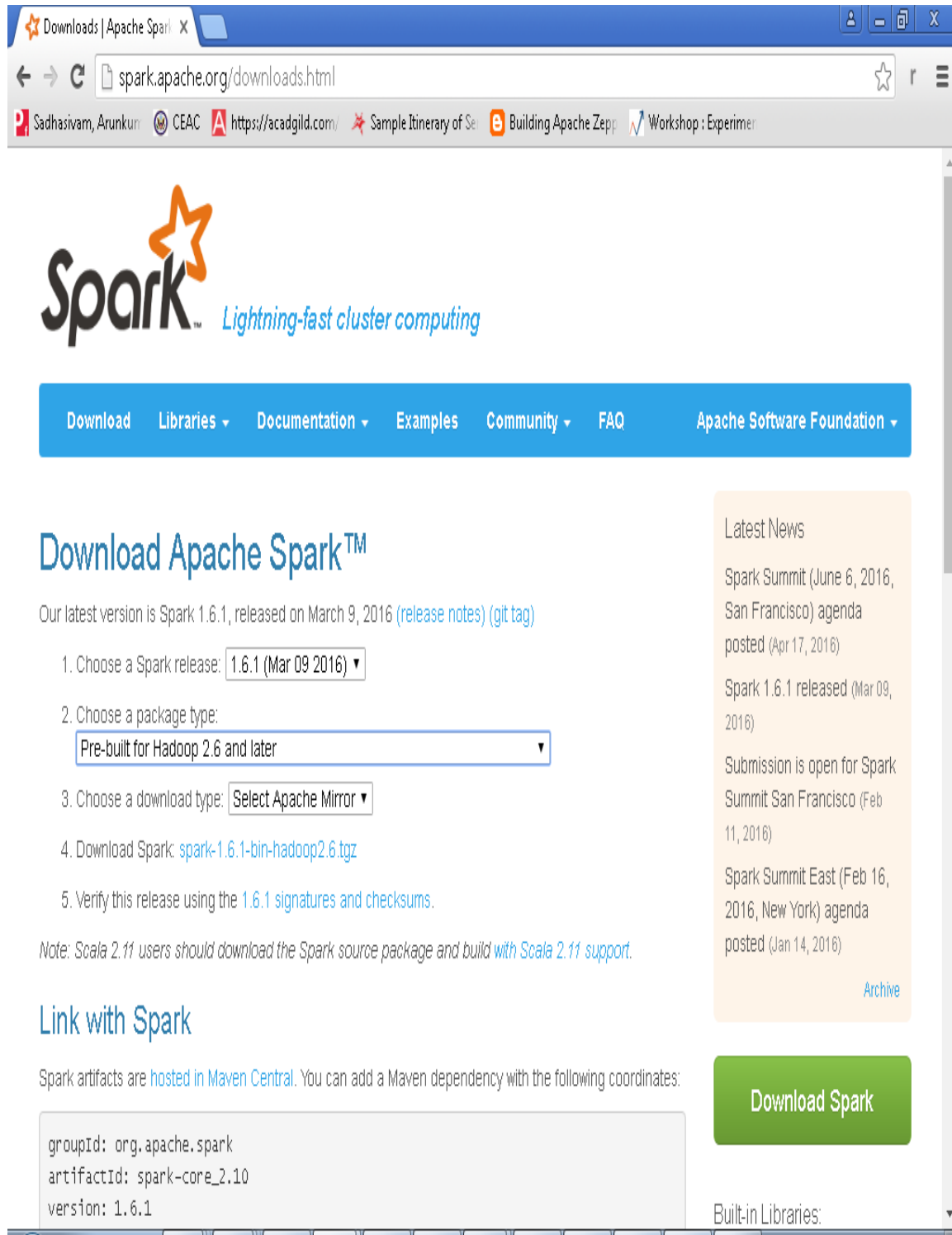


## HADOOP PREREQUISITES

1)download hadoop src also check related spark prebuilt version of spark which it support.if so spark need not be compiled for native windows format.



The screenshot shows the Apache Spark download page in a web browser. The browser's address bar displays 'spark.apache.org/downloads.html'. The page features the Spark logo with the tagline 'Lightning-fast cluster computing'. A blue navigation bar contains links for 'Download', 'Libraries', 'Documentation', 'Examples', 'Community', 'FAQ', and 'Apache Software Foundation'. The main content area is titled 'Download Apache Spark™' and states that the latest version is Spark 1.6.1, released on March 9, 2016. It provides a series of steps for downloading: 1. Choose a Spark release (1.6.1 (Mar 09 2016)), 2. Choose a package type (Pre-built for Hadoop 2.6 and later), 3. Choose a download type (Select Apache Mirror), 4. Download Spark (spark-1.6.1-bin-hadoop2.6.tgz), and 5. Verify this release using the 1.6.1 signatures and checksums. A note specifies that Scala 2.11 users should download the Spark source package and build with Scala 2.11 support. A 'Link with Spark' section provides Maven coordinates: groupId: org.apache.spark, artifactId: spark-core\_2.10, version: 1.6.1. A large green 'Download Spark' button is prominently displayed. On the right side, there is a 'Latest News' section with several announcements, including the Spark Summit agenda and release news. The bottom of the page shows a taskbar with various application icons.

Downloads | Apache Spark X

spark.apache.org/downloads.html

Sadhasivam, Arunkur CEAC https://acadgild.com/ Sample Itinerary of Se Building Apache Zepp Workshop : Experim

# Spark™

Lightning-fast cluster computing

Download Libraries Documentation Examples Community FAQ Apache Software Foundation

## Download Apache Spark™

Our latest version is Spark 1.6.1, released on March 9, 2016 ([release notes](#)) ([git tag](#))

1. Choose a Spark release: 1.6.1 (Mar 09 2016) ▼
2. Choose a package type:  
Pre-built for Hadoop 2.6 and later ▼
3. Choose a download type: Select Apache Mirror ▼
4. Download Spark: [spark-1.6.1-bin-hadoop2.6.tgz](#)
5. Verify this release using the [1.6.1 signatures and checksums](#).

Note: Scala 2.11 users should download the Spark source package and build with Scala 2.11 support.

### Link with Spark

Spark artifacts are [hosted in Maven Central](#). You can add a Maven dependency with the following coordinates:

```
groupId: org.apache.spark  
artifactId: spark-core_2.10  
version: 1.6.1
```

[Download Spark](#)

Built-in Libraries:

#### Latest News

Spark Summit (June 6, 2016, San Francisco) agenda posted (Apr 17, 2016)

Spark 1.6.1 released (Mar 09, 2016)

Submission is open for Spark Summit San Francisco (Feb 11, 2016)

Spark Summit East (Feb 16, 2016, New York) agenda posted (Jan 14, 2016)

[Archive](#)

2)After download hadoop check the building.txt

**Create binary distribution with native code and with documentation:**

```
$ mvn package -Pdist,native,docs -DskipTests -Dtar
```

**Create source distribution:**

```
$ mvn package -Psrc -DskipTests
```

**Create source and binary distributions with native code and documentation:**

```
$ mvn package -Pdist,native,docs,src -DskipTests -Dtar
```

**Create a local staging version of the website (in /tmp/hadoop-site)**

```
$ mvn clean site; mvn site:stage -DstagingDirectory=/tmp/hadoop-site
```

---

Building on Windows

---

Requirements:

- \* Windows System
- \* JDK 1.6+
- \* Maven 3.0 or later
- \* Findbugs 1.3.9 (if running findbugs)
- \* ProtocolBuffer 2.5.0
- \* CMake 2.6 or newer
- \* Windows SDK or Visual Studio 2010 Professional
- \* Unix command-line tools from GnuWin32 or Cygwin: sh, mkdir, rm, cp, tar, gzip
- \* zlib headers (if building native code bindings for zlib)
- \* Internet connection for first build (to fetch all Maven and Hadoop dependencies)

If using Visual Studio, it must be Visual Studio 2010 Professional (not 2012). Do not use Visual Studio Express. It does not support compiling for 64-bit, which is problematic if running a 64-bit system. The Windows SDK is free to download here:

<http://www.microsoft.com/en-us/download/details.aspx?id=8279>

---

Building:

Keep the source code tree in a short path to avoid running into problems related to Windows maximum path length limitation. (For example, C:\hdc).

Run builds from a Windows SDK Command Prompt. (Start, All Programs, Microsoft Windows SDK v7.1, Windows SDK 7.1 Command Prompt.)

JAVA\_HOME must be set, and the path must not contain spaces. If the full path would contain spaces, then use the Windows short path instead.

You must set the **Platform environment variable to either x64 or Win32 depending on whether you're running a 64-bit or 32-bit system. Note that this is case-sensitive. It must be "Platform", not "PLATFORM" or "platform".**

Environment variables on Windows are usually case-insensitive, but Maven treats them as case-sensitive. Failure to set this environment variable correctly will cause msbuild to fail while building the native code in hadoop-common.

set Platform=x64 (when building on a 64-bit system)  
set Platform=Win32 (when building on a 32-bit system)

Several tests require that the user must have the Create Symbolic Links privilege.

All Maven goals are the same as described above with the exception that native code is built by enabling the '**native-win**' Maven profile. **-Pnative-win** is enabled by default when building on Windows since the native components are required (not optional) on Windows.

If native code bindings for zlib are required, then the zlib headers must be deployed on the build machine. Set the ZLIB\_HOME environment variable to the directory containing the headers.

set ZLIB\_HOME=C:\zlib-1.2.7

At runtime, zlib1.dll must be accessible on the PATH. Hadoop has been tested with zlib 1.2.7, built using Visual Studio 2010 out of contrib\studio\vc10 in the zlib 1.2.7 source tree.

<http://www.zlib.net/>

-----  
Building distributions:

- Build distribution with native code : mvn package [-Pdist][-Pdocs][-Psrc][-Dtar]

## Create binary distribution with native code and with documentation:

```
$ mvn package -Pdist,native-win -DskipTests -Dtar
```

check whether platform java version is correctly picked by using mvn package -X

```
C:\hadoop-2.6.4-src> mvn package -X -Pdist,native-win -DskipTests -Dtar
```

```
Apache Maven 3.3.9 (bb52d8502b132ec0a5a3f4c09453c07478323dc5; 2015-11-10T22:11:4
```

```
7+05:30)
```

```
Maven home: C:\apache-maven-3.3.9\bin\..
```

```
Java version: 1.7.0_79, vendor: Oracle Corporation
```

```
Java home: C:\Java\jdk1.7.0_79\jre
```

```
Default locale: en_US, platform encoding: Cp1252
```

```
OS name: "windows 7", version: "6.1", arch: "amd64", family: "windows"
```

```
[DEBUG] Created new class realm maven.api
```

```
[DEBUG] Importing foreign packages into class realm maven.api
```

```
[DEBUG] Imported: javax.enterprise.inject.* < plexus.core
```

### NOTE:

1)cannot find cmake.exe in the folder.this issue will occur in hadoop common project.

For this add cygwin in the path **C:\cygwin64\bin** since cygwin has cmake inside

**C:\cygwin64\bin\cmake** . No need to add or download external cmake.

2)Also run command set Platform=/x64

otherwise solution files in native folder will generate for both 32 and 64 bit os.

**C:\hadoop-2.6.4-src\hadoop-common-project\hadoop-common\src\main\winutils.sln**

```
Project("{8BC9CEB8-8B4A-11D0-8D11-00A0C91BC942}") = "winutils",  
  "winutils.vcxproj", "{D94B3BD7-39CC-47A0-AE9A-353FDE506F33}"  
    ProjectSection(ProjectDependencies) = postProject  
        {12131AA7-902E-4A6D-9CE3-043261D22A12} = {12131AA7-902E-  
4A6D-9CE3-043261D22A12}  
    EndProjectSection  
EndProject  
Project("{8BC9CEB8-8B4A-11D0-8D11-00A0C91BC942}") = "libwinutils",  
  "libwinutils.vcxproj", "{12131AA7-902E-4A6D-9CE3-043261D22A12}"  
EndProject  
  
GlobalSection(SolutionConfigurationPlatforms) = preSolution  
    Debug|x64 = Debug|x64  
    Release|x64 = Release|x64  
EndGlobalSection
```

see the native file compilation needs **winutils,libwinutils**.

### issue 1:

[ERROR] Failed to execute goal org.apache.hadoop:hadoop-maven-plugins:2.6.4:protoc (compile-protoc) on project hadoop-common: org.apache.maven.plugin.MojoExecutionException: 'protoc --version' did not return a version -> [Help 1]  
org.apache.maven.lifecycle.LifecycleExecutionException: Failed to execute goal org.apache.hadoop:hadoop-maven-plugins:2.6.4:protoc (compile-protoc) on project hadoop-common: org.apache.maven.plugin.MojoExecutionException: 'protoc --version' did not return a version

### solution:

**install google Protocol Buffers and add to path (C:\protoc)**

<http://code.google.com/p/protobuf/>

### issue 2:

[ERROR] Failed to execute goal org.codehaus.mojo:exec-maven-plugin:1.2:exec (compile-ms-winutils) on project hadoop-common: Command execution failed. Process exited with an error: 1(Exit value: 1) -> [Help 1]  
org.apache.maven.lifecycle.LifecycleExecutionException: Failed to execute goal org.codehaus.mojo:exec-maven-plugin:1.2:exec (compile-ms-winutils) on project hadoop-common: Command execution failed.

### Solution:

Add windows C:\hadooputils to path. It needs winutils in class path download from <https://github.com/arunsadhasivam/hadoop>

### issue 3:

"C:\hadoop-2.6.4-src\hadoop-common-project\hadoop-common\src\main\winutils\winutils.sln" (default target) (1) ->  
(ValidateSolutionConfiguration target) ->

**C:\hadoop-2.6.4-src\hadoop-common-project\hadoop-common\src\main\winutils\winutils.sln**

**tils.sln**.metaproj : error MSB4126: The specified solution configuration "Release|x64" is invalid. Please specify a valid solution configuration using the Configuration and Platform properties (e.g. MSBuild.exe Solution.sln /p:Configuration=Debug /p:Platform="Any CPU") or leave those properties blank to use the default solution configuration. [C:\hadoop-2.6.4-src\hadoop-common-project\hadoop-common\src\main\winutils\winutils.sln]

0 Warning(s)

1 Error(s)

Time Elapsed 00:00:02.48

### **Solution 1.1:**

```
set WindowsSdkDir=C:\Program Files\Microsoft SDKs\Windows\v7.1
set PATH=%WindowsSdkDir%\Bin;%PATH%
set LIB=%WindowsSdkDir%\Lib;%LIB%
set INCLUDE=%WindowsSdkDir%\Include;%INCLUDE%
set TARGET_CPU=x64
set Platform=/x64
```

After this all error gone but below error:

### **hadoop-2.3.0-src/hadoop-common-project/hadoop-common/pom.xml:**

```
<id>compile-ms-winutils</id>
  <phase>compile</phase>
  <goals>
    <goal>exec</goal>
  </goals>
  <configuration>
    <executable>msbuild</executable>
    <arguments>
      <argument>${basedir}/src/main/winutils/winutils.sln</argument>
      <argument>/nologo</argument>
      <argument>/p:Configuration=Release</argument>
      <argument>/p:OutDir=${project.build.directory}/bin/</argument>
    </arguments>
```

msbuild is from .net runtime

**C:\Windows\Microsoft.NET\Framework64\v3.5\msbuild.exe**

**c:\Windows\Microsoft.NET\Framework64\v4.0.30319;C:\Windows\icrosoft.NET\Framework64\v3.5;**

**C:\Program Files\Microsoft SDKs\Windows\v7.1\Bin\setEnv.cmd**  
**has below lines**

```
:: set WinSDK default dir
SET WindowsSdkDir=%ProgramFiles%\Microsoft SDKs\Windows\v7.1\

IF EXIST "%WinDir%\Microsoft.NET\Framework\msbuild.exe" SET
"FrameworkDir32=%WinDir%\Microsoft.NET\Framework\"
IF EXIST "%WinDir%\Microsoft.NET\Framework64\msbuild.exe" SET
"FrameworkDir64=%WinDir%\Microsoft.NET\Framework64"
```

```
IF EXIST "%WinDir%\Microsoft.NET\Framework\v3.5\MSBuild.exe" SET
"Framework35Version=v3.5"
```

#### Solution 1.2:

if issue still persists

C:\hadoop-2.3.0-src\hadoop-common-project\hadoop-  
common\src\main\winutils\winutils.sln

if any 32 bit lines present comment it except the presolution since it won't accept  
changes in presolution.

Also change in winutils.vcxproj, libwinutils.vcxproj, like below s

#### To Check error Message reasons:

##### NOTE:

if you set

\$setenv=/x64 then check below path to check error

C:\Program Files  
(x86)\MSBuild\Microsoft.Cpp\v4.0\Platforms\x64\PlatformToolsets\Windows7.1SDK  
\Microsoft.Cpp.x64.Windows7.1SDK.targets

\$setenv=/x86 then check below path to check error

C:\Program Files  
(x86)\MSBuild\Microsoft.Cpp\v4.0\Platforms\Win32\PlatformToolsets\Windows7.1SDK  
\Microsoft.Cpp.Win32.Windows7.1SDK.targets File

#### issue 4:

commons-compress-1.4.1.jar;C:\Users\Arun\.m2\repository\org\tukaani\xz\1  
.0\xz-1.0.jar org.apache.hadoop.io.compress.zlib.ZlibCompressor org.apache.hadoop  
p.io.compress.zlib.ZlibDecompressor org.apache.hadoop.security.**JniBasedUnixGroup**  
**sMapping** org.apache.hadoop.io.nativeio.**NativeIO** org.apache.hadoop.security.JniBa  
sedUnixGroupsNetgroupMapping  
org.apache.hadoop.io.compress.snappy.SnappyCompress  
or org.apache.hadoop.io.compress.snappy.SnappyDecompressor org.apache.hadoop.io.  
compress.lz4.Lz4Compressor org.apache.hadoop.io.compress.lz4.**Lz4Decompressor** org  
.apache.hadoop.crypto.OpensslCipher org.apache.hadoop.crypto.random.OpensslSecur  
eRandom org.apache.hadoop.util.**NativeCrc32**"

#### solution:

Add ZLIB\_HOME to classPath since for compilin winutils.sln it had java file - which needs zlib.dll in classpath .

### SOFTWARE NEEDED

- 1)windows sdk
- 2)java 1.7
- 3)zlib
- 4)protocol buffers
- 5)cmake- <https://cmake.org/download/>  
cmake-3.5.20160503-gd15f5-win64-x64.msi

#### **To verify installation complete**

\$cmake --version

- 6)cygwin-setup-x86\_64.exe

#### **To verify**

\$uname -r

- 7)Git
- 8)dotNetFx40\_Full\_x86\_x64.exe
- 7)VC-Compiler-KB2519277.exe

### **Environment variables**

VariableName	value
JAVA_HOME	C:\Java\jdk1.7.0_79
Platform	x64
ZLIB_HOME	C:\zlib128

### **path:**

%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;  
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\;C:\Program  
Files\Intel\WiFi\bin\;C:\Program Files\Common  
Files\Intel\WirelessCommon\;C:\Program Files (x86)\Skype\Phone\;C:\apache-maven-  
3.3.9\bin;C:\Program Files\Microsoft SDKs\Windows\v7.1\bin;C:\Program  
Files\Git\bin;C:\Java\jdk1.7.0\_79\bin;C:\Program Files\R\R-3.2.3\bin;C:\scala-  
2.11.8\bin;C:\SBT-0.13\bin;C:\protoc;C:\Program Files  
(x86)\CMake\bin;C:\cygwin64\bin;C:\hadooputils

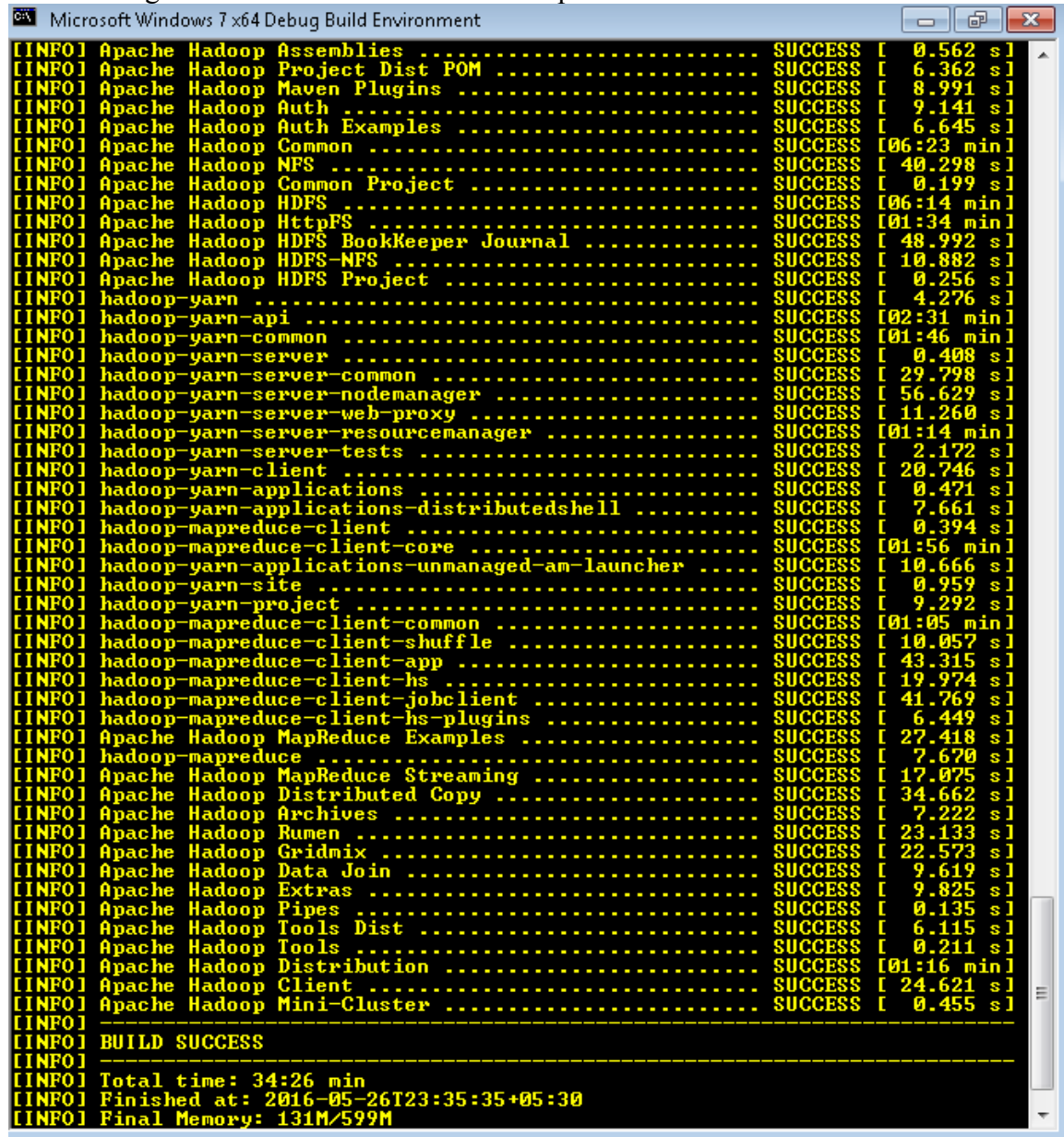
### **NOTE:**

Add space after set . After running set env check by runnin set it should shows  
all environment variables set and confirm.



```
set Platform=/x64
set env =/x64
mvn -X package -Pdist,native-win -DskipTests -Dtar
```

check configured variable and .net and mscompile in use



```
Microsoft Windows 7 x64 Debug Build Environment

[INFO] Apache Hadoop Assemblies ..... SUCCESS [ 0.562 s]
[INFO] Apache Hadoop Project Dist POM ..... SUCCESS [ 6.362 s]
[INFO] Apache Hadoop Maven Plugins ..... SUCCESS [ 8.991 s]
[INFO] Apache Hadoop Auth ..... SUCCESS [ 9.141 s]
[INFO] Apache Hadoop Auth Examples ..... SUCCESS [ 6.645 s]
[INFO] Apache Hadoop Common ..... SUCCESS [06:23 min]
[INFO] Apache Hadoop NFS ..... SUCCESS [ 40.298 s]
[INFO] Apache Hadoop Common Project ..... SUCCESS [ 0.199 s]
[INFO] Apache Hadoop HDFS ..... SUCCESS [06:14 min]
[INFO] Apache Hadoop HttpFS ..... SUCCESS [01:34 min]
[INFO] Apache Hadoop HDFS BookKeeper Journal ..... SUCCESS [ 48.992 s]
[INFO] Apache Hadoop HDFS-NFS ..... SUCCESS [ 10.882 s]
[INFO] Apache Hadoop HDFS Project ..... SUCCESS [ 0.256 s]
[INFO] hadoop-yarn ..... SUCCESS [ 4.276 s]
[INFO] hadoop-yarn-api ..... SUCCESS [02:31 min]
[INFO] hadoop-yarn-common ..... SUCCESS [01:46 min]
[INFO] hadoop-yarn-server ..... SUCCESS [ 0.408 s]
[INFO] hadoop-yarn-server-common ..... SUCCESS [ 29.798 s]
[INFO] hadoop-yarn-server-nodemanager ..... SUCCESS [ 56.629 s]
[INFO] hadoop-yarn-server-web-proxy ..... SUCCESS [ 11.260 s]
[INFO] hadoop-yarn-server-resourcemanager ..... SUCCESS [01:14 min]
[INFO] hadoop-yarn-server-tests ..... SUCCESS [ 2.172 s]
[INFO] hadoop-yarn-client ..... SUCCESS [ 20.746 s]
[INFO] hadoop-yarn-applications ..... SUCCESS [ 0.471 s]
[INFO] hadoop-yarn-applications-distributedshell ..... SUCCESS [ 7.661 s]
[INFO] hadoop-mapreduce-client ..... SUCCESS [ 0.394 s]
[INFO] hadoop-mapreduce-client-core ..... SUCCESS [01:56 min]
[INFO] hadoop-yarn-applications-unmanaged-am-launcher ..... SUCCESS [ 10.666 s]
[INFO] hadoop-yarn-site ..... SUCCESS [ 0.959 s]
[INFO] hadoop-yarn-project ..... SUCCESS [ 9.292 s]
[INFO] hadoop-mapreduce-client-common ..... SUCCESS [01:05 min]
[INFO] hadoop-mapreduce-client-shuffle ..... SUCCESS [ 10.057 s]
[INFO] hadoop-mapreduce-client-app ..... SUCCESS [ 43.315 s]
[INFO] hadoop-mapreduce-client-hs ..... SUCCESS [ 19.974 s]
[INFO] hadoop-mapreduce-client-jobclient ..... SUCCESS [ 41.769 s]
[INFO] hadoop-mapreduce-client-hs-plugins ..... SUCCESS [ 6.449 s]
[INFO] Apache Hadoop MapReduce Examples ..... SUCCESS [ 27.418 s]
[INFO] hadoop-mapreduce ..... SUCCESS [ 7.670 s]
[INFO] Apache Hadoop MapReduce Streaming ..... SUCCESS [ 17.075 s]
[INFO] Apache Hadoop Distributed Copy ..... SUCCESS [ 34.662 s]
[INFO] Apache Hadoop Archives ..... SUCCESS [ 7.222 s]
[INFO] Apache Hadoop Rumen ..... SUCCESS [ 23.133 s]
[INFO] Apache Hadoop Gridmix ..... SUCCESS [ 22.573 s]
[INFO] Apache Hadoop Data Join ..... SUCCESS [ 9.619 s]
[INFO] Apache Hadoop Extras ..... SUCCESS [ 9.825 s]
[INFO] Apache Hadoop Pipes ..... SUCCESS [ 0.135 s]
[INFO] Apache Hadoop Tools Dist ..... SUCCESS [ 6.115 s]
[INFO] Apache Hadoop Tools ..... SUCCESS [ 0.211 s]
[INFO] Apache Hadoop Distribution ..... SUCCESS [01:16 min]
[INFO] Apache Hadoop Client ..... SUCCESS [ 24.621 s]
[INFO] Apache Hadoop Mini-Cluster ..... SUCCESS [ 0.455 s]
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 34:26 min
[INFO] Finished at: 2016-05-26T23:35:35+05:30
[INFO] Final Memory: 131M/599M
```

### Correctly working environment variables

[INFO] Reactor Summary:

[INFO]

[INFO] Apache Hadoop Main ..... SUCCESS [ 4.496 s]  
[INFO] Apache Hadoop Project POM ..... SUCCESS [ 5.242 s]  
[INFO] Apache Hadoop Annotations ..... SUCCESS [ 7.693 s]  
[INFO] Apache Hadoop Assemblies ..... SUCCESS [ 0.562 s]  
[INFO] Apache Hadoop Project Dist POM ..... SUCCESS [ 6.362 s]  
[INFO] Apache Hadoop Maven Plugins ..... SUCCESS [ 8.991 s]  
[INFO] Apache Hadoop Auth ..... SUCCESS [ 9.141 s]  
[INFO] Apache Hadoop Auth Examples ..... SUCCESS [ 6.645 s]  
[INFO] Apache Hadoop Common ..... SUCCESS [06:23 min]  
[INFO] Apache Hadoop NFS ..... SUCCESS [ 40.298 s]  
[INFO] Apache Hadoop Common Project ..... SUCCESS [ 0.199 s]  
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[INFO] hadoop-mapreduce-client-jobclient ..... SUCCESS [ 41.769 s]  
[INFO] hadoop-mapreduce-client-hs-plugins ..... SUCCESS [ 6.449 s]  
[INFO] Apache Hadoop MapReduce Examples ..... SUCCESS [ 27.418 s]

```

[INFO] hadoop-mapreduce ..... SUCCESS [ 7.670 s]
[INFO] Apache Hadoop MapReduce Streaming ..... SUCCESS [ 17.075 s]
[INFO] Apache Hadoop Distributed Copy ..... SUCCESS [ 34.662 s]
[INFO] Apache Hadoop Archives ..... SUCCESS [ 7.222 s]
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[INFO] Apache Hadoop Data Join ..... SUCCESS [ 9.619 s]
[INFO] Apache Hadoop Extras ..... SUCCESS [ 9.825 s]
[INFO] Apache Hadoop Pipes ..... SUCCESS [ 0.135 s]
[INFO] Apache Hadoop Tools Dist ..... SUCCESS [ 6.115 s]
[INFO] Apache Hadoop Tools ..... SUCCESS [ 0.211 s]
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[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 34:26 min
[INFO] Finished at: 2016-05-26T23:35:35+05:30
[INFO] Final Memory: 131M/599M
[INFO] -----

```

```

C:\hadoop-2.2.0-src>set
ALLUSERSPROFILE=C:\ProgramData
APPDATA=C:\Users\Arun\AppData\Roaming
APPVER=6.1
CL=/AI c:\Windows\Microsoft.NET\Framework64\v4.0.30319
CommandPromptType=Native
CommonProgramFiles=C:\Program Files\Common Files
CommonProgramFiles(x86)=C:\Program Files (x86)\Common Files
CommonProgramW6432=C:\Program Files\Common Files
COMPUTERNAME=ARUN-PC
ComSpec=C:\Windows\system32\cmd.exe
Configuration=Debug
CURRENT_CPU=x64
FP_NO_HOST_CHECK=NO
FrameworkVersion=v4.0.30319
HADOOP_CONF_DIR=C:\hadoop-2.2.0\etc
HADOOP_HOME=C:\hadoop-2.2.0
HOME=C:\Users\Arun
HOMEDRIVE=C:
HOMEPATH=\Users\Arun
INCLUDE=C:\Program Files (x86)\Microsoft Visual Studio
10.0\VC\INCLUDE;C:\Progra
m Files\Microsoft SDKs\Windows\v7.1\INCLUDE;C:\Program Files\Microsoft
SDKs\Wind

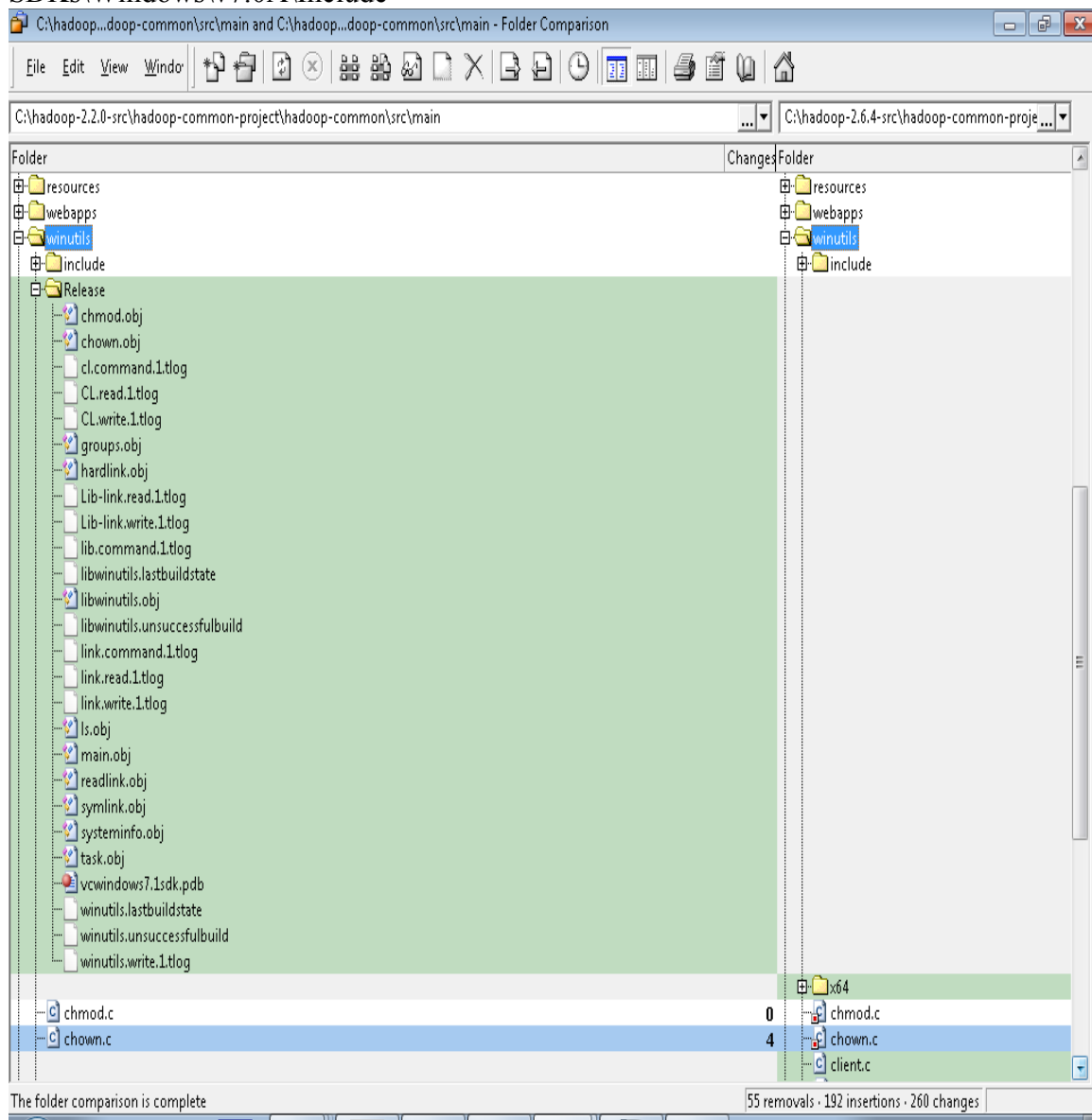
```

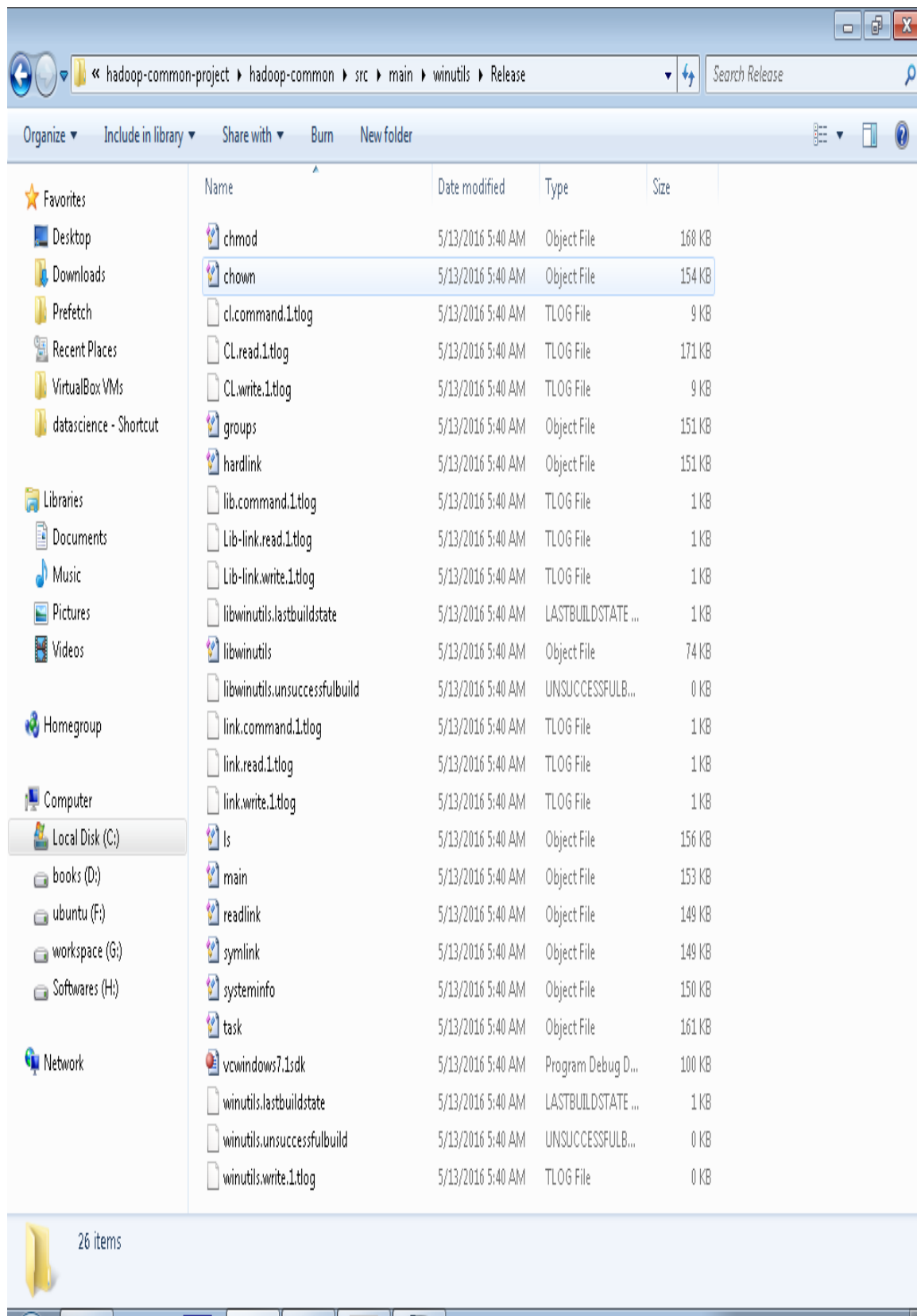
ows\v7.1\INCLUDE\gl;C:\Program Files (x86)\Microsoft Visual Studio  
 10.0\VC\ATLMF  
 C\INCLUDE;  
 JAVA\_HOME=C:\Java\jdk1.7.0\_79  
 LIB=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Lib\amd64;C:\Program  
 Files\Microsoft SDKs\Windows\v7.1\Lib\X64;C:\Program Files (x86)\Microsoft Visua  
 l Studio 10.0\VC\ATLMFC\LIB\AMD64;  
 LIBPATH=c:\Windows\Microsoft.NET\Framework64\v4.0.30319;C:\Windows\Microsof  
 t.NET  
 \  
 Framework\v4.0.30319;C:\Windows\Microsoft.NET\Framework64\v3.5;C:\Windows\Mi  
 cro  
 soft.NET\Framework\v3.5;;C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\  
 Lib\amd64;  
 LOCALAPPDATA=C:\Users\Arun\AppData\Local  
 LOGONSERVER=\\ARUN-PC  
 NUMBER\_OF\_PROCESSORS=4  
 ORIGINALPATH=C:\Windows\system32;C:\Windows;C:\Windows\System32\Wbem;C  
 :. \Windows\  
 System32\WindowsPowerShell\v1.0;C:\Program Files\Intel\WiFi\bin\;C:\Program Fil  
 es\Common Files\Intel\WirelessCommon\;C:\Program Files (x86)\Skype\Phone\;C:\apa  
 che-maven-3.3.9\bin;C:\Program Files\Microsoft SDKs\Windows\v7.1\bin;C:\Program  
 Files\Git\bin;C:\Java\jdk1.7.0\_79\bin;C:\Program Files\R\R-3.2.3\bin;C:\scala-2.  
 11.8\bin;C:\SBT-0.13\bin;C:\protoc;C:\Program Files (x86)\CMake\bin;C:\cygwin64\  
 bin;C:\hadooputils;C:\hadoop-2.2.0\bin;C:\hadoop-2.2.0\sbin;C:\spark-1.6.1-bin-h  
 adoop2.6\bin;C:\spark-1.6.1-bin-hadoop2.6\sbin;C:\protoc-2.5.0-win32;C:\Program  
 Files (x86)\Microsoft SDKs\Windows\v7.0A\Include;;C:\Program Files\Docker Toolbo  
 x  
 OS=Windows\_NT  
 Path=c:\Windows\Microsoft.NET\Framework64\v4.0.30319;C:\Windows\Microsoft.NE  
 T\Fr  
 amework\v4.0.30319;C:\Windows\Microsoft.NET\Framework64\v3.5;C:\Windows\Micr  
 osof  
 t.NET\Framework\v3.5;;C:\Program Files (x86)\Microsoft Visual Studio 10.0\Common  
 7\IDE;C:\Program Files (x86)\Microsoft Visual Studio 10.0\Common7\Tools;;C:\Prog  
 ram Files (x86)\Microsoft Visual Studio 10.0\VC\Bin\amd64;C:\Program Files (x86)  
 \Microsoft Visual Studio 10.0\VC\Bin\VC Packages;;C:\Program Files\Microsoft SDKs  
 \Windows\v7.1\Bin\NETFX 4.0 Tools\x64;C:\Program Files\Microsoft  
 SDKs\Windows\v7  
 .1\Bin\x64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Bin;;C:\Windows\system32  
 ;  
 C:\Windows;C:\Windows\System32\Wbem;C:\Windows\System32\WindowsPowerShell  
 \v1.0\  
 ;C:\Program Files\Intel\WiFi\bin\;C:\Program Files\Common Files\Intel\WirelessCo  
 mmon\;C:\Program Files (x86)\Skype\Phone\;C:\apache-maven-3.3.9\bin;C:\Program F  
 iles\Microsoft SDKs\Windows\v7.1\bin;C:\Program Files\Git\bin;C:\Java\jdk1.7.0\_7

9\bin;C:\Program Files\R\R-3.2.3\bin;C:\scala-2.11.8\bin;C:\SBT-0.13\bin;C:\prot  
oc;C:\Program Files (x86)\CMake\bin;C:\cygwin64\bin;C:\hadooputils;C:\hadoop-2.2  
.0\bin;C:\hadoop-2.2.0\sbin;C:\spark-1.6.1-bin-hadoop2.6\bin;C:\spark-1.6.1-bin-  
hadoop2.6\sbin;C:\protoc-2.5.0-win32;C:\Program Files (x86)\Microsoft SDKs\Windo  
ws\v7.0A\Include;;C:\Program Files\Docker Toolbox  
PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC  
PlatformToolset=Windows7.1SDK  
PROCESSOR\_ARCHITECTURE=AMD64  
PROCESSOR\_IDENTIFIER=Intel64 Family 6 Model 42 Stepping 7, GenuineIntel  
PROCESSOR\_LEVEL=6  
PROCESSOR\_REVISION=2a07  
ProgramData=C:\ProgramData  
ProgramFiles=C:\Program Files  
ProgramFiles(x86)=C:\Program Files (x86)  
ProgramW6432=C:\Program Files  
PROMPT=\$P\$G  
PSModulePath=C:\Windows\system32\WindowsPowerShell\v1.0\Modules\  
PUBLIC=C:\Users\Public  
sdkdir=C:\Program Files\Microsoft SDKs\Windows\v7.1\  
SESSIONNAME=Console  
SystemDrive=C:  
SystemRoot=C:\Windows  
TARGET\_CPU=x64  
TARGET\_PLATFORM=WIN7  
TEMP=C:\Users\Arun\AppData\Local\Temp  
TMP=C:\Users\Arun\AppData\Local\Temp  
ToolsVersion=4.0  
USERDOMAIN=Arun-PC  
USERNAME=Arun  
USERPROFILE=C:\Users\Arun  
VBOX\_MSI\_INSTALL\_PATH=C:\Program Files\Oracle\VirtualBox\  
VS100COMNTOOLS=c:\Program Files (x86)\Microsoft Visual Studio  
10.0\Common7\Tools  
\  
windir=C:\Windows  
WindowsSDKDir=C:\Program Files\Microsoft SDKs\Windows\v7.1\  
WindowsSDKVersionOverride=v7.1  
windows\_tracing\_flags=3  
windows\_tracing\_logfile=C:\BVTBin\Tests\installpackage\csilogfile.log  
  
C:\hadoop-2.2.0-src>

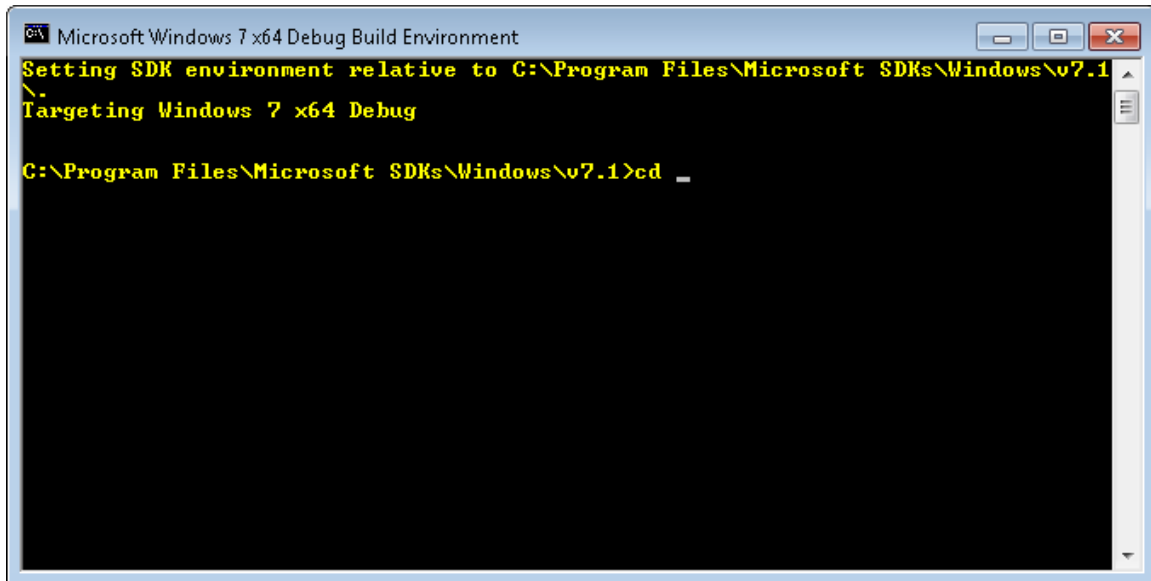
## environment variable:

%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;  
%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\;C:\Program  
Files\Intel\WiFi\bin\;C:\Program Files\Common  
Files\Intel\WirelessCommon\;C:\Program Files (x86)\Skype\Phone\;C:\apache-maven-  
3.3.9\bin;C:\Program Files\Microsoft SDKs\Windows\v7.1\bin;C:\Program  
Files\Git\bin;C:\Java\jdk1.7.0\_79\bin;C:\Program Files\R\R-3.2.3\bin;C:\scala-  
2.11.8\bin;C:\SBT-0.13\bin;C:\protoc;C:\Program Files  
(x86)\CMake\bin;C:\cygwin64\bin;C:\hadooputils;C:\hadoop-2.2.0\bin;C:\hadoop-  
2.2.0\sbin;C:\spark-1.6.1-bin-hadoop2.6\bin;C:\spark-1.6.1-bin-  
hadoop2.6\sbin;C:\protoc-2.5.0-win32;C:\Program Files (x86)\Microsoft  
SDKs\Windows\v7.0A\Include





Above folder winutils/debug match below windows 7 x64



```
Microsoft Windows 7 x64 Debug Build Environment
Setting SDK environment relative to C:\Program Files\Microsoft SDKs\Windows\v7.1
\-.
Targeting Windows 7 x64 Debug
C:\Program Files\Microsoft SDKs\Windows\v7.1>cd _
```

install vc++

- 1) protoc.exe
  - 2) vs\_ultimateweb.exe
  - 3) cmake-3.5.20160503-gd15f5-win64-x64.exe
- download from cmake -<http://cmake.org/>



Control Panel Home

View installed updates

Turn Windows features on or off

Control Panel > Programs > Programs and Features

Search Programs and Features

Uninstall or change a program

To uninstall a program, select it from the list and then click Uninstall, Change, or Repair.

Organize ▾ Uninstall/Change

Name	Publisher	Installed On	Size	Version
Microsoft Visual C++ 2010 x64 DesignTime - 10.0.30319	Microsoft Corporation	5/25/2016	254 KB	10.0.30319
Microsoft SQL Server 2008 R2 Data-Tier Application Project	Microsoft Corporation	5/25/2016	11.8 MB	10.50.1447.4
Microsoft SQL Server 2008 R2 Management Objects (x64)	Microsoft Corporation	5/25/2016	9.97 MB	10.50.1447.4
Microsoft SQL Server Compact 3.5 SP2 x64 ENU	Microsoft Corporation	5/25/2016	4.51 MB	3.5.8080.0
Microsoft SQL Server Database Publishing Wizard 1.4	Microsoft Corporation	5/25/2016	10.1 MB	10.1.2512.8
Microsoft Visual Studio 2010 IntelliTrace Collection (x64)	Microsoft Corporation	5/25/2016	821 KB	10.0.30319
Microsoft Sync Framework Runtime v1.0 SP1 (x64)	Microsoft Corporation	5/25/2016	1.00 MB	1.0.3010.0
Microsoft SQL Server 2008 R2 Transact-SQL Language Ser...	Microsoft Corporation	5/25/2016	5.34 MB	10.50.1447.4
Microsoft SQL Server 2008 R2 Management Objects	Microsoft Corporation	5/25/2016	15.1 MB	10.50.1447.4
Microsoft SQL Server System CLR Types (x64)	Microsoft Corporation	5/25/2016	848 KB	10.50.1447.4
Microsoft SQL Server Compact 3.5 SP2 ENU	Microsoft Corporation	5/25/2016	3.39 MB	3.5.8080.0
Microsoft SQL Server System CLR Types	Microsoft Corporation	5/25/2016	2.52 MB	10.50.1447.4
Microsoft Sync Services for ADO.NET v2.0 SP1 (x64)	Microsoft Corporation	5/25/2016	541 KB	2.0.3010.0
Microsoft Visual Studio 2010 ADO.NET Entity Framework ...	Microsoft Corporation	5/25/2016	33.4 MB	10.0.30319
Visual Studio 2010 Tools for SQL Server Compact 3.5 SP2 ...	Microsoft Corporation	5/25/2016	10.7 MB	4.0.8080.0
Microsoft Sync Framework SDK v1.0 SP1	Microsoft Corporation	5/25/2016	29.6 MB	1.0.3010.0
Microsoft SQL Server 2008 R2 Data-Tier Application Fram...	Microsoft Corporation	5/25/2016	330 KB	10.50.1447.4
Microsoft Sync Framework Services v1.0 SP1 (x64)	Microsoft Corporation	5/25/2016	2.84 MB	1.0.3010.0
Microsoft Visual Studio 2010 Ultimate - ENU	Microsoft Corporation	5/25/2016		10.0.30319
Microsoft Help Viewer 1.0	Microsoft Corporation	5/25/2016	3.97 MB	1.0.30319
GoToMeeting 7.18.0.4962	CitrixOnline	5/24/2016		7.18.0.4962
Free Download Manager 3.9.6	FreeDownloadManager.ORG	5/23/2016	32.1 MB	
Oracle VM VirtualBox 5.0.20	Oracle Corporation	5/20/2016	153 MB	5.0.20
Docker Toolbox version 1.11.1	Docker	5/20/2016	245 MB	1.11.1

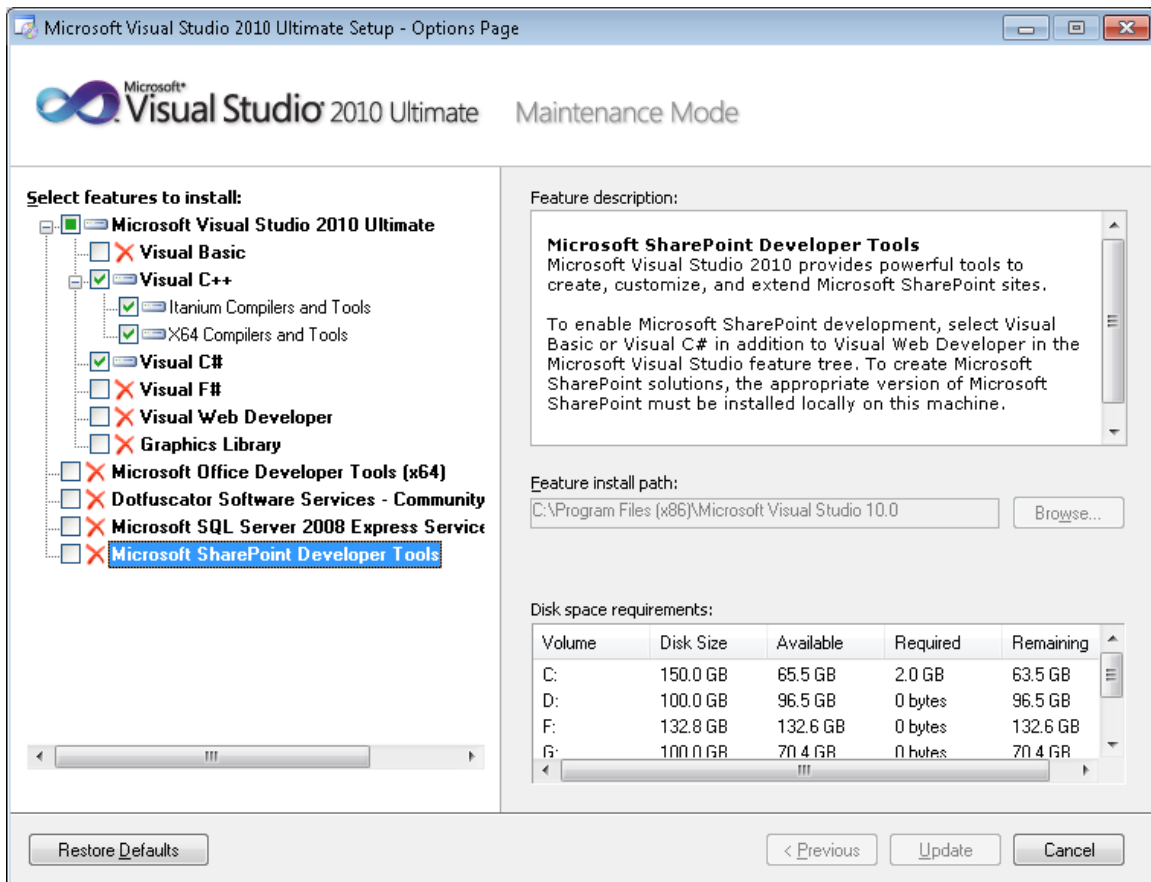
Microsoft Corporation

Product version: 1.0.30319

Update information: <http://go.microsoft.com/fwlink/?LinkId=133408>

Help link: <http://go.microsoft.co...>

Size: 3.97 MB



## Minimal configuration required and comparison between 2.2 ,2.3 and 2.6

For hadoop 2.2 & 2.3 zlib is not needed.

For higher version of hadoop-2.6.4 zlib is needed.you can src BUILDING.txt files

Hadoop -2.3.0	Hadoop -2.6.4
Requirements:  * Windows System * JDK 1.6+ * Maven 3.0 or later * Findbugs 1.3.9 (if running findbugs) * ProtocolBuffer 2.5.0 * Windows SDK or Visual Studio 2010 Professional * Unix command-line tools from GnuWin32 or Cygwin: sh, mkdir, rm, cp, tar, gzip * Internet connection for first build (to fetch all Maven and Hadoop dependencies)	Requirements:  * Windows System * JDK 1.6+ * Maven 3.0 or later * Findbugs 1.3.9 (if running findbugs) * ProtocolBuffer 2.5.0 * <b>CMake 2.6 or newer</b> * Windows SDK or Visual Studio 2010 Professional * Unix command-line tools from GnuWin32 or Cygwin: sh, mkdir, rm, cp, tar, gzip * <b>zlib headers (if building native code bindings for zlib)</b> * Internet connection for first build (to fetch all Maven and Hadoop dependencies)

## Hadoop 2.2 & 2.3

### ISSUE:

"C:\hadoop-2.2.0-src\hadoop-common-project\hadoop-common\src\main\winutils\winutils.sln" (default target) (1) ->

(ValidateSolutionConfiguration target) ->

C:\hadoop-2.2.0-src\hadoop-common-project\hadoop-common\src\main\winutils\winutils.sln.metaproj : error MSB4126: The specified solution configuration "Release /x64" is invalid. Please specify a valid solution configuration using the Configuration and Platform properties (e.g. MSBuild.exe Solution.sln /p:Configuration=Debug /p:Platform="Any CPU") or leave those properties blank to use the default solution configuration. [C:\hadoop-2.2.0-src\hadoop-common-project\hadoop-common\src\main\winutils\winutils.sln]

0 Warning(s)

1 Error(s)

### Solution:

dont set set Platform=/x64 it should be x64 ,if set as /x64 it will throws above error

## **hadoop 2.2 & 2.3 windows sdk command prompt settings compiled sucessfully: working path and sdk set info:**

**C:\Users\admin>path**

```
PATH=C:\Windows;C:\Windows\SysWOW64;C:\apache-maven-3.3.9\bin;C:\Progra~1\Java\jdk1.7.0_80\bin;C:\protoc32;c:\Progra~1\Microsoft SDKs\Windows\v7.1\Bin;C:\Program Files (x86)\Git\bin;C:\Program Files (x86)\Skype\Phone\;
```

NO native to compile so hadoop 2.2 & 2.3 above env is enough to run.

Setting SDK environment relative to C:\Program Files\Microsoft SDKs\Windows\v7.1

\\.

Targeting Windows 7 x64 Debug

```
C:\Windows\system32>set
```

```
ALLUSERSPROFILE=C:\ProgramData
```

```
APPDATA=C:\Users\admin\AppData\Roaming
```

```
APPVER=6.1
```

```
CL=/AI C:\Windows\Microsoft.NET\Framework64\v4.0.30319
```

```
CommandPromptType=Native
```

```
CommonProgramFiles=C:\Program Files\Common Files
```

```
CommonProgramFiles(x86)=C:\Program Files (x86)\Common Files
```

```
CommonProgramW6432=C:\Program Files\Common Files
```

```
COMPUTERNAME=HOME
```

```
ComSpec=C:\Windows\system32\cmd.exe
```

```
Configuration=Debug
```

```
CURRENT_CPU=x64
```

```
CYGWIN=tty
```

```
FP_NO_HOST_CHECK=NO
```

```
FrameworkVersion=v4.0.30319
```

```
HOMEDRIVE=C:
```

```
HOMEPATH=\Users\admin
```

```
INCLUDE=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE\gl;
```

```
JAVA_HOME=C:\Progra~1\Java\jdk1.7.0_80
```

```
LIB=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Lib\amd64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Lib\X64;
```

```
LIBPATH=C:\Windows\Microsoft.NET\Framework64\v4.0.30319;C:\Windows\Microsoft.NET\Framework\v4.0.30319;C:\Windows\Microsoft.NET\Framework64\v3.5;C:\Windows\Microsoft.NET\Framework\v3.5;;C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\
```












Lib\amd64;  
LOCALAPPDATA=C:\Users\admin\AppData\Local  
LOGONSERVER=\\HOME  
MULE\_HOME=C:\mule-standalone-3.7.0  
NUMBER\_OF\_PROCESSORS=2  
ORIGINALPATH=C:\Windows;C:\Windows\SysWOW64;C:\apache-maven-3.3.9\bin;C:\Progra~1\Java\jdk1.7.0\_80\bin;C:\protoc32;c:\Progra~1\Microsoft SDKs\Windows\v7.1\Bin;C:\Program Files (x86)\Git\bin;C:\Program Files (x86)\Skype\Phone\;  
OS=Windows\_NT  
Path=C:\Windows\Microsoft.NET\Framework64\v4.0.30319;C:\Windows\Microsoft.NET\Framework\v4.0.30319;C:\Windows\Microsoft.NET\Framework64\v3.5;C:\Windows\Microsoft.NET\Framework\v3.5;;C:\Program Files (x86)\Microsoft Visual Studio 10.0\Common7\IDE;C:\Program Files (x86)\Microsoft Visual Studio 10.0\Common7\Tools;;C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Bin\amd64;C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Bin\VC Packages;;C:\Program Files\Microsoft SDKs\Windows\v7.1\Bin\NETFX 4.0 Tools\x64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Bin\x64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Bin;;C:\Windows;C:\Windows\SysWOW64;C:\apache-maven-3.3.9\bin;C:\Progra~1\Java\jdk1.7.0\_80\bin;C:\protoc32;c:\Progra~1\Microsoft SDKs\Windows\v7.1\Bin;C:\Program Files (x86)\Git\bin;C:\Program Files (x86)\Skype\Phone\;  
PATHEXT=.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH;.MSC  
Platform=x64  
PlatformToolset=Windows7.1SDK  
PROCESSOR\_ARCHITECTURE=AMD64  
PROCESSOR\_IDENTIFIER=Intel64 Family 6 Model 23 Stepping 10, GenuineIntel  
PROCESSOR\_LEVEL=6  
PROCESSOR\_REVISION=170a  
ProgramData=C:\ProgramData  
ProgramFiles=C:\Program Files  
ProgramFiles(x86)=C:\Program Files (x86)  
ProgramW6432=C:\Program Files  
PROMPT=\$P\$G  
PSModulePath=C:\Windows\system32\WindowsPowerShell\v1.0\Modules\  
PUBLIC=C:\Users\Public  
sdkdir=C:\Program Files\Microsoft SDKs\Windows\v7.1\  
SNF=C:\ProgramData\Medlights\snp.sc  
SystemDrive=C:  
SystemRoot=C:\Windows  
TARGET\_CPU=x64  
TARGET\_PLATFORM=WIN7  
TEMP=C:\Windows\TEMP

```

TMP=C:\Windows\TEMP
ToolsVersion=4.0
USERDOMAIN=HOME
USERNAME=admin
USERPROFILE=C:\Users\admin
VBOX_MSI_INSTALL_PATH=C:\Program Files\Oracle\VirtualBox\
windir=C:\Windows
WindowsSDKDir=C:\Program Files\Microsoft SDKs\Windows\v7.1\
WindowsSDKVersionOverride=v7.1
windows_tracing_flags=3
windows_tracing_logfile=C:\BVTBin\Tests\installpackage\csilogfile.log

```

C:\Windows\system32>

Organize ▾ Uninstall/Change					
Name	Publisher	Installed On	Size	Version	
 Microsoft Visual C++ Compilers 2010 SP1 Standard - x64	Microsoft Corporation	5/28/2016	207 MB	10.0.40219	
 Skype Click to Call	Microsoft Corporation	5/28/2016	20.4 MB	8.3.0.9150	
 Microsoft Visual C++ Compilers 2010 SP1 Standard - x86	Microsoft Corporation	5/28/2016	614 MB	10.0.40219	
 CMake 3.3.2, a cross-platform, open-source build system	Kitware	5/28/2016		3.3.2	
 MiniTool Partition Wizard Free 9.1	MiniTool Solution Ltd.	5/21/2016	55.6 MB		
 Revo Uninstaller Pro 3.1.4	VS Revo Group, Ltd.	5/16/2016	37.0 MB	3.1.4	
 Microsoft Windows SDK for Windows 7 (7.1)	Microsoft Corporation	5/15/2016		7.1.7600.0.30514	
 Microsoft .NET Framework 4 Extended	Microsoft Corporation	5/15/2016	51.9 MB	4.0.30319	
 Microsoft .NET Framework 4 Client Profile	Microsoft Corporation	5/15/2016	38.8 MB	4.0.30319	
 7-Zip 16.00 (x64)	Igor Pavlov	5/14/2016	4.75 MB	16.00	
 Potlauer-64 Bits	Kakan Corp	5/1/2016			

## Hadoop 2.6

<https://hadoop.apache.org/docs/r2.6.4/hadoop-project-dist/hadoop-common/NativeLibraries.html>

Please note the following:

- **It is mandatory to install both the zlib and gzip development packages on the target platform in order to build the native hadoop library; however, for deployment it is sufficient to install just one package if you wish to use only one codec.**
- **It is necessary to have the correct 32/64 libraries for zlib, depending on the 32/64 bit jvm for the target platform, in order to build and deploy the native hadoop library.**

**Check downloaded C:\zlib128\README.txt**

Build info

=====

Contributed by Jan Nijtmans.

Compiler:

**i686-w64-mingw32-gcc (GCC) 4.5.3**

Library:

mingw64-i686-runtime/headers: 3.0b\_svn5747-1

Build commands:

```
i686-w64-mingw32-gcc -c -DASMV contrib/asm686/match.S
```

```
i686-w64-mingw32-gcc -c -DASMINF -I. -O3 contrib/inflate86/inffas86.c
```

```
make -f win32/Makefile.gcc PREFIX=i686-w64-mingw32- LOC="-mms-bitfields -DASMV  
-DASMINF" OBJA="inffas86.o match.o"
```

Finally, from VS commandline (VS2005 or higher):

```
lib -machine:X86 -name:zlib1.dll -def:zlib.def -out:zdll.lib
```

As per the readme.txt use mingw32 compiler instead of CMAKE.

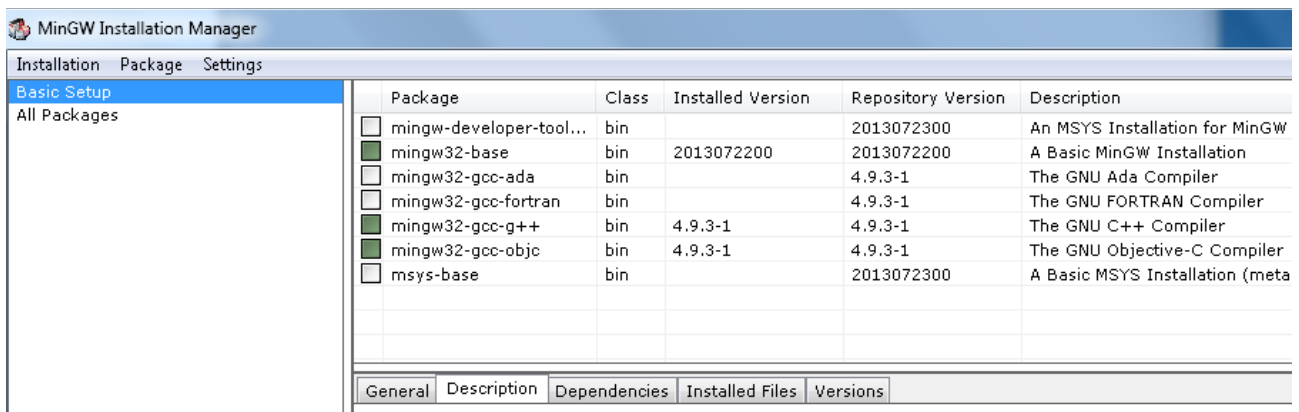
## Hadoop 2.7

This release drops support for JDK6 runtime and works with JDK 7+ only.

**MinGW: Minimalist GNU for Windows**, specifically with `sh`, `mkdir`, `rm`, `cp`, `tar`,  
and `gzip`.

<https://sourceforge.net/projects/mingw/files/latest/download?source=files>

select basic setup and set mingw32-base for all compiler since we need C we select gcc "C"  
compiler



Note: **mingw32-gcc** is selected

either install zlib or MINGW Gui basic for windows since both has zlib1.dll

C:\MinGW\bin\zlib1.dll

## ISSUE

native because it already exists.

[exec] Current OS is Windows 7

[exec] Executing 'cmake' with arguments:

[exec] 'C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs/src/'

[exec] '-DGENERATED\_JAVAH=C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hd

fs\target\native/javah'

[exec] '-DJVM\_ARCH\_DATA\_MODEL=64'

[exec] '-DREQUIRE\_LIBWEBHDFS=false'

[exec] '-DREQUIRE\_FUSE=false'

[exec] '-G'

[exec] 'Visual Studio 10'

[exec]

[exec] The ' characters around the executable and arguments are

[exec] not part of the command.

Execute:Java13CommandLauncher: Executing 'cmake' with arguments:

'C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs/src/'

'-DGENERATED\_JAVAH=C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\na

tive/javah'

'-DJVM\_ARCH\_DATA\_MODEL=64'

'-DREQUIRE\_LIBWEBHDFS=false'

'-DREQUIRE\_FUSE=false'

'-G'

'Visual Studio 10'

The ' characters around the executable and arguments are  
not part of the command.

[exec] -- The C compiler identification is unknown

[exec] -- The CXX compiler identification is unknown

[exec] CMake Error in :

[exec] No CMAKE\_C\_COMPILER could be found.

[exec]

[exec]

[exec]

[exec] -- Configuring incomplete, errors occurred!

[exec] See also "C:/hadoop-2.6.4-src/hadoop-hdfs-project/hadoop-hdfs/target  
/native/CMakeFiles/CMakeOutput.log".

[exec] See also "C:/hadoop-2.6.4-src/hadoop-hdfs-project/hadoop-hdfs/target



/native/CMakeFiles/CMakeError.log".

[exec] CMake Error in :

[exec] No CMAKE\_CXX\_COMPILER could be found.

C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\pom.xml

```
<!-- The second make is a workaround for HADOOP-9215. It can
      be removed when version 2.6 of cmake is no longer supported .
      <exec executable="make" dir="${project.build.directory}/native"
failonerror="true"></exec>
      -->
```

When you check error log

C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\CMakeError.txt

C:\Program Files

(x86)\MSBuild\Microsoft.Cpp\v4.0\Platforms\Win32\PlatformToolsets\Windows7.1SDK\Microsoft.Cpp.Win32.Windows7.1SDK.targets(20,5): error : You are attempting to build a Win32 application from an x64 environment. If using the Windows 7.1 SDK build environment, type setenv /x86 [C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\3.3.2\CompilerIdC\CompilerIdC.vcxproj]

ClCompile:

C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\bin\CL.exe /c /nologo /W0 /WX- /Od /Oy- /D \_MBCS /Gm- /EHsc /RTC1 /MDd /GS /fp:precise /Zc:wchar\_t /Zc:forScope /Fo"Debug\" /Fd"Debug\vcWindows7.1SDK.pdb" /Gd /TC /analyze- /errorReport:queue CMakeCCompilerId.c

CMakeCCompilerId.c

Link:

C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\bin\link.exe /ERRORREPORT:QUEUE /OUT:". \CompilerIdC.exe" /INCREMENTAL:NO /NOLOGO kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbc32.lib odbccp32.lib /MANIFEST /ManifestFile:"Debug\CompilerIdC.exe.intermediate.manifest" /MANIFESTUAC:"level='asInvoker' uiAccess='false'" /PDB:"C:\hadoop-2.6.4-

```
src\hadoop-hdfs-project\hadoop-  
hdfs\target\native\CMakeFiles\3.3.2\CompilerIdC\CompilerIdC.pdb"  
/SUBSYSTEM:CONSOLE /TLBID:1 /DYNAMICBASE /NXCOMPAT  
/IMPLIB:".\\CompilerIdC.lib" /MACHINE:X86 Debug\CMakeCCompilerId.obj  
LINK : fatal error LNK1181: cannot open input file 'kernel32.lib' [C:\\hadoop-  
2.6.4-src\\hadoop-hdfs-project\\hadoop-  
hdfs\\target\\native\\CMakeFiles\\3.3.2\\CompilerIdC\\CompilerIdC.vcxproj]  
Done Building Project "C:\\hadoop-2.6.4-src\\hadoop-hdfs-project\\hadoop-  
hdfs\\target\\native\\CMakeFiles\\3.3.2\\CompilerIdC\\CompilerIdC.vcxproj"  
(default targets) -- FAILED.
```

## 2 files:

1)C:\\hadoop-2.6.4-src\\hadoop-hdfs-project\\hadoop-  
hdfs\\target\\native\\CMakeFiles\\3.3.2\\CompilerIdC\\CMakeCCompilerId.c

2)C:\\hadoop-2.6.4-src\\hadoop-hdfs-project\\hadoop-  
hdfs\\target\\native\\CMakeFiles\\3.3.2\\CompilerIdC\\CompilerIdC.vcxproj

inside CmakeCCompilerId.c you can see it takes cygwin or ming based on  
installation

### CmakeCCompilerId.c

```
#elif defined(__CYGWIN__)  
# define PLATFORM_ID "Cygwin"
```

```
#elif defined(__MINGW32__)  
# define PLATFORM_ID "MinGW"
```

```
#elif defined(__APPLE__)  
# define PLATFORM_ID "Darwin"
```

### CompilerIdC.vcxproj

```
<ProjectConfiguration Include="Debug|Win32">  
  <Configuration>Debug</Configuration>  
  <Platform>Win32</Platform>
```

```
</ProjectConfiguration>
```

```
•  
•  
•
```

```
<ProjectConfiguration>
```

**C:\Program Files**

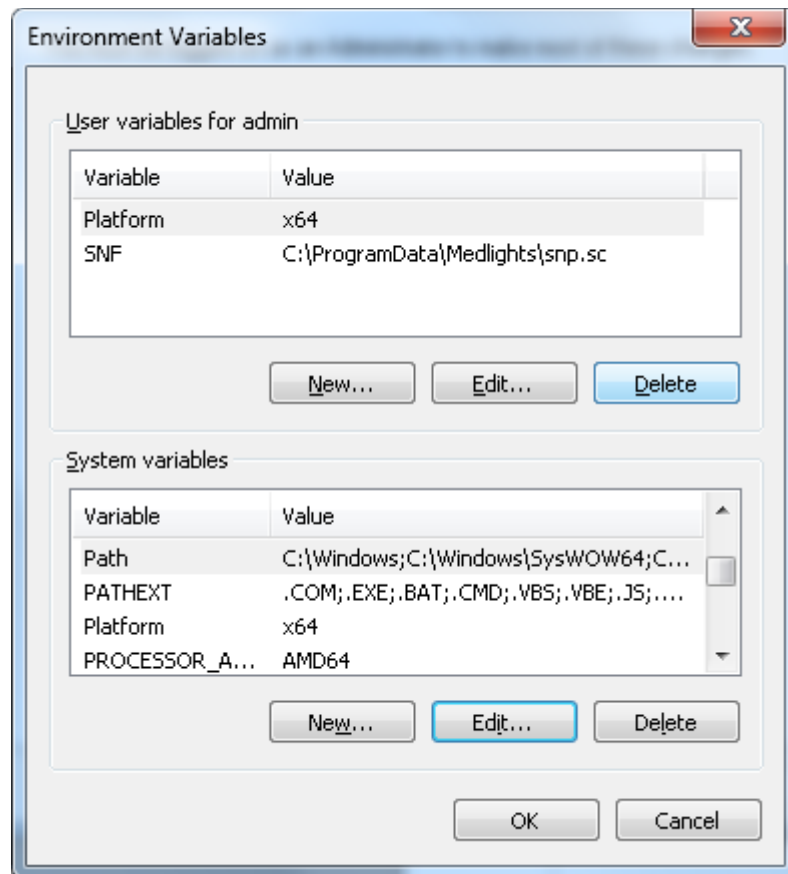
**(x86)\MSBuild\Microsoft.Cpp\v4.0\Platforms\Win32\PlatformToolsets\Windows  
7.1SDK\Microsoft.Cpp.Win32.Windows7.1SDK.targets**

**it uses win32 below:**

```
<!--Installed to "%ProgramFiles  
%\MSBuild\Microsoft.Cpp\v4.0\Platforms\Win32\PlatformToolsets\Windows7.1SD  
K"  
-->  
<Project xmlns="http://schemas.microsoft.com/developer/msbuild/2003">  
  <Import Project="$  
(VCTargetsPath)\Platforms\Win32\PlatformToolsets\Windows7.1SDK\ImportBefore  
\*.props" Condition="Exists('$  
(VCTargetsPath)\Platforms\Win32\PlatformToolsets\Windows7.1SDK\ImportBefore'  
)" />
```

**NOTE:**

**As you see it use win 32 help it shows error "You are attempting to build a  
Win32 application from an x64 environment"**

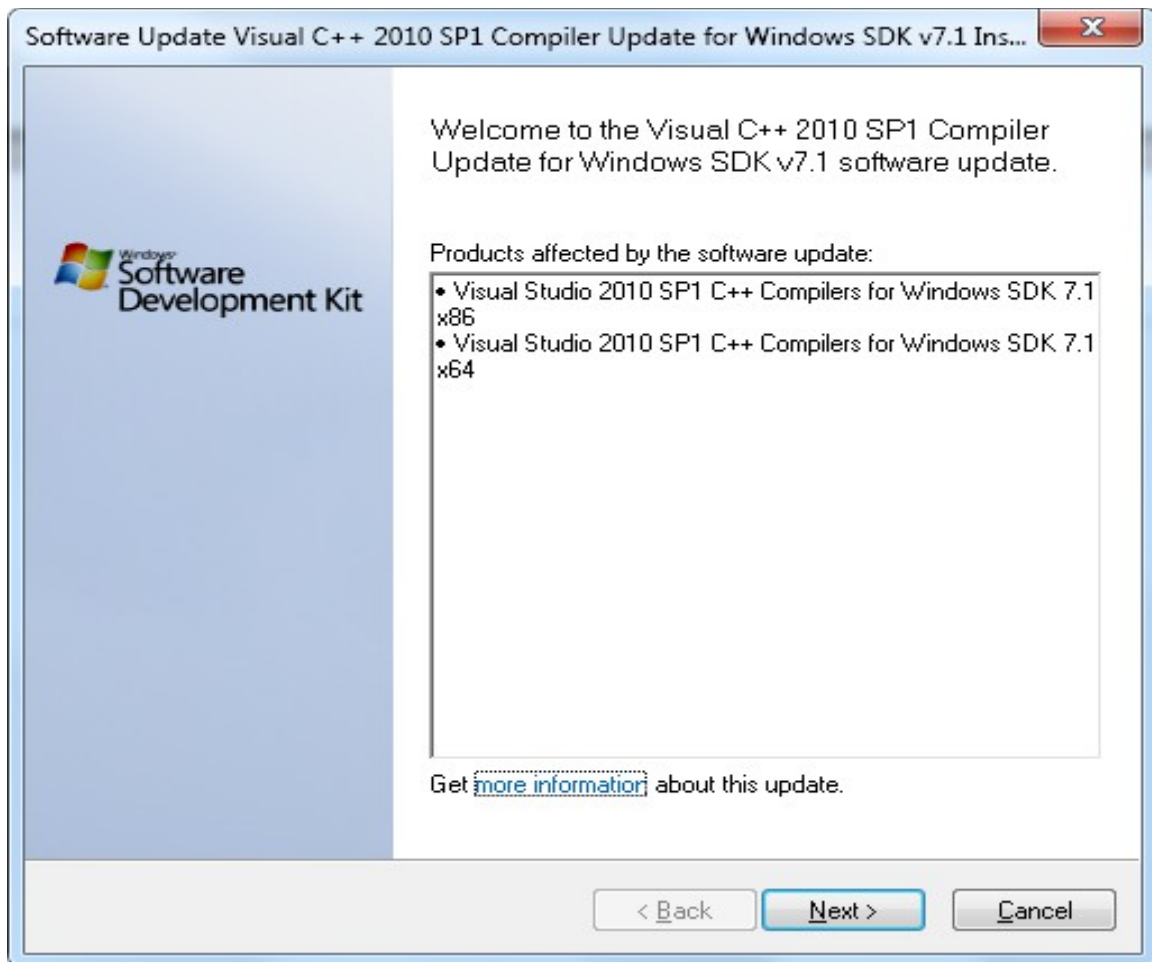


As you can see compiler(**VC-Compiler-KB2519277.exe**) is not needed not redistributable package(**vcredist.exe**).

**NOTE:**

you can view definition of this error **CMAKE\_CXX\_COMPILER** in the path  
C:\Program Files (x86)\CMake\doc\cmake\html\variable

**VC-Compiler-KB2519277.exe**



## CMAKE\_VS\_MSBUILD\_COMMAND

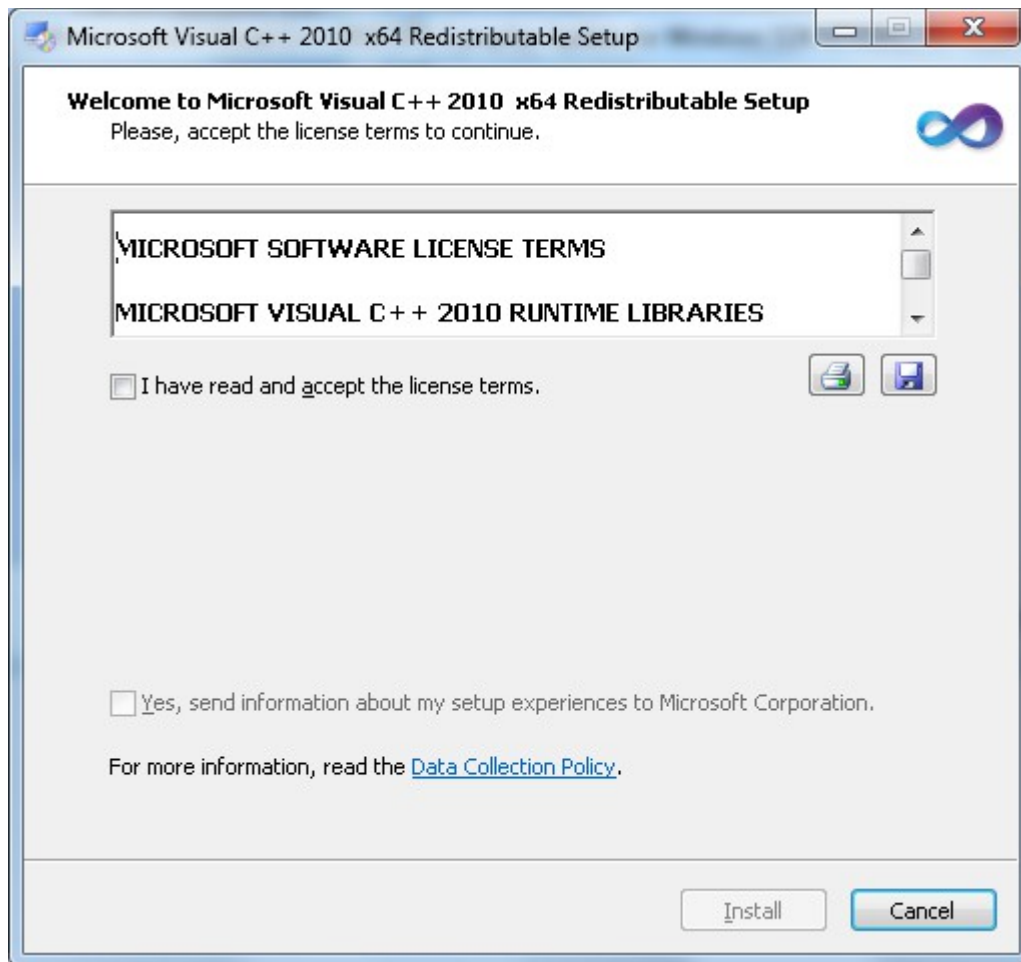
-----  
The generators for :generator: `Visual Studio 10 2010` and above set this variable to the ``MSBuild.exe`` command installed with the corresponding Visual Studio version.

This variable is not defined by other generators even if ``MSBuild.exe`` is installed on the computer.

The :variable: `CMAKE\_VS\_DEVENV\_COMMAND` is also provided for the non-Express editions of Visual Studio.

See also the :variable: `CMAKE\_MAKE\_PROGRAM` variable.

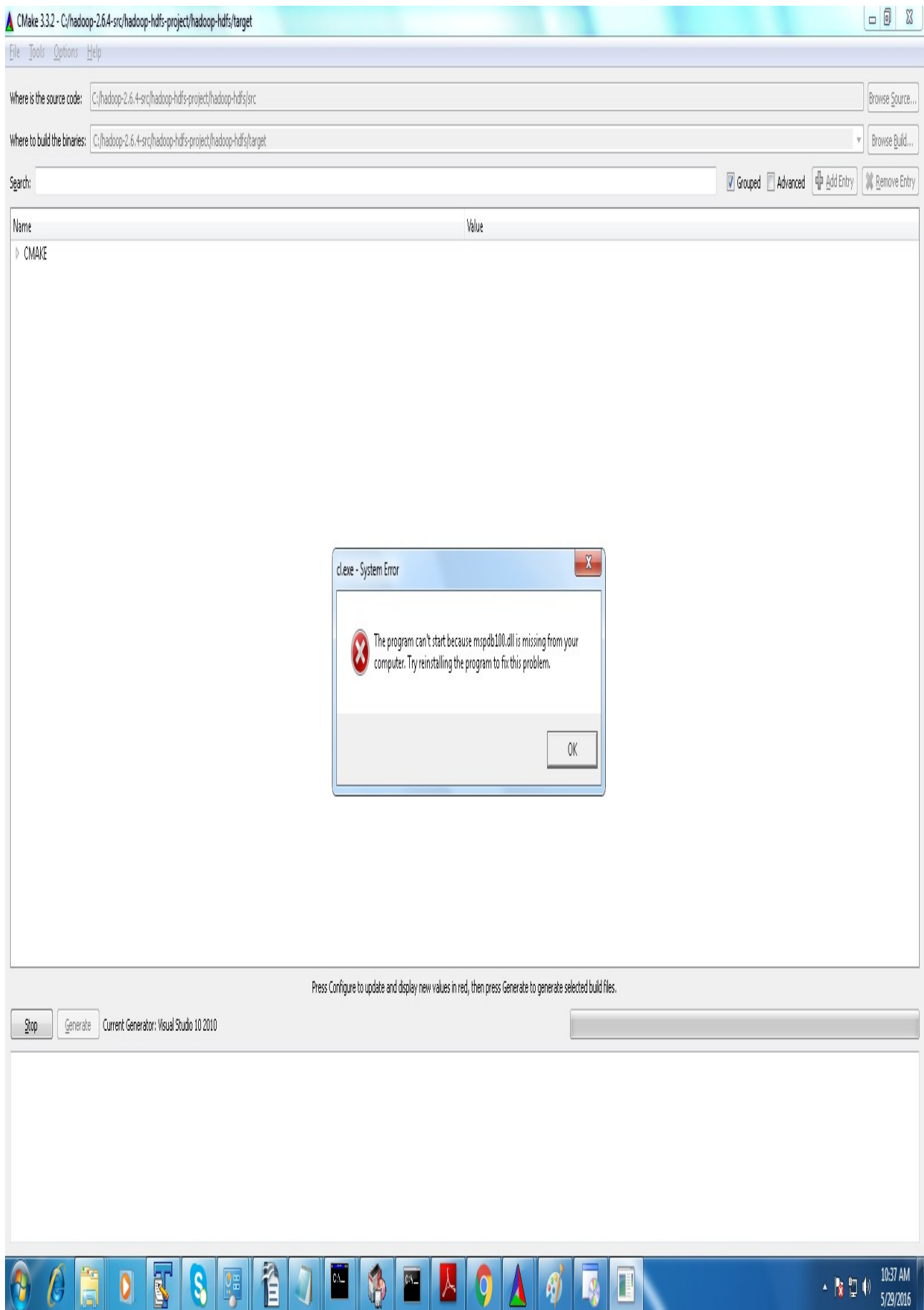
## Microsoft vcredist\_x64.exe



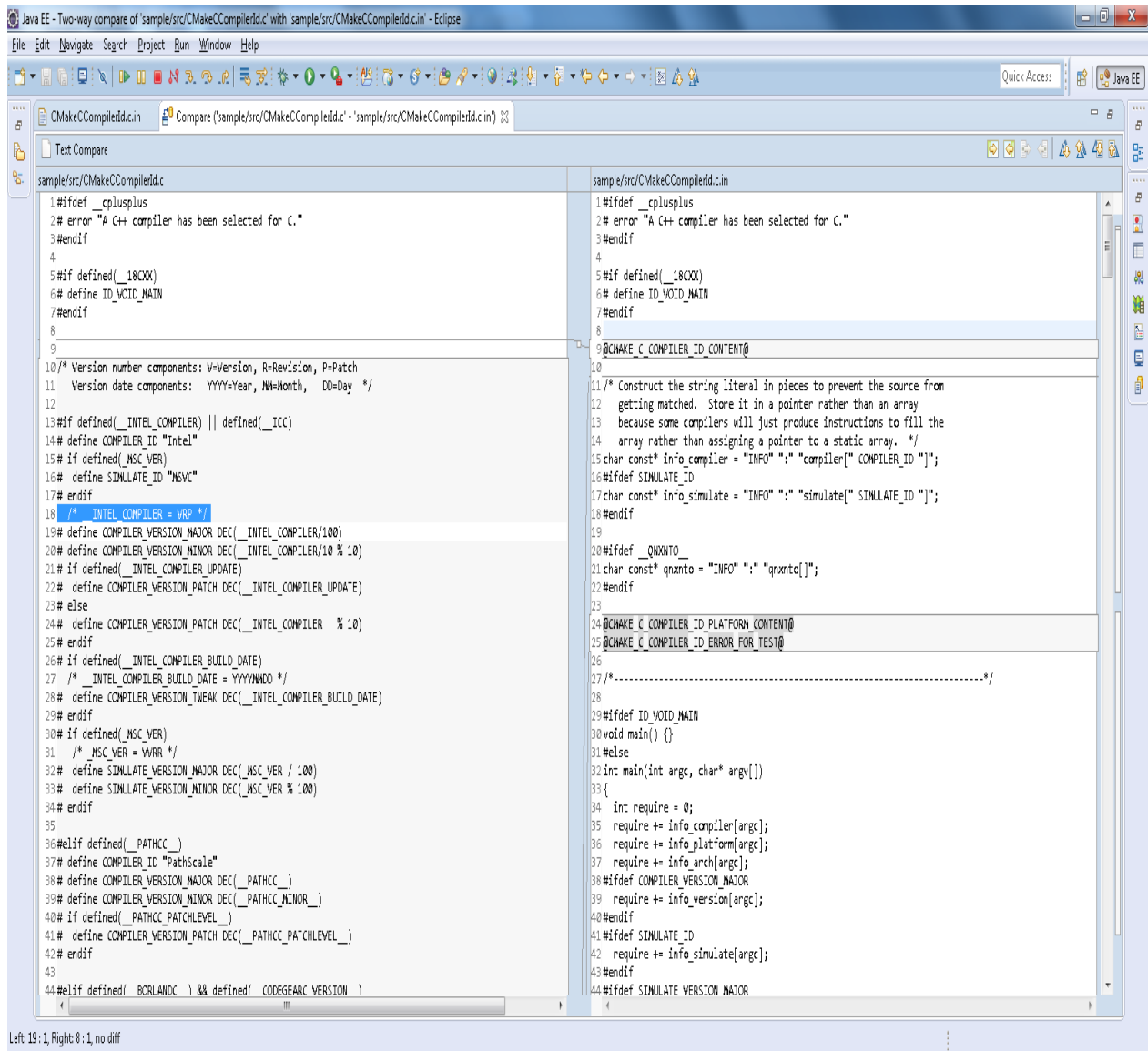
### **Environment variable PATH:**

%SystemRoot%;C:\Windows\SysWOW64;C:\apache-maven-3.3.9\bin;  
%JAVA\_HOME%\bin;C:\protoc32;c:\Progra~1\Microsoft  
SDKs\Windows\v7.1\Bin;C:\Program Files (x86)\Git\bin;C:\Program Files  
(x86)\Skype\Phone\;









cl.exe - System Error

The program can't start because mspdb100.dll is missing from your computer. Try reinstalling the program to fix this problem.

OK

**C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\3.3.2\CompilerIdC\CompilerIdC.vcxproj**

<PostBuildEvent>

<Command>for %%i in (cl.exe) do %40echo CMAKE\_C\_COMPILER=%%~\$PATH:i</Command>

</PostBuildEvent>

**C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\3.3.2\CompilerIdCXX\CompilerIdCXX.vcxproj**

<PostBuildEvent>

<Command>for %%i in (cl.exe) do %0echo CMAKE\_CXX\_COMPILER=%%~\$PATH:i</Command>

</PostBuildEvent>

**C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\3.3.2\CompilerIdC\CMakeCCompilerId.c matches CmakeCCompilerId.c.in**

inside C:\Program Files (x86)\CMake\share\cmake-3.3\Modules\CMakeCompilerId.c.in

**C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\3.3.2\CompilerIdCXX\CMakeCXXCompilerId.cpp matches**

**C:\Program Files (x86)\CMake\share\cmake-3.3\Modules\CMakeCXXCompilerId.cpp.in**

CmakeCCompilerId.c.in has some template which gets generated and placed in hadoop target C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\target\native\CMakeFiles\3.3.2\CompilerIdC

**E.g @CMAKE\_C\_COMPILER\_ID\_CONTENT@**

will get generated as below in CmakeCCompilerId.c (hadoop directory)

**#if defined(\_\_INTEL\_COMPILER) || defined(\_\_ICC)**

**@CMAKE\_C\_COMPILER\_ID\_PLATFORM\_CONTENT@**

**@@CMAKE\_C\_COMPILER\_ID\_ERROR\_FOR\_TEST@**

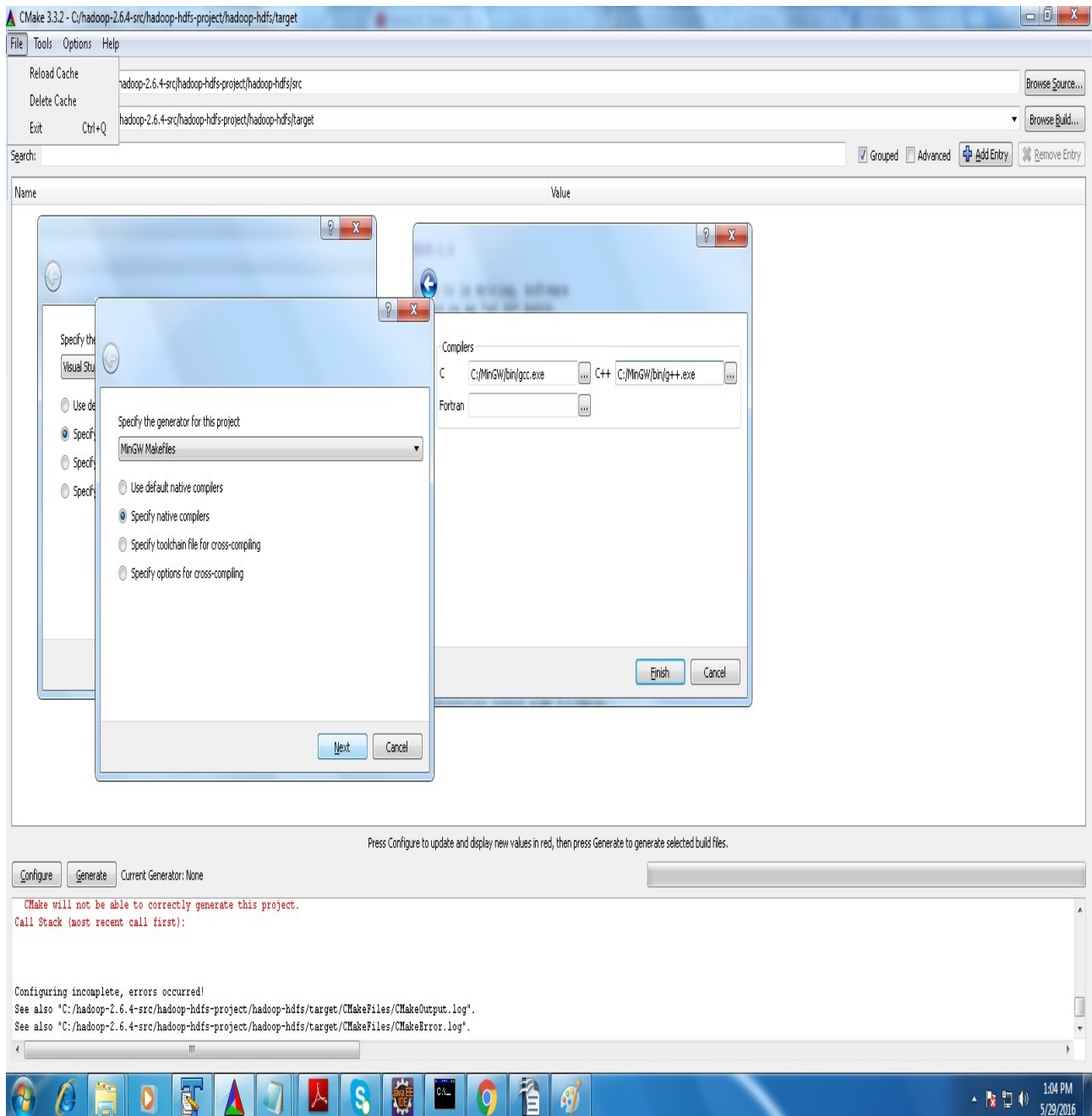
**Two procedure to set CMAKE\_C\_COMPILER and CMAKE\_CXX\_COMPILER:**

## PROCEDURE 1: do the changes in CMAKE GUI

Step1 : delete cache

Step 2: select the generator Mingw

Step 3: select c /c++ exe path



## PROCEDURE 2: DO CHANGES in the CMAKELISTS.txt File

In the below file

**C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\src\CMakeLists.txt**

add below line

```
cmake_minimum_required(VERSION 2.6 FATAL_ERROR)
```

```
# Default to release builds
```

```
set(CMAKE_BUILD_TYPE, Release)
```

```
set(CMAKE_C_COMPILER "C:/MinGW/bin/gcc.exe")
set(CMAKE_CXX_COMPILER "C:/MinGW/bin/g++.exe")

set(${CMAKE_C_COMPILER} "C:/MinGW/bin/gcc.exe")
set(${CMAKE_CXX_COMPILER} "C:/MinGW/bin/g++.exe")
```

**Note:** Above 2 lines Newly added

C:\Program Files (x86)\CMake\share\cmake-3.3\Modules\CMakeDetermineCCompiler.cmake has setting to set CMAKE\_C\_COMPILER and CMAKE\_CXX\_COMPILER

#### CMAKE COMPILE COMMAND:

Simply way to test is.

```
C:\hadoop-2.6.4-src>cmake -G "Visual Studio 10 2010" -D
CMAKE_C_COMPILER=C:/MinGW/bin/gcc.exe -D CMAKE_CXX_COMPILER=C:/MinGW/bin/g++.exe
C:\hadoop-2.6.4-src\hadoop-hdfs-project\hadoop-hdfs\src
```

E.g Mingw Generator:

```
cmake -G "MinGW Makefiles" -D CMAKE_C_COMPILER="gcc-4.2" -D
CMAKE_CXX_COMPILER="C:/MinGW/bin/gcc.exe" C:\hadoop-2.6.4-src\hadoop-hdfs-
project\hadoop-hdfs\src
```

Visual Studio 10 2010 – generator to know list of generator type

```
C:\hadoop-2.6.4-src>cmake --help
```

### TO use different compiler:

#### **Method 1: use environment variables**

For C and C++, set the `CC` and `CXX` environment variables. This method is not guaranteed to work for all generators. (Specifically, if you are trying to set Xcode's `GCC_VERSION`, this method confuses Xcode.)

For example:

```
CC=gcc-4.2 CXX=/usr/bin/g++-4.2 cmake -G "Your Generator" path/to/your/source
```

#### **Method 2: use cmake -D**

Set the appropriate `CMAKE_FOO_COMPILER` variable(s) to a valid compiler name or full path on the command-line using `cmake -D`.

For example:

```
cmake -G "Your Generator" -D CMAKE_C_COMPILER=gcc-4.2 -D CMAKE_CXX_COMPILER=g++-4.2
path/to/your/source
```

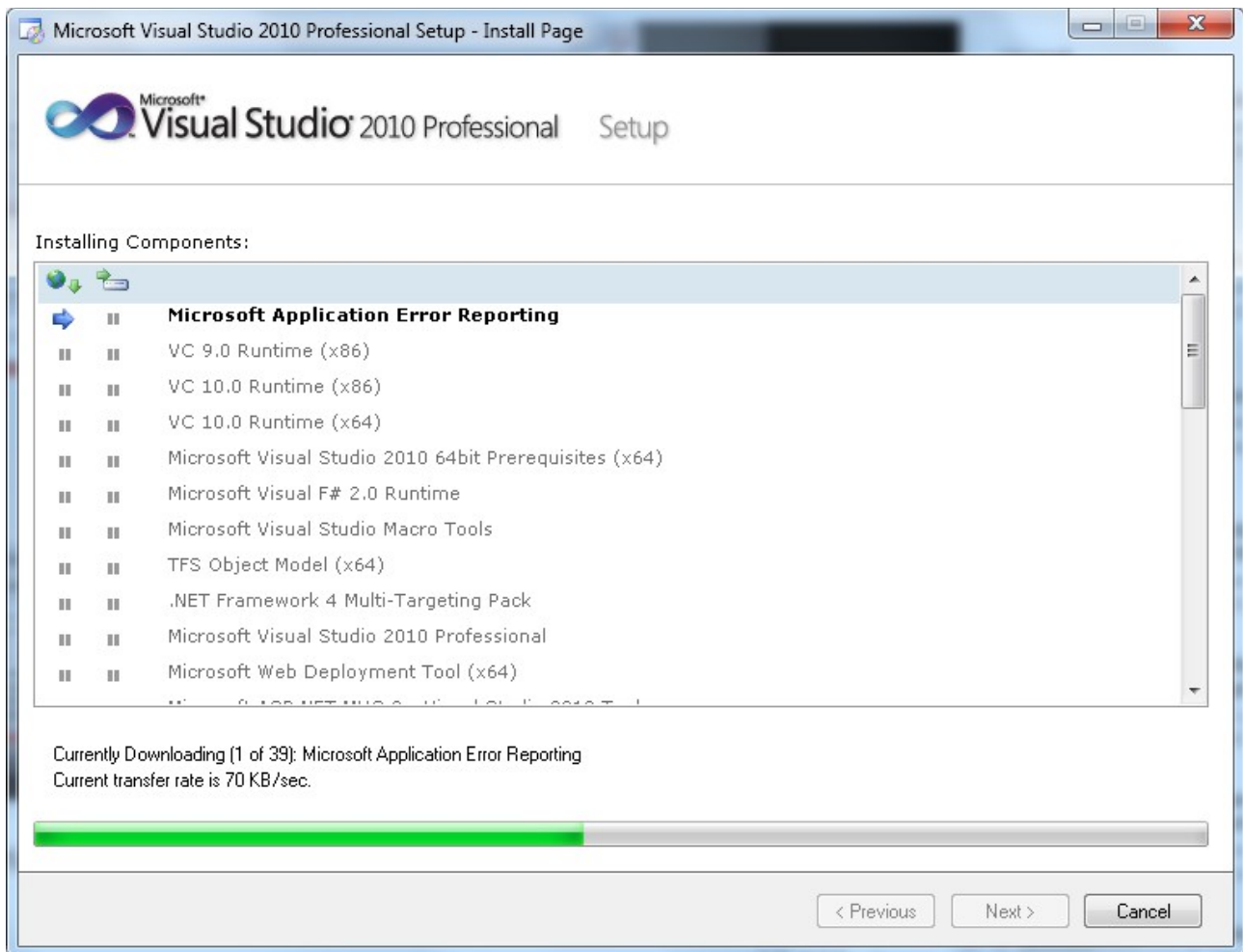
#### **Method 3 (avoid): use set()**

Set the appropriate `CMAKE_FOO_COMPILER` variable(s) to a valid compiler name or full path in a list file using `set()`. This must be done *before* any language is set (ie before any `project()` or `enable_language()` command).

For example:

```
set(CMAKE_C_COMPILER "gcc-4.2")
set(CMAKE_CXX_COMPILER "/usr/bin/g++-4.2")

project("YourProjectName")
```



To resolve issue i installed microsoft visual studio full installation all packages instead of only vc++ stills it is not working.

#### NOTE:

even Add C:\zlib128\include to path but error below shows "cannot open include file: zlib.h "

after installing whole visual studio above it shows below error

ClCompile:

```
C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\bin\amd64\CL.exe /c /I.
.\winutils\include /I..\..\..\target\native\javah /I"C:\Progra~1\Java\jdk1.7.0_80\include" /I"C:\Progra~1\Java\jdk1.7.0_80\include\win32" /I.\src /Zi /nologo /W
3 /WX- /O2 /Oi /GL /D WIN32 /D NDEBUB /D _WINDOWS /D _USRDLL /D NATIVE_EXPORTS /
D _WINDLL /D _UNICODE /D UNICODE /Gm- /EHsc /MD /GS /Gy /fp:precise /Zc:wchar_t
/Zc:forScope /Fo"..\..\..\target\native\Release\" /Fd"..\..\..\target\native\Re
lease\vcWindows7.1SDK.pdb" /Gd /TC /wd4244 /errorReport:queue src\org\apache\hadoop\io\compress\zlib\ZlibCompressor.c src\org\apache\hadoop\io\compress\zlib\Zli
bDecompressor.c
```

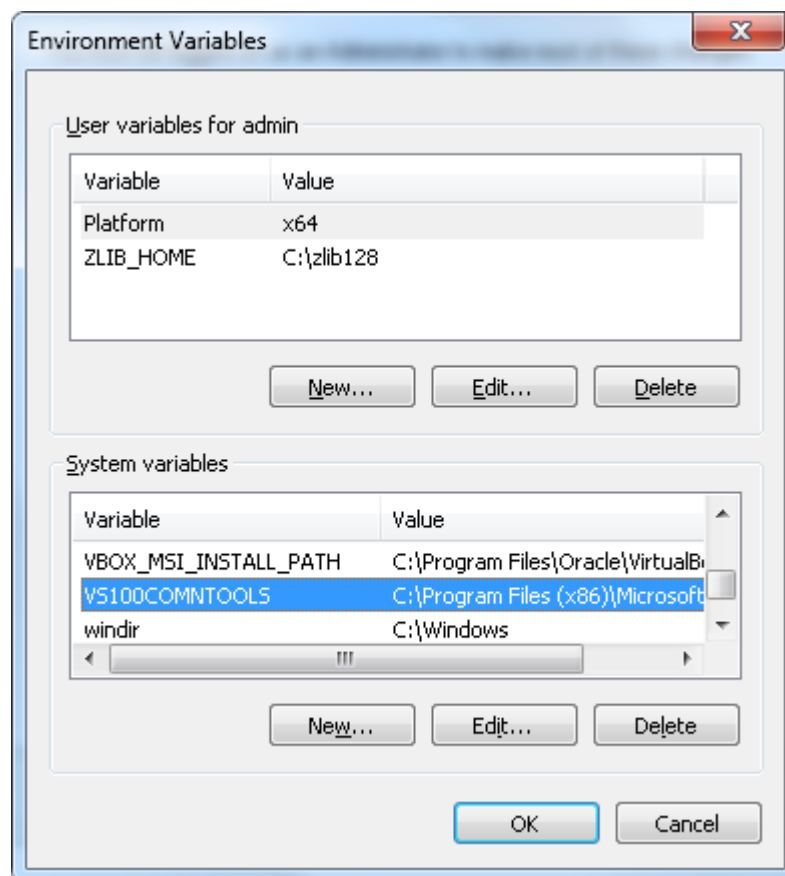
ZlibCompressor.c

```
c:\hadoop-2.6.4-src\hadoop-common-project\hadoop-common\src\main\native\src\org\
apache\hadoop\io\compress\zlib\org_apache_hadoop_io_compress_zlib.h(36): fatal e
rror C1083: Cannot open include file: 'zlib.h': No such file or directory [C:\ha
doo-2.6.4-src\hadoop-common-project\hadoop-common\src\main\native\native.vcxpro
j]
```

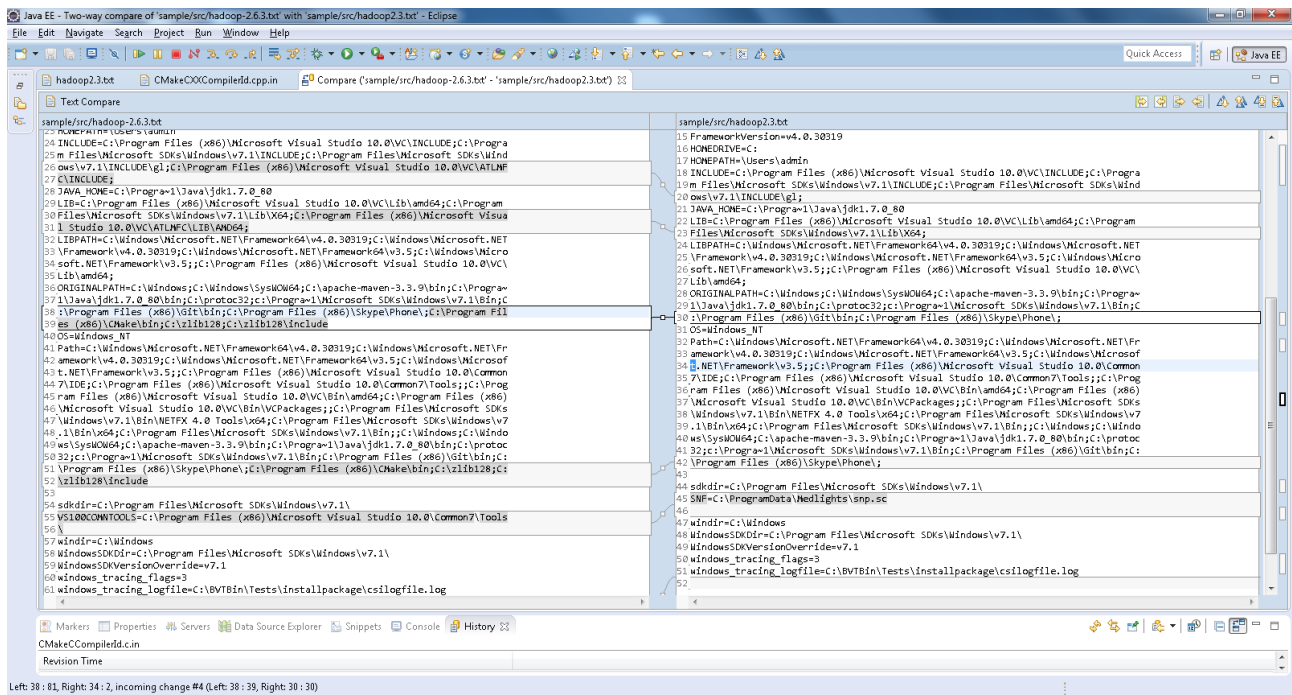
## HADOOP COMMON SETTINGS

You can build Visual C++ projects either in Visual Studio or on the command line. The Visual Studio IDE uses [MSBuild](#) to build projects and solutions. On the command line, you can use the C/C++ compiler (cl.exe) and linker (link.exe) to build simple projects. To build more complex projects on the command line, you can use MSBuild or [NMAKE](#). For an overview about how to use Visual Studio to build projects and solutions, see [Compiling and Building in Visual Studio](#).

C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\bin\cl.exe



Hadoop 2.3	Hadoop-2.6.3
Not present	VS100COMNTOOLS=C:\Program Files (x86)\Microsoft Visual Studio 10.0\Common7\Tools \
set LIB=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Lib\amd64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Lib\X64	LIB=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Lib\amd64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Lib\X64;C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\ATLMFC\LIB\AMD64;
set INCLUDE=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE\gl;	INCLUDE=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE\gl;C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\ATLMFC\INCLUDE;
ORIGINALPATH=C:\Windows;C:\Windows\SysWOW64;C:\apache-maven-3.3.9\bin;C:\Program~1\Java\jdk1.7.0_80\bin;C:\protoc32;c:\Program~1\Microsoft SDKs\Windows\v7.1\Bin;C:\Program Files (x86)\Git\bin;C:\Program Files (x86)\Skype\Phone\;	ORIGINALPATH=C:\Windows;C:\Windows\SysWOW64;C:\apache-maven-3.3.9\bin;C:\Program~1\Java\jdk1.7.0_80\bin;C:\protoc32;c:\Program~1\Microsoft SDKs\Windows\v7.1\Bin;C:\Program Files (x86)\Git\bin;C:\Program Files (x86)\Skype\Phone\;C:\Program Files (x86)\CMake\bin;C:\zlib128;C:\zlib128\include



override the 2 properties and tried by deleting the **VS100COMNTOOLS**

set LIB=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\Lib\amd64;C:\Program Files\Microsoft SDKs\Windows\v7.1\Lib\X64

set INCLUDE=C:\Program Files (x86)\Microsoft Visual Studio 10.0\VC\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE;C:\Program Files\Microsoft SDKs\Windows\v7.1\INCLUDE\gl;

still same error "cannot open file zlib.h"

C1083: Cannot open include file: 'zlib.h': No such file