parsonsbots / dynamic-proxy-node-reconfiguration

```
Update dynamic reconfiguration for new gateway
                                                                                                                       Browse files
 master
 parsonsbots committed 27 minutes ago
                                                                   1 parent 5985d0a
                                                                                     commit 077c3023b12960e8c63c83cd7fcbb0c566d7628e
Showing 1 changed file with 21 additions and 82 deletions.
                                                                                                                       Unified
                                                                                                                                Split
  * Dynamic Proxy Node Reconfiguration
                                                                             * Dynamic Proxy Node Reconfiguration
   4
                                                                      4
                                                                             *
          * Reconfigure and manage redundant proxy processes with
                                                                             * Reconfigure and manage redundant proxy processes with
       no connection interruptions
                                                                          no connection interruptions
   6
      - * in Squid (HTTP) and 3proxy (SOCKS 5) with an
                                                                          + * with an unlimited number of unique ACLs for
       unlimited number of unique ACLs for
                                                                          individual proxy nodes using
       - * individual proxy nodes using multiple destination IPs
                                                                          + * multiple destination IPs on a single server.
       on a single server.
   8
                                                                      8
   9
                                                                      9
          * @author Will Parsons
                                                                             * @author Will Parsons
       - * @link https://parsonsbots.com
                                                                     10
                                                                            * @copyright 2019 Will Parsons
                                                                          + * @license https://github.com/parsonsbots/dynamic-
                                                                          proxy-node-reconfiguration/blob/master/LICENSE MIT License
                                                                          + * @link
                                                                                         https://parsonsbots.com
                                                                          + * @link
                                                                                         https://eightomic.com
         class DynamicProxyReconfiguration {
                                                                            class DynamicProxyReconfiguration {
                       $this->gatewaysData =
                                                                                         $this->gatewaysData =
       json_decode(file_get_contents('/scripts/cache/gatewaysData
                                                                          json_decode(file_get_contents('/scripts/cache/gatewaysData
       '), true);
                                                                          '), true);
                       if (empty($this->gatewaysData['data']
                                                                     41
                                                                                         if (empty($this->gatewaysData['data']
       ['proxies'])) {
                                                                          ['proxy_ips'])) {
                                                                     42
                               return false;
                                                                                                 return false;
                                                                     43
  41
          * @return boolean
                                                                             * @return boolean
                                                                                 protected function _applyReconfiguration() {
                                                                     78
               protected function _applyReconfiguration() {
                       // Create writable log and cache
       directories
                       $this->_createDirectories();
                                                                                         $this->_createDirectories();
  78
                       // Check for existing reconfiguration
       process
  80
       (file_exists('/scripts/pid/reconfigure.pid')) {
                                                                          (file_exists('/scripts/pid/reconfigure.pid')) {
                              $lastRan =
                                                                                                 $lastRan =
       file_get_contents('/scripts/pid/reconfigure.pid');
                                                                          file_get_contents('/scripts/pid/reconfigure.pid');
  83
                              // Start new reconfiguration
       process if 15 minutes has passed
                                                                                                 if ($lastRan < strtotime('-15</pre>
                              if ($lastRan < strtotime('-15</pre>
       minutes')) {
                                                                          minutes')) {
  85
                                                                     85
       unlink('/scripts/pid/reconfigure.pid');
                                                                          unlink('/scripts/pid/reconfigure.pid');
```

```
86
                                                                                                    } else {
91
                                                                      91
                      $gatewaysJsonData = shell_exec("curl " .
                                                                                           $gatewaysJsonData = shell_exec("curl " .
      $this->api . " --connect-timeout 30");
                                                                           $this->api . " --connect-timeout 30");
                      $this->gatewaysData =
                                                                                            $this->gatewaysData =
                                                                           json_decode($gatewaysJsonData, true);
      json_decode($gatewaysJsonData, true);
94
                      // Log API error timestamp
                      if (
                                                                                           if (
                              empty($this->gatewaysData['data'])
                                                                                                    empty($this->gatewaysData['data'])
      П
                                                                           П
97
                                                                      96
                              !is_dir('/etc/squid3')
                                                                                                    !is_dir('/etc/squid3')
                              return false;
                                                                                                    return false;
102
                                                                     101
                      }
                                                                                           }
                                                                     102
                      // Require Squid and sysctl configurations
      from API
                      if (
106
                              empty($this->gatewaysData['data']
      ['squid_conf']) ||
107
                              empty($this->gatewaysData['data']
      ['sysctl_conf'])
                      ) {
109
     unlink('/scripts/pid/reconfigure.pid');
                              return false;
                      }
                      // Cache new ACLs from API
                                                                     103
      file_put_contents('/scripts/cache/gatewaysData',
                                                                           file_put_contents('/scripts/cache/gatewaysData',
      $gatewaysJsonData);
                                                                           $gatewaysJsonData);
                      // Create new reconfiguration process ID
                                                                     104
      file_put_contents('/scripts/pid/reconfigure.pid', time());
                                                                           file_put_contents('/scripts/pid/reconfigure.pid', time());
                      // Save and apply sysctl settings
                                                                     106
                                                                                           if (!empty($this->gatewaysData['data']
                                                                           ['server'])) {
120
                      file_put_contents('/etc/sysctl.conf',
                                                                     107
      $this->gatewaysData['data']['sysctl_conf']);
                                                                           file_put_contents('/etc/sysctl.conf', implode("\n", $this-
                                                                           >gatewaysData['data']['server']));
                      shell_exec('sysctl -p');
                                                                                                    shell_exec('sysctl -p');
                                                                                           }
                      // Don't run reconfiguration if there
                                                                                            $proxyIps = $this->gatewaysData['data']
      aren't any ACLs to apply to proxy IPs
                                                                           ['proxy_ips'];
                      $proxies = $this->gatewaysData['data']
     ['proxies'];
126
                      if (empty($proxies[0])) {
                                                                                           if (empty($proxyIps[0])) {
     unlink('/scripts/pid/reconfigure.pid');
                                                                           unlink('/scripts/pid/reconfigure.pid');
                              return false;
                                                                                                    return false;
                      }
                                                                                           }
                      // Create new Squid user directories with
     chunked sources and destinations
                                                                                           shell_exec('rm -rf /etc/squid3/users/');
                      shell_exec('rm -rf /etc/squid3/users/');
                      shell_exec('mkdir -m 777
                                                                     119
                                                                                           shell_exec('mkdir -m 777
      /etc/squid3/users/');
                                                                           /etc/squid3/users/');
141
                      }
                                                                                           }
```

```
143
                      $firewallRules = $this-
                                                                                            $firewallRules = $this-
      >_configureFirewallRules(true);
                                                                           >_configureFirewallRules(true);
                      // Save Squid ACLs from API to file
146
                      shell exec('rm
                                                                                            shell_exec('rm
      /etc/squid3/proxy_ip_acl.conf');
                                                                           /etc/squid3/proxy_ip_acl.conf');
147
                      shell_exec('touch
                                                                                            shell_exec('touch
      /etc/squid3/proxy_ip_acl.conf');
                                                                           /etc/squid3/proxy_ip_acl.conf');
      file_put_contents('/etc/squid3/proxy_ip_acl.conf',
                                                                           file_put_contents('/etc/squid3/proxy_ip_acl.conf', $this-
      implode("\n", $this->gatewaysData['data']['acls']));
                                                                           >gatewaysData['data']['http']['acls']);
150
                      // Set proxy usernames and passwords using
      htpasswd and basic_ncsa_auth for security
                      shell_exec('htpasswd -cb
                                                                                            shell_exec('htpasswd -cb
      /etc/squid3/passwords default default');
                                                                           /etc/squid3/passwords default default');
                      shell_exec('htpasswd -D
                                                                                            shell_exec('htpasswd -D
      /etc/squid3/passwords default');
                                                                           /etc/squid3/passwords default');
                      }
                                                                                            }
160
                      // Apply redundant firewall rules to begin
      seamless reconfiguration
                      $this->_applyFirewallRules($firewallRules,
                                                                     142
                                                                                            $this->_applyFirewallRules($firewallRules,
      'redundant');
                                                                           'redundant');
                                                                     143
                      // Reconfigure existing SOCKS processes
      first once redundant firewall is applied
                      if (
                                                                                            if (
                               !empty($this->gatewaysData['data']
                                                                                                    !empty($this->gatewaysData['data']
      ['socks']) &&
                                                                           ['socks']) &&
                               !empty($this->processes['socks']
                                                                                                    !empty($this->processes['socks']
      [0])
                                                                           [0])
                      ) {
                                                                     147
                                                                                            ) {
                              // Reconfigure main SOCKS instance
                              $this->_reconfigure(
                                                                                                    $this->_reconfigure(
                                       'socks',
                                                                                                            'socks',
                                       'service 3proxy start',
                                                                     150
                                                                                                            'service 3proxy start',
                              );
                                                                                                    );
                                                                                            }
                      // Reconfigure main HTTP instance
                      $this->_reconfigure(
                                                                                            $this->_reconfigure(
                               'http',
                                                                                                    'http',
                               'squid3 start',
                                                                                                    'squid3 start',
                              0,
                                                                                                    0,
                              75,
                                                                                                    75,
189
                               '/etc/squid3/squid.conf',
                                                                                                    '/etc/squid3/squid.conf',
                              str_replace('[pid]', 'pid_filename
                                                                     168
                                                                                                    str_replace('[pid]', 'pid_filename
      /var/run/squid3.pid', str_replace('[ports]', 'http_port '
                                                                           /var/run/squid3.pid', str_replace('[ports]', 'http_port '
      . implode("\n" . 'http_port ', $this->processes['http']
                                                                           . implode("\n" . 'http_port ', $this->processes['http']
      [0]), $this->gatewaysData['data']['http']))
                                                                           [0]), $this->gatewaysData['data']['http']['acls']))
                      ):
                      $redundantProcesses = $this-
                                                                                            $redundantProcesses = $this-
      >processes['http'];
                                                                           >processes['http'];
                      unset($redundantProcesses[0]):
                                                                                            unset($redundantProcesses[0]):
                      $redundantProcessChunks =
                                                                                            $redundantProcessChunks =
      array_chunk($redundantProcesses,
                                                                           array_chunk($redundantProcesses,
      round(count($redundantProcesses) / 2), true);
                                                                           round(count($redundantProcesses) / 2), true);
                      foreach ($redundantProcessChunks as
                                                                                            foreach ($redundantProcessChunks as
```

```
$redundantProcessChunk) {
                                                                           $redundantProcessChunk) {
198
                              // Define active redundant process
      numbers
                              $activeRedundantProcesses =
                                                                                                    $activeRedundantProcesses =
      array_keys($redundantProcesses);
                                                                           array_keys($redundantProcesses);
201
                              // Define redundant process number
      range for reconfiguration
                               reset($redundantProcessChunk);
                                                                                                    reset($redundantProcessChunk);
                              $redundantProcessStart =
                                                                                                    $redundantProcessStart =
      key($redundantProcessChunk);
                                                                           key($redundantProcessChunk);
204
                              end($redundantProcessChunk);
                                                                                                    end($redundantProcessChunk);
209
      unset($activeRedundantProcesses[$redundantProcess - 1]);
                                                                           unset($activeRedundantProcesses[$redundantProcess - 1]);
                              // Get list of active redundant
      ports for firewall configuration
                              $activeRedundantPorts = array();
                                                                                                    $activeRedundantPorts = array();
214
                                                                     187
                              foreach ($redundantProcesses as
                                                                                                    foreach ($redundantProcesses as
      $key => $redundantProcess) {
                                                                           $key => $redundantProcess) {
                              $this-
                                                                     208
      >_applyFirewallRules($firewallRules, 'elastic');
                                                                           >_applyFirewallRules($firewallRules, 'elastic');
                              foreach ($redundantProcessRange as
                                                                     210
                                                                                                    foreach ($redundantProcessRange as
      $redundantProcess) {
                                                                           $redundantProcess) {
238
                                       // Reconfigure redundant
     HTTP instances
                                       $this->_reconfigure(
                                                                                                            $this->_reconfigure(
                                               'http',
                                                                                                                    'http',
241
                                                                                                                    'squid3-redundant'
                                               'squid3-redundant'
      . $redundantProcess . ' start -f /etc/squid3/squid-
                                                                           . $redundantProcess . ' start -f /etc/squid3/squid-
      redundant' . $redundantProcess . '.conf',
                                                                           redundant' . $redundantProcess . '.conf',
                                                                                                                    0,
                                               0.
      '/etc/squid3/squid-redundant' . $redundantProcess .
                                                                           '/etc/squid3/squid-redundant' . $redundantProcess .
      '.conf',
                                                                           '.conf',
247
                                                                     219
      str_replace('[pid]', 'pid_filename /var/run/squid-
                                                                           str_replace('[pid]', 'pid_filename /var/run/squid-
      redundant' . $redundantProcess . '.pid',
                                                                           redundant' . $redundantProcess . '.pid',
      str_replace('[ports]', 'http_port ' . implode("\n" .
                                                                           str_replace('[ports]', 'http_port ' . implode("\n" .
      'http_port ', $this->processes['http']
                                                                           'http_port ', $this->processes['http']
      [$redundantProcess]), $this->gatewaysData['data']
                                                                           [$redundantProcess]), $this->gatewaysData['data']['http']
      ['http']))
                                                                           ['acls']))
                                       ):
                                                                                                            ):
250
                              // Fixed delay necessary to
      circumvent connection errors from varying downtime during
      reconfiguration with bulk ACLs
                              sleep(75);
                                                                                                    sleep(75);
                      }
                      $this->_applyFirewallRules($firewallRules,
                                                                                            $this->_applyFirewallRules($firewallRules,
      'elastic');
                                                                           'elastic');
                      if (!empty($this->gatewaysData['data']
                                                                                            if (!empty($this->gatewaysData['data']
      ['socks-redundant'])) {
                                                                           ['socks-redundant'])) {
                              // Reconfigure redundant SOCKS
      instance
                              $this->_reconfigure(
                                                                                                    $this-> reconfigure(
```

```
'socks',
                                       'service 3proxv-redundant
                                                                                                             'service 3proxv-redundant
      start',
                                                                            start'.
274
                                                                      245
                      $this->_applyFirewallRules($firewallRules,
                                                                                            $this->_applyFirewallRules($firewallRules,
      'elastic');
                                                                            'elastic');
276
                      // Remove reconfiguration process ID
278
                      unlink('/scripts/pid/reconfigure.pid');
                                                                                            unlink('/scripts/pid/reconfigure.pid');
                                                                      247
                      return true:
                                                                                            return true:
         * @return boolean
                                                                               * @return boolean
              protected function _checkDNS() {
                                                                                    protected function _checkDNS() {
                      // Check for existing DNS check process ID
                      if (file_exists('/scripts/pid/dns.pid')) {
                                                                                            if (file_exists('/scripts/pid/dns.pid')) {
                              $lastRan =
                                                                                                    $lastRan =
      file_get_contents('/scripts/pid/dns.pid');
                                                                            file_get_contents('/scripts/pid/dns.pid');
                                                                      259
                              // Start new DNS check process if
      2 minutes have passed
294
                               if ($lastRan < strtotime('-2</pre>
                                                                                                     if ($lastRan < strtotime('-2</pre>
      minutes')) {
                                                                           minutes')) {
                                                                            unlink('/scripts/pid/dns.pid');
      unlink('/scripts/pid/dns.pid');
                              } else {
                                                                                                    } else {
                                       return false;
                                                                                                             return false;
                              }
                                                                                                    }
                                                                                            }
                      // Create new DNS check process ID
                      file_put_contents('/scripts/pid/dns.pid',
                                                                                            file_put_contents('/scripts/pid/dns.pid',
      time()):
                                                                            time()):
                      // Get list of DNS IPs
305
                      $this->gatewaysData =
                                                                                            $this->qatewaysData =
      json_decode(file_get_contents('/scripts/cache/gatewaysData
                                                                            json_decode(file_get_contents('/scripts/cache/gatewaysData
      '), true);
                                                                            '), true);
                      array_shift($this->gatewaysData['data']
                                                                                            array_shift($this->gatewaysData['data']
      ['dns_ips']);
                                                                            ['dns_ips']);
307
                      foreach ($dnsIps as $key => $dnsIp) {
                                                                                            foreach ($dnsIps as $key => $dnsIp) {
                              $processName = $key == 0 ? 'named'
                                                                                                    $processName = $key == 0 ? 'named'
      : 'named-redundant' . $key;
                                                                            : 'named-redundant' . $key;
                              $dnsResponse = array();
                                                                                                    $dnsResponse = array();
                              exec('dig +time=2 +tries=1
                                                                                                    exec('dig +time=2 +tries=1 proxies
                                                                              . $dnsIp . ' 2>&1', $dnsResponse);
      ghostproxies @' . $dnsIp . ' 2>&1', $dnsResponse);
                              if (
                                                                                                    if (
                                       !empty($dnsResponse[3]) &&
                                                                                                             !empty($dnsResponse[3]) &&
         * @return array $rules Firewall rules
                                                                               * @return array $rules Firewall rules
              protected function
                                                                                    protected function
      _configureFirewallRules($redundant = false, $overridePorts
                                                                            _configureFirewallRules($redundant = false, $overridePorts
      = array()) {
                                                                            = array()) {
405
                      // Begin input filter rules
                      $rules = array(
                                                                                            $rules = array(
                               '*filter',
                                                                                                     '*filter',
                               ':INPUT ACCEPT [0:0]',
                                                                                                     ':INPUT ACCEPT [0:0]',
409
                               ':FORWARD ACCEPT [0:0]',
                                                                                                     ':FORWARD ACCEPT [0:0]',
410
                               ':OUTPUT ACCEPT [0:0]',
                                                                                                     ':OUTPUT ACCEPT [0:0]',
                               '-A INPUT -p icmp -m hashlimit --
                                                                                                     '-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', // Rate limit
                                                                           1/second --hashlimit-burst 2 -j ACCEPT'
      ICMP to prevent PoD attacks
412
                                                                                           );
413
414
                      // Rate limit SSH ports to protect from
      brute-forcing
415
                      if (
                                                                                           if (
416
                               !empty($this->sshPorts) &&
                                                                                                    !empty($this->sshPorts) &&
417
                              is_array($this->sshPorts)
                                                                                                    is_array($this->sshPorts)
418
                      ) {
                                                                                           ) {
419
                              foreach ($this->sshPorts as
                                                                                                    foreach ($this->sshPorts as
      $sshPort) {
                                                                           $sshPort) {
420
                                       if (is_numeric($sshPort))
                                                                                                            if (is_numeric($sshPort))
      {
                                                                           {
421
                                               srules[] = '-A
                                                                                                                    srules[] = '-A
      INPUT -p tcp -m tcp --dport ' . $sshPort . ' -m connlimit
                                                                           INPUT -p tcp -m tcp --dport ' . $sshPort . ' -m connlimit
      --connlimit-above 4 --connlimit-mask 32 --connlimit-saddr
                                                                           --connlimit-above 4 --connlimit-mask 32 --connlimit-saddr
                                                                           -j DROP';
      -j REJECT --reject-with tcp-reset';
422
                                                                                                                    rules[] = '-A
                                               rules[] = '-A
                                                                           INPUT -p tcp -m tcp --dport '. \$sshPort . ' -m hashlimit
      INPUT -p tcp -m tcp --dport ' . $sshPort . ' -m hashlimit
      --hashlimit-upto 15/hour --hashlimit-burst 3 --hashlimit-
                                                                           --hashlimit-upto 15/hour --hashlimit-burst 3 --hashlimit-
      mode srcip --hashlimit-name ssh --hashlimit-htable-expire
                                                                           mode srcip --hashlimit-name ssh --hashlimit-htable-expire
      500000 -j ACCEPT';
                                                                           500000 -j ACCEPT';
423
                              }
                                                                                                    }
425
                      }
                                                                                           }
426
427
                      // Apply custom firewall rules from API
      (e.g. disabling ports for specific destinations)
                      if (
                                                                                           if (
429
                              !empty($this->gatewaysData['data']
                                                                                                    !empty($this->gatewaysData['data']
      ['firewall_filter']) &&
                                                                           ['firewall_filter']) &&
                                                                                                    is_array($this-
                              is arrav($this-
      >gatewaysData['data']['firewall_filter'])
                                                                           >gatewaysData['data']['firewall_filter'])
                              }
435
                                                                                           }
                      }
436
                      // Allow specific DNS IPs for internal
      round-robin DNS
                                                                                           if (
                                                                     398
439
                              !empty($this->gatewaysData['data']
                                                                                                    !emptv($this->gatewaysData['data']
      ['dns_ips']) &&
                                                                           ['dns_ips']) &&
440
                              is_array($this-
                                                                                                    is_array($this-
      >gatewaysData['data']['dns_ips'])
                                                                           >gatewaysData['data']['dns_ips'])
441
                      ) {
                                                                                           ) {
442
                              $rules[] = '-A OUTPUT -d ' .
                                                                     401
                                                                                                    $rules[] = '-A OUTPUT -d ' .
      implode(',', $this->gatewaysData['data']['dns_ips']) . ' -
                                                                           implode(',', $this->gatewaysData['data']['dns_ips']) . ' -
      p udp -m udp -j ACCEPT';
                                                                           p udp -m udp -j ACCEPT';
443
                                                                     402
                                                                                           }
                      }
445
                      // Prevent spoof attacks when using DNS on
      localhost
446
                      $rules[] = '-A OUTPUT -s 127.0.0.0/24 -p
                                                                                            $rules[] = '-A OUTPUT -s 127.0.0.0/24 -p
      udp -i DROP';
                                                                           udp -i DROP';
                      // End input filter rules
                      $rules[] = 'COMMIT';
                                                                                           $rules[] = 'COMMIT';
450
                      // Prepare default rules for NAT
452
                      $rules[] = '*nat';
                                                                                           $rules[] = '*nat';
453
                      $rules[] = ':PREROUTING ACCEPT [0:0]';
                                                                     407
                                                                                           $rules[] = ':PREROUTING ACCEPT [0:0]';
                      $rules[] = ':INPUT ACCEPT [0:0]':
                                                                                           $rules[] = ':INPUT ACCEPT [0:0]':
```

```
455
                                                                     409
                      $rules[] = ':OUTPUT ACCEPT [0:0]';
                                                                                            $rules[] = ':OUTPUT ACCEPT [0:0]';
456
                                                                      410
                      $rules[] = ':POSTROUTING ACCEPT [0:0]';
                                                                                            $rules[] = ':POSTROUTING ACCEPT [0:0]';
457
                                                                      411
                      // Remove 127.0.0.1 from array of DNS IPs
      and sort keys for load balancing
459
                      $dnsIps = array_values($this-
                                                                     412
                                                                                            $dnsIps = array_values($this-
      >gatewaysData['data']['dns_ips']);
                                                                            >gatewaysData['data']['dns_ips']);
460
                      unset($dnsIps[0]);
                                                                      413
                                                                                            unset($dnsIps[0]);
                      krsort($dnsIps);
                                                                      414
                                                                                            krsort($dnsIps);
462
                                                                      415
463
                      // Load balance DNS
                      foreach ($dnsIps as $key => $dnsIp) {
                                                                     416
                                                                                            foreach ($dnsIps as $key => $dnsIp) {
465
                                                                      417
                              $loadBalancer = '';
                                                                                                    $loadBalancer = '';
                                                                      418
                              $rules[] = '-A OUTPUT -d
                                                                                                    $rules[] = '-A OUTPUT -d
471
                                                                      423
      127.0.0.1/32 -p udp -m udp --dport 53 ' . $loadBalancer .
                                                                            127.0.0.1/32 -p udp -m udp --dport 53 ' . $loadBalancer .
      '-j DNAT --to-destination ' . $dnsIp;
                                                                            '-j DNAT --to-destination ' . $dnsIp;
472
                      }
                                                                      424
                                                                                            }
473
                                                                      425
474
                      // Begin DNAT load balancing for each
      process
475
                      if (
                                                                      426
                                                                                            if (
476
                               !empty($this->processes) &&
                                                                      427
                                                                                                     !empty($this->processes) &&
477
                                                                                                    is_array($this->processes)
                              is_array($this->processes)
498
                                                                      449
                                       $ports =
                                                                      450
                                                                                                             $ports =
      array_unique($basePorts);
                                                                            array_unique($basePorts);
                                                                      451
501
                                       // Remove ports from
      routing list that are refusing connections
                                       foreach ($ports as $key =>
                                                                                                             foreach ($ports as $key =>
      $port) {
                                                                            $port) {
                                               if ($this-
                                                                      453
                                                                                                                     if ($this-
      >_checkPort($this->gatewaysData['data']['proxies'][0],
                                                                            >_checkPort($this->gatewaysData['data']['proxy_ips'][0],
      $port, $protocol) === false) {
                                                                            $port, $protocol) === false) {
                                                                      454
      unset($ports[$key]);
                                                                            unset($ports[$key]);
                                                                                                                     }
506
                                                                      456
507
                                                                      457
509
                                               Prevent individual
      listening ports / sockets from overloading using this
      simple, persistent internal load balancing
                                               method for DNAT
      ports only (without changing the destination IP). This
      also prevents malicious processes from hijacking
                                               shared ports (when
      the combination of SO_REUSEPORT and SO_REUSEADDR are used)
      while still allowing a large number of sockets
                                                                      458
                                       shuffle($ports);
                                                                                                             shuffle($ports);
                                                                      459
                                       $ports =
                                                                                                             $ports =
      array_values($ports);
                                                                            array_values($ports);
                                       krsort($ports):
                                                                                                             krsort($ports):
                                                                      479
                              }
                                                                                                    }
                                                                      480
                                                                                            }
                                                                      481
                      // End DNAT load balancing for each
      process
                                                                     482
                      $rules[] = 'COMMIT':
                                                                                            $rules[] = 'COMMIT';
                      // Chunk firewall rules to write to file
```

```
541
                       $rules = array_chunk($rules, 100);
                                                                     483
                                                                                            $rules = array_chunk($rules, 100);
                                                                      484
                                                                                            return $rules;
                      return $rules;
                                                                     485
              }
                                                                                    }
                                                                      486
632
                              $shellCommands[] = 'kill -9 ' .
                                                                                                    $shellCommands[] = 'kill -9 ' .
      trim($killProcess);
                                                                            trim($killProcess);
633
                      }
                                                                                            }
634
                      // Run shell commands through bash script
635
636
                      if (count($shellCommands > 1)) {
                                                                                            if (count($shellCommands > 1)) {
637
                              unlink('/scripts/' . $protocol .
                                                                                                    unlink('/scripts/' . $protocol .
      '.sh');
                                                                            '.sh');
                              file_put_contents('/scripts/' .
                                                                                                     file_put_contents('/scripts/' .
      $protocol . '.sh', implode("\n", $shellCommands));
                                                                            $protocol . '.sh', implode("\n", $shellCommands));
                              shell_exec('chmod +x /scripts/' .
                                                                                                    shell_exec('chmod +x /scripts/' .
      $protocol . '.sh');
                                                                            $protocol . '.sh');
640
                                                                      580
                              shell_exec('/scripts/./' .
                                                                                                    shell_exec('/scripts/./' .
      $protocol . '.sh');
                                                                            $protocol . '.sh');
641
642
                      // Update configuration file for process
644
                                                                                            if (
645
                               !empty($configurationFile) &&
                                                                                                     !empty($configurationFile) &&
                               !empty($configurationData)
                                                                                                     !empty($configurationData)
647
                      ) {
                                                                                            ) {
648
      file_put_contents($configurationFile, $configurationData);
                                                                            file_put_contents($configurationFile, $configurationData);
649
                      }
                                                                                            }
650
651
                       // Process recovery
652
                      unlink($processId);
                                                                                            unlink($processId);
653
                      sleep(2);
                                                                                            sleep(2);
654
                      shell_exec($startCommand);
                                                                                            shell_exec($startCommand);
706
                                                                     644
707
        }
                                                                              }
        ?>
                                                                     646
                                                                              ?>
                                                                     647
```

0 comments on commit 077c302