asprom Firewall Compliance scanner

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Chapter 5

Namespace Documentation

5.1 asprom Namespace Reference

Namespaces

- aspromGUI

  Created on Oct 19, 2014.
- aspromNagiosCheck

  Created on Oct 23, 2014.
- aspromScan

  Created on Oct 23, 2014.
- inc

5.2 asprom.aspromGUI Namespace Reference

Created on Oct 19, 2014.

Functions

- def before_request

  before each dynamic request, create DB connection and Model instances.
- def serve_homepage

  HTTP Redirect to `http:///alerts-exposed`.
- def serve_alertsexposed

  Presents view: `http:///alerts-exposed`.
- def serve_alertsclosed

  Presents view: `http:///alerts-closed`.
- def serve_neatline

  Presents view: `http:///neatline`.
- def serve_forensic

  Presents view: `http:///forensic`.
- def serve_schedule

  Presents view: `http:///schedule`.
- def serve_log

  Presents view: `http:///log`.
- def serve_editjob_view

Presents view: `http:///dia/editjob`.

- def serve_addjob_view

  Presents view: `http:///dia/addjob`.
- def returnjson

  Presents all json views: `http:///json/*`.
- def serve_rescanController

  Activates controller: `http:///controller/rescanjob/`<*jobid*>.
- def serve_rescanMachine

  Activates controller: `http:///controller/rescanmachine/`<*hostid*>*[/*<*portid*>*]*.
- def serve_rescanService

  Activates controller: `http:///controller/rescanservice/`<*serviceid*>.
- def serve_deleteJob

  Activates controller: `http:///controller/deletejob/`<*jobid*>.
- def serve_flipCrit

  Activates controller: `http:///controller/flipcrit/`<*exposed*|*closed*>/<*serviceid*>.
- def serve_approve

  Activates controller: `http:///controller/approve`.
- def serve_remove

  Activates controller: `http:///controller/remove`.
- def serve_changejob

  Activates controller: `http:///controller/editjob/`<*jobid*>.
- def serve_addjob

  Activates controller: `http:///controller/addjob/`<*jobid*>.
- def static

  returns static files from the path defined by variable SR.

Variables

- string sr = 'static/'

  relative path to static files
- M = None

  main model
- SM = None

  schedule model
- tuple localconf = Cfg()

5.2.1 Detailed Description

Created on Oct 19, 2014.

Author

stefankn

Main Script for the asprom GUI. This script presents a webserver socket to which client browsers can connect to. Also, it orchestrates URL calls between the model, view and controller classes.

5.2.2 Function Documentation

5.2.2.1 def asprom.aspromGUI.before_request ( )

before each dynamic request, create DB connection and Model instances.

5.2.2.2 def asprom.aspromGUI.returnjson (*filename*)

Presents all json views: http:///json/*.

These are used by the tables embedded in the main html views. The data is aquired using ajax calls. The data is pulled from the model in dict format and then converted to json.

Parameters

filename	the json view to be shown. can be any of alerts-exposed, alerts-closed, neatline, forensic or schedule.

5.2.2.3 def asprom.aspromGUI.serve_addjob (*jobid*)

Activates controller: http:///controller/addjob/<jobid>.

This method tells the controller to set the parameters of the specified job and add it to crontab.

Parameters

jobid	the job to be edited.

The following arguments are to be passed by using the HTTP POST method.

Parameters

cronval	the cron schedule string.
iprange	a CIDR range, single IP or hostname.
portrange	a single port or port range in the format <startport>-<endport> to be scanned.
extraparams	extra command line parameters for nmap.

5.2.2.4 def asprom.aspromGUI.serve_addjob_view ( )

Presents view: http:///dia/addjob.

This is meant to be used as a dialog popup in the schedule view. On this dialog, the parameters of a new job can be entered.

5.2.2.5 def asprom.aspromGUI.serve_alertsclosed ( )

Presents view: http:///alerts-closed.

5.2.2.6 def asprom.aspromGUI.serve_alertsexposed ( )

Presents view: http:///alerts-exposed.

5.2.2.7 def asprom.aspromGUI.serve_approve ( )

Activates controller: http:///controller/approve.

The arguments are to be passed by using the HTTP POST method. Using this method, a service can be approved to the neatline.

Parameters

pk	The Service ID to be approved.
value	a business justification for the service to be approved.

5.2.2.8 def asprom.aspromGUI.serve_changejob (*jobid*)

Activates controller: http:///controller/editjob/<jobid>.

This method tells the controller to set or change the parameters of the specified job.

Parameters

jobid	the job to be edited.

The following arguments are to be passed by using the HTTP POST method.

Parameters

cronval	the cron schedule string.
iprange	a CIDR range, single IP or hostname.
portrange	a single port or port range in the format <startport>-<endport> to be scanned.
extraparams	extra command line parameters for nmap.

5.2.2.9 def asprom.aspromGUI.serve_deleteJob (*jobid*)

Activates controller: http:///controller/deletejob/<jobid>.

Instructs the controller to delete the job with id <jobid>.

Parameters

jobid	The Job ID to be scanned.

5.2.2.10 def asprom.aspromGUI.serve_editjob_view (*jobid*)

Presents view: http:///dia/editjob.

This is meant to be used as a dialog popup in the schedule view. On this dialog, the parameters of an existing job can be edited.

Parameters

jobid	the job ID to be edited.

5.2.2.11 def asprom.aspromGUI.serve_flipCrit (*page*, *serviceid*)

Activates controller: http:///controller/flipcrit/<exposed|closed>/<serviceid>.

Instructs the controller to flip the criticality of service <serviceid> on the alerts-<exposed|closed> view. Flipping sets the service criticality to WARNING if it was CRITICAL before and the other way round.

Parameters

page	Either "exposed" or "closed". Denominates the view on which the criticality of the service should be flipped.

serviceid	The Service whose criticality should be flipped.

5.2.2.12 def asprom.aspromGUI.serve_forensic ( )

Presents view: `http:///forensic`.

5.2.2.13 def asprom.aspromGUI.serve_homepage ( )

HTTP Redirect to `http:///alerts-exposed`.

5.2.2.14 def asprom.aspromGUI.serve_log ( )

Presents view: `http:///log`.

5.2.2.15 def asprom.aspromGUI.serve_neatline ( )

Presents view: `http:///neatline`.

5.2.2.16 def asprom.aspromGUI.serve_remove ( )

Activates controller: `http:///controller/remove`.

The arguments are to be passed by using the HTTP POST method. Using this method, a service can be removed from the neatline.

Parameters

pk	The Service ID to be removed.
value	a business justification for the service to be removed.

5.2.2.17 def asprom.aspromGUI.serve_rescanController (*jobid*)

Activates controller: `http:///controller/rescanjob/`<jobid>.

Instructs the controller to perform a forensic rescan of the job with id <jobid> now.

Parameters

jobid	the job ID to be scanned.

5.2.2.18 def asprom.aspromGUI.serve_rescanMachine (*host*, *port* = `None`)

Activates controller: `http:///controller/rescanmachine/`<hostid>[/<portid>].

Instructs the controller to perform a forensic rescan of the machine with id <hostid> now. If <portid> is present, only this single port is being rescanned.

Parameters

host	the host ID to be scanned.

port	the port to be rescanned on the specified machine.

5.2.2.19 def asprom.aspromGUI.serve_rescanService (*serviceid*)

Activates controller: http:///controller/rescanservice/<serviceid>.

Instructs the controller to perform a forensic rescan of the service with id <serviceid> now.

Parameters

serviceid	The Service ID to be scanned.

5.2.2.20 def asprom.aspromGUI.serve_schedule ( )

Presents view: http:///schedule.

5.2.2.21 def asprom.aspromGUI.static (*filename*)

returns static files from the path defined by variable SR.

Parameters

filename	path to the static file relative to the SR directory.

5.2.3 Variable Documentation

5.2.3.1 tuple asprom.aspromGUI.localconf = Cfg()

5.2.3.2 asprom.aspromGUI.M = None

main model

5.2.3.3 asprom.aspromGUI.SM = None

schedule model

5.2.3.4 string asprom.aspromGUI.sr = 'static/'

relative path to static files

5.3 asprom.aspromNagiosCheck Namespace Reference

Created on Oct 23, 2014.

Functions

- def genMessages

  generates textual descriptions of profile discrepancies.
- def main

5.3.1 Detailed Description

Created on Oct 23, 2014.

Author

stefankn

This file is invoked from the CLI and can be directly used as a nagios plugin. if any of the services on the alerts-exposed or alerts-closed views are marked as critical, this script terminates with a return value of 2. if none are marked as critical, but at least one is marked as warning, this script terminates with a return value of 1. Else, it terminates with a value of 0 signalling everything is alright.

5.3.2 Function Documentation

5.3.2.1 def asprom.aspromNagiosCheck.genMessages (*exp*)

generates textual descriptions of profile discrepancies.

Parameters

rowset	a rowset as generated by aspromModel.getAlertsExposed() or getAlertsClosed()

Returns

a two-tuple containing a list of critical and a list of\ warning discrepancies

5.3.2.2 def asprom.aspromNagiosCheck.main ( )

5.4 asprom.aspromScan Namespace Reference

Created on Oct 23, 2014.

Functions

- def main

  parse arguments from command line.

5.4.1 Detailed Description

Created on Oct 23, 2014.

Author

stefankn

this file is invoked on the CLI as a wrapper script to nmap. when invoked from the command line, the scan() method is called.

5.4.2 Function Documentation

5.4.2.1 def asprom.aspromScan.main ( )

parse arguments from command line.

usage:

```
aspromScan.py [-h] [-o EXTRA_OPTIONS] [-s SENSOR] [-p PORT_RANGE]
[-j JOB_ID] TARGET

Scans an IP Range for asprom. Needs nmap installed on the sensor host.


positional arguments:
  TARGET                the hostname/ip/ip range to be scanned

optional arguments:

  -h, --help            show this help message and exit

  -o EXTRA_OPTIONS, --extra-options EXTRA_OPTIONS
                        extra options to be passed to nmap

  -s SENSOR, --sensor SENSOR
                        start scanning on another sensor

  -p PORT_RANGE, --port-range PORT_RANGE
                        set custom port range to be scanned

  -j JOB_ID, --job-id JOB_ID
                        set arbitrary job id (used by aspromGUI and cron)
```

5.5 asprom.inc Namespace Reference

Namespaces

- asprom

  Created on Oct 22, 2014.

5.6 asprom.inc.asprom Namespace Reference

Created on Oct 22, 2014.

Classes

- class AspromModel

  This Model abstracts calls to the database.
- class AspromScheduleModel

  This model abstracts access to the schedule, which consists of the users crontab and log data in the mysql DB.
- class Cfg

  Configuration in dict form from the config file etc/asprom.cfg.
- class Controller

  The Controller defines all actions that are possible from within the GUI.
- class Machine

  represents a machine, that is a singular IP adress.
- class NoJoibIDException

  Exception raised for crontab entries not concerning asprom.
- class Service

  This class represents a single Service, that is a port on a machine.

Functions

- def scan

  Scans the port range on the target IP/IP Range with nmap.
- def initDB

  inits the database into the bottle request scope.
- def closeDB

  commit all open database cursors.

5.6.1 Detailed Description

Created on Oct 22, 2014.

Author

stefankn

Library for asprom Scripts.

5.6.2 Function Documentation

5.6.2.1 def asprom.inc.asprom.closeDB ( )

commit all open database cursors.

close the connection.

5.6.2.2 def asprom.inc.asprom.initDB (*localconf*)

inits the database into the bottle request scope.

5.6.2.3 def asprom.inc.asprom.scan (*target, port_range, extra_options, job_id, sensor = 'localhost'*)

Scans the port range on the target IP/IP Range with nmap.

extra_options are passed as CLI arguments to nmap. The job_id will be saved to the changelog entry in the database for reference to the actual job.

Parameters

target	CIDR Range, singular IP or hostname
port_range	range of ports to be scanned
extra_options	extra CLI arguments to be passed to nmap
job_id	job UUID as used by the schedule model
sensor	In future versions, you may specify a sensor to be used for scanning (not implemented yet).

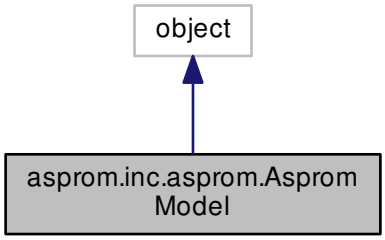
Chapter 6

Class Documentation

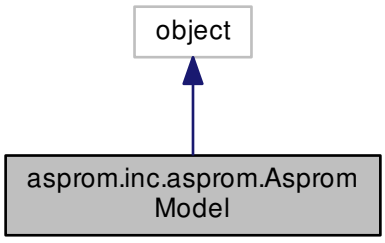
6.1 asprom.inc.asprom.AspromModel Class Reference

This Model abstracts calls to the database.

Inheritance diagram for asprom.inc.asprom.AspromModel:



Collaboration diagram for asprom.inc.asprom.AspromModel:



Public Member Functions

- def __init__

  standard constructor
- def getAlertsExposed

  returns row data for the alerts-exposed view.
- def getAlertsClosed

  returns row data for the alerts-closed view.
- def getNeatline

  returns row data for the neatline view.
- def getForensic

  returns row data for the forensic view.
- def getLastLog

  returns <count> last log entries from the changelog in html format.

Static Public Member Functions

- def tojson

  converts row data to json format.

Static Public Attributes

- username = None

  logged in username, e.g.

6.1.1 Detailed Description

This Model abstracts calls to the database.

It returns rows of data for the views in the GUI. Using the toJSON static method, they can be easily converted to the json format used by bootstrap-table AJAX calls.

6.1.2 Constructor & Destructor Documentation

6.1.2.1 def asprom.inc.asprom.AspromModel.__init__ (*self, username* = None, *args, kwargs*)

standard constructor

6.1.3 Member Function Documentation

6.1.3.1 def asprom.inc.asprom.AspromModel.getAlertsClosed (*self*)

returns row data for the alerts-closed view.

Returns

returns row data for the alerts-closed view.

6.1.3.2 def asprom.inc.asprom.AspromModel.getAlertsExposed (*self*)

returns row data for the alerts-exposed view.

Returns

row data for the alerts-exposed view.

6.1.3.3 def asprom.inc.asprom.AspromModel.getForensic (*self*)

returns row data for the forensic view.

Returns

returns row data for the forensic view.

6.1.3.4 def asprom.inc.asprom.AspromModel.getLastLog (*self, count*)

returns <count> last log entries from the changelog in html format.

Parameters

count	number of lines to return.

Returns

<count> last log entries from the changelog in html format.

6.1.3.5 def asprom.inc.asprom.AspromModel.getNeatline (*self*)

returns row data for the neatline view.

Returns

returns row data for the neatline view.

6.1.3.6 def asprom.inc.asprom.AspromModel.tojson (*someDict*) [static]

converts row data to json format.

Parameters

someDict	row data in dictionary format.

Returns

JSON String.

6.1.4 Member Data Documentation

6.1.4.1 asprom.inc.asprom.AspromModel.username = None [static]

logged in username, e.g.

by apache auth_basic

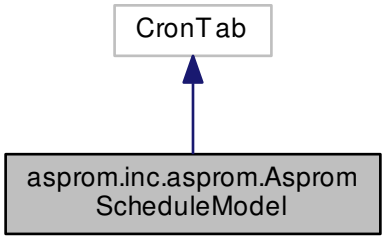
The documentation for this class was generated from the following file:

- inc/asprom.py

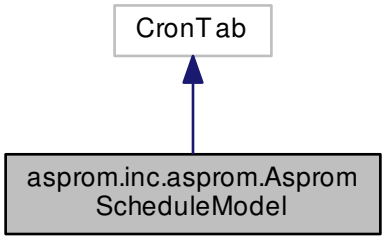
6.2 asprom.inc.asprom.AspromScheduleModel Class Reference

This model abstracts access to the schedule, which consists of the users crontab and log data in the mysql DB.

Inheritance diagram for asprom.inc.asprom.AspromScheduleModel:



Collaboration diagram for asprom.inc.asprom.AspromScheduleModel:



Public Member Functions

- def __init__

  standard Constructor
- def read

  override read method in CronTab.py.
- def getJobByID

  returns the job with id <jobid>.
- def changeJob

  changes the parameters of the Job with UUID <jobid> in the crontab.
- def addJob

  adds a Job to the crontab.
- def deleteJob

  deactivates the job with id <jobid> and refreshes the model.
- def getScheduleEntryByID

returns the job specifics for the job with id <jobid>.

- def getSchedule

  returns the schedule (crontab) in flat (unindexed) form, e.g.

Static Public Member Functions

- def promoteToIndex

  index the dic by valueKey.

Static Public Attributes

- scheduleLog = None

  schedule log from database
- schedule = None

  schedule data from crontab
- tuple jobsByID = dict()

  dictionary of jobs indexed by id

6.2.1 Detailed Description

This model abstracts access to the schedule, which consists of the users crontab and log data in the mysql DB.

Both components are joined together using an UUID, the jobID.

requires CronTab.py, as this class inherits from that.

6.2.2 Constructor & Destructor Documentation

6.2.2.1 def asprom.inc.asprom.AspromScheduleModel.__init__ (*self, args, kwargs*)

standard Constructor

6.2.3 Member Function Documentation

6.2.3.1 def asprom.inc.asprom.AspromScheduleModel.addJob (*self, jobid, cronval, iprange, portrange, extraparams*)

adds a Job to the crontab.

Parameters

jobid	the job id to be added.
cronval	the cron schedule string.
iprange	a CIDR range, single IP or hostname.
portrange	a single port or port range in the format <startport>-<endport> to be scanned.
extraparams	extra command line parameters for nmap.

6.2.3.2 def asprom.inc.asprom.AspromScheduleModel.changeJob (*self, jobid, cronval, iprange, portrange, extraparams, job* = `None`)

changes the parameters of the Job with UUID <jobid> in the crontab.

Parameters

jobid	the job to be edited.
cronval	the cron schedule string.
iprange	a CIDR range, single IP or hostname.
portrange	a single port or port range in the format <startport>-<endport> to be scanned.
extraparams	extra command line parameters for nmap.

6.2.3.3 def asprom.inc.asprom.AspromScheduleModel.deleteJob (*self, jobid*)

deactivates the job with id <jobid> and refreshes the model.

Parameters

jobid	the job's id.

6.2.3.4 def asprom.inc.asprom.AspromScheduleModel.getJobByID (*self, jobid*)

returns the job with id <jobid>.

Parameters

jobid	the job's id.

Returns

a job object.

6.2.3.5 def asprom.inc.asprom.AspromScheduleModel.getSchedule (*self*)

returns the schedule (crontab) in flat (unindexed) form, e.g.

for GUI table data.

6.2.3.6 def asprom.inc.asprom.AspromScheduleModel.getScheduleEntryByID (*self, jobid*)

returns the job specifics for the job with id <jobid>.

Parameters

jobid	the job's id.

Returns

a dictionary with job parameters.

6.2.3.7 def asprom.inc.asprom.AspromScheduleModel.promoteToIndex (*dici, valueKey*) [static]

index the dic by valueKey.

promotes the element on position <valueKey> from each sublist to an index in a dictionary.

Parameters

dic	a list of lists or a list of dictionaries, e.g. a database result set.
valueKey	position or name of the value to be promoted to an index.

Returns

promoted dictionary.

example:

```
>>> d = [[1,2,3,4,5], [6,7], [8,9], [9,10]]
>>> e=AspromScheduleModel.promoteToIndex(d,1)
>>> print e
{9: [8], 2: [1, 3, 4, 5], 10: [9], 7: [6]}
```

6.2.3.8 def asprom.inc.asprom.AspromScheduleModel.read (*self, filename* = None)

override read method in CronTab.py.

Additionally fetches log information from the database and fills the properties schedule and scheduleLog.

6.2.4 Member Data Documentation

6.2.4.1 tuple asprom.inc.asprom.AspromScheduleModel.jobsByID = dict() [static]

dictionary of jobs indexed by id

6.2.4.2 asprom.inc.asprom.AspromScheduleModel.schedule = None [static]

schedule data from crontab

6.2.4.3 asprom.inc.asprom.AspromScheduleModel.scheduleLog = None [static]

schedule log from database

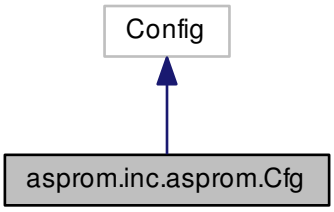
The documentation for this class was generated from the following file:

- inc/asprom.py

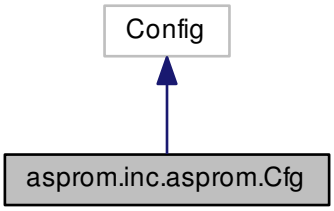
6.3 asprom.inc.asprom.Cfg Class Reference

Configuration in dict form from the config file etc/asprom.cfg.

Inheritance diagram for asprom.inc.asprom.Cfg:



Collaboration diagram for asprom.inc.asprom.Cfg:



Public Member Functions

- def __init__

  expanded constructor, calls the super constructor of Config with the path to asprom.cfg

Static Public Attributes

- maindir = None

6.3.1 Detailed Description

Configuration in dict form from the config file etc/asprom.cfg.

6.3.2 Constructor & Destructor Documentation

6.3.2.1 def asprom.inc.asprom.Cfg.__init__ (*self*)

expanded constructor, calls the super constructor of Config with the path to asprom.cfg

6.3.3 Member Data Documentation

6.3.3.1 asprom.inc.asprom.Cfg.maindir = None [static]

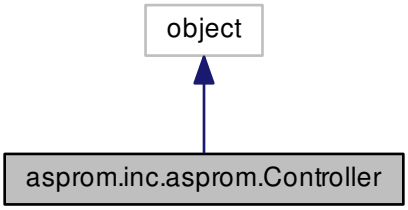
The documentation for this class was generated from the following file:

- inc/asprom.py

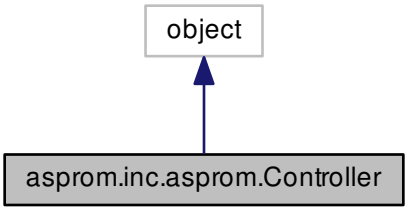
6.4 asprom.inc.asprom.Controller Class Reference

The Controller defines all actions that are possible from within the GUI.

Inheritance diagram for asprom.inc.asprom.Controller:



Collaboration diagram for asprom.inc.asprom.Controller:



Static Public Member Functions

- def rescanJob

  run the scheduled job with id <jobid> right now.
- def rescanMachine

  rescan the machine.
- def rescanService

  rescans the service.
- def flipCrit

flips the criticality of the service.

- def approve

  Using this method, a service can be approved to the neatline.

- def remove

  Using this method, a service can be removed from the neatline.

6.4.1 Detailed Description

The Controller defines all actions that are possible from within the GUI.

6.4.2 Member Function Documentation

6.4.2.1 def asprom.inc.asprom.Controller.approve (*serviceid, justification, username*) [static]

Using this method, a service can be approved to the neatline.

Parameters

serviceid	The Service ID to be approved.
justification	a business justification for the service to be approved.

6.4.2.2 def asprom.inc.asprom.Controller.flipCrit (*serviceid, exposed* = `True`) [static]

flips the criticality of the service.

Flipping sets the service criticality to WARNING if it was CRITICAL before and the other way round.

Parameters

serviceid	The Service whose criticality should be flipped.
page	Denominates the view on which the criticality of the service should be flipped. If true, "alerts-exposed" is flipped. Else, "alerts-closed".

6.4.2.3 def asprom.inc.asprom.Controller.remove (*serviceid, justification, username*) [static]

Using this method, a service can be removed from the neatline.

Parameters

serviceid	The Service ID to be removed.
justification	a business justification for the service to be removed.

6.4.2.4 def asprom.inc.asprom.Controller.rescanJob (*jobid*) [static]

run the scheduled job with id <jobid> right now.

Parameters

jobid	the UUID of the job to be run

6.4.2.5 def asprom.inc.asprom.Controller.rescanMachine (*machineid, port* = `None`) [static]

rescan the machine.

this method finds the task in the schedule to which the machine belongs and takes its additional arguments from there.

Parameters

machineid	ID of the machine to be rescanned.
port	port of the machine to be rescanned.

6.4.2.6 def asprom.inc.asprom.Controller.rescanService (*serviceid*) [static]

rescans the service.

Parameters

serviceid	ID of the service to be rescanned.

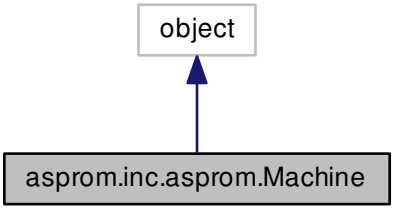
The documentation for this class was generated from the following file:

- inc/asprom.py

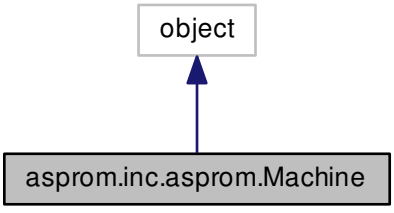
6.5 asprom.inc.asprom.Machine Class Reference

represents a machine, that is a singular IP adress.

Inheritance diagram for asprom.inc.asprom.Machine:



Collaboration diagram for asprom.inc.asprom.Machine:



Public Member Functions

- def __init__

  Constructor Loads all information about the machine from the database.
- def getServices

  return list of services associated with this machine.
- def delete

  delete self.

Static Public Member Functions

- def create

  create new Machine and return self.
- def inRange

  returns true if ip is in range r, false otherwise.
- def getIPsInRange

  return a dictionary of IPs to IDs for all known hosts in the defined range.

Static Public Attributes

- id = None

  machines database id.
- hostname = None

  hostname, if known.
- ip = None

  ip address of the machine.
- lsdate = None

  date when the machine was last seen by port scanner.
- ffdate = None

  date when the machine was first found by the port scanner.

6.5.1 Detailed Description

represents a machine, that is a singular IP adress.

6.5.2 Constructor & Destructor Documentation

6.5.2.1 def asprom.inc.asprom.Machine.__init__ (*self, machineid*)

Constructor Loads all information about the machine from the database.

Parameters

machineid	Database id of the machine.

6.5.3 Member Function Documentation

6.5.3.1 def asprom.inc.asprom.Machine.create (*name, ip*) [static]

create new Machine and return self.

Parameters

name	hostname
ip	ip address

Returns

self

6.5.3.2 def asprom.inc.asprom.Machine.delete (*self*)

delete self.

6.5.3.3 def asprom.inc.asprom.Machine.getIPsInRange (*r, exposedOnly =* `False`) [static]

return a dictionary of IPs to IDs for all known hosts in the defined range.

Parameters

r	ip range

Returns

dictionary IPs/Machine IDs in that range

6.5.3.4 def asprom.inc.asprom.Machine.getServices (*self, exposedOnly =* `False`)

return list of services associated with this machine.

Parameters

exposedOnly	if true, only return currently exposed services.

Returns

list of services.

6.5.3.5 def asprom.inc.asprom.Machine.inRange (*r, ip*) [static]

returns true if ip is in range r, false otherwise.

Parameters

r	range
ip	ip address

Returns

true if ip is in range r, false otherwise.

6.5.4 Member Data Documentation

6.5.4.1 asprom.inc.asprom.Machine.ffdate = None [static]

date when the machine was first found by the port scanner.

6.5.4.2 asprom.inc.asprom.Machine.hostname = None [static]

hostname, if known.

6.5.4.3 asprom.inc.asprom.Machine.id = None [static]

machines database id.

6.5.4.4 asprom.inc.asprom.Machine.ip = None [static]

ip address of the machine.

6.5.4.5 asprom.inc.asprom.Machine.lsdate = None [static]

date when the machine was last seen by port scanner.

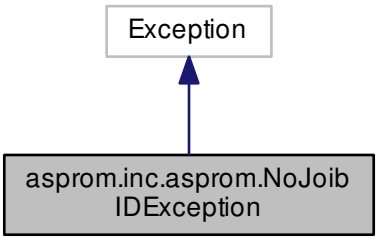
The documentation for this class was generated from the following file:

- inc/asprom.py

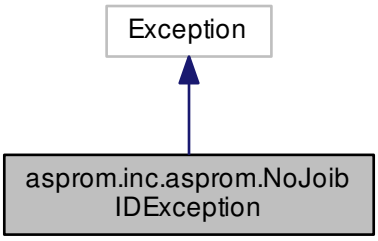
6.6 asprom.inc.asprom.NoJoibIDException Class Reference

Exception raised for crontab entries not concerning asprom.

Inheritance diagram for asprom.inc.asprom.NoJoibIDException:



Collaboration diagram for asprom.inc.asprom.NoJoibIDException:



Public Member Functions

- def __init__

Public Attributes

- job

6.6.1 Detailed Description

Exception raised for crontab entries not concerning asprom.

6.6.2 Constructor & Destructor Documentation

6.6.2.1 def asprom.inc.asprom.NoJoibIDException.__init__ (*self, job*)

6.6.3 Member Data Documentation

6.6.3.1 asprom.inc.asprom.NoJoibIDException.job

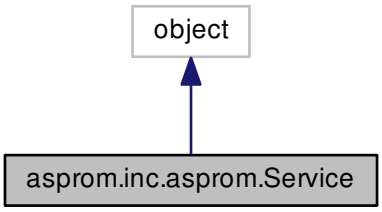
The documentation for this class was generated from the following file:

- inc/asprom.py

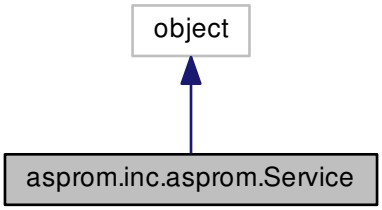
6.7 asprom.inc.asprom.Service Class Reference

This class represents a single Service, that is a port on a machine.

Inheritance diagram for asprom.inc.asprom.Service:



Collaboration diagram for asprom.inc.asprom.Service:



Public Member Functions

- def __init__
  Constructor.
- def delete
  deletes this service.
- def getMachine
  returns the machine object associated with this service.
- def inRange
  tells if a service is in a specific port range.
- def flipCrit
  Flip criticality of "exposed" view if exposed = true, else of the "closed" view.
- def approve
  approve this service and add it to the neat line
- def remove
  remove this service from the neat line.

Static Public Member Functions

- def create
  create new service and return self

Static Public Attributes

- id = None
  services database id
- machine = None
  machine object to which this service is associated
- port = None
  port number of this service
- product = None
  additional product information gleaned by nmap
- version = None
  additional version information gleaned by nmap
- extrainfo = None
  additional extra information gleaned by nmap
- lsdate = None
  datetime, when this service was last seen
- ffdate = None
  datetime, when this service was first seen
- critExposed = True
- critClosed = False
  flag: does this service raise a critical alert when closed and approved?

6.7.1 Detailed Description

This class represents a single Service, that is a port on a machine.

6.7.2 Constructor & Destructor Documentation

6.7.2.1 def asprom.inc.asprom.Service.__init__ (*self, serviceid*)

Constructor.

Loads all information about the service from the database.

Parameters

serviceid	Database id of the service.

6.7.3 Member Function Documentation

6.7.3.1 def asprom.inc.asprom.Service.approve (*self, justification, username, neat* = `True`)

approve this service and add it to the neat line

Parameters

justification	a business justification.
neat	true for approval. if false, remove from neat line. this is used by the method remove().

6.7.3.2 def asprom.inc.asprom.Service.create (*mach, portno, product* = '', *version* = '', *extrainfo* = '') `[static]`

create new service and return self

Parameters

mach	Machine object to which the service belongs
portno	Port number of this service
product	additional product information gleaned by nmap. if not defined, get generic information about port from /etc/services.
version	additional version information gleaned by nmap
extrainfo	additional extra information gleaned by nmap

Returns

self

6.7.3.3 def asprom.inc.asprom.Service.delete (*self*)

deletes this service.

6.7.3.4 def asprom.inc.asprom.Service.flipCrit (*self, exposed* = `True`)

Flip criticality of "exposed" view if exposed = true, else of the "closed" view.

Parameters

exposed	a boolean.

6.7.3.5 def asprom.inc.asprom.Service.getMachine (*self*)

returns the machine object associated with this service.

Returns

a machine object.

6.7.3.6 def asprom.inc.asprom.Service.inRange (*self, r*)

tells if a service is in a specific port range.

Parameters

r	single port number or range, e.g. "1024-65535"

Returns

boolean.

6.7.3.7 def asprom.inc.asprom.Service.remove (*self, justification, username*)

remove this service from the neat line.

Parameters

justification	a business justification.

6.7.4 Member Data Documentation

6.7.4.1 asprom.inc.asprom.Service.critClosed = False [static]

flag: does this service raise a critical alert when closed and approved?

6.7.4.2 asprom.inc.asprom.Service.critExposed = True [static]

6.7.4.3 asprom.inc.asprom.Service.extrainfo = None [static]

additional extra information gleaned by nmap

6.7.4.4 asprom.inc.asprom.Service.ffdate = None [static]

datetime, when this service was first seen

6.7.4.5 asprom.inc.asprom.Service.id = None [static]

services database id

6.7.4.6 asprom.inc.asprom.Service.lsdate = None [static]

datetime, when this service was last seen

6.7.4.7 asprom.inc.asprom.Service.machine = None [static]

machine object to which this service is associated

6.7.4.8 asprom.inc.asprom.Service.port = None [static]

port number of this service

6.7.4.9 asprom.inc.asprom.Service.product = None [static]

additional product information gleaned by nmap

6.7.4.10 asprom.inc.asprom.Service.version = None [static]

additional version information gleaned by nmap

The documentation for this class was generated from the following file:

- inc/asprom.py

Chapter 7

File Documentation

7.1 __init__.py File Reference

Namespaces

- asprom

7.2 aspromGUI.py File Reference

Namespaces

- asprom.aspromGUI

  Created on Oct 19, 2014.

Functions

- def asprom.aspromGUI.before_request

  before each dynamic request, create DB connection and Model instances.
- def asprom.aspromGUI.serve_homepage

  HTTP Redirect to `http:///alerts-exposed`.
- def asprom.aspromGUI.serve_alertsexposed

  Presents view: `http:///alerts-exposed`.
- def asprom.aspromGUI.serve_alertsclosed

  Presents view: `http:///alerts-closed`.
- def asprom.aspromGUI.serve_neatline

  Presents view: `http:///neatline`.
- def asprom.aspromGUI.serve_forensic

  Presents view: `http:///forensic`.
- def asprom.aspromGUI.serve_schedule

  Presents view: `http:///schedule`.
- def asprom.aspromGUI.serve_log

  Presents view: `http:///log`.
- def asprom.aspromGUI.serve_editjob_view

  Presents view: `http:///dia/editjob`.
- def asprom.aspromGUI.serve_addjob_view

  Presents view: `http:///dia/addjob`.

- def asprom.aspromGUI.returnjson

  Presents all json views: `http:///json/*`.
- def asprom.aspromGUI.serve_rescanController

  Activates controller: `http:///controller/rescanjob/`<*jobid*>.
- def asprom.aspromGUI.serve_rescanMachine

  Activates controller: `http:///controller/rescanmachine/`<*hostid*>*[/*<*portid*>*]*.
- def asprom.aspromGUI.serve_rescanService

  Activates controller: `http:///controller/rescanservice/`<*serviceid*>.
- def asprom.aspromGUI.serve_deleteJob

  Activates controller: `http:///controller/deletejob/`<*jobid*>.
- def asprom.aspromGUI.serve_flipCrit

  Activates controller: `http:///controller/flipcrit/`<*exposed*|*closed*>/<*serviceid*>.
- def asprom.aspromGUI.serve_approve

  Activates controller: `http:///controller/approve`.
- def asprom.aspromGUI.serve_remove

  Activates controller: `http:///controller/remove`.
- def asprom.aspromGUI.serve_changejob

  Activates controller: `http:///controller/editjob/`<*jobid*>.
- def asprom.aspromGUI.serve_addjob

  Activates controller: `http:///controller/addjob/`<*jobid*>.
- def asprom.aspromGUI.static

  returns static files from the path defined by variable SR.

Variables

- string asprom.aspromGUI.sr = 'static/'

  relative path to static files
- asprom.aspromGUI.M = None

  main model
- asprom.aspromGUI.SM = None

  schedule model
- tuple asprom.aspromGUI.localconf = Cfg()

7.3 aspromNagiosCheck.py File Reference

Namespaces

- asprom.aspromNagiosCheck

  Created on Oct 23, 2014.

Functions

- def asprom.aspromNagiosCheck.genMessages

  generates textual descriptions of profile discrepancies.
- def asprom.aspromNagiosCheck.main

7.4 aspromScan.py File Reference

Namespaces

- asprom.aspromScan

  Created on Oct 23, 2014.

Functions

- def asprom.aspromScan.main

  parse arguments from command line.

7.5 inc/asprom.py File Reference

Classes

- class asprom.inc.asprom.NoJoibIDException

  Exception raised for crontab entries not concerning asprom.
- class asprom.inc.asprom.Cfg

  Configuration in dict form from the config file etc/asprom.cfg.
- class asprom.inc.asprom.AspromModel

  This Model abstracts calls to the database.
- class asprom.inc.asprom.AspromScheduleModel

  This model abstracts access to the schedule, which consists of the users crontab and log data in the mysql DB.
- class asprom.inc.asprom.Controller

  The Controller defines all actions that are possible from within the GUI.
- class asprom.inc.asprom.Service

  This class represents a single Service, that is a port on a machine.
- class asprom.inc.asprom.Machine

  represents a machine, that is a singular IP adress.

Namespaces

- asprom.inc.asprom

  Created on Oct 22, 2014.

Functions

- def asprom.inc.asprom.scan

  Scans the port range on the target IP/IP Range with nmap.
- def asprom.inc.asprom.initDB

  inits the database into the bottle request scope.
- def asprom.inc.asprom.closeDB

  commit all open database cursors.

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