Chapter 1

Introduction to Windows Communication Foundation Framework

After completing this chapter, you will be able to:

- Pre-requisite concepts required to learn Service Oriented Architecture (SOA).
- Understand the concepts related to SOA.
- Know the tenets of SOA and how these tenets are implemented in WCF.
- Understand Windows Communication Foundation (WCF) Framework.
- Understand the essential pieces of WCF.
- Differentiate between WCF and Web Service.
- Know the importance of WCF in developing professional applications.
- Understand the advantages of using WCF in building rich enterprise applications.

INTRODUCTION

The Windows Communication Foundation Framework is a unified programming model for building distributed and Service Oriented Applications (SOA) (Green, 2016). Before you build any WCF service, it is necessary to understand the concepts such as web service, distributed computing,
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interoperability, and loosely coupled systems and SOA. These concepts are explained in the following section.

**PRE-REQUISITE CONCEPTS**

To learn any technology based on web service it is essential to learn the following topics in details to gain proper understanding.

**Interoperability**

Interoperability means the ability to communicate with other technology or language with ease. In object oriented programming we can design components which can be reused in the same technology or language. For instance Java Beans can be consumed in any Java application, but what about consuming these Java Beans in.Net? Interoperability solves this problem by providing loosely coupled architecture between diverse applications to communicate with one another. To have interoperability there must be some interface or common standards between the applications to communicate with each other. As shown in Figure 1, an application developed in JAVA is able to consume the functionality available in.NET application (regardless of the language such as C#, VB etc.) with ease. So it is possible because the systems are interoperable. Now how to provide interoperability? It is possible due to web service. So in the following section we will learn about web service and underlying concepts related to it.

*Figure 1. Communication between.NET and Java*
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