

SiteShadow

Operation and Maintenance Manual

(SiteShadow-OMM-004)

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JVN Communications Inc. 3120 Fire Road Egg Harbor Township, NJ 0823 609-569-1477 www.jvncommunications.com



Contents

1.	SiteShadow Overview
2.	Getting Started 4
2.1.	SiteShadow - Wizzard6
2.2.	SiteShadow - Configuration Files7
3.	IFShadow 8
3.1.	IFShadow - Options
3.2.	IFShadow - Send Message10
3.3.	IFShadow – Restore Base
4.	Relayd12
4.1.	Relayd – Configuration Files13
4.2.	Manage relayd14
5.	AViD
6.	SDRR
7.	Status Tab
Арр	endix A. Revision History



1. SiteShadow Overview

The JVN SiteShadow tool executes and manages applications that are needed to sniff live Interfacility and surveillance connections while forwarding messages to a "shadowing" system. The applications necessary for this functionality are ifshadow, relayd, and avid.

Ifshadow - interfacility messages

relayd - surveillance data

avid - graphical display of relayd message counts



2. Getting Started

SiteShadow is launched from the command line of a konsole window or through the SiteShadow wizard. Executing 'siteshadow' with no options will display usage information



SiteShadow command line options

srcCfgFile	The source configuration file that tells SiteShadow where to receive the data from.
labCfgFile	The lab configuration file that tells SiteShadow which devices to use.
offset=offset	The amount of time to hold the data before sending it. The value is 100ths of a second and the default is to send the data immediately
ifshadow=host,stars	Starts IFShadow. "host" is the 3 letter identifier of the HOST system in the config file. "stars" is the 3 letter identifier of the system that is being connected to.



ifshadowPlayback=[filename]	Creates an SDRR playback file. By default if no filename is specified /tmp/playback.xml.MMDDYYYY.hhmm will be created.
enablehandoffs	Enables handoffs from HOST to STARS on start up. By default handoffs are disabled.
disable field 48	Disables field 48 in the accept transfer (TA) message
avid	Starts AViD to display a graphical count of surveillance statistics.
nodatadist	Do not start datadist process
sdrr="sdrr config"	Starts SDRR using the configuration file specified. Can be used for ETMS, static ADS-B message generation, etc
nofullscreen	Will not open SiteShadow to the full size of the screen
native	Specify the graphics engine
raster	Specify the graphics engine
single	Will cause SiteShadow to exit if an instance of SiteShadow is already running

Sample command line execution

siteshadow /usr/local/cfg/src.xml /usr/local/cfg/lab.xml --ifshadow=zfw,dfa --avid --sdrr=/usr/local/cfg/sdrrCfg.xml



2.1. SiteShadow - Wizzard

To use the SiteShadow wizard execute "SiteShadow" in the konsole. The options that are listed above can be selected through a GUI. The required information is the "Source Configuration" and the "Lab Configuration" after those two items are filled in the "Finish" button is enabled. See below for what the SiteShadow wizard looks like.

× 🛛	SiteShadow	$\odot \odot \odot \odot$
SiteShadow		
⊂ Source Configuration —		
		Browse
Lab Configuration		
		Browse
_IF Shadow		
Host Name:		
STARS Name:		
SDRR Configuration		
		Browse
Filename:		Browse
Offset		
0		
Options-		
Start AViD	Enable Handoffs	
Disable datadist	Single Instance	
Disable Field 48		
	Circle I.	
	Enish	Cancel

SiteShadow Wizard



2.2. SiteShadow - Configuration Files

Below are examples of the srcCfgFile and labCfgFile configurations files.

srcCfgFile:

```
<root>
 <sources>
   <radar name="atl" device="multi:eth1:239.1.1.1/1900" type="asr9-modes" magdev="-3.00"
scantime="4.75" elev="1028.00" pos="+33:37:43.50,-084:25:48.20"/>
   <arts name="aaa" device="multi:eth1:239.1.1.1/1909" facName="aaa" autoTR="0"/>
   <host name="ztl" facName="zct" facID="t" autoTR="0" autoTA="10" tangent="+34:21:24.98,-</pre>
084:02:28.97" org="-424.000,-365.625">
    <artsio name="aaa" device="multi:eth1:239.1.1.1/1910" facName="aaa" magdev="-3.00"</pre>
tangent="+33:37:44.00,-084:25:48.00"/>
   </host>
  </sources>
</root>
labCfgFile:
<root>
 <sources>
   <radar name="atl" device="/dev/srr0" type="asr9-modes" magdev="-3.00" scantime="4.75"
elev="1028.00" pos="+33:37:43.50,-084:25:48.20"/>
   <host name="ztl" facName="zct" facID="t" autoTR="0" autoTA="10" tangent="+34:21:24.98,-</pre>
084:02:28.97" org="-424.000,-365.625">
    <artsio name="aaa" device="/dev/if0" facName="aaa" magdev="-3.00" tangent="+33:37:44.00,-</pre>
084:25:48.00"/>
   </host>
 </sources>
</root>
```

In the above configuration files the shadow data comes in on the network device eth1 and is then sent out to a locally connected system by devices on the SiteShadow machine /dev/srr0 and /dev/if0. This is just a simple example showing radar and Interfacility messages being shadowed. More complex configurations can be made to shadow radar, Interfacility, ADS-B and DASI data to the system.



3. IFShadow

The JVN IFSHADOW application safely sniffs live IFDT connections with a receive port while passing the IFDT data along a separate bidirectional port to a terminal system/s, (STARS, CARTS, TAMR...). IFSHADOW acts as a translator between what it receives from the live IFDT and what it sends to the terminal system/s, converting ECID and TCIDs to match the connected terminal system/s. The terminal system/s actually receives what the real HOST sends and is able to respond back with DA, DR because IFSHADOW is in the middle acting like a smart switch. This allows controller/trainees to actually have real flight plans populate their tab list and auto acquire on tracks.



Interfacility Tab



3.1. IFShadow - Options

IFSHADOW includes the ability to pass handoff messages to and from the Host/Terminal. This allows controller/trainees to receive the actual arrival/over-flight handoffs from the center. To enable this functionality select "Enable Incoming Handoffs" from the options menu. They are also able to handoff departures tracks to the simulated center, or even to adjacent facilities that IFSHADOW is simulating. The controller will be able to see the response DA/DR messages as if the real HOST/Terminal responded. This is a big help while testing handoffs to adjacent sites.

IFSHADOW includes the ability to enable field 48 in the TA message. By default this option is enabled to include filed 48. Some sites are configured to not receive filed 48 so disabling this will allow the site to mimic the TA message that they would receive. This option can be toggled while running by selecting "enable filed 48" from the options menu or disabled during application startup with the command line option "--disablefield48". See the image below for the options menu.

۲	\odot	Site shadow: /tmp/lab.xml Host: zdc pct		\odot \otimes \otimes
Fil	e		04/0	5/2013 11:59:45
	nterfacility Status			
	Options <u>A</u> bout			
	Enable Field 48	Shadow	Send Message	Restore Base
		00:00:00.00 STARS Name: PCT		

IFShadow Options



3.2. IFShadow - Send Message

IFSHADOW includes a helpful send message button to allow messages to be input real-time such as flight plans, amendments, etc. to their terminal system. This functionality has proven to be a valuable test feature while debugging IFDT issues. It also allows users to manually send flight plans to tag with targets of opportunity on the glass.

File 07/06/2012 17:241 Interfacility Status Interfacility Status Interfacility 17:233:03 50 ACA1723055047 : TU DFA 040 (-11100-56 375)(-3.115):* 17:233:04 50 FA172737504 ac Control 000 -: Interfacility 17:233:03 50 ACA1723055047 : TU DFA 040 (-11100-56 375)(-78.109):* 17:233:04 50 FA1727475 interfacility Interfacility 17:233:04 50 FA1727475 DA1 000 2:07172391 := 0:00:00:00 STARS Name: DFA 17:20:343:07 DFA172000 := 17:233:04 50 FA1727475 DA1 000 2:07172092 := 0:00:00:00 STARS Name: DFA 17:20:343:07 DFA1720740 := 17:233:04 50 FA1727001 := 17:20:343:07 DFA1727474 := 17:20:343:07 DFA1727474 := 17:233:54 80 ACA1724850 DFA :: TU DFA 040 (-11:00-56:250)(-1.115):= 17:20:355 DFA172000 := 17:20:355 DFA172000 := 17:233:54 80 ACA1724850 DFA :: TU DFA 040 (-27:22:0-62:730) := 17:21:06:15 DFA1721001 := 17:21:06:15 DFA1721001 := 17:233:64 80 ACA1724850 DFA :: TU DFA 040 (-27:22:0-62:730) := 17:21:06:15 DFA1721001 := 17:21:06:15 DFA1721001 := 17:233:64 80 ACA1724850 DFA :: TU DFA 060 (-11:00-0:56:250):= 17:21:06:15 DFA1721001 := 17:21:06:15 DFA1721001 := 17:233:64 80 ACA1724850 DFA :: TU DFA 060 (-12:00-0:- 17:21:06:15 DFA1721001 := 17:21:06:15 DFA172100 := <td< th=""><th>O siteshadow</th><th></th><th>_ D X</th></td<>	O siteshadow		_ D X
Interfacility Surveillance Options About Status Interfacility Send Message Interfacility Shadow Send Message Interfacility Status Interfacility Send Message Interfacility Status Status Status Send Message Interfacility Status Status Status Send Message Interfacility Status Status Status	File	07/06	/2012 17:24:11
Options About Status Interfacility Shadow Send Message Division Shadow Send Message	Interfacility Surveillance		
Options About Status Interfacility Send Message Live Shadus Shadus Send Message 17:233:043 CAT/233907A: TU DFA 040 (-11 000.56.375) (-3.115) :* CAT/233907A: TU DFA 040 (-11 000.56.375) (-3.115) :* CODO 00.00 STAME Manne: DFA 17:233:043 DFAI/24773 : DA 040 (-21 C7 25.0.62.275) (-7.91.09) :* 17:20.34.35 C7D HAT/20001 :# 00A 001 ZCF1723822 :H T/20.34.35 C7D HAT/20001 :# 00A 001 ZCF1723822 :DFW :# 17:233:20 D CF1723822 :DT DFA 080 (-3.75.0.42.91) :* 17:20.34.35 C7D HAT/20001 :# 00A 001 ZCF1723822 :DFW :# 17:20.34.35 C7D HAT/20001 :# 00A 001 ZCF1723822 :DFW :# 17:233:37 02 ZCF1723822 :DT DFA 081 (-27.25.0.62.750) (-7.91.08) :* 17:20.35.75 DFAI/27002 :# 27:21.01.01.02 :# 17:233:38 70 EXCIT21000 :: DFAI/24774 :: DFAI/24774 :: 17:20.01.02 :# 17:233:38 70 EXCIT21000 :: DFAI/24774 :: DFAI/24774 :: 17:20.01.02 :# 17:233:01 C DFAI/24775 :: IF DFAI/24776 :: IF DFAI/24776 :: 17:20.01.02 :# 17:233:01 C DFAI/24776 :: IF DFAI/24776 :: IF DFAI/24776 :: IF DFAI/24776 :: 17:233:01 C DFAI/24776 :: IF DFAI/24776 :: IF DFAI/24776 :: IF DFAI/24776 :: 17:233:01 C DFAI/24776 ::	,		
Status Interfacility Shadow Send Message 17.23 20103 CATY 229850564 ::10 UPA 040 ::11000 :56.375 (1-3115) ::* 17.201000 ::P 099812775W 1/RE9L 2403 SLX A1734 160 DT0 ::* 17.23 3012 CATY 229850564 ::10 UPA 061 (27.250-62 R57) (7-3.109) ::* 17.201000 ::P 099812775W 1/RE9L 2403 SLX A1734 160 DT0 ::* 17.23 3024 CATY 224850967A ::10 UPA 061 (27.250-62 R57) (7-3.109) ::* 17.2013272 CT720000 ::P 099812775W 1/RE9L 2403 SLX A1734 160 DT0 ::* 17.23 3024 CATY 224850067A ::10 UPA 061 (27.250-62 R57) (7-3.108) ::* 17.2013564 ZCF1720000 ::P 000242311 CFW 0753 2300 UKW A1730 350 DFW ::* 17.23 3035 CATY 224850067A ::10 UPA 061 (27.250-62 R50) (-3.115) :* 17.2013564 ZCF1720000 ::P 00024724774 CFT 24000 ::* 17.23 37.71 DFA1724775 SA 64 DAT 244775 :* 17.201373 DA 41724775 :* 17.2103127000 ::: 0 004 ACG1721000 ::: 17.23 38 64 CFT 23800 :: 10 DFA 040 (::11000 ::: 17.2103127000 ::: 17.210127000 ::: 17.210127000 :::: 17.23 38 64 CAT7248600FA ::: DFA1724777 ::: 17.210127000 ::: 17.210127000 ::: 17.210127000 ::: 17.23 38 64 CFT 23800 ::: D GA1724777 ::: IFO00471 ::: IFO00471 ::: IFO00471 ::: 17.23 38 64 CA17248050FA :::: D GA1724775 ::: IFO012471 ::: I	Options About		
Live Shadow Send Message 17:23:30:35 CCA17238920 - TA DRX 000 - 27 0000.0000 STABS (Marks (Marks 07A) 0000.0000 STABS (Marks 07A) 17:23:30:35 CCA17238920 - TA DRX 040 (-11:000-56:375) (-3:115) : * 17:20:35:45 CCF1720000 : #0 DRX 040 (-11:000-56:250 (-1:1:15) : * 17:20:35:45 CCF1720000 : #0 DRX 042 CCF1723822 (-1:1:2:1:1:2:1:2:1:2:1:2:1:2:1:2:1:2:1:2	Status Interfacility		
Live Shadow Send Message 17:23:30:16 ACM122385:0PA :::U DFA 040 (-11:00:-56:375) (-3.115) ::* 00:00:00:00 05:1485 Nume: DFA 17:23:30:16 ACM122385:0PA :::U DFA 060 (-12:72:00:-62:875) (-78:109) ::* 17:20:30:16 ACM122385:0PA :::U DFA 060 (-12:72:30:-62:875) (-78:109) ::* 17:23:30:16 ACM122385:0PA :::U DFA 060 (-12:72:30:-62:875) (-78:109) ::* 17:20:30:16 ACM122382:0PA :: 17:20:10:12 ACM122382:0PA :: <td< td=""><td></td><td></td><td></td></td<>			
17:23:30 Column 2000 0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:0:	Live	Shadow Ser	nd Message
17:24:08.97 ACA1724877DFA ::TU DFA 061 (26:500-61.750)(-70.114) ::* 17:24:09.82 ACA1724877DFA ::TU DFA 061 (26:500-61.750)(-70.114) ::* 17:24:11.76 DFA1724018 ::DA 018 ZCF1724017 ::* 17:24:11.76 DFA1724018 ::DA 018 ZCF1724017 ::*	17:23:30.36 ACA17238580FA ::TU DFA 040 (-11.00056.375 17:23:30.36 ACA17238580FA ::TU DFA 061 (27.25062.875 17:23:32.12 ACA17248580FA ::TU DFA 061 (27.25062.875 17:23:32.07 ZCF1723822 ::TD DFA 080 CCF1723822 DFA1W ::* 17:23:32.07 ZCF1723822 ::TD DFA 080 ZCF1723822 DFA1W ::* 17:23:32.07 ZCF1723822 ::TD DFA 080 (-34.750.43.250) (-3 17:23:32.00 DFA1724774 ::DA 080 ZCF1723822 DFA1W ::* 17:23:32.80 DFA1724774 ::DA 080 ZCF1723822 DFA1W ::* 17:23:32.80 DFA1724775 ::TA 464 01W ::* 17:23:37.82 ZCF17238023 ::DA 464 DFA1724775 ::* 17:23:38.04 ZCF17238023 ::DD FA061 (27.25062.750 17:23:38.04 ZCF17238023 ::D 0FA097 (-2.0001.750 17:23:38.04 ZCF1723825 ::FP 6035KW364Z 1/CRJ7 26 17:23:40.69 DFA1724777 ::'U 047 (-2.0002.000) (- 17:23:41.67 ZCF1723825 ::FP 6035KW364Z 1/CRJ7 20 17:23:42.40 DFA1724776 ::D DFA 085 (-30.250.48.3 17:23:44.55 ACA1724865DFA ::TU DFA 061 (27.125.62.375 17:23:45.50 ACA1724865DFA ::TU DFA 061 (26.75062.500 17:23:45.50 ACA1724865DFA ::TU DFA 061 (26.75062.500 17:23:45.50 ACA1724850FA ::TU DFA 061 (26.75062.500 17:23:45.50 ACA1724850FA ::TU DFA 061	Shadow Ser (1-3.115) ::* 0::00::00:00 STARS Name: DFA 17:20:34:36 ZCF1720000 ::FP 099N277SW 1/BE9L 2403 SLX A1734 160 DT 17:20:35:65 DFA1720001 ::FP 098D401ZCF1720000 ::* 17:20:35:65 DFA1720002 ::DA 001 ZCF1720000 ::* 17:20:35:65 DFA1720002 ::DA 002 ZCF1720001 ::* 17:20:35:65 DFA1720002 ::DA 002 ZCF172002 ::* 17:21:05:73 DFA1721003 ::* 17:21:05:73 DFA1721003 ::FP 098E6F331D DFWE135 2346 RCL P1745 370 17:21:06:13 DFA1721003 ::FP 073AAL1672 DFWB738 2340 RBL P1745 370 17:21:06:13 DFA1721003 ::FP 073AAL1672 DFWB738 2340 RBL P1745 370 17:21:06:13 DFA1721003 ::FP 073AAL1672 DFWB738 2340 RBL P1745 370 52cf1721003 ::* ination DFA Acid EGF3204 Send Message From ZCF Send Cancel Send Cancel Send Cancel Send Cancel Send Cancel Send Cancel Sect7721008 ::* 17:21:13:63 DFA1721011 ::DA 011 ZCF1721010 ::* Send Cancel Sect7721008 ::* Sect7721008 ::* 17:21:13:63 DFA1721011 ::DA 011 ZCF1721010 ::* Sect7721008 ::* Sect7721008 ::* Sect7721008 ::*	Ind Message IDFW (0)* ID* ID* <td< td=""></td<>

IFShadow Send Message Dialogue



3.3. IFShadow – Restore Base

The Restore Base button under the interfacility tab is used to resend all of the active Flight Plans that are in the system. This is useful to use after doing a cold start or reset of the automation system.

File		04/17/2015 14:06:30
Interfacility Status		
Options About		
Status Interfacility		
Live	Shadow	Send Message Restore Base
14:05:12.77 PPP1405344 ::10 595 (1.500,-7.500)(301,-17) ::*	آ	
14:05:13.57 PPP1405345 ::TB 88T ::*	00:00:00.00 STARS Name: PPP	
14:05:17.77 PPP1405346 ::TU 595 (2 000 -7 500)(303 -17) ::*	14:03:00.38 ZCN1403000 ::FP 4	94FFT1035 ILG/A320 3017 STO P1418 380 ::*
14:05:22.77 PPP1405347 ::TU 595 (2.375,-7.500)(305,-14) ::*	14:05:00 37 ZCN1405001 ::EP 5	5TAAL1826 PHI /A321 2702 PTW P1420 320 ···*
14:05:27.77 PPP1405348 ::TU 595 (2.750,-7.500)(305,-15) ::*	14:05:00.37 PPP1405002 ::DA 0	02 ZCN1405001 ::*
14:05:32.77 PPP1405349 ::TU 595 (3.125,-7.500)(306,-15) ::*	14:05:00.67 ZCN1405002 :: FP 9	28AAL672 PHL/A321 1161 MXE P1420 300 ::*
14:05:3/.// PPP1405350 :: IU 595 (3.500,-/.500)(305,-15) ::*	14:05:00.67 PPP1405003 ::DA 0	03 ZCN1405002 ::*
14:05:40.86 PPP1405351 ::DT ZCN1405806 IZZ MONITOR ::*	14:06:27.96 ZCN1406003 ::FP 5	51AAL1826 PHL/A321 2/02 PTW P1420 320 .:*
14:05:42.77 PPP1405352 ::TU 595 (3.875,-7.625)(305,-16) ::*	14:06:27.96 ZCN1406005 ::FP 4	94FFT1035 ILG/A320 3017 STO P1418 380 ::*
14:05:42.86 PPP1405353 ::TB 27T ::*	14:06:27.96 PPP1406004 ::DA 0	02 ZCN1 406003 ::*
14:05:43.07 ZCN1405807 ::DA 27T PPP1405353 ::*	14:06:27.96 PPP1406005 ::DA 0	03 ZCN1406004 ::*
14:05:47.77 PPP1405354 ::10 595 (4.375,-7.625)(306,-16) ::*	14:06:27.96 PPP1406006 ::DA 0	01 ZCN1406005 ::*
14:05:57.77 PPP1405356 ::TU 595 (5.1257.625)(30716) ::*		
14:05:58.47 PPP1405357 ::DM 174 1405 ::*		
14:05:58.96 ZCN1405808 ::DA 174 PPP1405357 ::*		
14:06:02.77 PPP1406358 ::TU 595 (5.875,-7.625)(308,-16) ::*		
14:06:07.77 PPP1406359 ::10 595 (6:000,-7:625)(309,-16) ::*		
14:06:10.59 PPP1406360 ::DA 981 ZCN1406809 ::*		
14:06:12.77 PPP1406361 ::TU 595 (6.750,-7.750)(318,-17) ::*		
14:06:17.27 PPP1406362 ::TI N00 046 (-4.000,-3.875)(-68,-251) ::*		
14:06:17.67 ZCN1406810 ::DA 046 PPP1406362 ZCN68 ::*		
14:06:19.27 PPP1406364 ::TI N00 300 (22.250.11.875)(18183) ::*		
14:06:19.67 ZCN1406811 ::DA 300 PPP1406364 ZCN68 ::*		
14:06:21.27 PPP1406365 ::TB 281 ::*		
14:06:21.47 ZCN1406812 ::DA 281 PPP1406365 ::*	F	
-4 000 -4 125)(-30 -269) ··595 (7 625 -7 750)(326 -13) ··*		
14:06:27.86 PPP1406367 ::TU 300 (22.250,11.375)(17,-181) ::046 (
-4.000,-4.875)(52,-286) ::595 (8.125,-7.750)(338,-20) ::*		

IFShadow Restore Base Functionality



4. Relayd

This application is a process that relays JVN formatted messages. JVN formatted messages can be serial radar data, ADS-B data, Interfacilty messages or DASI. The devices used for input and output are defined in configuration files.

Usage : relayd inputCfg [outputCfg | -a dir] [-dtq]

- -a dir Auto-create output files in specified dir. dir will be created if needed.
- -d Turn debug messages on.
- -q don't use QCoreApplication eventLoop (do select ourselves).
- -t Don't fork into background.



4.1. Relayd - Configuration Files

Below are examples of the inputCfg and outputCfg configuration files.

input configuration:

<root>

```
<sources>
<radar name="atl" device="/dev/srr0" type="asr9-modes" magdev="-3.00" scantime="4.75"
elev="1028.00" pos="+33:37:43.50,-084:25:48.20"/>
<arts name="aaa" device="/dev/if1" facName="aaa" autoTR="0"/>
<host name="ztl" facName="zct" facID="t" autoTR="0" autoTA="10" tangent="+34:21:24.98,-
084:02:28.97" org="-424.000,-365.625">
<artsio name="aaa" device="/dev/if2" facName="aaa" magdev="-3.00" tangent="+33:37:44.00,-
084:25:48.00"/>
</host>
</sources>
</root>
```

output configuration:

```
<root>
<sources>
<radar name="atl" device="multi:eth1:239.1.1.1/1900" type="asr9-modes" magdev="-3.00"
scantime="4.75" elev="1028.00" pos="+33:37:43.50,-084:25:48.20"/>
<arts name="aaa" device="multi:eth1:239.1.1.1/1909" facName="aaa" autoTR="0"/>
<host name="ztl" facName="zct" facID="t" autoTR="0" autoTA="10" tangent="+34:21:24.98,-
084:02:28.97" org="-424.000,-365.625">
<artsio name="aaa" device="multi:eth1:239.1.1.1/1910" facName="aaa" magdev="-3.00"
tangent="+33:37:44.00,-084:25:48.00"/>
</host>
</root>
```

Using relayd with these configurations will cause any data from srr0/if1/if2 to be sent out of the network device eth1.



4.2. Manage relayd

Manage relayd is a convenient way to start, stop, restart or check the status of relayd. This is performed through the K-menu or the main panel. Left clicking on the K-menu you will find a section called "**Manage relayd**". Within the submenu there are four options

Restart/Start/Status/Stop clicking on one of these will perform that action. If setup in the main panel left clicking on the icon will pop up a similar menu. After clicking on one of the options a window will be displayed with feedback from the action performed.



Manage relayd through the K-menu





Manage relayd through the main panel



Manage relayd status feedback



5. AViD

The Airspace Visualization Display (AViD) displays a graphical representation of messages counts from the relayd process.

🔵 💽 sitesl	hadow														
File	Current ill													07/06/2012	7:44:39
Interfacility	Survein														
Surveillan	ce Statisti	cs 🛛 🗌													
Windows															
	8	_	_	_	_	_	dfe	_	_	_	_	ĺ	- 0 ×		
	dfe											F	lesetStats		
		TOT	DON	0.00	DDTOO	OBTOO	OTAT	14/14	MARK	0010	18137	MALE	0/0/0		
	Chan 0	21374	9949	5HC 7375	112	236	222	VVX 0	3480			MALF	STNC 0		
	Chan 1 Chan 2	21376 21374	9774 9827	7443	112 112	221 215	223 211	0	3603 3653	0			0		
	Chan 3	14956	0	0	0	U	0	14318	0	638			o		

AViD Surveillance Tab



6. SDRR

SiteShadow can also include the use of SDRR to simulate ETMS or DASI data interfaces. When the --sdrr option is used an SDRR tab will appear in SiteShadow. Clicking the SDRR Tab will allow the user to display ETMS or DASI interaction with the system.

Site shadow: ,	/usr/local/cfg/Scenario/PHL/PHL-config.xml Host: zny p	pp <@sirs12-master> 💿 💿 🛞
File		04/17/2015 12:25:00
Interfacility Surveillance SDRR Sta	atus	
Status ETMS DASI		
sees tmu	♀ ≈ x	
TR XON XOFF		
12:23:55.63 START		
12:24:18:35 *L082 TR XXX TEST*		
12:24:25.85 *X001 TR LLL TEST*		
12:24:48.41 *L085 TR XXX TEST*		
12:24:56.03 *X003 TR LLL TEST*		
12:24:56.15 *L087 DT X003 TEST*		

ETMS simulation Data under the SDRR Tab



Under the DASI tab the user can adjust the Update Period or the DASI value that is sent to the system.

Site shadow: /usr/local/cfg/Scenario/PHL/PHL-config.xml Host: zny ppp <@sirs12-master>	
File	04/17/2015 12:25:17
Interfacility Surveillance SDRR Status	
Status ETMS DASI	
see dasi-apc (FA10454 mode) $\widehat{\mathbf{v}} \otimes \widehat{\mathbf{x}}$	
sendmessage Adjust Opdate Period Adjust DASI Setting	
12:24:31.39 29.92 12:24:36.40 29.92 12:24:41.41 29.92 12:24:46.50 29.92 12:24:45.51 29.92 12:25:01.56 29.92 12:25:06.66 29.92 12:25:11.67 29.92 12:25:16.78 29.92	
svæ dasi-lvk (FA10035 mode) 👽 🗟 🕱	
SendMessage Adjust Update Period Adjust DASI Setting	
00:00:00.00 Period set to 15 00:00:00.00 Value changed to 29.920 12:23:56.14 29.920 12:24:11.29 29.920 12:24:41.41 29.920 12:24:56.53 29.920 12:25:11.67 29.920	

DASI simulation under the SDRR Tab



7. Status Tab

The Status Tab in SiteShadow displays useful information about the system status and device connections. Red errors may be displayed in the tab alerting the user to potential problems with the configuration. Some errors that the user may be alerted to are the the "Device or resource is busy" which means that the radar device is already transmitting data. The user should check that no other scenarios are running using the devices.

• •	Site sha	dow: /usr/lo	al/cfg/Scenario/F	PHL/PHL-config.xml	Host: zny ppp ·	<@sirs12-master>		\odot \otimes \otimes
File							04/17/2015	12:25:32
		Status						
Internacinty Surveir	ance John	Jorarus]
12:23:54.84 started d								onfig.xml
12:23:54.87 started if:					ocal/cfg/Live/ph	l-input.xml /usr/local/	/cfg/Scenario/PHL/PHL-	
config.xmlhost=zny -	-stars=pppna							
12:23:54.88 started a								
12:23:54.88 started si								
12:23:54.89 datadist:								
12:23:54.89 datadist:								
12:23:54.89 datadist:								
12:23:54.89 datadist:							3"	
12:23:54.89 datadist:								
12:23:54.89 datadist:					60.28.30/5995		160.28.30/59954	
12:23:55.04 datadist:		lp establish						
12:23:55.04 datadist:		est for "ads		:multi:eth4:239.1				
12:23:55.05 datadist:	Relay for ads-sv	ol establish	ed.					
12:23:55.05 datadist:		est for "dov						
12:23:55.05 avid: usin	g native graphic	ssystem						
12:23:55.10 datadist:	Error establishi	ng relay for		utput dov : Error	opening /dev/a	sr11-9: Device or res	source busy.	
12:23:55.10 datadist:	Sent relayReque							
12:23:55.18 datadist:		ng relay for			pening /dev/irr.		e busy	
12:23:55.18 datadist:								
12:23:55.27 datadist:			wri: (dest): ou	Lput wri: Error o			ource busy	
12:23:55.27 datadist:								
12:23:55:35 datadist:								
12:23:55.43 datadist.								
12:23:55 43 datadist						52> multi-eth3-23	9 160 28 30/59952	
12:23:55 51 datadist								
12:23:55.51 datadist:	Sent relavReque							
12:23:55.59 datadist:	Error establishi	ng relav for		utput phl : Error d	penina /dev/srr	0: Device or resourc	ce busy	
12:23:55.59 datadist:	Sent relavReque	est for "ads	1090": sirs3-iv		160.28.30/599		9.160.28.30/59951	
12:23:55.67 datadist:								



Appendix A. Revision History

July 5, 2012 (Version 1.1.4 Rev. 1)

Initial Publication

April 3, 2013 (Version 3.2.2 Rev. 2)

• Editorial Changes

June 3, 2013 (Version 3.2.4 Rev. 3)

• Added Mange relayd

April 16, 2015 (Version 3.5.5 Rev. 4)

- Editorial Changes
- Added wizard subsection
- Added cfg subsections
- Added IFShadow Options/Send Message subsections
- Added SDRR Section
- Added Status Section