

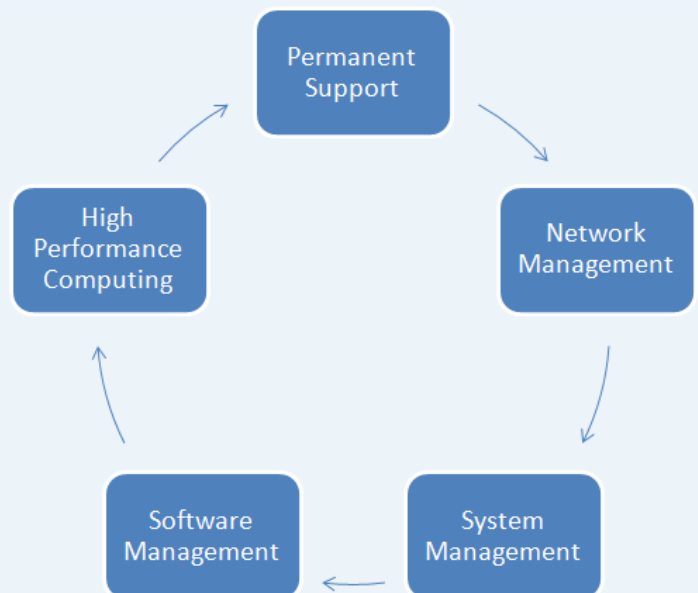
anterio performs research in the field of molecular modelling including computer-aided drug design.

With our experience in these fields we help customers to implement an IT infrastructure to aid these goals. We start with the operating system, to the High Performance Cluster and to the end user workstation with 3D stereoscopic support and we create the network design.

Most scientific IT environments are based on Linux<sup>®</sup> and Windows<sup>®</sup>, however Linux<sup>®</sup> is still the main approach to run scientific software on. We also support software types and architectures that run in a heterogeneous environment.

Managing a scientific IT environment needs many years of experience and a detailed knowledge about

- The implemented queuing system
- Parallel communication protocols
- Scientific software
- Hardware architectures
- OS configurations
- Authentication methods
- Network implementation
- Storage management
- License management
- Load adjustments
- Software distribution
- Change management
- Accounting



The anterio service concept was created around all these needs and can be adapted to any customer environment.

We provide a modular type of service options:

- System management
- Software management
- Network management



# IT service for life science

## System management

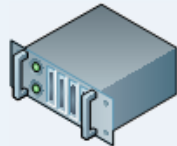
Our system management services are provided in conjunction with a trouble ticketing system to provide a maximum transparency and depth of detail in terms of accounting costs. We manage the operating system and its configurations, expand and optimize the configurations, we do the patch management for the customers operating systems and manage the authentication facility.

In case of hardware failure we will also take care about the replacement service together with the hardware vendor.

We always intend to do most of the tasks remotely, however certain tasks need to be done on-site and will be planned and discussed together with the customer.

**Patch Deployment**

**Authentication Management**



**Configuration Enhancements**

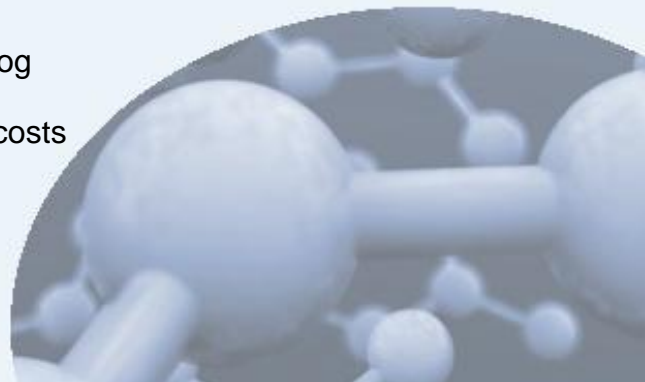
**Storage- Filesystem- and Hardware Management**

anterio will also manage cluster file systems varying from open source to specialised vendors.

We will manage the storage facility, and the file system regardless of type.

Customers benefit from:

- Rapid patch deployment
- Installation and management of the authentication facility
- Management of the storage facility
- Deep knowledge of file system handling
- Hardware maintenance service
- Configuration enhancements
- Planning of complex concepts
- Industry standard documentation and change-log
- Most tasks will be handled remotely to reduce costs



# IT service for life science

## Software management

Software management services are also provided with a trouble ticketing system for maximum transparency.

We manage the software installations for the customer in terms of installation and updates. We test new versions and manage the needed environment around it.

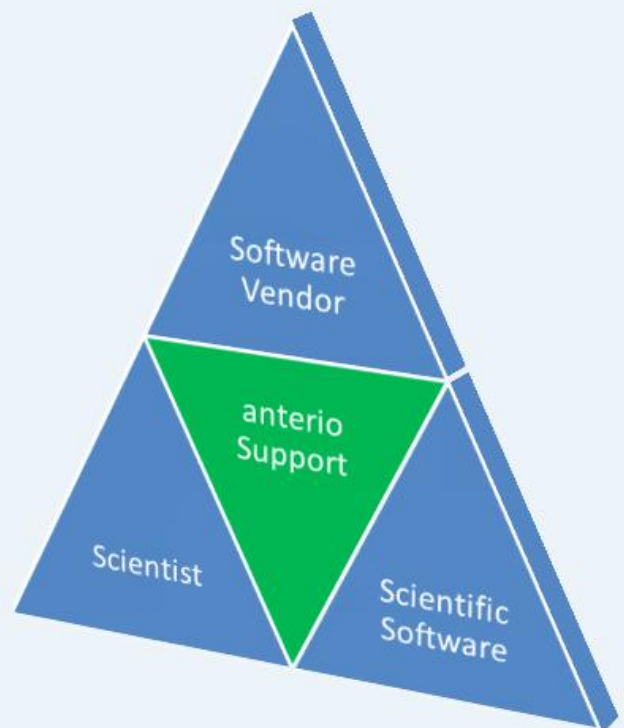
We support all common software suites in the field of life sciences, anterio often works together with specific software vendors and customers can benefit from our contact network.

In case of malfunctions that are not caused by the environment, we will keep track of the problem together with the software vendor and find a solution for the customer.

We always intend to do most of the tasks remotely, however certain tasks need to be done on-site and will be planned and discussed together with the customer.

We support any scientific software package:

- Open source software
- Commercial software
- Any common queuing system:
  - SGE<sup>®</sup>
  - PBSpro<sup>®</sup>
  - Torque<sup>®</sup>
  - LSF<sup>®</sup>
- Parallel environments like
  - OpenMPI<sup>®</sup>
  - PVM<sup>®</sup>
  - MPICH<sup>®</sup>
  - MPI<sup>®</sup>



anterio does also implement queuing capabilities to software packages that do not support queuing from scratch.



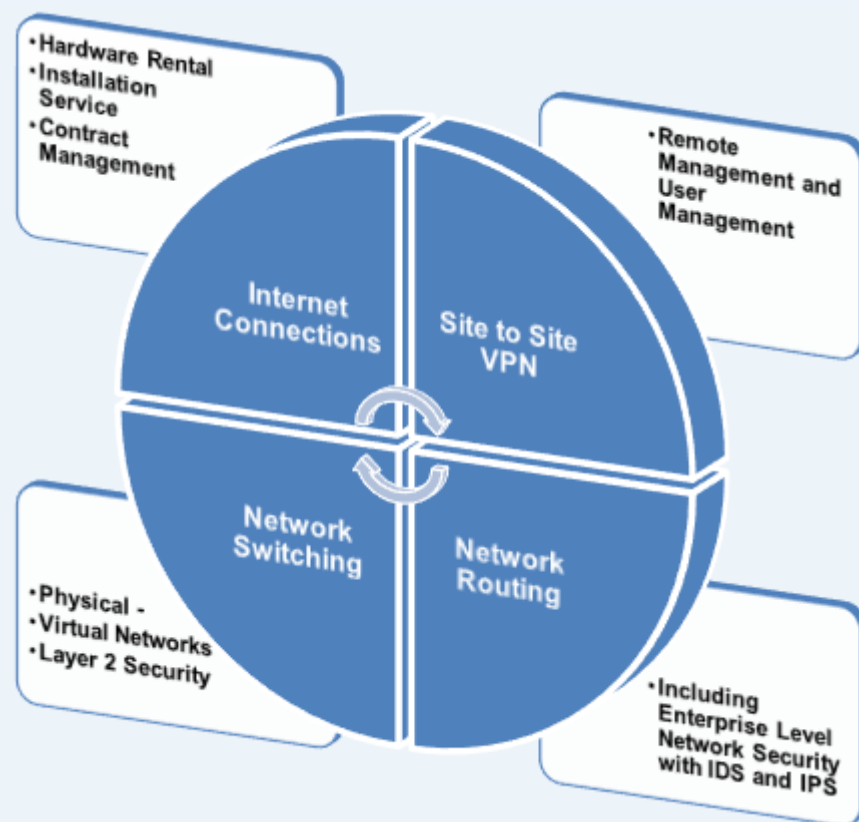
# IT service for life science

## Network management

anterio also offers a corporate wide network management and implementation service. Our network engineers can rely on many years of experience implementing all types of network devices and technologies.

From our scientific expertise we are also able to enhance the entire network performance and implement high performance networking as well as fail over architectures.

Customers will receive an enterprise level network documentation including change log.



- High performance networking
- Firewalls
- VPN technologies
- Virtual networking
- User management
- Routing
- Switching
- Fail-over networking
- Contract management
- Life cycle management



# IT service for life science

## Virtualisation service

anterio does also provide a maximum quality virtualisation service based on free or commercial virtualisation software. This helps the customer to maximise the server capacity and save costs within and after the life cycle of hardware generations.

We also use this technology within the anterio network, anterio uses full- and para-virtualized systems for different purposes.

This is a high end service which needs a complex planning and a detailed knowledge about virtualisation, security and internetworking. Customers can now benefit from our knowledge in this field.

We support the virtualisation of any common operating system.

Examples:

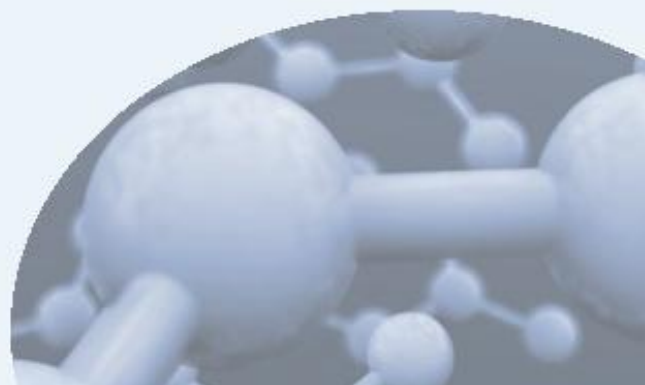
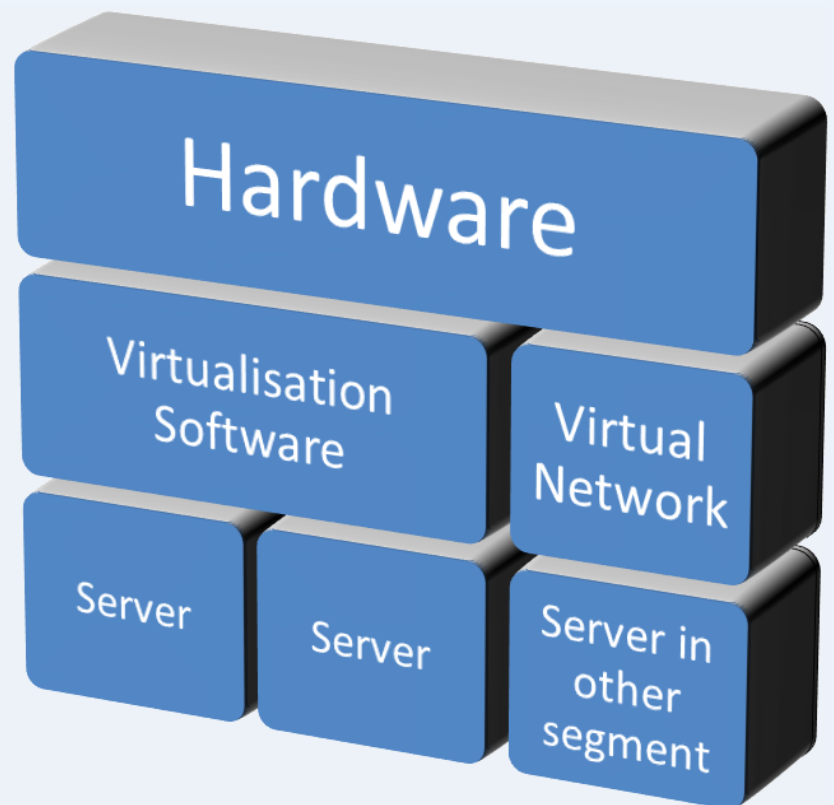
- Domain controllers
- Mail servers
- Application servers
- Web servers

Almost anything can be virtualized if the appropriate technologies are being used.

We support:

- iSCSI
- Fibre Channel

And many other connection types to attach fast storage to a virtualisation layer.

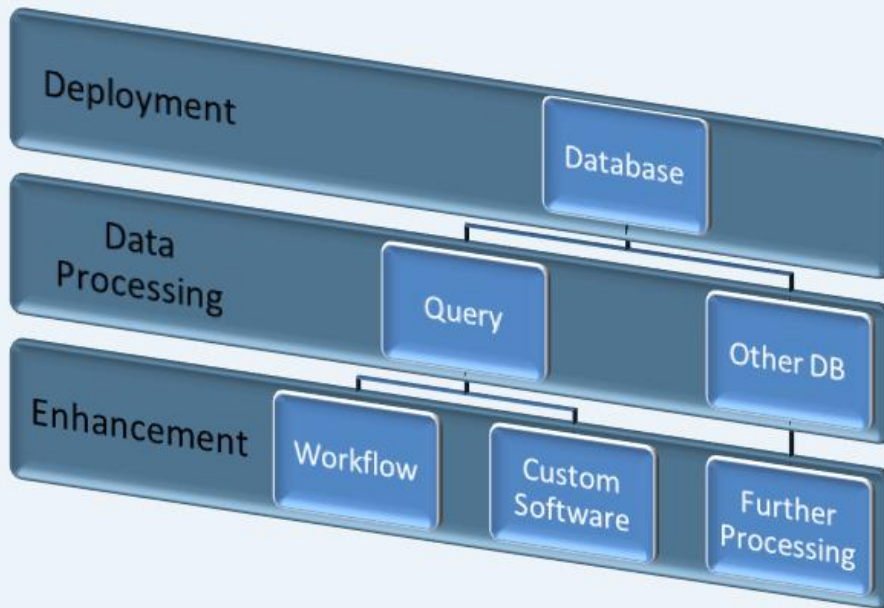


# IT service for life science

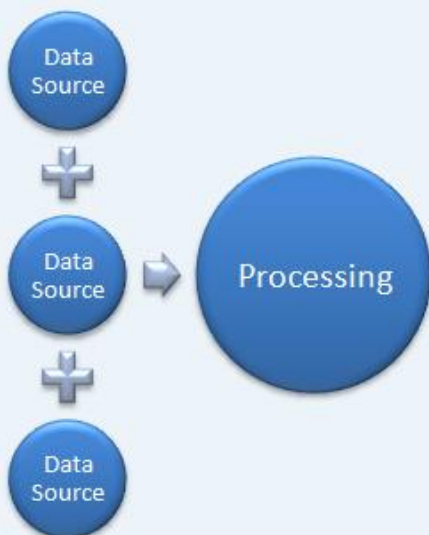
## Database management

anterio offers a rich set of services in the field of database management for various commercial and open-source database systems. We assist in the process of putting databases into service from the very beginning:

We help size the database server for the customer's specific requirements and plan the installation of the database system. We install the operating system and deploy the database system on it.



- Planning & design
- Installation & patching
- SQL query optimisation & performance tuning
- Database application development
- User management
- Storage management
- Backup, restore & disaster recovery



### Make the data available!

Scattered data stocks are a main problem in processing and accessing information.

With our help customers can:

- Process and migrate data from different sources into a central system
- Take advantage of a custom build data stock
- Develop their own solutions

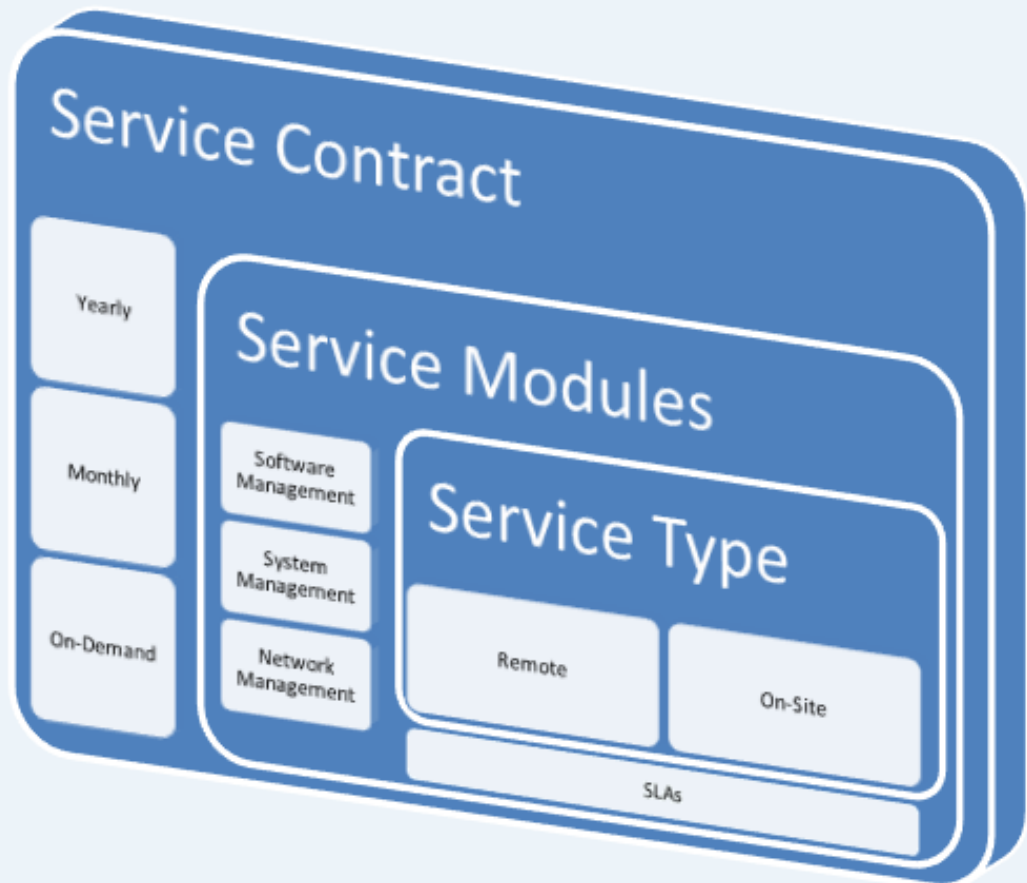




# IT service for life science

## Service contract types

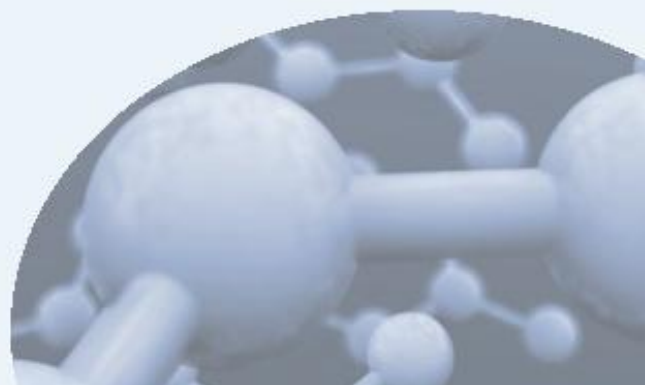
anterio offers different contract types which can be adjusted to the customer's needs. Customers can select from different support modules to build their personal type of contract.



Contracting with anterio is very flexible. Service contract durations can be selected as needed.

We also offer a type of contract without any runtime: the “On-Demand” option. Customers that only have few machines to manage can buy service hours which will be consumed over time and on demand. These service hours do not decay after a certain time.

- Flexible contract times
- Modular contract layout
- No call center redirect, there is always a competent system engineer available
- Definition of SLA together with the customer
- Trouble Ticket system for precise handling of service times and accounting



# IT service for life science

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