parsonsbots / dynamic-proxy-node-reconfiguration



```
511 ■■■■ dynamic_reconfiguration.php 🚉
     @ -1,281 +1,106 @@
       <?php
                                                                      1
                                                                            <?php
             class DynamicProxyReconfiguration {
                                                                                  class DynamicProxyReconfiguration {
                                                                      3
4
                     public $api;
                                                                      4
                                                                                          public $apiUrl;
                     public $processes;
                     public $shell;
6
                     public $sshPorts;
                                                                                          public $sshPorts;
8
                                                                      6
9
                     public function __construct($api,
                                                                                          public function __construct($apiUrl,
     $processes, $shell, $sshPorts) {
                                                                          $sshPorts) {
                                                                                                  $this->apiUrl = $apiUrl;
10
                             $this->api = $api;
                             $this->processes = $processes;
                             $this->shell = $shell;
                                                                     9
                             $this->sshPorts = $sshPorts;
                                                                                                  $this->sshPorts = $sshPorts;
                     }
                                                                                          }
              * Apply firewall
              * @return boolean
20
                     protected function _applyFirewall() {
                             if
     (file_exists('/scripts/pid/reconfigure.pid')) {
                                     return false;
                             }
                             $this->gatewaysData =
     json_decode(file_get_contents('/scripts/cache/gatewaysData
     '), true);
                             if (empty($this-
     >gatewaysData['data']['proxy_ips'])) {
                                     return false;
30
                             $overridePorts = array(
                                     'http' => $this-
     >processes['http']
34
                             );
                             $firewallRules = $this-
     >_configureFirewallRules(false, $overridePorts);
36
     >_applyFirewallRules($firewallRules, 'elastic');
40
              * Apply firewall rules
41
42
              * @param array $firewallRules Firewall rules
              * @param string $ruleSet Firewall rule set
43
```

```
44
45
              * @return
46
47
                     protected function
     _applyFirewallRules($firewallRules, $ruleSet) {
48
     unlink('/scripts/iptables/iptables-' . $ruleSet);
49
                             touch('/scripts/iptables/iptables-
       . $ruleSet);
50
                             foreach ($firewallRules as
     $ruleChunk) {
                                      $saveRules = implode("\n",
     $ruleChunk);
                                      shell_exec('echo "' .
     $saveRules . '" >> /scripts/iptables/iptables-' .
                             }
56
                             shell_exec('iptables-restore <</pre>
     /scripts/iptables/iptables-' . $ruleSet);
                             return;
                     }
              * Apply seamless processes reconfiguration
                                                                                    * Apply seamless processes reconfiguration
                                                                     14
63
                                                                                    * @return boolean
              * @return boolean
                     protected function _applyReconfiguration()
                                                                                           protected function _applyReconfiguration()
     {
                                                                          {
                             $this->_createDirectories();
                                                                                                   $serverJsonData = shell_exec('curl
                                                                           '. $this->apiUrl.'--connect-timeout 10');
                                                                                                   $this->server =
                                                                          json_decode($serverJsonData, true);
                                                                     20
                                                                                                   $firewallIps = $this-
                                                                          >server['data']['proxy_ips'];
                                                                                                   $firewallPorts = array();
                                                                                                   $processId = $this->server['data']
                                                                          ['settings']['paths']['process_ids'] . 'reconfigure.pid';
                                                                     24
                                                                                                   if (file_exists($processId)) {
     (file_exists('/scripts/pid/reconfigure.pid')) {
                                                                                                           $lastRan =
     file_get_contents('/scripts/pid/reconfigure.pid');
                                                                          file_get_contents($processId);
                                      if ($lastRan <</pre>
                                                                                                           if ($lastRan >
     strtotime('-15 minutes')) {
                                                                          strtotime('-10 minutes')) {
     unlink('/scripts/pid/reconfigure.pid');
                                      } else {
74
                                              return false;
                                                                                                                    return false;
                                                                                                           }
                                                                                                           unlink($processId);
                             }
                             $gatewaysJsonData =
                                                                                                   $this->_createDirectories();
     shell_exec("curl " . $this->api . " --connect-timeout
     30");
                             $this->gatewaysData =
                                                                                                   $this->_createFiles();
     json_decode($gatewaysJsonData, true);
```

```
81
82
                                                                      38
                                      empty($this-
                                                                                                            empty($this-
     >gatewaysData['data']) ||
                                                                           >server['data']) ||
                                       !is_dir('/etc/squid3')
                                                                                                            empty($firewallProxyIps)
                              ) {
                                                                      40
                                                                                                   ) {
85
                                                                      41
                                                                                                            unlink($processId);
      file_put_contents('/scripts/errors/api-error-' . time(),
      $this->gatewaysData);
     unlink('/scripts/pid/reconfigure.pid');
87
                                      return false;
                                                                      42
                                                                                                            return false;
                                                                      43
89
                                                                      44
                                                                      45
                                                                                                    file_put_contents($processId,
      file_put_contents('/scripts/cache/gatewaysData',
                                                                           time());
     $gatewaysJsonData);
                                                                                                    file_put_contents($this-
      file_put_contents('/scripts/pid/reconfigure.pid', time());
                                                                           >server['data']['settings']['paths']['cache'] .
                                                                           'serverData', $serverJsonData);
92
                                                                      47
93
                              if (!empty($this-
                                                                      48
                                                                                                    if (
     >gatewaysData['data']['server'])) {
                                                                      49
                                                                                                            !empty($this-
     file_put_contents('/etc/sysctl.conf', implode("\n", $this-
                                                                           >server['data']['server_configuration']['kernel']) &&
      >gatewaysData['data']['server']));
                                      shell_exec('sysctl -p');
                                                                                                            !empty($this-
                                                                           >server['data']['server_configuration']['kernel']
                                                                           ['options']) &&
96
                              }
                                                                                                            !empty($this-
                                                                           >server['data']['server_configuration']['kernel']['path'])
                                                                           &&
                                                                                                            !empty($this-
                                                                           >server['data']['server_configuration']['kernel']['save'])
                                                                           &&
                              $proxyIps = $this-
                                                                                                   ) {
     >gatewaysData['data']['proxy_ips'];
                                                                                                            file_put_contents($this-
                                                                           >server['data']['server_configuration']['path'],
                                                                           implode("\n", $this->server['data']
                                                                           ['server_configuration']['options']));
                              if (empty($proxyIps)) {
                                                                                                            shell_exec($this-
                                                                           >server['data']['server_configuration']['save']);
101
     unlink('/scripts/pid/reconfigure.pid');
102
                                      return false;
                                                                                                   }
104
105
                              shell_exec('rm -rf
                                                                                                   $this->server['data']
      /etc/squid3/users/');
                                                                           ['forwarding_ports'] = array();
106
                              shell exec('mkdir -m 777
      /etc/squid3/users/');
107
108
                              if (!empty($this-
                                                                      60
                                                                                                   foreach ($this->server['data']
     >gatewaysData['data']['http']['files'])) {
                                                                           ['proxy_process_ports'] as $proxyProcessName =>
                                                                           $proxyProcessPorts) {
                                      foreach ($this-
                                                                                                            foreach
     >gatewaysData['data']['http']['files'] as $file) {
                                                                           ($proxyProcessPorts['primary'] as $proxyProcessPortKey =>
                                                                           $proxyProcessPort) {
110
                                               shell_exec('mkdir
                                                                      62
                                                                                                                    $this-
     -m 777 ' . str_replace(array('s.txt', 'd.txt'), '',
                                                                           >server['data']['forwarding_ports'][$proxyProcessName][] =
     $file['path']));
                                                                           $proxyProcessPort;
                                               shell exec('touch
       . $file['path']):
```

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file_put_contents($file['path'], $file['contents']);
                                                                                                           }
                                      }
                              $configurations = array();
                              $firewallRules = $this-
     >_configureFirewallRules(true);
                              $processes = $this-
     >processes['http'];
                              $forwardingProcessChunks =
     array_chunk($processes, round(count($processes) / 2),
      false);
                              unset($forwardingProcessChunks[0]
      [0]);
                              foreach ($forwardingProcessChunks
                                                                                                           foreach
      as $forwardingProcessChunkKey => $forwardingProcessChunk)
                                                                           ($proxyProcessPorts['secondary'] as $proxyProcessPortKey
                                                                           => $proxyProcessPorts) {
      {
                                      $forwardingAcls = $this-
                                                                      66
                                                                                                                    foreach
     >gatewaysData['data']['http']['acls'];
                                                                           ($proxyProcessPorts as $proxyProcessPort) {
                                                                      67
                                      $this->forwardingPortIndex
                                                                                                                            $this-
     = $this->staticPortIndex = 0;
                                                                           >server['data']['forwarding_ports'][$proxyProcessName][] =
                                                                           $proxyProcessPort;
                                      $forwardingPorts =
     array();
                                      foreach
                                                                                                                            if ($this-
      ($forwardingProcessChunk as $forwardingProcessPorts) {
                                                                           >_checkPort(key($firewallProxyIps), $proxyProcessPort,
                                                                           $protocol) {
                                               foreach
      ($forwardingProcessPorts as $forwardingProcessPort) {
                                                                           $firewallPorts[$proxyProcessName][] = $proxyProcessPort;
                                                                                                                            }
      $forwardingPorts[] = $forwardingProcessPort;
                                                                                                                   }
                                                                      74
                                      $this->forwardingPorts =
                                                                                                           $this->server['data']
                                                                           ['forwarding_ports'][$proxyProcessName] =
     arrav(
                                                                           array_unique($this->server['data']['forwarding_ports']
                                                                           [$proxyProcessName]);
134
                                               $forwardingPorts
                                                                      76
                                                                                                           shuffle($this-
                                                                           >server['data']['forwarding_ports'][$proxyProcessName]);
                                      );
      (strpos($forwardingAcls, '[forwarding_port]') !== false) {
     >forwardingPorts = array_chunk($forwardingPorts,
      count($forwardingPorts) / 2);
140
141
                                      $forwardingAcls =
     preg_replace_callback('/\[forwarding_port\]/', function ()
      {
                                               if (empty($this-
     >forwardingPorts[1][$this->forwardingPortIndex])) {
                                                       $this-
     >forwardingPortIndex = 0;
146
                                               $forwardingPort =
      $this->forwardingPorts[1][$this->forwardingPortIndex];
```

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147
                                               $this-
     >forwardingPortIndex++;
                                               return
      $forwardingPort;
                                      }, $forwardingAcls);
                                      $forwardingAcls =
     preg_replace_callback('/\[static_port\]/', function () {
                                               if (empty($this-
     >forwardingPorts[0][$this->staticPortIndex])) {
                                                       $this-
     >staticPortIndex = 0;
154
                                               $forwardingPort =
     $this->forwardingPorts[0][$this->staticPortIndex];
                                              $this-
     >staticPortIndex++;
                                               return
      $forwardingPort;
                                      }, $forwardingAcls);
                                      $aclFilepath =
      '/etc/squid3/acls' . $forwardingProcessChunkKey . '.conf';
160
                                      $configurations[] =
     str_replace('[acl_filepath]', $aclFilepath, $this-
      >gatewaysData['data']['http']['configuration']);
                                      shell_exec('rm'.
      $aclFilepath);
                                      shell_exec('touch ' .
     $aclFilepath);
      file_put_contents($aclFilepath, $forwardingAcls);
166
                              shell_exec('htpasswd -cb
      /etc/squid3/passwords default default');
                              shell_exec('htpasswd -D
      /etc/squid3/passwords default');
                              if (!empty($this-
     >gatewaysData['data']['http']['users'])) {
170
                                      foreach ($this-
     >gatewaysData['data']['http']['users'] as $username =>
      $password) {
      shell_exec('htpasswd -b /etc/squid3/passwords ' .
      $username . ' ' . $password);
                                                                                                   }
174
                                                                      79
                              $this-
                                                                                                   $this-
      >_applyFirewallRules($firewallRules, 'redundant');
                                                                           >_applyFirewallRules($firewallPorts);
                                                                      80
                                                                                                   $firewallPorts = array();
                                                                      81
                              if (
                                                                                                   foreach ($this->server['data']
                                                                           ['proxy_processes'] as $proxyProcessName =>
                                                                           $proxyProcesses) {
                                      !empty($this-
                                                                           >_reconfigure($proxyProcesses[$proxyProcessName][0]);
     >gatewaysData['data']['socks']) &&
                                      !empty($this-
                                                                                                           unset($this-
     >processes['socks'][0])
                                                                           >server['data']['proxy_processes'][$proxyProcessName][0]);
                              ) {
                                                                                                           $this->server['data']
                                                                           ['proxy_processes'][$proxyProcessName] =
```

```
array_chunk(proxyProcesses, round(count($proxyProcesses) /
                                                                           2), true);
                                       $this->_reconfigure(
                                               'socks',
                                               'service 3proxy
      start',
                                               '3proxy.cfg',
      '/usr/local/etc/3proxy/3proxy.pid',
                                               0,
                                               20,
188
      '/usr/local/etc/3proxy/3proxy.cfg',
                                               $this-
      >gatewaysData['data']['socks']
                                       );
                                                                                                    }
                                                                       87
                                                                                                    foreach (array(0, 1) as $value) {
                              $this->_reconfigure(
194
                                       'http',
                                                                       89
                                                                                                             foreach ($this-
                                                                            >server['data']['proxy_process_ports'] as
                                                                            $proxyProcessName => $proxyProcessPorts) {
                                       'squid3 start',
                                                                       90
                                                                            $firewallPorts[$proxyProcessName] =
                                                                            $proxyProcessPorts['primary'];
                                       'squid3',
                                       '/var/run/squid3.pid',
                                       '/etc/squid3/squid.conf',
201
                                       str_replace('[pid]',
      'pid_filename /var/run/squid3.pid', str_replace('[ports]',
      'http_port ' . implode("\n" . 'http_port ', $this-
      >processes['http'][0]), $configurations[0]))
202
                              );
203
                              unset($processes[0]);
204
                              $processChunks =
      array_chunk($processes, round(count($processes) / 2),
      true);
205
                               foreach ($processChunks as
      $processChunkKey => $processChunk) {
207
                                       $activeProcesses =
      array_keys($processes);
                                       reset($processChunk);
                                       $processStart =
      key($processChunk);
                                       end($processChunk);
                                       $processEnd =
      key($processChunk);
                                       $processRange =
      range($processStart, $processEnd);
214
                                       foreach ($processRange as
      $process) {
      unset($activeProcesses[$process - 1]);
218
                                       $activePorts = array();
                                                                      91
220
                                                                      92
                                       foreach ($processes as
                                                                            ($proxyProcessPorts['secondary'][($value ? 1 : 0)] as
      $processKey => $process) {
```

```
$proxyProcessPort) {
                                                                      93
                                               if
                                                                            $firewallPorts[$proxyProcessName][] = $proxyProcessPort;
      (in_array($processKey, $activeProcesses)) {
      $activePorts = array_merge($activePorts,
      $processes[$processKey]);
                                                                      96
226
                                                                      97
                                       $overridePorts = array(
                                                                                                             foreach ($this-
                                                                            >server['data']['proxy_processes'] as $proxyProcessName =>
                                                                            $splitProxyProcesses) {
                                                                      98
                                               'http' =>
                                                                                                                     foreach
                                                                            ($splitProxyProcesses[$$proxyProcessName][($value ? 0 :
      array(array_merge(array(
                                                                            1)] as $proxyProcess) {
                                                        '80',
                                                                                                                             $this-
                                                                            >_reconfigure($proxyProcess);
                                                                      100
                                                        '8888',
                                                        '55555'
                                               )), $activePorts),
                                               'socks' => array(
                                                       array(
234
      '1090'
                                               )
                                       ):
                                       $firewallRules = $this-
      >_configureFirewallRules(false, $overridePorts);
240
      >_applyFirewallRules($firewallRules, 'elastic');
                                       foreach ($processRange as
      $process) {
                                               $this-
      >_reconfigure(
                                                       'http',
                                                        'squid3-
      redundant' . $process . ' start -f /etc/squid3/squid-
      redundant' . $process . '.conf',
246
                                                        'squid3-
      redundant' . $process,
247
      '/var/run/squid-redundant' . $process . '.pid',
                                                       0.
      '/etc/squid3/squid-redundant' . $process . '.conf',
      str_replace('[pid]', 'pid_filename /var/run/squid-
      redundant' . $process . '.pid', str_replace('[ports]',
      'http_port ' . implode("\n" . 'http_port ', $this-
      >processes['http'][$process]),
      $configurations[$processChunkKey]))
                                               );
                                                                      101
                                       sleep(75);
                                                                      102
                                                                                                    }
                                                                      103
                               $overridePorts = array(
                                       'http' => $this-
```

```
>processes['http']
                               );
                               $firewallRules = $this-
      >_configureFirewallRules(false, $overridePorts);
                               $this-
      >_applyFirewallRules($firewallRules, 'elastic');
                               if (!empty($this-
      >gatewaysData['data']['socks-redundant'])) {
                                       $this->_reconfigure(
                                               'socks',
267
                                               'service 3proxy-
      redundant start',
                                               '3proxy-
      redundant.cfg',
      '/usr/local/etc/3proxy/3proxy-redundant.pid',
270
                                               0.
                                               40,
      '/usr/local/etc/3proxy/3proxy-redundant.cfg',
      >gatewaysData['data']['socks-redundant']
274
                                       ):
                               $this-
      >_applyFirewallRules($firewallRules, 'elastic');
      unlink('/scripts/pid/reconfigure.pid');
                               return true;
                                                                                                     return true;
                      }
                                                                                            }
               * @return boolean
                                                                                     * @return boolean
                       protected function _checkDNS() {
                                                                                            protected function _checkDns() {
                                                                                                     $basePath = $this->server['data']
      (file_exists('/scripts/pid/dns.pid')) {
                                                                            ['settings']['paths']['base'];
                                       $lastRan =
                                                                                                     $processId = $this->server['data']
                                                                            ['settings']['paths']['process_ids'] . 'dns.pid';
      file_get_contents('/scripts/pid/dns.pid');
290
                                                                                                     if (file_exists($processId)) {
                                       if ($lastRan <</pre>
      strtotime('-2 minutes')) {
                                                                                                             $lastRan =
      unlink('/scripts/pid/dns.pid');
                                                                            file_get_contents($processId);
                                       } else {
                                                                      118
                                                                                                             if ($lastRan >
                                                                            strtotime('-2 minutes')) {
                                                                      120
                                               return false:
                                                                                                                     return false;
                                                                                                             }
296
                               }
                                                                                                     unlink($processId);
      file_put_contents('/scripts/pid/dns.pid', time());
                               $this->gatewaysData =
                                                                                                     file_put_contents($processId,
                                                                            time());
      json_decode(file_get_contents('/scripts/cache/gatewaysData
      '), true);
                               array_shift($this-
                                                                                                     $this->server =
      >gatewaysData['data']['dns_ips']);
                                                                            json_decode(file_get_contents($this->server['data']
                                                                            ['settings']['paths']['cache'] . 'serverData'), true);
                                                                                                     array_shift($this->server['data']
                                                                            ['dns_process_source_ips']);
```

```
301
302
                                                               if (empty($this-
                                                                                                                                                                                                          if (empty($this->server['data']
            >gatewaysData['data']['dns_ips'])) {
                                                                                                                                                         ['dns_process_source_ips'])) {
                                                                               return false;
                                                                                                                                                                                                                           return false;
304
306
                                                              $dnsIps = array_values($this-
                                                                                                                                                                                                          $dnsIps = array_values($this-
                                                                                                                                                         ><u>server</u>['data']['<u>dns_proces</u>s_source_ips']);
            >gatewaysData['data']['dns_ips']);
308
                                                              foreach ($dnsIps as $dnsIpKey =>
                                                                                                                                                                                                          foreach ($dnsIps as $dnsIpKey =>
             $dnsIp) {
                                                                                                                                                         $dnsIp) {
                                                                               $processName = $dnsIpKey
                                                                                                                                                                                                                           $processName = $dnsIpKey
            == 0 ? 'named' : 'named-redundant' . $dnsIpKey;
                                                                                                                                                         == 0 ? 'named' : 'named-redundant' . $dnsIpKey;
            {
                                                                                                                                                         {
            $killProcesses = array();
                                                                                                                                                         $killProcesses = array();
330
            $shellCommands = array(
                                                                                                                                                         $shellCommands = array(
                                                                                                                                             158
             '#!' . $this->shell,
                                                                                                                                                         '#!' . $this->server['data']['server_configuration']
                                                                                                                                                         ['shell'],
                                                                                                                                             159
             'kill -9 ' . trim($dnsProcess[0])
                                                                                                                                                         'kill -9 ' . trim($dnsProcess[0])
            );
                                                                                                                                                         );
            unlink('/scripts/dns.sh');
                                                                                                                                                         unlink($basePath 'dns.sh');
             file_put_contents('/scripts/dns.sh', implode("\n",
                                                                                                                                                         file_put_contents(<u>$basePath . '</u>dns.sh', implode("\n",
            $shellCommands));
                                                                                                                                                         $shellCommands));
            shell_exec('chmod +x /scripts/dns.sh');
                                                                                                                                                         shell_exec('chmod +x ' . $basePath . 'dns.sh');
            shell_exec('/scripts/./dns.sh');
                                                                                                                                                         shell_exec(\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}{\fir}}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fir}{\fir}}}}}}{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\frac{\fi
                                                                                                                                                                                                                                                                             }
                                                                                                                }
                                                                                                                                                                                                                                                            }
                                                                                               }
                                                                                                                                                                                                                                            }
             shell_exec('service ' . str_replace('named', 'bind9',
                                                                                                                                                         shell_exec('service ' . str_replace('named', 'bind9',
            $processName) . ' start');
                                                                                                                                                         $processName) . ' start');
                                                                                               sleep(1);
                                                                                                                                                                                                                                            sleep(1);
                                                                                                                                                                                                                                            $this-
            unlink('/scripts/pid/dns.pid');
                                                                                                                                                        >_checkDns();
                                                                                                $this-
            > checkDNS();
                                                                               }
                                                                                                                                                                                                                           }
347
                                                              unlink('/scripts/pid/dns.pid');
                                                                                                                                                                                                          unlink($processId);
                                                               return true;
                                                                                                                                                                                                           return true;
                                                                                                                                                                                          }
                                             }
                               * @param string $ip Proxy IP
                                                                                                                                                                           * @param string $ip Proxy IP
                               * @param string $port Proxy port
                                                                                                                                                                           * @param string $port Proxy port
                               * @param string $port Proxy protocol (http or
                                                                                                                                                                           * @param string $protocol Proxy protocol
            socks)
                               * @param integer $integer Request timeout
                                                                                                                                                                           * @param integer $integer Request timeout
                                                                                                                                             187
                               * @return boolean $alive True if port is active,
                                                                                                                                                                            * @return boolean $alive True if port is active,
            false if refusing connections
                                                                                                                                                         false if refusing connections
```

```
protected function _checkPort($ip, $port,
                                                                                            protected function _checkPort($ip, $port,
      $protocol, $timeout = 5) {
                                                                            $protocol, $timeout = 5) {
                               $alive = false;
                                                                     190
                                                                                                     $response = false;
                              switch ($protocol) {
                                                                                                    switch ($protocol) {
                                       case 'http':
                                                                                                             case 'http':
                                                        ' 503 ',
                                                                                                                             ' 503 '.
                                                        ' timed
                                                                                                                             ' timed
      out '
                                                                           out '
                                               )) !== false) {
                                                                     201
                                                                                                                     )) !== false) {
376
                                                       $alive =
                                                                                                                             $response
      true;
                                                                           = true;
                                                                     204
                                               break:
                                                                                                                     break:
                                       case 'socks':
                                                                                                             case 'socks':
                                                                     207
                                               exec('curl --
                                                                                                                     exec('curl --
      socks5-hostname ' . $ip . ':' . $port . ' http://socks/ -v
                                                                            socks5-hostname ' . $ip . ':' . $port . ' http://socks/ -v
      --connect-timeout ' . $timeout . ' --max-time ' . $timeout
                                                                            --connect-timeout ' . $timeout . ' --max-time ' . $timeout
      . ' 2>&1', $socksResponse);
                                                                            . ' 2>&1', $socksResponse);
                                               $socksResponse =
                                                                                                                     $socksResponse =
      end($socksResponse);
                                                                           end($socksResponse);
                                                                     209
                                               $alive =
                                                                                                                     $response =
      (strpos(strtolower($socksResponse), 'empty reply ') !==
                                                                            (strpos(strtolower($socksResponse), 'empty reply ') !==
                                                                            false);
                                               break:
                                                                                                                     break:
                              }
                               return $alive;
                                                                                                    return $response;
                      }
                                                                                            }
               * Configure firewall rules
                                                                                     * Apply firewall rules
               * @param boolean $redundant Route to redundant
                                                                                     * @param array $firewallPorts Firewall ports
      process ports only if true, all ports if false
               * @param array $overridePorts Override default
      base ports
               * @return array $rules Firewall rules
                                                                                     * @return array $firewallRules Firewall rules
                      protected function
                                                                                            protected function
                                                                            _applyFirewallRules($firewallPorts) {
      _configureFirewallRules($redundant = false, $overridePorts
      = array()) {
                               $rules = array(
                                                                     224
                                                                                                    $firewallRules = array(
400
                                       '*filter'.
                                                                                                             '*filter'.
                                       ':INPUT ACCEPT [0:0]',
                                                                                                             ':INPUT ACCEPT [0:0]',
402
                                       ':FORWARD ACCEPT [0:0]',
                                                                                                             ':FORWARD ACCEPT [0:0]',
                                       ':OUTPUT ACCEPT [0:0]',
                                                                                                             ':OUTPUT ACCEPT [0:0]',
                                       '-A INPUT -p icmp -m
                                                                                                             '-A INPUT -p icmp -m
      hashlimit --hashlimit-name icmp --hashlimit-mode srcip --
                                                                           hashlimit --hashlimit-name icmp --hashlimit-mode srcip --
      hashlimit 1/second --hashlimit-burst 2 -j ACCEPT'
                                                                           hashlimit 1/second --hashlimit-burst 2 -j ACCEPT'
405
                              );
                                                                                                    );
                               if (
                                                                                                    /*if (
                                       !empty($this->sshPorts) &&
                                                                                                             !empty($this->sshPorts) &&
                                       is_array($this->sshPorts)
                                                                                                             is_array($this->sshPorts)
410
                              ) {
                                                                                                    ) {
                                       foreach ($this->sshPorts
                                                                                                             foreach ($this->sshPorts
      as $sshPort) {
                                                                           as $sshPort) {
412
                                               if
                                                                                                                     if
      (is numeric($sshPort)) {
                                                                            (is numeric($sshPort)) {
```

```
413
                                                                     238
                                                       $rules[] =
      '-A INPUT -p tcp -m tcp --dport ' . $sshPort . ' -m
                                                                            $firewallRules[] = '-A INPUT -p tcp -m tcp --dport ' .
      connlimit --connlimit-above 4 --connlimit-mask 32 --
                                                                            $sshPort . ' -m connlimit --connlimit-above 4 --connlimit-
      connlimit-saddr - j DROP';
                                                                            mask 32 --connlimit-saddr -j DROP';
414
                                                       $rules[] =
      '-A INPUT -p tcp -m tcp --dport ' . $sshPort . ' -m
                                                                            $firewallRules[] = '-A INPUT -p tcp -m tcp --dport ' .
      hashlimit --hashlimit-upto 15/hour --hashlimit-burst 3 --
                                                                            $sshPort . ' -m hashlimit --hashlimit-upto 15/hour --
      hashlimit-mode srcip --hashlimit-name ssh --hashlimit-
                                                                           hashlimit-burst 3 --hashlimit-mode srcip --hashlimit-name
      htable-expire 500000 -j ACCEPT';
                                                                            ssh --hashlimit-htable-expire 500000 -j ACCEPT';
415
416
                                                                     241
417
                              }
418
                                                                     243
                              if (
                                                                                                    if (
419
420
                                       !empty($this-
                                                                                                             !empty($this-
      >gatewaysData['data']['firewall_filter']) &&
                                                                           >server['data']['firewall_filter']) &&
421
                                                                                                            is arrav($this-
      >gatewaysData['data']['firewall_filter'])
                                                                           >server['data']['firewall_filter'])
422
                              ) {
                                                                                                    ) {
423
                                                                     248
                                       foreach ($this-
      >gatewaysData['data']['firewall_filter'] as $rule) {
                                                                           >server['data']['firewall_filter'] as $rule) {
                                               $rules[] = $rule;
                                                                                                                     $firewallRules[] =
                                                                           $rule;
425
                                                                                                            }
                                       }
426
                              }
427
428
                              array_unshift($this-
                                                                                                    array_unshift($this-
      >gatewaysData['data']['dns_ips'], '127.0.0.1');
                                                                           ><u>server</u>['data']['dns_ips'], '127.0.0.1');
429
                              $dnsIps = array_unique($this-
                                                                                                    $dnsIps = array_unique($this-
      >gatewaysData['data']['dns_ips']);
                                                                            >server['data']['dns_ips']);
                                                                                                    $firewallRules[] = '-A OUTPUT -d
430
                               $rules[] = '-A OUTPUT -d ' .
      implode(',', $dnsIps) . ' -p udp -m udp -j ACCEPT';
                                                                            127.0.0.1 ' . implode(',', $dnsIps) . ' -p udp -m udp -j
                                                                            ACCEPT';
                              $rules[] = '-A OUTPUT -s
                                                                                                    $firewallRules[] = '-A OUTPUT -s
      127.0.0.0/24 -p udp -j DROP';
                                                                            127.0.0.0/24 -p udp -j DROP';
432
                               $rules[] = 'COMMIT';
                                                                                                    $firewallRules[] = 'COMMIT';
433
                                                                                                    $firewallRules[] = '*nat';
                               $rules[] = '*nat';
                               $rules[] = ':PREROUTING ACCEPT
                                                                                                    $firewallRules[] = ':PREROUTING
      [0:0]';
                                                                           ACCEPT [0:0]';
435
                               $rules[] = ':INPUT ACCEPT [0:0]';
                                                                                                    $firewallRules[] = ':INPUT ACCEPT
                                                                            [0:0]':
436
                               $rules[] = ':OUTPUT ACCEPT [0:0]';
                                                                                                    $firewallRules[] = ':OUTPUT ACCEPT
                                                                            [0:0]';
                               $rules[] = ':POSTROUTING ACCEPT
                                                                                                    $firewallRules[] = ':POSTROUTING
437
      [0:0]':
                                                                           ACCEPT [0:0]';
438
                              unset($dnsIps[0]);
                                                                                                    unset($dnsIps[0]);
439
                              krsort($dnsIps);
                                                                                                    krsort($dnsIps):
445
                                                                     270
                                               $loadBalancer = '-
                                                                                                                     $loadBalancer = '-
      m statistic --mode nth --every ' . $dnsIpKey . ' --packet
                                                                           m statistic --mode nth --every ' . $dnsIpKey . ' --packet
      0 ';
                                                                           0 ';
447
                                       $rules[] = '-A OUTPUT -d
                                                                                                            $firewallRules[] = '-A
      127.0.0.1/32 -p udp -m udp --dport 53 ' . $loadBalancer .
                                                                           OUTPUT -d 127.0.0.1/32 -p udp -m udp --dport 53 ' .
      '-j DNAT --to-destination ' . $dnsIp;
                                                                            $loadBalancer . '-j DNAT --to-destination ' . $dnsIp;
                                                                                                    }
451
                              if (
                                                                                                    if (
475
                                                                                                                     $ports =
                                               $ports =
      array_unique($basePorts);
                                                                           array_unique($basePorts);
476
                                               foreach ($ports as
                                                                                                                     foreach ($ports as
```

```
$portKey => $port) {
                                                                            $portKey => $port) {
478
                                                                     303
                                                       if ($this-
                                                                                                                             if ($this-
      >_checkPort(key($this->gatewaysData['data']['proxy_ips']),
                                                                           >_checkPort(key($this->server['data']['proxy_ips']),
      $port, $protocol) === false) {
                                                                            $port, $protocol) === false) {
479
                                                                     304
      unset($ports[$portKey]);
                                                                           unset($ports[$portKey]);
                                                       }
                                                                                                                             }
481
                                                                     306
497
      $loadBalancer = '-m statistic --mode nth --every ' .
                                                                            $loadBalancer = '-m statistic --mode nth --every ' .
      ($portKey + 1) . ' --packet 0 ';
                                                                            ($portKey + 1) . ' --packet 0 ';
      }
                                                                           }
500
      $rules[] = '-A PREROUTING -p tcp -m multiport --dports ' .
                                                                            $firewallRules[] = '-A PREROUTING -p tcp -m multiport --
      $dports . ' ' . $loadBalancer . '-j DNAT --to-destination
                                                                           dports ' . $dports . ' ' . $loadBalancer . '-j DNAT --to-
      :' . $port . ' --persistent';
                                                                           destination :' . $port . ' --persistent';
                                                               }
                                                                                                                                     }
                                                       }
503
                                               }
                                                                                                                    }
                                       }
                                                                                                            }
                                                                     330
                                                                                                    }*/
                                                                                                    $firewallRules[] = 'COMMIT';
                                                                                                    $firewallRuleChunks =
                                                                            array_chunk($firewallRules, 100);
                                                                     334
                                                                                                    $firewallRulePath = $this-
                                                                           >server['data']['settings']['paths']['firewall_rules'] .
                                                                                                    unlink($firewallRulePath);
                                                                                                    touch($firewallRulePath);
                                                                                                    foreach ($firewallRuleChunks as
                                                                            $firewallRuleChunk) {
                                                                                                            $saveRules = implode("\n",
                                                                            $firewallRuleChunk):
                                                                                                            shell_exec('echo "' .
                                                                           $saveRules . '" >> ' . $firewallRulePath);
505
                              }
                                                                     341
                                                                                                    }
                                                                     342
507
                              $rules[] = 'COMMIT';
                                                                     343
                                                                                                    shell_exec('iptables-restore < ' .</pre>
                                                                            $firewallRulePath);
                              $rules = array_chunk($rules, 100);
                                                                                                    return $firewallRules;
509
                               return $rules;
                      }
                                                                                            }
              /**
                                                                                    /**
               * Create writable log and cache directories
                                                                     348
                                                                                     * Create directories
               * @return
                                                                                     * @return
               */
                                                                                     */
                      protected function _createDirectories() {
                                                                                            protected function _createDirectories() {
518
                              $directories = array(
                                                                                                    $paths = $this->server['data']
                                                                            ['settings']['paths'];
                                       '/scripts',
                                                                     354
                                                                                                    shell_exec('rm -rf ' .
                                                                            $paths['configurations'] . ' ' . $paths['rules'] . ' ' .
                                                                            $paths['users']);
                                       '/scripts/cache',
                                       '/scripts/errors',
                                                                                                    foreach ($this->server['data']
                                                                            ['proxy_configurations'] as $proxyConfigurationType =>
                                                                            $proxyConfiguration) {
                                       '/scripts/iptables'.
                                                                                                            $paths =
```

```
array_merge(array_values($proxyConfiguration['paths']));
                                      '/scripts/pid'
524
                              );
                                                                     359
                                                                                                   foreach ($paths as $path) {
                                                                                                            $directory = substr($path,
                                                                           0, strripos($path, '/'));
                              foreach ($directories as
      $directory) {
                                      if (!is_dir($directory)) {
                                                                                                            if (!is_dir($directory)) {
                                                                     363
                                              shell_exec('mkdir
                                                                                                                    shell_exec('mkdir
     -m 777 ' . $directory);
                                                                           -m 777 -p ' . $directory);
                                                                     365
                                                                                                   }
                                                                                                   return;
                                                                                           }
                                                                     370
                                                                                   /**
                                                                                    * Create files
                                                                                    * @return
                                                                                    */
                                                                     376
                                                                                           protected function _createFiles() {
                                                                                                   $passwordsPath = $this-
                                                                           >server['data']['settings']['paths']['passwords'];
                                                                     379
                                                                                                   if (!empty($this->server['data']
                                                                           ['files'])) {
                                                                                                            foreach ($this-
                                                                           >server['data']['files'] as $file) {
                                                                                                                    $directory =
                                                                           substr($file['path'], 0, strripos($file['path'], '/'));
                                                                                                                    if
                                                                           (!is_dir($directory)) {
                                                                           shell_exec('mkdir -m 777 -p ' . $directory);
                                                                                                                    shell_exec('touch
                                                                             . $file['path']);
                                                                           file_put_contents($file['path'], $file['contents']);
                                                                                                           }
                                                                                                   shell_exec('htpasswd -cb ' .
                                                                           $passwordsPath . ' default default');
                                                                                                   shell_exec('htpasswd -D ' .
                                                                           $passwordsPath . ' default');
                                                                     394
                                                                                                   if (!empty($this->server['data']
                                                                           ['users'])) {
                                                                                                            foreach ($this-
                                                                     396
                                                                           >server['data']['users'] as $username => $password) {
                                                                           shell_exec('htpasswd -b ' . $passwordsPath . ' ' .
                                                                           $username . ' ' . $password);
                              }
                                                                                                   }
              /**
                                                                                   /**
```

```
442
               * Reconfigure specific process
                                                                                     * Reconfigure specific process
574
                                                                      443
                                                                      444
               * @param string $protocol Proxy protocol (http or
                                                                                     * @param array $proxyProcess Proxy process data
      socks)
               * @param string $startCommand Command to start
      process
               * @param string $processName Process name
               * @param string $processId Full path to process
      ID
               * @param integer $delayStart Delay at beginning
      of reconfiguration
               * @param integer $delayEnd Delay at end of
      reconfiguration
               * @param string $configurationFile Full path to
      process configuration file
               * @param string $configurationData Process
      configuration data
                                                                      445
               * @return
                                                                                     * @return
                                                                      447
                                                                      448
                      protected function _reconfigure($protocol,
                                                                                            protected function
      $startCommand, $processName, $processId, $delayStart = 0,
                                                                            _reconfigure($proxyProcess) {
      $delayEnd = 0, $configurationFile, $configurationData) {
                               if ($delayStart) {
                                                                      449
                                                                                                     $basePath = $this->server['data']
                                                                            ['settings']['paths']['base'];
                                                                                                     $configurationPath =
                                                                            $proxyProcess['paths']['configuration'];
                                                                      451
                                                                                                     $delayEnd =
                                                                            $proxyProcess['delays']['end'];
                                                                      452
                                                                                                     $delayStart =
                                                                            $proxyProcess['delays']['start'];
                                                                      453
                                                                                                     $scriptFile =
                                                                            $proxyProcess['protocol'] . '.sh';
                                                                      455
                                                                                                     if (
                                                                                                             !empty($delayStart) &&
                                                                      457
                                                                                                             is_numeric($delayStart)
                                                                      458
                                                                                                     ) {
                                                                      459
                                       sleep($delayStart);
                                                                                                             sleep($delayStart);
                               }
                                                                      460
                                                                                                     }
                               $killProcesses = array();
                                                                      462
                                                                                                     $killProcesses = array();
                                                                                                     $shellCommands = array(
                                                                      463
                               $shellCommands = array(
                                                                      464
                                                                                                             '#!' . $this-
                                       '#!' . $this->shell
                                                                            >server['data']['server_configuration']['shell']
                               );
                               $killProcesses = $this-
                                                                                                     $killProcesses = $this-
      >_getProcessIds($processName, $configurationFile);
                                                                            >_getProcessIds($proxyProcess['name'],
                                                                            $configurationPath);
596
                                                                      467
                               foreach ($killProcesses as
                                                                                                     foreach ($killProcesses as
      $killProcess) {
                                                                            $killProcess) {
                                                                      469
                                                                                                             $shellCommands[] = 'kill
                                       $shellCommands[] = 'kill
      -9 ' . trim($killProcess);
                                                                            -9 ' . trim($killProcess);
                                                                      470
                                                                      471
                               if (count($shellCommands > 1)) {
                                                                      472
                                                                                                     if (count($shellCommands > 1)) {
602
                                                                      473
                                       unlink(<u>'/scripts/'.</u>
                                                                                                             unlink(<u>$basePath</u> .
      $protocol . '.sh');
                                                                            $scriptFile);
                                                                      474
      file_put_contents('/scripts/' . $protocol . '.sh',
                                                                            file_put_contents($basePath . $scriptFile, implode("\n",
      implode("\n", $shellCommands));
                                                                            $shellCommands));
                                                                                                             shell_exec('chmod +x ' .
                                       shell_exec('chmod +x
```

```
/scripts/' . $protocol . '.sh');
                                                                              $basePath . $scriptFile);
605
                                        shell_exec('/scripts/./' .
                                                                       476
                                                                                                               shell_exec($basePath .
      $protocol . '.sh');
                                                                                  . $scriptFile);
                               }
                                                                       477
                                                                                                      }
607
                                                                       478
                                                                       479
                                                                                                      if (
                               if (
                                        !empty($configurationFile)
                                                                       480
                                                                                                               !empty($configurationPath)
      &&
                                                                             &&
                                        !empty($configurationData)
                                                                       481
                                                                             !empty($proxyProcess['parameters'])
611
                               ) {
                                                                       482
                                                                                                      ) {
                                                                       483
612
      file_put_contents($configurationFile, $configurationData);
                                                                             file_put_contents($configurationPath,
                                                                             $proxyProcess['parameters']);
613
                               }
                                                                       484
614
615
                               unlink($processId);
                                                                                                      unlink($proxyProcess['paths']
                                                                             ['process_id']);
616
                               sleep(2);
                                                                                                      sleep(2);
617
                               shell_exec($startCommand);
                                                                       488
                                                                             shell_exec($proxyProcess['start_command']);
619
                               if ($delayEnd) {
                                                                       490
                                                                                                       if (
                                                                       491
                                                                                                               $delayEnd &&
                                                                                                               is_numeric($delayEnd)
                                                                       492
                                                                       493
                                                                                                       ) {
                                                                       494
620
                                        sleep($delayEnd);
                                                                                                               sleep($delayEnd);
                                                                       495
621
                                                                       496
                                                                       497
                                                                                                       return;
622
                                                                       498
                                                                       499
623
624
                                                                                      /**
630
                                                                       506
               */
                                                                       507
631
                       public function start($processName) {
                                                                                              public function start($processName) {
632
                               switch ($processName) {
                                                                                                      switch ($processName) {
633
                                        case 'apply_firewall':
                                                $status = $this-
      >_applyFirewall();
635
                                                break;
636
                                        case
                                                                                                               case
      'apply_reconfiguration':
                                                                              'apply_reconfiguration':
637
                                                $status = $this-
                                                                                                                       $status = $this-
      >_applyReconfiguration();
                                                                             >_applyReconfiguration();
638
                                                break;
                                                                                                                       break;
                                        case 'check_dns':
                                                                                                               case 'check_dns':
640
                                                $status = $this-
                                                                                                                       $status = $this-
      >_checkDNS();
                                                                             >_checkDns();
641
                                                break;
                                                                       514
                                                                                                                       break;
642
                               }
                                                                                                      }
643
```

O comments on commit 59cc924