

Implementing Build Automation with Team Foundation Service

In this supporting article, we introduce the steps to install Build for Team Foundation. The content was created using the Eam Foundation Server BETA Developer Preview, but is applicable to RC and RTM as well.



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Introduction

To be able to install and execute a hosted Build Service against Team Foundation Service, you will need the Build Service installation from the Team Foundation Server, the URL to your Team Foundation Service project collection, and the credentials for a user with “Edit collection-level information” permissions. This permission may be enabled via the Project Collection Build Administrators group permissions. In addition, Team Foundation Service must be able to make a TCP connection to port 9191 on the build server, so make sure your firewall is configured to accept this connection.

You may choose to host your build server yourself or through an Infrastructure as a Service (IaaS) hosting provider if the conditions laid out in the above paragraph can be met. Should you choose to host your build server with an outside server hosting provider, ensure that you plan for a secure method of retrieving the completed build over the WAN to your site. We will also suggest a method for this copy process.

Summary

The following steps should be performed to get a Build Service up and running against Team Foundation Service.

- Open port 9191.
- Install the Build Service installation from the Team Foundation Server.
- Register Build Controller with Team Foundation Service.
- Configure a build template.
- Create a “secure share” to use when accessing build.
- Kick off a build.
- *Remotely hosted build server only:* securely copy the completed build to your site.

¹ <http://www.microsoft.com/visualstudio/11/en-us/downloads#tfs>

Installation

Launch the Build Service installation from the Visual Studio Team Foundation Server installation and select the **Configure Team Foundation Build Service** option.

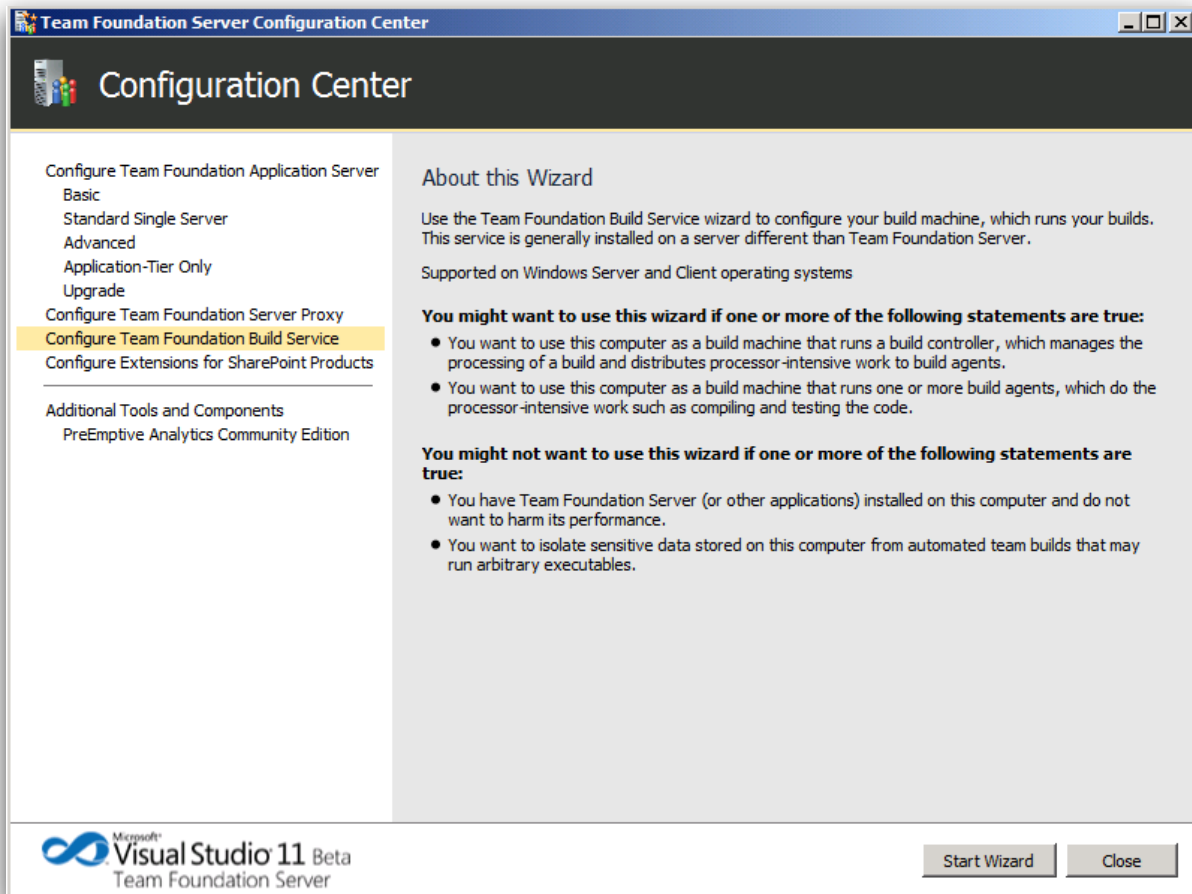


Figure 1: Team Foundation Server Configuration Center

Click **Start Wizard** to begin configuring the build service.

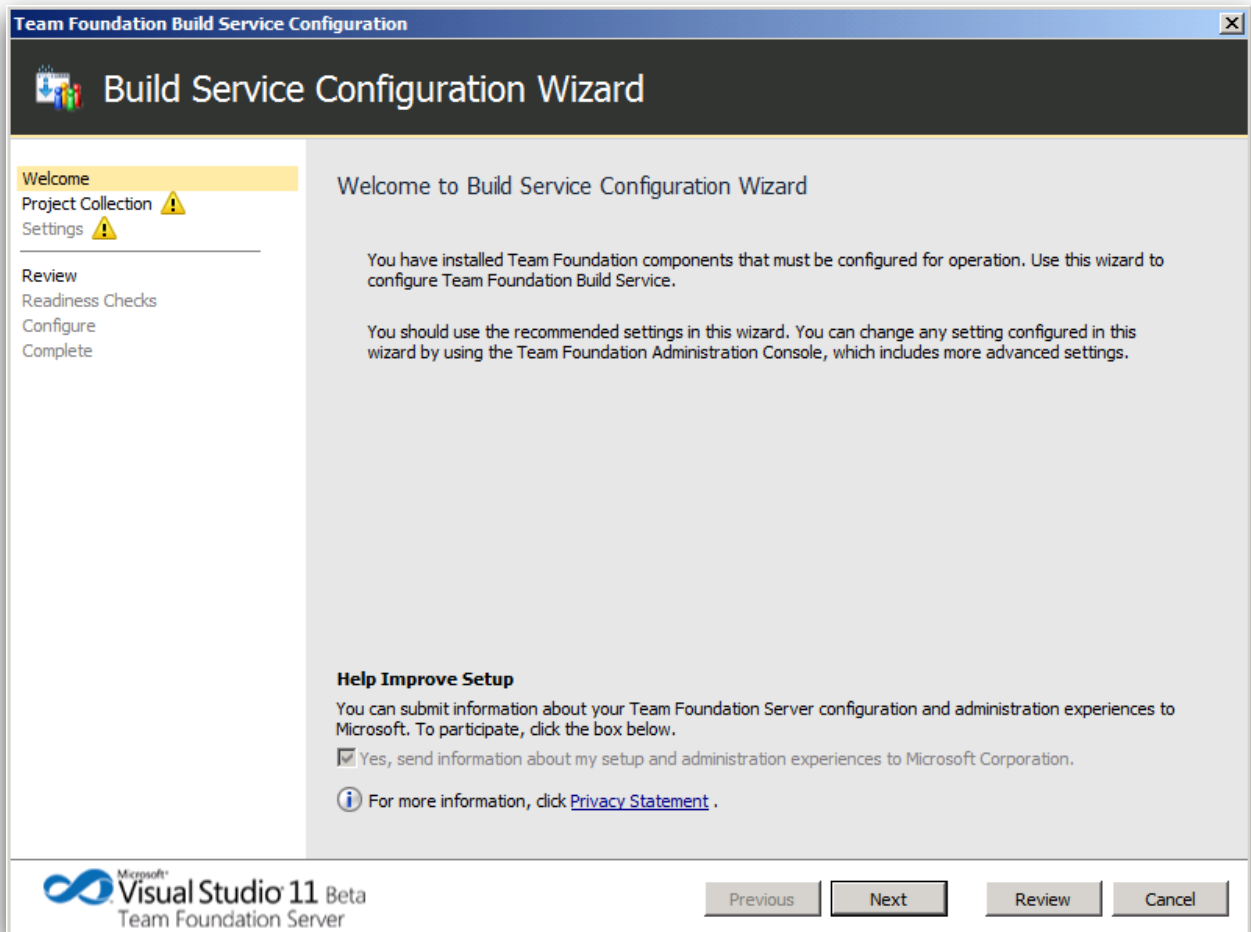


Figure 2: Welcome Screen

Click **Next** to continue the installation.

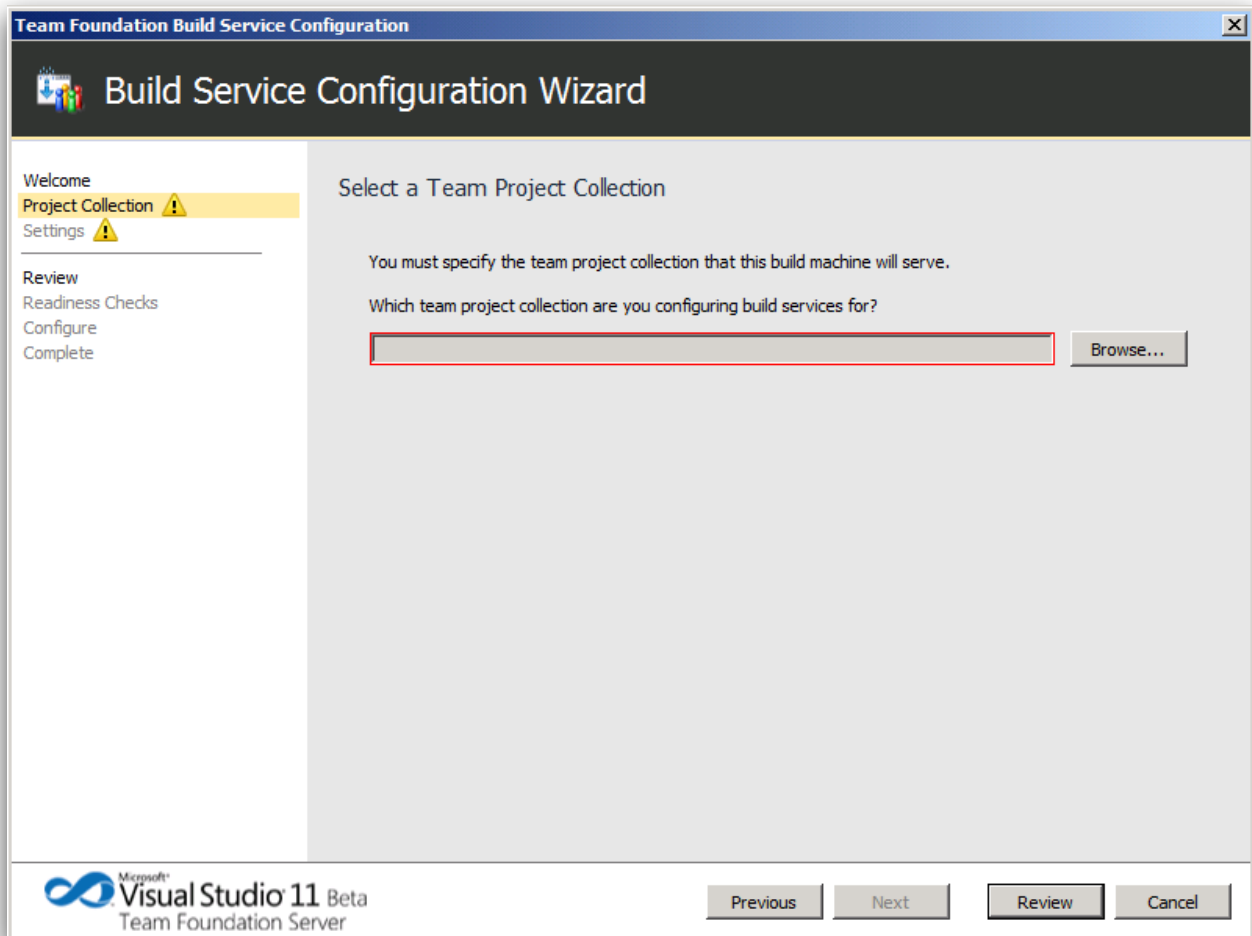


Figure 3: Select Team Project Collection

Enter the URL to your Team Foundation Service project collection and click **Next**.

Alternatively, click the **Browse** button to use a wizard to format the connect string.

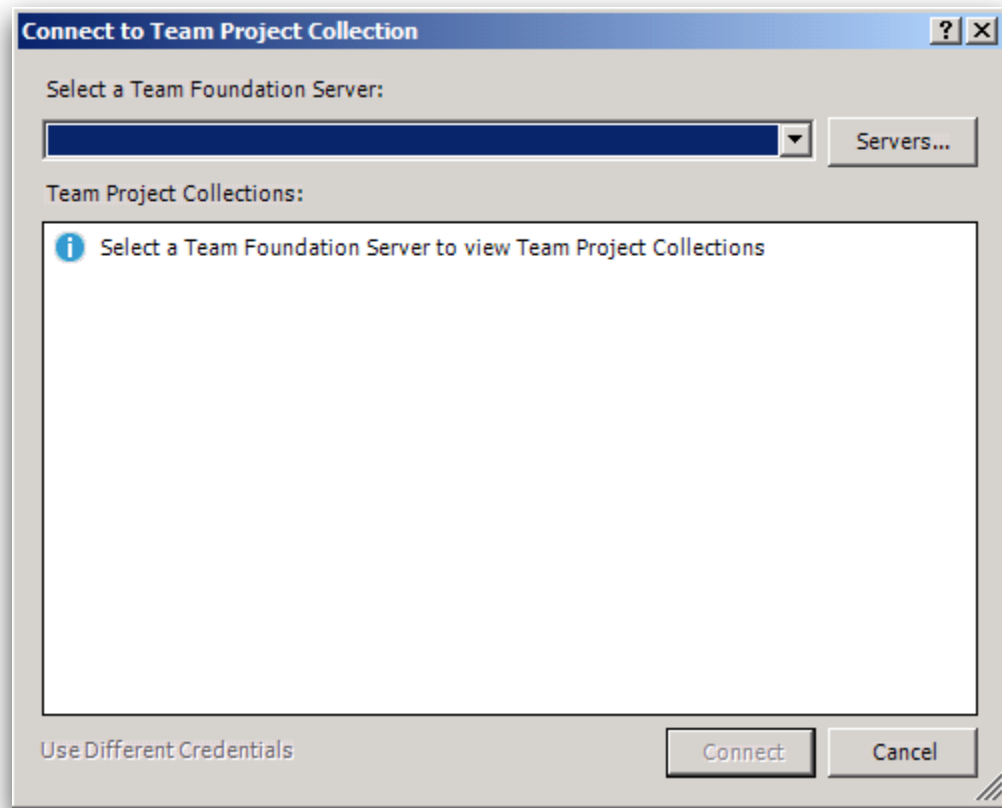


Figure 4: Connection Wizard

From the **Connect to Team Foundation Server** dialog box, click the **Servers** button.

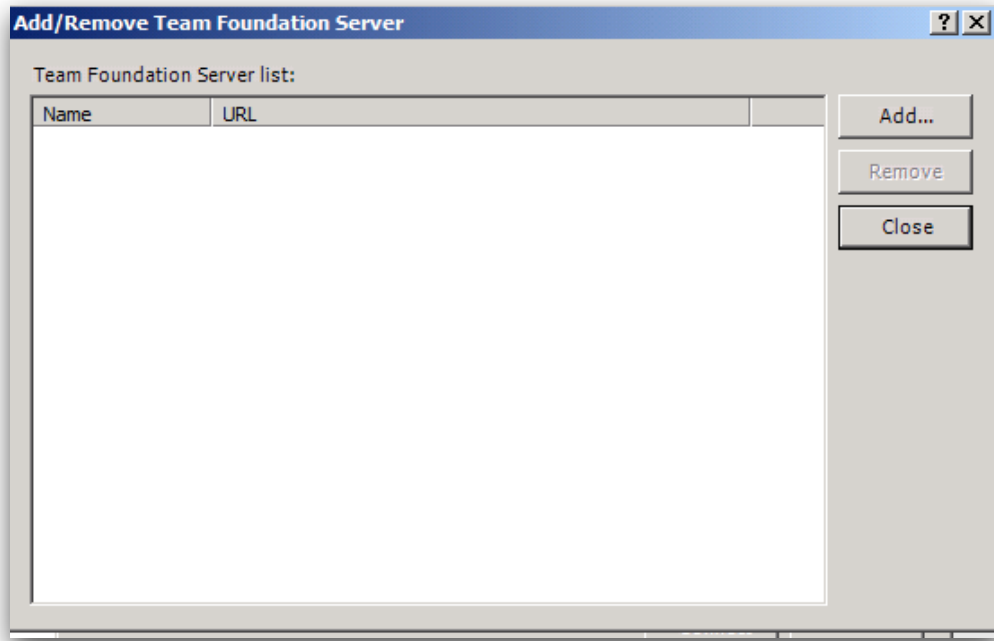


Figure 5: Add/Remove Team Foundation Server

Click **Add**.

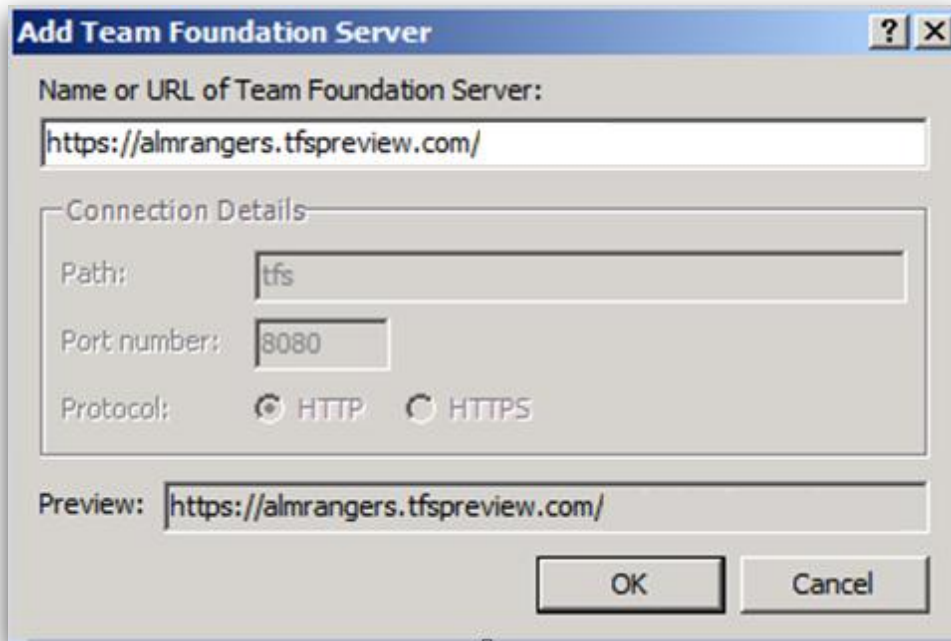


Figure 6: Add Team Foundation Server

Enter the URL to Team Foundation Server and click **OK**.

Next, sign in to Windows Live if you are prompted to do so.

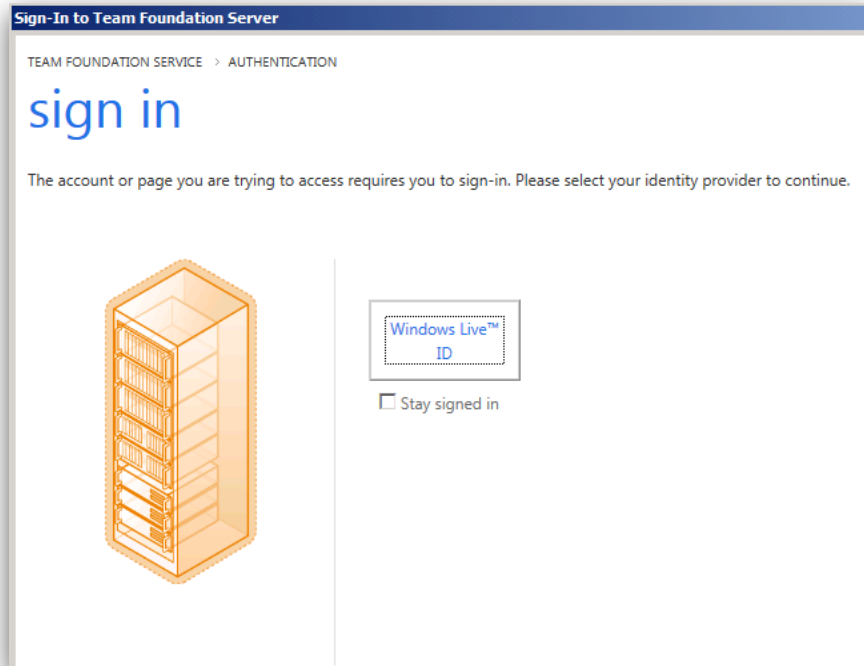


Figure 7: Sign-In Prompt

Click the **Windows Live ID** link.

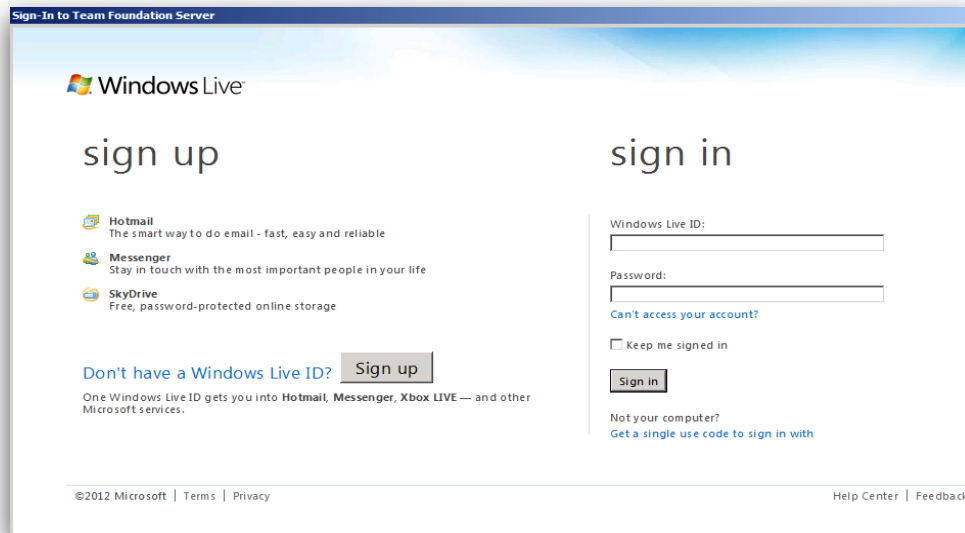


Figure 8: Windows Live login

Enter your credentials and click **Sign in**.

NOTE

If you see the following prompt, click **OK**. It is just telling us that when we entered the URL to Team Foundation Service we included the project collection, which was not necessary.

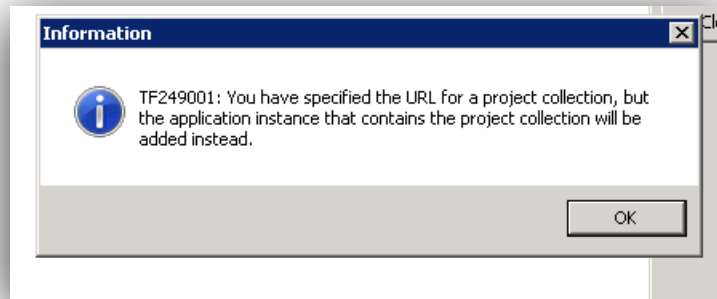


Figure 9: Information

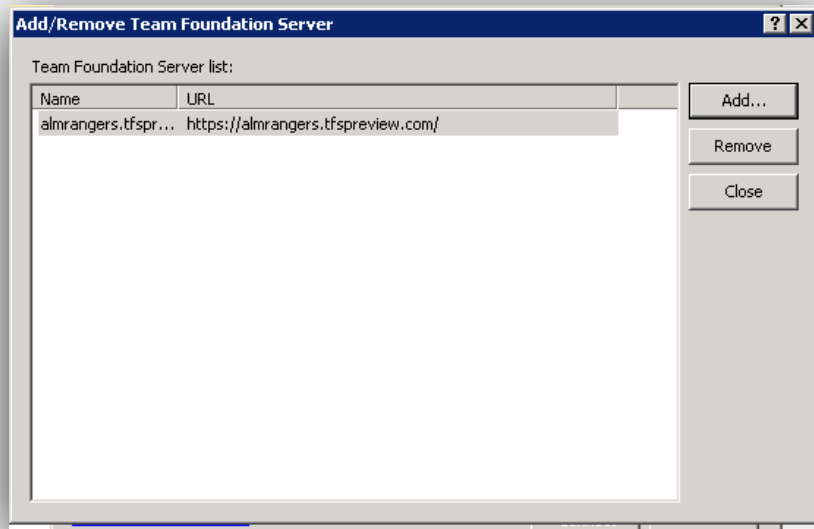


Figure 10: Team Foundation Server list

The URL is now included in the Team Foundation Server list. Click **Close**.

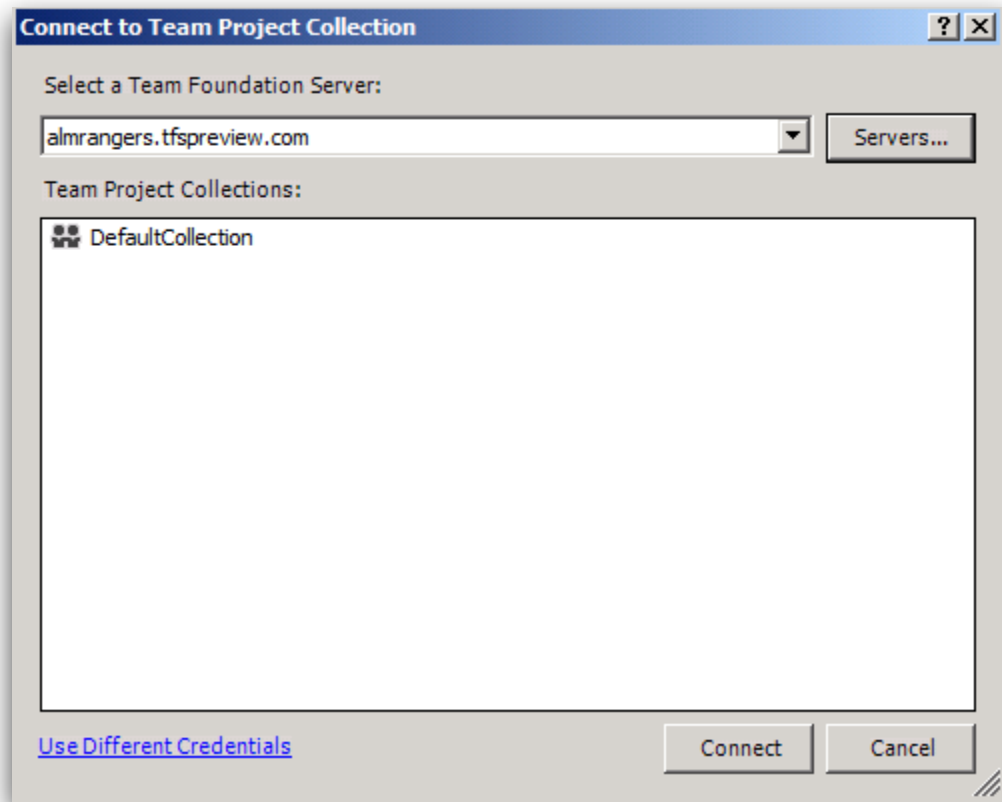


Figure 11: Select Team Project Collection

Highlight the Team Foundation project collection and click **Connect**.

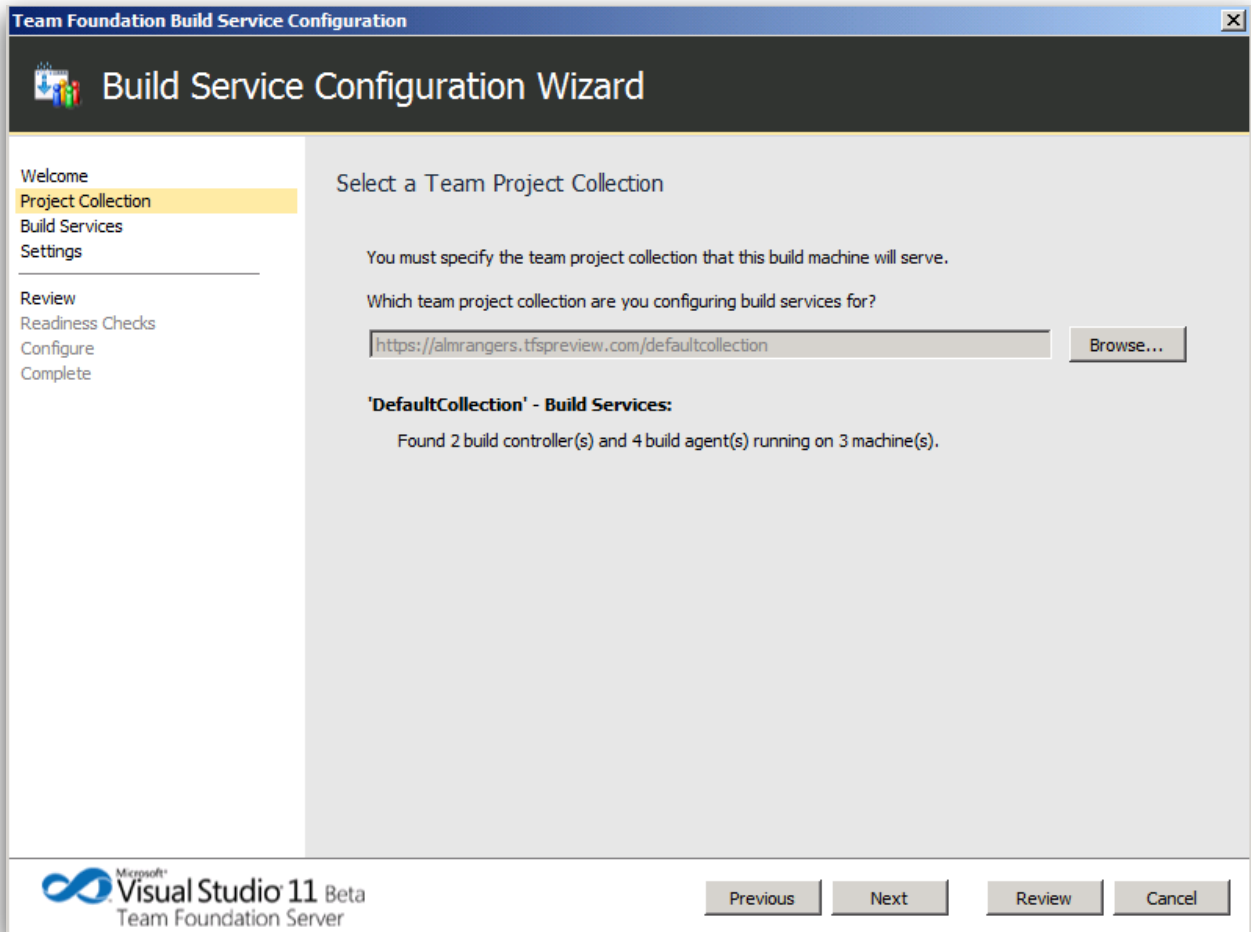


Figure 12: Team Project Collection Selected

Click **Next**.

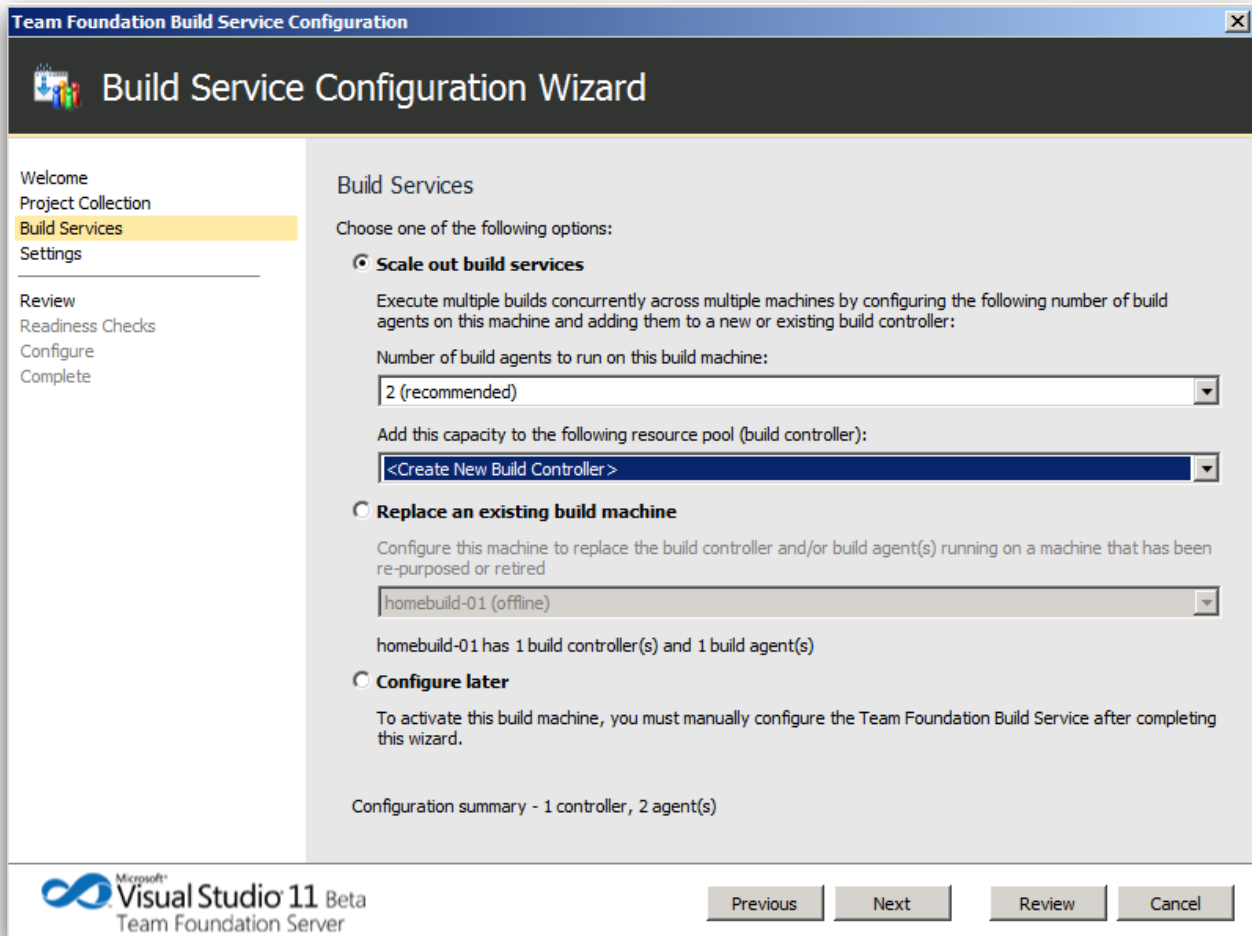


Figure 13: Configure Build Services

Continue with the build service configuration wizard. Select the **Scale out build services** option, **Number of build agents to run on this build machine**, and ensure the **Add this capacity to the following resource pool** drop-down list is set to **<Create New Build Controller>** and click **Next**.

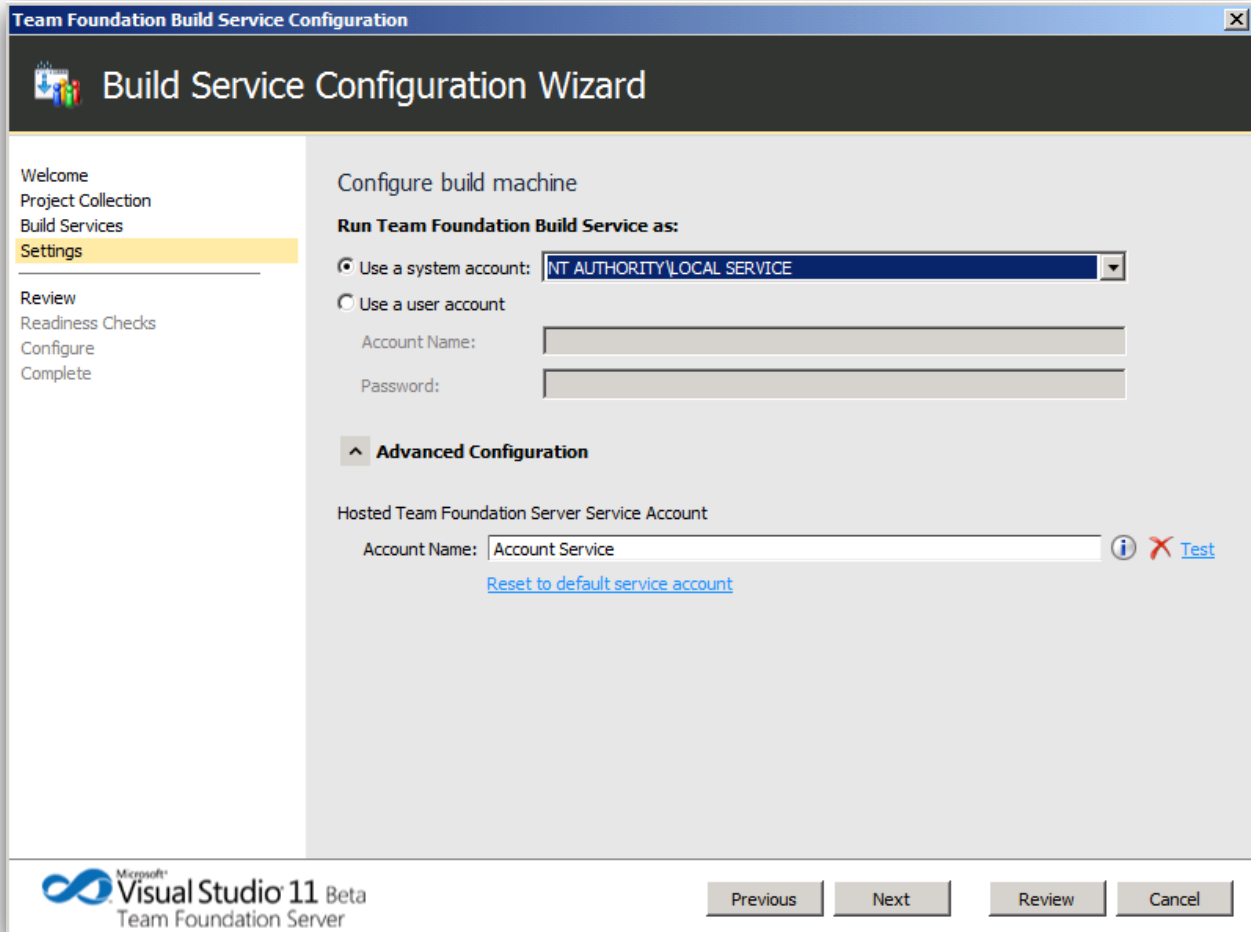


Figure 14: Build Service Credentials

Enter the credentials for a user that has read and write access to the drop location and configure the port. Click **Next** to run the review.

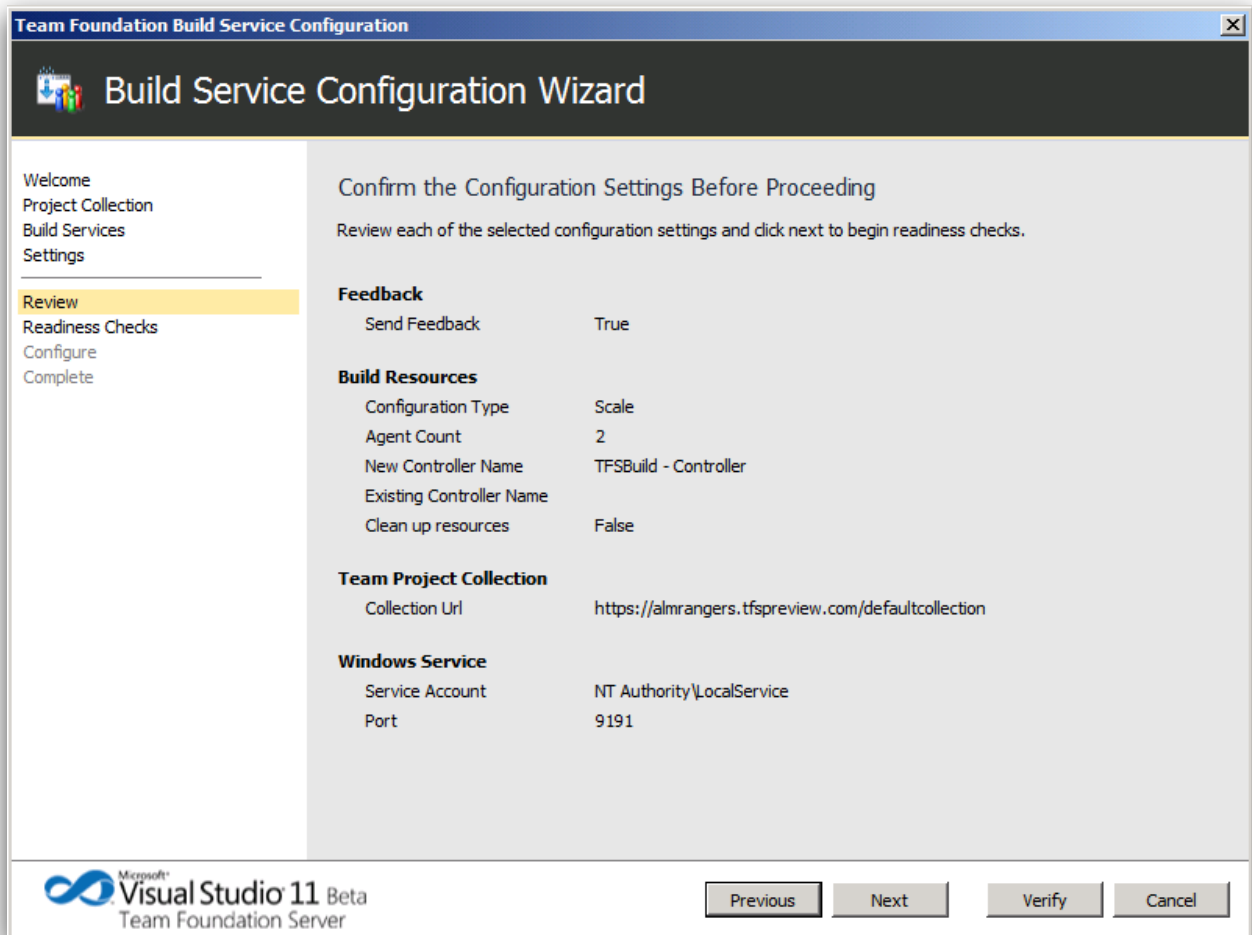


Figure 15: Review

Click **Next**.

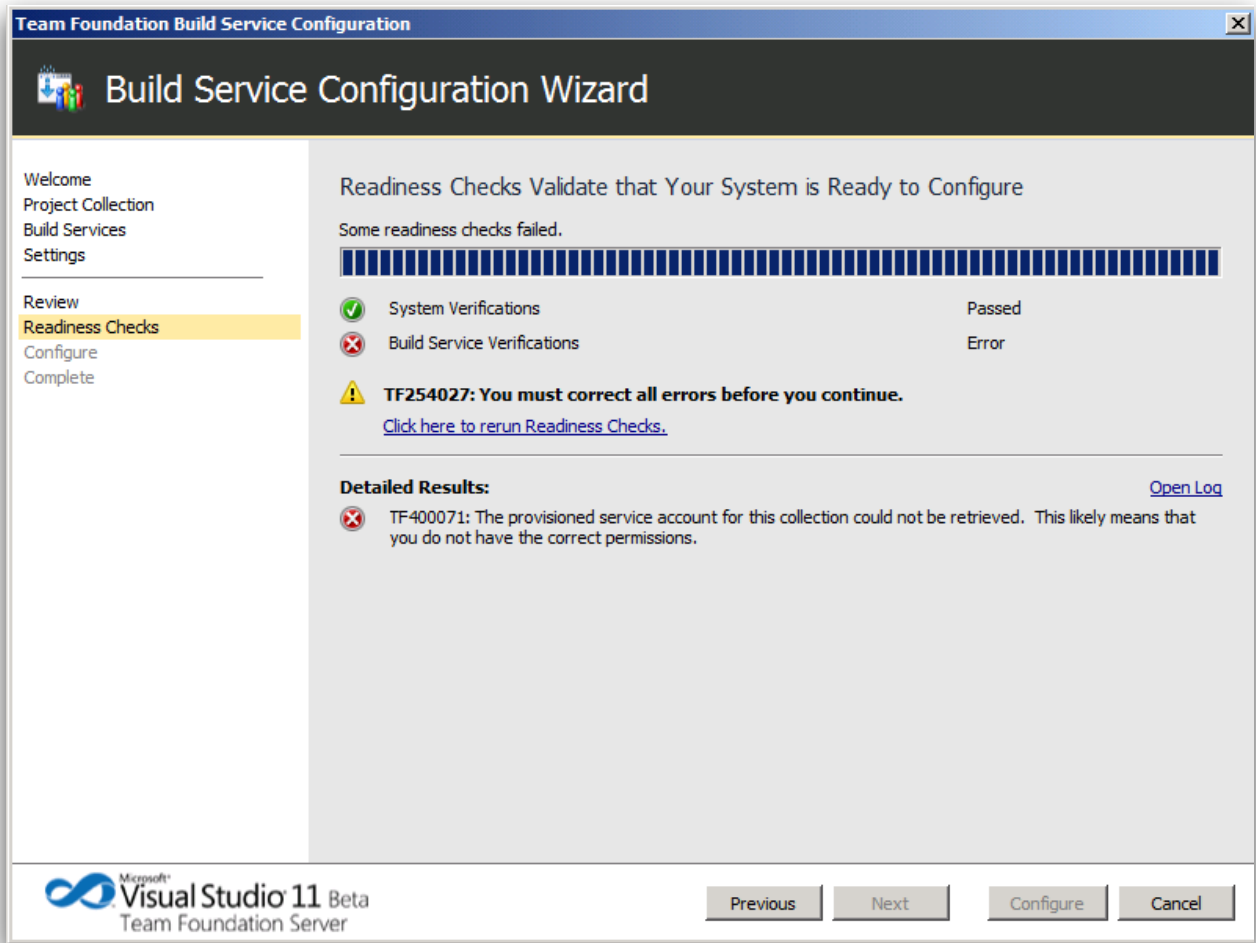


Figure 16: Readiness Check Error

If you see this error, you need “Edit collection-level information,” which is included with the Project Collection Build Administrators groups permissions.

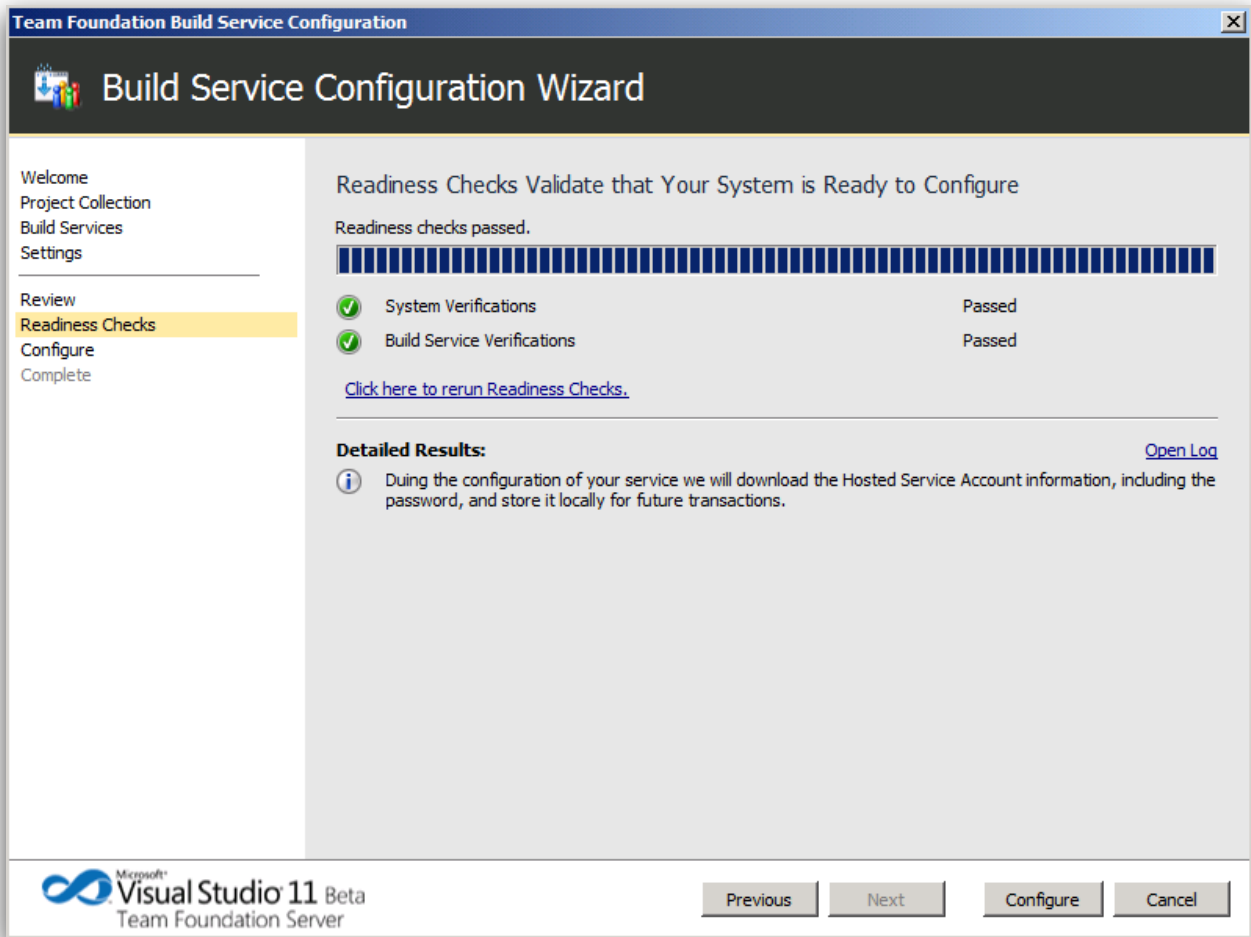


Figure 17: Readiness Check Complete

Once the readiness check succeeds without issue, click **Configure**.

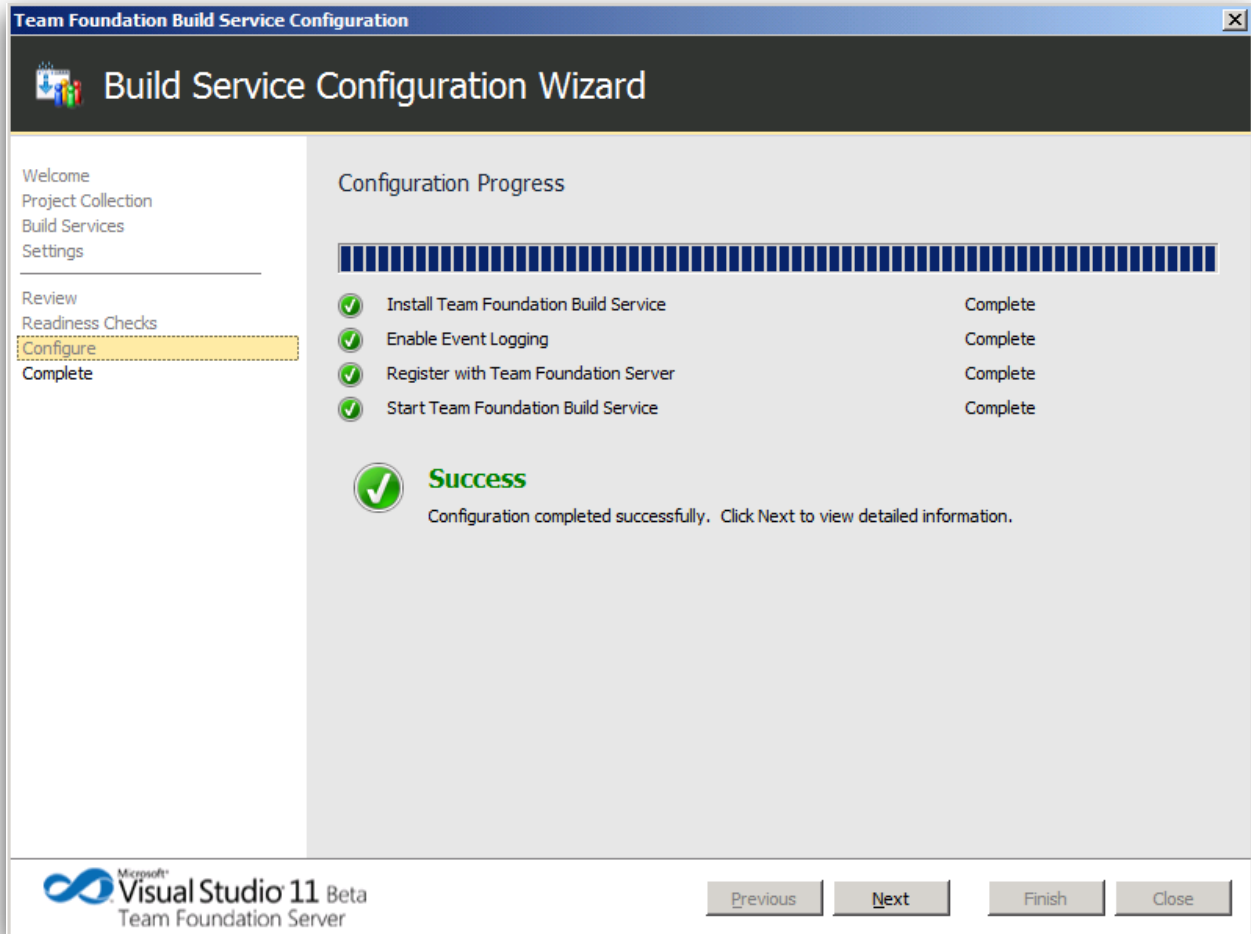


Figure 18: Successful Configuration

When the configuration completes successfully, click **Next**.

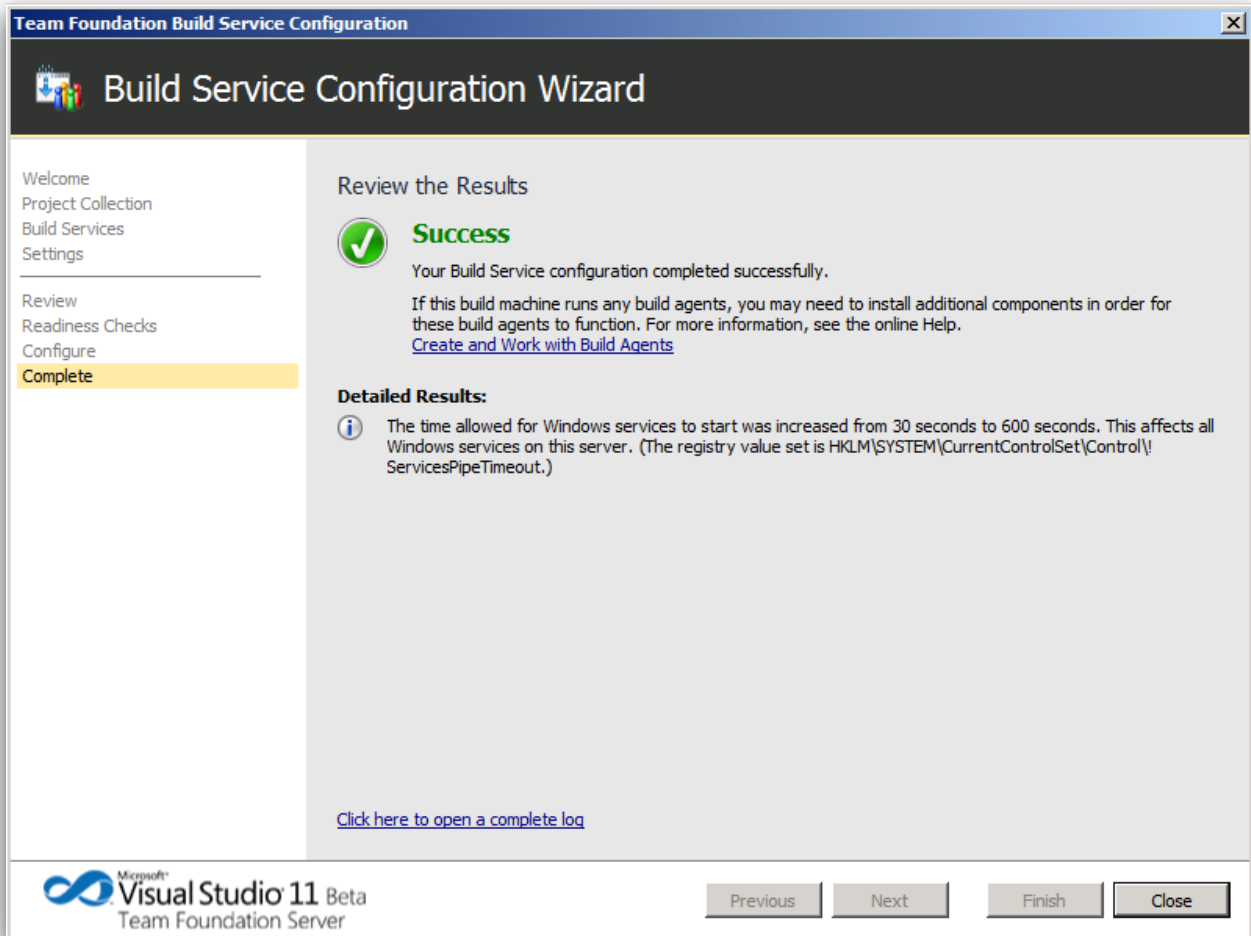


Figure 19; Results

Review the results and click **Close**.

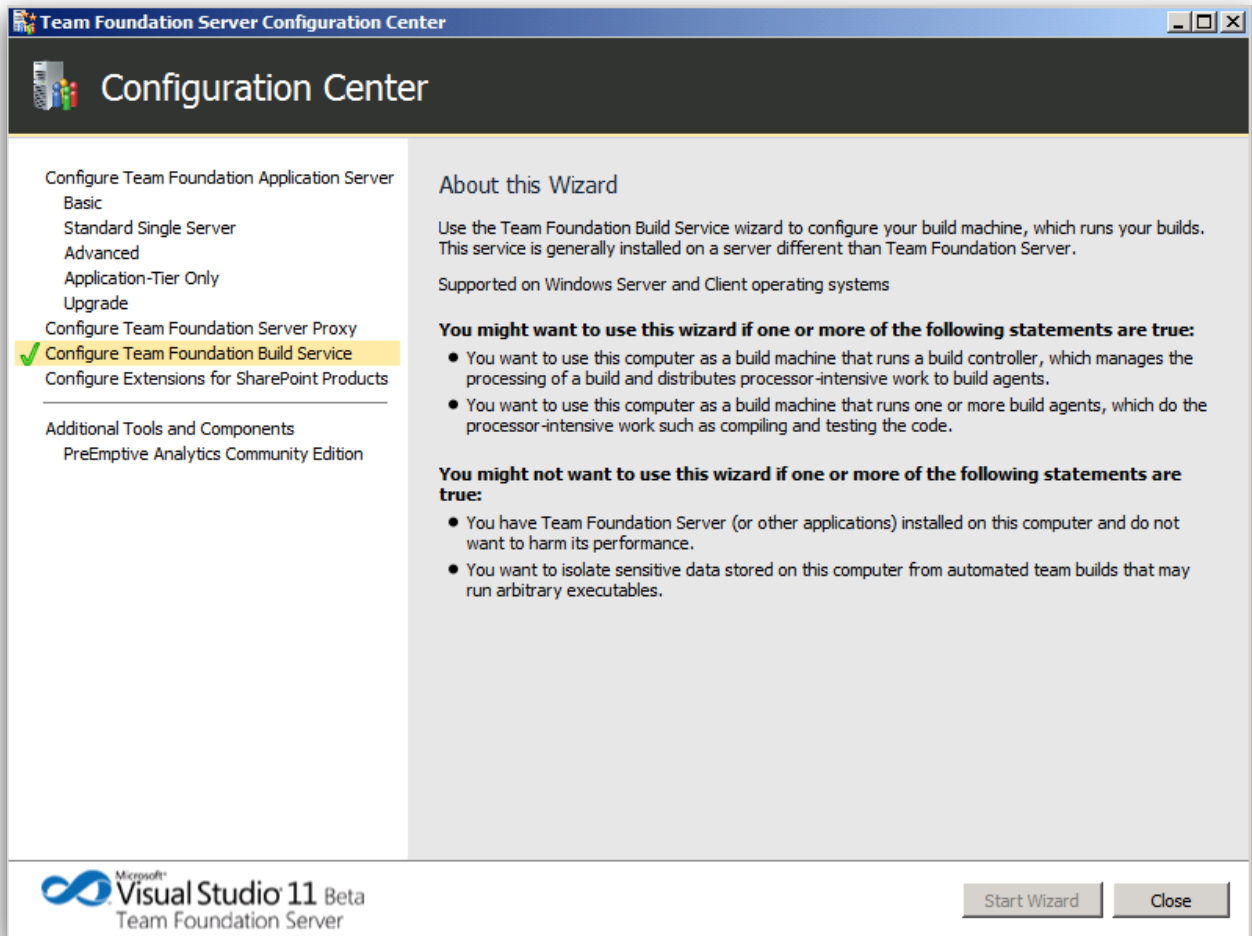


Figure 20: Installation Complete

Once the Team Foundation Build Service installation is complete, you will see a green checkmark next to the “Configure Team Foundation Build Service” option. You may close the install.

Launching a build

In Solution Explorer, select **Queue New Build**:

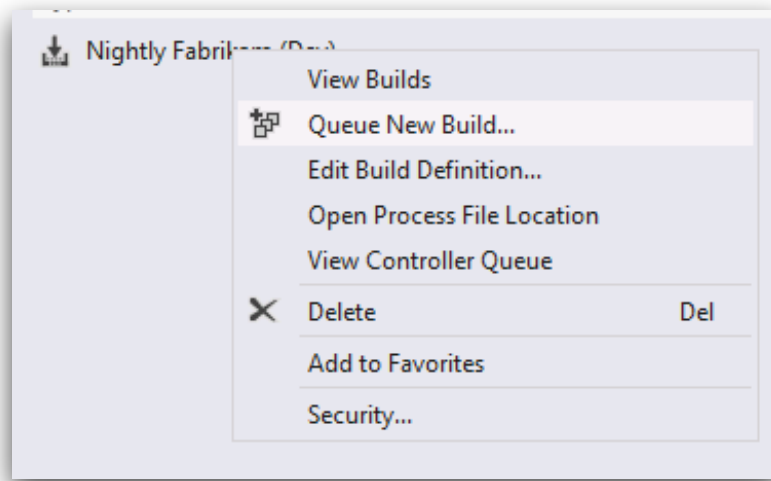


Figure 21: Queue Build

Choose the controller and click **Queue**.

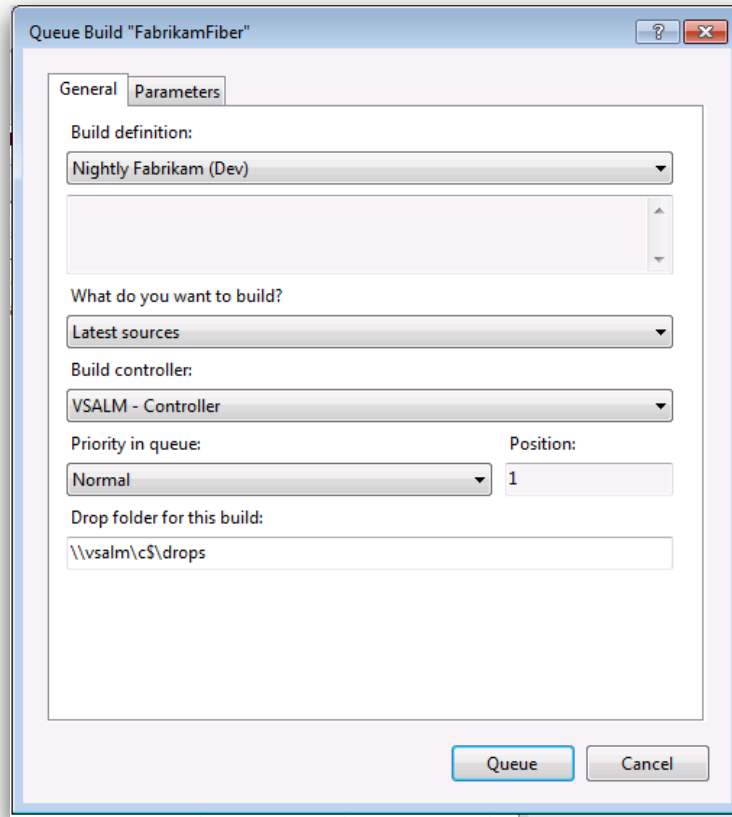


Figure 22: Build Details

i **NOTE**

The Team Foundation Build service account must have read/write access to the drop location.

Secure Retrieval of the Build

The previous sections showed you how to install the build service and build your sources that are stored in Team Foundation Service on a build server. The information in the previous sections applies regardless of whether you host your build server on-premises or at a hosting provider. If you have chosen to host your build server at an off-site provider, we suggest that you plan for a secure method of copying the drop from the build server to your local network.

i NOTE

This section is relevant only if you've chosen to host your build server with a hosting provider.

There are various methods and products that can be used to do this. One way this can be accomplished is available out of the box using Windows 2008 R2 IIS 7.x. IIS 7.x supports FTPS, which is simply the FTP protocol over a secure SSL connection.

To set up an FTPS server using Windows 2008 R2, follow the detailed steps laid out in this article: <http://learn.iis.net/page.aspx/304/using-ftp-over-ssl-in-iis-7/>

If you complete the steps in the link above exactly as they're presented, your FTPS site will make the contents of the %SystemDrive%\inetpub\ftproot directory available to the user connected to the site. Since that is probably not the same directory as your build server drop directory, you can create a post build step to copy the drop to the ftproot directory. However, it is probably easier to just set the ftproot directory to your drop directory while you step through the Add FTP Site wizard. In the Add FTP Site wizard page shown below, replace %SystemDrive%\inetpub\ftproot with the physical path of your drop directory:

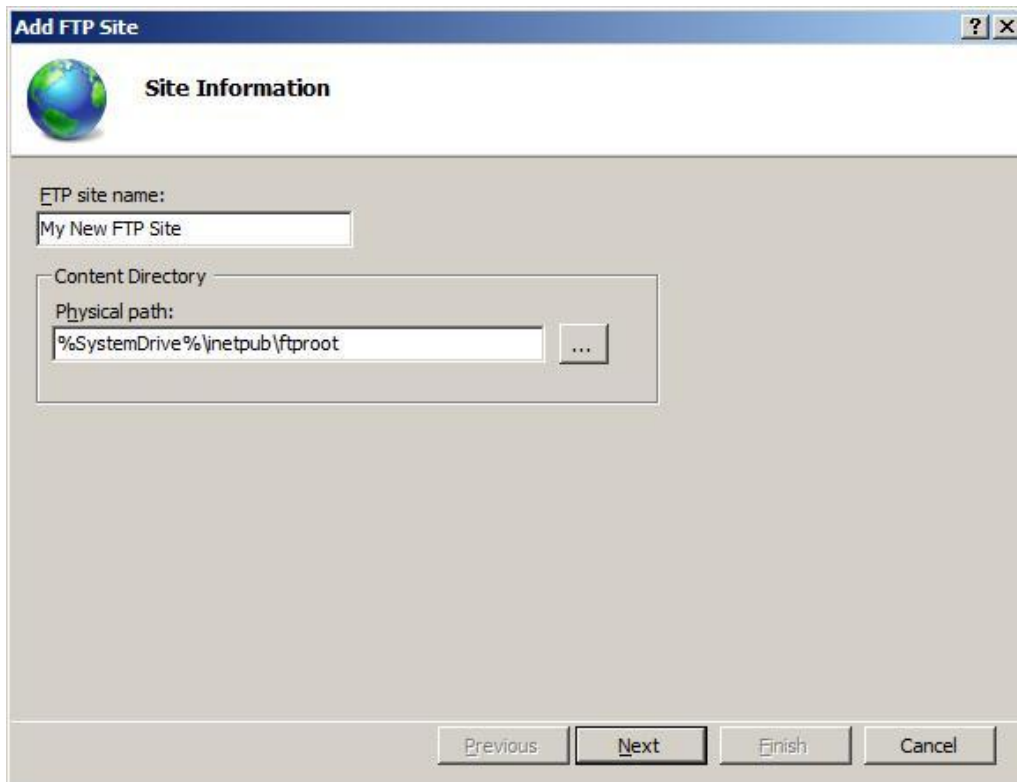


Figure 23: FTP Site Information

References

- 1 <http://www.microsoft.com/visualstudio/11/en-us/downloads#tfs>