

Availability and Capacity Management

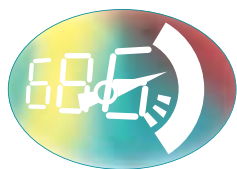
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Key

Glossary term: [Glossary term](#)

Cross reference: [Cross reference](#)



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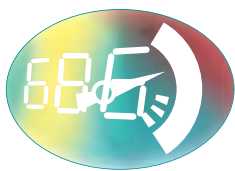
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Availability and Capacity Management

ACM 1 Introduction to Availability and Capacity Management

Would you like to stop fire fighting and take positive steps to prevent the occurrence of failure as far as possible? Availability and capacity management helps you achieve that and more...

ACM 1.1

Aim

The aim of this section is to introduce the topic of availability and capacity management (which includes preventative maintenance and network monitoring) and to help you implement them in your school with a minimum of preparation and training.

ACM 1.2

Objectives

The objectives of this section are to enable you to:

- understand the concept and benefits of availability and capacity management
- understand what is involved in the process of availability and capacity management
- implement availability and capacity management in your school
- continue to operate availability and capacity management
- identify useful measurements to gain benefit from the availability and capacity management process you have implemented.

ACM 2 Overview of Availability and Capacity Management

ACM 2.1

What is Availability and Capacity Management?

Availability and Capacity Management is, in [ITIL](#), two separate processes: Availability Management and Capacity Management.

Availability Management

The Availability Management process is to help you ensure that ICT services are available to end-users with as little disruption or downtime as possible, during the hours they are needed. It has a proactive and a reactive element:

- designing for availability involves preventing **problems** that may cause downtime
- recovering **availability** is to help you detect problems that have occurred and resolve them as quickly as possible.

Capacity Management

The Capacity Management process is to help you ensure that the components of the ICT infrastructure have enough capacity to enable the services that end-users require. Capacity in this context can be disk space for file storage, processing power, memory, bandwidth and so on. Capacity management is predominantly a proactive process involving planning for growth and identifying potential capacity problems before they occur.

Both processes focus on the proactive detection and prevention of ICT problems and help you to optimise what you have and to decide what you need.

ACM 2.2

Why use Availability and Capacity Management?

Availability and capacity management allows your ICT end-users to depend on the ICT services they have become accustomed to having. If they rely on ICT to carry out activities, the ICT infrastructure must be reliable enough for this to happen whenever it is needed, not just some of the time. Availability and capacity management benefits you by helping you to:

- maintain your ICT infrastructure to prevent the occurrence of failure as far as possible
- see potential **problems** before they become actual problems
- improve the design of the ICT infrastructure and eliminate single points of failure
- detect failures quickly
- diagnose failures
- understand the peaks and troughs of infrastructure utilisation and optimise accordingly.

ACM 2.3

Who uses Availability and Capacity Management?

It is mainly technical staff who use availability and capacity management. The processes involve network-monitoring techniques and technical skills ranging from software set-up adjustments to the installation and reinstallation of equipment.

However, those responsible for ICT should also have an interest in the output from these processes, in terms of understanding the current state of the infrastructure and planning for the future. Data gathered during network monitoring should also contribute to service reports showing ICT and technical support performance.

ACM 2.4

How FITS has adapted Availability and Capacity Management for schools

There are two common themes in managing availability and capacity: detection and prevention.

We have streamlined these themes into two processes that span both availability and capacity management. They are network monitoring and preventative maintenance and these terms should also sound more familiar to you.

Network Monitoring

Network monitoring deals with the detection of infrastructure activity and its impact on the components making up the infrastructure. This includes identifying capacity issues, establishing trends in peaks and troughs of usage and finding points of failure that may have already occurred – ideally before an end-user reports it to the service desk.

Preventative Maintenance

Preventative maintenance focuses on using network-monitoring information to identify improvements that can be made to prevent availability or capacity problems before they happen. This includes housekeeping or increasing capacity, identifying trouble spots and eliminating single points of failure.

Network Monitoring and Preventative Maintenance show you how to address availability and capacity issues proactively and reactively, without any duplication of process.

Relationships with other processes

The Availability and Capacity Management processes do not work in isolation. Some of the other FITS processes provide inputs to them and they, in turn, provide inputs to other FITS processes. It is important that those carrying out availability and capacity management (or network monitoring and preventative maintenance) are familiar with the other processes because they will participate in them at some stage.

Incident Management	An incident reported by a user may be the initial detection of an availability or capacity issue. This will be an input to the Problem Management process.
Problem Management	The availability or capacity problem detected as a result of the incident being reported will require diagnosis and the identification of a solution using the Problem Management process. This will result in a solution for an availability or capacity problem.
Release Management	The problem solution may require new software or hardware to be developed and tested, so will become an input to the Release Management process. Alternatively, it may be a straightforward change that can be implemented as soon as possible using the Change Management process.
Change Management	Changes developed via release management, or other changes, must be introduced in a controlled manner. The Change Management process enables this.
Configuration Management	The structure and configuration of the infrastructure is documented in the configuration-management database . This should assist by providing current details of the infrastructure components and help to diagnose the cause of problems and determine changes that may be required.
Service Level Management	The actual needs of end-users are defined in Service Level Management . The availability and capacity requirements should match these needs, so the Service Level Management process will provide an input to the Availability and Capacity Management process.
Service Continuity Management	What is currently available must continue to be available, so changes made as a result of Availability and Capacity Management will provide inputs to Service Continuity Management .
Financial Management	Finances will have a role to play when determining how much can be spent on managing availability and capacity. For example, if money is no object, a capacity issue may be addressed by increasing disk space; alternatively, housekeeping or restricting user disk space may have to be the answer.