Machete Installation Manual

Release 1.7.0

Savage Learning LLC

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CHAPTER

ONE

INTRODUCTION

Machete is a web application built on Microsoft Internet Information Server (IIS) using the ASP.NET/MVC Framework. As such, the server components of Machete can be installed on a wide variety of Windows operating systems and underlying hardware. Machete works with most major web browsers, such as Chrome, Firefox, Internet Explorer (IE9+), and Safari.

This installation targets an installation for a single computer environment; presumably, the most common for a small day labor organization. This chapter assumes only that the user has basic experience with Windows an internet concepts such as DNS. This chapter should be sufficient for a skilled system administrator to install Machete to other environments.

1.1 System Pre-Requisites

Hardware

Machete was developed on an Intel Core 2 Duo processor purchased in 2008. Many Windows compatible machine with 2 gigabytes of memory should be able to function as a Machete server. As with any system, more memory will improve some performance issues. However, since Machete is a client/server application that operates over a network, any issues that affect network performance will also affect Machete.

Software

Machete is an ASP.NET/MVC Application. It has been tested on IIS 7 with Windows 7 Professional, Windows 7 Home Premium, and Windows Server 2008r2. Presumably, any Windows OS that can run IIS 7 and SQL Server Express will work.

Note: The screenshots and instructions are for Windows 7. If you're using Server 2008, it's assumed that you can figure out the slight differences from those contained herein.

CHAPTER

TWO

WINDOWS 7 INSTALLATION

This chapter walks through the installation of Machete and its dependencies. It captures each step either as a screenshot, or narrative text, guiding the reader through the installation.

2.1 Install Internet Information Server

Windows 7 comes with IIS installed, but it is not enabled by default. To enable IIS, execute the following:

Click: Start -> All Programs -> Control Panel -> Programs and Features

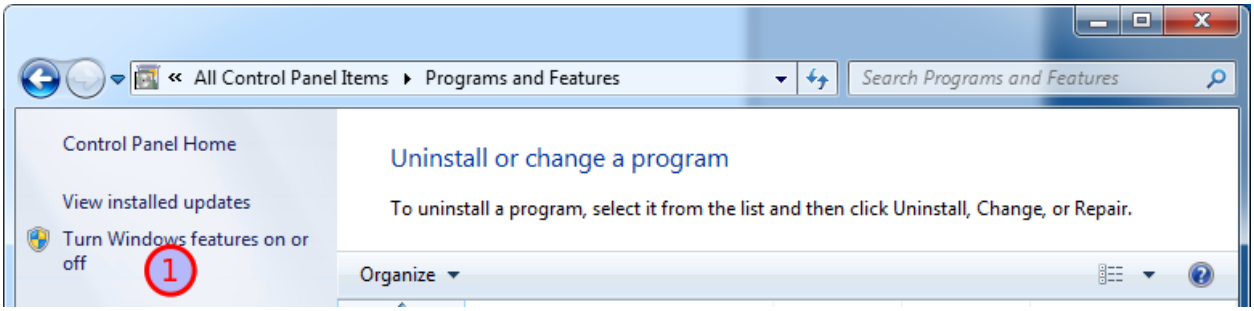


Figure 2.1: Click "Turn Windows features on or off"

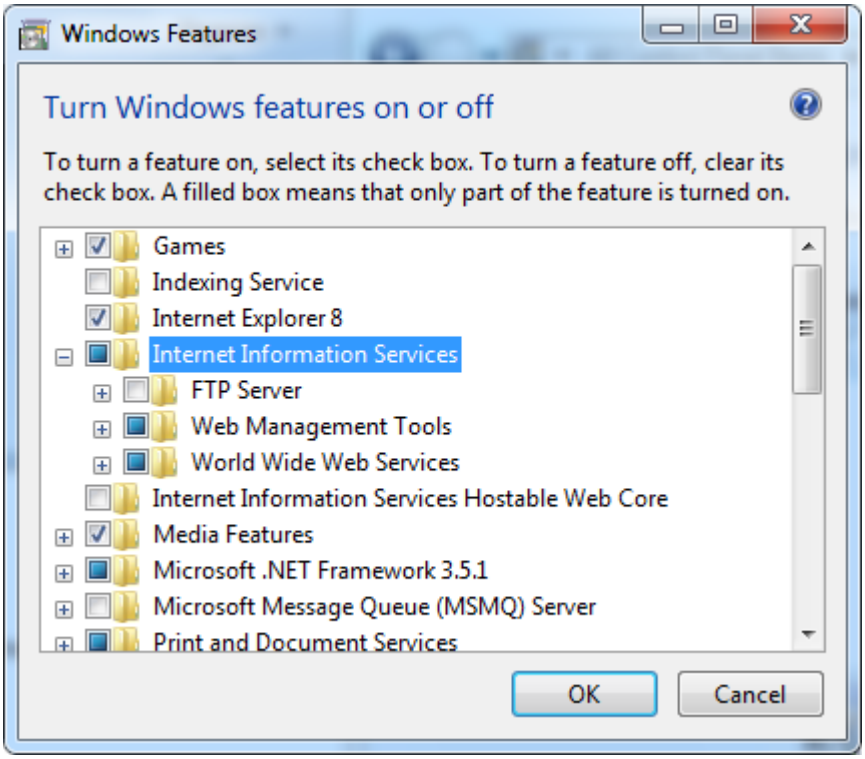


Figure 2.2: Select “Internet Information services” and select “OK”

2.2 Check the IIS installation

Start -> All Programs -> Internet Explorer (Or Chrome, or Firefox)

Go to address: http://localhost/

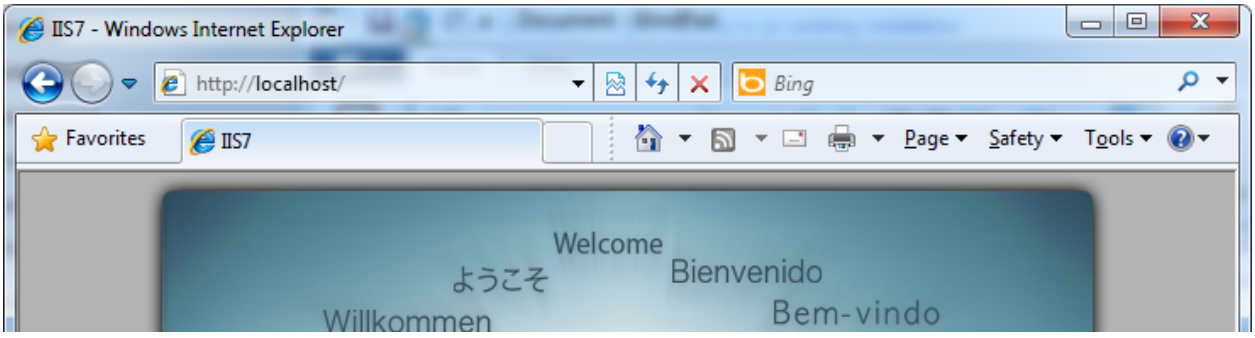


Figure 2.3: IIS default page

If IIS is running correctly, it will display the default IIS page (seen above).

2.3 Configure Machete name resolution

Machete is implemented using standard web and internet technologies, and as such it is dependent on domain name resolution and the domain name services (DNS) of your environment. Specifically, the URL used to access Machete will be dependent on the naming of your environment. Contact your system administrator to resolve what the domain name for Machete should be and to request changes to your environment for the Machete name.

This document assumes that Machete is being setup on a single system, and configures the domain name to resolve to the localhost. If your network environment is different, contact to your system administrator to configure Machete name resolution.

2.3.1 Configuring Machete for localhost

Click on the following items on the Windows Taskbar:

- Start -> All Programs -> Accessories
- Right-click on Notepad
- Click on **Run As Administrator**
- Click **yes** on the security authorization
- Using notepad, open the file C:\Windows\System32\drivers\etc\hosts

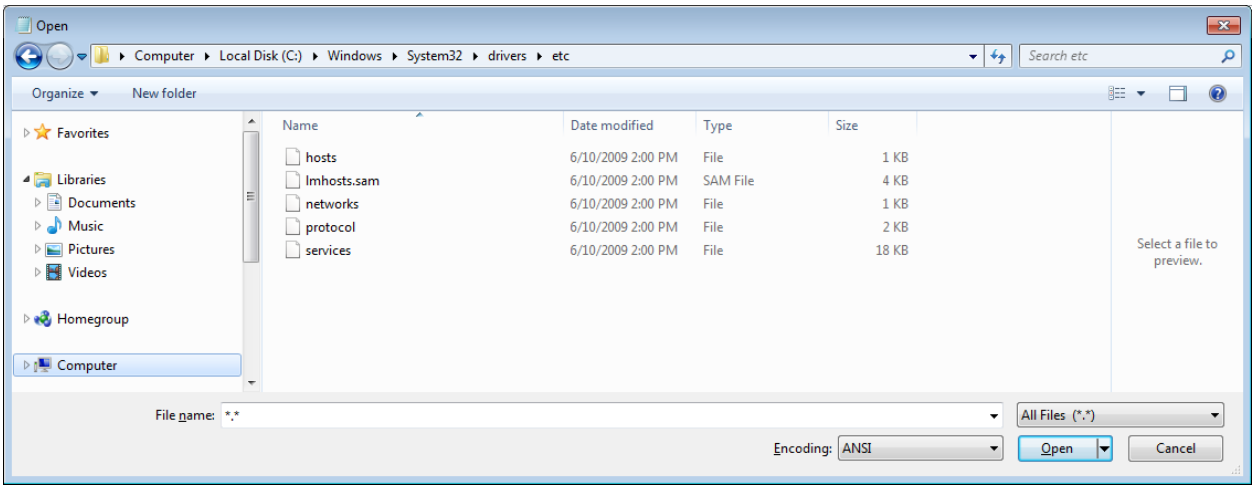


Figure 2.4: Loading the hosts file in Notepad

- Put "*.*" in the File name to see all the files
- Select "hosts"

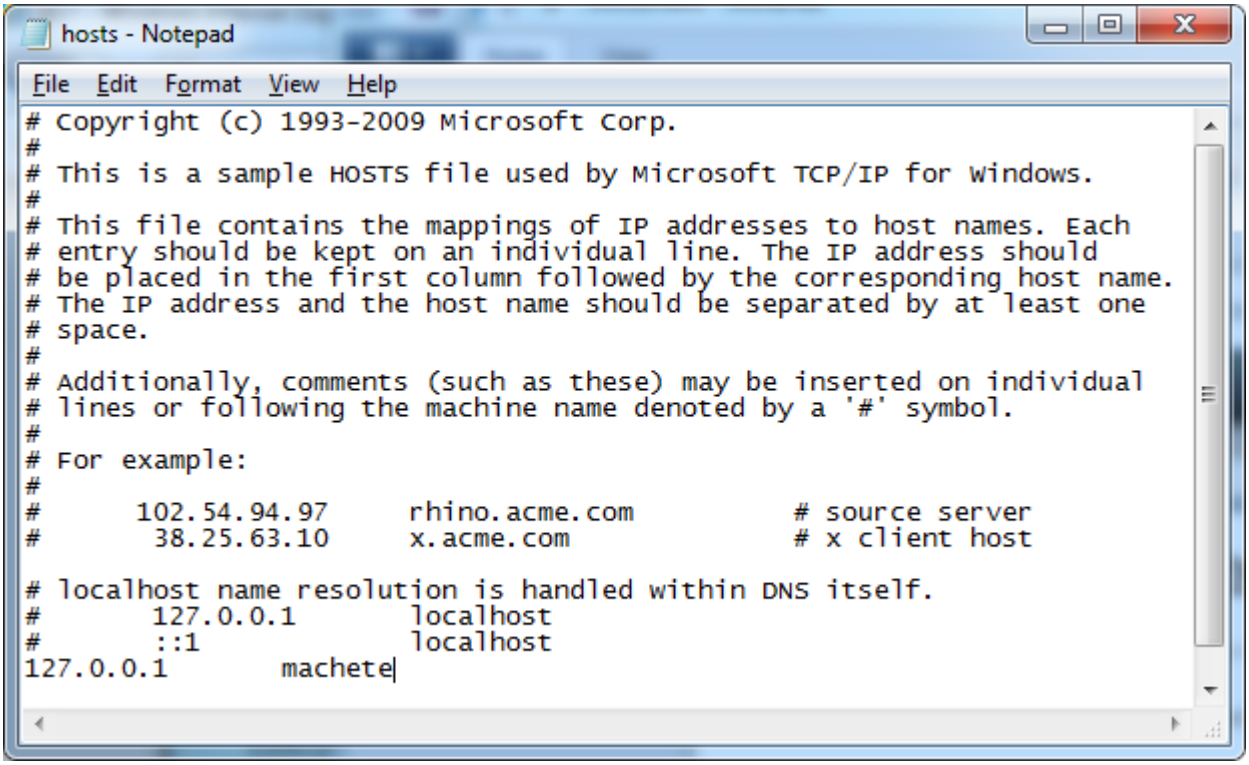


Figure 2.5: Adding the Machete entry to the hosts file

- Add “127.0.0.1 machete” to the hosts file
- Save the file

Note: If the file will not save because of permissions, you need to use the **Run As Administrator** feature to run Notepad with elevated privileges.

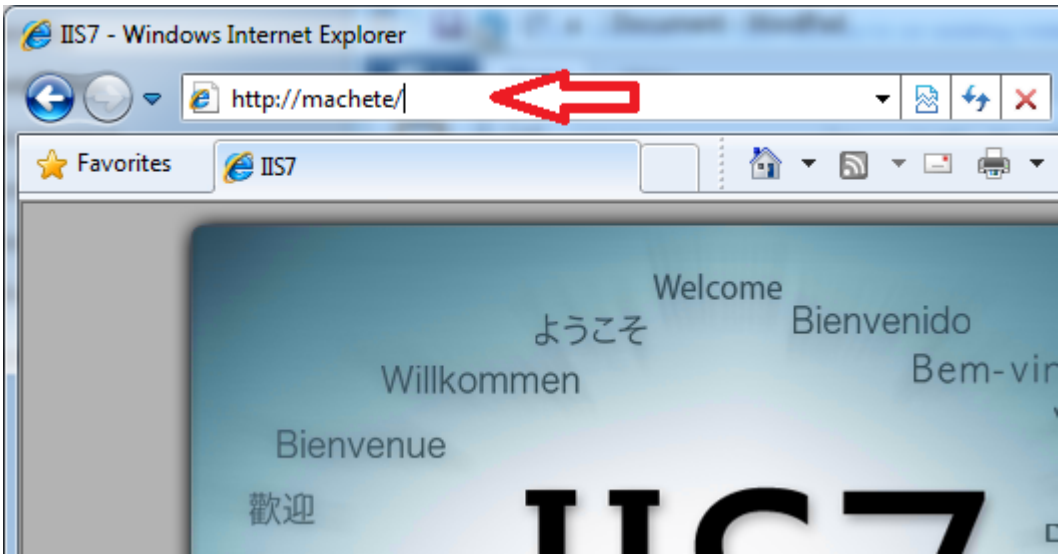


Figure 2.6: Verify the Machete host name functions

Use Internet Explorer (or Chrome, or firefox). Check that http://machete/ works. You should see the default IIS web site page.

2.4 Install Web Platform Installer

2.4.1 Download the Web Platform Installer from Microsoft

http://www.microsoft.com/download/en/details.aspx?id=6164

Click Download for either x86 / x64, depending on the platform

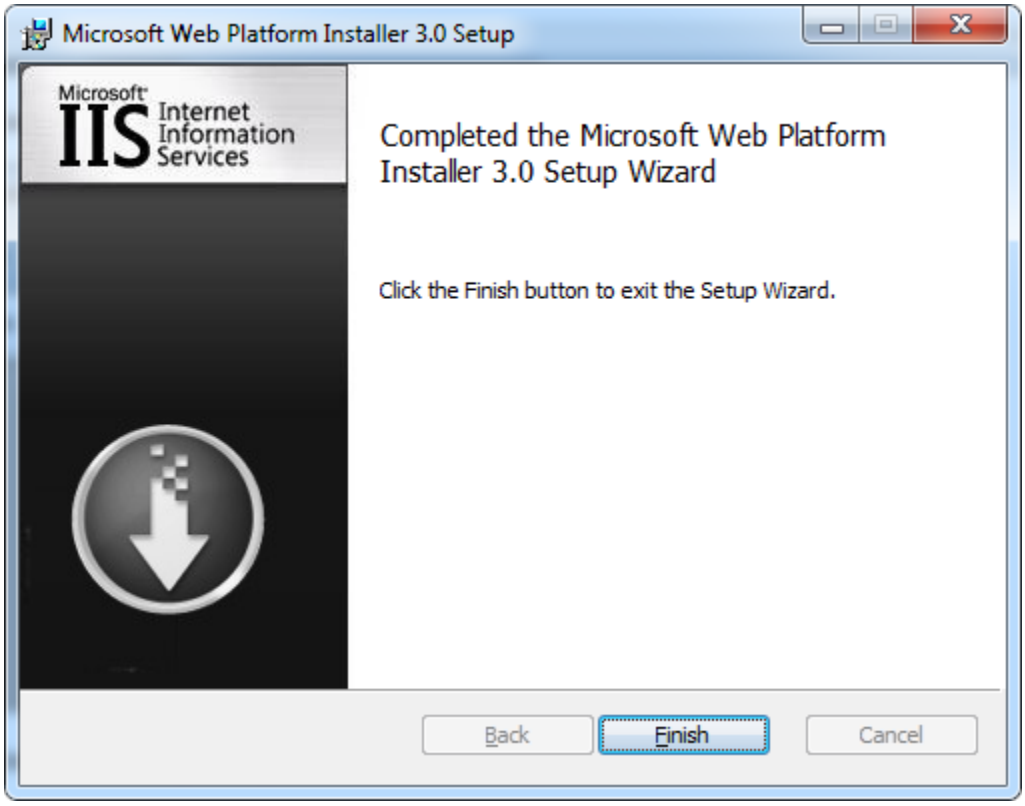
Click Run on the Download page

Click Run on the Security warning

Click "I accept the terms in the License Agreement"

Click "Install"

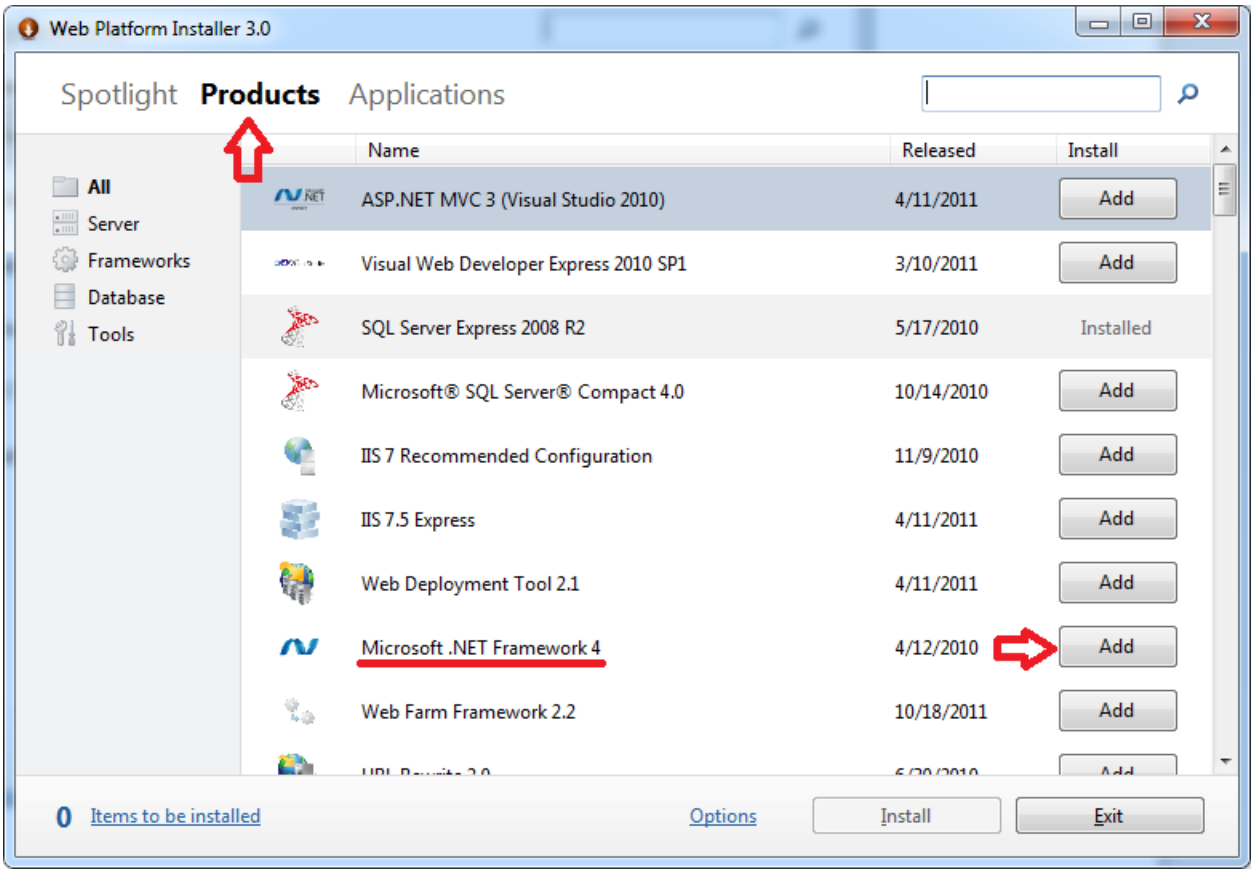
Click "Yes" on the User Account Control (another security warning)



Click "Finish"

Start -> Microsoft Web Platform Installer

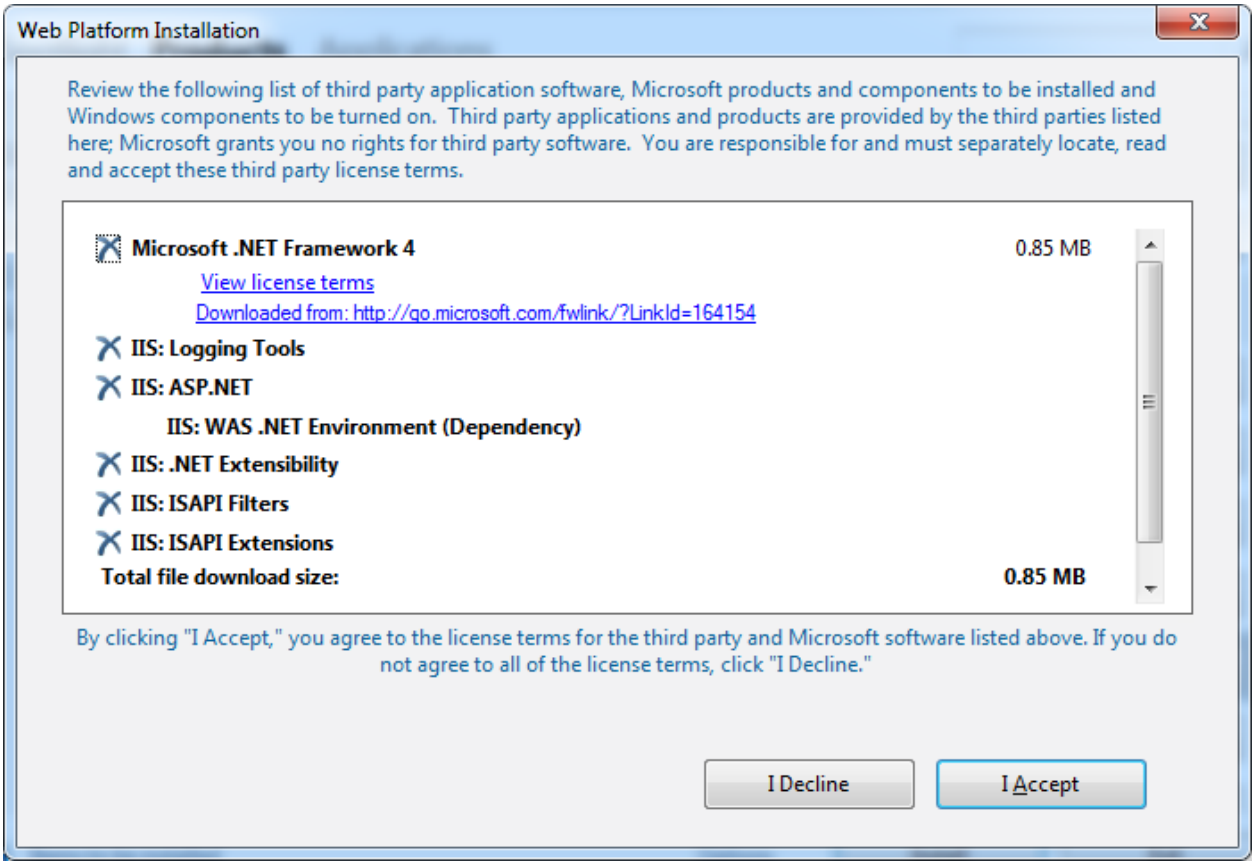
Click "Yes" on the User Account Control (the security dialog)



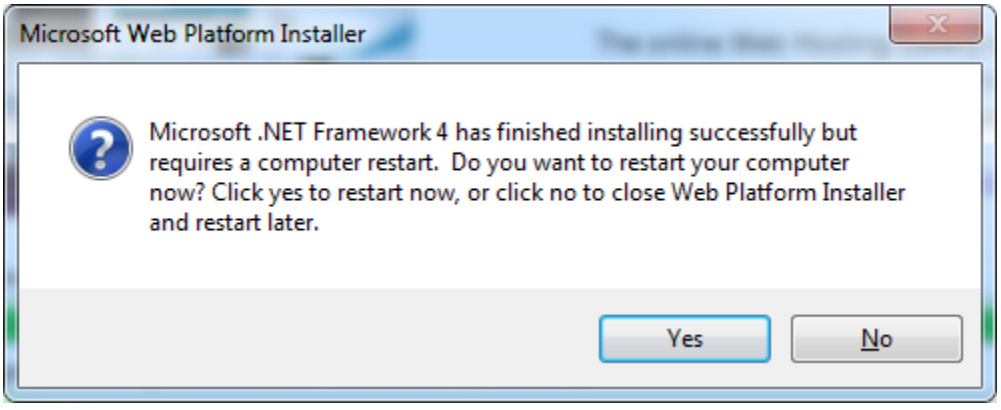
Click “Products”

Find and Click Add next to “Microsoft .NET Framework 4”

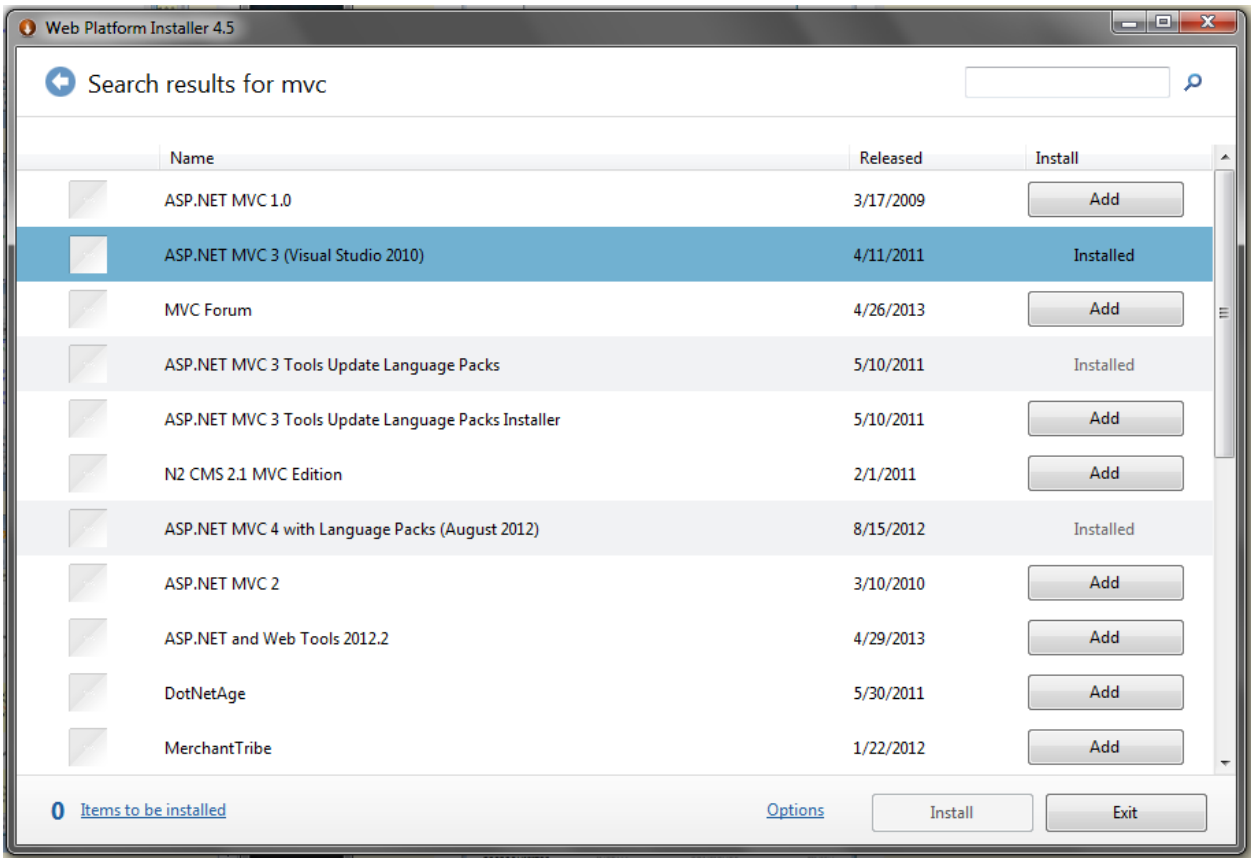
Click “Install”



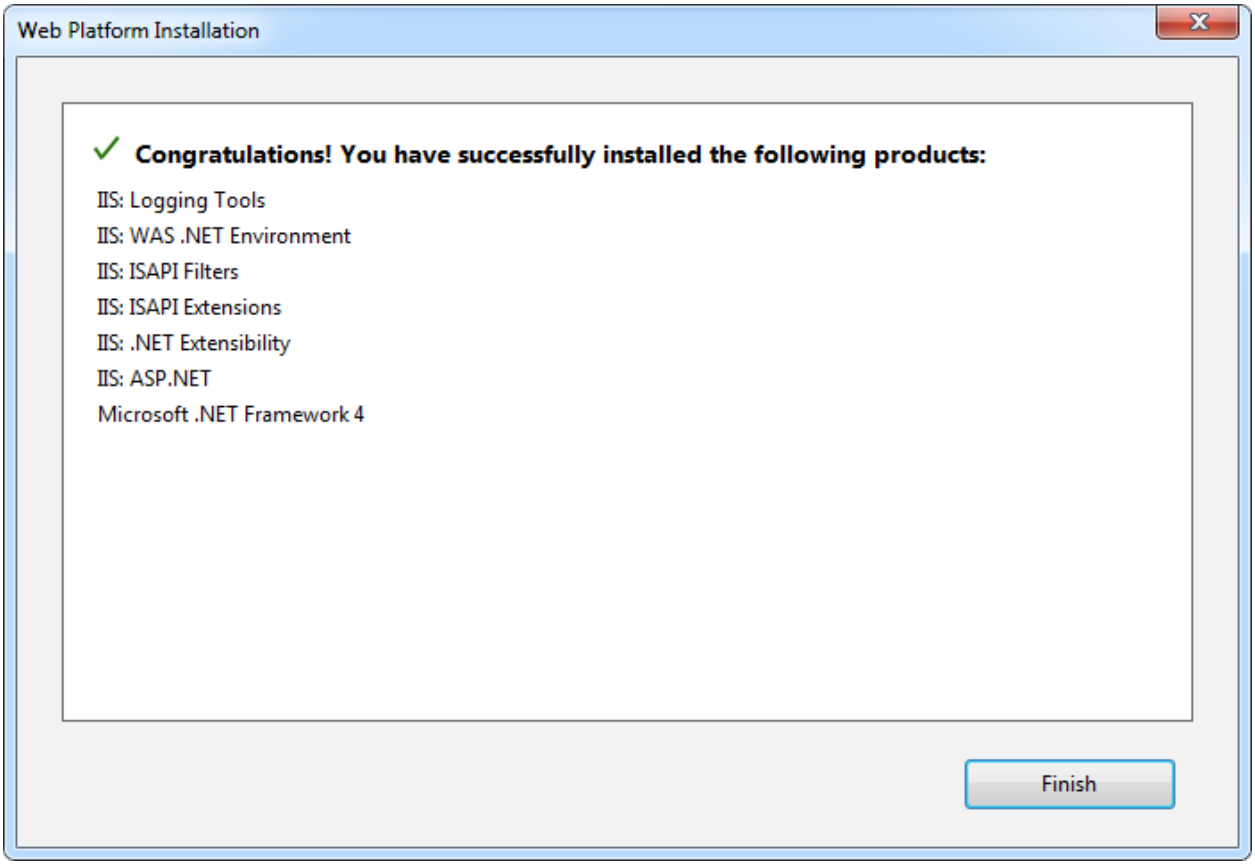
Click “I Accept”



Click “Yes” and reboot.



When your computer restarts, reopen the Web Platform Installer 4.5 (WebPI). Type “MVC” in the search bar and press enter. Select the option that reads “ASP.NET MVC 3 (Visual Studio 2010)” and install it. Complete the installation.

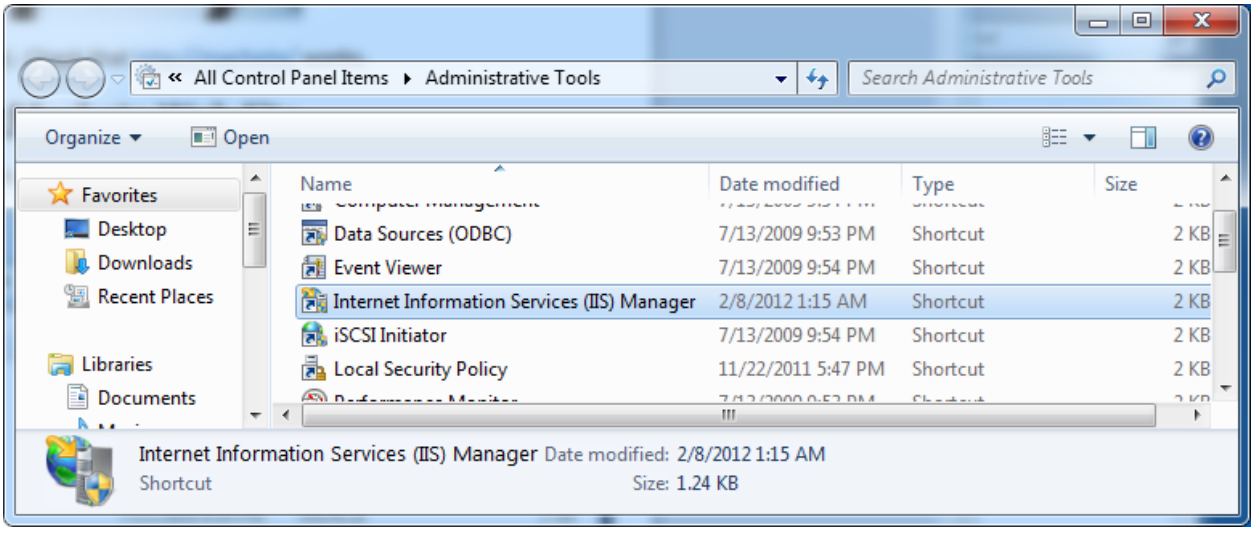


Click “Finish”

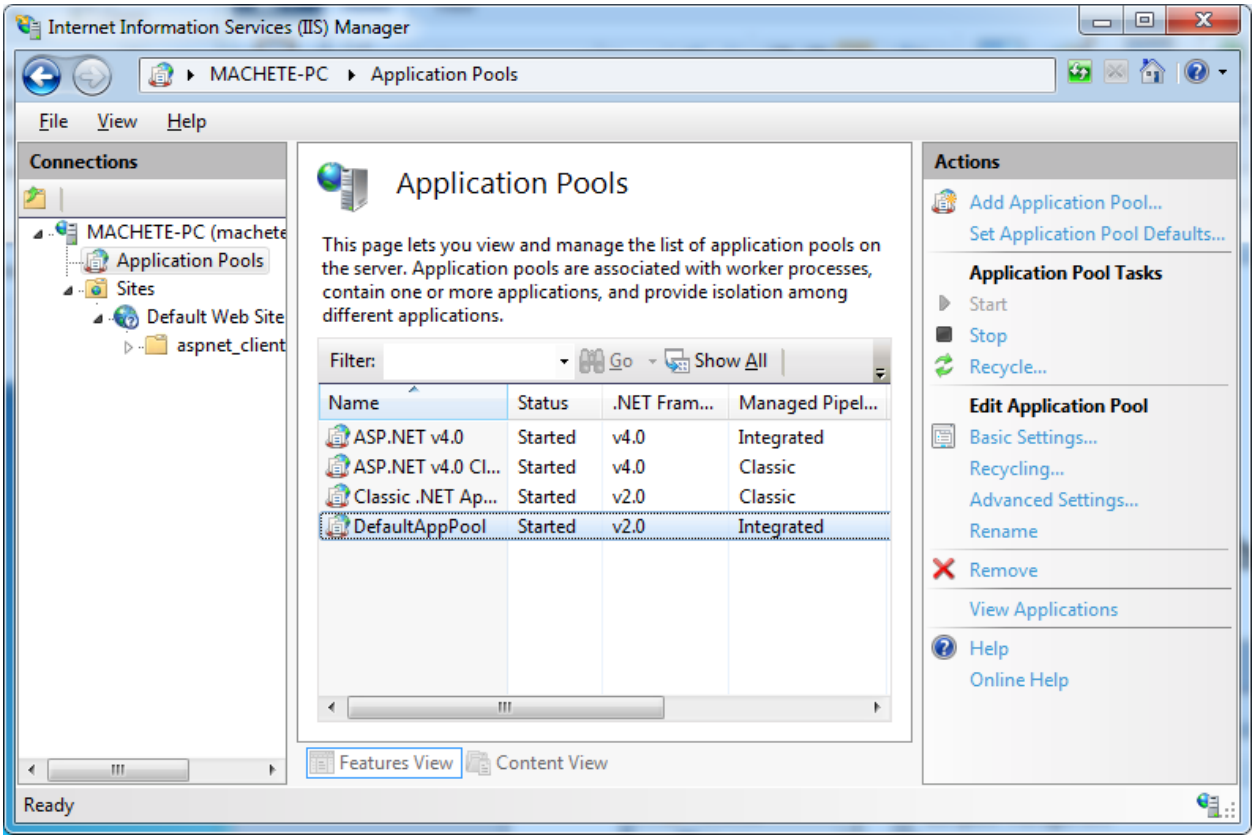
Click Exit

2.5 Configure IIS Application Pool and Machete Web Site

Start -> Control Panel -> Administrative Tools



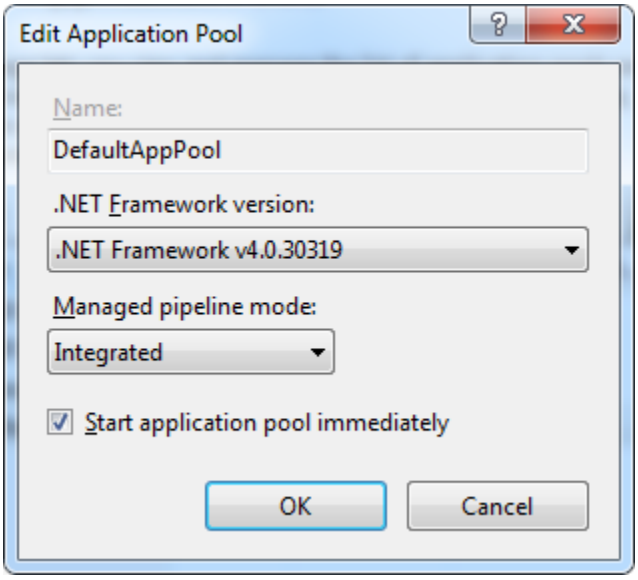
double click “Internet Information Services (IIS) Manager”



Double-Click on the Web Server (The name will be different than in the image)

Double-Click on “Application Pools”

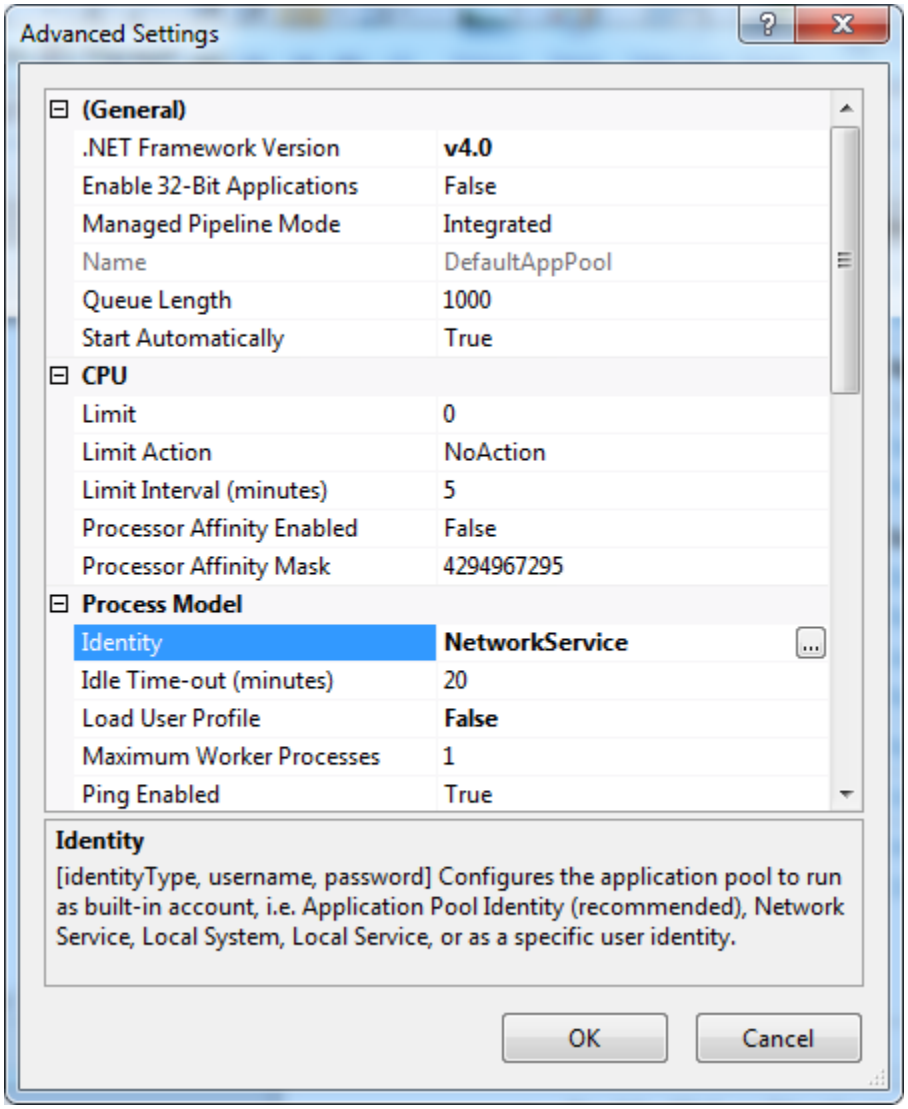
Double-Click on the “DefaultAppPool”



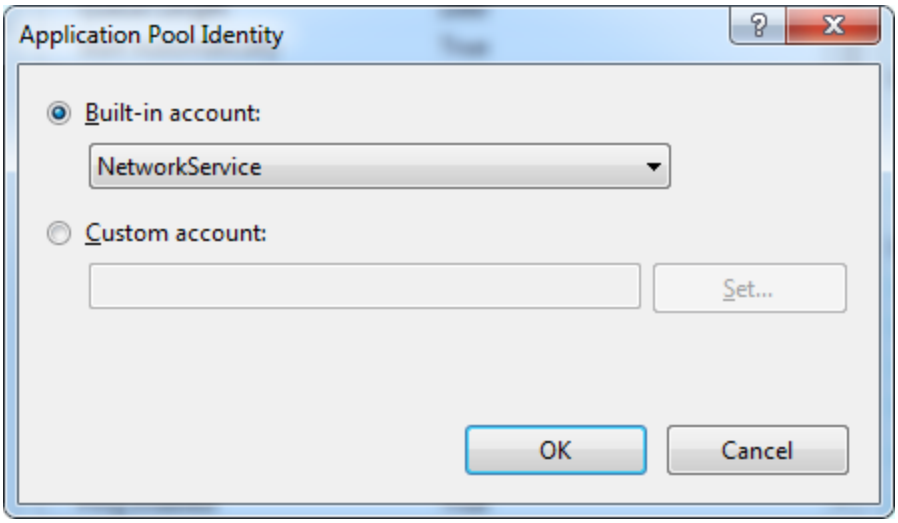
Change the ".NET Framework version" to "v4.0.30319"

Click "OK"

Right-click on "DefaultAppPool", click "Advanced settings..."



Click the "..." in the Identity field

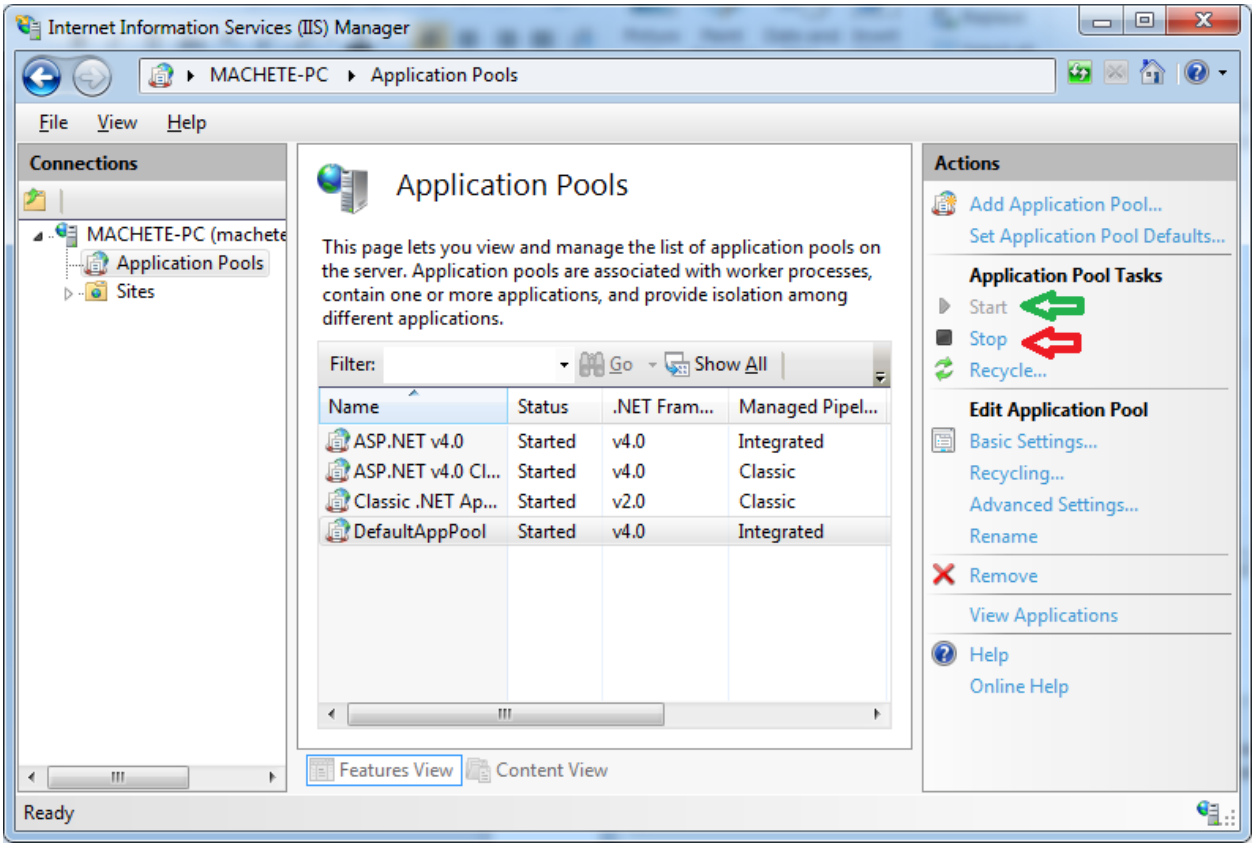


Change the “Built-in account” to “NetworkService”, then click “OK”

Click “OK” to the “Advanced Settings” to close the window.

Click “Stop” and wait for the Application Pool to stop.

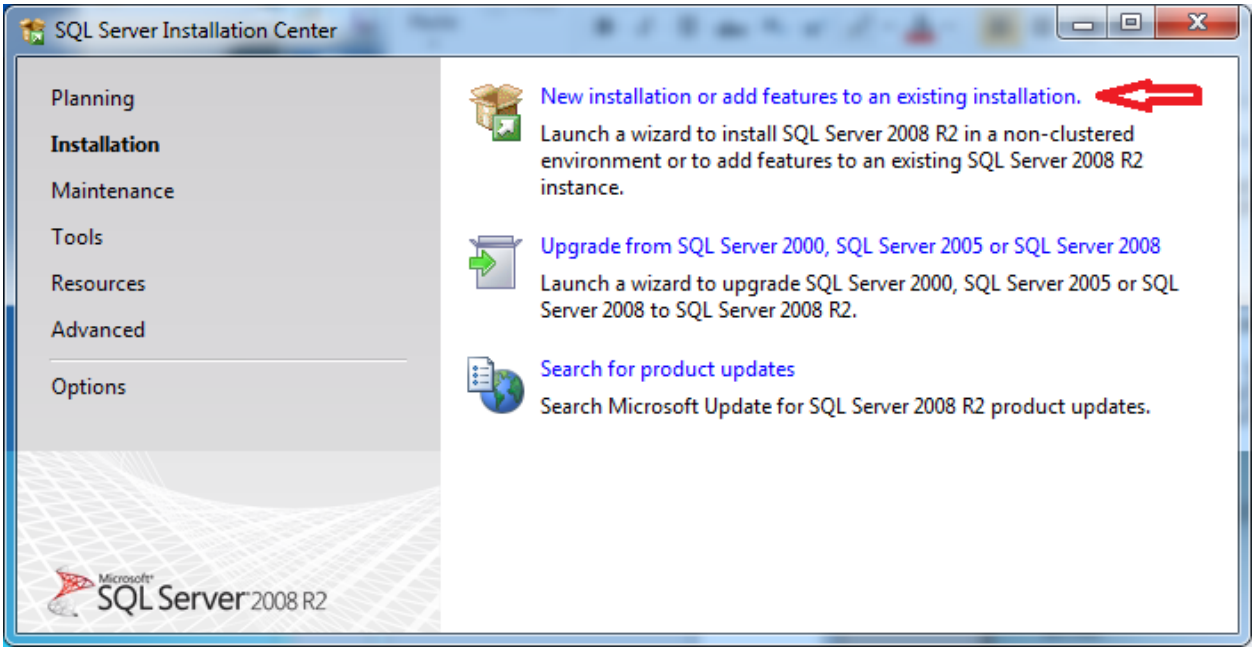
Click “Start” and wait for the Application Pool to start.



2.6 Install SQL Server Express

Down SQL Server Express with Management Tools (choose x86 or x64, based on the OS)http://www.microsoft.com/download/en/details.aspx?displaylang=en&id=23650

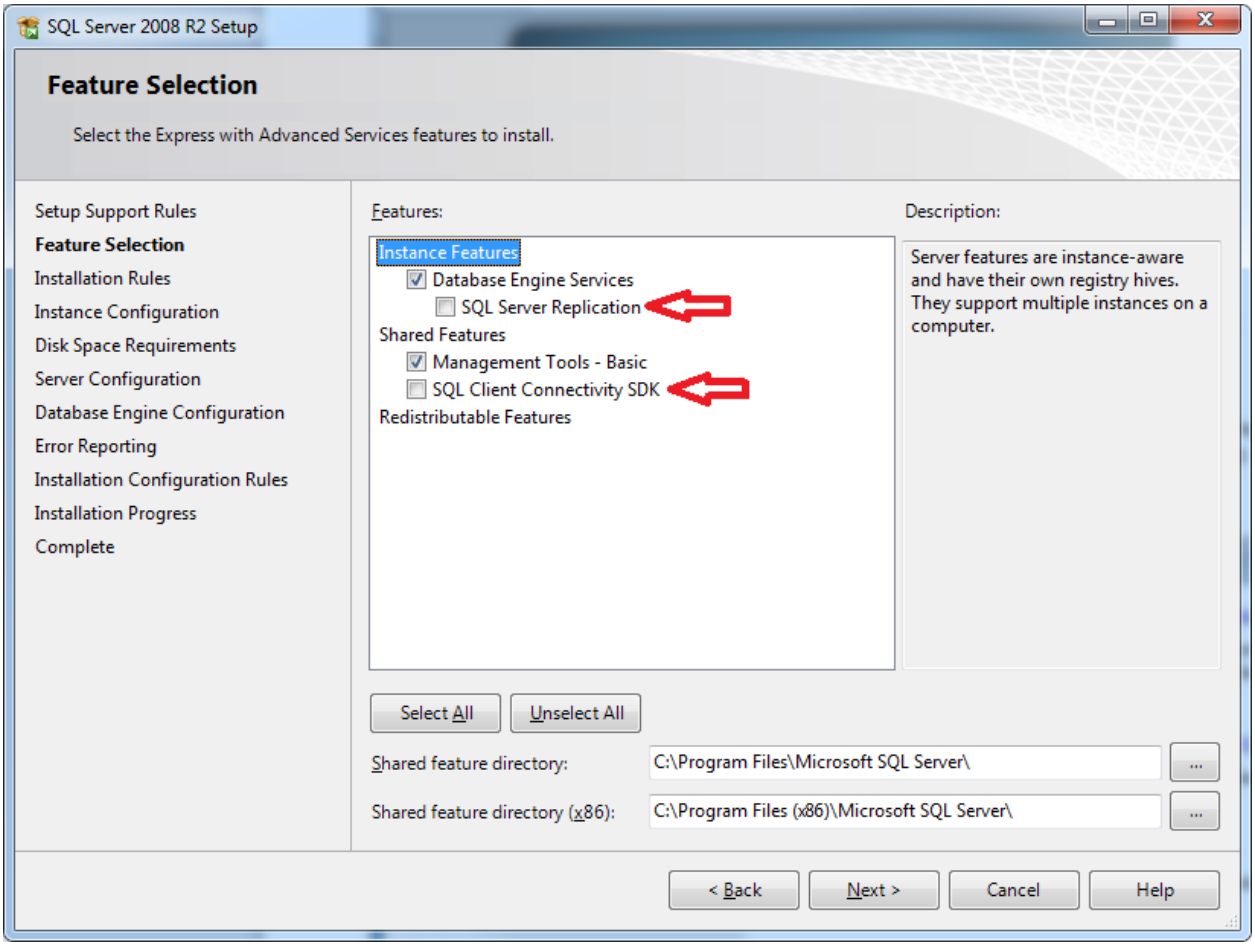
Run the downloaded program



Click on “New installation ... “

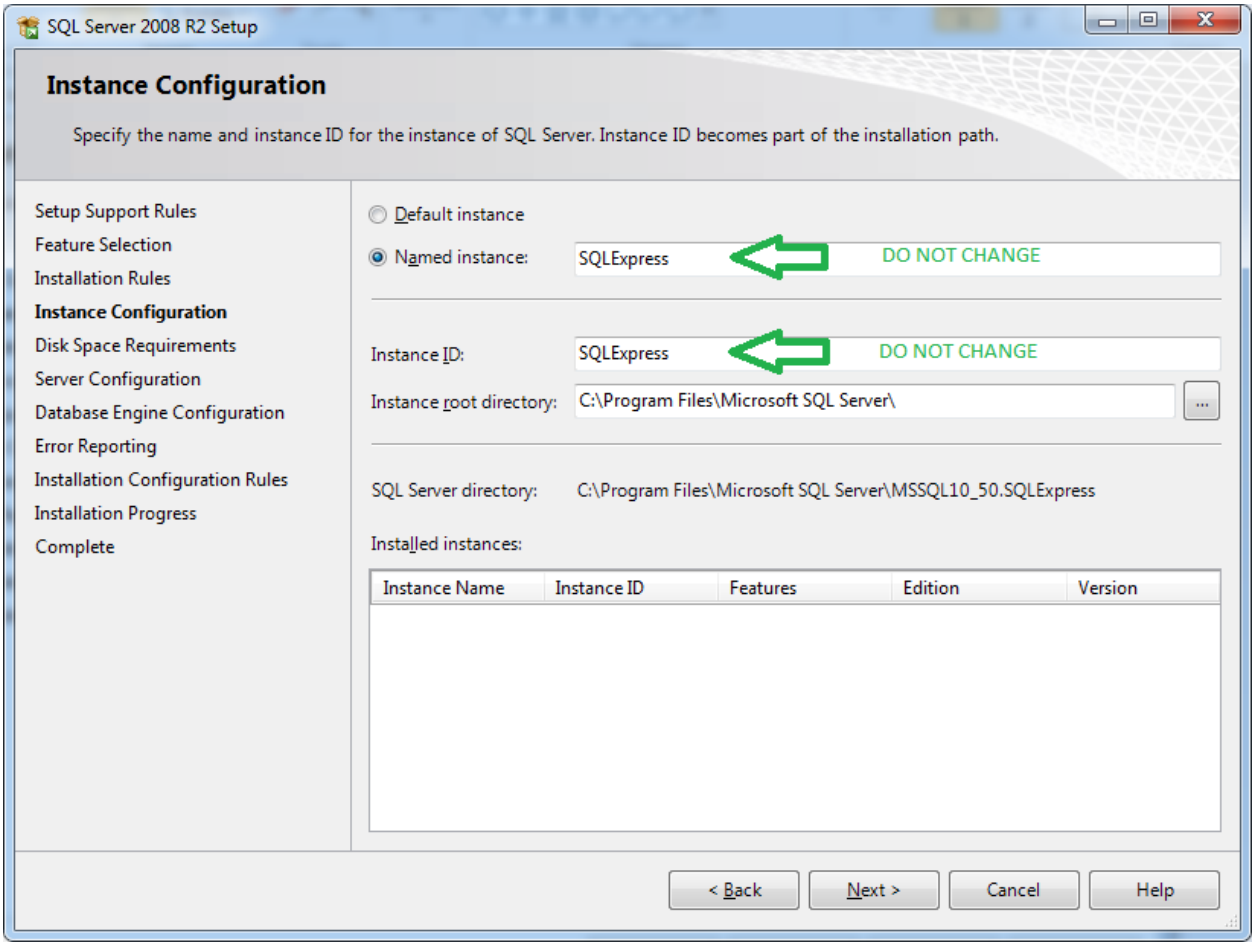
Click “I accept the terms”

Click “Next” -> (several screens will pop up and go away...wait)



Uncheck “SQL Server Replication” and uncheck “SQL Client Connectivity SDK”

Click “Next”

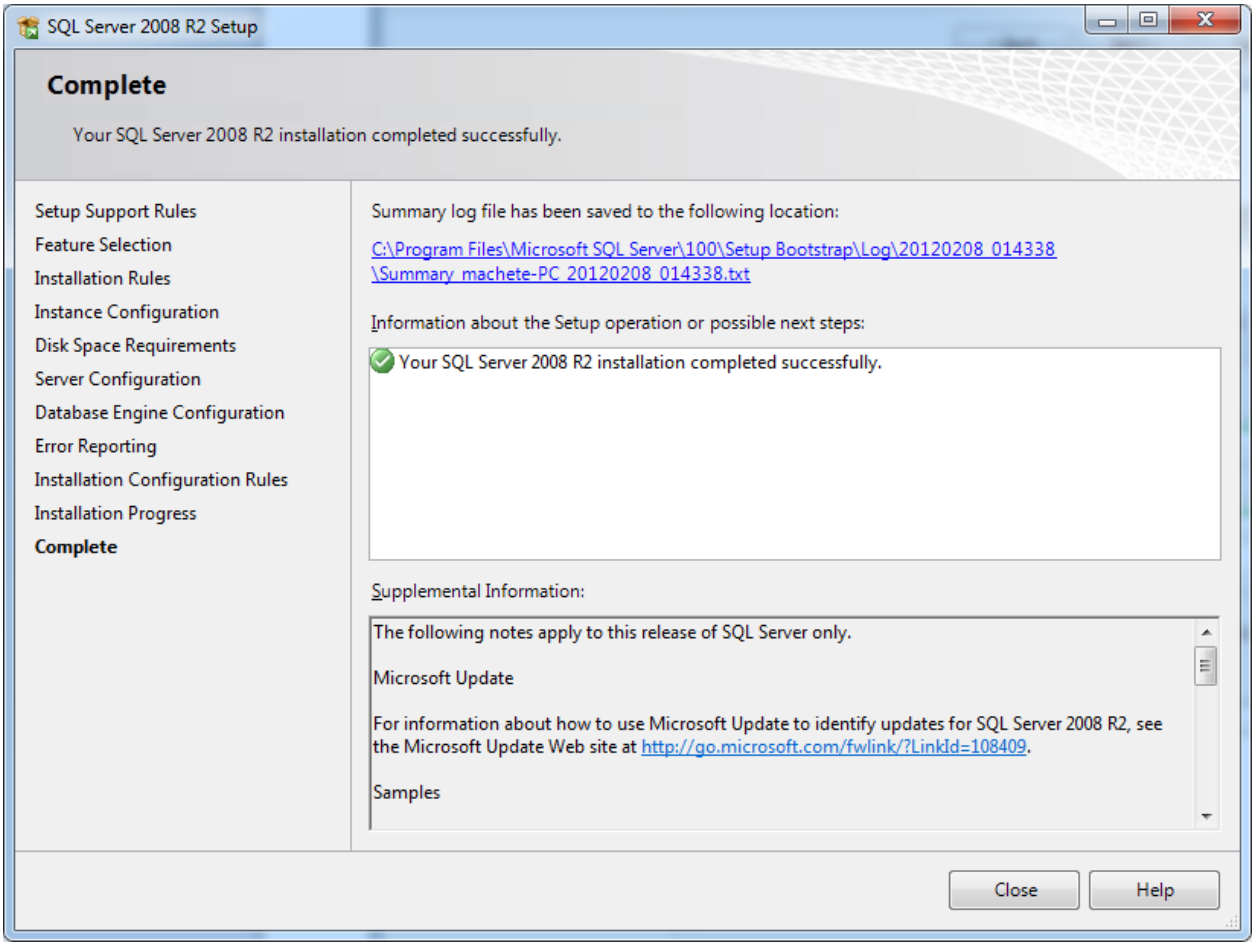


Click “Next” (DO NOT CHANGE the names. Machete is configured to use these names.)

Click “Next” thru the Server Configuration page

Click “Next” thru the Database Engine Configuration page

Click “Next” thru the Error Reporting page. The installation will start.



Click Close

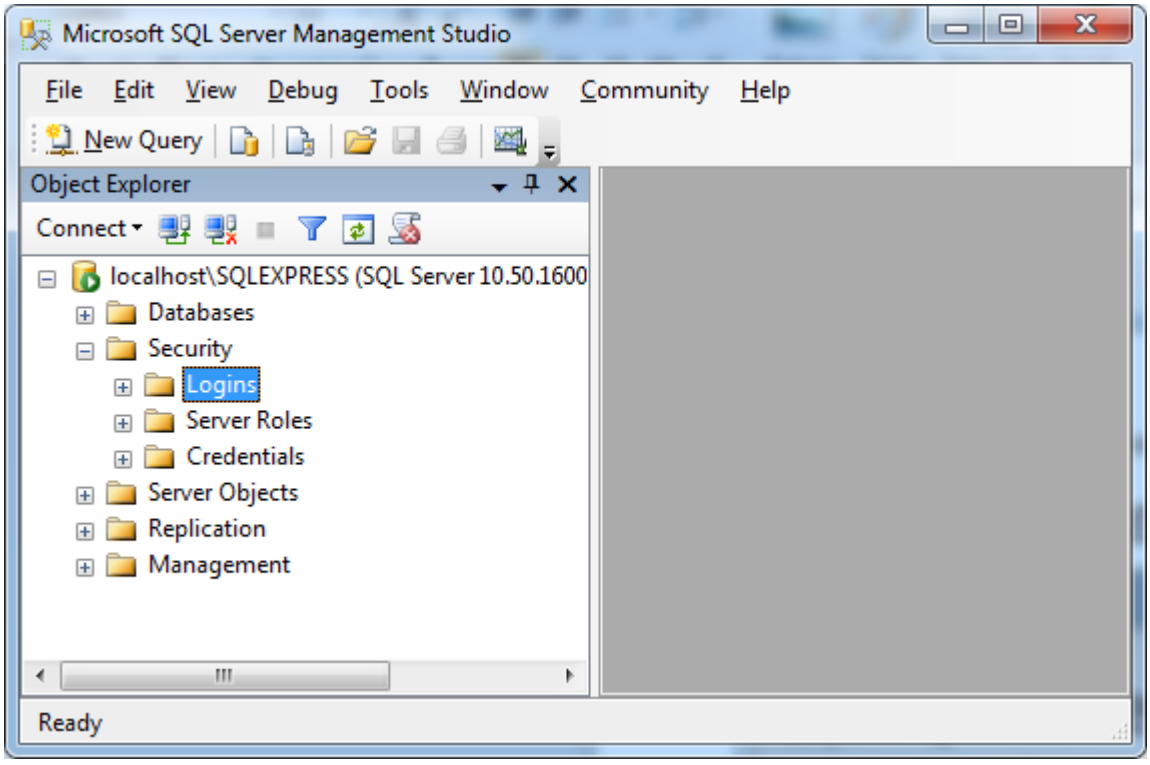
Click the “Red X” in the upper right-hand of the box.

Configure “Network Service” account to access SQL Server

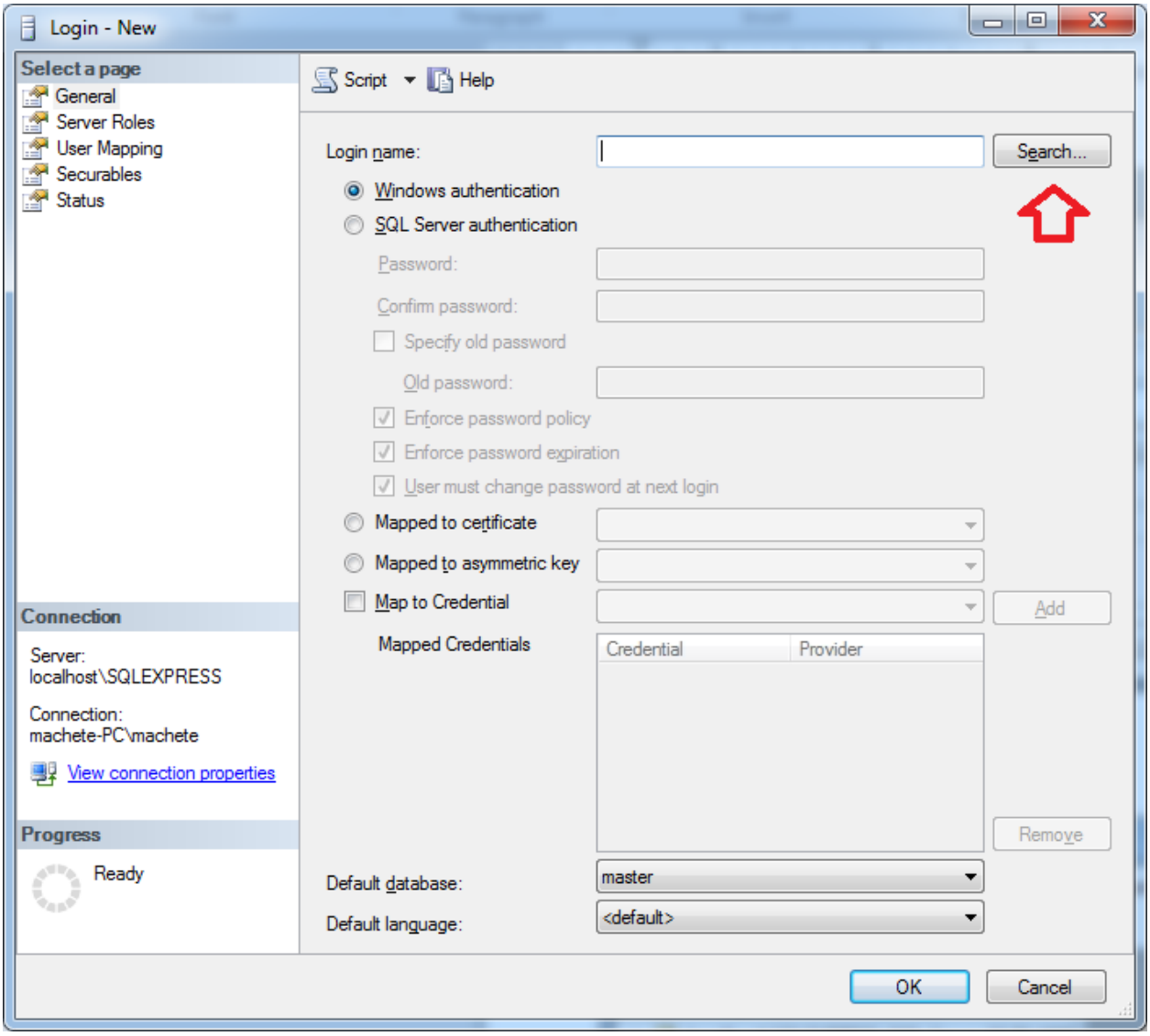
Start -> All Programs -> Microsoft SQL Server 2008 R2 -> SQL Server Management Studio (SSMS)

Set server name to “localhost\SQLEXPRESS”

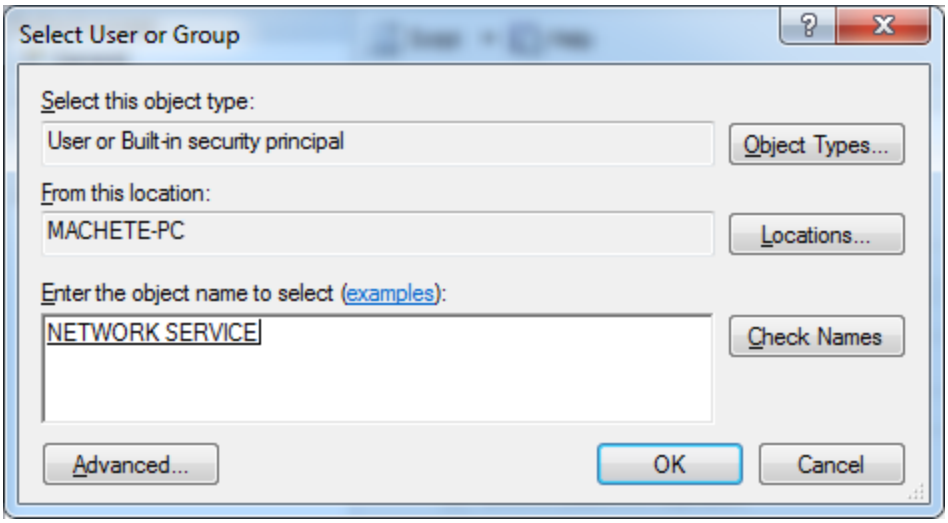
Click “Connect”



Right-click on Logins, then click “New Login...”

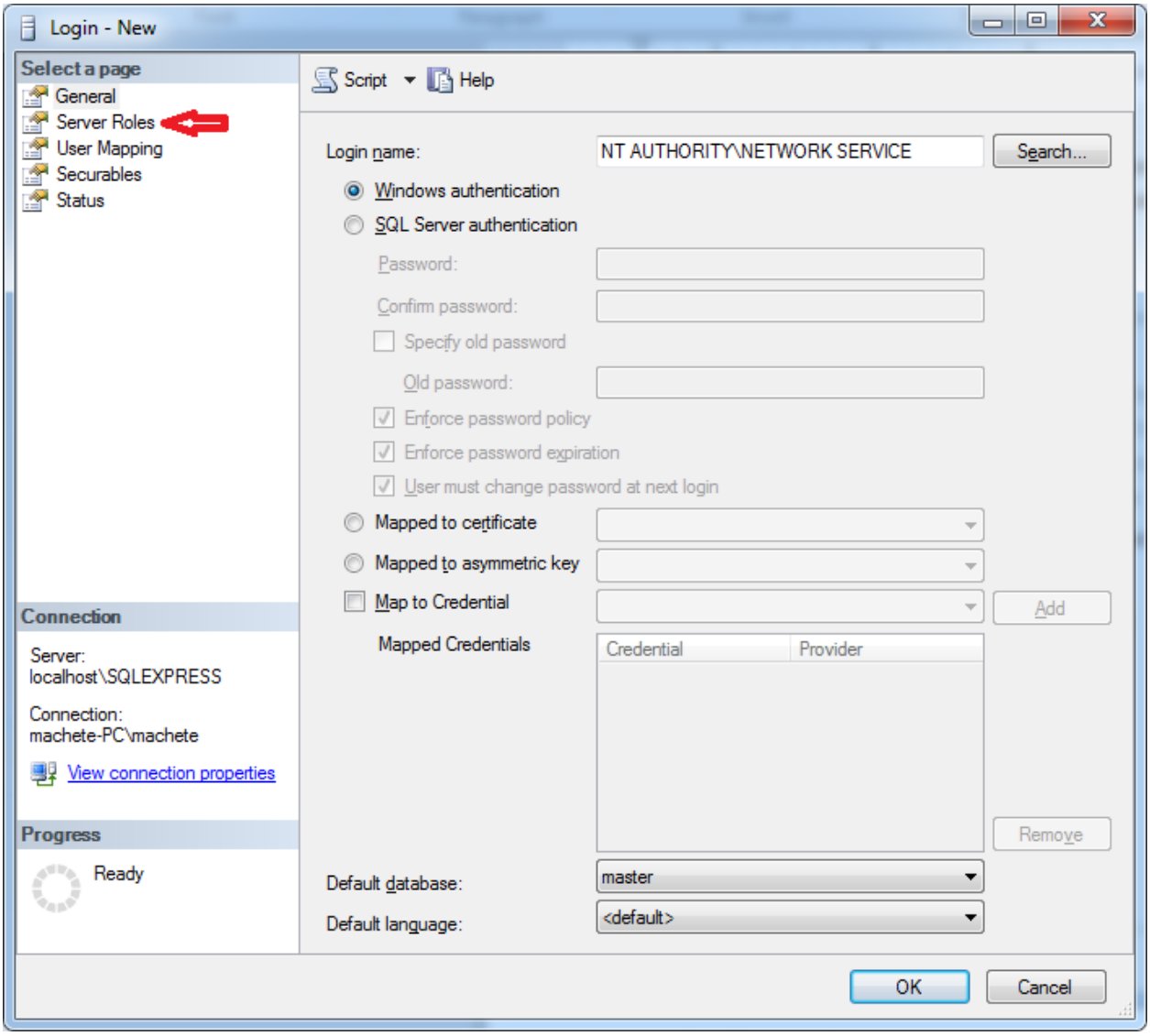


Click “Search...”

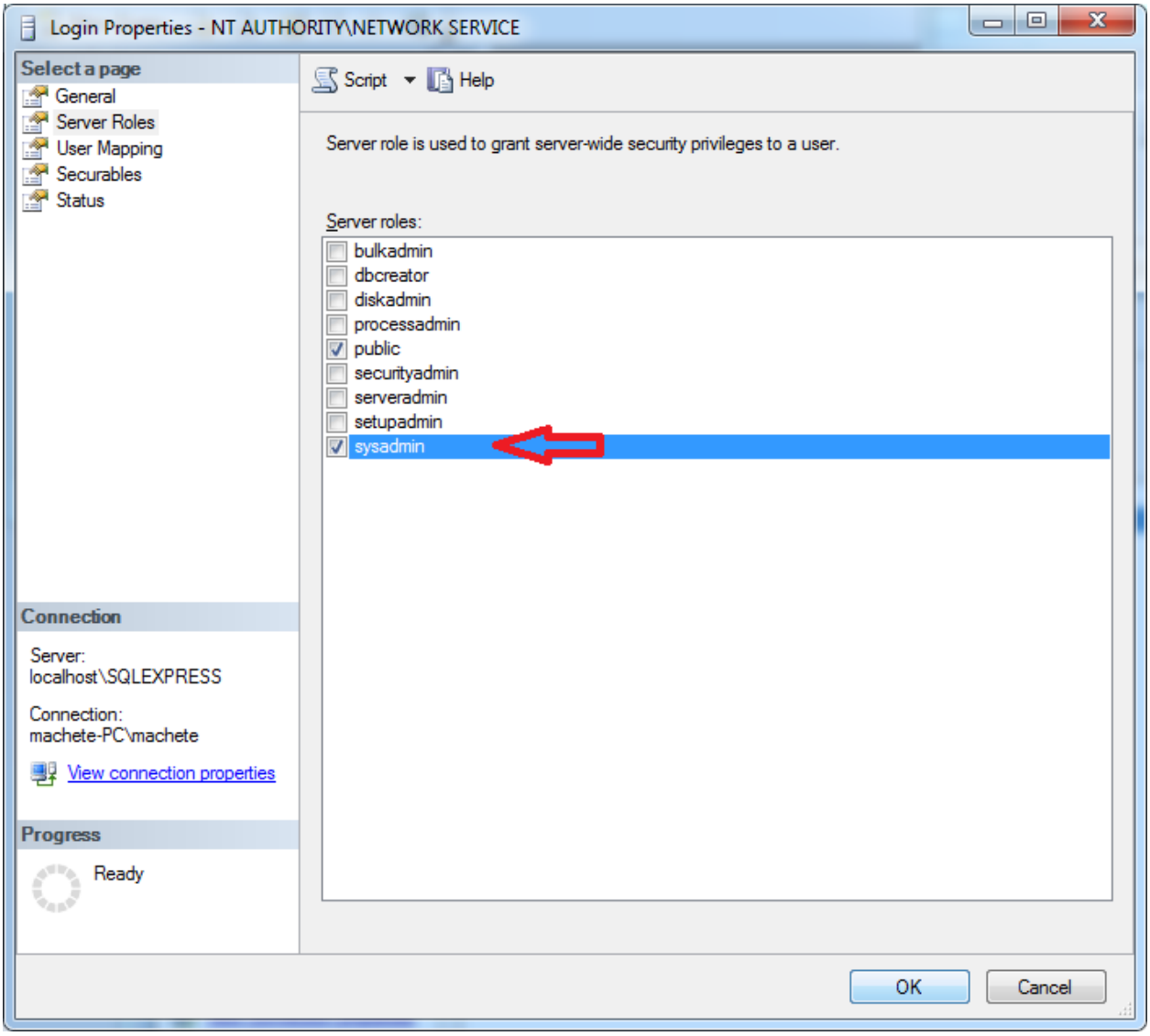


Type “network service” into the test box, then click “Check Names”. You should see the name change and the name become underlined.

Click “OK”



Click “Server Roles”



Click the checkbox next to “sysadmin”

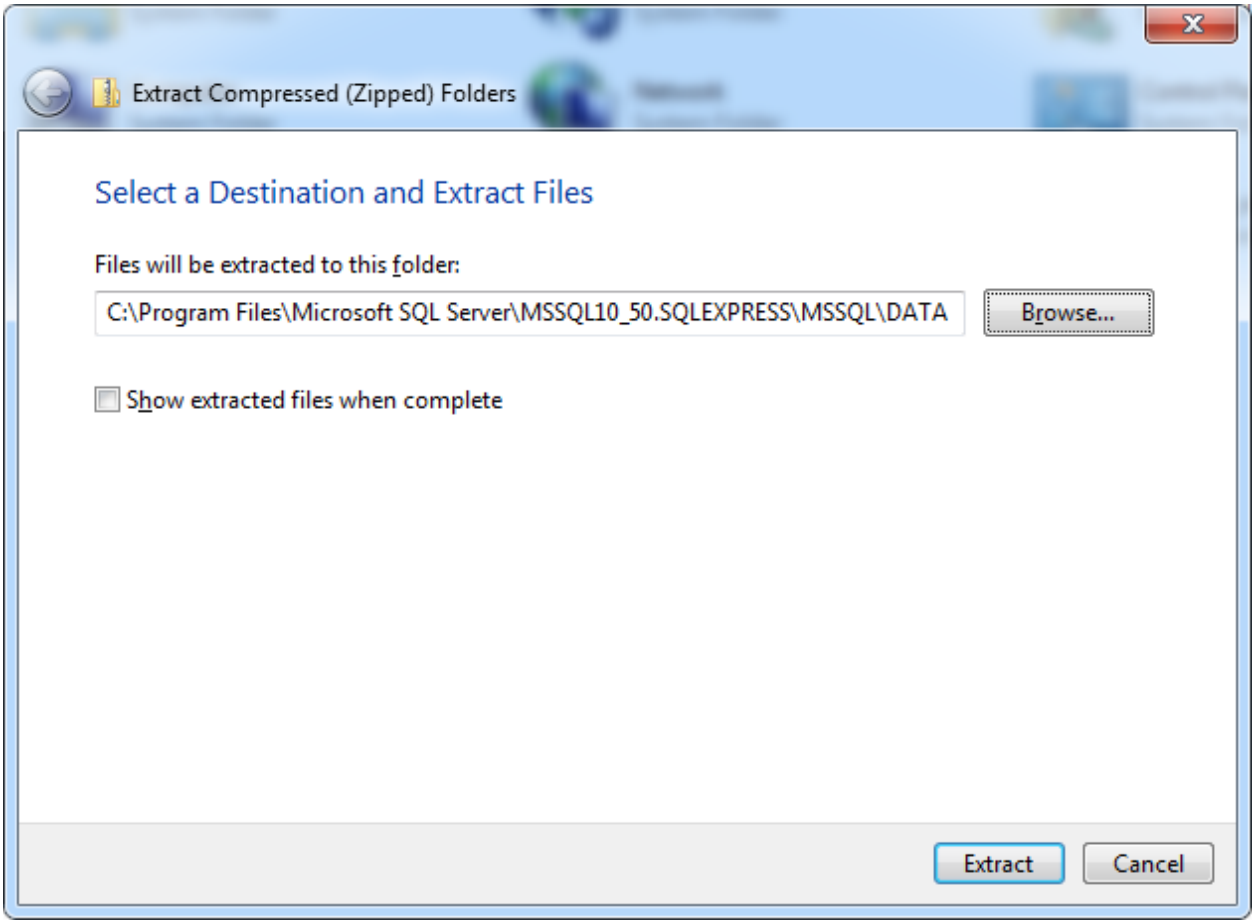
Click “OK”

2.7 Add Machete User and Log database to Machete

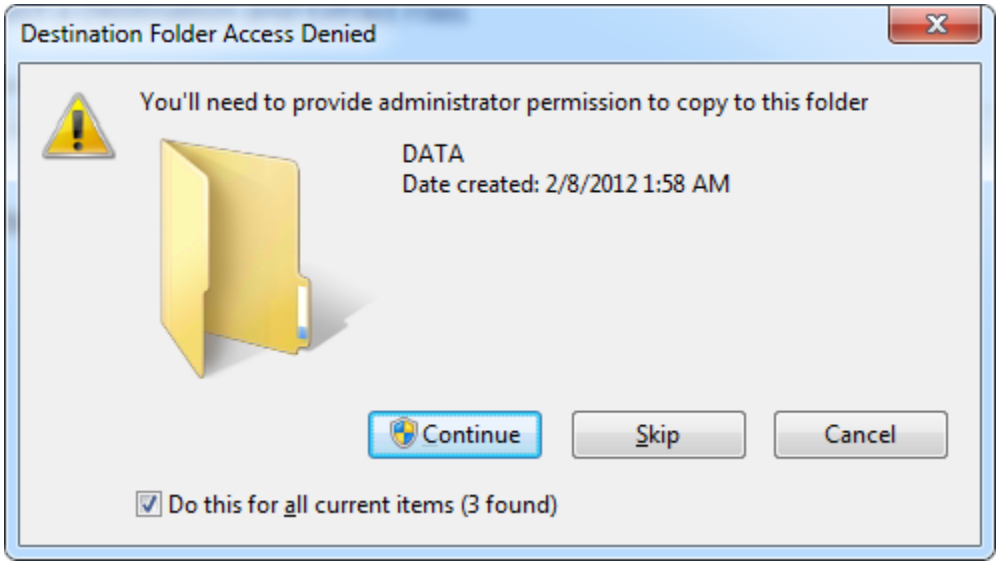
Machete requires three databases to function. Each database contains data for a core function. They are:

- User accounts (aspnetpub.mdf)
- Log information (ELMAHlog.mdf)
- Application information (machete.mdf)

Machete.mdf is created by the application when it first runs. The other two databases must be copied into the correct SQL Server directly and attached to the database server.

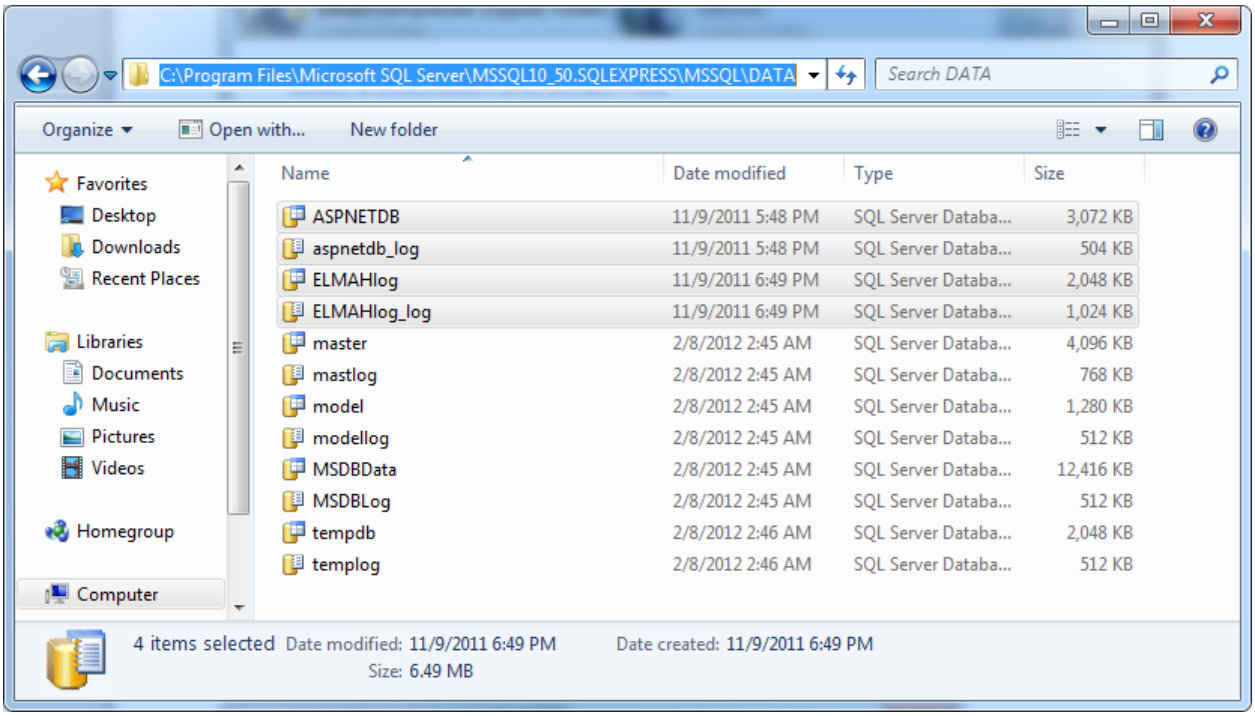


Use Windows Explorer to “Extract All” from the “machete_User_log_databases.zip” file.



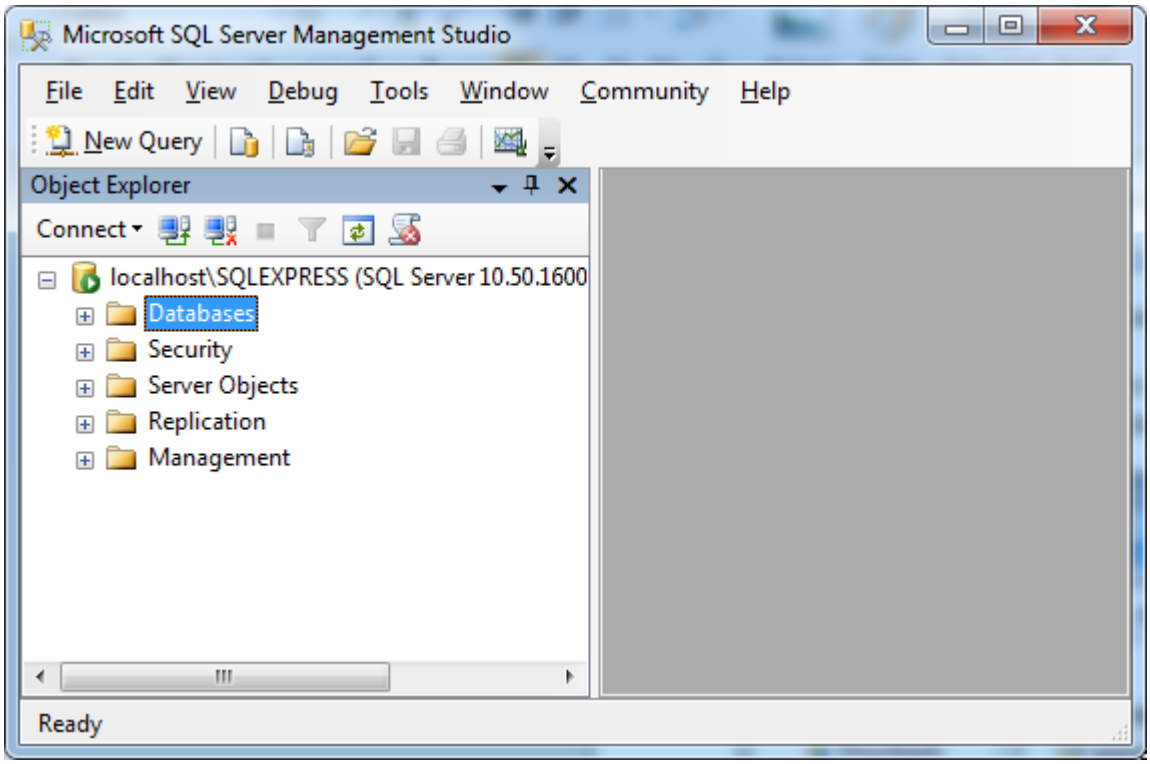
Click “continue” on the security confirmation

Use windows explorer to verify the files are in the correct location. You will need to "confirm" permission to view the directory:

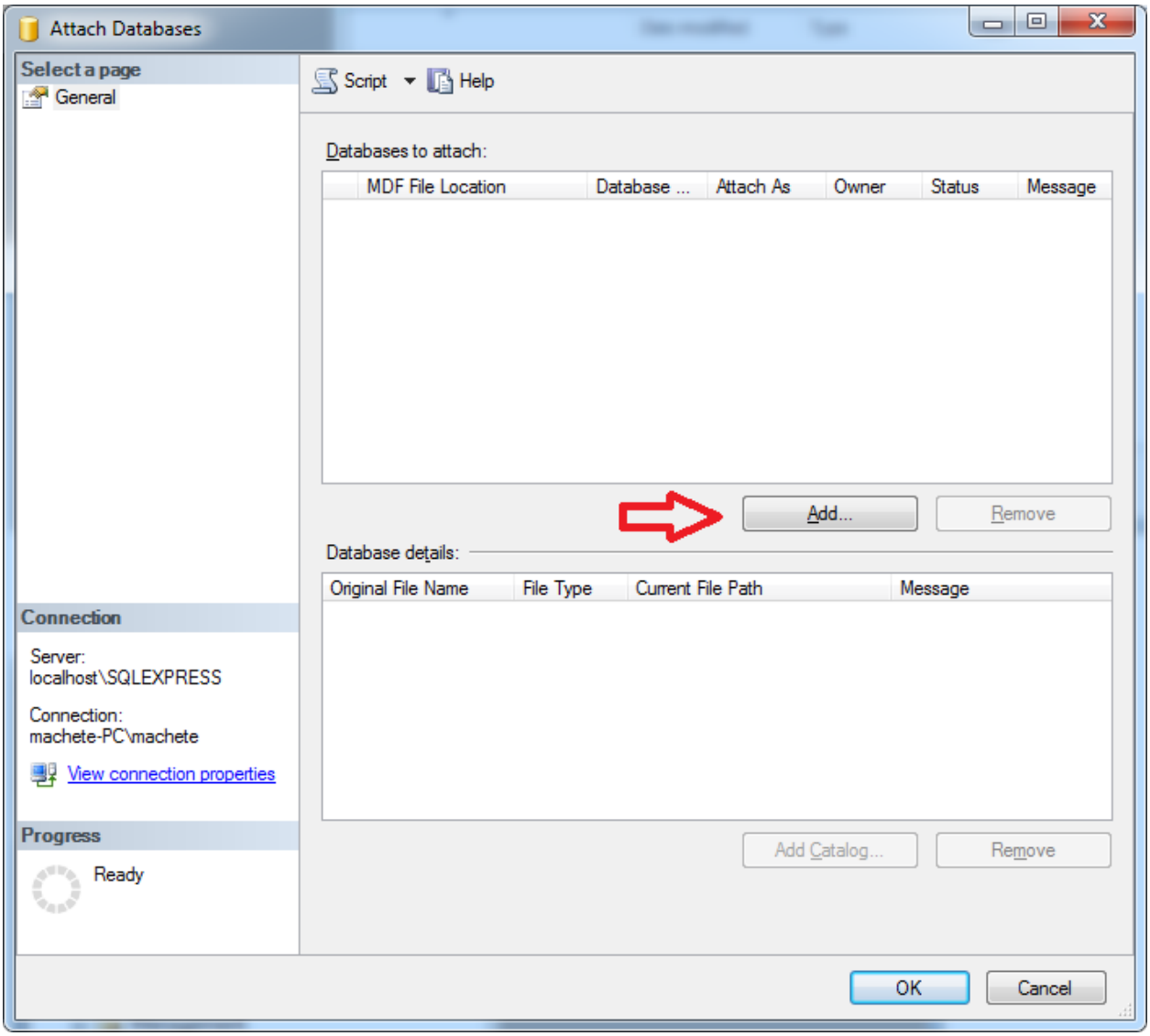


Use SQL Server Management Studio (SSMS) to attach the two databases.

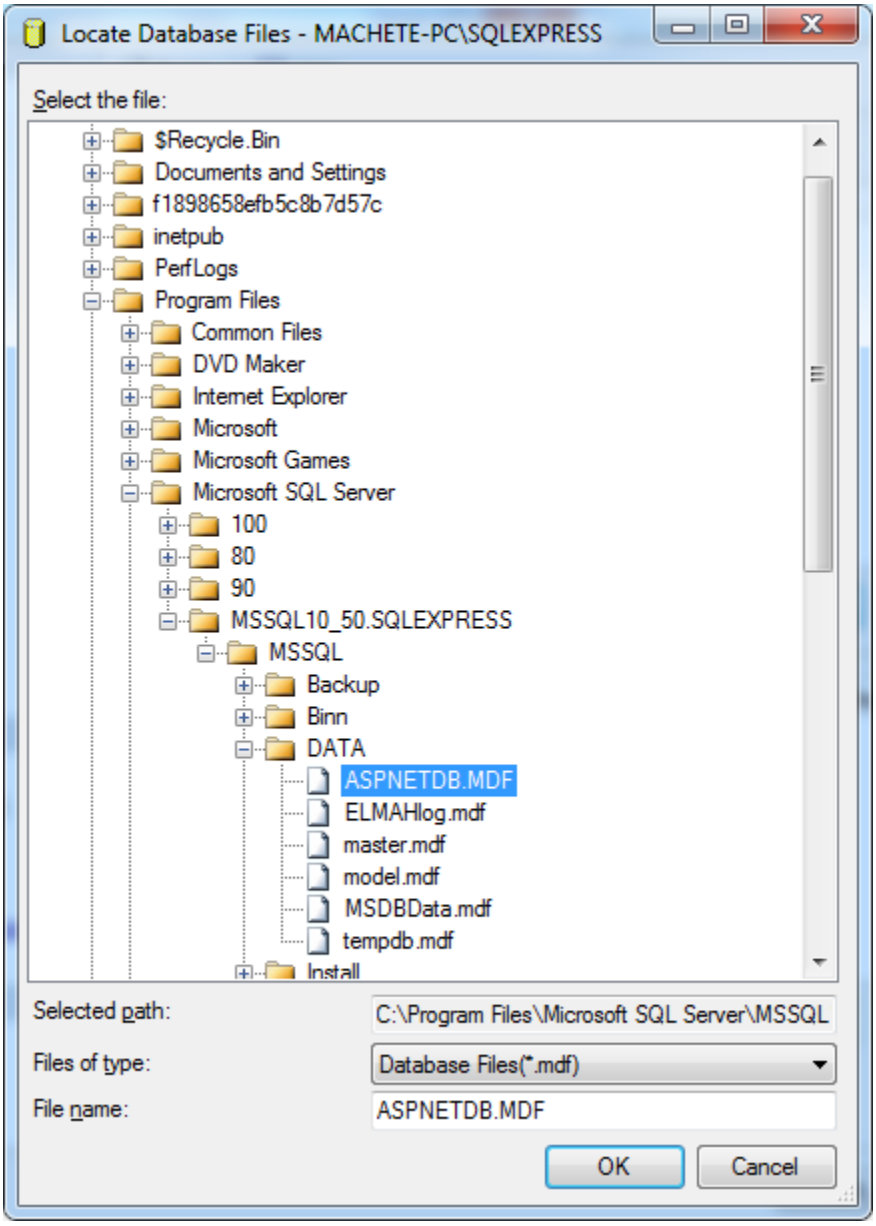
(See steps at the beginning of this section for instructions on logging into SSMS)



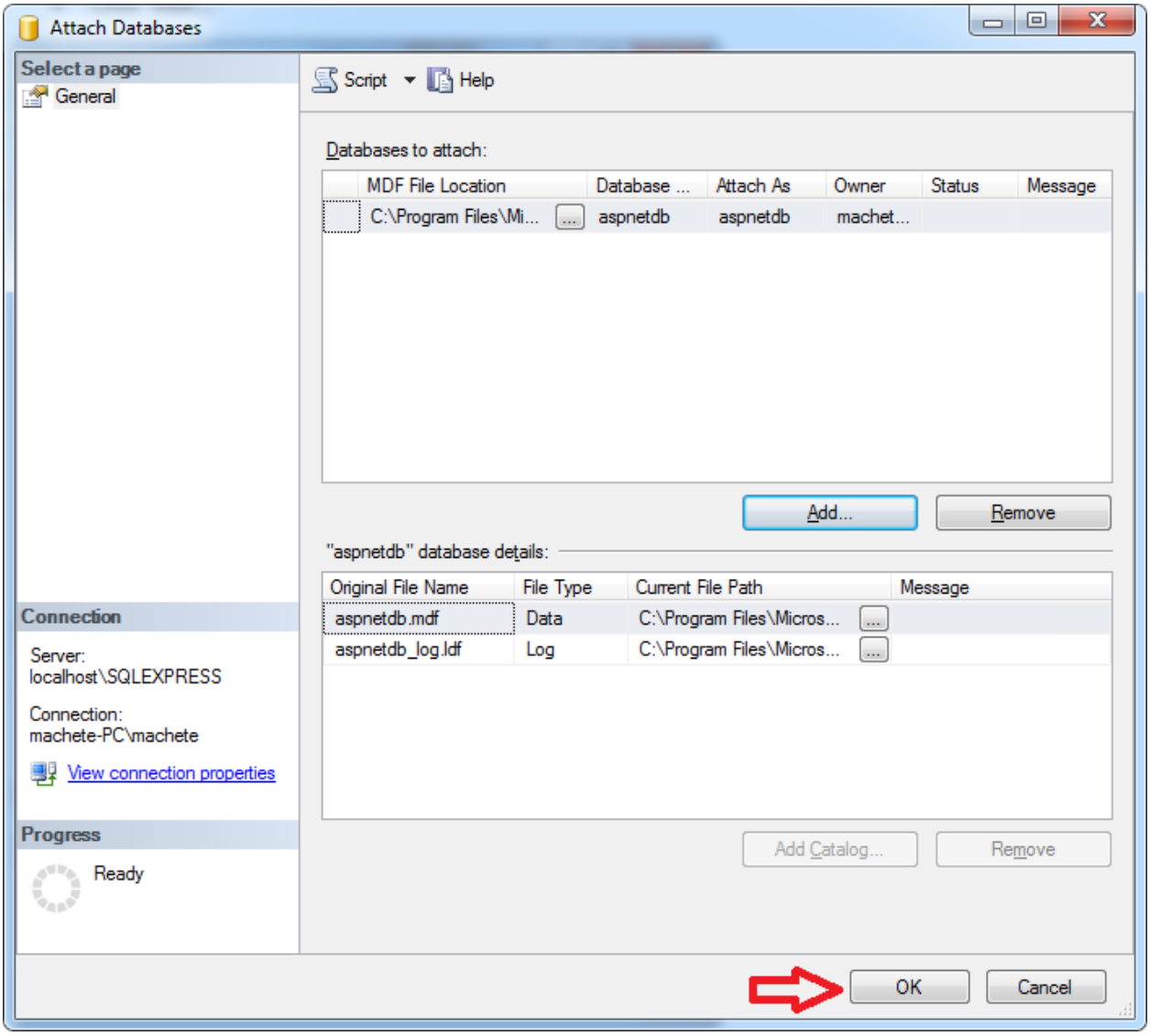
Right-click on “Databases”, click on “Attach...”



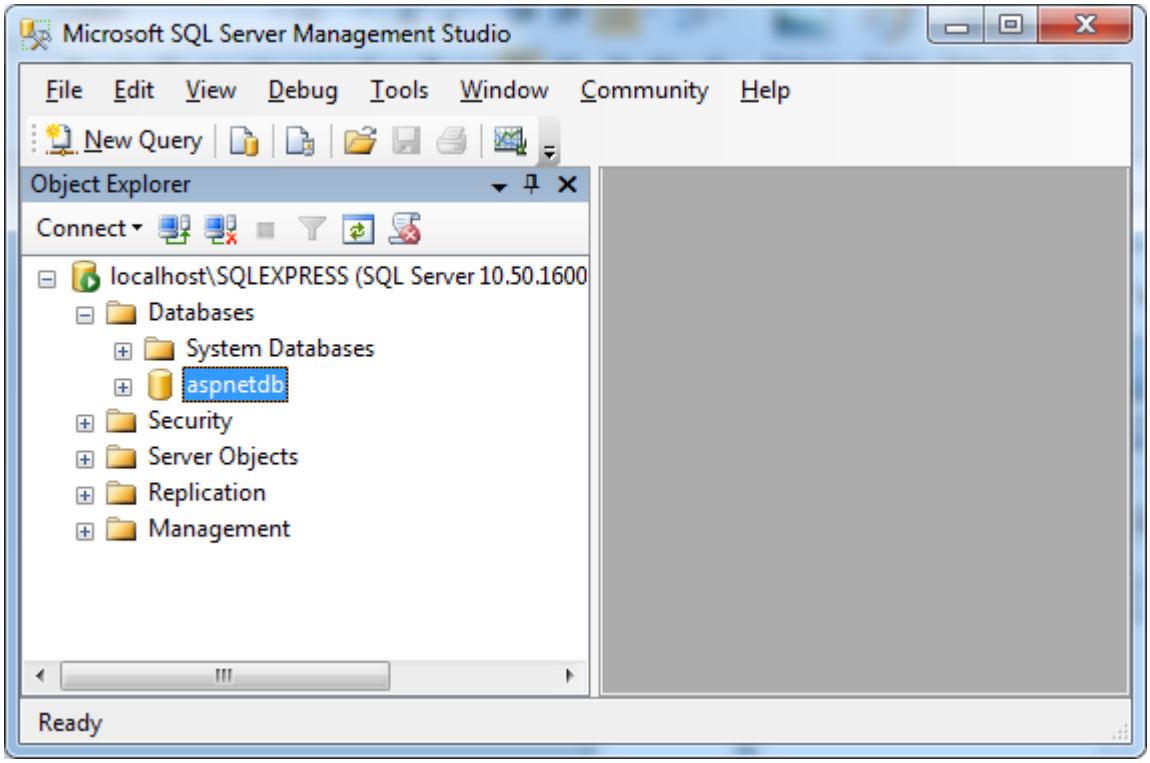
Click “Add...”



Select “ASPNETDB.MDF” and click “OK”



Make no changes. Click “OK”



Verify that the aspnetdb is visible in the “Databases” branch of the Object Explorer

Repeat the same steps for the ELMAHlog.mdf file.

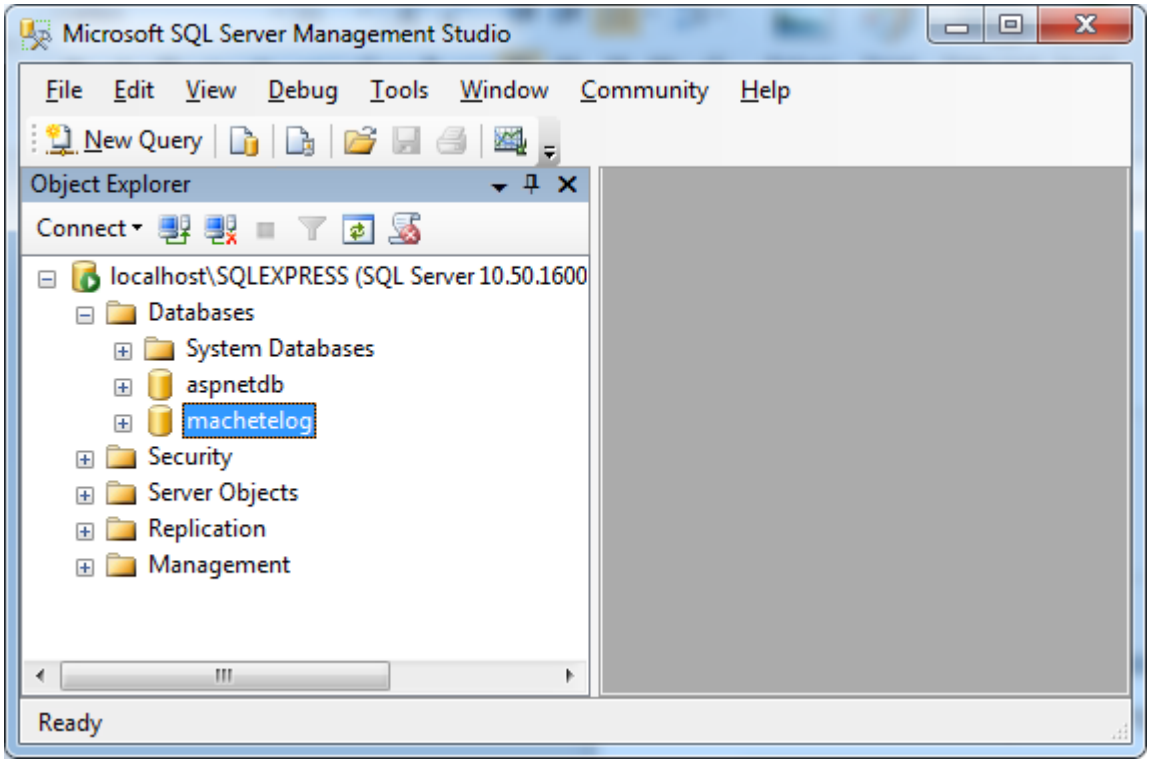
Right-click on “Databases”, click on “Attach...”

Click “Add...”

Select “ELMAHlog.MDF” and click “OK”

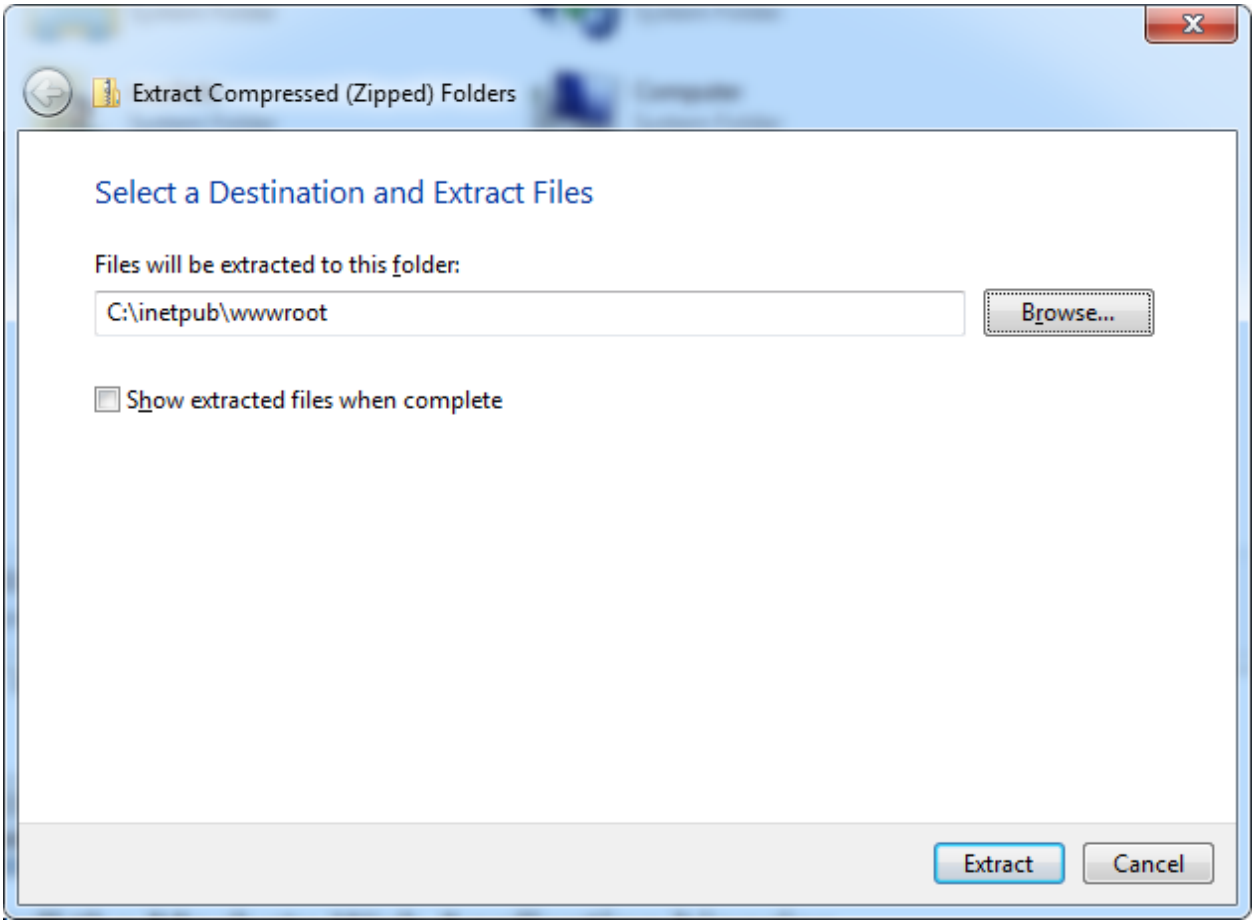
Make no changes. Click “OK”

Verify that the machetelog is visible in the “Databases” branch of the Object Explorer

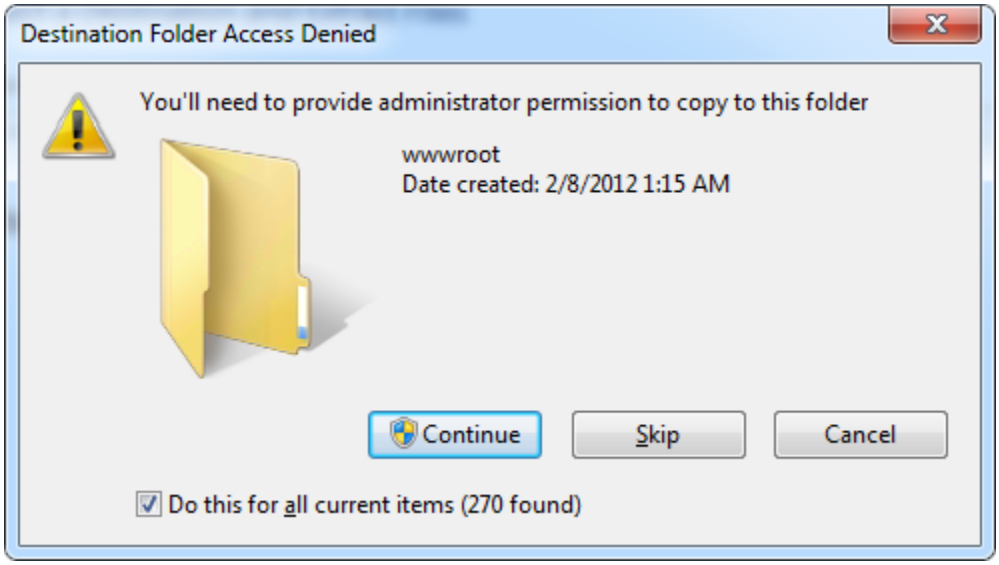


2.8 Install the Machete Web Application binaries

Get a current copy of the Machete web binaries



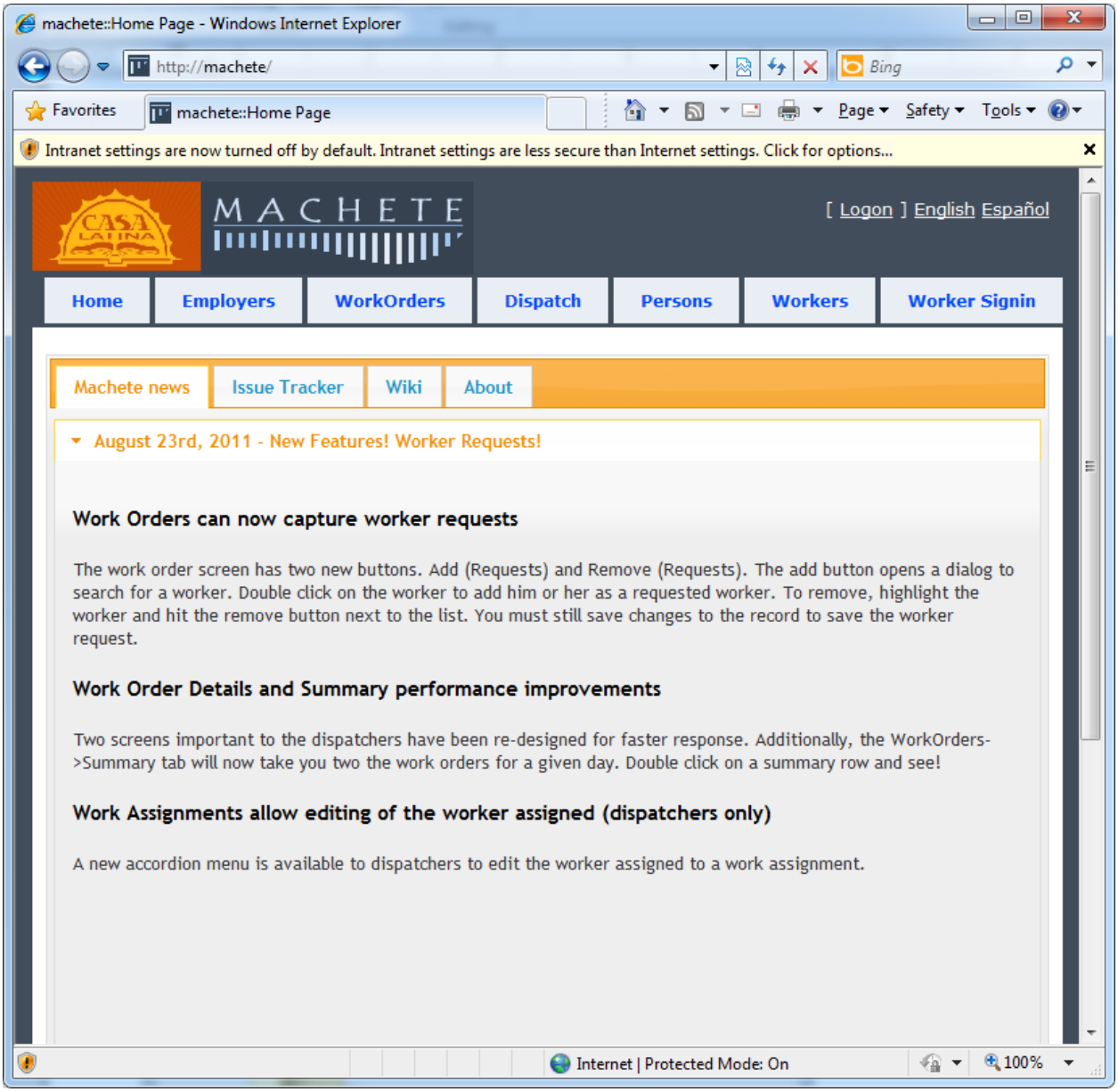
Extract the Machete binaries from the supplied ZIP file (machete-2012.xx.xx.zip)



Confirm security permission

Use Internet Explorer (or Firefox, or Chrome) to verify that Machete works

http://machete/

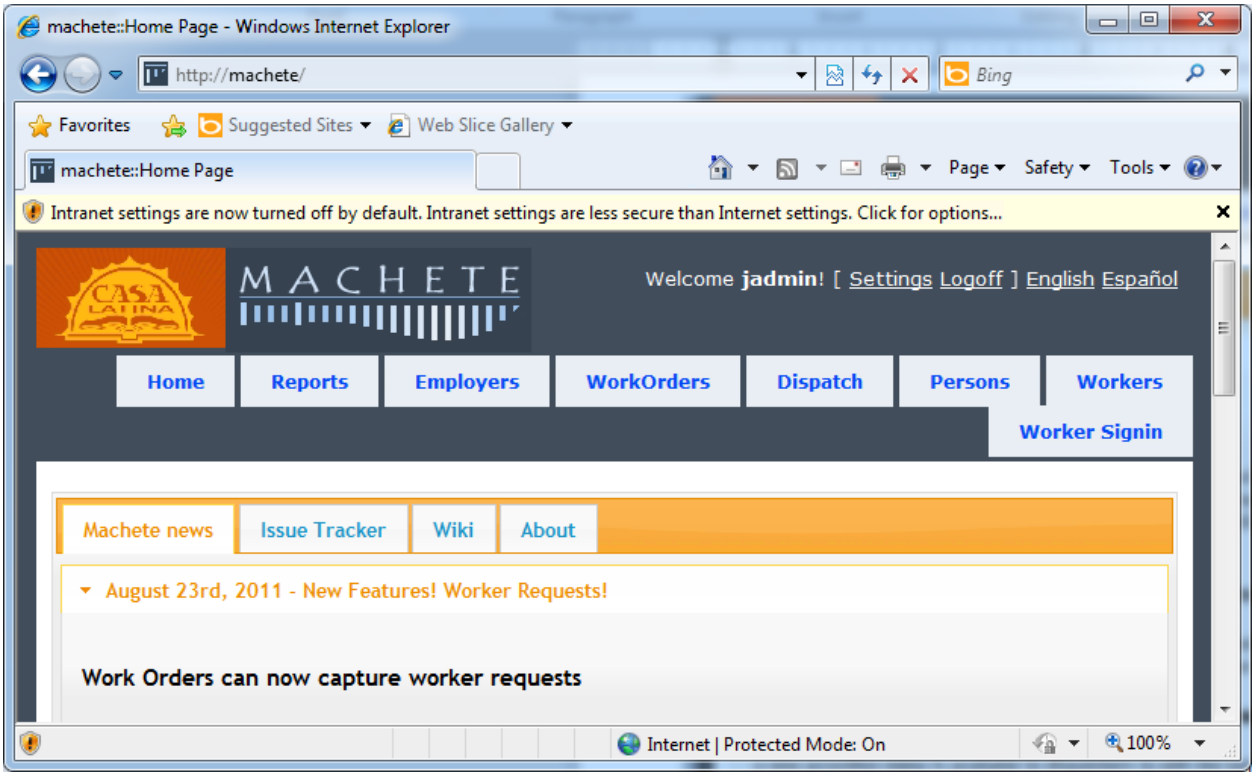


Verify that users can login successfully

click “Logon” in the upper right corner

use jadmin for the account and machete for the password

If you successfully logon, then everything is configured correctly



2.9 Install Google Chrome and Internet Explorer 9

Windows 7 comes with Internet Explorer 8 (IE8). You must upgrade to IE9, because Machete requires javascript and the IE8 defaults block javascript by default.

2.9.1 Internet Explorer 9

http://windows.microsoft.com/en-US/internet-explorer/products/ie/home?WT.mc_id=MSCOM_EN_US_DLC_FAMILIES_121LMUS(

(Be sure to uncheck the box that says "I would also like Bing and MSN defaults")

2.9.2 Google Chrome

https://www.google.com/chrome

Make Google Chrome the default browser. Use Google chrome for the demonstration. It is faster and works perfectly from the installation.

CHAPTER

THREE

MAINTENANCE TASKS

3.1 Machete database backup

3.2 Weekly class creation

To support collecting attendance for regularly scheduled activities, such as language classes, Machete needs to create Activity Records automatically. At this time, Machete uses the Windows Server's Task Scheduler to read a comma-separated-value file (CSV) of default classes and creates them automatically. The Task Scheduler executes a powershell script, which parses the CSV file and and creates new Activities directly in the Machete database using T-SQL commands. The powershell script, addWeeklyScheduledClasses.ps1 , is designed to execute every Sunday. It relies on permissions of the executing process to authenticate it to Machete's database, and assumes they are on the same server.

3.2.1 Creating the Task Scheduler job

The system administrator of the Machete server will need to copy the powershell script and the default classes CSV file to an appropriate directory on the Machete server and schedule its execution in the Task Scheduler.

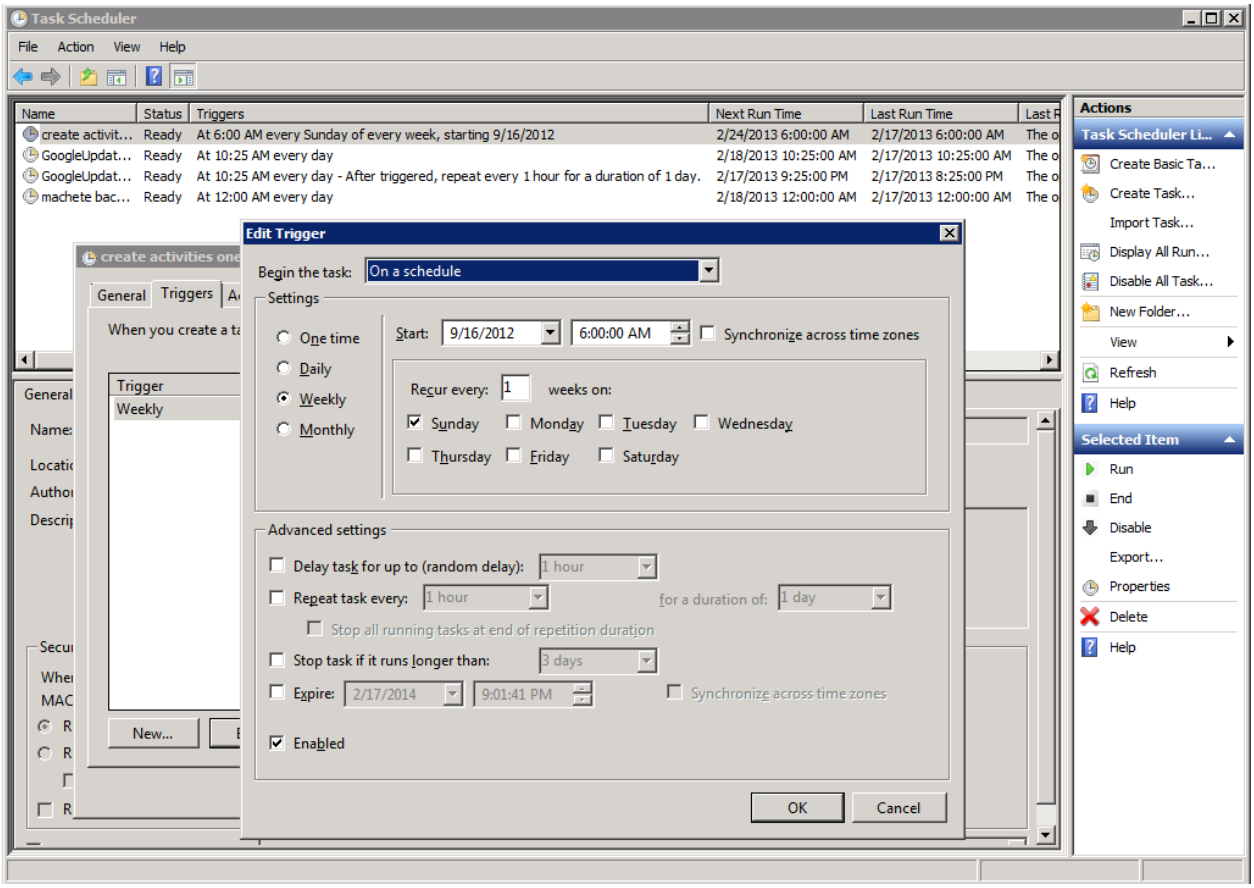


Figure 3.1: Windows Server Task Scheduler

Scheduling the task is a common system administrator task and will not be covered in detail here. It is important to know that using complete paths when referencing the powershell script and the CSV file will solve most execution problems. The following is an example of the action parameters of a task that executes the powershell script:

Actions -> Edit Action

Program/Script:

%SystemRoot%\system32\WindowsPowerShell\v1.0\powershell.exe

Optional Arguments:

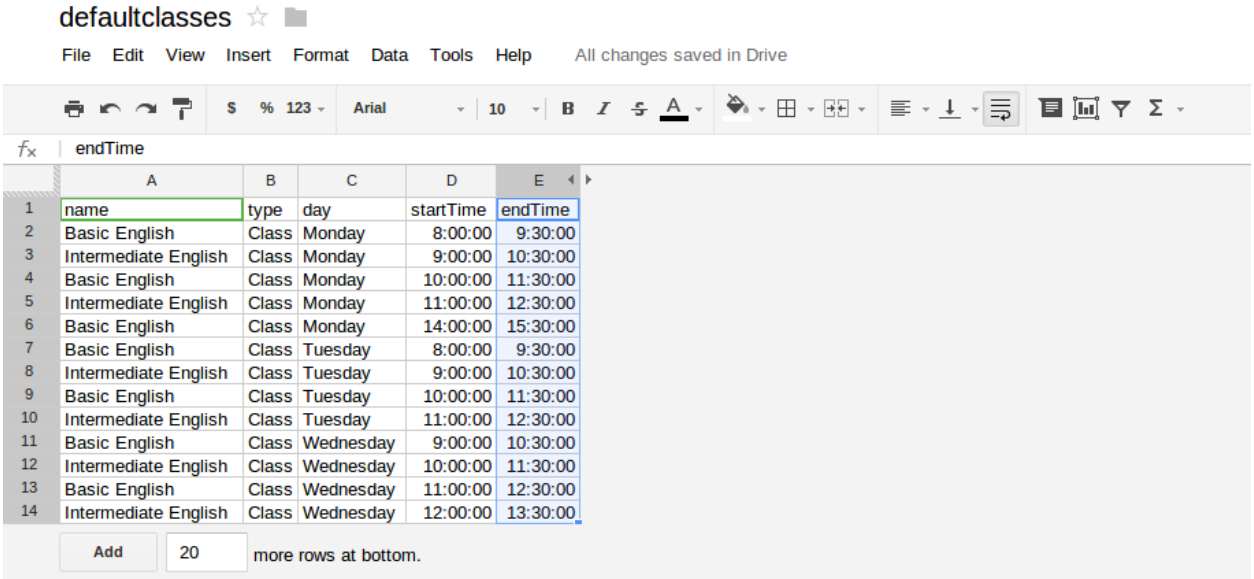
-file "c:\archives\powershell_scripts\addWeeklyScheduledClasses.ps1" "c:\archives\powershell_scripts\defaultClasses.csv"

3.2.2 Creating the CSV file

Creating or modifying the CSV file is fairly simple, but there are some dependencies that must be understood. There are 5 columns in CSV file. The first row must be a header row, and the powershell script is case-sensitive, so the names in the header must match the following list exactly:

- name
- type
- day

- startTime
- endTime



	A	B	C	D	E
1	name	type	day	startTime	endTime
2	Basic English	Class	Monday	8:00:00	9:30:00
3	Intermediate English	Class	Monday	9:00:00	10:30:00
4	Basic English	Class	Monday	10:00:00	11:30:00
5	Intermediate English	Class	Monday	11:00:00	12:30:00
6	Basic English	Class	Monday	14:00:00	15:30:00
7	Basic English	Class	Tuesday	8:00:00	9:30:00
8	Intermediate English	Class	Tuesday	9:00:00	10:30:00
9	Basic English	Class	Tuesday	10:00:00	11:30:00
10	Intermediate English	Class	Tuesday	11:00:00	12:30:00
11	Basic English	Class	Wednesday	9:00:00	10:30:00
12	Intermediate English	Class	Wednesday	10:00:00	11:30:00
13	Basic English	Class	Wednesday	11:00:00	12:30:00
14	Intermediate English	Class	Wednesday	12:00:00	13:30:00

Figure 3.2: default classes CSV file (in Google Drive)

name

The name field is the name of the Activity in Machete. The script looks for an ActivityName configuration record based on the value in this field.

type

The type field is the name of the Activity Type in Machete. The script looks for an ActivityType configuration record based on the value in this field.

day

The day of the week (in English) that the default activity is to be created. Values here should be Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, or Sunday.

startTime

This is the time that the default activity will start. It is in 24-hour military time.

endTime This is the time that the default activity will end. It is in 24-hour military time.

CHAPTER

FOUR

ONLINE ORDER FORMS

4.1 Overview

Machete offers the ability to receive work orders from other systems, such as public web sites. Orders from online systems are flagged as originating from an on-line system, then added to the Machete database like any other order originating from the user interface. This allows organizations to use an existing web site to capture work requests and forward them directly to Machete, or to integrate Machete into an existing Service Oriented Architecture (SOA) using HTTPS requests.

4.1.1 Security Concerns

Due to the nature of computer networks, when creating applications that receive business data from the Internet, precautions must be taken to protect against unwanted spamming or malicious hacking. To address this, Machete uses public key certificates (certs) to ensure that only authorized systems can create orders automatically. In simple terms, a cert is created for an external system, then installed in Machete's web server configuration. When a client attempts to connect, it must offer a cert that Machete knows to trust, or the connection will be ignored.

Any 3rd-party system can be configured to forward orders to Machete, provided that the system can offer the cert to Machete when it initiates the communication. Such functionality is common for modern web browsers and web automation languages (Python, Perl, C#).

4.1.2 Order Form Design

Most modern websites use a web framework such as WordPress or Drupal. These frameworks offer a large variety of plug-ins that provide common functionality to a web site developer, such as forms, blogs, and RSS feeds, and Machete takes advantage of these functions. Machete relies on the website's framework to create a form that captures the necessary information for the work order, and to store the order in the website's database. Once recorded, Machete will find the order through the use of scripts installed on the website's server, and forward order to Machete.

Machete also leverages the website framework for email notification. Most frameworks allow for email verification when a form is submitted. Machete uses this feature to confirm the order with the employer submitting the request by sending the employer an electronic receipt of the submission. The Machete scripts are then responsible for getting the order to the Machete system. if the script encounters a problem sending the order to Machete, it emails an alert to the administrator, which is defined in script configuration file.

4.2 Drupal 7 Add-On

The Machete add-on for Drupal consists of a series of scripts and scheduled tasks that interact with standard Drupal modules. The setup and maintenance of Drupal itself is beyond the scope of this document, which assumes that Drupal

is installed and configured properly.

4.2.1 System Pre-requisites

A Mail Server

The Machete script saves errors to a log file and sends email notifications when an error occurs. The script assumes that an email service exists on the web server and is available for the script to use. Configuring the email server is beyond the script of this document.

The Machete script uses the Python smtplib to interact with the mail server. It has been tested using a local postfix mail server, but should also work other SMTP servers, such as Gmail. Documentation on smtplib can be found here: http://docs.python.org/2/library/smtplib.html

Python Interpreter & Modules

Python is the scripting language used for the Machete scripts on the website's server. Python 2.x will need to be installed on the web server and available to the user account executing the Machete scripts. Additionally, the scripts will need the following Python modules:

PIP Installer

PIP is a utility for installing Python packages automatically. You will need administrator privileges on the web server to install it. To do so, execute the following from a terminal window:

```
sudo apt-get install python-pip python-dev build-essential
```

If apt-get is not available, PIP can be found here: http://www.pip-installer.org/en/latest/

Once PIP is installed, use it to upgrade itself to the latest version:

```
sudo pip install –upgrade pip
```

Virtualenv Module

The Virtualenv module for Python allows scripts to create a virtual execution environment for the script, so that it does not interfere with other python installations.

```
sudo pip install –upgrade virtualenv
```

Requests Module

The Python Requests module handles the communication between the script and Machete using HTTPS. It is required for the script to function. To install it, execute the following on the web server:

```
pip install requests
```

Information on the Requests module can be found at the following link: http://docs.python-requests.org/en/latest/user/install/

Python mysqldb Module

The Python Mysqldb Module allows the script to query Drupal's database (mysql). This module is required for the script to function. To install it, execute the following on the web server:

```
sudo apt-get build-dep python-mysqldb pip install MySQL-python
```

For more information on Python integration with Mysql, see the following link: http://sourceforge.net/projects/mysql-python/

4.2.2 Drupal Pre-requisites

An existing Drupal installation

See http://drupal.org for more information on Drupal. Many shared hosting sites offer Drupal support.

Drupal Modules

- **Webform**: http://drupal.org/project/webform

  Webform is a module that aids in making various one-off forms such as contact forms, surveys, order forms, reservations, CRM requests, and more.

- **webform_validation**: http://drupal.org/project/webform_validation

  Webform Validation adds an extra tab to each webform node, allowing you to specify validation rules for your webform components.

4.2.3 Installation

Create Drupal form

Use the Drupal framework to create a webform. See the following link for documentation pertaining to creating a Drupal webform: http://drupal.org/documentation/modules/webform

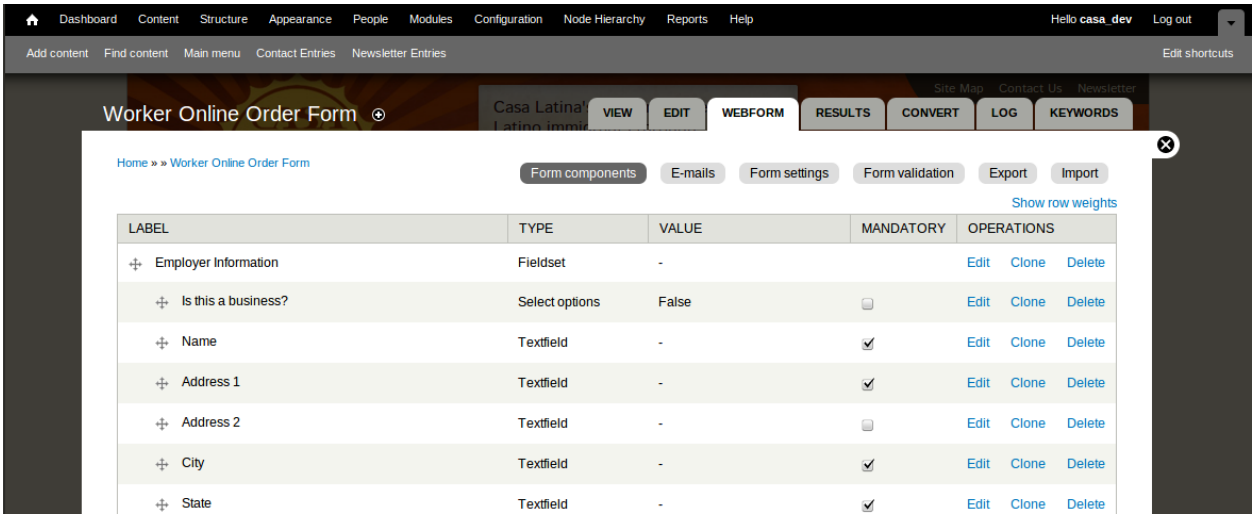


Figure 4.1: The Drupal WebForm configuration page

Machete has a set number of fields for creating an Employer record and a Work Order record, and the webform must provide values for all required fields. A few fields are not required, and can be provided or left blank by the webform. Therefore, when creating the webform, the following fields must be created. Using the fields names below in the webform will also simply subsequent steps.

The following is a list of the fields expected by the Machete script:

Field Name	Data type	Required?	Description
business	boolean	yes	

Table 4.1 – continued from p

Field Name	Data type	Required?	Description
name	string	yes	
address1	string	yes	
address2	string		
city	string	yes	
state	string	yes	
zipcode	string	yes	
phone	string	yes	Primary phone
cellphone	string		Secondary phone
email	string		
referredBy	int		The integer values are configured in Machete. The webform must use the same i
referredbyOther	string		
blogparticipate	boolean	yes	
returnCustomer	boolean	yes	
notes	string		Free form text related to the employer
contactName	string	yes	
workSiteAddress1	string	yes	
workSiteAddress2	string		
wo_city	string	yes	
wo_state	string	yes	
wo_zipcode	string	yes	
wo_phone	string	yes	
typeOfWorkID	int	yes	The integer values are configured in Machete. The webform must use the same i
englishRequired	boolean	yes	
englishRequiredNote	string		Free form text about language requirements
lunchSupplied	boolean	yes	
description	string		Free form text related to the work order
date_needed	string	yes	
time_needed	string	yes	
timeFlexible	boolean	yes	
transportMethodID	int	yes	The integer values are configured in Machete. The webform must use the same i

Map webform IDs to Machete fields

Once the webform is created, you will need to interrogate the webform and find the webform's internal IDs for the created form, and each field within the form. These IDs will be used by the Machete script to find the online orders inside the Drupal database and forward the order to Machete.

The simplest way to get the IDs is to export the form using the Export feature on the webform configuration page. Clicking the Export button on the upper-right side of the page will prompt to save a text file. The file is a (serialized) export of the webform, and contains all the internal IDs necessary.

you will need to customize the Machete scripts to match the IDs in your webform. The Machete script uses the IDs to extract values from Drupal's webforms database. Once it has the values, it sends them to Machete using the certs configured in subsequent sections. Using a text editor, do the following:

1. Edit the `employer_form.ini` file. Replace the number under the `[webform]` tag with the number embedded in the Export file's name. This is the Drupal `nid` ID for the webform.
2. Edit the `employer_combined.py` script. This is the script that reads the Drupal database, finds the webform entries, and processes them. At the top of the script, there is a `fields` array, which maps ID numbers to the Machete fields. You will need to search the Export file for the `cid` ID of each field, and replace the number in

the script with the number from the file. The numbers are assigned by Drupal–you must complete the mapping so that the Machete script knows which cid fields go with which Machete field.

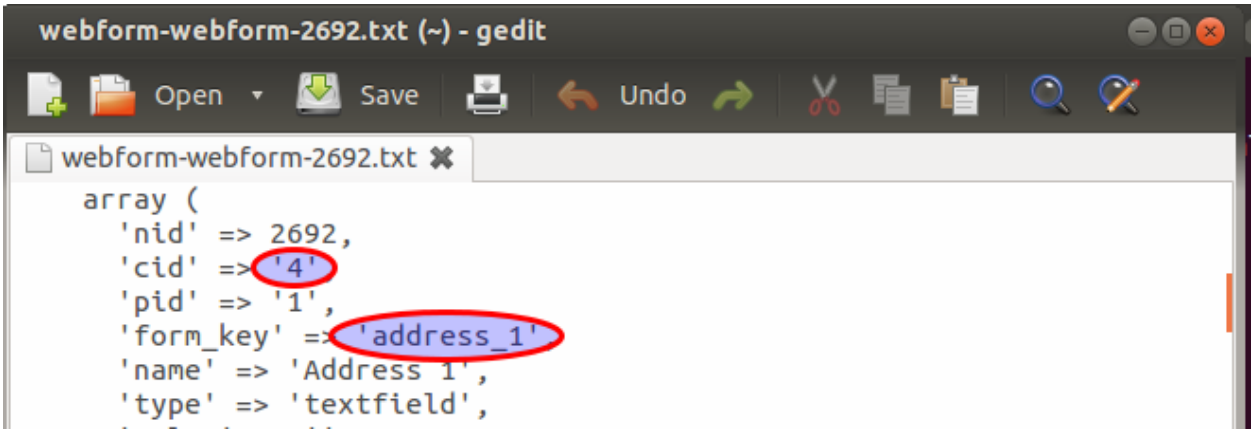


Figure 4.2: Mapping cids from the export file

Add tracking table to database

To track which webform entries have been sent to Machete, a new table must be added to the Drupal database. The table tracks the internal sid ID of webform order, whether it was successfully transmitted, how many attempts it took to transmit the order, and the date of the last attempt.

Execute the following statement from the mysql CLI:

> create table webform_machete (sid int not null primary key, success boolean not null default 0, tries int, last_attempt datetime)

This SQL statement will create the table and its four fields with the proper settings. To verify that the table is created properly, execute the following from the mysql CLI:

> show columns from webform_machete;

The show columns command will give a simple text-based display of the table, its four fields, and their properties.

```
mysql> use casalatinaorg;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
mysql> show columns from webform_machete;
+--------------+------------+------+-----+---------+-------+
| Field        | Type       | Null | Key | Default | Extra |
+--------------+------------+------+-----+---------+-------+
| sid          | int(11)    | NO   | PRI | NULL    |       |
| success      | tinyint(1) | NO   |     | 0       |       |
| tries        | int(11)    | YES  |     | NULL    |       |
| last_attempt | datetime   | YES  |     | NULL    |       |
+--------------+------------+------+-----+---------+-------+
4 rows in set (0.00 sec)

mysql>
```

Figure 4.3: Verifying webform_machete table creation

Schedule Machete script execution

The Machete script needs to be scheduled to run in order to execute, find new orders, and process them. On UX-type systems, a cron entry will execute the script periodically. To add the entry, execute the following command with root privileges:

crontab -e

On most systems, this will load the cron settings (crontab) in a text editor. Add the following line at the bottom of the crontab.

```
\*/5 * * * * bash -c "cd /home/user/pymachete;/usr/bin/python
/home/user/pymachete/employer_combined.py"
```

Save the crontab. The script will execute based on the cron entry.

Certificate configuration

A x509 certificate is used to secure communications between the website and Machete. The following steps must be completed for the communication to work safely and successfully:

1. Create the x509 certificate on the website
2. Make the certificate available to the Machete script
3. Create a secure IIS web site instance on Machete
4. Add the certificate's public key to the secure site's configuration
5. Verify proper configuration by running the Machete script

Create x509 certificate

Creating certificates is a non-trivial task. Certificates incorporate complex cryptography and are somewhat tedious. For a more thurough treatment of how to make a certificate and what each step does, see the following link:

https://help.ubuntu.com/10.04/serverguide/certificates-and-security.html

For Machete, the following steps have been used successfully, and were taken from the above link. If you encounter problems creating the certificate, refer to the link first and identify what, if anything, you did differently.

- openssl genrsa -des3 -out example.key 1024
- openssl rsa -in example.key -out example.key.insecure
- mv example.key example.key.secure
- mv example.key.insecure example.key
- openssl req -new -key example.key -out example.csr
- openssl x509 -req -days 365 -in example.csr -signkey example.key -out example.crt

Make certificate available to script

Once the example.crt cert and the example.key exist, copy them to the website server. Or, if you executed the above steps on the server, move the cert file to the location of the Machete scripts. You cancdefhrstuvwxz, and probably should, rename the files to be a little more descriptive too.

The Machete script's ini file has a config entry for the script, so you can store the files wherever you wish, but it makes sense to keep all the components of the Machete script in the same location. Edit the `employer_form.ini` file and update the `cert` entry and the `key` entry to the locations of the files.

```
[machete]
base_url=https:/
user=online.orderform
pw=
cert=/home/webdev/pymachete/cert/casaweb2.crt
key=/home/webdev/pymachete/cert/casaweb2.key
```

Figure 4.4: Editing employer_form.ini file, adding certificate information

Create secure IIS site instance

The main Machete web site uses HTTP, which is unencrypted as it's transferred over the network. The Online Order Form uses HTTPS, which is encrypted, and requires a separate web site instance in Microsoft's web server (IIS).

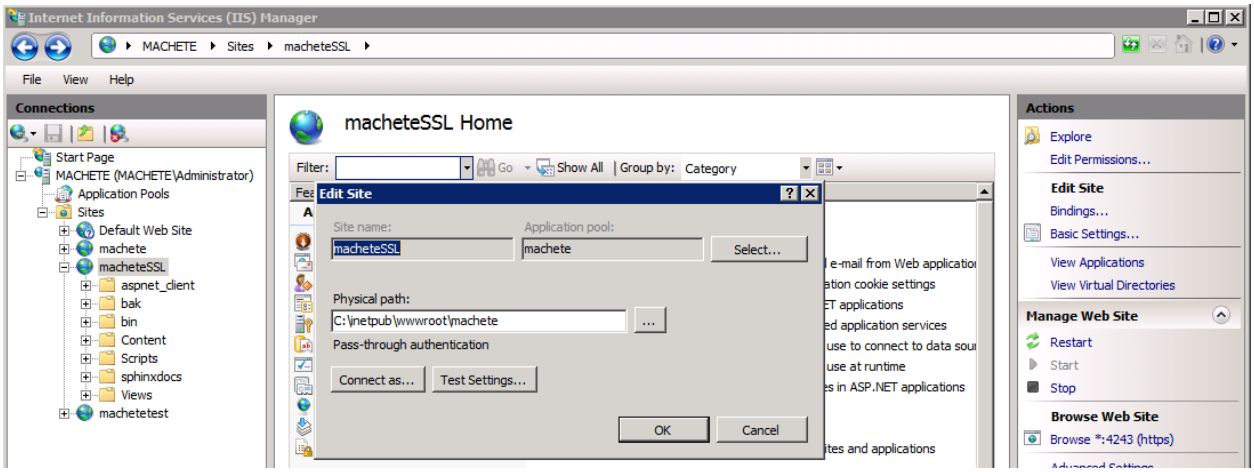


Figure 4.5: Creating the secure Machete IIS instance

To setup the secure instance, create a new website in the Server Explorer. In the site's settings, use the same path as the main Machete instance. The files are identical; the only difference is the IIS configuration.

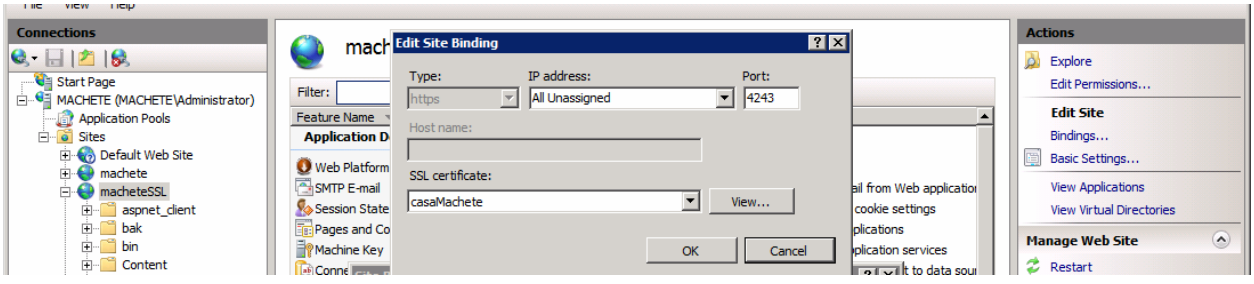


Figure 4.6: Setting the site's port and certificate

Next, edit the site's bindings. Set a certificate for the site. It's acceptable to use the IIS Self-Signed certificate feature

to create a cert, but a cert is required for the HTTPS protocol to function. Also be sure to set a port for the binding. If you're behind a firewall, a non-standard port supported. The employer_form.ini just needs to be updated to use the correct port in the URL for the Machete server.

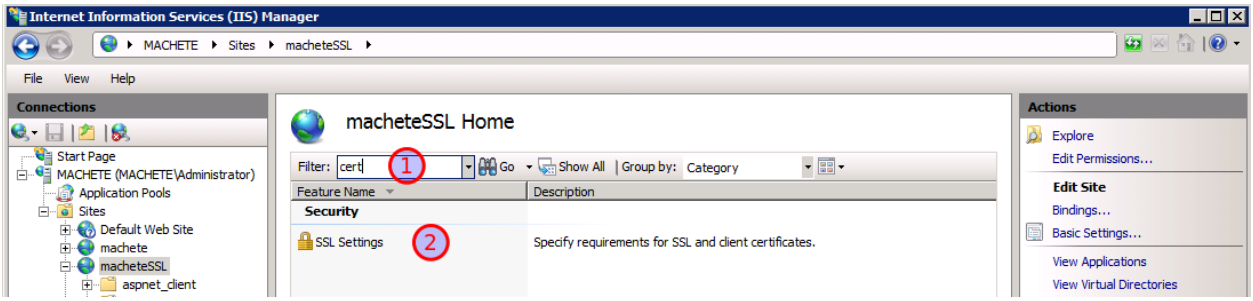


Figure 4.7: Setting the site's SSL settings

Finally, set the site to require client certificates. In the secure site's configuration, type `cert` into the filter (see 1). This will display only the `SSL Settings` option (see 2) in main dialog. Double on it. When the SSL Settings page opens, click the checkbox to require SSL, then also click the radio button to require SSL. Then Save and close.

Add certificate to site

The previous section created an IIS website and configured it to only accept connections from clients using SSL. However, in order for this to work, the Machete server will need the public key component of the certificate made in the previous section.

Copy the example.crt from the certificate creation section to the Machete server. Use the Microsoft Management Console (mmc.exe) to add the certificate. Be sure to add it to the local computer's store, not the user's store. Once the certificate is installed, Machete will trust any client using the certificate (and a valid Machete account) to create online orders. It's actually possible for a web browser to connect using the same certificate, which is a good way to verify that everything works. See the following section for details on connecting with a browser using a cert.

Verify Configuration

Adding client-side certificates varies by web browser. Below are notes and links to current instructions as of this writing. Search the internet for "add a certificate for client side IIS" or something similar.

Add to Internet Explorer http://kingsleyhauaiimi.wordpress.com/2012/08/03/iis-7-ssl-and-two-factor-authentication-installing-client-side-certificate-for-ssl-authentication/

Add to Firefox Allows you to access the Machete interface using the certificate

- create a pkcs12 file from the x.509 public cert and private key
- openssl pkcs12 -export -in example.crt -inkey example.key -out example.p12

In Firefox, import

- Edit > Preferences > Advanced > Encryption > View Certificates > Your Certificates > Import the p12 file