

# ARCHITECTURE FUNDAMENTALS FOR THE DIGITAL AGE

6 DAYS (PART 1 & 2 COMBINED)



A critical success factor in the Digital Transformation journey is a consistent, coherent approach to Solution Architecture – one that embraces modern development methods and emerging technologies.

CC&C's Architecture Fundamentals course, developed initially in 2018 for a top10 global bank, helps the enterprise meet this need.

We equip software designers and teams with the principles, patterns, semantics and methods needed to integrate digital technologies and deliver timely results at scale.

This clear, consistent body of knowledge, delivered across the enterprise and across the world, lays the groundwork for the new level of cross-functional teamwork needed to meet the digital challenge.

## Scope of the course

Architecture Fundamentals level-sets global teams on current essential design concepts in:

- **Enterprise and Solution Architecture**
- **DevSecOps and the Software Delivery Tool Chain**
- **Selected Emerging Technologies such as APIs, Microservices, Cloud, Security, Mobility, Big Data / Analytics, Blockchain, RPA, Microservices and more (choices aligned with your strategic focus).**

## Urgency of the course

Companies must go faster than ever to transform existing landscapes and expose new features to customers. To deliver the required speed and functionality IT leaders must master a few essentials:

- **The tools that provide acceleration to solution delivery teams**
- **The Agile and DevOps processes that set the tone for rate of delivery**
- **Techniques and principles for integrating key emerging technologies**
- **A Solution Architecture approach that combines subject matter expertise with modern technologies and delivery styles.**



**Architecture Fundamentals Level 1 (Core)** provides the foundational tools needed by solution architects to bridge corporate vision and product vision, and to support rapid delivery of solutions in modern delivery contexts such as Agile and DevOps.

**Architecture Fundamentals Level 2 (customised for each client)** introduces the principles and techniques for key emerging technologies that are most critical for the enterprise digital journey. Specific modules are chosen based on your technology and business strategy.

The common understanding and common vocabulary gained in this course will lay the groundwork for successful deployment of agile, cross-functional teams (architects, developers, operations) in the digital enterprise.

## Learning Objectives

This course is aimed at giving participants a strong foundational knowledge of Solution Architecture concepts and the best practices needed to work effectively in support of modern Agile and DevOps teams in large enterprises. Our course model is aimed at:

- **Maximizing retention of concepts by using immediate hands-on work to internalize learning**
- **Changing the thought process of every participant coming from a range of specializations, experiences and background**
- **Combining both “catch-up” and “forward thinking” concepts**
- **Providing a balance across three pedagogical approaches:**
  - o Classroom training
  - o Coaching
  - o Workshop

## The Learning Journey and Course Design

Every Module has three parts:

- Theory: The art and science behind each concept
- Method: Reflections of a seasoned architect with definitive steps to scalable & replicable outcomes
- Practice: Application of concepts using a real-world scenario

Every Module builds on the previous module

- Design Patterns require an understanding of Non-Functional Requirements
- Architecture Styles require an understanding of Technology and Patterns
- Delivery Acceleration in DevSecOps require an understanding of Company Direction, Technology, Styles, Patterns
- ... and so on.

## Syllabus: Core / Level 1

- Different Architecture Roles in the Industry
- Architecture Roles in Your Enterprise (customized)
- Different Architecture Domains in the Industry
- Architecture Lifecycle and Alignment to DevSecOps
- Stakeholder Concerns
- Design Patterns
- Quality and Non-Functional Requirements
- Stakeholder Alignment
- Viewpoints and Views
- Architecture Repository
- Self-Service Concepts in IT4IT™
- Definition of MVP, MMF and EVP
- Solution Repository
- Alignment with CMDB
- Asset Types and Risk Types
- The Architect's Role in Governance
- DevSecOps
- Delivery Train
- Key Activities and Roles in DevSecOps
- Managing and Decoupling Sprint Teams in Large Projects
- Approaches to Ensure Quality of Delivery
- Criteria for Go-To Market

## Syllabus: Technology Modules / Level 2

Level 1 is a Pre-requisite for Level 2. Modules listed here for Level 2 are typical but can be substituted based on your requirements.

Each Module is a half-day or full-day mix of instruction and hands-on Lab work.

### APIs & Microservices

- Characteristics of Microservices
- Tools required to create and test Microservices
- Approach to designing the interface
- APIs as an approach to concurrent development

### Cloud Technologies

- Name, differentiate & select appropriate Cloud Operating Models
- Name, differentiate & select appropriate Cloud Availability Models
- Compare services across major providers
- Architect responsibilities in specifying solution & operations approach

Other Modules are in development and can be tailored each company's requirement

### Mobile Technologies

- Mobile resources & protection
- Device feature detection
- UX patterns for devices
- Behavior and usage monitoring
- Architect responsibilities in specifying solution & operations approach

### Big Data

- Big Data characteristics
- Big Data Solutions in the market
- Big Data Patterns
- Data Lakes
- Architects responsibilities in specifying solution & operations approach

### Security

- Responsibilities of the App Dev Team
- Information security standards and principles
- Access Control Mechanisms
- Logging to support monitoring
- Architects responsibilities in security

## Prerequisites and Target Audience

The course is designed for members or prospective members of cross-functional teams in medium to large enterprises.

The typical student will have at least three years of experience in some aspect of large-scale software development and delivery, and in-depth knowledge of at least one of:

- Enterprise Architecture
- IT Strategy
- Business Architecture
- Software and Solution Architecture
- Security Architecture
- Data Architecture
- Domain architecture
- Portfolio Architecture
- Business Analysis
- Business Process Analysis
- IT / Digital Transformation Management
- DevOps
- Agile and Lean methods
- IT Operations and Service Management
- Business Technology Partnership



## Why Train with CC&C Solutions

CC&C is a leader in Enterprise Architecture, Digital Transformation, and IT Transformation. CC&C was a pioneer in Enterprise Architecture training and consulting and is a Gold Member of The Open Group. For almost two decades, we have been helping leading organizations in the Americas, Europe, India and AsiaPacific.

Real-World Focus: Our faculty are experienced practitioners who can bring their hands-on, real-world experience to life.

CC&C training prepares students for the actual application of the training material and focuses on the skills needed to be an effective and respected professional.



**Consistent Global Delivery:** CC&C's qualified local faculty work as a global team and can present this training with a single voice, ensuring that all students receive the same content and quality of instruction wherever they may be.