



Linux Learning Centre

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Training & Certification

Programmes at LLC

LLC102: Essentials of Linux OS
LLC103: Linux System & Network Administration
LLC203: Linux Advanced Administration
LLC303: Linux System & Network Monitoring Tools
LLC104: Linux Internals & Programming Essentials
LLC105: Programming with Qt
LLC106: Device Driver Programming on Linux
LLC107: Network Programming on Linux
LLC108: Bash Shell Scripting Essentials
LLC109: CVS on Linux
LLC204: MySQL on Linux
LLC205: Programming with PHP
LLC206: Programming with Perl
LLC207: Programming with Python
LLC208: PostgreSQL on Linux
LLC209: Joomla CMS
LLC210: Drupal CMS
LLC403: Qmail Server Administration
LLC404: Postfix Mail Server Administration
LLC405: Linux Firewall Solutions
LLC406: Open LDAP Server Administration
LLC408: Samba Server Administration
LLC409: DNS Administration
LLC410: Nagios - System & Network Monitoring Software
LLC412: Apache & Secure Web Server Administration
LLC414: Web Proxy Solutions
LLC501: Programming with OpenGL
LLC504: Linux on Embedded Systems
LLC602: Linux Apache MySQL & PHP (LAMP)
RH033: Red Hat Linux Essentials
RH133: Red Hat Linux System Administration
RH253: Red Hat Linux Network & Security Administration
RH301: Red Hat Rapid Track Certification Course
RHS333: Red Hat Enterprise Security : Network Services
RH423: Red Hat Enterprise Directory Services & Authentication
RHS429: Red Hat Enterprise SELinux Policy Administration
RH401: Red Hat Enterprise Deployment & Systems Management
RH436: Red Hat Enterprise Clustering & Storage Management
RH442: Red Hat Enterprise System Monitoring & Performance Tuning
RH142: Linux Troubleshooting Techniques & Tools
RH184: Red Hat Enterprise Linux Virtualization
SUSE3071: SUSE Linux Enterprise Server Fundamentals
SUSE3072: SUSE Linux Enterprise Server Administration
SUSE3073: SUSE Linux Enterprise Server Advanced Administration

Programming with Qt

Course Overview

Qt is a multiplatform C++ application development framework. It has become the emerging standard development environment for IT professionals who want to write a single source-tree, port it to multiple platforms with a simple recompile, integrate it easily with Motif and ActiveX, make it database-capable, globalize it, give it a native look and feel, and run it at native speed. After completion you will have: A knowledge of the capabilities & limitations of Qt; A knowledge of multi platform development using Qt; Experience programming with Qt.

Pre-Requisites

Very good knowledge of the C++ programming language. Awareness of atleast on UI toolkit is a plus, but not required, Should be comfortable using a GNU/Linux distribution. Knowledge of OpenGL would be a plus (only for learning the Qt/OpenGL module)

Target Audience

Programmers developing applications for desktops, embedded devices and/or targeting multiple platforms - Windows, Unix and Mac will greatly benefit from this training.

Course Material

The courseware includes a comprehensive guide with examples.

Post Training Support

Candidates can clarify any doubts on the topics covered in the course over email for a period of 30 days after the conclusion of the course.

Course Duration

Four Days: 9 am - 6 pm

Course Fee

Rs. 15,000/- (plus 10.3% service tax)

Mode of Payment

The course fee has to be paid completely in advance by cash / Credit-Debit Card / Cheque / Demand Draft payable in Bangalore City in favour of "Linux Learning Centre Private Limited". The registration can be forwarded along with the payment by hand or by courier.

Course Outline

- Introduction to Qt: Survey of GUI toolkits
- Technical and product history of Qt, Trolltech.
- Dual-license of Qt
- Installation
 - Getting Qt sources: Compiling and installing Qt
 - "Hello World" program in Qt
- Introduction to Signals and Slots
 - Making a connection: Breaking a connection: Creating signals & slots
- Introduction to UI programming in Qt
 - The QWidget class: The QMainWindow class: Qt Designer
 - User actions: QAction/QToolBar/QMenu/QToolBar: Exercise: Text Editor
- Containers, Types, and Macros.
- QList: QMap: QStack: Iterating containers
- Common Widgets
 - QPushButton, QCheckBox, QRadioButton, QToolButton
 - QLabel: QLineEdit, QSpinBox; QGroupBox
 - QSlider, QProgressBar
- Common Dialogs
 - QFileDialog: QInputDialog: QColorDialog
 - QMessageBox: QProgressDialog
- Custom Widgets
 - Form Widgets: Custom controls
- Layouts
 - Vertical & Horizontal layouts
 - Grid layouts: Form layouts: Custom layouts
- Drawing and Printing (Arthur Framework)
 - Drawing framework: QPainter, QPainterEngine, QPainterEngine Helper classes: QRect, QPoint, QPen, QBrush, QGradient & QPainterPath
 - Drawing on widgets
 - Drawing on pixmaps
 - Printing
 - Transformations: QMatrix, QTransform
- Handling Events in Qt
 - Event model in Qt. (QEvent and subclasses, QObject::event() method)
 - Event handlers in Qt (paintEvent, mousePressEvent, mouseReleaseEvent etc)
 - Event filters
 - Signal/Slot internals (QObject and friends)
- The Model-View Framework (Interview)
 - Introduction to MVC Design Pattern
 - QAbstractItemModel - Qt's Model class
 - QAbstractItemView - Qt's View class
 - QAbstractItemDelegate - Qt's Delegate class
- QModelIndex - Qt's data pointer into model
 - Built in models: QDirModel, QStringListModel, QFileSystemModel
 - Built in views: QListView, QTreeView, QColumnView, QTableView
 - Built in item views: QListWidget, QTreeWidget, QTableWidget
 - Writing custom models and views
- Graphics View Framework
 - QGraphicsScene, QGraphicsView and QGraphicsItem
 - OTS items: QGraphicsLineItem, QGraphicsRectItem, QGraphicsEllipseItem etc
 - Custom items
 - Transformations and Interactive graphics
- Files, Streams
 - IO Device framework: QIODevice
 - Built in IO Devices: QFile, QBuffer
 - Stream classes: QTextStream and QDataStream
 - Buffer classes: QByteArray, QString
- Help System (Qt 4.4 module)
 - How to create compressed help files in Qt
 - Using compressed help files in Qt assistant
 - Showing help in your applications using QHelpEngine and friends
- Multimedia (Phonon)
 - How to play audio and video files in Qt
- HTML Rendering (WebKit)
 - Introduction to WebKit project
 - QWebView - the Browser control in Qt
- Making your applications scriptable (QScript)
 - Basic concepts: What does a scriptable application mean
 - Evaluating scripts using QScriptEngine
 - Accessing Qt/C++ objects in the script environment
 - Accessing variables in the script within Qt/C++
 - Designing objects for scriptability
- XML
 - DOM and SAX
 - Parsing XML files
 - Authoring XML files
- OpenGL
 - The QGLWidget class
 - Using OpenGL in graphics view
 - Using OpenGL in your widgets
- Doing Things in Parallel. (Threads and QProcess)
 - QThread, QMutex and QSemaphore
 - QProcess
- Plugin system
 - QPlugin and friend classes
 - Creating Qt Designer plugins
 - Architecting applications to allow extensions via plugins
 - How to load and use plugins
 - Using QLibrary to dynamically load libraries
- Networking
 - Understanding QAbstractSocket
 - TCP/IP communication using QTcpSocket and QTcpServer UDP communication using QUdpSocket
 - FTP / HTTP Transactions
- Introduction to Third-Party Libraries
 - Qt - Graphing Library
 - GCF - Components Framework Library (similar to Microsoft's COM and KParts)