1. Download packages

```
wget -r --no-parent https://svn.netxms.org/public/netxms/trunk/src/java/report-generator/
wget http://repo1.maven.org/maven2/net/sf/jasperreports/jasperreports/4.7.0/jasperreports-4.7.0.jar
```

2. Install and configure packages

Install required packages:

```
sudo apt-get sendemail maven2
```

Install maven module:

```
mvn install:install-file -DgroupId=jasperreports -DartifactId=jasperreports -Dversion=4.7.0 -
Dpackaging=jar -Dfile=./jasperreports-4.7.0.jar
```

Edit pom.xml to remove unnecessary dependencies:

```
cd ./svn.netxms.org/public/netxms/trunk/src/java/report-generator/
nano pom.xml
```

Compile java package:

```
mvn clean package
```

Copy java package:

```
cp ./svn.netxms.org/public/netxms/trunk/src/java/report-generator/target/report-generator.jar /opt/
```

3. Create report definition

Create report definition with Jaspersoft iReport.
OpenVPN users count example report definition:

```xml
<?xml version="1.0" encoding="UTF-8"?>
<jasperReport xmlns="http://jasperreports.sourceforge.net/jasperreports" xmlns:xsi="http://
www.w3.org/2001/XMLSchema-instance" xsi:schemaLocation="http://jasperreports.sourceforge.net/
jasperreports http://jasperreports.sourceforge.net/xsd/jasperreport.xsd" name="IP Inventory"
language="groovy" pageWidth="595" pageHeight="842" columnWidth="555" leftMargin="20"
rightMargin="20" topMargin="20" bottomMargin="20" uuid="d2307047-026d-4216-9118-
3d3065cf2f89">
    <property name="ireport.zoom" value="1.0"/>
    <property name="ireport.x" value="0"/>
    <property name="ireport.y" value="0"/>
    <queryString>
        <![CDATA[SELECT
    object_properties.name AS nas_name,
    items.name AS parameter,
    raw_dci_values.transformed_value AS value,
    raw_dci_values.transformed_value AS count
FROM
    object_properties
INNER JOIN
    items
ON
    object_properties.object_id = items.node_id AND items.name = 'OpenVPN.Users'
INNER JOIN
    raw_dci_values
ON
    items.item_id = raw_dci_values.item_id AND raw_dci_values.transformed_value ~ '^[0-9]+'
ORDER BY
    value]]>
    </queryString>
    <field name="nas_name" class="java.lang.String"/>
    <field name="parameter" class="java.lang.String"/>
    <field name="value" class="java.lang.Integer"/>
    <field name="count" class="java.lang.String"/>
    <group name="opevpn">
        <groupExpression><![CDATA[$F{nas_name}]]></groupExpression>
        <groupHeader>
            <band height="50">
                <textField>
                    <reportElement uuid="ac26901e-99bc-4480-ae74-14edfed0ec8c" x="24"
y="19" width="100" height="20"/>
                    <textElement>
                        <font size="14" isBold="true"/>
                    </textElement>
                    <textFieldExpression><![CDATA[$F{nas_name}]]></textFieldExpression>
                </textField>
            </band>
```

```xml
                </groupHeader>
                <groupFooter>
                        <band height="50"/>
                </groupFooter>
        </group>
        <background>
                <band splitType="Stretch"/>
        </background>
        <detail>
                <band height="20" splitType="Stretch">
                        <textField>
                                <reportElement uuid="4fcd26d0-4a9c-48df-9a1e-6450a7e3a05d" x="20" y="0"
width="143" height="20"/>
                                <textElement/>
                                <textFieldExpression><![CDATA[$F{parameter}]]></textFieldExpression>
                        </textField>
                        <textField>
                                <reportElement uuid="b8d7b1a7-c8a8-421f-b871-69868511c279" x="163" y="0"
width="143" height="20"/>
                                <textElement/>
                                <textFieldExpression><![CDATA[$F{value}]]></textFieldExpression>
                        </textField>
                </band>
        </detail>
        <pageFooter>
                <band height="21">
                        <line>
                                <reportElement uuid="ed04fdff-36e5-4933-8449-71bd688e4500" x="0" y="0"
width="555" height="1"/>
                        </line>
                        <textField pattern="dd/MM/yyyy HH:mm:ss">
                                <reportElement uuid="18759a7f-270d-414b-b307-72d3e915fc08"
positionType="FixRelativeToBottom" x="0" y="1" width="100" height="20"/>
                                <textElement/>
                                <textFieldExpression><![CDATA[new java.util.Date()]]></textFieldExpression>
                        </textField>
                        <textField>
                                <reportElement uuid="7bd7f91a-b85c-4985-bb5c-4b42c26c756b"
positionType="FixRelativeToBottom" x="435" y="1" width="80" height="20"/>
                                <textElement textAlignment="Right"/>
                                <textFieldExpression><![CDATA["Page "+$V{PAGE_NUMBER}+" of"]]></
textFieldExpression>
                        </textField>
                        <textField evaluationTime="Report">
                                <reportElement uuid="2e8900df-8f71-4982-9093-f17f3c043b91"
positionType="FixRelativeToBottom" x="515" y="1" width="40" height="20"/>
                                <textElement/>
                                <textFieldExpression><![CDATA[" " + $V{PAGE_NUMBER}]]></
textFieldExpression>
                        </textField>
```

```xml
        </band>
    </pageFooter>
    <summary>
        <band height="403">
            <pieChart>
                <chart>
                    <reportElement uuid="3f034c57-aa9c-4113-8eba-aa35cfe229a4" x="0"
y="0" width="555" height="403"/>
                    <chartTitle/>
                    <chartSubtitle/>
                    <chartLegend/>
                </chart>
                <pieDataset>
                    <keyExpression><![CDATA[$F{nas_name}]]></keyExpression>
                    <valueExpression><![CDATA[$F{value}]]></valueExpression>
                    <labelExpression><![CDATA[$F{count}]]></labelExpression>
                </pieDataset>
                <piePlot>
                    <plot/>
                    <itemLabel/>
                </piePlot>
            </pieChart>
        </band>
    </summary>
</jasperReport>
```

4. Generate report and send it

Generate report from console:

```
"/usr/bin/java" -cp "/opt/netxms/java-lib/report-generator.jar" org.netxms.report.Generator "/etc/
netxmsd.conf" "/opt/OpenVPN-report.def" "/opt/reports/`date +%d%m%Y`-openvpn-count.output"
```

Convert this report to PDF format:

```
"/usr/bin/java" -cp "/opt/netxms/java-lib/report-generator.jar" org.netxms.report.Exporter "/opt/
reports/`date +%d%m%Y`-openvpn-count.output" "/opt/reports/`date +%d%m%Y`-openvpn-count.pdf"
```

Send report via email:

```
sendemail -f "sender@example.com" -t "receiver@example.com" -m "Subject: OpenVPN report `date
+%d-%b-%Y`" -u "Header: Report `date +%d-%b-%Y`" -a "/opt/reports/`date +%d%m%Y`-openvpn-
count.pdf"
```

Add this configuration to the crontab file to schedule reports.