

Server Installation Guide

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Pre-Requisites

In order to perform the required installations, the following pre-requisites must first be met:

- The Server has been setup as a domain controller or connected into a domain with Active Directory, User and Group security policies, DNS, and DHCP.
- Ideally the server should have a drive/partition for the operating system and a separate drive/partition for the learning materials to be installed.
- The server is configured so that users can save their work in their own folders.
- The workstation PCs have been setup and are members of the domain.

External USB drive

The external USB drive contains the software that has to be installed on the server. The purpose of the drive is twofold:

1. As a method to install the content.
2. As a backup should a re-install be required at future date. The drive should be stored in a safe location with the end user.

Server Installation

The server will need the LJ Curriculum Content to be installed. Instructions are below:

LJ Curriculum Content

Overview

The LJ curriculum content is delivered using the server's webserver (Internet Information Server – IIS). This will need to be configured as an Intranet site. The curriculum content will be installed from the external USB drive to a folder on the server. IIS will then be configured to serve this content to other machines on the network.

Below are the basic instructions for setting up a webserver. It is recommended that the IT administrator is consulted before installing the software.

The following instructions are written on the assumption that the server is running Windows Server 2012, however newer Windows Server software should have similar options.

Please make a note of the following information as it will be needed during the installation:

Domain:e.g. ***yourdomain.com***

IP address of server:e.g. ***192.168.0.2***

Installing IIS on Windows Server 2012

1. In *Server Manager*, select *Dashboard*, and click *Add roles and features*.
2. On the *Before You Begin* page, click *Next*.
3. On the *Select installation type* page, select *Role-based or Feature-based Installation* and click *Next*.

4. On the *Select destination server* page, choose *Select a server from the server pool*, select the name of your computer, and click *Next*.
5. On the *Select server roles* page, select *Web Server (IIS)* and choose *Add features* from the popup dialogue. Select *Web Server (IIS)* and click *Next*.
6. On the *Select features* page, you will notice that some features are already selected, click *Next*.
7. On the *Web Server Role (IIS)* page, click *Next*.
8. On the *Select Role Services* page, ensure the following services **are selected** (ticked):
 - Common HTTP Features > Default Document
 - Common HTTP Features > HTTP Errors
 - Common HTTP Features > Static Content
 - Performance > Static Content Compression
 - Security > Windows Authentication
 - Management Tools > IIS Management Console.
9. Ensure the following services **are not selected** (unticked):
 - Common HTTP Features > Directory Browsing
 - Health and Diagnostics > HTTP Logging
 - Security > Request Filtering
 Click *Next*.
 Note: Roles can be added or removed at a later time if needed.
10. On the *Confirm installation selections* page, check your selections, and click *Install*.
11. On the *Installation progress* page, confirm that your installation completed successfully and click *Close*.
12. To verify that IIS installed successfully, open a web browser on the server and enter the following address:
http://localhost
13. You should see the default IIS Welcome page.

Create a Folder for the Website and Set Security Permissions

By default Microsoft installs the “inetpub” folder to the root of the system drive (drive C:\). Depending on how your server is configured, good security practice recommends installing your website content onto a different drive/partition to your Operating System.

1. Add a new folder called “DRL” to either the “C:\inetpub” folder or to the root of the drive on which you are going to install the web site.
2. Right-click on the DRL folder and select *Properties*.
3. On the *Security* tab, click *Edit* then *Add*. Type “**IIS_IUSRS**” and click *OK*.
4. Ensuring that permissions for this group are set as “**Read & execute**”, “**List folder contents**” and “**Read**”.

Installing Learning Content

1. Connect the external USB drive to a USB port on the server. Ideally this should be a USB 3.0 / SuperSpeed (SS) USB port.
2. If the server does not have internet access and has not had recent updates installed then you should install the latest Verisign Code Signing Certificate from the USB drive before continuing with the install. See the note below for further details.

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3. Navigate to the **DRL Disc** folder on the root of the USB drive.
4. Run the Setup.exe file.
5. Click on the *Install* button.
6. Wait while the installer checks required disk space - when the checks are complete, the *Next* button will enable. Click *Next* to begin the installation.
7. Accept the license agreement and click *Next*.
8. On the Destination folder screen, **CHANGE the Destination Folder** path to the “DRL” folder you have just created (e.g. “C:\inetpub\DRL” or “E:\DRL”) then click on *Next*.
9. Continue through the installation process. Click *Finish* when the installation completes.

NOTE: Error 1330 displayed during installation of the learning content indicates that the latest VeriSign Code Signing certificate is not installed. To install the required certificate from the external USB drive, navigate to “\Support\Certificates”, right click on the file called “VeriSign Code Signing 2010 CA” and select “Install Certificate”. Follow the instructions to install the certificate leaving all options at their defaults. If the learning content install process failed, it must now be repeated.

Removing Unused Shortcut

During the installation process a shortcut was generated in the Start menu. Please locate and delete the following shortcut and its accompanying parent folders:

LJ Create\Digital Resource Library\???????

Note: This folder and shortcut is stored in the all users profile typically located here:

C:\ProgramData\Microsoft\Windows\Start Menu\Programs

Configuring IIS

1. Open *Internet Information Services (IIS) Manager* from *Administrative Tools*.
2. In the *Connections* pane on the left, expand the server node to show the *Sites* folder in the tree. Right-click the *Sites* node and select *Add Website*.
3. In the *Add Website* dialog box, enter a friendly name for your website into the *Site name* field. It is suggested this should be called “**LJ Create Web Site**”
4. In the *Physical path* field, enter or browse (...) to the website's root folder. This is a subfolder of the DRL folder you created earlier, e.g.

C:\inetpub\DRL\data\site\www\root or E:\DRL\data\site\www\root

5. Leave the protocol for the website *Binding Type* as **http**.
6. A static IP address must be assigned for the website - enter the IP address of the server (recorded earlier in this document) into the *IP address* field.
7. Enter **9000** into the *Port* text box. This is needed to avoid conflicts with future local intranet sites. The learning content has been configured to work with port 9000.
8. Enter a *Host name* for the website - we suggest using **ljcreate**, this will be added to the front of your domain to give a full domain path as **ljcreate.yourdomain.com**.
9. Ensure the *Start Website immediately* box is checked.
10. Click *OK*.

Stopping the Default Web Site

If the default website is not required we suggest stopping it. Select the *Default Web Site* node in the left pane and click on *Stop* from the *Actions* pane on the right.

MIME Types

The new website will require the following MIME types to be added.

Select the *LJ Create Web Site*, double-click the *MIME Types* option then from the *Actions* pane click on *Add...* and add the types from the following table:

File name extension	MIME Type
.plc	application/vnd.ljcreate.plc
.apj	application/vnd.abilix.apj
.flw	application/vnd.abilix.flw
.flwx	application/vnd.abilix.flwx

Firewall settings

A new inbound rule is needed to allow port 9000 to work with the website. The rule will be similar to the predefined rule for port 80 (see rules for World Wide Web Services (HTTP Traffic-In) for reference). The following assumes that the firewall being used is Microsoft's.

1. Launch the *Windows Firewall with Advanced Security* (from the run command (**WIN+R**) and enter **WF.msc**).
2. Select *Inbound Rules* from the menu on the left
3. Select *New Rule...* from the *Actions* pane on the right
4. In the *New Inbound Rule Wizard*, select **Port**, then click *Next*.
5. Set the rule to apply to **TCP** and the **Specific local ports** to **9000**, then click *Next*.
6. Leave **Allow the connection** selected and click *Next*
7. Set the profile to be **Domain** only -untick the *Private* and *Public* options.
8. Set the *Name* to "**LJ Curriculum Content**" and the *Description* as "**An inbound rule to allow HTTP traffic for the LJ Curriculum Content (MIOG Smart ICT Classroom) – Digital Resource Library running under IIS [TCP 9000]**". Click on *Finish* then close the Firewall settings application.

Note: additional security can be enforced by editing the rule and allowing only certain IP addresses to work. See the *Scope* tab of the inbound rule.

Adding a Resource Record to a Forward Lookup Zone

The assumption is that the DNS has already been setup for the domain.

1. Open the *DNS Manager* from *Administrative Tools*.
2. Open the *Forward Lookup Zones* folder from the tree in the left pane.
3. Right-click on the school's domain (*yourdomain.com*) and create a *New Host (A or AAAA)*.
4. Set the *Name* as **ljcreate** and the *IP address* as the IP address of the server (recorded at the start of this document) and click OK.

Student Workstation Installation

The installation instructions for each application are detailed below. Installation of these applications requires administrative rights and assumes that the PC is a member of and is connected to the domain.

PC Setup

Web Browser

The default browser for Windows 10 is Microsoft Edge, however this browser is not currently fully compatible with LJ Curriculum Content. The content does function correctly on all other major browsers including Microsoft Internet Explorer, Google Chrome and Mozilla Firefox.

It is recommended that Internet Explorer 11 is made the default browser on the PC as it is preinstalled with Windows 10. (IE 11 can be found in the *Windows Accessories* program group)

Whichever browser is selected, ensure it is made the default.

(In IE 11, this can be done from the *Programs* tab of the *Internet Options* settings).

LJ Curriculum Content Shortcut or Favourite

Each PC must be able to access the LJ Curriculum Content via a browser. The user should be able to enter the URL (<http://ljcreate.yourdomain.com:9000>) but to assist students it is recommended that a shortcut is added to these PCs.

We recommend that at least one of the following is performed on each PC.

- A shortcut from the start menu (located inside a folder called **LJ Create**)
- A shortcut from the desktop
- A shortcut from the taskbar
- A shortcut from a tile
- A favourite added to the browser (located inside a folder called **LJ Create**) □ A favourite added to the browser's Favourite bar

Third Party Software

Adobe Reader

Adobe Reader is an application that allows PDF document files to be viewed. This is used extensively throughout the LJ learning content. Download the current version from Adobe at the time of installation.