Before we install TFS into our infrastructure there are some things to consider. We need to plan for the deployment so that we can get optimal result of TFS. Some things we need to consider are

- TFS Architecture; the logical application, data, and client tiers
- Physical server location that will host those tiers
- Team Foundation Build and the build computers that will run in our environment
- Team Foundation Server Proxy for our remote locations

In this chapter we take a look at some of these aspects so that you can plan for the best solution for your organization. Let’s start with TFS architecture.

**TFS Architecture**

We can divide the TFS services into three logical tiers:

- The Logical Application Tier
- The Logical Data Tier
- The Team Foundation Client Tier

These tiers can all run on one machine or they can be divided on several. It all depends on what the needs are in the organization.

Team Foundation Server 2012 also includes a set of web services and databases which we can install and configure separately on the server or servers that host the logical application, data, and client tiers for TFS. This means that we do not have to keep one specific layer on one server, we can distribute even the logical tiers. This gives us the flexibility to adapt TFS to our specific infrastructure needs.

---

**Note**  The reason we call two of these tiers “logical” is purely because the services on them can be logically grouped together. The data tier has all databases/data services; the application tier has all TFS application services, and so on. This does not mean that the application tier must run on a single machine. We can divide the components of each tier on several physical servers to handle a large workload.
Let’s look at what services are included in the application tier.

Logical Application Tier

The application tier is the core of TFS. Here we find all services TFS offers.

First we find all web services for team project collections. We all recognize this so no further explanation is necessary:

- Version control
- Build service
- Lab management
- Work Item tracking
- Team Foundation Framework services.

This set of services is running on the Application Tier of TFS and allows us to access the different aspects of Team Foundation Server, including administration, security, and events. They enable us to extend Team Foundation functionality by developing TFS extensions and adapters to integrate third-party tools with TFS 2012.

We also find the Application Web services:

- Core Framework services (see above)
- Supporting Framework services, such as SharePoint server extensions and reporting services

The Virtual Machine Manager Administration tools let us manage our virtual machines if we have enabled this feature set.

There are also administrative tools (see Figure 30-1) for TFS that belong to the logical application tier. These tools help us perform most of the administrative tasks that are required to manage our TFS infrastructure. Figure 30-1 shows the administrative console for TFS. This console is installed by default on any server on which you install one or more of the following components: