RIPE NCC Test Traffic Measurement Service
and
Test Box Purchase Agreement

Jacqueline M.B. Seignette
Vogel & Ruitenberg Advokaten
Amsterdam

Henk Uijterwaal
RIPE NCC

2 October, 2000
Document: RIPE-214.ps

Abstract

One of the services offered by the RIPE NCC is the Test Traffic Measurements (TTM). The goal of the TTM is to collect data describing the performance of the network between providers such as network delays, packet losses or routing information, and to present the collected information in a useful format to the customer.

In order to do these measurements, measurement probes will have to be installed at the site interested in this service. These probes are called "test boxes". The RIPE NCC will sell one or, depending on the network topology, more test boxes to the customer. After the customer has installed the test boxes, the RIPE NCC will operate them for the customer as "black boxes" measuring the performance of the networks between the customer and other sites hosting a test box.

This contract describes the terms and conditions for the purchase of a test box and for the subsequent operation of the test box by the RIPE NCC.

Customer

Name:
Legal Form:
Registered Office:
City/Country:

Lawfully represented by:

Billing and Administrative Contact Person:
Name:
Telephone number:
Telefax number:
E-mail address:
Billing address:

Contract Specifications

Number of Text Boxes to be delivered:
Total Purchase Price:
Shipping Costs:
Installation Costs:
VAT tariff: %
Number of Test Boxes for which Service is requested:
Service Fee until 31 December of the current year:
Service Fee subsequent years: annually
VAT tariff: %

Test Box 1

Site (Location at which Test Box will be installed):
Technical Contact Person(s) at the Test Box Site:
Name(s):
Telephone Number:
Telefax Number:
E-mail address:

Shipping Address:
Shipping Instructions: **SkyNet/FedEx/UPS**
FedEx or UPS customer number:

Rack Space: **available/not available**
Suitable antenna position: **available/not available**
Estimated Maximum Cable Length: **meters**
Estimated time needed to install the antenna: **weeks**
Remarks/Special requirements:

Description of local network situation:

IP-address for the Test Box:
IP-address(es) of a local resolving name-server(s):

IP-number of Default Gateway:
Routing Protocol: **RIP / IRDP / none of the above**

Netmask for the machine:
IP address (-range) for monitoring machines:

If applicable: Test Box 2 (3, 4, etc.)

Site (Location at which Test Box will be installed):
Technical Contact Person(s) at the Test Box Site:
Telephone Number:
Telefax Number:
E-mail address:

Shipping Address:
Shipping Instructions: SkyNet/FedEx/UPS
FedEx or UPS customer number:

Rack Space: available/not available
Suitable antenna position: available/not available
Estimated Maximum Cable Length: meters
Estimated time needed to install the antenna: weeks
Remarks/Special requirements:

Description of local network situation:

IP-address for the Test Box:
IP-address(es) of a local resolving name-server(s):

IP-number of Default Gateway:
Routing Protocol: RIP / IRDP / none of the above

Netmask for the machine:
IP address (-range) for monitoring machines:

Customer and the RIPE NCC herewith enter into this Agreement including the General Terms attached hereto. Customer declares to have read and agree with the General Terms.

Customer	**RIPE NCC**
Place:	**Place: Amsterdam**
Date:	**Date:**
Name:	**Name:**
Position:	**Position:**
Signature(s):	**Signature:**

General Terms to the RIPE NCC Test Traffic Measurement Test-Box Purchase and Service Agreement

Article 1 - Definitions

Agreement:	Test Traffic Measurement Box Purchase and Service Agreement consisting of the Contract Form and these General Terms, including Annex A to E.
Contract Form:	Contract form specifying the Customer's name and address, the number of Test Boxes purchased, the total Purchase Price and Service Fee as well as a description of the local situation at the Site as provided by Customer.
Functional Specifications:	The functional specifications applicable to the Test Box as set forth in Annex A hereto.

Hardware and Software Requirements:	The hardware, software and network requirements necessary to install and operate the Test Box as set forth in Annex A hereto.
Installation Costs:	Fee covering the costs made by the RIPE NCC in assisting Customer to install the Test Box.
Installation Document:	Document ripe-168 subsections 2 and 3 describing the installation procedure.
Purchase Price:	Total Price of the Test Box(es) to be delivered under this Agreement.
Rights of Use:	Uses of the Test Box (including TTM Software) to which the Customer is authorised under this Agreement.
RIPE NCC:	Réseaux IP Européens Network Coordination Centre (RIPE NCC), an association under the laws of the Netherlands with official seat in Amsterdam, the Netherlands.
Service Fee:	Annual fee to be paid by Customer to the RIPE NCC for the provision of the Services.
Services:	The services as specified in Article 4 of this Agreement.
Site:	Location at which the Test Box will be used by Customer, as specified on the Contract Sheet
Test Box:	Box provided by the RIPE NCC containing TTM Software for the collection of data on the performance of the network between providers such as network delays, packet losses or routing information, as further described on http://www.ripe.net/test-traffic.
TTM Data:	The data which may be collected from the Test Box.
TTM Database:	Database operated by the RIPE NCC containing TTM Data collected by the RIPE NCC.
TTM Software:	Test traffic measurement software embedded in the Test Box.

Article 2 – Subject Matter of this Agreement

1. Subject to the provisions of this Agreement, the RIPE NCC will sell and provide, and the Customer shall purchase the number of Test Boxes as indicated on the Contract Form and pay for the Services as specified in Article 4.
2. In the event Customer enters into the Agreement for the provision of Services in respect of Test Boxes delivered by RIPE NCC prior to entering into this Agreement (see Contract Form), the RIPE NCC will provide and the Customer shall pay for the Services as specified in Article 4 in respect of these Test Boxes. Articles 3 and 9 do not apply to these Test Boxes. The physical ownership of these Test Boxes is transferred to Customer upon entering into this Agreement.
3. This Agreement is independent from the standard RIPE NCC Service Agreement and RIPE NCC membership and does not entitle Customer to RIPE NCC membership services.

Article 3 – Delivery and Installation

1. The procedure for the delivery and installation of the Test Box is described in Annex B hereto.
2. Subject to payment by Customer of the Installation Costs, the RIPE NCC shall assist Customer in installing the Test Box as described in the Installation Document.
3. Customer declares that it has read the Installation Document and that the Site meets the Hardware and Software Requirements necessary to install and operate the Test Box.
4. The Test Box shall not include keyboard, monitor, mouse, routers, firewalls and special hardware such as re-radiators, antenna splitters, cables, etc.
5. After delivery at the Site, Customer will bear all the risks of loss, destruction or damage, whatever the cause may be.

Article 4 – Services

1. In consideration of the Service Fee and during the term of this Agreement, the RIPE NCC shall provide the services described in this Article.
2. The RIPE NCC shall operate the Test Box by remote access in order to collect TTM Data. TTM Data shall be collected once a day by a central computer at the RIPE NCC. If the TTM Data could not be collected for a particular day, the RIPE NCC will try to collect the TTM Data the next day until the files expire after 30 days.
3. The RIPE NCC shall store the TTM Data collected pursuant to 4.2 during a period of two years following the collection of the data.

4. At the customer's request, the RIPE NCC shall put the raw TTM Data retrieved from Customer's Test Box on a ftp-server in ROOT format.
5. The RIPE NCC shall correct errors, if any, to the best of its ability if the TTM Software due to such error does not meet the Functional Specifications. The RIPE NCC does not warrant that the TTM Software shall function without interruption or errors or that errors will be remedied. The Test Box contains a back up copy of the TTM Software which the RIPE NCC may switch on in the event of failure of the running copy.
6. As soon as a new version of the software embedded in the Test Box is considered by the RIPE NCC to be ready for installation on distributed Test Boxes, the RIPE NCC shall install such new version on Customer's Test Box by means of remote distribution, in accordance with the procedures described in document ripe-168.
7. The RIPE NCC at its own discretion shall analyse the TTM Data and make the results available to Customer.
8. The RIPE NCC shall take actions it deems appropriate to secure the Test Box operations and the TTM Data.
9. The RIPE NCC may annually amend the Service Fee to reflect general price increases and to cover the total costs of its test traffic measurement operations. In the event the RIPE NCC decides to amend the Service Fee for the following calendar year, it will notify the administrative contact person thereof by post, fax or e-mail.
10. The RIPE NCC shall not be obliged to correct errors if the Test Box has not been installed or operated in accordance with this Agreement, if the local configuration is not as described in the Contract Form, if the Test Box has been used incorrectly, incompetently or without authorisation or if the error is caused by external causes, such as fire, water, power outage or lightning.

Article 5 – Local Management of the Test Box

1. The RIPE NCC shall operate the Test Box from its central computer. Local Management of the Test Box shall be done by the technical contact person(s) indicated on the Contract Form in accordance with the procedure described in Annex D. Customer shall not undertake other acts in respect of the Test Box than those authorised in this Agreement.
2. Customer shall take all reasonable technical and organisational measures to prevent unauthorised access to the Test Box, TTM Software and TTM Data.
3. Customer shall not interfere with any UPD, TCP and ICMP based traffic from and to any port on the Test Box needed to operate the Test Box or to do measurements. Customer shall ensure that upstream providers do not place filters on this traffic.

Article 6 – Rights of Use

1. During the term of this Agreement, Customer shall have the right to use the Test Box (including TTM Software) in accordance with this Agreement in order to enable the RIPE NCC to collect data on loss and delay of messages sent and received by Customer's network as described in the Contract Form. Customer shall not be entitled to use the Test Box and TTM Software for other purposes.
2. Customer is entitled to review the source code of the TTM Software in order to detect whether the TTM Software may introduce security risks at the Site. Upon request, the RIPE NCC shall make the source code available to Customer for this purpose via the RIPE NCC FTP-server.
3. Customer shall not be entitled to reproduce, modify and distribute reproductions or modified versions of the TTM Software unless necessary to exercise Customer's mandatory user rights under the applicable copyright law.
4. This Agreement and the sale of the Test Box pursuant to this Agreement does not in any way involve the transfer of any intellectual property right subsisting in the Test Box and TTM Software.
5. The RIPE NCC shall indemnify Customer against claims by third parties that the Test Box or part thereof infringes on intellectual property rights owned by them, provided Customer promptly notifies such claim to the RIPE NCC and enables the RIPE NCC to handle the defence and settlement negotiations.

Article 7 – TTM Data

1. The RIPE NCC shall be entitled to retrieve, reproduce, store and combine TTM Data in order to perform the Services specified in Article 4.
2. The RIPE NCC may provide TTM Data including the address and position of Customer's Test-Box to another ISP if the data refer to communication between Customer's Test Box and the Test Box of the other ISP.
3. The RIPE NCC may provide anonymous TTM Data and analysis of anonymous TTM Data to third parties. The RIPE NCC furthermore shall be entitled to provide full TTM Data to third parties for scientific and statistical purposes after expiry of one year following the collection of the data. This provision shall survive the expiry or termination of this Agreement.
4. Customer shall have access to the TTM Database at the RIPE NCC and the data contained therein only in order to download and analyse its own TTM Data and to compare them to the data made publicly available by the RIPE NCC on the network performance of other ISP's.
5. In presenting data from the TTM Database or analysis of these data to third parties, Customer shall comply with the data disclosure procedure as described in Annex E hereto and as provided in ripe-180.ps. Customer shall not present modified Test Box Data or analysis.

Article 8 - Payment

1. The RIPE NCC shall send Customer an invoice for the Purchase Price, Service Fee, Installation Costs and Shipping costs. The first invoice for the Service Fee shall be sent after delivery of the Test Box to Customer. The first invoice for the Service Fee pertaining to Test Boxes delivered to Customer prior to entering into this Agreement, will be sent to Customer directly after the Agreement has been entered into.
2. Payment shall be made by Customer to the RIPE NCC within 30 days of the invoice date, failing which Customer shall be in default with no notice of default being required.
3. With effect from the day on which Customer defaults on its payment obligations, Customer shall owe the RIPE NCC the statutory rate of interest on the amounts unpaid and reimburse the RIPE NCC for any extra-judicial collection costs, without prejudice to any other rights the RIPE NCC may invoke against Customer in connection with its failure to effect (timely) payment.
4. Customer may not postpone its payment obligations under this Agreement or offset payment by any of its own claims against the RIPE NCC.

Article 9 – Test Box Warranty, Repair, Replacement

1. During a period of twelve months from the date of delivery, the RIPE NCC warrants that the Test Box delivered by the RIPE NCC pursuant to this Agreement is free from defects in materials and workmanship.
2. The warranty may be exercised in accordance with the procedure described in Annex C.
3. The warranty does not apply if the Test Box has not been installed or operated in accordance with this Agreement, if the local configuration is not as described in the Contract Form, if the Test Box has been used incorrectly, incompetently or without authorisation or if the defect or error is caused by external causes, such as fire, water, power outage or lightning.
4. Customer may request repair or replacement of a Test Box or part outside the scope of the warranty in accordance with the procedure described in Annex C.

Article 10 – Liability

1. Without prejudice to the warranty provided in Article 9, the RIPE NCC shall not be liable against Customer for damage caused by a defect in the Test Box or a failure by the RIPE NCC to meet any obligation under this Agreement.
2. The exclusion of liability provided in subsection 1 does not apply if the failure or defect is due to a grossly negligent or wilful act or omission by the RIPE NCC managing personnel.
3. In no event shall the RIPE NCC be liable for indirect damages caused by a defect in the Test Box or a failure by the RIPE NCC to meet any obligation

under this Agreement, including damage to the Customer's business or loss of profits.

4. Notwithstanding any other provision in this Article, the RIPE NCC shall not accept liability for:
    - mutilation or loss of TTM Data or other data during transmission or when stored on Customer's computers;
    - the results and consequences of analysis of TTM Data undertaken by the RIPE NCC;
    - the consequences of any modification or adaptation to the Test Box or TTM Software made by Customer or from the combination of the Test Box or TTM Software with hardware or software other than that prescribed in the Hardware and Software Requirements.
5. Notwithstanding any other provision in this Article, the RIPE NCC shall not be liable for damage as a result of a failure to meet any obligation under this Agreement if such failure is due to circumstances for which the RIPE NCC is not considered accountable according to law, contract or trade custom. The RIPE NCC in any event shall not be accountable for failures to perform resulting from the non- or untimely delivery of Test Box parts by suppliers or from interruptions or improper functioning of power or telecommunication services facilities.
6. Customer shall indemnify the RIPE NCC for any third-party claims filed against the RIPE NCC in relation to Customer's use of the Test Box or resulting from the non-performance by Customer of any obligation arising out of this Agreement.
7. In no event shall the liability of the RIPE NCC in connection with this Agreement exceed the Service Fee invoiced in respect of the calendar year in which the damage first occurred. The maximum shall apply per event or series of connected events resulting in such liability.

Article 11 – Term and Termination

1. The Agreement shall enter into force when signed by both parties and, unless terminated pursuant to the provisions of this Article, shall run until 31 December of the following calendar year. Subsequent to this date, the Agreement shall be automatically extended with periods of one year each, unless one of the parties terminates the Agreement against 31 December of the current calendar year by means of a written notice sent to the other party before 1 October of that year.
2. Customer subsequent to the receipt of a notification as meant in 4.9 shall be entitled to terminate the Agreement subject to a three months written notice to the RIPE NCC.
3. In the event Customer's obligations under this Agreement are substantially enlarged pursuant to a change in the procedures described in Annex B, C, D or E or in the RIPE documents referred to in this Agreement, Customer may immediately terminate the Agreement by means of a written notice to the RIPE

NCC. The RIPE NCC in that event shall reimburse to Customer the percentage of the Service Fee that corresponds with the remaining period of the current contract period.

4. In the event of a substantial breach by Customer of any of the following provisions, the RIPE NCC shall be entitled to terminate this Agreement with immediate effect by giving written notice: 5.1, 5.3, 6.2, 7.4, 7.5, 8.2.
5. Without prejudice to 11.4, in the event of a substantial breach by a party of any other obligation under this agreement which is irremediable or which is not remedied within thirty (30) days of written notice from the other party requiring that it be remedied the other party shall be entitled to terminate this Agreement with immediate effect by giving written notice.
6. In the event that any party during the term of this Agreement enters into bankruptcy or liquidation or any other arrangement for the benefit of its creditors, the other party shall be entitled to terminate this Agreement with immediate effect by giving written notice.
7. Upon termination pursuant to this Article, the Rights of Use described in Article 6 and access to the RIPE NCC TTM database will terminate with immediate effect. The RIPE NCC shall be entitled and Customer shall co-operate to delete the TTM Software from the Test Box.

Article 12 – Miscellaneous

1. All the RIPE-documents referred to in this Agreement are available on http://www.ripe.net. Customer shall regularly take notice of updated RIPE-documents available on the web site. The RIPE-documents referred to in this Agreement as well as the procedures described in Annex B to E to this Agreement may be replaced by new documents or procedures. The RIPE NCC shall announce such replacements via the mailing list tt-host@ripe.net. The corresponding sections in the replaced texts shall apply to this Agreement from the moment of their replacement.
2. Customer shall promptly notify RIPE NCC of any changes in the data on the Contract Form.
3. In the event that one or more provisions of this Agreement would appear to be non-binding, the other provisions of this Agreement will continue to be effective.
4. Without prior written authorisation by the RIPE NCC, Customer shall not be permitted to assign or sub-license any rights or assign or subcontract any obligations arising from this Agreement to a third party.
5. The RIPE NCC shall be entitled to assign and subcontract this Agreement in whole or in part to a third party.
6. The Agreement will be governed by Dutch law.
7. The competent court in Amsterdam has exclusive jurisdiction in respect of any disputes which may arise in connection with this Agreement. An action for the payment of the Purchase Price, Service Fee, Installation Costs or Shipping

costs may however also be brought before the competent court in Customer's domicile.

Annex A – Functional Specifications, Hardware and Software Requirements

Functional Specifications

A Test Box is an instrument for measuring quantities related to network performance, such as delay, packet-loss or routing information, according to the metrics defined in RFC's 2330, 2679 and 2680.

Hardware and Software Requirements

- a PC consisting of:
  - An Intel Celoron 500 MHz processor, on an Intel motherboard
  - 256 Mb RAM
  - 2 Seagate IDE hard-disks, 8 Gb capacity each, in removable disk canisters
  - a 3COM 3C905B Ethernet interface
  - an interface card for the GPS receiver, designed and built by NIKHEF
  - a video card capable of displaying 80x25 characters
  - a 19" rack-mount cabinet
  - a power supply suitable for 110 and 220V AC
- a Trimble Palissade GPS receiver
- 15m of CAT5-cable to connect the GPS receiver to the PC
- power cables with standard European plugs.

or equivalent or better hardware

Annex B – Delivery and Installation Procedure

1. As soon as the delivery of components and the RIPE NCC's production schedule permits and the Purchase Price has been paid, the RIPE NCC shall configure and deliver the Test Box(es) to Customer. The RIPE NCC shall test the Test Box before shipping to verify that the hardware components perform according to the specifications of the vendors, that the software has been properly installed and that the Test Box has been configured according to the data provided by the Customer.
2. The costs of shipment of the Test Box/Boxes shall not be included in the Purchase Price. Any shipping costs, taxes and import/export duties incurred by the RIPE NCC or any shipping company hired by the RIPE NCC in relation to the shipment may be charged to Customer. The RIPE NCC and its authorised shipping company shall be entitled to withhold/retain the Test Box/Test Boxes until payment of such costs has been made to the RIPE NCC.
3. Customer shall install the Test Box in accordance with the Installation Document. Installation is at Customer's own responsibility and expense.

Customer is responsible for installation of cables and the setting up of other hardware such as routers or fire-walls required to operate the Test Box.

4. During a period of 90 days from the date of delivery of the Test Box, the RIPE NCC shall provide on request to Customer e-mail support (tt-ops@ripe.net) to help Customer with the installation of the Test Box. The initial response on an e-mail request for support shall be within one (1) working day after receipt of the e-mail by the RIPE NCC.
5. The RIPE NCC shall not provide on-site support. The parties may agree on additional arrangements for a RIPE NCC engineer to do a site-survey or support the installation against payment of a fee and reimbursement of travel costs.

Annex C – Warranty, Repair and Replacement Procedure

1. Customer notifies the RIPE NCC of a problem with the Test Box by e-mail (tt-ops@ripe.net). If the Test Box has been damaged during shipment, Customer also notifies the shipping company. The RIPE NCC shall reply via e-mail whether the problem is covered by the warranty and give instructions to Customer to solve the problem. Customer will follow the instructions.
2. If the problem cannot be solved by means of the instructions received from the RIPE NCC, Customer shall request the RIPE NCC by e-mail (tt-ops@ripe.net) to repair or replace the Test Box or a part thereof. RIPE NCC shall provide instructions to Customer on how to return the Test Box to RIPE NCC.
3. The costs of shipping the Test Box or part to the RIPE NCC and back to Customer shall be charged to Customer.
4. If Customer requests the RIPE NCC to repair or replace the Test Box or a part outside of the warranty, the RIPE NCC shall charge Customer the regular purchase price or the costs of repair, as well as the costs of shipment.
5. The RIPE NCC at its own initiative or at the request of Customer may undertake trouble-shooting together with the local contact person to detect defects of the CPU. The RIPE NCC decides if a Test Box has to be sent back for repair.
6. The RIPE NCC shall inform Customer by e-mail when the replaced or repaired Test Box or part will be delivered to Customer.

Annex D – Local Management Procedure

1. At least one of the technical contact persons indicated on the Contract Form shall be minimally available by telephone and e-mail (number and address described in Contract Form) from Monday to Friday (except public holidays) during normal regular business hours in order to solve problems in accordance with the procedure described in subsection 2.4 of the Installation Document.
2. During absence of the technical contact person(s) specified in the Contract Form, Customer shall provide for a replacement available to the RIPE NCC under the same telephone number and e-mail address.

3. The technical contact person(s) shall regularly read the information provided by the RIPE NCC on the mailing list tt-host@ripe.net to which he will be automatically subscribed.
4. Requests for local support shall be accessed and dealt with by a technical contact person only.
5. If a Test Box causes problems and there is no technical contact person available, the RIPE NCC may remove the Test Box from the measurement network until the problem can be solved.
6. Customer shall inform the RIPE NCC (tt-ops@ripe.net) of a power outage planned by Customer at least one (1) working day in advance. The RIPE NCC shall perform a regular shutdown of the Test Box shortly before the power outage and inform the technical contact person when the Test Box can be re-booted.
7. The technical contact person may perform an emergency system stop only if such is necessary to avoid damage to the Test Box, Test Box Data or local network and the RIPE NCC cannot be informed in time to take appropriate actions to avoid such damage. The emergency system stop shall be performed in accordance with the procedure described in Document ripe-179, Appendix B. The technical contact person informs the RIPE NCC (tt-ops@ripe.net) immediately following the emergency stop
8. If the configuration data of the Test Box has to be changed, Customer shall provide the RIPE NCC (tt-ops@ripe.net) with the new data and the date at which they become effective at least one (1) working day in advance. After the RIPE NCC has reconfigured the Test Box and shut the Test Box down, it shall inform Customer when the Test Box can be re-installed. Customer shall re-install the Test Box in accordance with the procedure described in the Installation Document.

Annex E – Data Disclosure

Customer is free to discuss the analysis inside its organisation or the relevant RIPE working group. In order for TTM data or an analysis of data to be presented to the outside world, the data and analysis first have to be verified. To this end, Customer shall provide a write-up of the data and analysis that includes enough detail for anybody to independently re-implement the data and the analysis and to verify its conclusions. This write-up will be circulated by the RIPE NCC amongst (a subset of) the ISP's using a Test Box for a peer review. If there are objections to an analysis or the accuracy of the data, it will be discussed with Customer what changes in the publication will have to be made in order to make it acceptable. If an ISP still disagrees, they can ask that data related to their site is removed from the analysis. An ISP however cannot veto the publication of an analysis. Published data shall not include references to names of other ISP's, IP-addresses of Test Boxes and routers and the like if this is not strictly necessary.