives and acknowledges the alarm signal.
Permission	All user roles have flexible permission settings that can be managed by admins.
Primary	Main INCC instance. All data is being constantly synced to the secondary.

Name	Definition
Recipient	The INCC supports sending notification to persons not registered as an INCC user. Notification is initialized by <u>Trigger</u> . A recipient can be added to BUs by the admin.
Restoral	Specific code that says the alarm/alert is fixed.
RF	Radio frequency—the main channel for radio subscribers.
RF Interference	Radio frequency interference is the conduction or radiation of radio frequency energy that causes an electronic or electrical device to produce noise that typically interferes with the function of an adjacent device.
Role	The set of permissions. The INCC has an AES admin role and four user roles:Admin
	Central Monitoring Station Admin (CMS Admin)/tier 1
	Manager/tier 2
	Operator/tier 3
	A user can see other users and their data only if the other roles are lower.
Route	See Path.
Routing Table	A routing table exists for each subscriber on a network. It can contain up to eight viable transmission routes. The routing tables are visible only via a handheld programmer or through IP control. Routes, also known as paths, are what subscribers will depend on to deliver alarm signals back to the central monitoring station. This table is dynamic, meaning that as conditions change (i.e., other subscribers have troubles or are removed from the network), the table changes and other subscribers are entered into the list. The best route is always first on the list.
Secondary	Standby INCC instance to keep the system up if the primary is down.
Service Log	Occasionally, subscribers may require service, and this log identifies all the subscribers in need of service.
SMNR	Software MultiNet Receiver, another name for the INCC.
Subscriber	Hardware unit that monitors fire or burglary and sends signals to the INCC.

AES IntelliNet® Network Control Center (INCC) Installation, Configuration, and Operations Manual

Name	Definition
Subscribers over time	This chart displays how many signals the INCC received from every model of connected subscribers.
Tier 1	Role: central monitoring station admin (CMS admin)
Tier 2	Role: manager
Tier 3	Role: operator (this role can access only one BU)
Top Repeater	To convey packets along their route toward an IP Link, it's normal for some subscribers to repeat RF packets originating from other subscribers. However, excessive packet repetition by a single subscriber may reduce network efficiency and cause delays.
Top Talker	Ideally, all subscribers in the network should generate roughly an equal numbers of RF packets. Excess RF traffic from a single subscriber may reduce network efficiency by consuming airtime. Tips for reducing excess activity on a subscriber are described <u>here</u> .
Total Signals Received	A business unit statistics chart that displays the number of signals received from all units.
Trigger	Trigger is a customizable event to send a notification to recipient.
TTL	Time to Live period that can be set for check-in, status, alarm, trouble, and restoral.
UL	The UL enterprise is a global safety science company that provides certification of safety standards.
Unit	AES/non-AES hardware module.
Updater	Software installation package that provides seamless update for an existing INCC.
User	A registered person who has access to the INCC.
Zone	Adjustable hardware part of subscriber/hybrid.

10. Version Control Schema

AES has established the following version control schema to align itself with contemporary software development practices and to provide greater consistency and visibility into software releases. The software recevier version number begins **v10**, followed by other digits. The details on version identification are described in the diagram below:



* The second, third, and fourth decimal places increment beginning with the number 1 and will always be represented as a whole number. The third decimal place has a leading zero, whereas the second and fourth decimal places do not have leading zeros.

** Other designators are used internally to distinguish between the alpha and beta releases ("a" versus "b"). Development releases, designated by an "x", are also used internally.

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