

# Measurement and improvement of application performance with Newtest

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Executive summary

This white paper was written by Yphise. It outlines the benefits of Newtest for the business and the IT departments. Good reading.

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## About Auditec

Since its foundation in 1995, Auditec is a leader and pioneer in software packages that measure response times, performances and availability of any type of application service. The Newtest line allows unbiased, continuous and automated tracking and management of quality of service provided to end-users by every application and IT services. Auditec conducts consulting missions and trains users in addition to software development and sale.

Auditec has built up a client base of more than 260 major international and French accounts.

Visit [www.auditec-newtest.com](http://www.auditec-newtest.com).

## About Yphise

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## NEWTEST: KEY COMPONENT OF QUALITY OF SERVICE



Corporate **governance** requires a commitment by IT departments to deliver expected **service levels** to business lines, partners and customers. However, the measurement, proof and improvement of the **service level perceived by end-users** are difficult.

**Quality of service** is a commitment relating to two types of services:

1. **availability and response time of transactional processing applications;**
2. other critical services, most of the time less recurrent or visible to end-users, such as batch punctuality, helpdesk, demand and change management, security, disaster recovery and maintenance reliability.

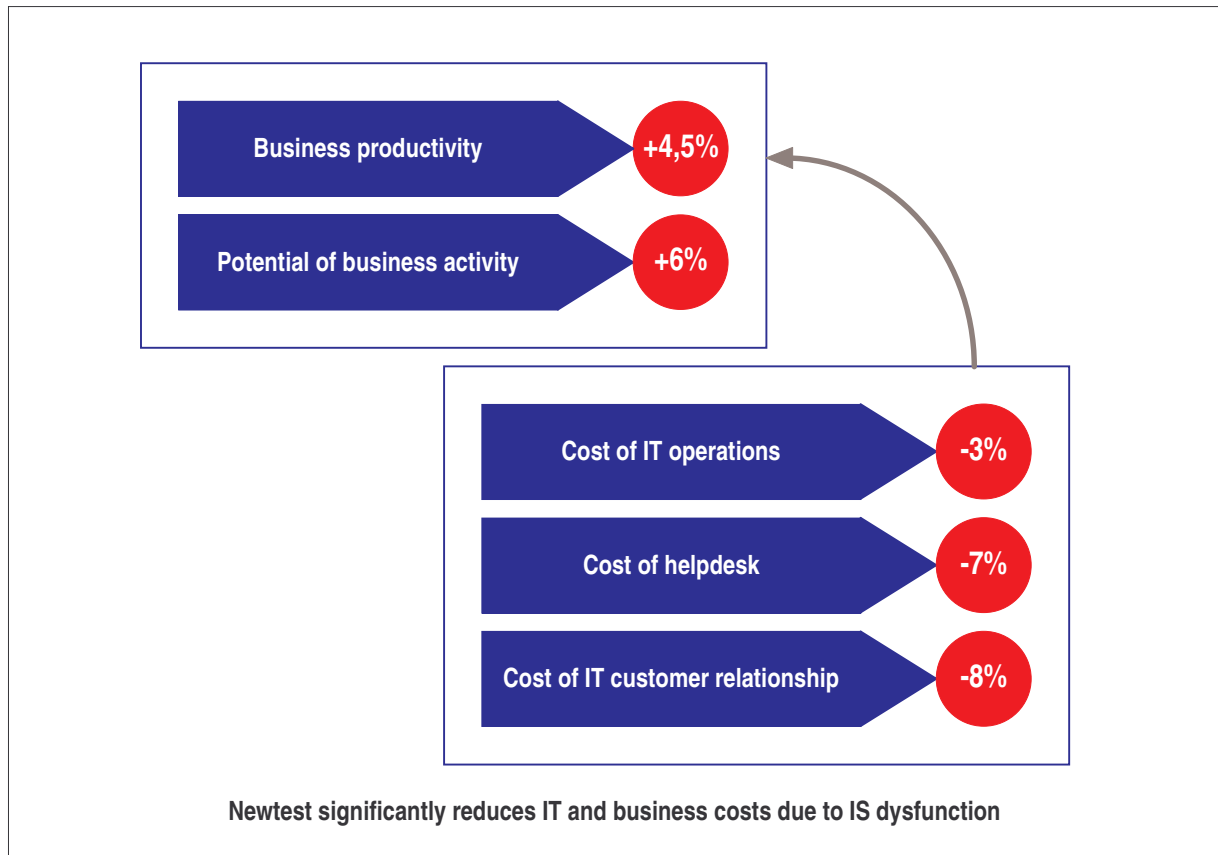
**The IT department mission includes delivering the service level** required by companies in order to succeed in their market. IT departments cannot achieve this mission successfully without application performance management software, i.e. measurement of the availability and response time of transactional applications, as end-users perceive them.

Newtest contributes to success in the area of quality of service.

1. **Newtest measures application availability and response time.**
2. **The Newtest architecture complies with standards,** in order to facilitate integration into overall service level management solutions.

Whether or not a service level commitment is formalized in service level agreements (SLAs), Newtest is required to meet the business service level requirements.

## NEWTEST REDUCES COSTS



### Newtest improves business availability

A major cause of **loss for a business** is disruption of applications, i.e. unavailability or excessive response time.

⇒ Business costs increase each time the application disruption blocks or delays the work of business end-users. Unavailability and degraded response time cause **loss of productivity** and waste of resources.

An estimated 10% gain of productivity may result from the elimination of application disruption<sup>1</sup>.

⇒ Application disruption results in lost **business opportunities**. Application dysfunction affects sales and production. Because of unavailability and degraded response time, customers and partners may switch to competitors.

We estimate that 30% of application disruptions lead to a loss of sale opportunities or customers.

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<sup>1</sup> Note. Values in this chapter are average values based on Yphise experience in various business areas, organizational and technical contexts. You may replace these values by your own ones, according to your company specificity.

Newtest improves business efficiency because it **mitigates the risk of disruption of critical business applications**. Improvement of the delivered IT service level entails business benefits. Newtest can improve business productivity by 4.5% and increase the business activity potential by 6%.

⇒ Newtest can **prevent performance degradation**. Disruption can be fixed before it becomes critical or obvious to business end-users. Newtest facilitates capacity planning of resources required to deliver the expected service level. It makes it possible to schedule the required investment in IT resources.

We estimate that, thanks to application performance management, 20% of disruption events can be treated before end-users are affected. End-user productivity increases by 2% (10% $\times$ 20%) on average. The activity potential increases by 6% (30% $\times$ 20%).

⇒ Newtest helps in analyzing the root causes of performance disruption. Newtest **reduces fix time**, because it helps identify appropriate actions.

We estimate that Newtest reduces by 30% on average the fix time of 80% of the performance degradation perceived by end-users. The productivity benefit is 2.5% on average (80% $\times$ 30% $\times$ 10%).

Potential productivity benefit for end-users	10%
Proportion of disruption events fixed before they impact on end-users	x20%
<b>Productivity benefit obtained by reducing the frequency of application disruption</b>	<b>2%</b>
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Potential productivity benefit for end-users	10%
Proportion of disruption events impacting on end-users	x80%
Reduction of disruption fix time	x30%
<b>Productivity benefit obtained by reducing the duration of application disruption</b>	<b>2.5%</b>
<b>Productivity benefit for business end-users</b>	<b>4.5%</b>

Proportion of application disruption events leading to lost business opportunities	30%
Proportion of disruption events fixed before impacting on end-users	x20%
<b>Increase of business activity potential</b>	<b>6%</b>

**Newtest improves IT efficiency**

⇒ **Newtest improves the efficiency of IT operations**. Degraded performance and unavailability require intervention by IT operations teams to restore service. Newtest reduces the cost of IT operations by 3%.

✓ Newtest makes it possible to **prevent disruption events**. It makes it possible to act before the dysfunction requires major intervention.

We estimate that Newtest reduces the intervention load by 20% thanks to this anticipation. On average, 30% of fixing actions involves application performance

issues. Incident fixing represents on average 30% of the IT operations load. Newtest reduces operations costs by 2% ( $20\% \times 30\% \times 30\%$ ).

- ✓ Newtest makes it possible to **diagnose disruption root causes** in order to determine the most appropriate actions required to fix problems. It reduces the diagnostic duration and cost by 30%. This analysis represents 30% of the cost to fix incidents. Newtest reduces operations costs by 1% ( $30\% \times 30\% \times 30\% \times 30\%$ ).
- ✓ In addition, Newtest allows the **fixing of disruptions according to business priorities**. Newtest can assign weights to indicators, according to the business and to the location of performance measurement. The criticality of disruption can be tuned according to business impact.

Newtest makes it possible to agree on disruption **responsibility**. It highlights whether problems are due to PCs, network or servers. It prevents people from endlessly blaming one another.

It should be noted that the operations segment of IT department budget is usually higher than the ones dealing with helpdesk, customer relationship or industrialization. This benefit is usually the highest one in absolute value.

Benefit for operations intervention load that relates to application performance incidents	20%
Proportion of operations interventions that involves application performance incidents	x30%
Proportion of incident fixing that pertains to operations load	x30%
<b>Reduction of operations costs that results from resolution of application performance incidents</b>	<b>2%</b>
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Benefit for duration and cost of performance incident diagnostic	30%
Proportion of diagnostic in operations incident fixing	x30%
Proportion of operations actions that involves application performance	x30%
Proportion of incident fixing that pertains to operations load	x30%
<b>Reduction of operations costs that results from diagnostic load related to performance incidents</b>	<b>1%</b>
<b>Reduction of IT operations costs</b>	<b>3%</b>

⇒ **Newtest improves helpdesk efficiency**. Newtest reduces helpdesk costs by 7%.

- ✓ Newtest **reduces the number of calls to the helpdesk**, because disruption is fixed before end-users can perceive it.

We estimate that Newtest treats 20% of performance disruption incidents before end-users perceive them. On average, 30% of calls to the helpdesk involves application performance. Newtest reduces the number of calls to the helpdesk by 6% ( $20\% \times 30\%$ ).

- ✓ The helpdesk must know how to answer end-users who call about degraded application performance. Newtest validates or invalidates the submitted problems. It reduces the cost of the **call qualification** by 30%.

On average, 30% of calls to the helpdesk involve application performance. Call qualification represents on average 15% of the helpdesk load. Newtest reduces the helpdesk cost by 1% ( $30\% \times 30\% \times 15\%$ ).

- ✓ In addition, the helpdesk **responds to business users, customers or partners who complain** about degraded performance. Newtest avoids repetitive calls by end-users who feel their requests have not been considered. Newtest helps the helpdesk answer and convince end-users.

Proportion of disruptions fixed before they impact on end-users	20%
Proportion of calls to the helpdesk that involves application performance	x30%
<b>Reduction of volume of calls made to helpdesk</b>	<b>6%</b>
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Reduction of qualification costs of calls made to the helpdesk	30%
Proportion of calls to the helpdesk that involves application performance	x30%
Proportion of call qualification that makes up the helpdesk load	x15%
<b>Reduction of qualification costs of calls made to the helpdesk</b>	<b>1%</b>
<b>Reduction of helpdesk costs</b>	<b>7%</b>

⇒ **Newtest improves the IT customer relationship efficiency.** Newtest reduces the IT customer relationship cost by 8%.

- ✓ Newtest provides objective, reliable measurement of the delivered service level. It helps in **drawing up and negotiating the service level agreements**, because it provides the knowledge of realistic service level commitment.

The drawing up of service level agreements represents on average 30% of the customer relationship load. The setting of service level thresholds on transactional applications represents on average 10% of the load for drawing up agreements. Newtest reduces the customer relationship cost by 3% ( $30\% \times 10\%$ ).

The negotiations aimed at setting the thresholds and reaching an agreement between the business and the IT department represents on average 25% of the customer relationship load. Agreeing on application performance represents about 30% of the negotiation load. Newtest reduces this load by 65%, because it provides a reliable reference. Newtest reduces the customer relationship cost by 5% ( $25\% \times 30\% \times 65\%$ ).

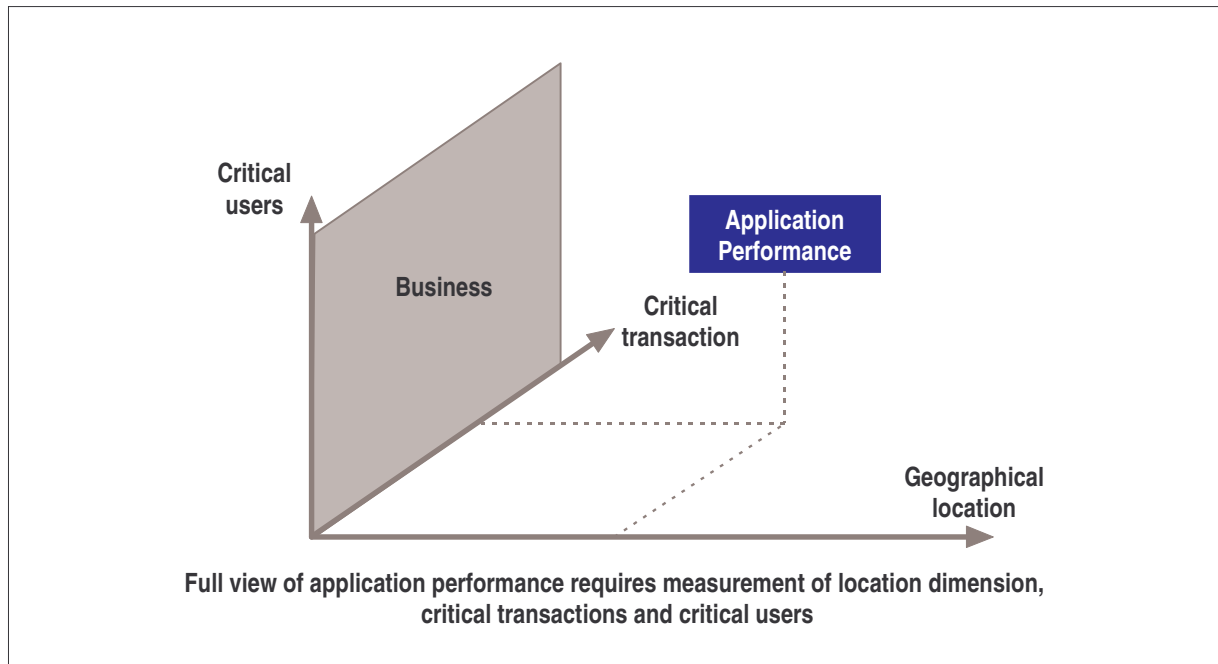
- ✓ In addition, Newtest helps settle disagreements. It provides an objective reference. It puts the relationship between the business and the IT department on a more sound footing.
- ✓ In addition, Newtest helps in explaining the IT investment to the business executives. It helps reaching consensus in order to invest. It highlights exactly the inadequacies of service levels. It provides fair analysis of the disruption root causes.

Proportion of definition of service level thresholds on transactional applications within the drawing up of agreements	10%
Proportion of drawing up of service level agreements within the customer relationship	x30%
<b>Reduction of service level threshold definition costs</b>	<b>3%</b>
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Reduction of negotiation load that relates to agreements on application performance	65%
Proportion of agreements on application performance within all the agreements	x30%
Proportion of agreement negotiation within the customer relationship	x25%
<b>Reduction of agreement negotiation costs</b>	<b>5%</b>
<b>Reduction of IT customer relationship costs</b>	<b>8%</b>

⇒ **Newtest improves industrialization efficiency.** In projects, the industrialization process prepares all the tools required for operations. This includes implementation of service level measurement.

Industrialization managers cannot implement some monitoring and measurement functions without application management tools. They cannot completely fulfill their mission. **Newtest increases the value deliverable by the industrialization process to the business lines.**

## CRITICAL TRANSACTIONS AND USERS



Application performance measurement must include the various factors that can cause variations in the thresholds and the delivered service level. The two main factors are the **geographical dimension** (i.e. where to measure) and the **business dimension** (i.e. the mission or business line for which the service level is measured).

Newtest covers both dimensions. Performance indicators are computed according to both parameters and include weights for each pair (location, business).

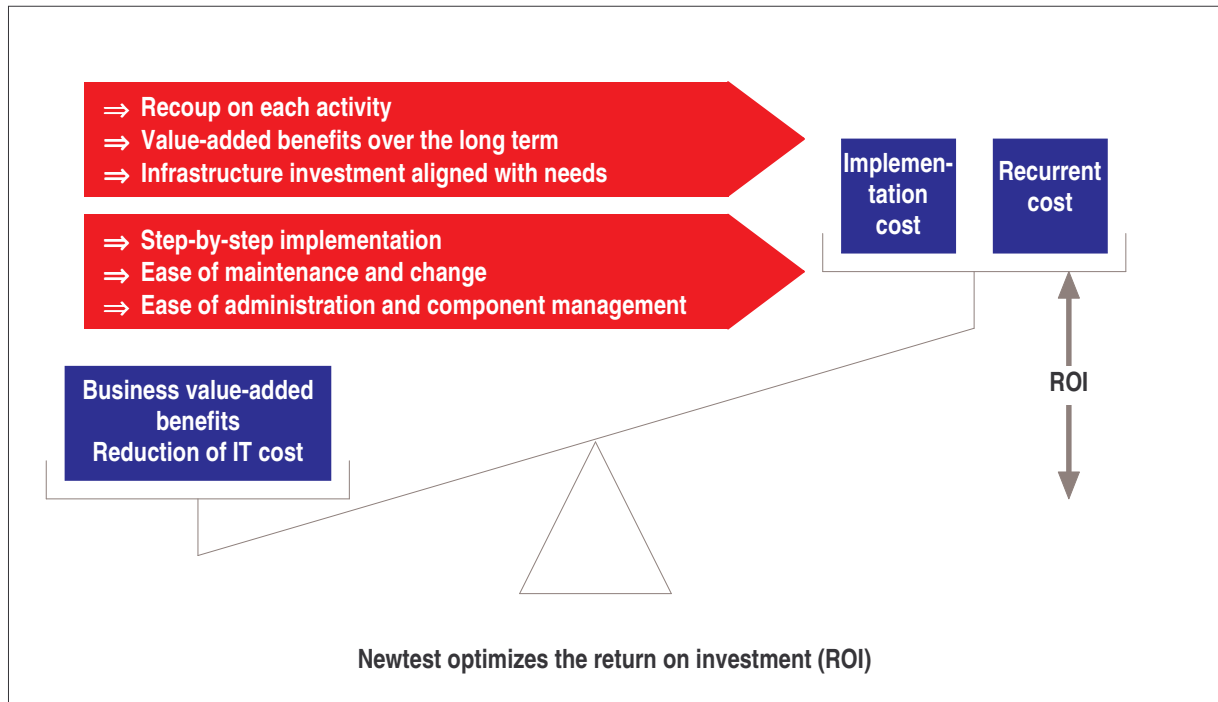
Newtest **fully covers the business dimension**. This dimension includes two subdimensions: measurement of **critical transactions** and **critical users**.

⇒ **Newtest measures the application performance of critical transactions.** The monitoring of critical transactions guarantees the performance of actions that create business value. Monitoring the transactions independently of the users who actually run these transactions makes it possible to anticipate performance degradation. Newtest **active agents simulate** the use of applications at the selected frequency according to **preset scenarios**, regardless of whether users run the applications or not.

⇒ **Newtest measures the application performance of critical users.** The monitoring of critical transactions does not meet all the service level measurement requirements. Newtest complements the transaction-oriented view with a user-oriented view provided by **passive agents**.

1. A gap may exist between the simulated service level and the service level perceived by **some end-users**. The reason for this gap may be the location, hardware or business priorities among the transactions.
2. Monitoring the transactions is insufficient in order to **diagnose problems** encountered by specific end-users.

## NEWTEST ENSURES ROI



Newtest **optimizes the return on investment (ROI)** with regard to the value-added benefits highlighted above.

Newtest limits the required investment.

- ⇒ Newtest is **written off the cost of all company activities**. Newtest can monitor all applications in the information system, regardless of company business. Investment in Newtest is useful for every business lines.
- ⇒ Newtest brings value-added benefits over the long term. Newtest is **durable** with regard to technology changes in the information system. Technology changes do not weaken the investment in Newtest.
- ⇒ Newtest **limits the infrastructure investment** required to reach the target service level. The service level reachable with a selected investment level is known. This avoids oversizing the infrastructure.

Newtest limits implementation and maintenance costs.

- ⇒ Newtest may be **implemented step-by-step**. The definition of the application and transaction scope to be monitored represents a **major risk** of failure in application performance management projects. We recommend starting with a limited number of critical applications and transactions. The monitoring and measurement scope can be extended progressively. New scenarios can be added on the Newtest agents. More Newtest agents can be deployed according to need.

- ⇒ The Newtest ease of implementation and maintenance of service level measurement scenarios minimizes **recurrent costs**. Newtest provides tools to **define the scenarios** required to implement the application performance management at the lowest cost. Scenarios can be defined progressively according to need.
- ⇒ The Newtest **ease of administration** and component management minimizes **recurrent costs**. The functional and technical administration costs associated with Newtest are limited.