



q-status™ Data Center Server Analysis Software

White Paper

Introduction

This white paper presents an overview of the q-Status™ Server Analysis software—its benefits, its uses and product details. This overview discusses IT server configuration management problems, argues for the cost effectiveness of the use of q-Status™ and details some real case examples and their results.

The Requirements

When maintaining a complex data center, Information Technology (IT) organization must have timely access to server configuration information. They must analyze server configuration data and maintenance requirements, review and deploy hardware/software updates, identify single points of failure and allocate server resources to projects. For advanced server configuration management, they must report relationships of their software and hardware across the Enterprise and identify dependencies. This encompasses dependencies between servers, storage, networks, operating system and software. Server configuration data becomes very valuable when IT performs a server consolidation or a server migration. IT requires reliable server configuration data and analysis to make decision quickly when required—as for example in an emergency.

Enter q-Status

LogiQwest became interested in Server configuration tools because of its Server Migration and Server Consolidation consulting projects. The people at LogiQwest understood the need for general administrative IT tools that are simple to use, collect data easily, have a brief learning curve and are usable under multiple desktop systems. Since it typically falls on the system administrator to collect and maintain server monitoring tools, LogiQwest took it upon themselves to create a comprehensive configuration analysis tool that system administrators would feel comfortable using. The tool provides clearly understandable reports, is easy to implement, has little or no learning curve and requires very little maintenance or hand holding to operate and maintain. Supporting all the major Unix servers, Linux and Windows operating systems, and using a web interface that works under any desktop environment, q-Status™ not only provides comprehensive configuration data for servers (including hardware, software, patches, network and storage), but allows comparison of servers with other servers or with themselves (historical baselines). q-Status™ compares a set of parameters to a server or set of servers to see if they meet standard requirements.

q-Status™ uses modern Web 2.0 JSON technologies to quickly provide search and filter functions for locating and analyzing information. q-Status™ unique discrepancy engine that provide multiple type of reports such as missing only or version conflict. q-Status™ summary reports display total amounts such as total storage and how they are being assigned for the whole data center or Enterprise.

q-Status™ is used both in the data center to maintain centralized server status information as well as by Profession Service Organizations as a valuable tool to support server migration, service consolidation and server assessment.

Data Center Implementation

An implementation for a technical university in Europe utilizes q-Status™ to provide server configuration status and analysis and to document the servers at their campuses. They have deployed q-Status™ for Solaris, Windows, Linux and AIX servers. The q-Status™ Runbook association that is part of the software displays their documentation as well as configuration information and analysis. On the first day of deployment, q-Status™ exposed duplicate IP addresses in the data centers. One of the universities using q-Status™ has extended the system by implemented custom comparison programs for proprietary data collection processes and use q-Status™ to provide multiple server comparisons and baseline comparisons for their own custom data using the templates provided with q-Status™.

Support Service Implementation

A software provider uses q-Status™ to analyze configuration issues for its clients product deployment in Enterprise environments. The company in the first couple of days of q-Status™ implementation, were able to close support tickets that had been open for three months by immediately identifying configuration discrepancies. Since they are constantly modeling different configurations of their software, they use q-Status™ to quickly identify internal server configurations and assess their availability for testing.

Server Migration

Server migration projects occur for several reasons. The construction of a new data center, hardware upgrade or change to a new platform or even because of an emergency event. q-Status™ server analysis played an important part in a server migration project. Due to a construction project, a Fortune 500 company experienced air contamination which affected all of their servers in their primary data center. Though the data center remained operational, all of the servers would need to be replaced or they would start failing one after another. Time was of the essence to move all processing to new servers as soon as possible and to a clean environment. To complicate matters further, the contaminated data center was supporting high volume business transaction processing and if taken down would have significant impact on the business. Hence the migration had to be done quickly, reliably and effectively.

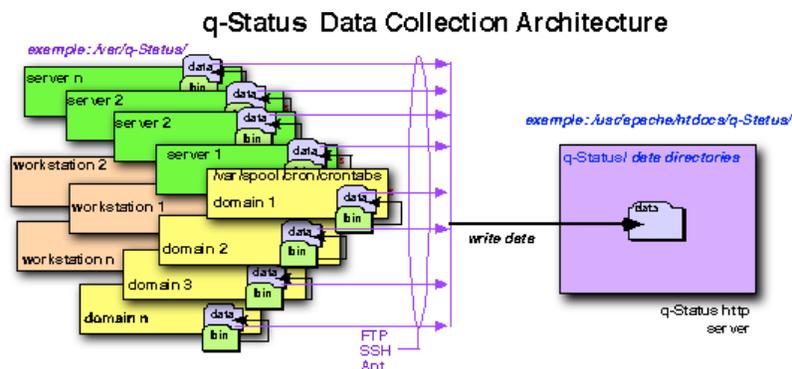
For this project, q-Status™ was deployed to collect data on all the servers that had to be migrated. Many of these systems were old hardware with legacy systems still in use. q-Status™ was able to immediately identify each system, including the old systems, report their current state, storage and networking issues. When analyzed, many server configuration showed inconsistencies along with single points of failure such as non mirrored disks. This allowed for the hardware provider to create a comprehensive new data center design without the time consuming process of taking a manual inventory and reviewing large lists of information. q-Status™ created concise reports that reduce the design process to days instead of weeks. At the same time the migration plan could be designed to define project tasks for update, move and migration. The project analysis time was reduced to days by using q-Status™. q-Status™ time savings also allowed more testing and validation to be accomplished to improve reliability for the move. When the data center was migrated and moved, downtime was kept to a minimum.

Server Assessment

From time to time, data centers ask for server assessments to be performed by an outside Professional Service organization. Such an assessment should identify potential failure issues, configuration anomalies and any best practice issue that needs to be addressed. Typically server assessments take several weeks and require two people to complete, for example you would spend four person/weeks with two people for 80 servers. The request to provide a server assessment for a small education institution of 18 servers resulted in an initial quote of three weeks with one person. This expense exceeded the budget and would take too long. The project needed to be completed in a week and with half the number of resources. q-Status, by replacing the manual collecting and analyzing data, enabled the Professional Service group to deliver this project as required. Using q-Status™, they were able to evaluate and analyze the 18 servers in less than four days and spend the remainder of the allocated time writing the documentation.

How q-Status™ Works

The success of q-Status™ lies in its design. Standard system processes are used to deliver a set of system level scripts that work on each operating system to collect the raw configuration data. These script execute standard operating system commands such as ifconfig for Linux and Unix server or ipconfig for Windows servers. The raw data is then transferred as text to the q-Status™ Web application where it can be processed and reviewed. There is no database involved in q-Status™ processing therefore it requires no database administrator. This simplifies the task for a system administrator or system specialist of configuring and maintaining q-Status™. The use of standard system commands to collect information, causes any burden on a machine while collecting data to be negligible.



For continuous data center monitoring, q-Status™ provides an ANT ssh transfer module for true security that works on all OS, whether SSH is installed or whether the server can support secure transfer. q-Status™ also supports standard methods to transfer data such as FTP and shared directories. Continuous system monitoring is maintained through a crontab or scheduler system which tends to be a well understood system administrative process.

For a project based configuration analysis, q-Status™ uses a standalone extraction script to collect data for transfer. The script packages the data into a compressed file which can be submitted via mail. It is worth mentioning that the size of q-Status™ data is very small for transfer or mailing as compared to other types of collection processes that use agents or daemons.

q-Status™ has conversion utilities for operating systems that use a proprietary analysis program to collect data. For example, Sun Microsystems has a diagnostic utility called Sun Explorer. q-Status™Solaris comes equipped with an easy-to-use converter that moves Explorer data to q-Status™ data. Though q-Status™ collected data is smaller than Explorer data, more configuration information is available through q-Status™ than through Explorer with some functionality added such as complex servers associations.

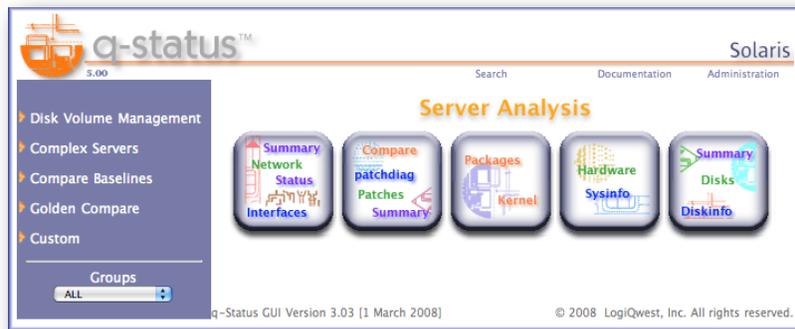
Product Details

q-Status Web Application

The Web application runs under an Apache Web server as a standard CGI program. This simplifies establishing a web server to run q-Status™. All collected raw text data is placed in the q-Status™ data directory and once placed there becomes available for analysis. There is no importing function required. As new server data is collected, transferring the data directory to q-Status™ makes it immediately available.

q-Status Interface

The q-Status™ interface is accessed through an http reference. Using Web 2.0 technology, q-Status™ presents to the user, a set of button rollovers to access different reports and functions. There is no navigation to sub directories or hidden information locations. The standard icon set consists of a “network icon”, “software icon”, “kernel icon”, “patches icon”, a



“system information icon” and a “disk icon”. Icon sets may consist of multiple rollover sets but under the same classification. There is no need to look around to find a server first, then its network card to just identify its IP address. One can locate that information quickly with just two clicks and most reports are available with just two clicks.

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q-status™ Solaris

Select Single Host for General Information

Return	Hostname	System Type	OS	Date as of	Group
<input type="checkbox"/>	blade1500	Sun Blade 1500	SunOS 5.10	2 Feb 2006 14	Engineering
<input type="checkbox"/>	c1d1	Sun Fire 15000	SunOS 5.9	2 Feb 2006 14	FINANCE2
<input type="checkbox"/>	c1d3	Sun Fire 15000	SunOS 5.9	2 Feb 2006 14	Mail Servers
<input type="checkbox"/>	c1d4	Sun Fire 15000	SunOS 5.9	2 Feb 2006 14	Solaris 10
<input type="checkbox"/>	c1d5	Sun Fire 15000	SunOS 5.9	2 Feb 2006 14	Sun Test
<input type="checkbox"/>	c1d6	Sun Fire 15000	SunOS 5.9	2 Feb 2006 14	Test Servers
<input type="checkbox"/>	c3d1	Sun Fire 6800	SunOS 5.9	2 Feb 2006 14	Web Servers
<input type="checkbox"/>	c3d2	Sun Fire 6800	SunOS 5.9	2 Feb 2006 14:44:09	X86
<input type="checkbox"/>	c3d3	Sun Fire 6800	SunOS 5.9	2 Feb 2006 14:44:10	Zoned Hosts
<input type="checkbox"/>	c3d4	Sun Fire 6800	SunOS 5.9	2 Feb 2006 14:44:10	idoc
<input type="checkbox"/>	coneflower	Ultra-Enterprise-10000	SunOS 5.8	2 Feb 2006 14:44:11	
<input type="checkbox"/>	cooltreads	Sun Fire T2000	SunOS 5.10	22 Dec 2006 01:49:42	
<input type="checkbox"/>	court38	Sun Fire 3800	SunOS 5.8	2 Feb 2006 14:44:12	
<input type="checkbox"/>	idalia	Ultra-Enterprise-10000	SunOS 5.8	2 Feb 2006 14:44:12	
<input type="checkbox"/>	idione-dev	Sun Fire V120	SunOS 5.10	2 Feb 2006 14:44:13	
<input type="checkbox"/>	idione-prod	Sun Fire V120	SunOS 5.10	2 Feb 2006 14:44:15	
<input type="checkbox"/>	idione	Sun Fire V120	SunOS 5.10	2 Feb 2006 14:44:16	
<input type="checkbox"/>	idune-mws	Sun Fire 480R	SunOS 5.9	2 Feb 2006 14:44:17	
<input type="checkbox"/>	gdbdv21	Sun Fire V1280	SunOS 5.9	2 Feb 2006 14:44:19	
<input type="checkbox"/>	hawk	Sun Enterprise 3500	SunOS 5.8	2 Feb 2006 14:44:19	
<input type="checkbox"/>	hdqof1	Sun Fire V1280	SunOS 5.9	2 Feb 2006 14:44:21	
<input type="checkbox"/>	hdqof2	Sun Fire V1280	SunOS 5.9	2 Feb 2006 14:44:22	
<input type="checkbox"/>	helena	Intel® Xeon™ 2.80GHz	SunOS 5.10	2 Feb 2006 14:44:23	
<input type="checkbox"/>	honeysuckle	Ultra-Enterprise-10000	SunOS 5.8	2 Feb 2006 14:44:23	
<input type="checkbox"/>	hurion_01	SPARC Enterprise T5220	SunOS 5.10	24 Feb 2008 19:29:46	
<input type="checkbox"/>	hyperion-am1	Sun Fire 4800	SunOS 5.10	2 Feb 2006 14:44:25	
<input type="checkbox"/>	hyperion-am2	Sun Fire 4800	SunOS 5.10	2 Feb 2006 14:44:26	
<input type="checkbox"/>	hyperion-ds1	Sun Fire 4800	SunOS 5.10	2 Feb 2006 14:44:27	
<input type="checkbox"/>	hyperion-ds2	Sun Fire 4800	SunOS 5.10	2 Feb 2006 14:44:28	
<input type="checkbox"/>	hyperion1	Sun Fire 4800	SunOS 5.10	2 Feb 2006 14:44:29	
<input type="checkbox"/>	hyperion2	Sun Fire 4800	SunOS 5.10	2 Feb 2006 14:44:30	
<input type="checkbox"/>	iapetus1	AMD Athlon™ 64 3200+	SunOS 5.11	2 Feb 2006 14:44:33	
<input type="checkbox"/>	iapetus	AMD Athlon™ 64 3200+	SunOS 5.11	2 Feb 2006 14:44:32	
<input type="checkbox"/>	kadence	Ultra 5	SunOS 5.10	28 Nov 2006 14:54:56	
<input type="checkbox"/>	lakers-sc0	Ultra CP 1500	SunOS 5.9	2 Feb 2006 14:44:35	
<input type="checkbox"/>	lakers-sc1	Ultra CP 1500	SunOS 5.9	2 Feb 2006 14:44:36	
<input type="checkbox"/>	lavender	Ultra-Enterprise-10000	SunOS 5.8	2 Feb 2006 14:44:37	

Single Server Report

To gain information about a single server, a listing of servers is present with a summary as to their OS version and the model or hardware type. This summary selection page filters and sorts using pull downs for easy and intuitive navigation.

The system information icon will display a server summary listing hardware, OS level, number of disks and network

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dione System Information Listing
Host: dione as of Tue Mar 7 09:41:32 2006

Sun Fire V120

Network | Patchdiag | Packages | Kernel | Prtdiag | Prtconf | Disks | Zones |

Nodename: dione	
Zones: dione-dev dione-prod	
Current OS: SunOS 5.10	
Build: Solaris 10 3/05 s10_74L2a SPARC	
System Type: Sun Fire V120	
Hostid: 7814d0ef	
Serial Number: Not Recorded	
Group Assignment(s): Solaris 10 Zoned Hosts	
Processors:	1 Freq: 648MHz
Memory:	1024 Megabytes
System Clock:	100 Mhz
Domain Name:	
Uptime:	2:39 hour(s)

Interface	Hostname	IP Address	Netmask
eri0	dione	172.166.11.202	ffffff00
eri0:1	dione-prod	172.166.11.205	ffffff00
eri0:2	dione-dev	172.166.11.206	ffffff00
eri0:3	BROADCAST	172.166.11.208	ffffff00
lo0	LOOPBACK	127.0.0.1	#00000000
lo0:1	dione-prod	127.0.0.1	#00000000
lo0:2	dione-dev	127.0.0.1	#00000000

Board	I/O Type	Name
0	PCI-1	ebus
0	PCI-1	pmu-pci10b9,7101
0	PCI-1	lomp
0	PCI-1	isa
0	PCI-1	SUNW_pci-eri
0	PCI-1	usb-pci108e,1103.1
0	PCI-1	ide-pci10b9,5229
0	PCI-1	SUNW_pci-eri
0	PCI-1	usb-pci108e,1103.1
0	PCI-2	Symbios,53C896
0	PCI-2	Symbios,53C896

Disk Type Quantity
<SUN36G cyl 24620 alt 2 hd 27 sec 107>:2

System Information Listing Version 3.02 15 February 2008

information. This dashboard allows drill down to the full reports for network, software, kernel, patches and other related system information. Other single server include network, software and disks.

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Disks Summaries

2.4TB 804.6GB 516.7TB 34%

	System Type	bytes	used	avail	capacity	Date as of
all Revisions	Intel(R) Xeon(TM) CPU	70.3GB	35.8GB	31.0GB	44%	11 Jun 2006 02:35:00
data Revisions	Pentium III 0	73.1GB	29.5GB	40.0GB	55%	2 Feb 2006 02:56:00
system Revisions	Intel(R) Xeon(TM) CPU	68.4GB	23.5GB	41.6GB	61%	11 Jun 2007 11:22:00
dbsevr1	Intel(R) Xeon(TM) CPU	68.4GB	34.0GB	31.0GB	45%	11 Jun 2007 11:32:00
dbsevr2	AMD Athlon(tm)	9.4GB	1.5GB	7.5GB	79%	11 Jun 2006 07:35:00
dev	Intel(R) Pentium(R) 4 CPU	152.9GB	83.5GB	61.7GB	40%	11 Jun 2007 08:35:00
fileserv1	Intel(R) Pentium(R) 4 CPU	21.2GB	3.0GB	18.0GB	85%	14 Apr 2007 18:35:44
galileo	Intel(R) Pentium(R) 4 CPU	14.9GB	12.5GB	2.5GB	17%	2 Feb 2006 14:56:36
javaDesktop	Intel(R) Xeon(TM) MP CPU	239.7GB	171.2GB	57.5GB	24%	14 Apr 2007 18:26:00
linux1	Intel(R) Xeon(TM) CPU	211.9GB	123.9GB	77.4GB	37%	14 Apr 2007 18:35:44
linux3	Intel(R) Xeon(TM) CPU	211.9GB	123.9GB	77.4GB	37%	14 Apr 2007 18:35:44
lvd1	Pentium III 0	7.6GB	3.6GB	3.6GB	48%	11 Jun 2007 08:11:00
lvd2	Pentium III 0	8.2GB	6.4GB	1.4GB	17%	11 Jun 2007 08:11:00
lvd3	Pentium III 0	8.2GB	6.4GB	1.4GB	17%	11 Jun 2007 08:11:00
msm1	Mobile AMD Athlon(tm) 64 Processor +	68.8GB	21.7GB	45.1GB	66%	16 Jan 2007 03:19:28
msm5	Intel(R) Pentium(R) M processor	56.8GB	6.7GB	48.9GB	86%	13 Nov 2006 00:45:38
q-change	AMD-K6(tm)-III	18.6GB	17.0GB	1.5GB	8%	2 Feb 2006 14:56:36
sge01	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge02	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge03	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge04	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge05	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge06	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge07	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge08	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge09	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
sge10	Intel(R) Pentium(R) III CPU family	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:15:00
smgr00	Intel(R) Xeon(R) CPU S140 @	842.5GB	533.9GB	266.1GB	32%	16 Jan 2008 11:36:29
smtp2	Intel(R) Pentium(R) 4 CPU	36.9GB	29.3GB	5.8GB	16%	2 Feb 2006 17:56:00
ubuntu	AMD Athlon(tm) XP +	1.4GB	758.8MB	677.2MB	47%	31 Dec 2001 16:53:35

Disks Summaries Version 1.00 1 October 2007

Summary Reports

Both network and disk information can be summarized for the entire enterprise in one report. The Disk summary report summarizes all the disk usage in the data center for all servers. Type filtering such as data, system and var filesystems is included with a variety of column sorts and filtering to highlight information. The disk summary report can also drill down to each individual server for detail disk information. The network summary display all the servers IP addresses, and checks for duplicates. The network status report summarizes the speed of each network, half or full duplex, and auto negotiate on or off.

Multiple Server Comparisons

Software packages, patch and kernel reports yield multiple server comparisons and use q-Status™ unique discrepancy engine that supports multiple filtering. For example, the patch comparison page for q-Status™ Solaris displays a patch

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q-status™ Solaris

Installed Packages

Package	c1d1	c1d3	c1d4	c1d5	c1d6	Package Description
FJVMdb	SunOS 5.9	Fujitsu Platform Modular Debugger				
MKAadm550	5.5.0	5.5.0	5.5.0	5.4.0	5.5.0	MKA Weblogic Admin Server
MKAadm550p	5.5.0	5.5.0	5.5.0	5.4.0	5.5.0	MKA Weblogic Admin Server
openFT	8.1A00	8.1A00		8.1A00	8.1A00	openFT (Open File Transfer)
openFT-CR	8.0A00	8.0A00		8.0A00	8.0A00	openFT-CR (Encryption of Open File Transfer)
SUNWnamox	1.1.REV~2002.01.16.05.40.06	1.1.REV~2002.01.16.05.40.06	1.1.REV~2002.01.16.05.40.06	1.0.REV~2002.01.11.05.38.06	1.0.REV~2002.01.11.05.38.06	Northern America 64-bit OS Support
SUNWmsgm	6.2.REV~20.2002.08.08	6.2.REV~20.2002.08.08	6.2.REV~20.2002.08.08	6.1.REV~15.2002.07.06	6.1.REV~15.2002.07.06	Netscape 6 for Solaris - Messenger
SUNWmsgp	6.2.REV~20.2002.08.08	6.2.REV~20.2002.08.08	6.2.REV~20.2002.08.08	6.1.REV~15.2002.07.06	6.1.REV~15.2002.07.06	Netscape 6 for Solaris - PSM
SUNWmsgxp	6.2.REV~20.2002.08.08	6.2.REV~20.2002.08.08	6.2.REV~20.2002.08.08	6.1.REV~15.2002.07.06	6.1.REV~15.2002.07.06	Netscape 6 for Solaris - XPCOM
SUNWwsvr	6.6.1.5800.REV~0.2002.04.05	6.6.1.5800.REV~0.2002.04.05	6.6.1.5800.REV~0.2002.04.05	6.6.1.5800.REV~0.2002.04.05	6.6.1.5800.REV~0.2002.04.05	X Window System Virtual Servers

Installed Packages Version 4.00 28 February 2008

report for only patches that are missing, have a revision conflict or are not the correct recommend version. These different type filters use Web 2.0 JSON which provides quick response to filter and search information.

Search Widget Filter

For large lists of complex data such as packages and patches, q-Status™ incorporates a JSON search filtering mechanism to instantly locate only the software package types or patches. For example, a software package list might consist of 500 packages installed on the system as multiple pages. By using the Search Widget, this list can be reduced

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q-status™ Solaris

Installed Packages

Search: weblogic

Package	c1d1	c1d3	c1d4	c1d5	c1d6	Package Description
BEAaws703	7.0 SP3	MKA Bea Weblogic Server 7.0 SP3				
BEAaws703p	7.0 SP3	MKA Bea Weblogic Server 7.0 SP3				
MKAadm550	5.5.0	5.5.0	5.5.0	5.4.0	5.5.0	MKA Weblogic Admin Server
MKAadm550p	5.5.0	5.5.0	5.5.0	5.4.0	5.5.0	MKA Weblogic Admin Server
MKAbea705	7.0.5	7.0.5	7.0.5	7.0.5	7.0.5	MKA Bea Weblogic Server 7.0 SP5
MKAman550	5.5.0	5.5.0	5.5.0	5.5.0	5.5.0	MKA Weblogic Managed Server
MKAman550p	5.5.0	5.5.0	5.5.0	5.5.0	5.5.0	MKA Weblogic Managed Server
MKBwls703	1.0	1.0	1.0	1.0	1.0	Weblogic 7.0.3
MKBwls703b	1.1	1.1	1.1	1.1	1.1	Weblogic 7.0.3
MKBwls705	1.0	1.0	1.0	1.0	1.0	Weblogic 7.0.5
MKBwls705.2	1.1	1.1	1.1	1.1	1.1	Weblogic 7.0.5
MKBwls705.3	1.2	1.2	1.2	1.2	1.2	Weblogic 7.0.5

Installed Packages Version 4.00 28 February 2008

to only those software package of interest such as a single page that compares the Weblogic applications. The q-Status™ search widget is also regular expression savvy which extends its capability to locate information.

Search Function

The main interface has a search function to locate servers with installed software and version and patch and their

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Return Search Patch Results Search Criteria: Equal (= any) Group: ALL

Patch Latest ID Revision	OS	xref Date	Synopsis
111570_04	SunOS 5.8	Mar/10/08	SunOS 5.8: uucp patch

rev	Hostname	System Type	Date as of
01	court38	Sun Fire 3800	7 Mar 2006 09:40:05
01	hawk	Sun Enterprise 3500	7 Mar 2006 09:46:34
01	mzp0	Sun Netra X1	7 Mar 2006 09:52:41
01	narsil12	Sun Fire 280R	7 Mar 2006 09:55:19
01	narsil15	Netra T1	7 Mar 2006 09:55:57
01	narsilp101-sc0	Ultra CP 1500	7 Mar 2006 09:55:38
01	narsilp101-sc1	Ultra CP 1500	7 Mar 2006 09:56:15
01	trinity	Sun Fire 4800	7 Mar 2006 10:01:52
02	sb1	Sun-Blade-1000	19 Jun 2007 17:40:10

Search Patch Results Version 2.01 19 February 2008

revisions. The software and patch search functions locates servers that do not have software or patches or the correct versions installed. There is a general search which will scan the q-Status™ raw data to locate the desired information. For example servers with point to point interface can be quickly located by searching for “POINTOPOINT” in the network files. Or search for servers with specific hardware cards with firmware that may require firmware updates.

Baseline Comparison

q-Status™ incorporates a baseline comparisons. A baseline allows for a history of server changes to be documented and compared. Baseline functions offer hardware, network, software and patches baseline comparison. The discrepancy engine is included as well as the Search Widget Filter. Baseline creations can be schedule through the crontab or

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Return Hardware Baseline Compares for ANANKE as of Thu Feb 2 14:52:34 2006 Full display

	ANANKE	15 December 2005	11 October 2005	18 April 2005
Hostname:	ananka	honschu	honschu	honschu
Current OS:	Windows 2000 Server SP4	Windows 2000 Server SP3	Windows 2000 Server SP3	Windows 2000 Server SP3
Version:	5.0.2195 Service Pack 4 Build 2195	5.0.2095 Service Pack 3 Build 2195	5.0.2095 Service Pack 3 Build 2195	5.0.2095 Service Pack 3 Build 2195
OS Manufacturer:	Microsoft Corporation	Microsoft Corporation	Microsoft Corporation	Microsoft Corporation
Hardware Manufacturer:	Dell Computer Corporation	Dell Computer Corporation	Dell Computer Corporation	Dell Computer Corporation
Model:	PowerEdge R300/A50	PowerEdge R300/A50	PowerEdge R300/A50	PowerEdge R300/A50
Type:	X86-based PC	X86-based PC	X86-based PC	X86-based PC
BIOS:	Phoenix ROM BIOS PLUS Version 1.10 A12	Phoenix ROM BIOS PLUS Version 1.09	Phoenix ROM BIOS PLUS Version 1.09	Phoenix ROM BIOS PLUS Version 1.09
Number of Processors:	2	2	2	2
Model Name:	x86 Family 6 Model 4 Stepping 1 GenuineIntel	x86 Family 6 Model 4 Stepping 1 GenuineIntel	x86 Family 6 Model 4 Stepping 1 GenuineIntel	x86 Family 6 Model 4 Stepping 1 GenuineIntel
Processors Clock Speed:	233 Mhz	233 Mhz	233 Mhz	233 Mhz
Number of Processors:	2			
Model Name:	x86 Family 6 Model 5 Stepping 3 GenuineIntel			
Processors Clock Speed:	449 Mhz			
Physical Memory Total:	2,096,208 KB	1,048,104 KB	1,048,104 KB	1,048,104 KB
Physical Memory Used:	1,843,812 KB	795,708 KB	795,708 KB	795,708 KB
Physical Memory Available:	252,396 KB	252,396 KB	252,396 KB	252,396 KB
Virtual Memory Total:	4,094,272 KB	2,094,272 KB	2,094,272 KB	2,094,272 KB
Virtual Memory Used:	1,200,420 KB	200,420 KB	200,420 KB	200,420 KB
Virtual Memory Available:	2,893,852 KB	1,893,852 KB	1,893,852 KB	1,893,852 KB
Legato IP Address:	192.168.1.121	192.168.1.121	192.168.1.121	192.168.1.121
Netmask:	255.255.255.0	255.255.255.0	255.255.255.0	255.255.255.0
Default Gateway:				
Local Area Connection IP Address:	155.252.138.142	155.252.138.142	155.252.138.142	155.252.138.142
Netmask:	255.255.254.0	255.255.254.0	255.255.254.0	255.255.254.0
Default Gateway:	155.252.138.1	155.252.1.1	155.252.1.1	155.252.1.1
SCSI Adapters:	3	2	2	2
Disk Count:	2	1	1	1
Disk #0:	Size: 16 GB	16 GB	16 GB	16 GB
Disk #1:	Size: 16 GB			

Baseline Hardware Comparisons Version 2.00 28 October 2007

Windows schedule. But they also can be created ad hoc. For example, when implementing a new patch cluster, software updates or hardware updates or network updates could be compared to the previous working system to see if the appropriate changes have taken place. In this role q-Status™ can serve as a validation method for Change Control and Change Management.

RAW Data

Raw data that is collected for which there is no format report, can still be displayed. Since the data is in text format, most reports support display of the raw data collected. For example, q-Status is collecting raw “df -k” data for Unix and the similar data for Windows. From the network report a simple click of a raw data links will display the raw data. Packages,

The left screenshot shows the 'Disk Information' report for host 'msm1 as of Tue Jan 16 03:19:28 2007'. It features a table of mounted disks with columns for Filesystem, size, used, avail, and capacity. A blue circle highlights the 'df -k' command link, and a blue arrow points to the right screenshot.

Filesystem	size	used	avail	capacity	Mounted on
/dev/hda3	10.5GB	4.1GB	6.4GB	39%	/
/dev/hda1	18.8GB	11.0GB	7.9GB	59%	/windows/c
/dev/hda5	27.8GB	21.9GB	2.5GB	91%	/home
/home/SUNWwdoc.crypt	11.4GB	6.2GB	4.6GB	58%	/opt/SUNWwdoc
tmpfs	257.6MB	12KB	257.6MB	1%	/dev/shm

The right screenshot shows the 'RAW Disk Information File' report for the same host and time. It displays the raw output of the 'df -k' command in a text format, including file system details and disk usage statistics.

hardware, storage and so forth all support raw data displayed. Raw data displays can also be accessed from the general search function which high-light found values with hyperlink paging.

The Sidebar

Other functions of q-Status™ are available through the q-Status™ sidebar. This sidebar not only supports additional q-Status™ modules, but gives access to custom modules either developed by the client using the extensive templates or using LogiQwest's customization service. Examples of additional configuration analysis modules are Veritas Volume Manager, Sun Volume Manager, ZFS filesystem, Veritas Cluster, Sun Cluster, VMware and Solaris Zones. On the software side we provide configuration analysis for JAVA, Tomcat, Apache, and MySQL applications. Some companies have utilized q-Status™ to evaluate the configuration of their



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Veritas Volume Layout Listing

Host: gdbdv21 as of Thu Feb 2 14:44:19 2006
Mounted Disk (Red Threshold = 80%)

Disk Group	Size	Layout/Volume	Capacity	Mounted	Status
rootdg	8389556	CONCAT/CONCAT c1i100 c1i060	26%/opt	ENABLED	ACTIVE
	16386408	CONCAT/CONCAT c10b00 c1i100	53%/	ENABLED	ACTIVE
rootvd	25166079	CONCAT/CONCAT c1i100 c1i060		ENABLED	ACTIVE
	16386408	CONCAT/CONCAT c10b00 c1i100	49%/u00	ENABLED	ACTIVE
var	4194828	CONCAT/CONCAT c10b00 c1i100	93%/var	ENABLED	ACTIVE
	Mounted Disk (Red Threshold = 80%)				
vol01dg	83875840	CONCAT/CONCAT Disk_21 Disk_10	49%/vol01	ENABLED	ACTIVE
Mounted Disk (Red Threshold = 80%)					
vol02dg	83875840	CONCAT/CONCAT Disk_20 Disk_9	85%/vol02	ENABLED	ACTIVE
Mounted Disk (Red Threshold = 80%)					
vol03dg	83875840	CONCAT/CONCAT Disk_19 Disk_8	29%/vol03	ENABLED	ACTIVE
Mounted Disk (Red Threshold = 80%)					
vol04dg	83875840	CONCAT/CONCAT Disk_18 Disk_7	29%/vol04	ENABLED	ACTIVE
Mounted Disk (Red Threshold = 80%)					
vol05dg	83875840	CONCAT/CONCAT	29%/vol05	ENABLED	ACTIVE

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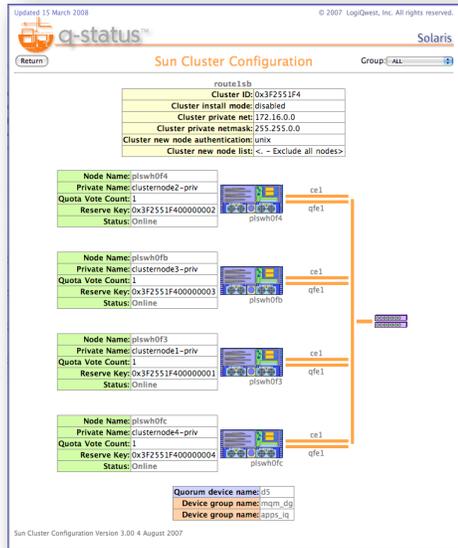
Solaris Zones Configurations

coolthreads Zones

Nodename: coolthreads
Processors: 32
Memory: 16376 Megabytes
Sun Fire T2000

Zone	ID	Zonename	Hostname	Status	Path
global	0	global	coolthreads	running	/
coolthreads-2	25	coolthreads-2	coolthreads-2	running	/zones/coolthreads-2
coolthreads-3	26	coolthreads-3	coolthreads-3	running	/zones/coolthreads-3
coolthreads-1	27	coolthreads-1	coolthreads-1	running	/zones/coolthreads-1

as of 22 Dec 2006 01:49:42



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Apache General Parameters Comparisons

Parameter	sge01	sge02	htaccess
AccessFileName	htaccess	htaccess	htaccess
CustomLog	/var/apache/logs/access_log common	/var/apache/logs/access_log common	/var/apache/logs/access_log common
DefaultType	text/plain	text/plain	text/plain
DocumentRoot	/LogiQwest/ApacheWeb	/LogiQwest/ApacheWeb	/var/apache/htdocs
ErrorLog	/private/var/log/httpd/error_log	/private/var/log/httpd/error_log	/var/apache/logs/error_log
Group	www	www	nobody
HostnameLookups	Off	Off	Off
KeepAlive	On	On	On
KeepAliveTimeout	15	15	15
LogLevel	warn	warn	warn
MaxClients	150	150	150
MaxKeepAliveRequests	100	100	100
MaxRequestsPerChild	100000	100000	0
MaxSpareServers	5	5	10
MinSpareServers	1	1	5
PidFile	/private/var/run/httpd.pid	/private/var/run/httpd.pid	/var/run/apache/httpd.pid
Port	80	80	80
ScoreboardFile	/private/var/run/httpd.scoreboard	/private/var/run/httpd.scoreboard	/var/run/apache/httpd.scoreboard
ServerAdmin	mbarito@logiquest.com	mbarito@logiquest.com	mbarito@logiquest.com
ServerName	127.0.0.1	127.0.0.1	www.stephenqwest.com
ServerRoot	/usr	/usr	/usr/apache
ServerSignature	On	On	On
ServerType	standalone	standalone	standalone
StartServers	1	1	5
Timeout	300	300	300
UserCanonicalName	On	On	On
User	www	www	nobody

Add Modules		
mod_access.c	sge01	ubuntu
mod_access.c	sge02	mod_access.c
mod_actions.c		mod_actions.c
mod_alias.c		mod_alias.c
mod_asis.c		mod_asis.c
mod_auth.c		mod_auth.c
		mod_auth_anon.c
		mod_auth_dbm.c
		mod_auth_ldap.c
		mod_auth_mysql.c
mod_autonindex.c		mod_autonindex.c
mod_cgi.c		mod_cgi.c
		mod_deflate.c
		mod_digest.c

software installations using both standard q-Status™ and custom developed modules. This is particularly useful for Enterprise deployments where baselines are maintained for later comparisons and troubleshooting.

Sun Path Diagnostics

For the Solaris version of q-Status™, the patch icon not only supports patch comparison for individual servers, but has integrated the Sun Microsystems standard patch reference file (e.g. patchdiag.xref) to show compliance by patch type

(e.g. recommended security and other types of patches plus will identify patch withdrawn issues) and by patch release date. A list of patches can be generated from this report. This Solaris Patch Diagnostics summary grades all Solaris



servers in the data center with a patch bar graph to show compliance. This works with version of Solaris starting as early as version 2.51 to the current version for all architectures.