Notes on the use of the Cost Comparison Spreadsheet

1. Introduction

The spreadsheet is intended to allow Administrations to explore the cost implications of migrating to an OSS installation. It is not intended to be a Total Cost of Ownership model. It compares the cost of running a proprietary installation with the cost of an OSS one together with the associated costs of migration.

The idea behind the spreadsheet is to allow Administrations to understand what the major cost determinants are and how they differ between the two environments. Administrations can change various parameters to see what the effects of various assumptions are. For instance some OSS sites report that they are able to run more servers per system administrator than in a proprietary environment. The spreadsheet allows the effect of this to be determined. It maybe that it is marginal and of no significance or it may be crucial and therefore will need much more detailed investigation.

Knowing what the major cost elements are and how changes in them effect the final total will provide Administrations with the information required to decide if a migration is financially viable and also which costs need careful monitoring and management.

In order to provide a single model a number of simplifying assumptions have been made which may not be strictly accurate but which are in netproject's opinion reasonable. One model cannot hope to cover all the possible variations on, for example, proprietary licensing schemes and different server configurations but there should be sufficient flexibility in the spreadsheet for it to be of wide use.

The sheet comes preloaded with illustrative data. This data is not intended to be real but is thought to be of the right order of magnitude.

Note all sheets are protected to avoid inadvertent change, there is no password however.

The sheet has been tested on a number of machines and there have been slight variations in font size which result in different page breaks when printed. If this happens the scaling factor on Page Setup may need to be adjusted slightly.

The spreadsheet consists of six individual sheets:

1. Summary.
   This compares the cost of a proprietary environment continuing for 5 years including an upgrade of software at some point, against the cost of an OSS environment together with the costs of migrating to it. It does this by bringing together the results of sheets 2,3 and 4 below, showing the costs spread over 5 years and calculating a payback period for the cost of migration.

2. OSS Environment.
   This details the costs associated with running an OSS environment.

   This details the costs associated with running a proprietary environment together with an upgrade to the software at some point. The timing of this upgrade is configurable.

4. Migration Costs.
   The major cost items associated with a migration to a radically different environment are noted
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here. Some of these costs may not be large if the proprietary environment is similar to OSS. Some of these costs are likely to be best guesses at the moment until proper statistics are available. Varying the costs in this sheet will give the Administration a good idea about the eventual payback period.

5. Common data and variables.

The sheets above have calculations which are based on the data in this sheet. It allows, for instance, different server and desktop hardware to be defined.


Each sheet above has references to notes which appear in this sheet. They give some guidance on how to use the spreadsheet properly.

We describe below how each individual sheet works and the assumptions made.

2. General Comments

The boxes in green are input fields and are where the Administration is expected to enter the details particular to their situation.

3. Summary Sheet

There are five input fields:

1. Number of Internal desktops.

   This is the number of desktop machines connected to the Administration's network and behind its firewall. It is assumed that they all are connected in a similar way and are essentially the same. They are all assumed to be running the same software.

2. Number of Remote/Home desktops.

   These machines are connected to the Administration's network but are situated outside of its firewall. This means that they need additional software to provide secure operation and access. These machines could be in homes or in small offices.

3. Total number of users.

   The total number of users could be larger than the total number of machines and some of the software is costed based on the number of users. These users include the remote users.

4. Number of computing sites.

   This measures how spread the central computing facilities are. It is used to calculate the number of servers needed.

5. The year the proprietary software is upgraded.

   The proprietary software is assumed to be upgraded in the year entered here.

The sheet shows the results of the other sheets summarised over a five year period with a payback period calculated.

4. OSS Sheet

This sheet contains three main sections; desktop costs, server costs and data. The desktop and server costs are calculated by reference to the data section and the content of the Variables sheet
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(See 7 below). The green boxes need to be filled with data which describes the expected use of OSS at the Administration.

4.1. Desktops

The desktop section is split into two; internal and remote desktops. The distinction between these follows the criteria for the numbers entered on the summary sheet.

For each of these sub sections a desktop type and setup time needs entering. The desktop type refers to an entry in the Variables sheet and should describe the type of machine used. If an appropriate type doesn't exist in the Variables sheet then a new one should be inserted. The setup time is the total time taken to configure a machine from its state as delivered by the manufacturer to the state which allows a user to make full use of it.

The ability to enter different types and setup times for remote desktops allows account to be taken for the additional software complexity and possibly additional hardware such as modems or network adaptors. Different desktop types also allow for different levels of hardware support costs.

4.2. Servers

The number of servers per systems administrator does not distinguish between different services and is therefore an average figure. The calculation simply divides the total number of servers by this number to obtain the number of administrators needed.

The average life of a server allows an annual depreciation cost to be calculated.

The other fields describe the services provided and the hardware needed to do so. For each service a server type is needed. The type refers to an entry in the Variables sheet and should describe the type of machine used. If an appropriate type doesn't exist in the Variables sheet then a new one should be inserted. A special type of 0 allows for services which share servers or which do not require hardware such as Client Access Licences.

In addition the number of concurrent users that can be supported on the server for the particular service should be entered together with an indicator defining whether a server per site is needed. (The number of sites was entered on the summary sheet). These two fields are used to calculate the number of servers needed.

Hopefully the service descriptions are self explanatory except perhaps for:

- Office Software Server
- Remote Display Server
- Client Access Licences

These are intended for use in the Thin Client and Unix Scenarios where the desktop is used as a thin client device only. The Office Software Server covers the possibility of a server providing word processing and other office services in the Unix Scenario. The Remote Display Servers would be Citrix or Windows TSE ones which were in place before the migration and were not introduced as part of it. If such services were introduced as part of the migration then they should be costed under the Migration Costs sheet.

4.3. Data

Two types of support personnel are assumed; a systems support person and a systems administrator. The former is assumed to cover basic desktop setup and support, the latter is
assumed to support the servers. The annual costs entered here should be the total cost of employing someone and not just the salary. Hence items such as employer taxes, pension costs and other fringe benefits all need to be included.

The remaining fields are the initial and annual costs of the software needed to provide services on both the desktop and servers. The cost for desktops are assumed per desktop and those for the server are assumed per user. See the comments above under servers to help with the Office Software Server, Remote Display Server and Client Access Licences items.

The internal support costs for desktops allow a distinction to be made between different services which could be useful for virus and spam support in particular. The internal support costs for servers is calculated differently as the number of systems administrators needed for the total number of servers. (See above).

Where a service is not used then enter zeros.

5. Proprietary Sheet

All of the comments for the OSS sheet above apply here. The specific comments on the proprietary sheet are:

5.1. Desktops

The upgrade may require a larger desktop than before. The ability to set a different type after the upgrade is therefore provided. Desktops are assumed to be replaced on a regular basis, however over the upgrade it is possible to assume that desktops younger than a certain age will be retained by setting the “maximum age” field.

5.2. Servers

The Client Access Licence costs may be per user or per desktop. If per user set the server entries if per desktop set the desktop entries.

5.3. Data

The annual cost of managing licences and the people cost of the upgrade are input fields.

In addition to the data required for the OSS sheet costs are required before and after the upgrade. The fields allow licences which are purely initial, purely annual or a mixture. In addition costs for support and upgrades can be entered separately from the licence costs. See 5.2 above for comments on Client Access Licences.

Again where an entry is not required enter zero.

6. Migration Costs

The migration costs are divided into those incurred immediately and those incurred annually. The annual ones will be because proprietary software has had to be used to support legacy applications.

The initial costs are simply found by multiplying the number of something by its cost. For instance the cost of retraining is the number of people to be retrained multiplied by the cost per person. Some of the costs will have to be average costs because the complexity of macros (say) can vary considerably. The actual costs will need to be estimated if done in house or found from third party quotes if done externally.
There is the opportunity to include a non specific cost to cover items not noted explicitly.
The annual costs are entered in the same way as for OSS and proprietary servers.

7. Variables

This sheet contains variables needed by the other sheets. The different types of desktop hardware are defined here. For each desktop configuration its initial and annual costs are recorded together with the average life. The average life determines how many desktops get replaced every year. Similarly the different types of server are defined. The notes referenced by entries give more detail.

Two other fields require input; the number of working days per annum and the number of hours worked each day. These are used to calculate the cost of support based on annual salaries.

8. Notes

The notes are referred to in the main sheets.