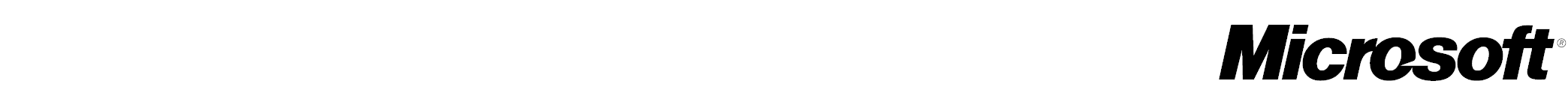
**MS-WSP Test Deployment Guide**

Microsoft Corporation.

Published: September 2008.

This deployment guide helps you to setup and configure the MS-WSP test suite environment.

**Abstract**

This document provides an overview and a standard process to help you deploy MS-WSP test environment.

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# Test Environment Requirement

## Test Machines and Devices List

### Generic Requirements

The MS-WSP requires the test environment including:

* 2 machines for servers and clients.
* Generic software list.
* Ethernet network.

Please refer to table 3-1-1 for the details.

|  |  |  |
| --- | --- | --- |
| **Device Type** | **Role** | **Description** |
| **Hardware** | SUT | System Under Test. |
| KDC | Key Distribution Center. |
| Client | Client computer to run the test suite. |
| **Service** | SUT | A licensee implementation of MS-WSP. or  A licensee implementation of MS-WSP which support the features of Windows Search Service. |
| KDC | A licensee implementation of Key Distribution Center. |
| Client | None. |
| **Software** | SUT | Run software to make the SUT act as Client. |
| KDC | Run software to make the DC act as the role of a Domain Controller. |
| Client | Required software installed to enable the running of test suite. |
| **Network** | The network is an isolated hub/switch connected Ethernet network, which the test suite and network topology are attached. | |

Table 3-1-1 Test Environment Requirements

### Requirements on Windows Platform

The MS-WSP requires the specific test environment when running on Windows platform as shown in table 3-1-2-1.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Machine Name** | **Operating System** | **CPU Architecture** | **Domain Workgroup** | **IP Version** | **Role** |
| **SUT01** | Windows Server 2008 enterprise SP1 | x64 | Domain | IPv6 | SUT |
| **SUT02** | Windows Server 2003 R2 Enterprise. | x86 | Workgroup | IPv4 | SUT |
| **DC01** | Windows Server 2008 Enterprise. | X64 | Domain | IPv4  IPv6 | KDC |
| **ENDPOINT01** | Windows Vista Ultimate ServicePack1. | X86 | Domain | IPv6 | Client |
| **ENDPOINT02** | Windows XP Professional ServicePack3. | x86 | Workgroup | IPv4 | Client |

Table 3-1-2-1 Windows Test Environment Requirements

The following table is the list of software that should be installed on machines for running MS-WSP test suite on the platform of Windows:

|  |  |  |
| --- | --- | --- |
| **Machine Name** | **OS** | **Software** |
| **SUT01** | W2K8 | Server role. |
| **SUT02** | W2K3 | Server role. |
| **DC01** | W2K8 | Domain Controller Role with domain name “WSPDC.Net”. |
| **ENDPOINT01** | Vista | Visual Studio 2008 Team System.  Protocol Test Framework version 2.1.866.0.  Network Monitor version 03.02.1106.0001.  Spec Explorer version 2.1.861. |
| **ENDPOINT02** | WinXP | Visual Studio 2008 Team System.  Protocol Test Framework version 2.1.866.0.  Network Monitor version 03.02.1106.0001.  SE PTF PAC June 2008. |

Table 3-1-2-2 Software Requirements

## Network Setting

MS-WSP requires 2 groups of test environments. These test LANs are isolated from all other networks and also isolated from each other.



Figure 3-2- Network Topology

**Notes:**

1. Test suites should be run on the **ENDPOINT01, ENDPOINT02** and **CLIENT.**
2. Domain name: WSPDC.Net

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Machine Name** | **IPv4 / Subnet Mask** | **IPv6 /**  **Prefix Length** | **Default Gateway** | **DNS Server** |
| **SUT01** | N/A | fec0::1a49:2aa:ff:fe34:ca1a/64 | 2001::5 | 2001::5 |
| **SUT02** | 192.168.0.2/255.255.255.0 | N/A | 192.168.0.5 | 192.168.0.5 |
| **DC01** | 192.168.0.5/255.255.255.0 | fec0::1a49:2aa:ff:fe34:ca1a5/64 | N/A | local host |
| **ENDPOINT01** | N/A | fec0::1a49:2aa:ff:fe34:ca11/64 | 2001::5 | 2001::5 |
| **ENDPOINT02** | 192.168.0.4/255.255.255.0 | N/A | 192.168.0.5 | 192.168.0.5 |

Table 3-2-1 Computer Network Configurations

//NOTE:

//Server IP from 10.50.210.89

//Client IP from 10.50.212.61

//DC IP: fec0::1a49:2aa:ff:fe34:ca1a

//Domain name: WSPDC.Net

# Test Environment Configuration

This section provides a step-by-step instruction to setup and configure the test environment when MS-WSP test suite is running on Windows platforms.

## Installing and Configuring DC

For steps and screenshots [Ref to Appendix](#_Install_Active_Directory_1).

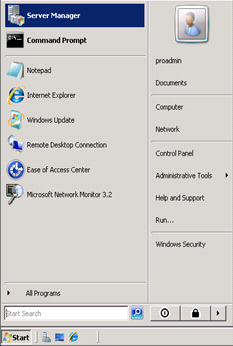
## Installing and Configuring SUT

### SUT01

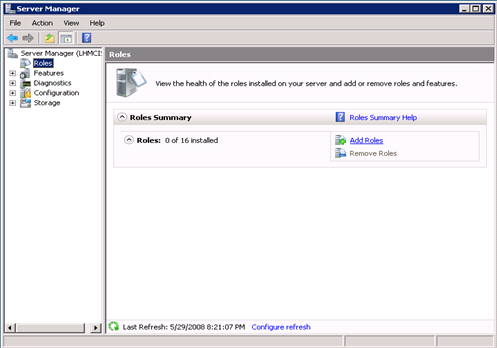
**Installing Windows Search Service**

**In Windows Server 2008 (Longhorn):**

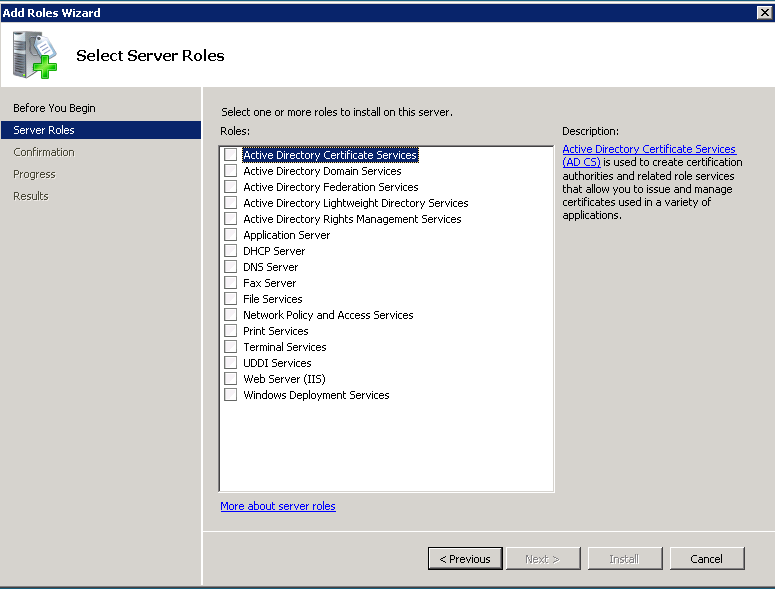
1. Go to **Start** and select **Server Manager**.



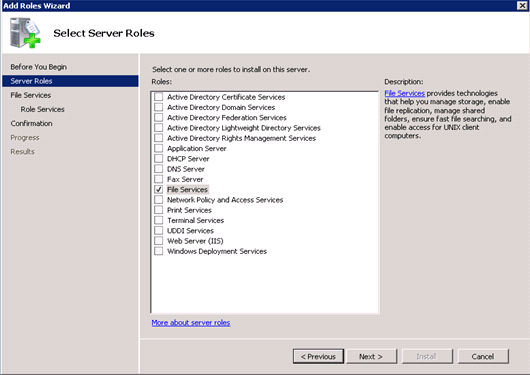
1. Select **Roles** from the **Server Manger** and click **Add Roles** in **Roles Summary**.



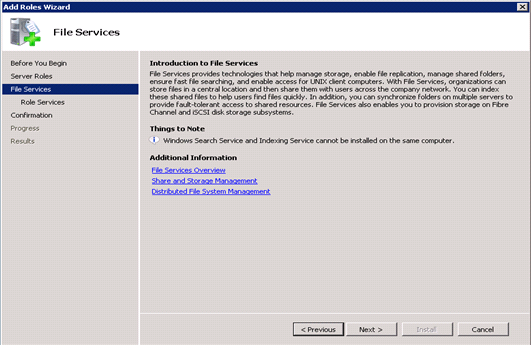
1. Select **Server Roles** in **Add Roles** Wizard.



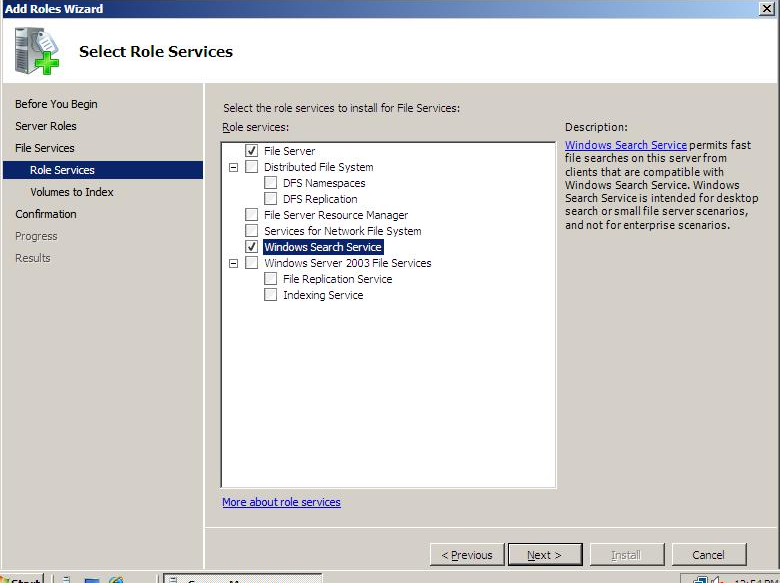
1. Select **File Services role to install** on the server and click **Next**.



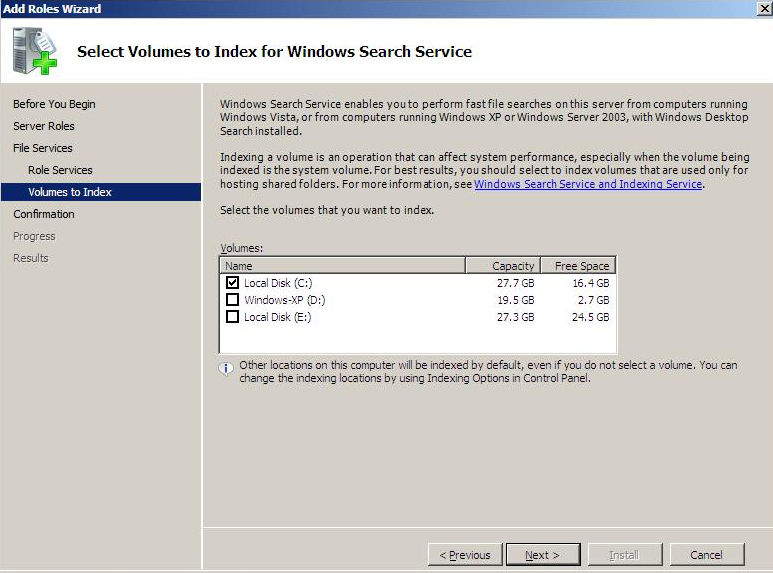
1. Click **Next**.



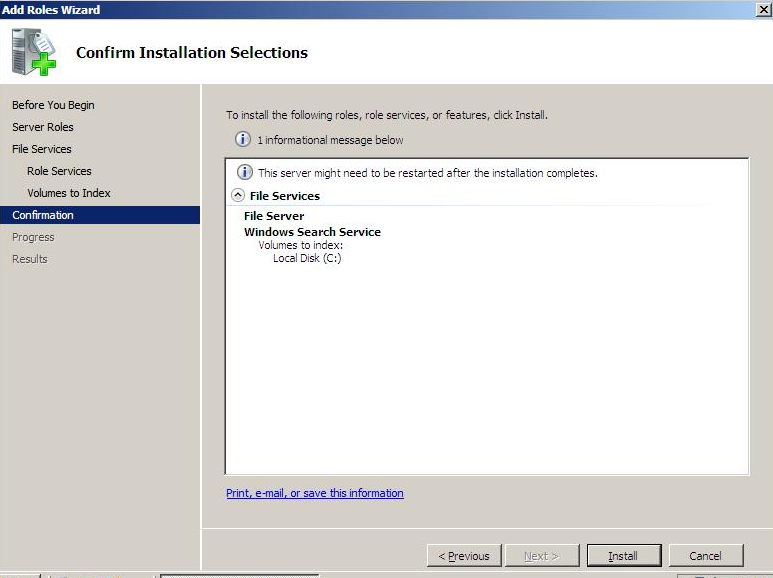
1. Select **Windows Search Service** from the list of **Role Services** to install for Distributed File System and click **Next**.



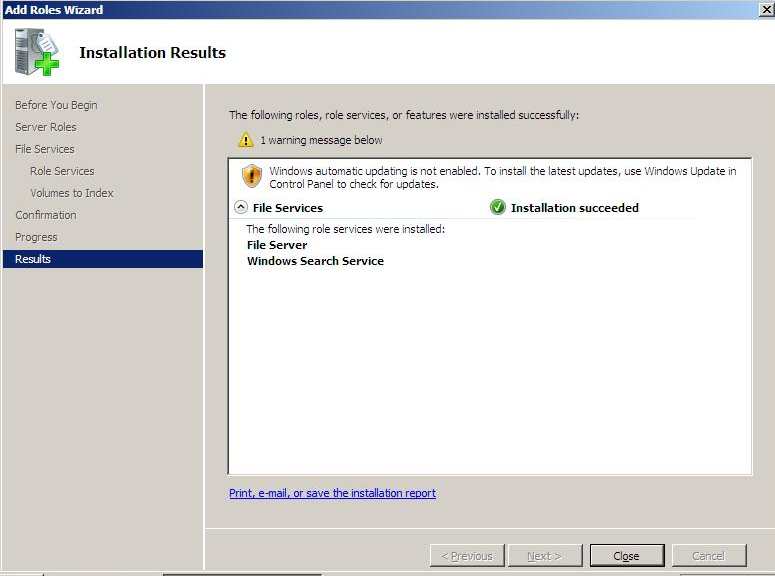
1. Select the appropriate volume to index for Windows Search service.



1. Click **Install.**



1. The Windows Search Service will be installed. Click **Close**.

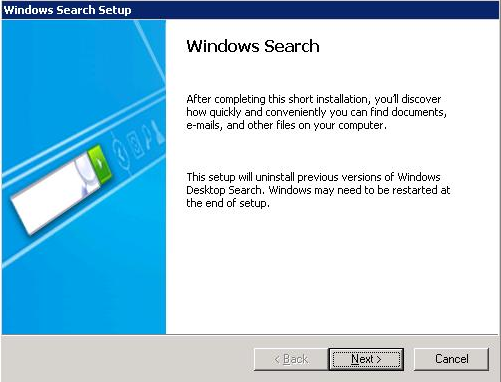


### SUT02

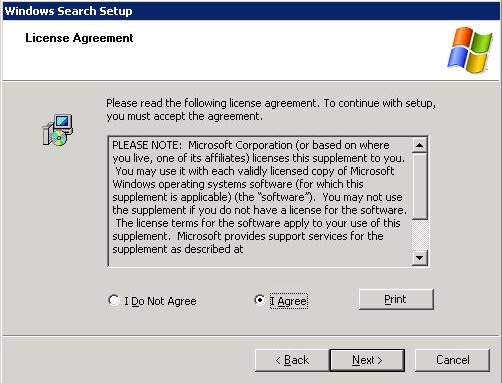
**Installing Windows Search Service**

**In Windows 2003 Server**:

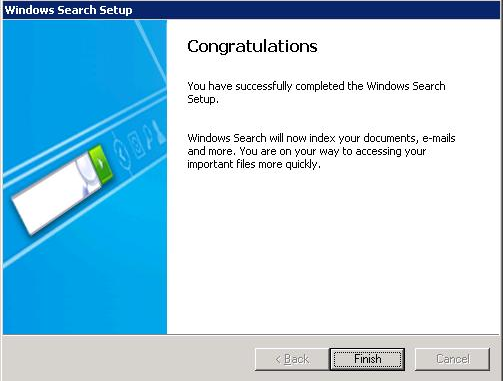
1. Double Click the Windows Desktop Search 4.0 setup file.



1. Select **Accept** and click Next.



1. Click **Finish** to complete the Windows Search setup.



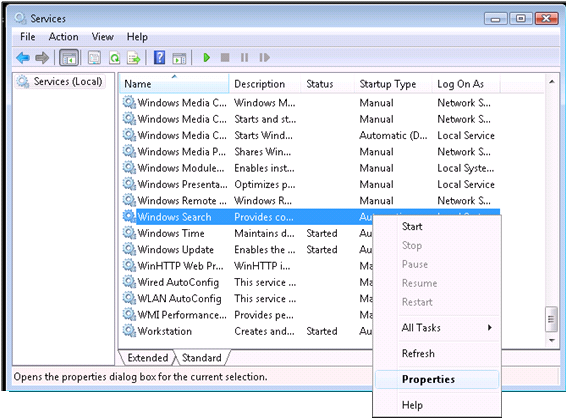
## Installing and Configuring CLIENT

### Installing and Configuring ENDPOINT01

#### Installing Windows Search Service

**In Windows Vista Ultimate**:

1. Windows Search service is available in vista by default. To start the windows search service from the services open services.msc from the command prompt.
2. Right click Windows Search Service and select **Properties**.



1. Click Start from the popup menu.

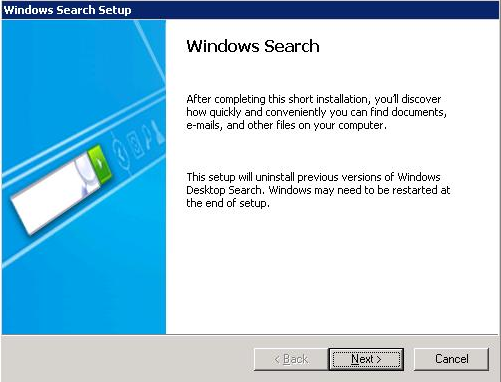
#### Install Network Monitor 3.2 on ENDPOINT01

Please refer to Appendix [to install Microsoft Network Monitor 3.2](#_How_to_install_2).

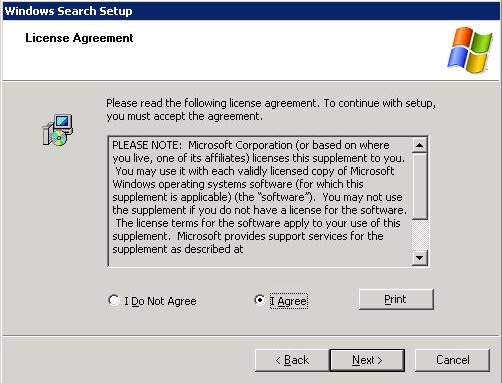
### Installing and Configuring ENDPOINT02

#### Installing Windows Search Service

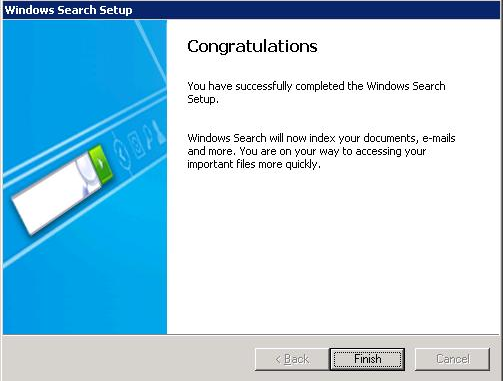
1. Double click **Windows Desktop Search 4.0** setup file.



1. Select **Accept** and click Next.



1. Click **Finish**.



#### Install Network Monitor 3.2 on ENDPOINT01

Please refer to Appendix [to install Microsoft Network Monitor 3.2](#_How_to_install_2).

# Test Suite Deployment

## How to install test suite

Copy **TestSuite** folder from DVD to a local folder of **CLIENT**.

For an example in this document, it is **C:\**.

## How to configure ptfconfig

Open MS-WSPTestSuite.deployment.ptfconfig:

1. Find <Property name="ServerComputerName" value="wsp2k3" />, make sure the value is either the Name or the ip address of the Server Computer;
2. Find <Property name="SERVER\_MACHINE\_NAME" value="wsp2k3" />, make sure the value is the Name of the Server Computer;
3. Find <Property name=" CLIENT\_USERNAME" value="administrator" />, make sure the value is the Client’s User Name;
4. Find <Property name="CLIENT\_MACHINE\_NAME" value="wspxp" />, make sure the field value is the name of the client machine.
5. Find <Property name=" CATALOG\_NAME " value=" Windows\SYSTEMINDEX " />, make sure the value is the Name of the catalog;
6. Find <Property name=" LANGUAGE\_LOCALE " value=" EN " />, make sure the value is the Name of the language locale;
7. Find <Property name=" LCID\_VALUE " value=" 1033" />, make sure the value is the value of the language locale;
8. Find <Property name=" ServerOffset " value=" 32" />, make sure the field specifies the Machine Architecture of the WSP server under test whether it is 64 bit or 32 bit.
9. Find <Property name=" ClientOffset" value=" 32" />, make sure the field specifies the Machine Architecture of the WSP client whether it is 64 bit or 32 bit.
10. Find <Property name="IsServerWindows " value=" true" />, make sure the field value indicates whether the server is windows.
11. Find <Property name="IsWDSInstalled" value="false" />, make sure the field value indicates whether Windows Desktop Search is installed on Windows Server under test. It is only applicable when 'IsServerWindows' is set to true.
12. Find <Property name="ServerVersion " value="265" />, make sure the field value indicates whether the version number (uint) of 32 bit server.

For Windows Server:

Windows 2003 32 it must be 265 (with Windows Desktop Search Installed)

Windows 2008 32 it must be 258 (without Windows Desktop Search)

Windows 2003 64 it must be 65801 (with Windows Desktop Search Installed)

Windows 2008 64 it must be 65794 (without Windows Desktop Search)

For Non-Windows Server:

The value should be less than 0x00010000 for 32 bit server.

The value should be greater than or equal to 0x00010000 for 64 bit server. the server is windows.

1. Find <Property name="ClientVersion" value="258" />, make sure the field value is the value specifies the version number (uint) of 32 bit client

For Windows XP 32 it must be 265 (with Windows Desktop Search Installed).

Vista 32 it must be 258 (without Windows Desktop Search)

Please specify the version number (uint) of 64 bit client

For Windows XP 64 it must be 65801 (with Windows Desktop Search Installed)

Vista 64 it must be 65794 (without Windows Desktop Search)

1. Find <Property name="TDI-19919 " value="Not Applicable" />, make sure the field value is the value defines whether the TDI is applicable to the SUT or not.
2. Find <Property name="QueryPath" value=”<file://wsp2k3/SharedFolderForTest> “/>,make sure the value is the path of the search location on server;
3. Find <Property name="QueryText" value="a" />, make sure the value is the Query string to be searched on the server;

## How to run the test suite

1. Double click **RunTest.cmd** in the **C:\TestSuite\bin** to execute the test suite.
2. Press any key to close the console, when **Pass** appears on the screen.
3. Check the test logs in the **C:\TestSuite\bin\TestResults**.

# Troubleshooting

## Test Setup/Environment

|  |  |
| --- | --- |
| Problem | Unable to install the Active Directory Services. |
| Cause | DNS Server is not installed or configured. |
| Resolution | Ensure that the DNS Server is installed and configured on the Server. |

|  |  |
| --- | --- |
| Problem | Unable to add Client to the domain. |
| Cause | The DNS server IP address is incorrect. |
| Resolution | Ensure that the appropriate IP for DNS Server is provided. |

|  |  |
| --- | --- |
| Problem | **Access denied** error from Server when client requests for a query. |
| Cause | Administrative rights not given to the Client by the Server. |
| Resolution | Provide Administrative rights to the client. |

|  |  |
| --- | --- |
| Problem | **Service not running** error from Server when client requests for a query. |
| Cause | Windows Search service is not installed or not running in the server. |
| Resolution | Install and Start Windows Search service. |

## Test Suite

|  |  |
| --- | --- |
| Problem | MS-WSPHelper.dll could not be found. |
| Cause | dll is not added in the testrunconfig file. |
| Resolution | Add the path of the dll in the deployment section of testrunconfig file under solution items. |

|  |  |
| --- | --- |
| Problem | ptfconfig could not be found. |
| Cause | ptfconfig file is not added in the testconfig file. |
| Resolution | Add the path of the ptfconfig file in the deployment section of testrunconfig file under solution items. |

|  |  |
| --- | --- |
| Problem | None of the test cases get executed and are aborted. |
| Cause | PtfConfig file is missing. |
| Resolution | Deploy the PtfConfig File to the solution. |

|  |  |
| --- | --- |
| Problem | None of the test cases get passed and are getting error as “Could not create handle”. |
| Cause | WSS is not running on server. |
| Resolution | Start the WSS on server. |

|  |  |
| --- | --- |
| Problem | Report is not generated. |
| Cause | The Requirement Specification is not added to testrunconfig file. |
| Resolution | Add the path of the Requirement Specification file in the deployment section of testrunconfig file under solution items and verify test log and report section in MS-WSPTestSuite.ptfconfig file. |

## Operating System Specific

None.

## Tool Specific

|  |  |
| --- | --- |
| PROBLEM | Reference of “IAdapter” and “NetworkMonitor” are not found in the Test Suite. |
| CAUSE | SpecExplorer is not installed. |
| RESOLUTION | Install the Spec Explorer. |

|  |  |
| --- | --- |
| PROBLEM | Null node Exception. |
| CAUSE | SpecExplorer is not installed. |
| RESOLUTION | Install the Spec Explorer. |

|  |  |
| --- | --- |
| PROBLEM | Netmon frames not being captured. |
| CAUSE | Netmon API has not been installed properly. |
| RESOLUTION | Re-install Netmon. |

## Known Issues

When using netmon 03.02.1106.0001, getting errors

“Netmon managed API failure: loading NPL parser: failed with error NOT\_FOUND”.

Or

“Netmon managed API failure: Netmon not installed”.

Follow the below work around to run test suite:

1. Install NetmonPT3.msi and Microsoft\_PT3\_Parser.msi.
2. Run netmon.exe and wait for parsers compile successfully.
3. Copy parsers folders:

xcopy /s "%ALLUSERSPROFILE%\Application Data\Microsoft\Network Monitor 3\NPL" "%ALLUSERSPROFILE%\Application Data\Microsoft Network Monitor 3\NPL"

1. Copy sparser.npl:

**At Client (XP)**:

copy "%USERPROFILE%\Local Settings\Application Data\Microsoft\Network Monitor 3\sparser.npl" "%ALLUSERSPROFILE%\Application Data\Microsoft Network Monitor 3\NPL"

**At Client (Vista)**:

copy "%USERPROFILE%\AppData\Local\Microsoft\Network Monitor 3\sparser.npl" "%ALLUSERSPROFILE%\Application Data\Microsoft Network Monitor 3\NPL"

1. Start running the project.

# Appendix

## How to install Domain Controller on Windows 2003

### Installing Active Directory Domain Services on DC

* 1. Create and save a file named **domain.txt** in **C:\** with following content.

**[DCINSTALL]**

**ReplicaOrNewDomain=Domain**

**TreeOrChild=Tree**

**CreateOrJoin=Create**

**NewDomainDNSName=contoso.com**

**DNSOnNetwork=yes**

**DomainNetbiosName=contoso**

**AutoConfigDNS=yes**

**SiteName=Defaule-First-Site-Name**

**AllowAnonymousAccess=yes**

**DatabasePath=%systemroot%\ntds**

**LogPath=%systemroot%\ntds**

**SYSVOLPath=%systemroot%\sysvol**

**SafeModeAdminPassword=Password01!**

**CriticalReplicationOnly=No**

**RebootOnSuccess=yes**

* 1. Go to **Start** and click **Run**.
  2. Type **dcpromo /answer:c:\domain.txt**

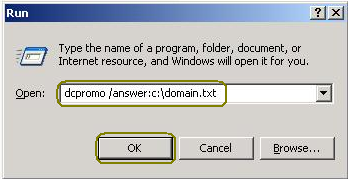


Figure 7-1-1 Promote a Domain Controller

* 1. Click **OK**.

## How to install Domain Controller on Windows 2008

### Installing Active Directory Domain Services on DC

1. Run **cmd.exe**.
2. Type the following command:

**dcpromo /unattend /InstallDns:yes /dnsOnNetwork:yes /replicaOrNewDomain:domain /newDomain:forest /newDomainDnsName:contoso.com /DomainNetbiosName:contoso /databasePath:"c:\ntds" /logPath:"c:\ntdslogs" /sysvolpath:"c:\sysvol" /safeModeAdminPassword:Password01!/forestLevel:2 /domainLevel:2 /rebootOnCompletion:yes**

1. Press **ENTER**.

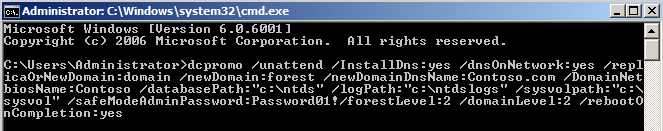


Figure 7-2-1 Promote domain controller by console

## How to install Visual Studio 2008

1. Open **VSTS\VS** directory.
2. Double click **setup.exe**.
3. Click **Install Visual Studio 2008**.



Figure 7-3-1 Install Visual Studio 2008

1. Click **Next**.

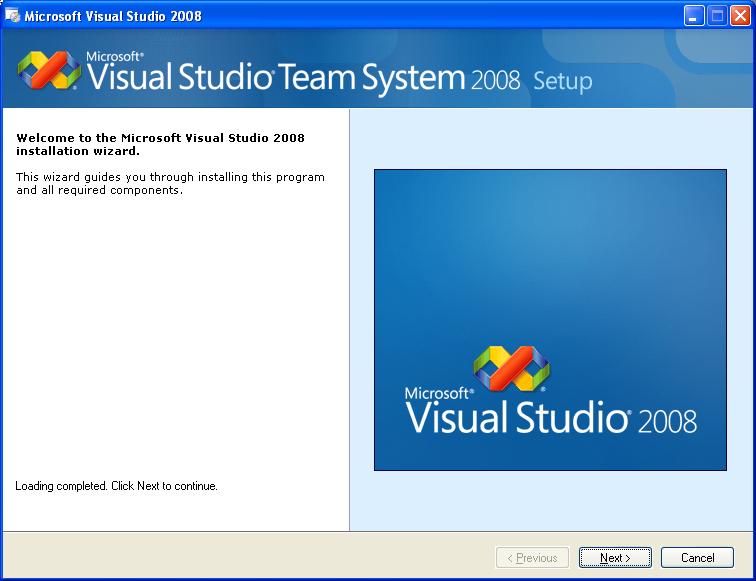


Figure 7-3-2 Install Visual Studio 2008

1. Select **I have read and accept the license terms** and click **Next**.

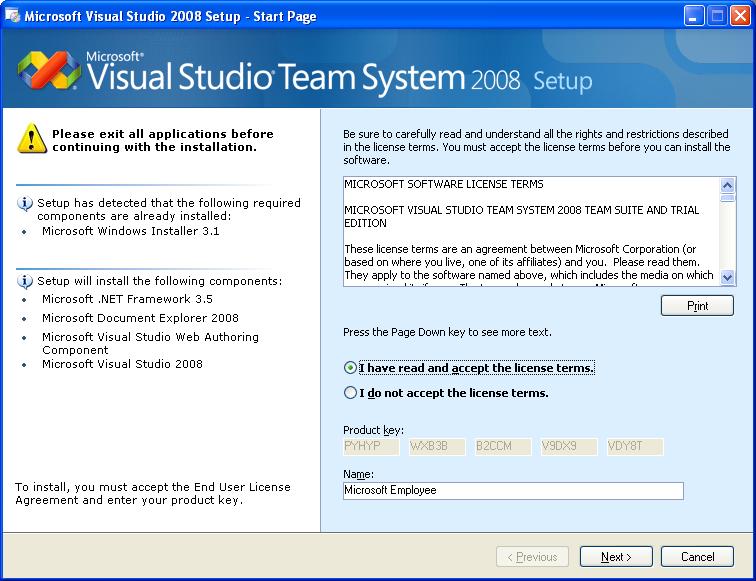


Figure 7-3-3 Install Visual Studio 2008

1. Select **Custom** and click **Next**.

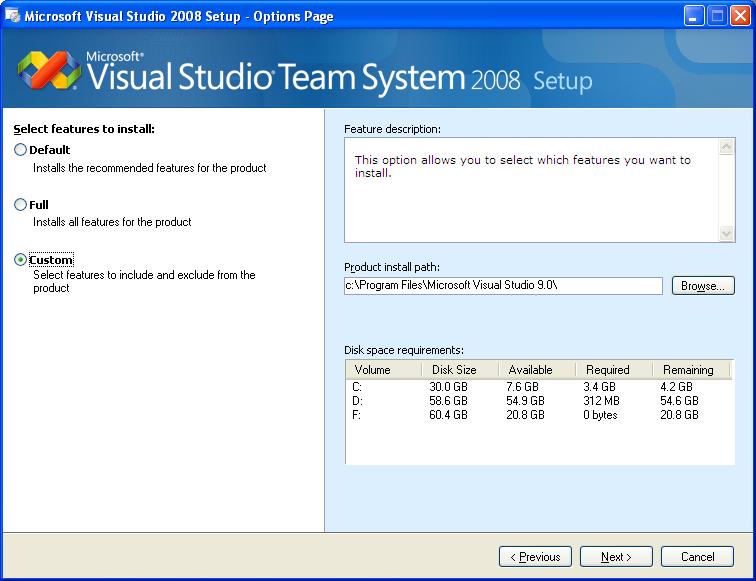


Figure 7-3-4 Install Visual Studio 2008

1. Select the necessary components as shown and click **Install**.

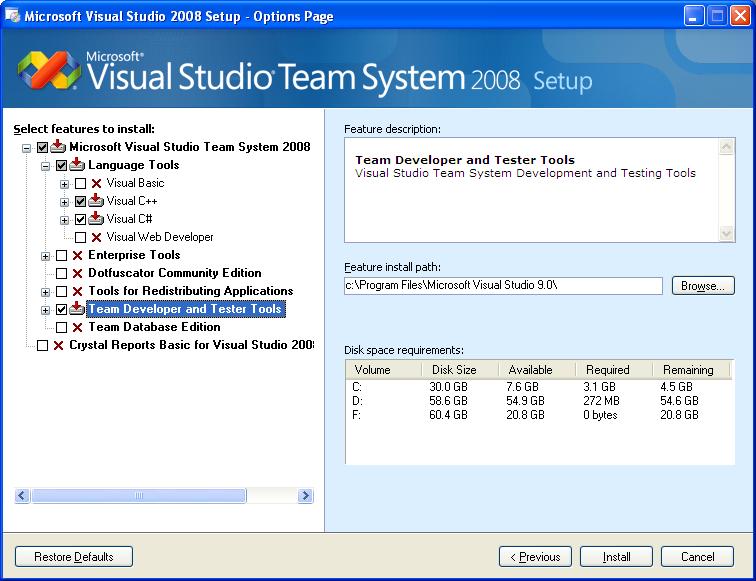


Figure 7-3-5 Install Visual Studio 2008

1. Click **Finish**.

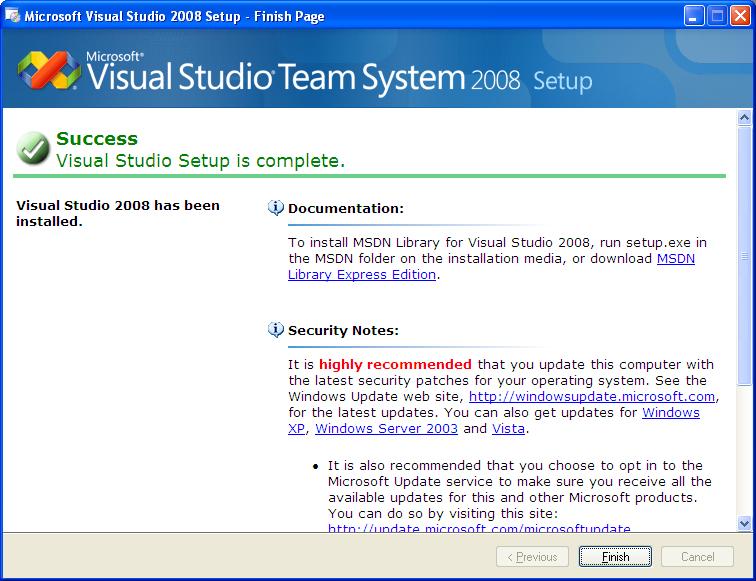


Figure 7-3-5 Install Visual Studio 2008

## How to install Microsoft Network Monitor 3.2

1. Double-click the **netmonpt3.exe**.
2. Click **Next**.

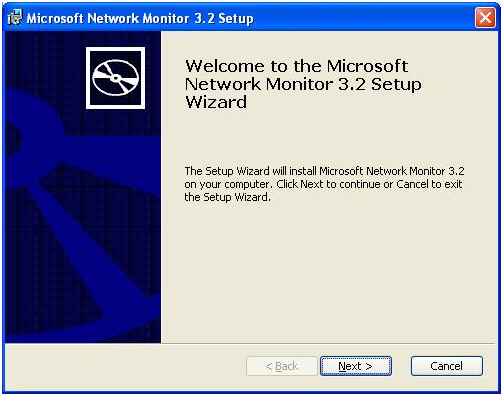


Figure 7-4-1 Install Network Monitor 3.2

1. Select **I accept the terms in the License Agreement** and click **Next**.

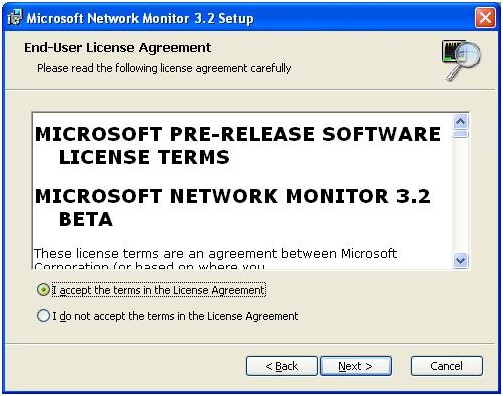


Figure 7-4-2 Install Network Monitor 3.2

1. Select **Participate in the Microsoft Network Monitor 3.2 Customer Experience Improvement Program. (Recommended)** and click **Next**.

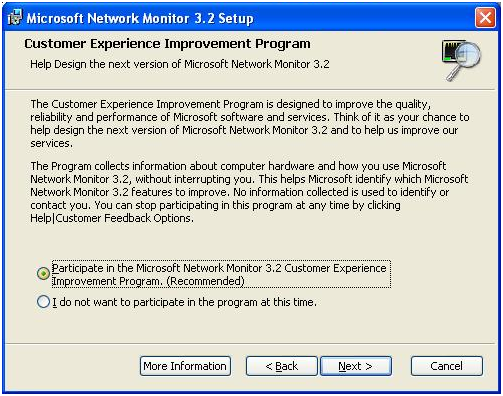


Figure 7-4-3 Install Network Monitor 3.2

1. Click **Complete**.

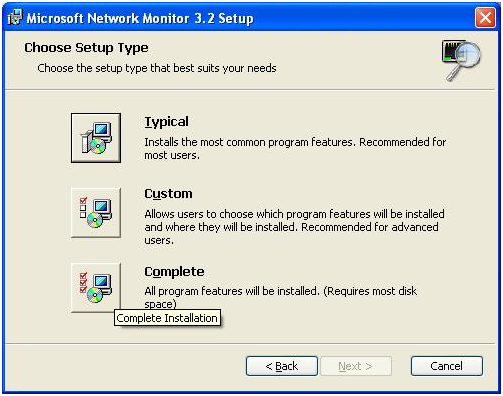


Figure 7-4-4 Install Network Monitor 3.2

1. Click **Install**.

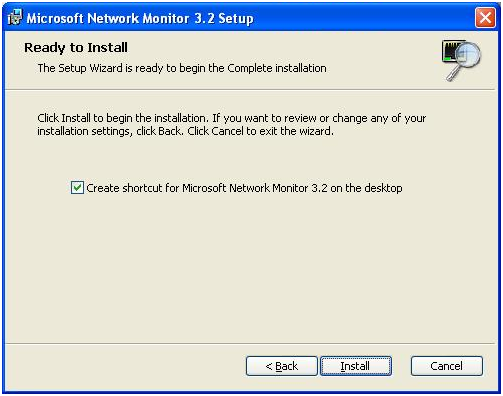


Figure 7-4-5 Install Network Monitor 3.2

1. Click **Finish**.



Figure 7-4-6 Install Network Monitor 3.2

## How to observe network trace

1. Open **Network Monitor 3.2**.
2. Click **New capture tab …**

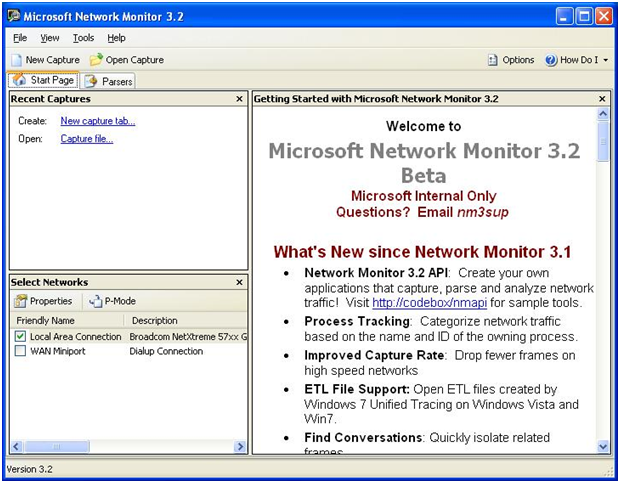


Figure 7-5-1 Observe Network Trace

1. Type “**MSWSP**” in the **Display Filter** panel, and click **Apply**.

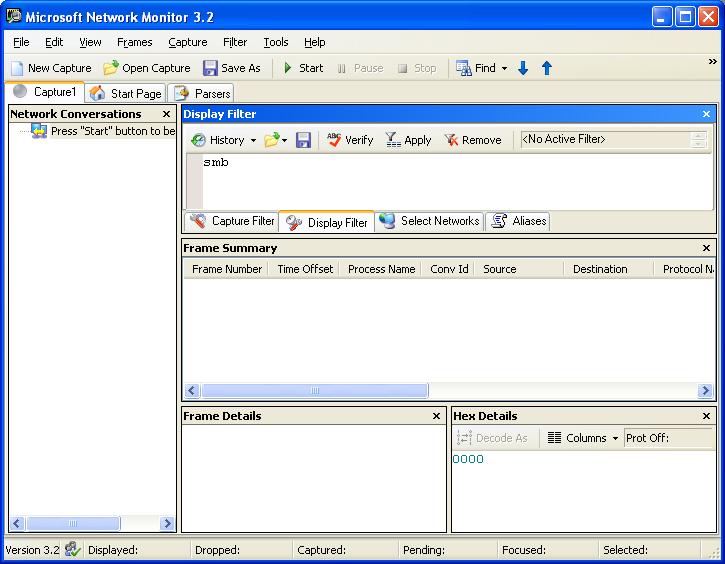


Figure 7-5-2 Observe Network Trace

1. Click **Start** to start capturing and run the test suite to capture the network trace.

## How to install Protocol Test Framework

1. Double-click the **ProtocolTestFramework.msi**.
2. Click **Next**.

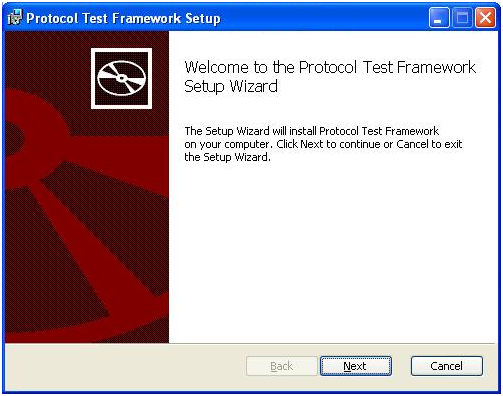


Figure 7-6-1 Install Protocol Test Framework

1. Select **I accept the terms in the License Agreement** and click **Next**.

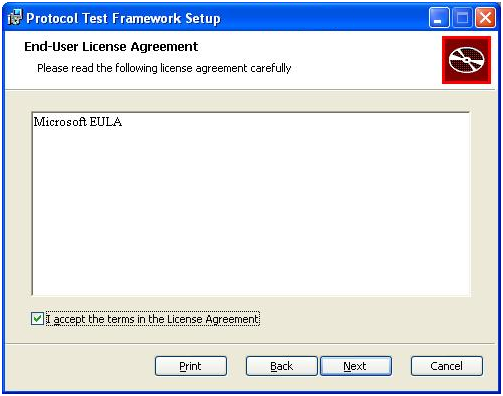


Figure 7-6-2 Install Protocol Test Framework

1. Click **Next**.

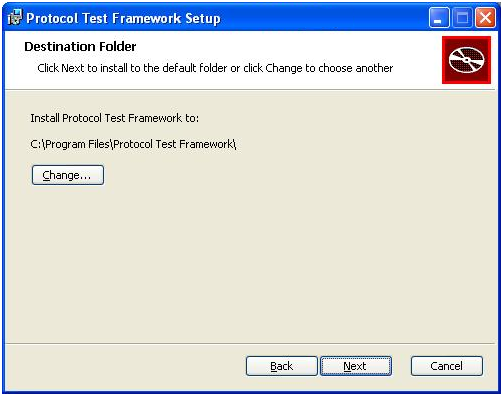


Figure 7-6-3 Install Protocol Test Framework

1. Click **Install**.



Figure 7-6-4 Install Protocol Test Framework

1. Click **Finish**.

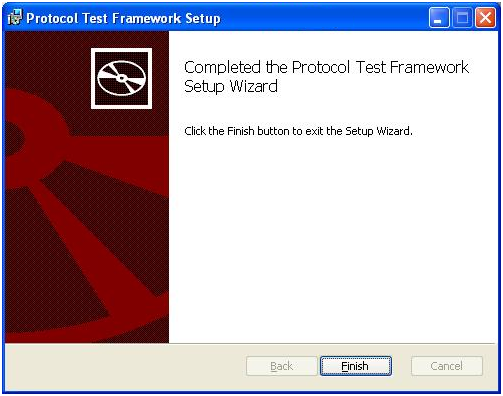


Figure 7-6-5 Install Protocol Test Framework

## How to install Spec Explorer

1. Double-click the **SpecExplorer.msi**.
2. Click **Next**.



Figure 7-7-1 Install Spec Explorer

1. Choose **I accept the terms in the License Agreement** and click **Next**.



Figure 7-7-2 Install Spec Explorer

1. Click **Next**.

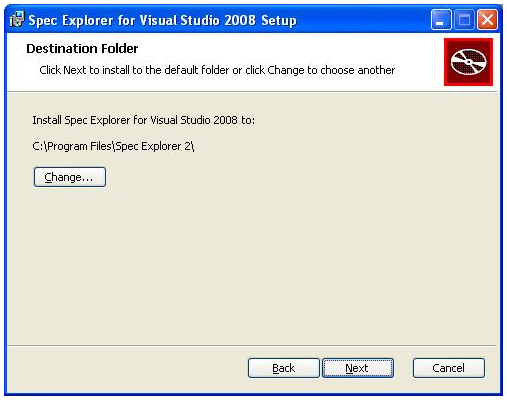


Figure 7-7-3 Install Spec Explorer

1. Click **Install**.



Figure 7-7-4 Install Spec Explorer

1. Click **Finish**.



Figure 7-7-5 Install Spec Explorer