

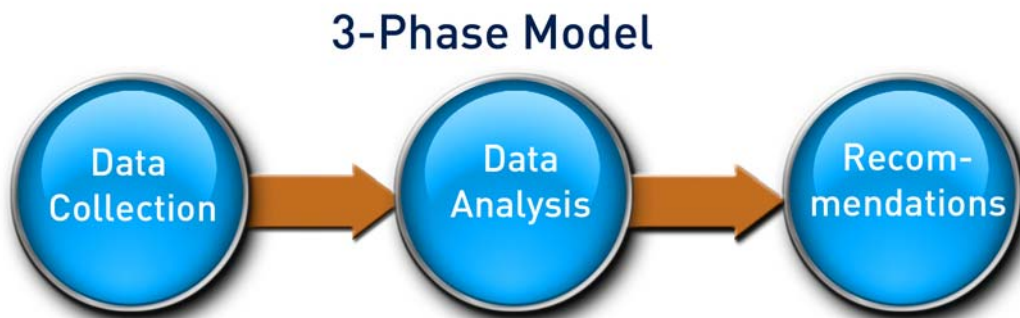
## Virtualisation

# VirtualisationCheck BASIC

The server hardware on the market today is typically over-sized for normal IT operations. In desktop environments excess capacity can still be “used up” in simple to operate user interfaces. Standard server resources such as CPU performance, main memory or I/O performance are seldom used up productively on an individual level and never in their entirety. There are also multi-core processes which can once again multiply CPU performance very cheaply without making the hardware infrastructure of a server more expensive. All modern processors provide virtualisation mechanisms which enable very effective virtualisation. At the same time maintenance and energy costs are rising for old servers. So it makes sense, for example, to use the next hardware replacement phase as a chance to start up a new, efficient and very flexible virtual infrastructure. But how can this be carried out in a calculated and transparent way?

### 3-Phase Model

The MATERNA VirtualisationCheck comprises three phases. In the first phase the existing IT infrastructure is recorded and described. The data acquired is evaluated and analysed in the second phase. In the third phase specific recommendations for action are developed.



### Data collection

In order to work out the potential that will result from virtualising the existing IT server landscape, it first has to be recorded and described. This includes surveying the existing servers and hardware and also the applications and services which run on it. Some of this data can be collected automatically, but in the end an exact overview considering organisational and strategic aspects can only be delivered by carrying out interviews with the people responsible.

In addition to this static recording of inventory data, data from performance measurements is required which has been collected over a reasonable period of time – for example 30 days. This is needed not only for inventory purposes but also so as to record behaviour and to be able to consider it effectively. Performance measurements take into account the levels of CPU and main memory utilisation as well as various aspects of the individual servers' I/O behaviour.

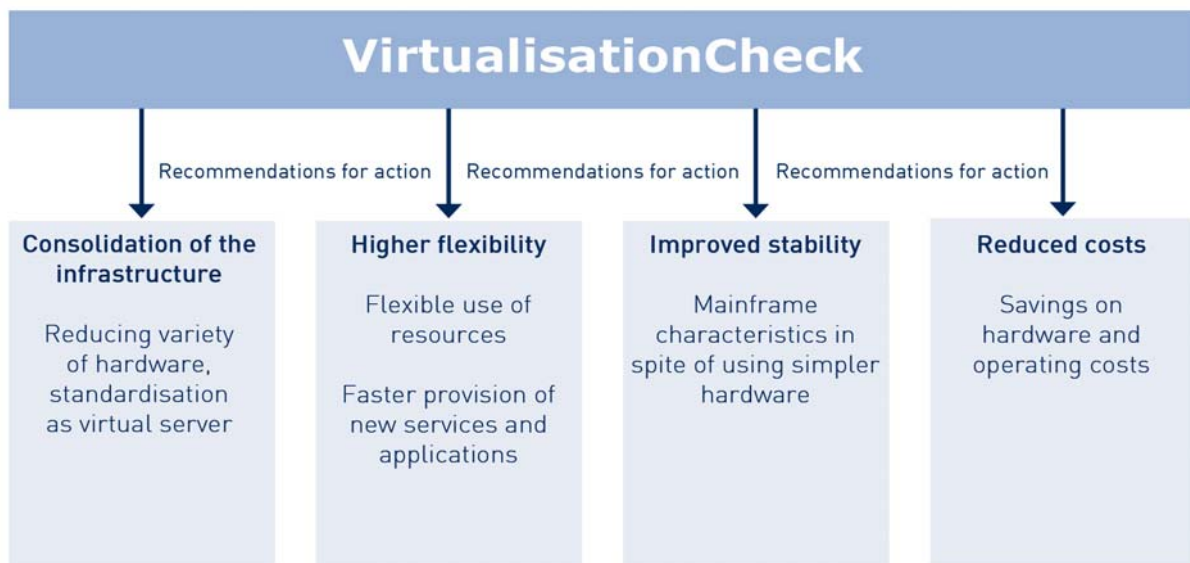
## Data analysis

The data from the data collection phase is used to ascertain the potential for virtualisation. It is possible to use the inventory data to work out which hardware can be sensibly virtualised with virtualisation methods.

After this initial selection it is possible, on the basis of the collected performance data, to combine individual systems so that they later sensibly complement each other when in operation and can use the target hardware optimally. The measurement data is also used to size the target hardware. This server-sizing can be done independently of any particular product or according to the standard manufacturers' latest series. This also takes into account all the availability requirements that have been ascertained in the form of reserve resources.

## Recommendations for action

Specific recommendations for action are developed from the results of the data analysis. These show what the target environment could look like and which initial systems are required to make use of the potential at the beginning. In addition to hardware recommendations the software components are also described which can optimally show the recorded infrastructure. The recommendations for action show in which order the servers should be replaced by their virtual counterparts to achieve the biggest impact and show the steps for extending the initial environment right through to the final stages. This also makes it possible to determine the necessary investment risks and the possibilities for optimisation.



MATERNA's VirtualisationCheck finds out how to make use of the advantages of virtualisation and how it can be embedded in an organisation's existing strategy.

The MATERNA VirtualisationCheck BASIC provides a very valuable description of the existing IT infrastructure. The investments needed for implementation are also presented transparently. Before every new extension stage it is possible to check easily whether the results achieved so far are enough to fulfil expectations. If necessary it is then possible to react with appropriate corrective action or strategy changes and thus to minimise the project risk as a whole.

If you are interested in finding out more about the VirtualisationCheck, we are happy to help.

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