DESKTOP MANAGEMENT

A review and full performance test on the NetSupport DNA 3 desktop management solution

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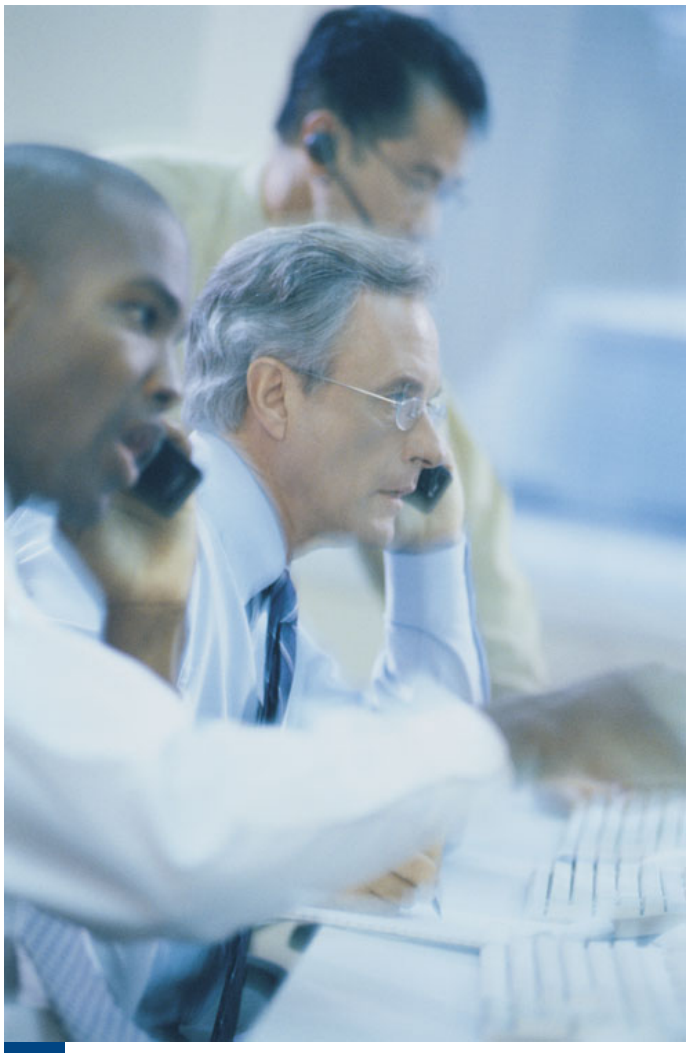
Introduction

Desktop management is a key function of network administration and at the enterprise level is a well established practice. However, many SMEs are put off by the inherent complexity of most solutions and see them as an expensive luxury rather than a necessity.

Managing IT assets effectively is essential if costs are to be controlled but with their limited resources, SMEs have a very specific set of requirements, with ease of use and value high on their agenda. NetSupport DNA (dynamic network administration) has always had a keen focus on these areas and aims to offer SMEs an easily deployed range of IT and asset management features.

In this report we provide a full performance test and review of the latest NetSupport DNA v3 which delivers an extensive set of features, some of which are unique, and also takes the green initiative with its new Energy Monitor.



Desktop management is essential at any level of business as if administrators don't know how many desktops they have, where they are and what hardware and software is installed on them then they can't possibly support them properly.

The problem is exacerbated for SMEs which invariably have understaffed support departments engaged in daily firefights as they try to deal with user demands. The biggest impact these scenarios can have is on support costs as they spiral out of control to the point where the initial price of the hardware pales into insignificance.

With TCO (total cost of ownership) high on the agenda it's important that network support is used effectively and proactively. Many companies focus only on the initial purchase costs of hardware and software whereas yearly support costs can easily outstrip these.

Desktop management software can pay big dividends by taking over many of the more mundane tasks and automating them. Hardware and software inventory are excellent examples as the entire information gathering process can be run regularly from a central location and the results stored in a single database.

Software inventory and application metering can show clearly what software is installed on each desktop and provide monitoring facilities for active applications. These come into their own for license metering as they allow application usage to be strictly controlled to avoid breaking software licensing laws.

Software distribution can automatically deploy applications and updates over the network so freeing up support staff from other time consuming tasks. Help desk functions are also valuable tools as these allow support staff to remotely troubleshoot user problems from the comfort of their own desk.

Controlling and monitoring workplace Internet access is now an essential requirement but the majority of point solutions are way beyond an SME's budget. DNA 3 has this covered as it uniquely includes a module that provides full reporting on all users' Internet activities and has the means to restrict what they can access.

The exponential growth of today's networks is making it difficult, if not impossible, for administrators to stay in control. IT support is a valuable business asset but it needs to be used proactively to get the best out of it and desktop management software has a clear role to play in these environments.

binary testing

Executive Summary

This report provides a full evaluation and performance analysis of the NetSupport DNA 3 desktop management software to determine its effectiveness in managing multiple systems in an SME network environment.

The primary focus of this report is to look at its abilities in Windows-based networks and the Binary Testing lab network was set up to duplicate this environment. Test systems were introduced to DNA with all key versions of Windows installed which included Microsoft's latest Windows 7.

Along with DNA's ability to be deployed swiftly to multiple systems, the report looked at the ease with which these systems could be managed and monitored. A diverse range of hardware platforms were used to test inventory accuracy and these including systems with the latest AMD Opteron and Intel Series 5500 Xeon processors.

Software inventory, license metering and application deployment were tested using a wide range of popular business applications. All client systems had Internet access and this was also used to evaluate DNA's Internet Metering and access control facilities.

The report found that NetSupport DNA fully supported all versions of Windows tested including Windows 7 and Server 2008 and was capable of gathering highly detailed hardware and software inventory about each test system which could be interrogated easily with the DNA Query and Reporting tools.

The Internet Metering module provided extensive information about online usage. Our testers could strictly control access and customise this for different users and groups allowing them to create a range of AUPs (acceptable use policies) for all workplace Internet access.

The Energy Monitor also proved to be a valuable tool and its findings caused a stir in the lab as some testers had previously been unaware of just how much power their systems were consuming.

This report concludes that NetSupport DNA 3 offers an impressive range of desktop and IT asset management tools. Along with easy deployment over a network, DNA satisfies the key demand that all support functions can be accessed and managed from a central location.

Unlike many enterprise solutions, DNA requires minimal resources to function and the intuitive design of the main console significantly reduces training requirements. DNA is also offered at a competitive price and can be customised further by only purchasing required modules making it a solid choice for SMEs on a tight budget.

Resources and Installation

One of the biggest drawbacks of enterprise products is their distributed approach to desktop management which can drive a big appetite for resources. Aimed at larger businesses, possibly with multiple offices in diverse geographical locations, these products often use a hierarchy of systems to manage desktops.

Microsoft's System Management Server (SMS), for example, groups the network into a hierarchy of different sites. It is initially installed on a central site that acquires data from the entire hierarchy and below this you can have primary sites and secondary sites that gather information about the network they are located on and pass this on up the chain.

LANDesk Management Suite (LDMS) is also aimed primarily at larger businesses as it too adheres to a domain concept for grouping systems together. However, not only does it require a core server for each domain but best practices insist that systems running the LDMS core server, database server, and service centre should be dedicated.

Issues particularly relevant to SMEs are that the LDMS core server still doesn't support Windows Server 2008 and this is not expected to materialise until v9.0. Businesses considering LDMS as a desktop management solution should also be aware that the parent company, Avocent, was recently acquired by Emerson Electric which could result in delays to further development of the software.

Now part of the Symantec empire, Altiris' Asset Management Solution is another heavyweight product that isn't well suited to SMEs due to its complexity. The number of different components can make deployment a lengthy process and its Notification Server central component still requires a dedicated Windows Server 2000 or Server 2003 platform to run from.

Requirements for the DNA host system are far more modest than the majority of competing products as this can be any Windows system ranging from Windows XP to Server 2008.

Hardware requirements are also much lower and minimal overheads mean the system doesn't need to be dedicated to desktop management duties either.

This makes it possible to retain a workstation rather than a server for these duties which brings a saving in operating system and hardware platform costs.

When testing installation we found that the DNA console can be loaded on a host system in a few minutes and requires very little user intervention. It requires a SQL database to store inventory data and provide query functions but if one isn't already available it will offer to load the bundled copy of MSDE2000 instead.

To put the DNA installation time into perspective, when installing LDMS we have found it can take up to ninety minutes just to load the core server software. The process is largely unattended but this does give a clear indication of the sheer number of components it requires.

There are some caveats for DNA if you plan on using Windows Server 2008 as your host system. As this OS doesn't support MSDE, if you are not using your own existing SQL installation, you are required to download the freely available Microsoft SQL Server Express 2005 prior to loading DNA.

As the process isn't yet automated, some manual intervention is required as the Express 2005 database must be configured to work with DNA. We discussed this with NetSupport's helpful support technicians and the process only took a few more minutes.

To manage each desktop, DNA requires a local utility, or agent, installed to allow it to be accessed and inventoried remotely by the central system. DNA takes a very simple approach to deployment and yet the routine impressed our testers with its capabilities.

Its deployment tool is accessed directly from the console and discovery routines can be run on selected IP subnets, domains or workgroups and all desktops and servers are displayed for selection.

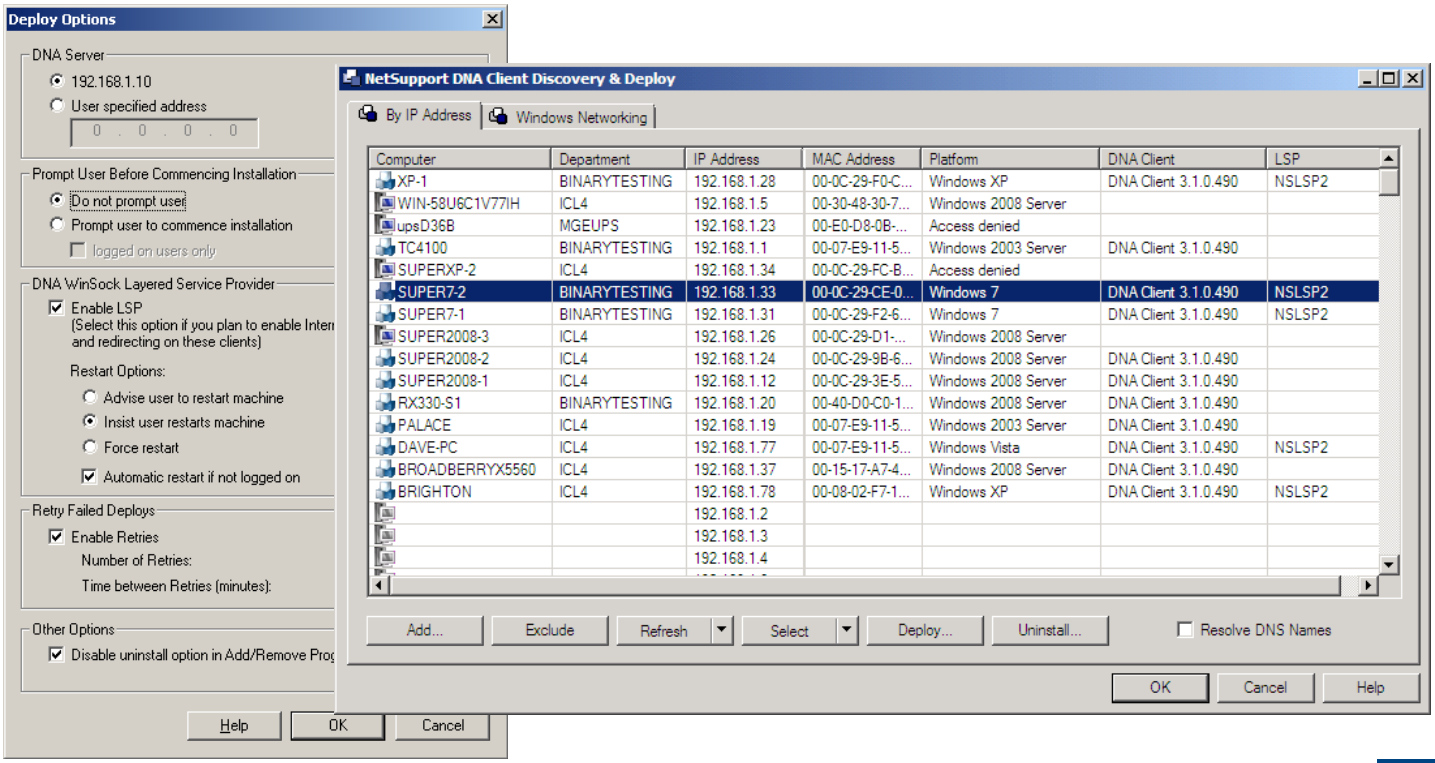
Usefully, the routine provides full details on computer names, workgroup or domain membership and the installed operating system. Any system with the client installed will have the version displayed making it easy to see if any need updating.

Deployment couldn't be easier as you select the systems to receive the client and deploy it to all of them with a single mouse click. A status display is provided so you can see the progress of the deployment and if there were any failures. There are plenty of controls over the client installation process. Prior to deployment you can decide which management server the client is to connect to and whether the installation should be silent or require user intervention.

Each system can be automatically rebooted on completion if required and failed install processes can be retried a specific number of times. More importantly, the deployment tool allows you to disable the option to uninstall the client on each desktop. To be able to deploy the agent to Windows Vista and 7 systems these needed to be part of an Active Directory domain. We tested using both these clients and found the process worked smoothly.

Our testers found the DNA console interface to be very well designed and extremely intuitive. The design philosophy is consistent throughout all of NetSupport's product range so using the remote control component from the Manager utility will require minimal training as it retains the same look and feel.

There will also be a requirement to provide controlled access for multiple users in environments where support staff have differing responsibilities. DNA 3 now offers role based administration which uses profiles to define privileges for selected functions. These profiles can be assigned to multiple users or linked to Window Groups and AD users and groups allowing access for different administrators and operators to be controlled and managed.



As soon as the clients have been deployed they communicate with the console, hardware and software inventories are taken and each system is automatically displayed in the left hand pane of the console. At the top level the desktops are placed in groups showing their respective workgroup and domain membership but, as with the majority of enterprise level solutions, DNA also uses dynamic groups.

We found DNA offers one of the most intuitive methods for dynamic group creation as you don't need to know any SQL query language. Instead, you build dynamic queries by picking and choosing from a complete list of source fields such as PC hardware and software assets, user details, Internet access and power usage.

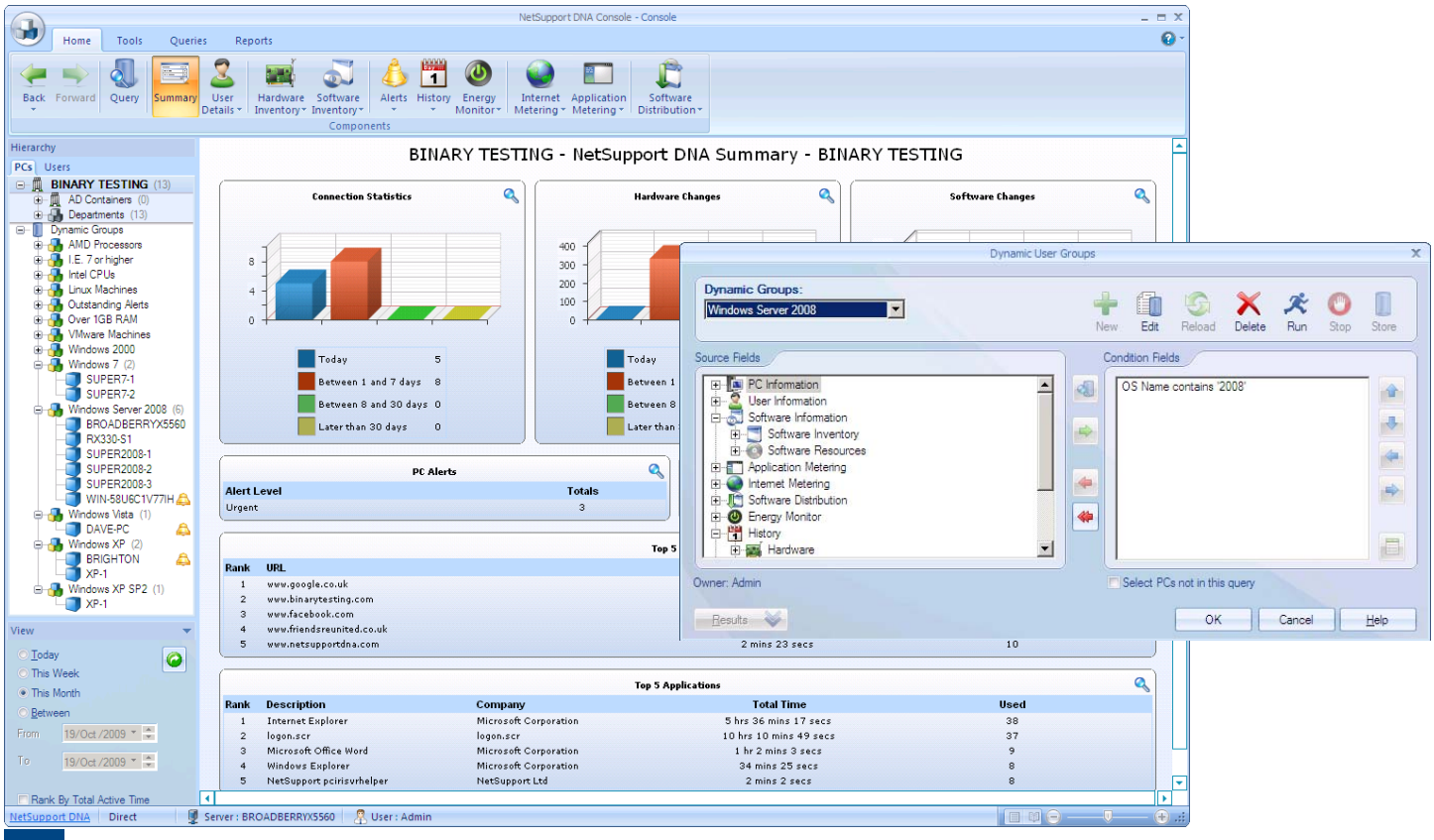
Each dynamic group can be based on multiple sources from different categories. To each included source you add a condition which can range from a simple numerical value to a date range or a particular piece of user information.

Dynamic groups make DNA extremely versatile as they can be used for a wide range of scenarios. Software deployment may require a minimum hardware specification so dynamic groups can be used to interrogate the inventory and the results set to automatically update as new clients appear that satisfy these criteria or their configuration changes.

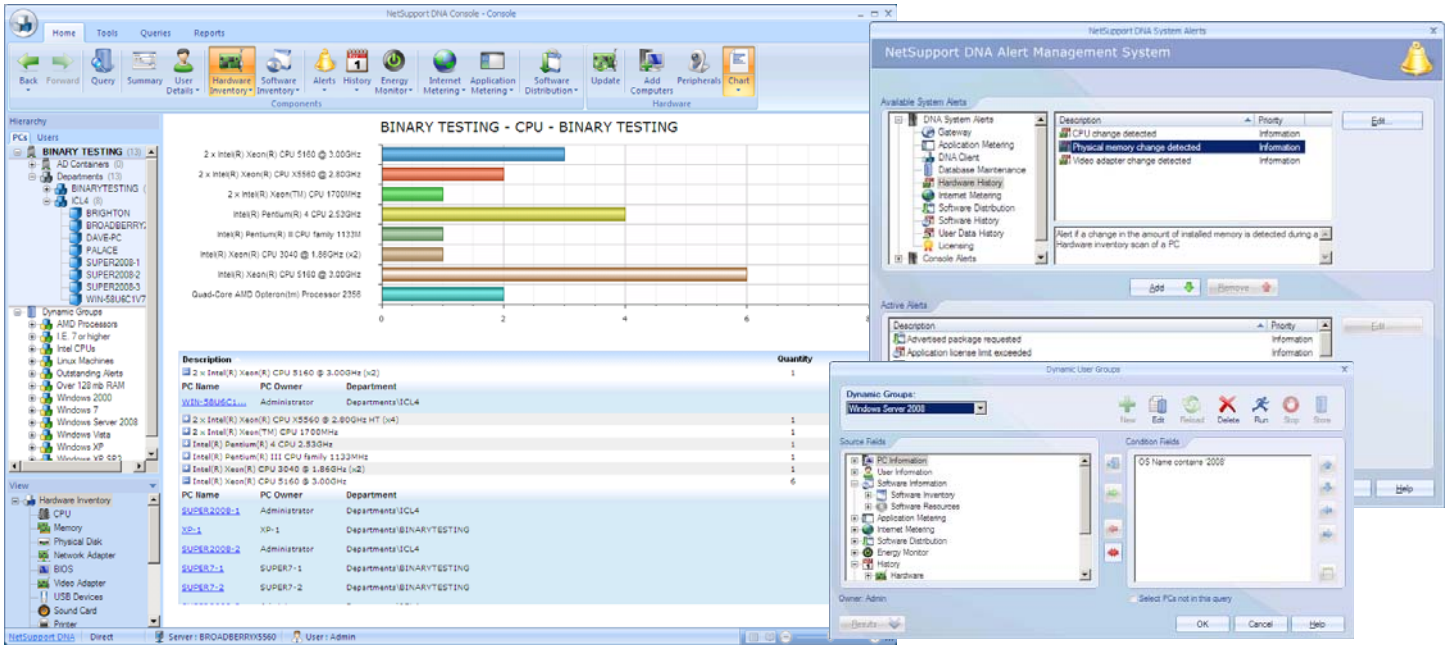
Support for a wide range of client platforms makes a desktop management product more versatile and along with all versions of Windows including Server 2008 and Windows 7, DNA can also look after all major Linux distributions allowing these systems to be included in the management console and inventory process.

DNA's intuitive console provides easy access to all functions from a single interface. Along with views of static and dynamic groups to the left it provides customisable graphs and tables to the right that are determined simply by the function selected from the row of menu buttons along the top of the interface.

A key feature of the console is the seamless integration between the various components. Selecting a group from the left pane allows you to view summaries of assets and user activity and you can easily drill down for more detail on each individual member.



Hardware and Software Inventory



Inventory is fundamental to desktop management as it provides the basis on which all other operations are carried out. During testing we found the high levels of information and accuracy presented by DNA were actually better than some supposedly enterprise level solutions.

Our test network comprised a wide variety of hardware platforms that presented DNA with a diverse range of processors. Starting with older Pentium III and 4 workstations, these led up to quad-core AMD Opteron 'Shanghai', Xeon 5100, Xeon 5400 and the very latest Xeon 5500 'Nehalem' processors.

DNA correctly identified all processors, their speeds and cores along with installed memory, motherboards and BIOS versions. Much more information was provided with hard disks and interfaces correctly identified along with their partitions and free space. All network interfaces and speeds were identified along with installed USB devices and other components such as video adapters or CD and DVD drives.

DNA's software inventory identified all test OSes including Windows 7 and showed all versions, service packs and latest patches. We also used systems running ESX Server 4 loaded with multiple VMs running a range of OSes and DNA correctly noted in their inventory that these were VMware virtual machines.

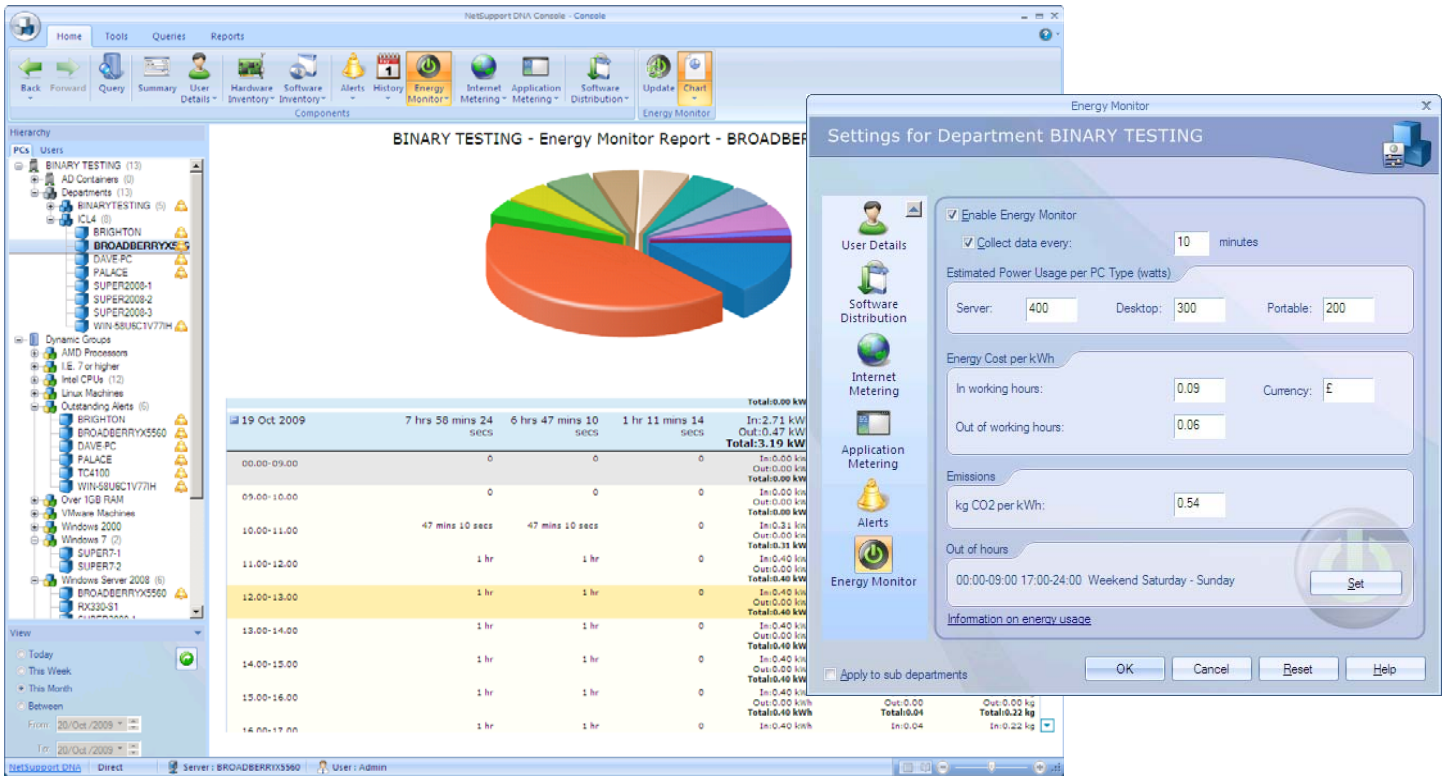
Software inventory also maintains a separate list of all applied Windows hotfixes and service packs and shows whether they installed successfully. Accuracy for software identification was also impressive. Our test clients were installed with multiple applications ranging from Microsoft Office 2003 and 2007 through to graphics design, games and desktop publishing applications and DNA spotted them all.

Compared with products such as LDMS and Microsoft's SMS our testers concluded that DNA delivers the same high level of inventory accuracy and detail but presents it in a more user-friendly format. Inventory has also been improved to allow it to differentiate between a software suite and its individual applications.

The new Program Manager in DNA provides details on all applications that each Windows system has available in its Add/Remove Programs list. It also provides direct access to software license management features allowing DNA to keep track of applications in use and warn you if the license count is being exceeded.

DNA's History is an invaluable feature that can track and record changes to hardware, software, users and alerts. Each time an inventory is run, DNA compares its findings with data already held on any of these four categories and it records all changes. The History can be viewed at any level of the DNA Hierarchy allowing support staff to quickly identify possible causes of problems and provide swift remedial action.

Energy Monitor



With utility prices spiralling year on year businesses cannot afford to ignore the costs of IT and must identify and eliminate wastage. Furthermore, with an ever increasing focus on environmental issues, these same businesses also need to be aware of their carbon footprint and make every effort to reduce it.

DNA's new Energy Monitor provides a simple yet highly effective means of gauging power usage, identifying wastage and calculating potential CO^2 emissions. Using the agent, it can keep track of the state of each system and identify when it is powered on or in hibernation.

Using baselines calculated from the amount of time a system is running each day it can provide tables and graphs showing average power consumption. Combining the Query and Reporting tools with this data makes it a relatively simple task to identify systems that are being left powered on outside normal working hours and potentially wasting energy.

The Energy Monitor goes much further as it can also calculate power usage, energy costs and CO^2 emissions. DNA categorises systems into server, workstation and portable devices each with their own set of parameters of estimated power usage in kW, energy costs per kWh and emissions in kg of CO^2 per kWh.

Clearly, you will need to have a good knowledge of these areas to provide appropriate values but once entered, DNA can be left to get on with gathering information about each monitored system. You also need to set periods defining what is outside normal working hours to allow DNA to identify rogue systems.

Selecting the Energy Monitor in the main console shows a graphical view of hourly power usage, costs and emissions for the system or group selected in the Hierarchy pane. We could easily interrogate this data further by swiftly creating custom database queries that could, for example, identify systems powered on for more than a certain number of hours each day.

The Reports module also comes into play as NetSupport provides a set of predefined reports looking at energy usage. These can be used to pull up details such as power usage and kgs of CO^2 produced outside normal working hours or total energy costs.

An essential element of desktop support is change management and the ability to react to problems in a timely manner. DNA's alerting module puts it up with many enterprise solutions as it provides the tools to automatically issue warnings when changes occur on the network.

It provides three types of alerts with DNA System Alerts focusing on changes that occur in the data stored in the database such as the software and hardware inventory, a new PC being added to a group and changes to user details.

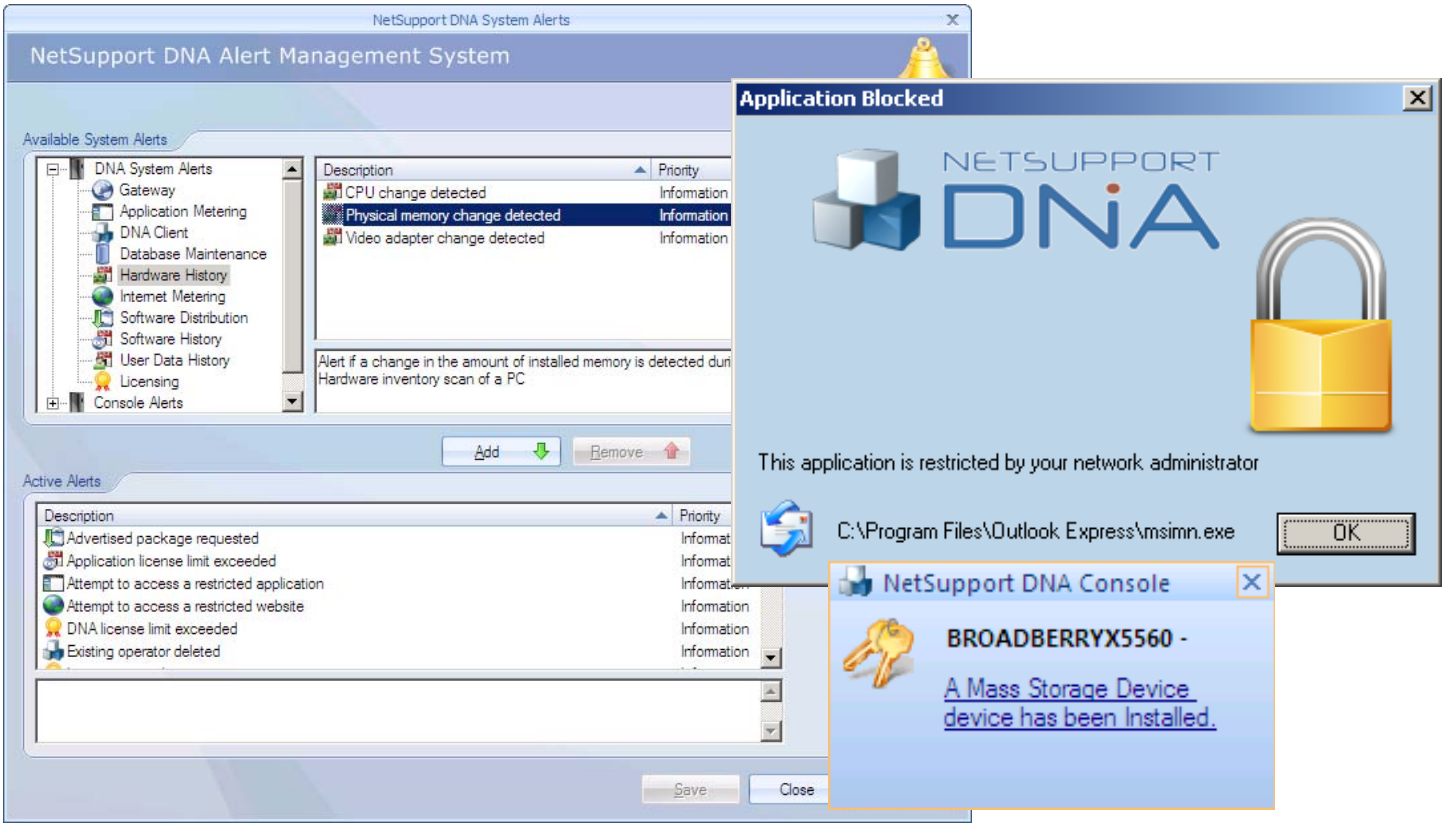
PC Alerts handle changes within the systems being monitored such as hard disk space decreasing, CPU utilisation, applications being installed and uninstalled and so on. Console Alerts concentrate on changes to DNA administration and will, for example, advise when a new Operator has been added.

In light of the increased awareness of data protection compliancy, DNA's ability to monitor USB devices adds considerable value to the alerting module. DNA can issue a warning when it detects a user inserting or removing a USB storage device.

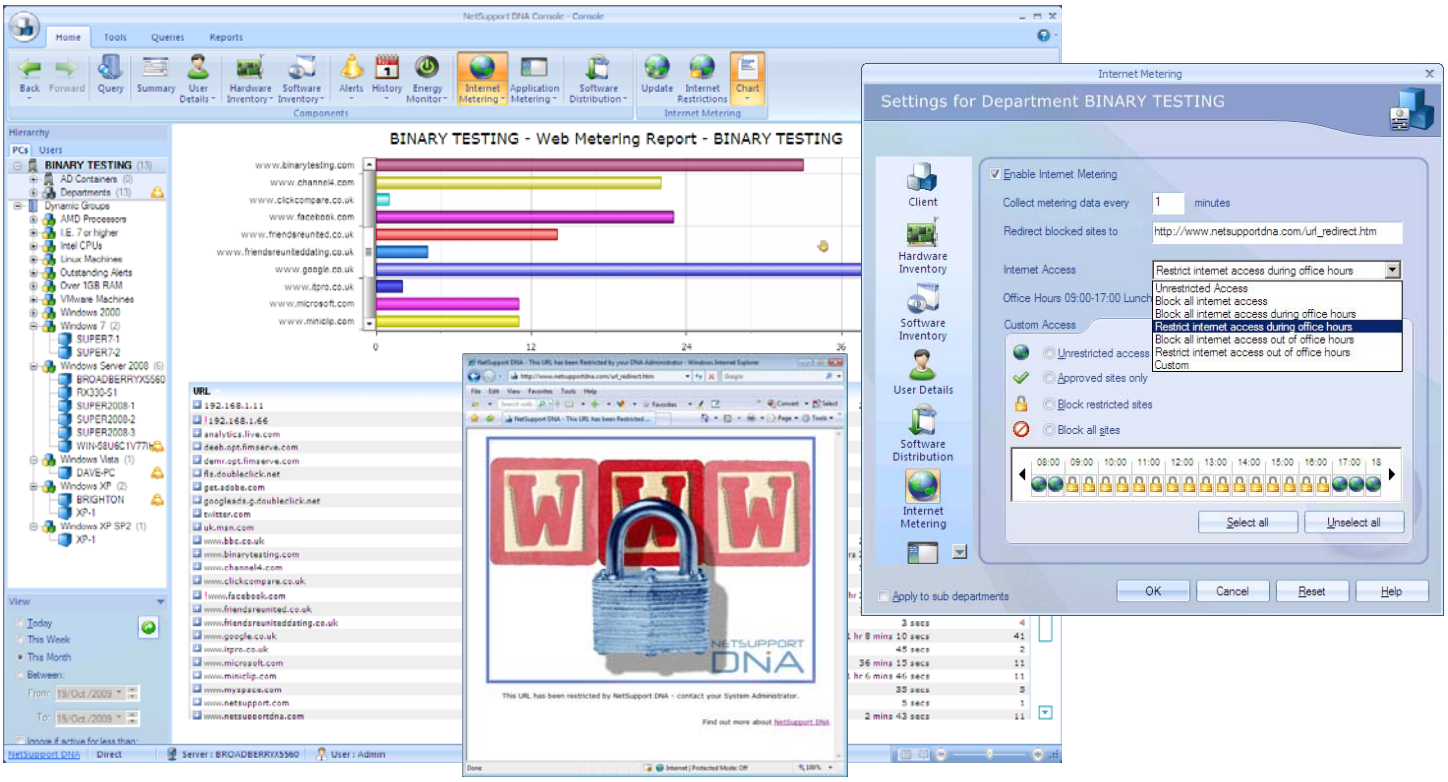
DNA doesn't have the ability to block access to these devices but its reporting facilities can be used to show clearly who has been using them and when. During testing we found this functioned effectively with the console providing pop-up warnings within seconds of a USB storage device being inserted or removed from our client systems.

Configuring alerts is simple enough as you provide the email addresses the alerts are to be sent to and decide on an escalation process. The latter allows you to set response times for each alert and if they are not signed off in time they will be escalated to the next stage.

When they've reached the critical level the DNA administrator will be informed. The status of all three alert types is displayed in the main console so it's easy to keep track of outstanding issues. Furthermore, from the Hierarchy pane, each group and system that has an associated alert is marked for attention.



Internet and Application Metering and Access Control



NetSupport's Internet metering and access control module make DNA virtually unique in the world of desktop management. The agent is capable of monitoring all Internet activity on each desktop in real-time and passing this information back to the console.

You can view graphs of the top web sites being visited by group members and even more detail is provided for individual users as you can see the top web sites they have been visiting. A complete list below shows all sites, the duration of their last visit and the number of times they have been requested.

DNA's metering can be used to control access to Internet resources. Global settings let you to decide whether to allow unrestricted access, implement approved or restricted URL lists or block access completely. Different settings can be applied to each group and a new feature is the ability to include sub-URLs allowing restrictions to be applied to individual web pages.

Selected URLs and sub-URLs can be added to DNA restricted or approved lists. These are easy enough to create as you can view all sites visited and move selected entries to either list. Users attempting to access a blocked site can be redirected to a custom advisory web page and DNA's alerting module configured to warn operators of this activity.

Time restrictions can also be applied at the group level allowing access policies to be activated during specific periods each day. This feature could, for example, allow businesses to limit employee Internet access to lunchtime periods only.

Along with software inventory, DNA can monitor active applications on each desktop and provide this information back at the central console so you can see precisely what each user is doing at any given time. As with Internet metering this option presents a graph of the top applications at the group and individual user level and you can see how long they have been using each one.

Application access management also comes into the equation as you can apply a similar level of controls to programs as you can for Internet access. Top-level restrictions can be applied to the whole company and these can be refined further down within each sub-group. If a user attempts to run a restricted application they receive a message from the console advising them that it has been blocked.

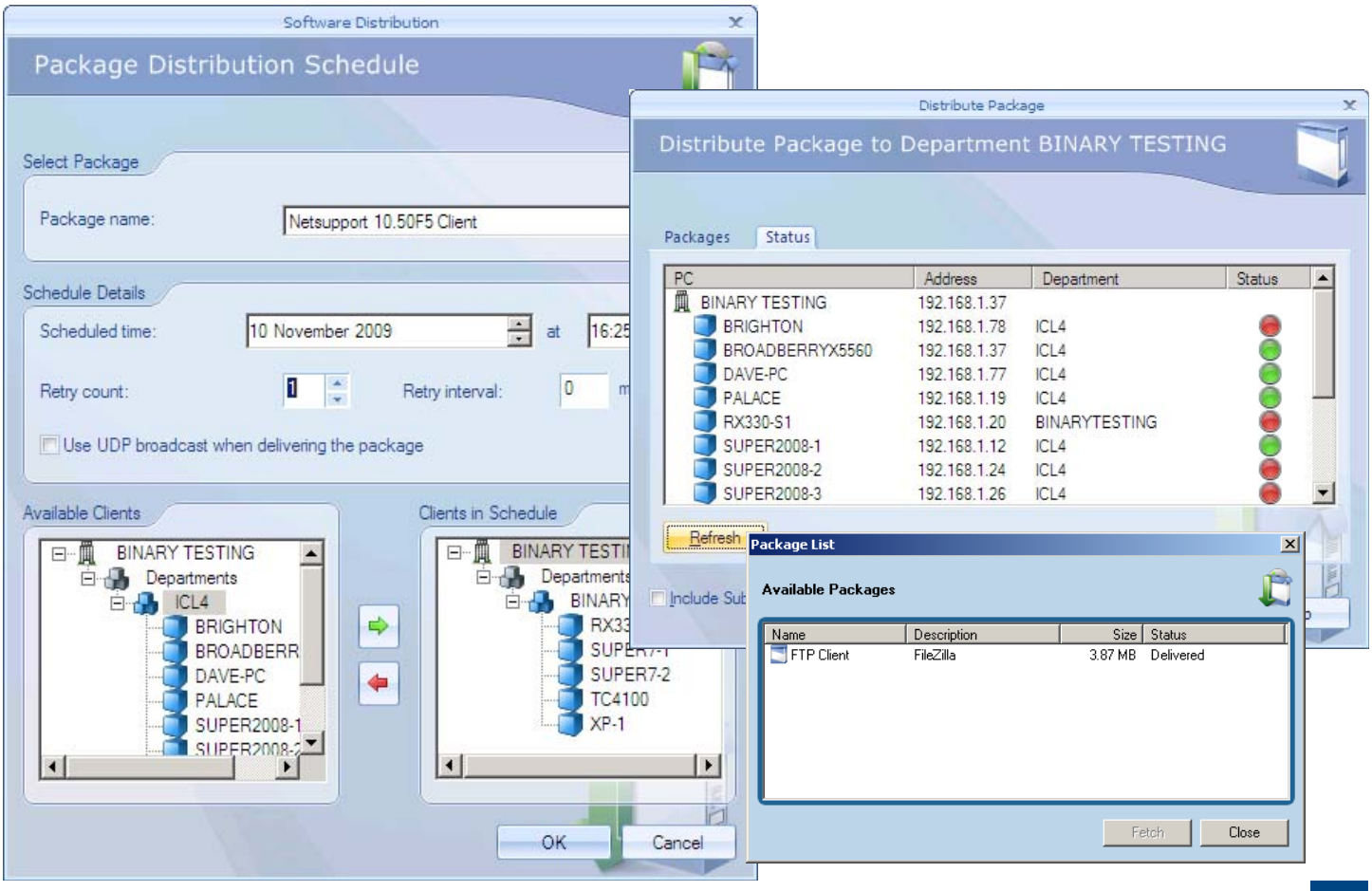
The days when support staff had the time to visit each user's PC to install new software are long gone. However, to remain compliant with data security requirements, there is a steady stream of patches that must be applied along with new applications, updates and upgrades.

Automated software distribution is a feature common to all enterprise desktop management products and provides the means to deliver these remotely as packages from a central location. We found DNA's distribution tools to be as advanced as the competition as they offer a good range of delivery methods that suit a wide variety of network environments.

Once a package has been created by DNA it can be delivered silently to the entire hierarchy, selected groups or individual systems. DNA offers a very similar system to Microsoft's SMS Collections as custom groups can be created by querying the inventory database thus ensuring that all included systems meet the hardware requirements for the package being distributed.

Packages can be delivered on demand and DNA offers a scheduler allowing them to be delivered out of hours to minimise the impact on productivity. The client utility also allows users to query the console to see if packages are available for distribution. The impact on network bandwidth can also be reduced by using selected clients as distribution warehouses.

This process works well with 'silent' installations but for more complex processes that require user intervention DNA also offers its separate application packager utility. The majority of desktop management products offer a virtually identical feature where the utility records an installation on a typical PC representative of the target group. The resultant package can then be advertised or distributed silently to selected DNA groups within the organisation.



Reporting

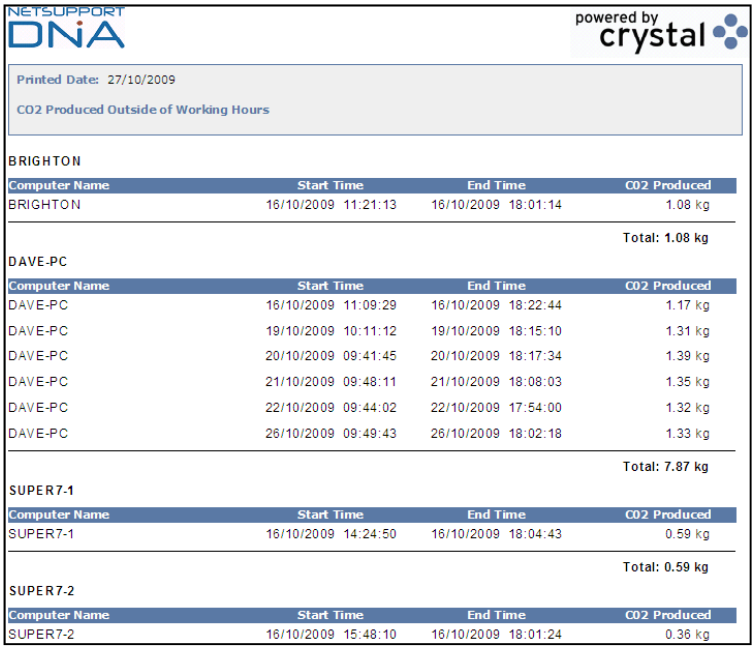
During testing we found DNA capable of providing high levels of detail about assets and its reporting facilities were able to present this information clearly in a range of formats. The relationship between the Hierarchy, View and Main console windows allows you to quickly pull up real time graphs and tables of assets and user activity without the need to run database queries.

The simple layout allows inventory details to be checked quickly whilst application and Internet usage can be monitored easily and in real time. A smart feature is that the data displayed changes according to the main menu option, hierarchy member and the view selected.

The Query Tool allows you to create your own reports on any of the various components. Any or all data from sources such as PC and user information, software and Internet metering, software distribution and alerting can be included and conditions applied to reduce extraneous information.

Query details are displayed in the console window and can be printed out but are comparatively basic. For reports that may be presented to the board, DNA has Crystal Reports integrated. They cannot be customised but NetSupport provides an extensive range of pre-defined reports for each category.

During testing we were impressed with the fact that once a Crystal powered report has been created you can select different groups from the Hierarchy pane and the report will change automatically dependent on the members.



NETSUPPORT DNA — powered by crystal

Printed Date: 27/10/2009

CO2 Produced Outside of Working Hours

BRIGHTON

Computer Name	Start Time	End Time	CO2 Produced
BRIGHTON	16/10/2009 11:21:13	16/10/2009 18:01:14	1.08 kg
			Total: 1.08 kg

DAVE-PC

Computer Name	Start Time	End Time	CO2 Produced
DAVE-PC	16/10/2009 11:09:29	16/10/2009 18:22:44	1.17 kg
DAVE-PC	19/10/2009 10:11:12	19/10/2009 18:15:10	1.31 kg
DAVE-PC	20/10/2009 09:41:45	20/10/2009 18:17:34	1.39 kg
DAVE-PC	21/10/2009 09:48:11	21/10/2009 18:08:03	1.35 kg
DAVE-PC	22/10/2009 09:44:02	22/10/2009 17:54:00	1.32 kg
DAVE-PC	26/10/2009 09:49:43	26/10/2009 18:02:18	1.33 kg
			Total: 7.87 kg

SUPER7-1

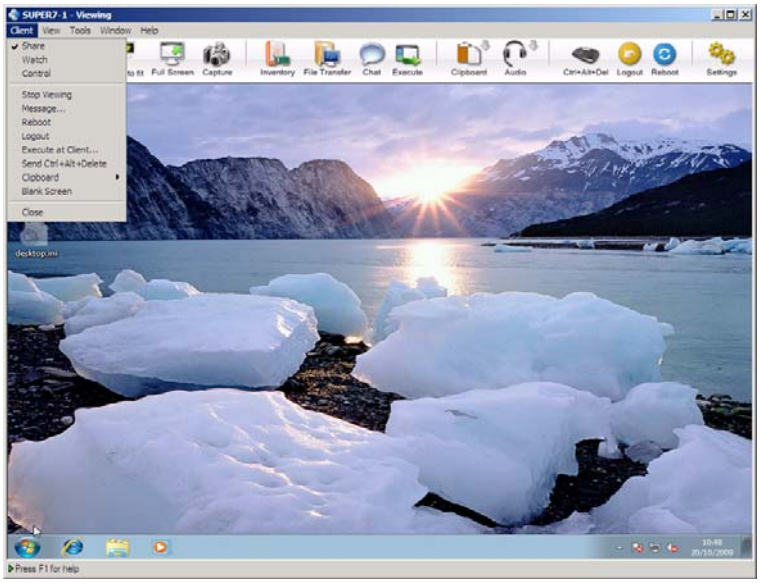
Computer Name	Start Time	End Time	CO2 Produced
SUPER7-1	16/10/2009 14:24:50	16/10/2009 18:04:43	0.59 kg
			Total: 0.59 kg

SUPER7-2

Computer Name	Start Time	End Time	CO2 Produced
SUPER7-2	16/10/2009 15:48:10	16/10/2009 18:01:24	0.36 kg

Help Desk Tools

Help desk tools are another fundamental feature required for desktop management as they allow support staff to remotely diagnose and fix users' problems. NetSupport is certainly no stranger to this and we consider the NetSupport Manager (NSM) remote control software to be one the best of its type on the market. It offers an excellent range of features and performance that few other competing products can match let alone beat.



Two options are available with the NSM remote control option offering the ability to watch, share and control other desktops over the network and providing chat and messaging facilities. The full NSM product adds an extra range of features including its own hardware and software inventory, file transfer and recording and replaying actions for use as training aids.

An important consideration is that the remote control features are not separate utilities but are accessed from within the DNA console. You can select a system from the Hierarchy pane and activate remote control, chat and message functions from a drop-down menu.

Conclusion

Desktop management is now a red hot topic as today's financial uncertainties are forcing businesses to search for ways to drive down costs for supporting and maintaining their IT infrastructure. There are a number of well established products on the market but many are overly complex and too expensive for SMEs.

After conducting tests in the lab over a number of weeks we concluded that NetSupport DNA combines many features that make it highly suited to the SME market. A feature that impressed our testers was the ease with which DNA can be installed, configured and deployed.

We found DNA offers a complete desktop management solution straight from the box where all components fit seamlessly into the main console. It represents good value and NetSupport now allows it to be customised further by offering different packs so you only pay for the features you want.

The base pack includes user management, hardware and software inventory, alerting and the Energy Monitor. Four other packs are available so you can add the DNA or NetSupport Manager remote control tools and mix and match them with Internet and Application Metering plus software distribution.

We recommend Pack 4 as this includes DNA's unique Internet Metering feature. Internet misuse in the workplace is a serious issue with a recent report commissioned by Morse, an IT services and technology company, claiming that 'Twitter and social networks cost UK businesses over £1.38 billion per year in lost productivity'.

DNA clearly has the capabilities to control Internet access in the workplace. Even if companies don't want to stop employee access, the passive Internet monitoring provides a wealth of information about sites being visited.

Accurate hardware and software inventory allows administrators to track IT assets and minimise resource wastage whilst application metering aids software license compliance. This component will also prove very useful in finding unused applications allowing license purchases to be more closely tailored to actual usage.

Having tracked DNA from when it was first launched in 2003 we have seen this product benefit from a committed and consistent development program and this latest version delivers a range of new and interesting features.

The Energy Monitor feature is a timely addition that shows ongoing costs and areas where savings can be made by ensuring non-essential systems aren't left running overnight. At the very least it will make businesses aware of their IT related carbon footprint.

The new Gateway feature brings remote or branch offices into the management strategy. This comprises server and client gateway components installed on each side of the remote office link. The client acts as a proxy for remote systems and talks to the gateway server which, in turn, passes inventory information onto the main DNA server.

The simple installation procedures and initial configuration for DNA makes it a very good choice for SMEs. We found it is possible to have DNA installed and taking inventories within minutes of loading the console on our test host system.

There are no significant demands for deployment planning making this an excellent desktop management product for the SME that requires minimal network resources to function and is capable of fitting in with existing network infrastructures.