



Agents: The forgotten and neglected cornerstone of IT management

By Mark Cowan, Abilisoft
Tuesday 29 March 2011

Companies require a new generation of agent technology that is highly automated and intelligent.

Ensuring the successful operation of the network is entirely dependent on the infrastructure tools embedded at the lowest level. This is because, if the agents that collect and feed data into management layers above - such as the domain manager for example - are antiquated, then the quality of data will be poor and this will in turn limit the performance of all management layers above.

The purpose of the agent layer is three-fold. Firstly it is a filter, consolidating the data it collects. Secondly it is a reporter, with the critical task of delivering the clean data to the right place, at the right time. Thirdly it automates fixes to commonly occurring issues.

Looking at it from this perspective, you could say that the agent layer is key to managing the network as it forms the bedrock upon which all the various IT management disciplines (domain management, BSM, SLM, CMS etc.) are built. That said, in many organizations it is an area that receives the least consideration or investment.

In the world's most mission-critical NOCs, the majority of agent technology was developed in the last century and is now 10 years old or more; some has been designed in-house, most is vendor-specific, and very little is inherently interoperable. The agents from the various vendors simply weren't designed to get along.

Today many companies employ a multitude of vendor-specific agents to carry out various tasks. Often, there are two or more agents doing the same/similar tasks, feeding conflicting or confusing information into the management layers above, and there are agents that have become redundant or reached end of life – the presence of which can cause their own system bottlenecks and software conflicts.

In addition, until now, companies who wished to upgrade any part of their NOC infrastructure were faced with the daunting prospect of replacing and/or reconfiguring everything - all agents and managers - all over again. In the telco space, the TMF has addressed this problem by proposing a next generation OSS architecture in which the management layers listed below are independent of each other:

- Element management (agent layer)
- Infrastructure management (domain manager layer)
- Service management (BSM, SLM, CMS layers)



Agents: The forgotten and neglected cornerstone of IT management

The software vendors, however, have made it difficult to 'pick and mix' the interoperability between their software layers, by forcing the use of proprietary interfaces, in an effort to keep the customer tied to their specific monitoring packages; in particular the agent and domain manager layers.

We are now in the second decade of the 21st century, and experiencing a new trend where developing economies are leapfrogging more mature economies by installing the latest technologies which are more open, flexible, performant and cheaper, simply because they aren't tied to legacy infrastructure and tools which dictate their choices. To keep up, companies in mature markets therefore need a similar level of flexibility to continue to improve performance and drive down costs. However to achieve this would mean replacing their existing monitoring packages (complete agent and management layers) with another, and the costs and risks involved in implementing the new solution generally prohibit such a move from the outset.

So how do companies with legacy monitoring solutions cost effectively improve their element management capabilities (agents) while at the same time safe guarding their system knowledge captured in their existing infrastructure management tools (domain managers)?

Companies require a new generation of agent technology that is highly automated and intelligent, so that each agent is more able than the previous generation, allowing companies to consolidate the number of agents that are deployed – disposing of all duplicated and redundant agents – and be assured that the new agents will carry out multiple tasks and follow more complex instructions.

This agent layer must be vendor-agnostic to flexibly add new technology seamlessly to the network without impacting business continuity or increasing operational cost. The agents need to be able to report into multiple management tools, removing duplication and confusion, and seamlessly enabling interoperability. Additionally, these agents should be centrally managed so that global changes can be made automatically across the entire network, from a single point of control, freeing up the resources of highly skilled NOC operators to concentrate on more complex tasks.

Finally, to compete effectively in today's aggressive marketplace, end users and/or customers need to be able to make changes to the configuration, so that they monitor what is important to them locally, and are alerted in a way that is convenient.

It is time to reassess the importance of the agent layer, as it really is the cornerstone of IT management.

Mark Cowan is CEO of Abilisoft

As co-founder and CEO, Mark Cowan is responsible for Abilisoft's strategic direction and growth. Prior to this, Mark was CEO at Abilitec, Europe's largest Tivoli Automation Services partner; a company that consistently delivered double-digit growth year-on-year. Abilitec was acquired by Innovise Plc in 2007, and for the next two years, Mark managed Innovise's ESM division and successfully integrated a number of businesses within that structure. Previously, Mark was UK Manager for Micromeritics Corporation..