

## **Two New features on the JANET Roaming Support Server 12 Oct 2009**

(Updated 4/05/2010)

As the result of enhancements in the interoperation of the JRS Support Server – NRPS in the area of packet flow control and realm handling, two new features have been added to the JRS Support Server that will enable participating organisations to utilise their RADIUS infrastructure in more flexible ways.

### **Designation of RADIUS Server Function**

Many organisations participating in JRS have deployed multiple ORPS and in many cases wish to dedicate these to particular functions (eg. authentication, accounting, testing).

The first new feature on the JRS Support Server is the option for JRS administrators to select from a list of four different types what function their ORPS performs:

- Authentication - ORPS can authenticate home users
- Accounting - ORPS can receive accounting packets
- Authentication & Accounting - ORPS can receive both (default)
- Client only – ORPS initiates exchange with NRPS, but NRPS will not send packets to ORPS

The selection can be made on the RADIUS proxy servers page under JRS Configuration where a new 'Function' field will be found. To change the ORPS designation, click on the drop down menu and select the required function. Then click on [Update RPS] at the bottom of the section.

The NRPS are set to receive packets from any ORPS configured in the JRS Support system so in all the above cases the ORPS is able to send packets to the NRPS, but by setting the function of the ORPS, the type of traffic that the NRPS sends to it can be controlled. This will allow the JRS Administrator to dedicate ORPS to particular roles.

Nb an organisation providing a Home (Identity Provider) service must always have at least one ORPS that can deal with authentication (otherwise the NRPS won't be able to proxy the Access Requests from the remote site to yours!)

All existing systems have, by default, been set to Authentication & Accounting as this was their previous behaviour and when creating new ORPS this is the default option.

### **RADIUS Server Test/Development Designation and Test Realm Handling**

#### **Introduction**

The second new facility is the ability for JRS administrators to designate a RADIUS ORPS server as a 'Test/Development' unit ('testdev') and put it into protected test-mode as far as the NRPSs are concerned. The server remains peered with the NRPS, but the effect of designating the unit as 'testdev' is to shelter it from being deluged with RADIUS traffic in order to enable you to carry out specific EAP tests yourselves.

By designating a server as 'testdev', the server will be set in the JRS NRPSs realm handling logic to protected test-mode with the result that the following packets will NOT be forwarded to it from the NRPS:

- production service RADIUS packets
- NAGIOS EAP monitor test probe RADIUS packets
- JRS Support on demand EAP test RADIUS packets

(Prior to the introduction of this testdev designation feature, RADIUS packets, for example resulting from a remote user attempting to authenticate at a Visited site, destined for 'youruniversity.ac.uk' would have been forwarded to any one of the ORPS you had configured – including any test/development pre-production servers).

### **Purpose**

This facility allows JRS administrators to bring up a new server, integrate it into the system, configure shared secrets, sort out firewalling etc., without fear that the NRPS will bombard it with production requests. This condition is also ideal for testing new server settings.

### **Effect – 'Test' sub-realm handling**

Only RADIUS traffic with the 'test' prefix to the realm will be sent to the 'testdev' ORPS. If you have more than one registered realm, then traffic prefixed with 'test' on any of your realms will be sent to the 'testdev' server. In other words, if you select an ORPS to be a 'testdev' system then only traffic targeted to your registered realms with a 'test' prefix will be sent to it.

For example if you have two realms registered, youruniversity.ac.uk and learning.ac.uk;

Both [testuser@test.youruniversity.ac.uk](mailto:testuser@test.youruniversity.ac.uk) and [testing\\_123@test.learning.ac.uk](mailto:testing_123@test.learning.ac.uk) will be sent to your testdev box.

Whilst [testuser@youruniversity.ac.uk](mailto:testuser@youruniversity.ac.uk) will be sent to your normal ORPS

### **ORPS Testing**

Setting an ORPS to testdev allows organisations to bring up a test box and for it to only be sent specific test traffic during logic/rules checking etc. JRS administrators will need to generate such test traffic themselves, eg. by using `rad_eap_test` with the username 'testuser@test.youruniversity.ac.uk' to do a 'loopback test' to the new systems. This can be done by using your live systems:

'testuser@test.youruniversity.ac.uk' -> Production ORPS -> NRPS -> Testdev ORPS

For this test realm handling facility to work JRS administrators do NOT have to specifically configure a 'test' sub-realm (eg. 'test.youruniversity.ac.uk') in the Realms section of JRS Support.

Nb. The manually initiated ICMP test from the JRS Support test page remains operational even when the test ORPS is set to 'testdev' – the test server can still be pinged.

Nb. The manually initiated EAP test from the JRS Support test page is designed to send test RADIUS traffic to the normal production realms, so by setting the ORPS to 'testdev' the test is effectively disabled. The same is true of the NAGIOS automatic EAP probe monitor test. These tests are designed to check / troubleshoot production servers.

### **How to Designate ORPS as Test/dev**

The designation of the RADIUS server as test or full service can be made on the RADIUS proxy servers page under JRS Configuration where a new 'Test/Development' field will be found.

The default setting is 'No – Full Service'. To change the ORPS designation to test/dev, click on the drop down menu and select 'Yes – Only send test realm traffic'. Then click on [Update RPS] at the bottom of the section.