# TASK 10 Help desk procedures

## Help desk basics

The help desk is a department within a company or organisation that responds to user’s technical questions. Most large software companies also have help desks to answer user questions. Questions and answers can be delivered by telephone or email. There is even help desk software that makes it easier for the people running the help desk to quickly find answers to common questions.

In a large organisation, the help desk itself may be an organisation that supports external clients; with up to twenty people staffing it every hour of the day, while in a small place, the help desk may be staffed by one person.

Help desk staff read and collect relevant information about the problem or questions clients have. Problems are registered on a database, analysed and eventually solved. Resolving the problem is done either by the help desk person, or by a person they have ‘escalated’ it to, usually an expert, or someone who needs to check the problem on-site.

## Identifying clients and recording problems

All problems handled by the help desk must be recorded. Records are essential for following up problems and in determining causes and suitable solutions.

Reports derived from records can reveal the causes of repeated problems, be they due to faulty equipment, network configurations, software bugs or the need for more user training. This information can then be used to improve computer systems by documenting configuration changes, budgeting for upgraded equipment, or updating software programs.

After the help desk staff identify themselves in answering calls, they follow pre-determined procedures to identify the client, usually by a series of questions.

### Equipment details and warranty status

Each workstation should have its equipment and software registered on the help desk software system, or an inventory control system. Depending on the size of the company and the number of computers, there may be a number of items to be registered.

Equipment registration details include the warranty status of equipment or software programs, or if they are covered by maintenance agreements or service level agreements. In such cases when agreements exist, if equipment is tampered with or software programs altered, the warranty or agreement becomes invalid.

## Prioritising problems

Some problems can be solved immediately, while others need to be passed on and reviewed by those with more experience. This is known as escalating the problem.

When there are a number of problems to be solved, they need to be prioritised according to how critical they are.

Point-of-sale systems such as cash registers and airline reservation systems are critical for a company to function. Any problems such as those critical to the business and affect multiple users, are given the highest priority. A failed network printer affecting 20 users that prints accounting business material may be classified as a medium-level problem. A problem such as a screen-saver failing, that only affects one user’s machine and has not affect on their work, would be set to a low priority.

The help desk staff need to question clients to find out the specific problem and cause, so the then assign it a priority level.

## Following-up and finalising problems

As the problem moves towards being solved, the client needs to be notified regularly of progress. Usually the support personnel working on the problem will notify the client or the help desk staff who originally took the call. How exactly this is done will depend on organisational procedures.

All information about problems must be logged and tracked from when a help desk person receives the call or email, to work by support personnel and the close of the call. This helps build a complete picture of the computer environment and provides a knowledge base for future reference.

When the problem is solved, the client should be contacted for the last time to check that they are satisfied with the result.

## Closing the call

When a problem has been solved, it is called closing the call. The client needs to be advised that the problem has been solved. They may be required to carry out actions again as when the problem occurred to confirm that the system functions properly.

It is then necessary to report the solution back to the help desk. This is done by contacting either the help desk staff, or by the support personnel recording the close of the problem in the help desk software themselves.

In larger companies or for complex problems, reports are required to be written for each problem, and how they were solved. This information is useful in analysing any current trends in faults of computer equipment or software. Failing equipment may require hardware purchases, and software may require updates in programming or patches for operating systems.

# Warranty and maintenance agreements

All critical hardware and software should be covered by a warranty or maintenance agreement (which can also be called a service agreement).

All hardware components and software are sold under warranty for a set period in which time their repair or replacement is the responsibility of the supplier, so long as faults are due to normal use. You usually have the option of extending the warranty when you buy a product, especially with larger hardware items. Or you can enter into a maintenance agreement when the initial warranty expires.

A maintenance agreement is an agreement between the organisation and the supplier for ongoing maintenance of the hardware or software. Maintenance agreements can be on a fixed service basis at 24 hours a day, 7 days per week (24/7); 8 hours a day, 5 days a week (8/5); 12 hours a day, 5 days a week (12/5) or on a per-call basis.

The benefit of the fixed service type of maintenance agreement is that you are more likely to get a dedicated and faster response. Depending on the terms of the agreement, your maintenance costs are also likely to be covered, although such ongoing contracts can be expensive.

A per-call basis means you receive the services of the supplier as required. Although cheaper than an ongoing maintenance contract in the long-term, you usually must wait until a technician is available (which may cost you in downtime), and you are charged for labour and parts.

Software should also be covered by a warranty or maintenance agreement. Warranties and purchase agreements usually include free upgrades of packaged software. Software warranty only lasts for a short time, so an ongoing maintenance agreement for critical software should be in place. If customised software has been developed in-house, a maintenance agreement will not be necessary because it will also be maintained internally.

# Determining maintenance procedures

When determining maintenance procedures, an organisation needs to take into account risks to the business continuity and how critical the IT components and/or software are to this.

The sources of this information are:

* internal service level requirements and agreements
* warranty and maintenance agreements
* supplier procedures.

## Response time standards

Response times are outlined in service level agreements. Standard response times need to be established, based on a service request priority rating. Standard response times can be determined by:

* Determining the criteria for rating the priority of a service request. For example, *critical* priority occurs when the network goes down.
* Aligning those ratings with standard response times in the client’s service level agreements.

The response time standards should have been negotiated at the time of purchase of the IT component or software. Under warranty agreements, response times may be set, but under maintenance agreements they are negotiated. Sometimes, suppliers have set options from which you select the one that best suits your needs. Response times will depend on how critical the product is that requires maintenance, the level of risk to business continuity, and how much the organisation is paying for the maintenance agreement.

## Solving the problem

As outlined above, during the initial stages of solving the problem, it needs to be determined whether the problems can be:

* solved immediately
* need the assistance of those who are more experience
* need to be resolved by outside resources.

For equipment under warranty, the supplier needs to be notified to solve the problem. As mentioned under Help desk procedures, if local support personnel do this instead, the warranty usually becomes invalid.

In most cases with calls from the help desk, the operator taking the call solves the simpler problems. More complex calls, or those where a technical person is required on-site, are recorded in the help desk system, allocated a priority and assigned to system or network support personnel.

The support personnel will review the problem and take into account the sources of information listed above, such as service level agreements and risks to business continuity.

The problem may be solved at this point, in which case the solution will be logged and the client notified and assured that all is working well before the problem is closed. If the problem is not solved, more contact with the user may be necessary to obtain further information on how the problem arose. Running various diagnostics may prove useful here to pinpoint how problem has originated.

Where service requests are automatically escalated to a more senior IT staff member, the level of risk to the business continuity needs to be assessed, so that the more critical service requests are addressed first.

Calls are then closed as outlined under Help desk procedures above.

# Preparing and presenting reports

Throughout your career in IT, you will need to prepare reports. These may be maintenance reports to managers, or maintenance schedules for everyone to follow, or your recommendations for improvements.

Writing reports is the most common way of presenting information in a business or organisational environment. The presentation of the report is also important. It needs to be set out in a clear, and clearly structured way, in a readable style. Technical staff are not usually required to write lengthy reports, but are expected to complete maintenance forms and provide analytical advice.

## The purpose and audience

Report writing requires a style that is different from other forms of writing. Its purpose is usually more technical, as it aims to present information that people can make use of in some way. The purpose will influence both the content and the recommendations of your report.

You need to understand who you readers are so that you can direct the report towards them. The outcome for reports is to have the reader treat the information as reliable, and in some cases, to accept recommendations made.

For many daily technical reports, lengthy research and analysis is not required, but a pro forma document is used. This ensures that the data can be easily used for any analysis or cross checking performed at a later date.

## Preparing to write your report

You need to gather information that is reliable. A reader needs to be able to see where your information came from so that if necessary they can check its credibility or verify facts. A bibliography is one method of providing references for the information supplied.

In preparing, you will need to organise all your research material as effectively as you can, as well as evaluating the material for its relevance.

## A quick guide to report structures

The structure of a report moves the reader along a logical path towards the recommendations, findings or conclusions made. Different types of reports require different structures. The following table outlines the possible headings for different types of reports.

**Table 1:** Outline of report structures and order of text or pages

|  |  |  |
| --- | --- | --- |
| Short report | Long report | Technical report |
| Purpose | Preliminary material: cover page, table of contents and lists of tables, graphs and figures. | Table of contents, lists of tables, illustrations and statistical data. |
| Definitions of terminology |
| Purpose |
| Scope |
| Introduction | Introduction | Introduction |
| Discussion | Discussion | Background and research method. |
|  | Method and technique used |
|  | Statement of the issue | Analysis |
|  | Findings | Findings |
| Conclusion | Conclusion | Summary of results |
| Recommendations | Recommendations | Recommendations |
| End matter such as bibliography, appendices and index. |

# Summary

The maintenance of IT infrastructure is a crucial role of an organisation’s IT department. Many problems are raised with the help desk, and all information needs to be recorded, from the initial call to the resolution of the problem or query. Reports derived from records can reveal trends that may indicate the need for a change in hardware, software or user training.

When determining maintenance requirements, both critical and non-critical software and hardware systems need to be considered. Likewise, it is important to consider whether the client is an internal customer or external supplier, and whether there is a maintenance agreement in place.

Response time standards, escalation procedures and reporting procedures will vary according to the conditions laid down in maintenance agreements, and according to the procedures set by the parties involved.

After each help desk call has been resolved, the user needs to be contacted. The user must be satisfied with the end result before the call is closed. The help desk software system must be updated to reflect the closure of call. In some organisations, a technical report is required for each problem. These are usually completed on a standard pro forma document that is used later for analysis.

**QUESTIONS**

Additional Resources: <http://www.google.com.au/search?hl=en&source=hp&q=Help+desk+basics&btnG=Google+Search&meta=&aq=f&aqi=&aql=&oq=&gs_rfai>=

1. What is the purpose of a HelpDesk?

**Answer:** The purpose of help desk is to help provide answers to client’s questions. Help desk responds to technical questions that clients ask.

1. Why use HelpDesk software?

**Answer:** The use of help desk software is useful to keep all issues organised and to keep track of repeated problems.

1. Recommend a HelpDesk software for Lander Toyota

**Answer:** Spiceworks 4.7

1. What are the reasons for your choice of software?

**Answer:** I would recommend this because it is a full featured software programme that includes network inventory, monitoring, help desk and warranty tracking.

It features include:

* Easy to install
* Easy to use browser interface
* Provides asset tracking
* Provides help desk tickets via email, then automatically has that users asset information
* Manages virtual servers

In my opinion this software is a valuable software programme to install on your network.

1. What is recorded on an inventory system?

**Answer:** An inventory system is a database that collects and keeps a record of the client’s computers automatically.   
The type of information it collects is the computer serial number, cpu type, memory size etc. It can also keep information on peripherals.

1. Give an example of :
   1. Laptop warranty

* **Product:** HP Pavilion dv7-4000 Entertainment Notebook PC series

**Warranty:** 1 year parts and labour

* 1. Printer warranty
* **Product:** HP LaserJet M3027x Multifunction Printer (CB417A)

**Warranty:** One-year limited hardware on-site warranty and phone and web support (varies according to region)

* 1. Workstation warranty
* **Product:** HP XW and Z Series Workstations

**Warranty:** 3 yrs parts, 3 yrs labour, 3 yrs on-site service

* 1. Point-of-sale system warranty
* **Product:** HP Point of Sale System ap5000

**Warranty:** 3 Years On-site Limited Warranty

1. **Complete a Help Desk Log Form** (attached) and allocate a priority to the following three helpdesk calls

#### Scenario

Jo is the help desk operator at Computers are You Pty Ltd. She makes decisions on how to handle each of the calls and what priority levels they get. The priority levels in Jo’s company are as follows.

Computers are Your PLTY Ltd — Help desk priorities

|  |  |  |
| --- | --- | --- |
| Priority | **Criticality** | **Description** |
| 1 | Urgent | Business is unable to operate |
| 2 | Major problem | Part of the business unable to operate |
| 3 | Minor problem | Business can continue but minor application or a computer is inoperable. |
| 4 | Answered immediately | These calls may range from urgent to minor, but can be answered within three minutes. |
| 5 | Pending | Awaiting further instructions from client. |

#### Example 1

Jo receives a call from John in Accounts:

‘How do I add email addresses to my Outlook Address Book?’

Jo can answer this call straight away and she talks John through the options in Outlook that he needs to choose in order to add the email addresses:

‘Open ‘Outlook’, choose ‘contacts’, and double click on the person’s name. Enter the email address in the ‘Email’ dialogue box found on the right side of the screen.’

**Jo logs this call into the help desk database and assigns it**

**priority level \_4\_**

#### Example 2

Jo receives a call from Pinko in the Marketing Department:

‘The floppy disk is jammed and I can’t remove it from the floppy disk drive’.

Jo can’t attend to this problem from her desk.

**She assigns it a priority level \_3\_**,

and passes it onto Maria, the local support officer.

Maria goes to Pinko’s computer and is able to remove the floppy disk by using a paddle pop stick to manoeuvre the disk out. The metal on the top of the disk had bent, and by using the paddle pop stick she was able to level out the metal, and pull out the floppy disk.

Maria logs onto the help desk database and completes the information required to close the call.

#### Example 3

Jo receives an email from James in Marketing:

‘My version of MYOB is older than the version used in the Finance Department. I need my version updated to ensure that our reports are compatible.’

The installation will take an hour or so to update and configure. But first it must be escalated it to a higher authority for approval. The Software Manager will need to approve the upgrade and register the upgrade. Then, a level 2 help desk support person will perform the upgrade.

Jo enters the information into the help desk database,

**assigning a priority of \_3\_.**

She also attaches an alert to the problem to the Software Manager, Silvio. The Software Manager will receive an email and link to the problem. He can approve it immediately if he has all the information at hand. Then the next step will automatically move the problem to the level 2 help desk support staff. They will arrange a suitable time with James to install the upgrade.

1. What actions are required when a problem has been solved by the support personnel:

**Answer:** The support personnel are required to enter the details of the solution into the help desk software for future reference.

The support personnel should also call the client back to ensure the issue is solved to their satisfaction.

1. Explain “next level escalation of a problem”
   1. Give examples of typical problems that are resolved at

**Level 1:** Add contact to address book in outlook.

* 1. Give examples of typical problems that are resolved at

**Level 2:** Upgrade of software.

* 1. Give examples of typical problems that are resolved at

**Level 3:** The replacement of hardware because of a breakdown.

* 1. Are their costs associated with escalating a problem, if so give an example.

**Level 1:** $25

**Level 2:** $100

**Level 3:** $275

1. **Report: Write down the life cycle of the help desk call, from the initial call to the final closing of the problem.**

Consider the following questions to help you follow the life cycle of the problem.

* Did the problem need to be escalated to another level?
* Were expert staff required?
* Was it necessary to purchase any hardware parts? Was it necessary to update any software programs?
* Was it necessary to update configuration or network settings?
* How many users were inconvenienced while the problem was being solved?

**Steps for Help Desk lifecycle**

1. Client makes contact with help desk centre.
2. Verify client.
3. Log issue.
4. Provide tracking order number to client.
5. Prioritise issue.
6. Check FAQs for the same issue.
7. Issue resolved at level 1.
8. Escalate as required.
9. Send issue to appropriate personnel
10. Issue resolved at level 2.
11. Escalate as required.
12. Send issue to appropriate personnel
13. Issue resolved at level 3.
14. Enter resolution into database.
15. Contact client to ensure issue resolved.
16. If issue not resolved return to step 12.
17. Close issue.
18. Send survey or questionnaire to client to ensure their satisfaction.

**References**

Help desk software: http://download.cnet.com/Spiceworks/3000-2651\_4-10571387.htmlInventory systems: <http://zci.sourceforge.net/>Laptop warranty: <http://h10010.www1.hp.com/wwpc/au/en/ho/WF06a/321957-321957-3329744-64354-64354-4149935.html?lang=en&jumpid=oc_R1002_AUENC-001_HP+Pavilion+dv7-4004tx+Entertainment+Notebook+PC&cc=au?jumpid=in_r2515_au/en/hho/ipg/psc404redirect-ot-xx-xx-/chev/>

Printer warranty: <http://h10010.www1.hp.com/wwpc/au/en/sm/WF06b/18972-18972-3328064-3328083-3328083-2512341-2512347.html>

Workstation warranty: <http://h20000.www2.hp.com/bizsupport/TechSupport/Document.jsp?objectID=c01167529&lang=en&cc=au&taskId=&prodSeriesId=4100568&prodTypeId=12454>

Help desk costs: <http://www.boxtone.com/blog/index.php/mobile_user_management_blackberry/webinar-recap-helping-the-help-desk-slash-blackberry-support-escalations-and-costs/>