



# Meet Qt

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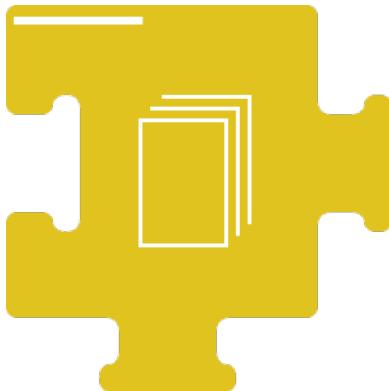
# The Qt Company: A Brief Introduction



- The Qt Company is a subsidiary of Digia Plc (listed on Nasdaq OMX Helsinki), responsible for all Qt operations globally
  - Digia Plc acquired the Qt business in September 2012 from Nokia (commercial licensing acquired in March 2011)
  - Worldwide leading Qt application and UI development, testing and UX design services and consulting company with 12 international locations
    - 10+ years of Qt experience
    - 200 in-house Qt experts
    - Trusted by over 5,000 customers worldwide



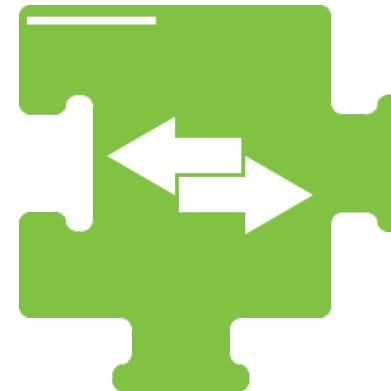
# The Leading C++ Cross-Platform Framework



**Cross-Platform  
Class Library**



**Integrated  
development tools**



**Cross platform IDE,  
Qt Creator**

- Used by approximately 800,000 developers in 70+ industries
- Proven & tested technology – since 1994

## Qt is Used for ...



**Application development for  
desktop & mobile**



**User interface development  
in device creation**



**Software development kits (SDK)  
for 3rd parties**  
**Build your developer ecosystem with Qt**

# Qt is Used Everywhere



From Desktop Applications to  
Embedded & Mobile Devices



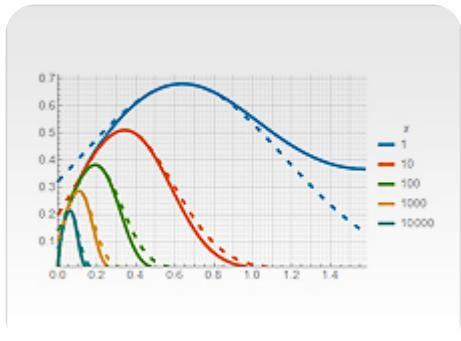
5000+ Companies from 70+ industries use Qt



# Qt Powers Industry Leading Software on Desktop



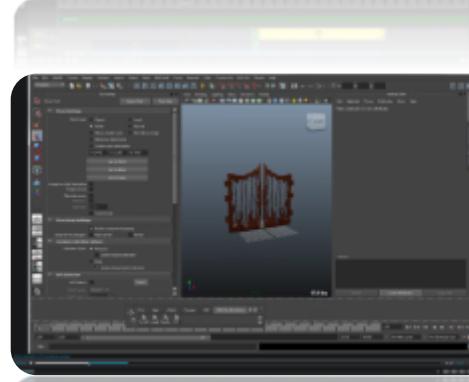
Wolfram Mathematica



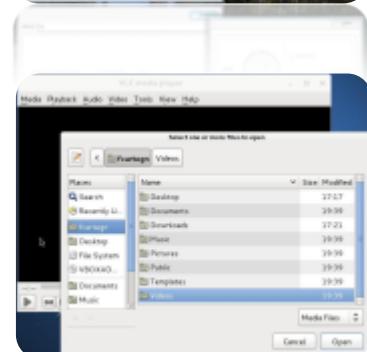
Skype on Linux



Autodesk Maya



VLC Media Player



# Target All Your End Users with One Technology

## Desktop:

Windows, Linux,  
Mac, Solaris,  
Enterprise UNIX



**Mobile:** Android, iOS, Windows Phone, WindowsRT, BlackBerry 10, Sailfish

**Embedded:**  
Embedded Linux,  
Embedded Android,  
Windows  
Embedded, QNX,  
VxWorks,  
INTEGRITY

# Where There's a User Interface, there's Qt



Automotive IVI



Network Analyzers



Medical Devices



Home Automation



Digital Photo Frames



Refrigerators & Coffee Machines



Set Top Boxes



Industrial/UMPCs



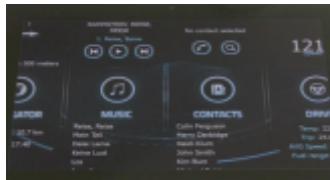
And many, many more ...

# Qt UI Offering – Choose the Best of All Worlds



## Qt Quick

C++ on the back, declarative UI design (QML) in the front for beautiful, modern touch-based User Experiences



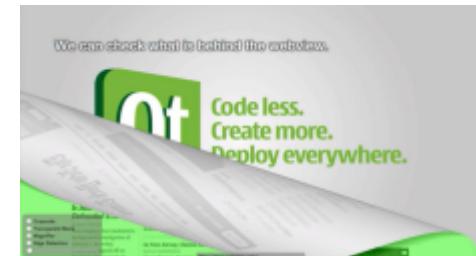
## Qt Widgets

Customizable C++ UI controls for traditional desktop look-and-feel. Also good for more static embedded UIs for more limited devices / operating systems



## Web / Hybrid

Use HTML5 for dynamic web documents, Qt Quick for native interaction.





# Qt for Application Development

Code Once. Deploy Everywhere.

# Rapid Workflow with Qt Quick



Designer



Developer

Qt Quick

Stunningly Fluent  
Modern User Interfaces,  
written with QML. Ideal for  
rapid UI prototyping

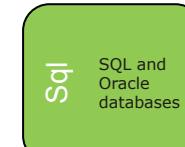
Power of Cross-Platform  
Native Qt/C++



Declarative UI Design



Imperative Logic

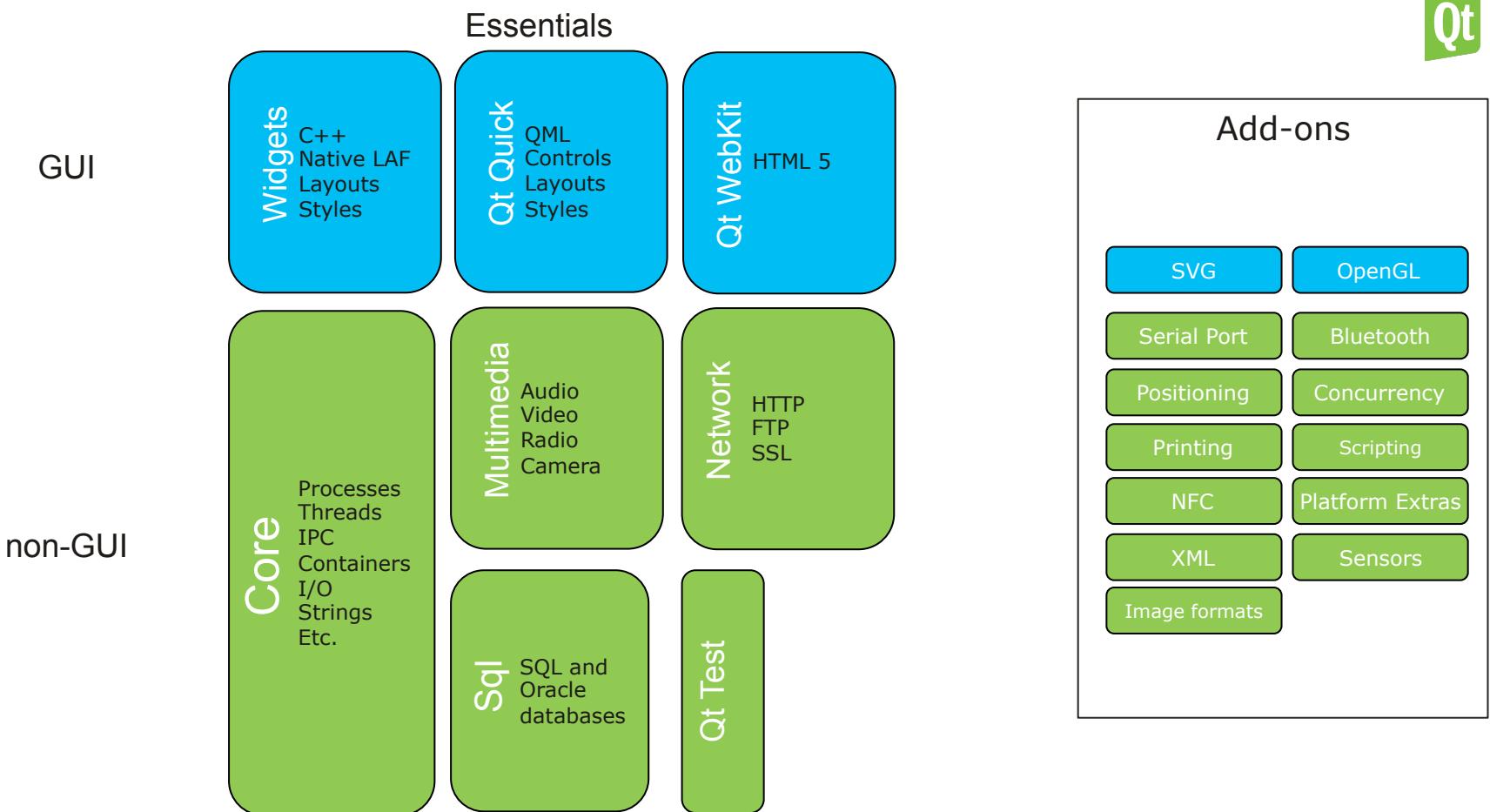


+ Direct Hardware Access

# Qt Applications Are Native Applications



# Qt Developer Offering, Cross-Platform APIs



# Opportunities with Qt on Mobile

Android  
iOS  
Windows Phone / WinRT  
Sailfish OS  
BlackBerry 10  
Ubuntu touch  
Nokia X  
Tizen

+ Qt Cloud Services

Symbian  
MeeGo

Qtopia  
Windows Mobile

<- 2008

Trolltech

2008 - 2012

Nokia

2012 ->

The Qt Company +  
community

# Use Case: MuseScore

Pallettes

- > Grace Notes
- > Clefs
- > Key Signatures
- > Time Signatures
- > Barlines
- > Lines
- > Arpeggios & Glissandi

Palettes

- > Grace Notes
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177.156% Page View Concert Pitch

Promenade\_Example Monks\_Cot\_Rhythm Vivaldi\_-Vieni\_vieni\_o\_mio\_diletto\*

# Vieni, vieni o mio diletto

Kerényi Miklós György fordítása Jöjj, ó jöjj hát Antonio VIVALDI (1678-1741)

**Allegretto**

The musical score consists of two staves of violin music. The top staff is in common time (indicated by 'C') and the bottom staff is in 12/8 time (indicated by '12/8'). The key signature is one sharp (F#). The first section of the score includes lyrics in Hungarian: 'Vie - ni, vie - ni o mio di - let - to che - il mio cor súgy ég e szív.' Below this, the lyrics change to: 'Jöjj, ó jöjj hát, oly ré - gen vár rád, súgy e szív.' The second section continues with: 'e tut - to af fet - to, già t'a - spet - ta, e o - gnor ti chia - ma. Oly for - rón hiv, oly vâ - gyón ég e szív, súgy vár, úgy hiv.'

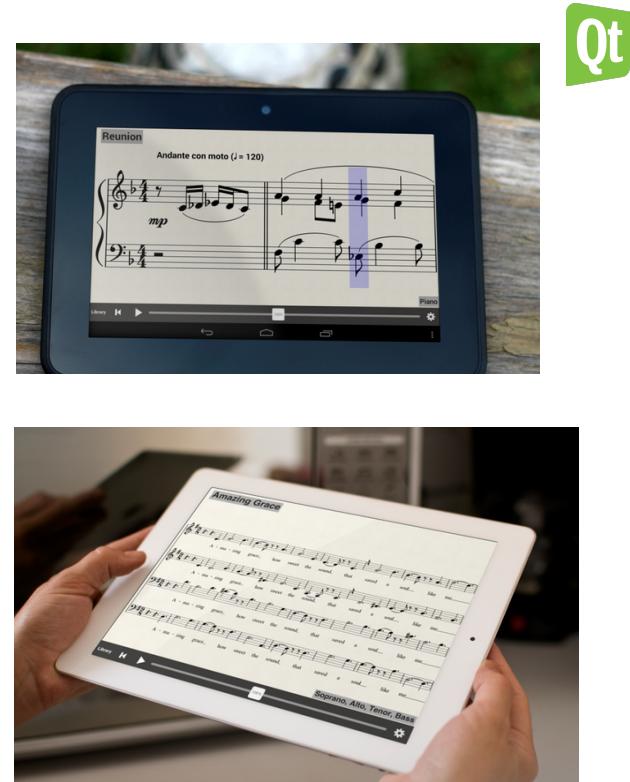
mf una corda

Breaths & Pauses  
Brackets  
Articulations & Ornaments  
Accidentals  
Dynamics

ppp pp p mp  
mf f ff fff  
fp qf qf<sup>#</sup> fff  
ffq<sup>#</sup> f<sup>#</sup> ffpp fp<sup>#</sup>  
rf fx m r  
z z n

Fingering  
Note Heads  
Tremolo  
Repeats  
Tempo  
Text  
Breaks & Spacers  
Bagpipe Embellishments  
Beam Properties  
Frames & Measures  
Symbols

# MuseScore for Desktop



# MuseScore Player for mobile devices

## Few more use cases from Qt for mobile

Games, apps, tools



Shorter Time-to-Market with  
Integrated Tooling and  
Value-Add Components

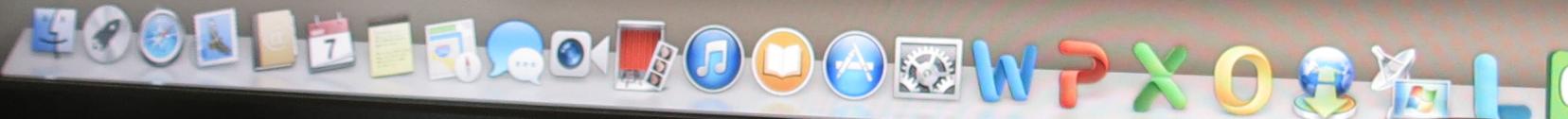
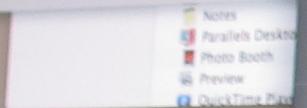


# Qt Creator

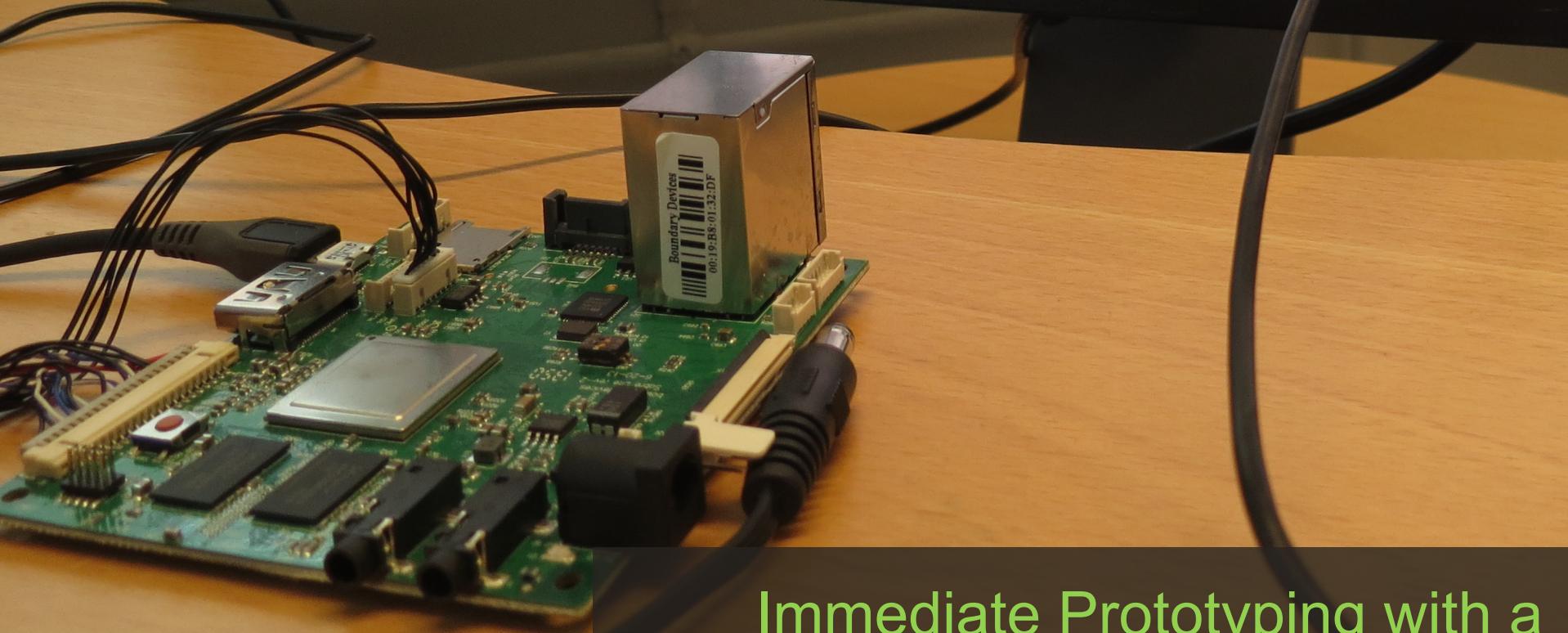


DevicePage.qml - Alarm - Qt Creator

```
DevicePage.qml
1 import QtQuick 2.1
2 import QtQuick.Controls 1.1
3 import QtQuick.Layouts 1.1
4 import QtQuick.Controls.Styles 1.1
5 import QtQuick.Enterprise.Controls 1.1
6
7 Rectangle {
8     width: 100
9     height: 62
10    property int bottomMargin: 10
11    property int topMargin: 20
12    property int columnSpacing: 50
13    property int buttonWidth: 90
14
15    gradient: Gradient {
16        GradientStop {
17            position: 0.00;
18            color: "#000000";
19        }
20        GradientStop {
21            position: 1.00;
22            color: "#b9b3b3";
23        }
24    }
25
26    Text {
27        id: pageTitle
28        color: "white"
29        anchors.horizontalCenter: parent.horizontalCenter
30        font.pixelSize: Math.floor(parent.height * 0.09)
31        text: qsTr("Device List")
32    }
33
34    Component {
35        id: deviceListDelegate
36        Item {
37            width: parent.width
38        }
39    }
40
41    Column {
42        spacing: 10
43        Row {
44            spacing: 10
45            Column {
46                spacing: 10
47                Image {
48                    source: "images/cog.png"
49                }
50                Text {
51                    text: qsTr("Cogs")
52                }
53            }
54            Column {
55                spacing: 10
56                Image {
57                    source: "images/eye.png"
58                }
59                Text {
60                    text: qsTr("Eye")
61                }
62            }
63        }
64        Row {
65            spacing: 10
66            Column {
67                spacing: 10
68                Image {
69                    source: "images/minus.png"
70                }
71                Text {
72                    text: qsTr("Minus")
73                }
74            }
75            Column {
76                spacing: 10
77                Image {
78                    source: "images/plus.png"
79                }
80                Text {
81                    text: qsTr("Plus")
82                }
83            }
84        }
85    }
86}
```



DELL



Immediate Prototyping with a  
Pre-Built Software Stack,  
*Boot to Qt*

The image shows a person's hands holding a white smartphone. The screen displays the Qt Cloud Services web interface. At the top, it says "CURRENT CLOUD Happy Birds". Below that is a navigation bar with "Home / Happy Birds". On the left is a sidebar with icons for "Enginio Data Storage" and "Managed WebSocket". The main content area has two sections: "Enginio Data Storage" and "Managed WebSocket", each showing a table of instances with columns for Name, Instance ID, Tags, and Status. Both sections have a "Launch instance" button and an "Actions" dropdown.

### Enginio Data Storage

Name	Instance ID	Tags	Status
Game High Scores	eds-eu-1-0nxoit6h		Running
Analytics Data	eds-eu-1-sh71r3xr		Running

### Managed WebSocket

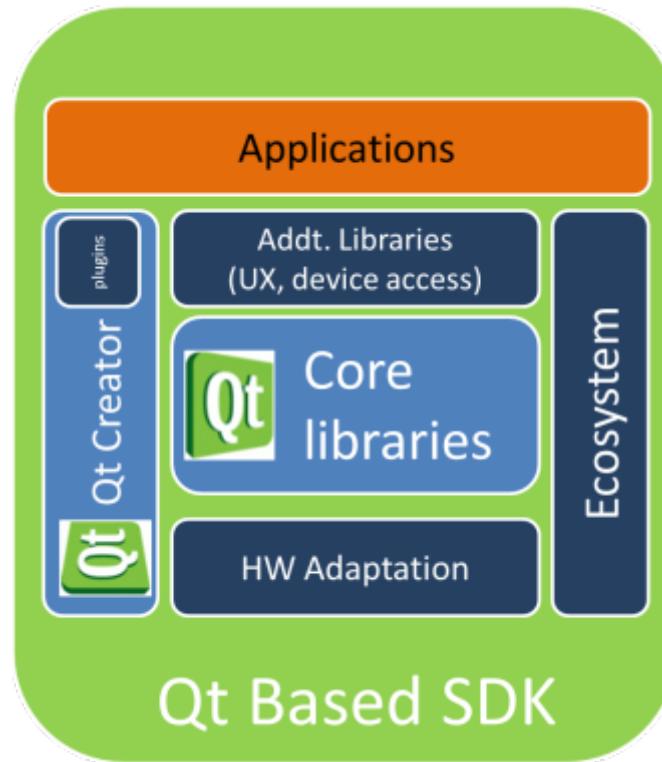
Name	Instance ID	Tags	Status
Chat Server	mws-eu-1-8bc6wcsv		Running

### Additional Resources

[Getting Started](#)

QtCloudServices.com

# Qt as Technology Platform



# What is Qt?

Desktop to Desktop

Productivity Enhancing Tools

Targeting the Fragmented  
Mobile Markets

Platform Independent Multi-Screen Software

Amazing Embedded GUIs

Internet of Things

Bring Your Own Device

Powerful Cross-Platform C++ APIs

Ecosystem of 800 000 Developers

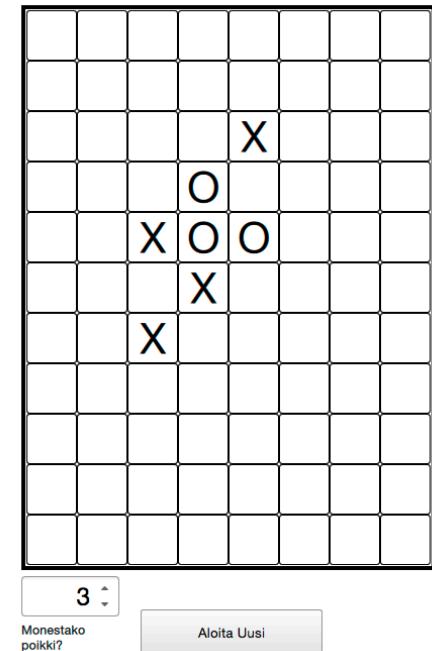
Technology Platform for own SDKs and  
ecosystems

# Hands On live coding – “Best Tic Tac Toe Ever”.

- Create a tic-tac-toe game on the fly by using
  - Qt Creator Designer – drag and drop
  - Qml & javascript
  - Demo example on the desktop screen
  - Deploy to Android Nexus7, Apple ipad and Windows8.1 phone

Best Tic-Tac-Toe Ever

Pelaaja 2:n vuoro



Qt is All This.

Qt is What You Make of It.



# Thank You!

[www.qt.io](http://www.qt.io)

[www.qt.io](http://www.qt.io)

See you there!