# Opening a network connection in Qt

This code snippet demonstrates how to open a network connection in Qt using the Bearer Management module. In Symbian this will prevent the native IAP dialog from opening every time an application does a network request.

In Qt 4.7, the Bearer API has been migrated to the QtNetwork library. For Qt earlier than 4.7, the Bearer API is part of Qt Mobility.

## Qt project file

```
# Qt libraries
QT += core gui network

# Link Bearer Qt Mobility module into project, for Qt earlien than 4.7. If the Qt
version is 4.7, this step is not necessary.
CONFIG += mobility
MOBILITY = bearer
```

```
symbian: {
TARGET.CAPABILITY = NetworkServices ReadUserData
}
```

## Header

```
#include <QtGui/QMainWindow>
#include <QPointer>
#include <qnetworkinterface.h> // have to be "QT += network" in pro file

#include <QTimer>
#include <QMessageBox>

// QtMobility
#include <qnetworkconfigmanager.h>
#include <qnetworksession.h>

// this is not necessary for Qt 4.7
QTM_USE_NAMESPACE

class qtSnippets : public QMainWindow
{
    Q_OBJECT

public:
    qtSnippets(QWidget *parent = 0);
    ~qtSnippets();

private slots:
    // Open network connection
    void openConnection();

private:
    // Session of the connection
    QPointer<QNetworkSession> m_session;
};
```


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## Source

```
#include <QTimer>
#include <QMessageBox>

qtSnippets::qtSnippets(QWidget *parent)
    : QMainWindow(parent)
{
    // Let application to startup fully and then
    // open connection to the network
    QTimer::singleShot(0, this, SLOT(openConnection()));
}

qtSnippets::~qtSnippets()
{
    // Remeber to close connection
    if (m_session)
        m_session->close();
}

void qtSnippets::openConnection()
{
    // Set Internet Access Point
    QNetworkConfigurationManager manager;

    const bool canStartIAP = (manager.capabilities()
        & QNetworkConfigurationManager::CanStartAndStopInterfaces);

        // Is there default access point, use it
    QNetworkConfiguration cfg = manager.defaultConfiguration();
    if (!cfg.isValid() || !canStartIAP) {
        // Available Access Points not found
        QMessageBox::information(this,"Bearer","Available Access Points not found");
        return;
    }

    // Open session
    m_session = new QNetworkSession(cfg);
    m_session->open();
    // Waits for session to be open and continues after that
    m_session->waitForOpened();

    // Show interface name to the user
    QNetworkInterface iff = m_session->interface();
    QMessageBox::information(this,"Network opened",iff.humanReadableName());
}
```

## Postconditions

A network connection has been opened.

## See also

- Setting up Qt Mobility


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- http://doc.qt.nokia.com/qtmobility-1.0/bearer-management.html
- User guide: Symbian Signed
- http://www.symbiansigned.com/


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