# Appendix 4. Infrastructure Requirements

| Requirement | Explanation |
|---|---|
| Anticipated Number of Users | Calculate the growth of the user base by estimating how many users will join the SCS-DSS at each upgrade. For example, six users are likely to join when the financial data mart comes online; another three can be expected when the performance data mart is complete; and four more may join when the management data mart is ready. |
| Expected Use | Divide this requirement into two categories: users who will request predefined reports and users who will regularly generate in-depth, ad hoc queries. |
| Anticipated Growth (Data Size/Population) | Estimate this for each SCS-DSS upgrade. For example, you may predict that the ODS will grow by 5 MB and 2,000 records every week and that the data marts will grow by 3 MB and 1,000 records every week. Each upgrade of the DSS will further refine these numbers. |
| Hardware | Determine what other equipment requirements your office will have, including desktop computers, bandwidth, and peripherals. |
| Temporary Storage (Data Mart) | Calculate the temporary storage your system will need by estimating how much hard disk space the data mart will use when developing responses to queries and generating predefined reports. Temporary storage depends on the number of users accessing the system, the size of the data mart, and the complexity of the queries/reports. A conservative multiplier is four times the size of the data mart. For example, if the data mart is expected to grow to 5 GB over the hardware's life, you should reserve an additional 20 GB for the temporary work area. This is a suggestion; your state's IT architecture plan may have a different multiplier. |
| CPU and Main Memory | Aim for the level of processing power and main memory you will need to maintain a suitable response time at the end of the hardware's life. A cost-effective method is to start with a server that supports multiple CPUs and has upgradeable Random Access Memory (RAM). For example, to aim for an 8-CPU, 64-GB RAM server, you might configure it as follows:<br>v Initial 2 CPUs, 4 GB RAM<br>v +18 months 4 CPUs, 8 GB RAM<br>v +36 months 8 CPUs, 32 GB RAM[1]<br>v +54 months Replace |

[1] The discrepancy between 64 GB and 32 GB installed after 36 months is not the result of mathematical error; we are simply leaving room for growth.