

Important note regarding time:

The Watch4net listener receives notifications time from SAM domain. Since notifications can come from another domain, it's highly important to keep all servers time in sync (Watch4net, SAM and every domains server). Out of synchronization time on servers can lead to erroneous reporting of notifications in Watch4net.

Real-Time grapher:

The emc-smarts-reports SPB will install configuration for the Real-Time grapher. After configuring the SPB with correct broker information, please restart Tomcat server in order to make this change effective.

Smarts health:

EMC Smarts health collection is now part of the emc-smarts-collect package. No configuration is required if running EMC Smarts 9.2 and above on Linux platforms.

For EMC Smarts 9.2 and above running on Windows, the processor, memory, and other domain information is unavailable until the icStats helper is set up.

To configure the icStats helper for EMC Smarts 9.2 and above running on Windows:

1. Obtain plist.exe from: <http://technet.microsoft.com/en-us/sysinternals/bb896682.aspx>
2. Install plist.exe in the PATH

For EMC Smarts 9.1 or lower versions, the processor, memory, and other domain information is unavailable until the icStats helper is set up.

To configure the icStats helper for EMC Smarts 9.1 or lower:

- Only for Windows based installation:
 - Obtain plist.exe from <http://technet.microsoft.com/en-us/sysinternals/bb896682.aspx>
 - Install plist.exe in the PATH
- Then:
 - Install icStats.cmd (Windows) or icStats.sh (Linux/Solaris) (found under <APG>/Collecting/Smarts-Collector/<INSTANCE>/contrib/sm-domain-health/sm-domain-health.zip) in your domains local/actions directory
 - Install ICSTATS.import in your domains import directory
 - /opt/InCharge/NPM/smarts/conf/isis/
 - /opt/InCharge/NPM/smarts/conf/eigrp/
 - /opt/InCharge/NPM/smarts/conf/bgp/
 - /opt/InCharge/NPM/smarts/conf/ospf/
 - /opt/InCharge/IP/smarts/conf/icf/
 - /opt/InCharge/SAM/smarts/conf/icoi/
 - /opt/InCharge/SAM/smarts/conf/ics/

- /opt/InCharge/ACM/smarts/conf/asm-ntier/
- /opt/InCharge/MPLS/smarts/conf/mpsls-vpn/
- For each of the domains import the .import file at runtime: (**or** restart each modified domain)
 - sm_adapter -s <domain> -f <file>.import <IC_BASE>/smarts/rules/import.asl

Known issues:

- Collector log entries

```
WARNING -- [2013-02-15 15:43:53 EST] -- SmDataIndicators::initializeStartClasses(): Class
ICS_AutoActionManager doesn't exist, skipping...
```

This behavior is normal; you can safely ignore all warning in regards to classes that doesn't exist.

- Warning messages in Smarts collector log related to IP and ESM system uptime availability

The availability filter computes the expected value based on the previous value and polling period and warns when the values do not match. This behavior is normal; you may ignore these messages.

```
WARNING -- [2013-02-15 15:43:53 IST] -- AvailabilityFilter::pushData(): 'IP-AM-PM_SM-System-
uptimeAvailability' not pushed because new 'Uptime' (7917 sec) is not consistent with last 'Uptime' (7915
sec)!
WARNING -- [2014-02-26 15:43:53 IST] -- AvailabilityFilter::pushData(): 'ESM_SM-System-
uptimeAvailability' not pushed because new 'Uptime' (7913 sec) is not consistent with last 'Uptime' (7910
sec)!
```

- Read time out exceptions in SMARTS collector while polling smarts-pm.xml

This may indicate the Smarts domain (INCHARGE-AM-PM in this case) is not able to respond to the polling request. This could be due to high CPU utilization on the Smarts domain host machine.

```
WARNING -- [2014-02-19 09:18:50 IST] -- PollingEngine::poll(): error polling emc-smarts : INCHARGE-AM-PM
(conf/smarts-pm.xml) java.net.SocketTimeoutException: Read timed out at
java.net.SocketInputStream.socketRead0(Native Method)...
```

Post Installation Steps:

After you install the EMC Smarts SolutionPack, you need to enable event reporting:

1. If you chose Datastore database in the Events section of the Solution Pack installation edit server.xml file located in the <INSTALL_DIR>/Web-Servers/Tomcat/Default/conf directory by uncommenting the Resource tag for FLOW-DS-EVENTS.
2. Edit the APG.xml file located in the <INSTALL_DIR>/Web-Servers/Tomcat/Default/conf/Catalina/localhost directory.
 - i. Remove the comment character (uncomment) from the emc-smarts-events for MySQL section to uncomment the ResourceLink tag if you select MSQl database for events while installing the SolutionPack.

ii. Remove the comment character (uncomment) from the emc-smarts-events for datastore section to uncomment the ResourceLink tag if you select datastore database for events while installing the SolutionPack.

3. Restart the Tomcat service to make the change effective.
4. Start datastore service and Configure the Watch4net Datastore.

Watch4net Datastore:

Closed and inactive events can be written to the new Watch4net Datastore. Active events are written to the MySQL database.

The new Watch4net Datastore requires loading the schema in order to get the Event Processing Manager loading. If not already done, please connect to the Watch4net Datastore, using the /opt/APG/bin/datastore-client. From the prompt, copy and paste the content of the Event-Processing/APG-Datastore-Writer/emc-smarts/ddl/ds-event-x100.sql file into it. This will create the schema, and the Event Processing Manager can now be loaded.

To verify that schema has loaded, type the following from the datastore-client command prompt:

```
sql> select count(*) from events_archive;
```

In the resulting output, you will see something similar to 1 row (for example, query: 0.01 sec; total: 0.01 sec).

RPE2 properties documentation:

Name:	Example of a value:
acknowledged	0 or 1
impact	Performance Availability Temperature Error
category	
certainty	100.0
classDisplayName	FileSystem Cable Processor Port Interface
className	FileSystem Cable Processor Port Interface
clearedAsDate	06-10-2009 21:09:00 EDT 06-10-2009 13:17:41 EDT 06-11-2009 08:59:33 EDT
clearedTimestamp	1244687206 1244726562 1244666800
createdTimestamp	1244687206 1244726562 1244666800
duration	<i>Duration in seconds</i>
durationDiv	<i>Duration in seconds / the length of time of the period selected.</i>
elementClass	Host ServiceOffering Cable Switch Router Customer Session
elementInstance	W4N-PV-ESX02 W4N-PL-DEMO W4N-PL-SVN1 W4N-PC-RTR1
event	OutOfRange HighErrorRate DownOrFlapping HighUtilization Impacted Disconnected MonEvent

	Down
	Unresponsive
eventSource	IC-ACM INCHARGE-PM INCHARGE-AM
eventState	1 for active events, 0 for inactive
eventStateAsString	ACTIVE INACTIVE
eventText	Indicates that the root cause is a failed system. Indicates that the percentage of error packets exceeds ErrorThreshold. [...]
eventType	DURABLE MOMENTARY
identifier	<i>Unique identifier created by Watch4net listener</i> 28909 27560 28908
impact	<i>Number of impacted objects</i>
inMaintenance	0 or 1
instanceDisplayName	IF-W4N-PJ-RTR4/121 [vlan.6] IF-W4N-PW-CRM01/12 [ethernet_7] [10.128.7.16, ...] IF-W4N-PC-RTR1/1 [Fa0] [10.128.1.1] [*** Vers W4N-PJ-RTR3 ***] IF-W4N-PJ-RTR3/117 [vlan.2] [10.128.1.98] IF-W4N-PJ-RTR4/33 [me0] IF-W4N-PJ-RTR4/148 [ge-0/0/12] [To W4N-PW-BKP2]
instanceName	IF-W4N-PJ-RTR4/160 I-Interface_Performance_MIB2-IF-W4N-PW-CRM01/12 IF-W4N-PJ-RTR4/162 IF-W4N-PJ-RTR3/49
isProblem	0 or 1
lastModifiedAsDate	11-18-2009 15:13:11 EST 11-19-2009 10:16:23 EST 11-19-2009 06:08:48 EST
lastNotifiedAsDate	06-10-2009 22:06:44 EDT 06-10-2009 13:34:35 EDT 06-10-2009 18:44:13 EDT
lastNotifiedGraphable	1244687206 1244726562 1244666800
lastNotifiedPerDay	04-16-2009 06-11-2009 06-02-2009
Name	<i>Duration</i>
overlappingDuration	<i>Number of seconds</i>
owner	admin SYSTEM
rootCause	0 or 1
severity	0 to 5
severityAsString	CRITICAL

	MAJOR MINOR UNKNOWN NORMAL
ticketId	<i>Remedy adapter or others...</i>
timestamp	1244687206 1244726562 1244666800
unit	
userDefined1	<i>Customer defined in Smarts</i>
userDefined2	<i>Customer defined in Smarts</i>
userDefined3	<i>Customer defined in Smarts</i>
userDefined4	<i>Customer defined in Smarts</i>
userDefined5	<i>Customer defined in Smarts</i>
userDefined6	<i>Customer defined in Smarts</i>
userDefined7	<i>Customer defined in Smarts</i>
userDefined8	<i>Customer defined in Smarts</i>
userDefined9	<i>Customer defined in Smarts</i>
userDefined10	<i>Customer defined in Smarts</i>
userDefined11	<i>Customer defined in Smarts</i>
userDefined12	<i>Customer defined in Smarts</i>
userDefined13	<i>Customer defined in Smarts</i>
userDefined14	<i>Customer defined in Smarts</i>
userDefined15	<i>Customer defined in Smarts</i>
userDefined16	<i>Customer defined in Smarts</i>
userDefined17	<i>Customer defined in Smarts</i>
userDefined18	<i>Customer defined in Smarts</i>
userDefined19	<i>Customer defined in Smarts</i>
userDefined20	<i>Customer defined in Smarts</i>