Configuration of the Windows Intuit OCR Abbyy Server

Overview

This document describes all the steps needed to install and configure the Intuit OCR Abbyy Server and its dependencies.

Prepare System

AMI baseline

AMI is a direct copy of our Pharos Windows 2008 r2 (5.1.3 CIS Approved) build w/ a few minor tweaks. This is sourced from Rod Foster from Platform Operations team. Ask Horace/Daniel for login credentials.

Region	Ami ID
N. California	ami-d2301c97
Oregon	ami-de1a7db7

IE Proxy

Add Squid egress proxy to IE internet settings.

1. Open Internet Explorer, and go to Tools->Internet Options
2. Go to the Connections tab
3. Click on LAN settings button
4. Click on Advanced button, and add for HTTP the proxy *internal-ocr-qa-sq-egressel-106kbjm0otqw7-1708494771.us-west-1.elb.amazonaws.com* on port *8080*
5. Close all IE sessions, and then open IE

System Proxy

1. Open System Properties
2. On Advanced tab, click on the Environment Variables
3. Add the HTTP_PROXY System Variable, set up to http://*internal-ocr-qa-sq-egressel-106kbjm0otqw7-1708494771.us-west-1.elb.amazonaws.com:8080*

.NET 4.5

Check if .NET 4.5 is already installed on the machine (see http://msdn.microsoft.com/en-us/library/hh925568(v=vs.110).aspx)

If yes, skip to the next step, otherwise please download and install .NET 4.5 version from http://www.microsoft.com/en-ca/download/details.aspx?id=30653 - or find a standalone installer at http://msdn.microsoft.com/en-us/library/5a4x27ek(v=vs.110).aspx

Note: If you update the .NET version, please make sure to update the .NET framework version used by the *DefaultAppPool* in IIS (under Application Pools)! You need to restart the IIS server to update this change.

IIS7

1. Install IIS
   a. Go to Server Manager, and add the Web Server IIS role

    b. During the setup, add the following role services:
    c. for Web Server
        i. Common HTTP Features
            1. Static Content
            2. Default Document
            3. Directory Browsing
            4. HTTP Errors
            5. Http Redirection
        ii. Application Development
            1. ASP.NET
            2. .NET Extensibility
            3. CGI
            4. ISAPI Extensions
            5. ISAPI Filters
        iii. Health and Diagnostics
            1. HTTP Logging
            2. Logging Tools
            3. Request Monitor
        iv. Security
            1. Windows Authentication
            2. Request Filtering
        v. Performance
            1. Static Content Compression
            2. Dynamic Content Compression
    d. for Management Tools
        i. IIS Management Console
        ii. IIS 6 Management Compatibility
2. Register the pre-installed .Net by running:
    a. aspnet_regiis.exe -i (it is located under: %WindowsDir%\Microsoft.NET\Framework\vx.y.zzzz, where version is something like 2.0.XX)
3. Configure the DefaultAppPool (in Application Pools):
    a. Identity: NetworkService
    b. Enable 32-Bit Applications: True
4. Change the binding for port 80 to 8888 in *Default Web Site*, right click and choose *Site Binding*.
5. Allow the traffic on port 8888 from outside the box
    a. open *Windows Firewall*, and click on *Inbound Rules*
    b. click on *New Rule... ,* and choose *Custom Rule*
        i. TCP Port 8888
        ii. Action: Allow the connection
        iii. Rule name: World Wide Web Services (HTTP Traffic-In) on 8888
        iv. Rule description: An inbound rule to allow HTTP traffic for Internet Information Services (IIS) [TCP 8888]
6. EventLog Permissions settings:
    a. Open the registry editor (regedit.exe)
    b. Navigate to *HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\EventLog*
    c. Right click this key, select Permissions, and grant the ASPNET account (or r0b0t) **read/write** permissions (see screenshot below)
    d. Navigate to *HKEY_LOCAL_MACHINE\System\CurrentControlSet\Services\EventLog\Security*
    e. Right click this key, select Permissions, and grant the ASPNET account (or r0b0t) **read** permissions (see screenshot below)
    f. Create the key *HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Eventlog\Application\InstantReturn*
    g. Restart IIS (start -> Run -> iisreset)
7. Install WebDeploy tool, that allow to import easily Visual Studio applications into IIS Server
8. Provide full access for ***IIS_IUSRS*** and ***NETWORK SERVICE*** users for the following directories (create the directories if they don't exist):
    a. C:\Temp
    b. C;\Temp\ABBYY
    c. C:\Windows\ServiceProfiles\NetworkService\AppData\Local\Temp
    d. %USERPROFILE%\AppData\Local\Temp
9. Change the file %WindowsDir%\Microsoft.NET\Framework\vx.y.zzzz\CONFIG\machine.config, adding/changing the runtime section:

```
<runtime>
    <enforceFIPSPolicy enabled="false" />
</runtime>
```

10. Adjust the logging on the IIS server. In IIS Manager, in the connection, click on the IIS->Logging. In the Log File->Format section, click on the Select Fields button, and select everything except Cookie.

At this point, you should get a successful request to the Default IIS Site, http:\\localhost:8888

Microsoft XML (MSXML)

Install Microsoft XML from http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=7f6c0cb4-7a5e-4790-a7cf-9e139e6819c0

Abbyy OCR Software

Install Abbyy FlexiCapture Engine 10

1. Download Abbyy FlexiCapture Engine 10 from http://www.abbyydownloads.com/FC10.5Engine
2. Use the Runtime License Serial Number: SWAO-1020-0003-0898-1033-1008

3. At the end you will get a message that the license is not valid, and that it is ok 🙂
4. Delete everything under *C:\ProgramData\ABBYY\SDK\10\Licenses.* Now copy the file SWAO102000030898 10331008.ABBYY.LocalLicense (found under "\ocr-abbyy\AbbyyLicense") to *C:\ProgramData\ABBYY\SDK\10\Licenses*
5. By default the Abbyy engine installs in ?Developer mode?, which won?t work on a production server. In order to configure the Abbyy engine to run in ?Open Runtime mode?, delete/rename this dll file: ***C:\Program Files (x86)\ABBYY SDK\10\FlexiCapture Engine\Bin\Protection.Developer.dll***

Abbyy DCOM Configuration

In order the IIS server to start FCEngine and FREngine processes, the Abbyy DCOM should be configured to allow that.

1. Open the DCOM config utility from command line, by typing *mmc comexp.msc /32*
2. In the tree, go to *Component Services* > *Computers* > *My Computer* > *DCOM Config*
3. Right-click on ***ABBYY FlexiCapture 10.0 Engine Loader (Local Server)***, and click ***Properties***. A dialog box will open. Click the ***Security*** tab. Under ***Launch and Activation Permissions***, click ***Customize***, and then click ***Edit*** to specify the accounts that can launch the application. In this case, add ?***IIS_IUSRS***? and "***NETWORK SERVICE***" and give it full control to everything.
4. Do the same for "***Access Permissions***"
5. Repeat steps 3 and 4 for ***ABBYY FineReader 10.0 Engine Loader FCE Build (Local Server)***

Deploy IntuitOCR Abbyy Server

1. Copy the following files from a build to the *C:\IntuitOCR*folder:
    a. OCRService.zip
    b. OCRSite.zip
2. Open IIS Manager
    a. right click on *Default Web Site*, and click on *Deploy* > *Import Application...*
    b. choose the *C:\IntuitOCR\OCRService.zip* file
3. Give permissions to *NETWORK SERVICE* user to read, read & execute, and list folder contents
4. Execute steps 2 and 3 for the OCRSite.zip
5. Test the web apps by hitting the following 2 URLs:
    a. http://localhost:8888/OCR/Test.aspx
    b. http://localhost:8888/OCRSite

Monitoring Tools (NewRelic and Splunk)

NewRelic Windows Server Monitoring

Install the NR Windows Server Monitoring to get access from the NR site to your instance usage in terms of CPU, memory, I/O, network, ... The NewRelic Server monitoring requires .NET 4, so please install it from http://www.microsoft.com/en-us/download/details.aspx?id=17851 before installing the NR Server Monitoring.

1. Run the NewRelic Windows Server Monitoring installer (it could be found in Perforce: *//mobile/ocr/ocr-abbyy/NewRelic /NewRelicServerMonitor_x64_2.0.0.198.msi)*
2. During the setup, use the license key from the same location as the installer.
3. Open the *NewRelic Server Monitor Configuration* application (*NewRelic.ServerMonitor.Config.exe*), and set up the Proxy URL to *internal-ocr-qa-sq-egressel-106kbjm0otqw7-1708494771.us-west-1.elb.amazonaws.com:8080*

NewRelic Agent Monitoring

To monitor the application specific transactions, we use NewRelic Agent. These are the steps to install and configure the NewRelic Agent:

1. Run the NewRelic Agent installer (it could be found in Perforce: *//mobile/ocr/ocr-abbyy/NewRelic/NewRelicAgent_x64_2.5.112.0.msi)*
2. During the setup interview, use the license key from the same location as the installer.
3. Copy the Perforce file *//mobile/ocr/ocr-abbyy/NewRelic/newrelic.xml* to location *%ALLUSERSPROFILE%\New Relic\.NET Agent*
4. Restart IIS server - iisreset

Splunk Monitoring

To monitor the log files, we use Splunk. Splunk Forwarder needs to be installed on each IntuitOCRAbbyy instance, so the log files from the configuration are sent to the Splunk server indexer. These are the steps to install the Splunk forwarder:

1. Run the Splunk Universal Forwarder installer (it could be found in Perforce: *//mobile/ocr/ocr-abbyy/SplunkForwarder/splunkforwarder-5.0.2-149561-x64-release.msi*)
2. During the setup interview use the following:
    a. Leave empty the *Specify a Deployment Server* section
    b. In the *Specify Receiving Indexer* section use *Hostname/IP:* *10.136.126.94* and *Port: 9997*

    c. Leave empty the *Cerificate Information* section
    d. Check *Local Data Only*
    e. Leave empty the *Enable Windows Inputs* section
3. Copy the Perforce file *//mobile/ocr/ocr-abbyy/SplunkForwarder/inputs.conf* to location *C:\Program Files\SplunkUniversalForwarder\etc\apps\SplunkUniversalForwarder\default*
4. Restart SplunkForwarder service (splund.exe process)