

Green College- Language School

Business Information

Ennio da Silva Vitor - Student n.:

Fernanda Palomino de Oliveira - Student n.:

Luciana Turola de Oliveira – Student n.:

Project

As IT experts, we were contacted by two friends who want to set up a new business in Dublin. They came up with the idea of a Language school based in Dublin 2 , which we will have to provide the better cost X quality in a project that includes all the technology required for a small business like printers, servers, switches, desktops, laptops, broadband, network set up, cables etc. The building where the school is located has five classrooms where in each one, a desktop will be installed, it also has a Director's office where we will install 2 laptops and a printer, a reception where they required a Mac desktop, a communication room where the server will be kept and a computer laboratory with 15 machines that will be used by students todo small researches, use the internet and do some small work as preparing their CVs etc.

We asked the owners a few questions that we needed to know for proceeding a start in our project. Questions were about:

- Their budget - and they didn't give us an average but the less costs possible, so we can be free to make the project.
- Preference of brand /model of a desktop or laptop – and they only specified the computer they wanted at the reception, a Mac.
- Where would they like to have internet access - and they don't want internet access around the building as students will only have access from the computer laboratory.
- If they want wireless or wired connection – and they want wired.
- How big the rooms are (for cabling measurement) – and it has 2 floors, 12m².

Project Development

Our team is formed by 3 IT students who are doing the best to provide the client a good option in a low cost as it was required.

The project includes researches about how to set up a new business, how to set up a network, cabling, virtualization – the advantages and disadvantages, price of devices and human labor.

We came up with the idea of virtualization, as a way to drop down the costs with hardware. Researching about this topic, we could see that there is a lot of doubt about how efficient this path would be for small companies. In a perfect world, we would get a Server 64GB capacity to attend 20 computers, distributing then, an average of 3GB RAM each. The problem we found was while getting information about the license for those 20 virtual machine and a real cost for it. Also, there are more costs involved in the virtualization than what we expected as for example to administrate this cluster and fix its problems, we would need a specialized IT professional, what would increase the costs of the company and then, we decided to buy low cost computers instead.

Project Costs

ITEM	SHOP	NAME	QUANTITY	UNIT PRICE	TOTAL PRICE	DETAILS
Speakers	PCWorld	LOGITECH Z150 Multimedia 2.0 PC Speakers	7	24.99	174.93	5 speakers to the classrooms + 2 as a backup.
Keyboards	PCWorld	ADVENT K112 Keyboard - Black	20	9.99	199.80	5 to the classrooms + 15 to the computer laboratory.
Mice	PCWorld	ADVENT M112 Optical Mouse - Black & Grey	20	7.99	159.80	-
Mice	PCWorld	HP X3500 Wireless Optical Mouse - Black	2	19.99	39.98	-
Mac Desktop	PCWorld	Apple iMAC 21.5" 8GB, Intel i5, HD 1TB	1	1,249.99	1,249.99	For the reception.
Keyboard for Mac	PCWorld	IWANTIT Bluetooth Mac Keyboard - White	1	24.99	24.99	-
Apple Mouse	Apple store	Apple mouse wired	1	42.00	42.00	-
Printer	PCWorld	Samsung Xpress All-in-one laser wifi printer	2	189.99	379.98	1 for directors office and 1 for reception and students.
Monitor 19.5"	PCWorld	AOC e2070	20	79.99	1,599.80	5 to the classrooms and 15 to the computer laboratory.
Computer	Techdirect	Asrock Beebox N3000 1.04GHz White 0.6L sized PC N3000	20	183.04	3,660.80	6 to the classrooms and 15 to the computer laboratory.
Server	Komplett	Synology DS716+ storage server	1	499.00	499.00	
Software for server	Microsoft	Windows Server 2012 R2 Essentials (25 User Limit)	1	455.00	455.00	-
Switch	ITM Component	SSH Console Serial Switch with Environmental Monitoring	1	1,532.57	1,532.57	With 32 ports, in case they want to expand later on.
Cable + Crimps	ebay	305M Roll Cat 6 RJ45 UTP Network LAN Ethernet Internet Cable Box + Crimp	1	53.65	53.65	To attend 12m² we will need 305m of cable.
Microsoft Office	Microsoft	MsOffice 2016 Office	1	389.34	389.34	Director's laptops (2 devices)
Microsoft Office	Microsoft	Office Home & Business 2016 for Mac	1	254.00	254.00	MsOffice for Mac desktop.
Open Office	openoffice.org	Free Office	0	0.00	0.00	For students use.
Router	router-switch.com	CISCO1941/K9 Cisco 1941 Router ISR G2	1	578.27	578.27	With security protocols.
Windows 10	ebay	Windows Win 10 Pro Retail License Key 1 PC 32/64 BIT Genuine	21	30.00	630.00	-
Human Labour	Palomino IT	Palomino's IT professionals	30	30.00	900.00	3 professionals X 10hours worked.

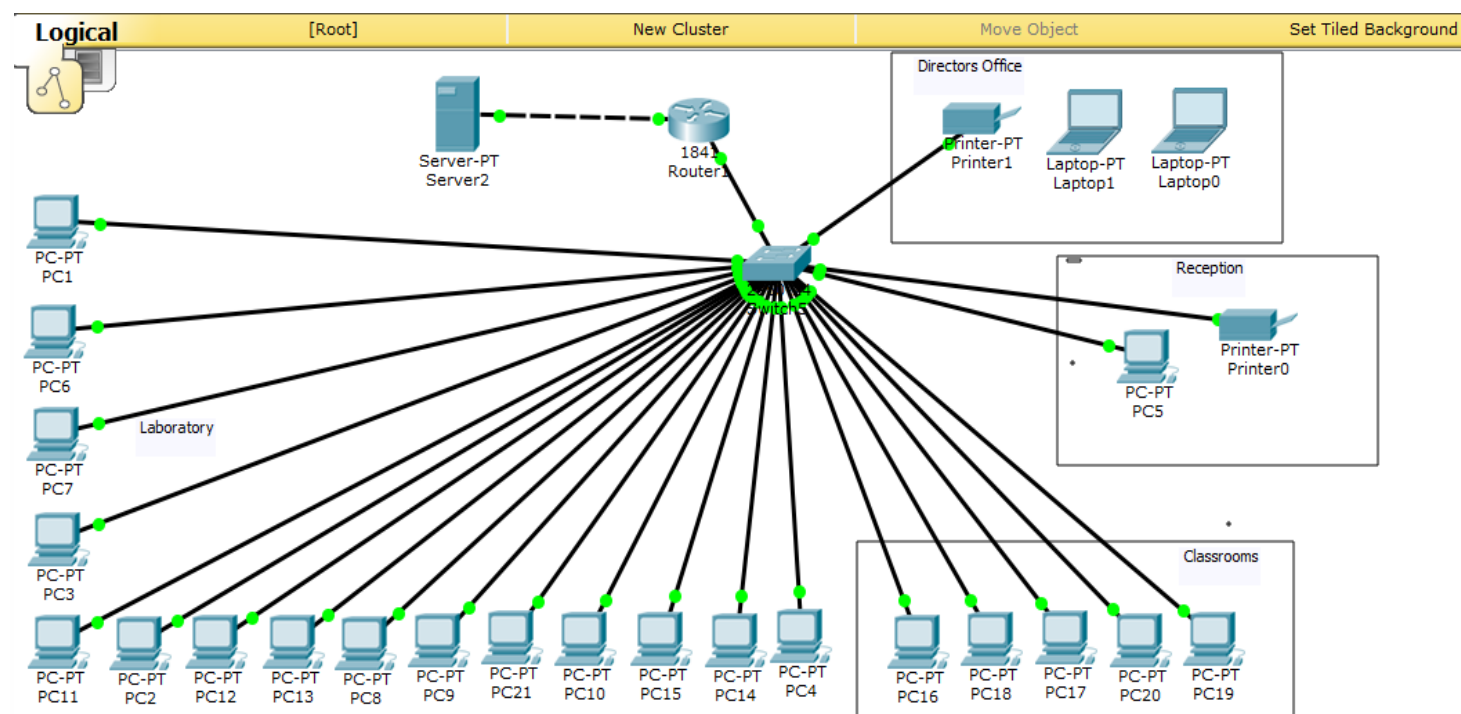
TOTAL				€	12,823.90
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* All prices have VAT included, except for Software Windows Server 2012 R2 Essentials, which is bought in US dollars (budget already contains total converted to Euro).

Networking Set Up

We need a router that is going to be connected to the server and to a switch. This switch is going to distribute the network between the 25 devices.

Please see picture below:



References:

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