
NETWORKER INFORMATION HUB



NetWorker Usage Survey, 2014

Preston de Guise

NetWorker Information Hub

February 2015

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INTRODUCTION

Objective

The purpose of the NetWorker Usage Survey is to independently gauge key high level details of how EMC NetWorker is used within the community, and to report trends on that usage.

Survey Period

The survey was conducted between December 1, 2014 and January 31, 2015, and follows previous surveys conducted in 2013, 2012, 2011 and 2010 (June and November).

About the Author

Preston de Guise is a long term data protection expert with a career focus on enterprise backup and recovery solutions. Preston is the author of "Enterprise Systems Backup and Recovery: A corporate insurance policy" (CRC Press, 2008, 978-1420076394), and of the upcoming title, "Data Protection: Preventing Data Loss in the Age of Big Data, Cloud and Virtualization".

Preston has worked on and developed backup solutions in most industry verticals, covering the full range of businesses from SOHO through to Global Fortune 500 companies.

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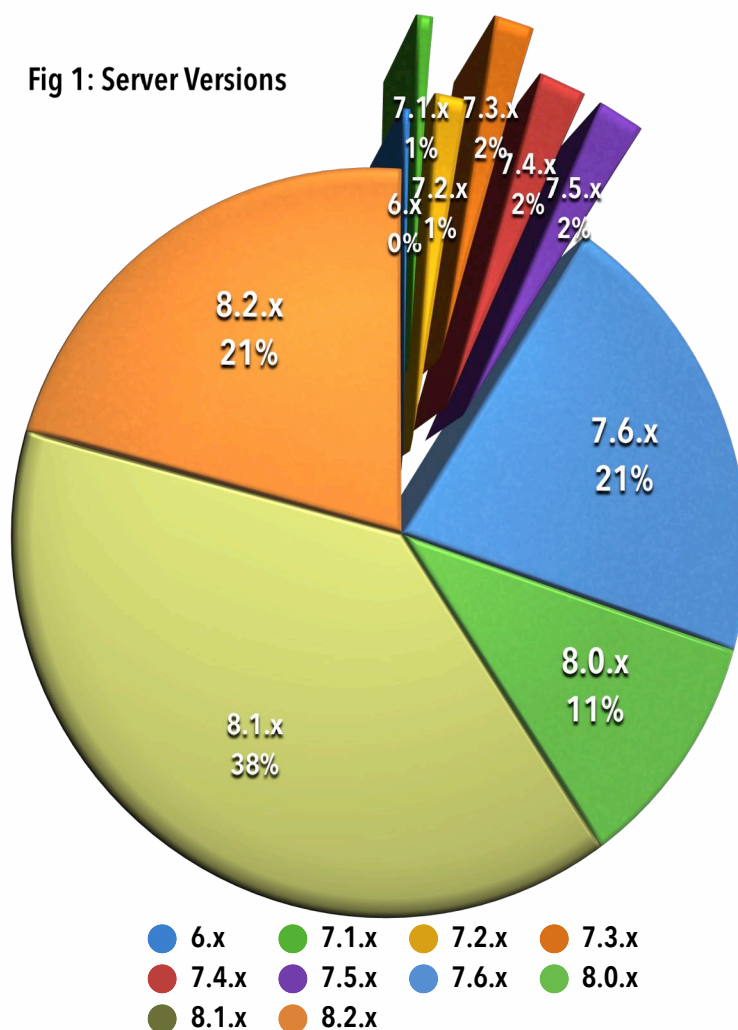
NETWORKER SERVER VERSION

Responses

Responses overwhelmingly saw organisations running on supported versions of NetWorker. Since we know many organisations have more than one NetWorker datazone, this question allowed multiple responses. The responses were as follows:

Version	Number
6.x	1
7.0.x	0
7.1.x	2
7.2.x	4
7.3.x	5
7.4.x	6
7.5.x	6
7.6.x	57
8.0.x	29
8.1.x	103
8.2.x	57

Fig 1: Server Versions



Findings

With 70% of respondents running a NetWorker v8.x release, it's clear the advanced functionality offered in NetWorker has persuaded many organisations to upgrade. Prior to the release of NetWorker 8, it was reasonably common to see businesses slower at upgrading to the most recent version of the product – this appears to no longer be the case.

Instead, the vast majority of organisations are now running a current or reasonably current release of NetWorker. (And, as we'll see later, diving in to new functionality.)

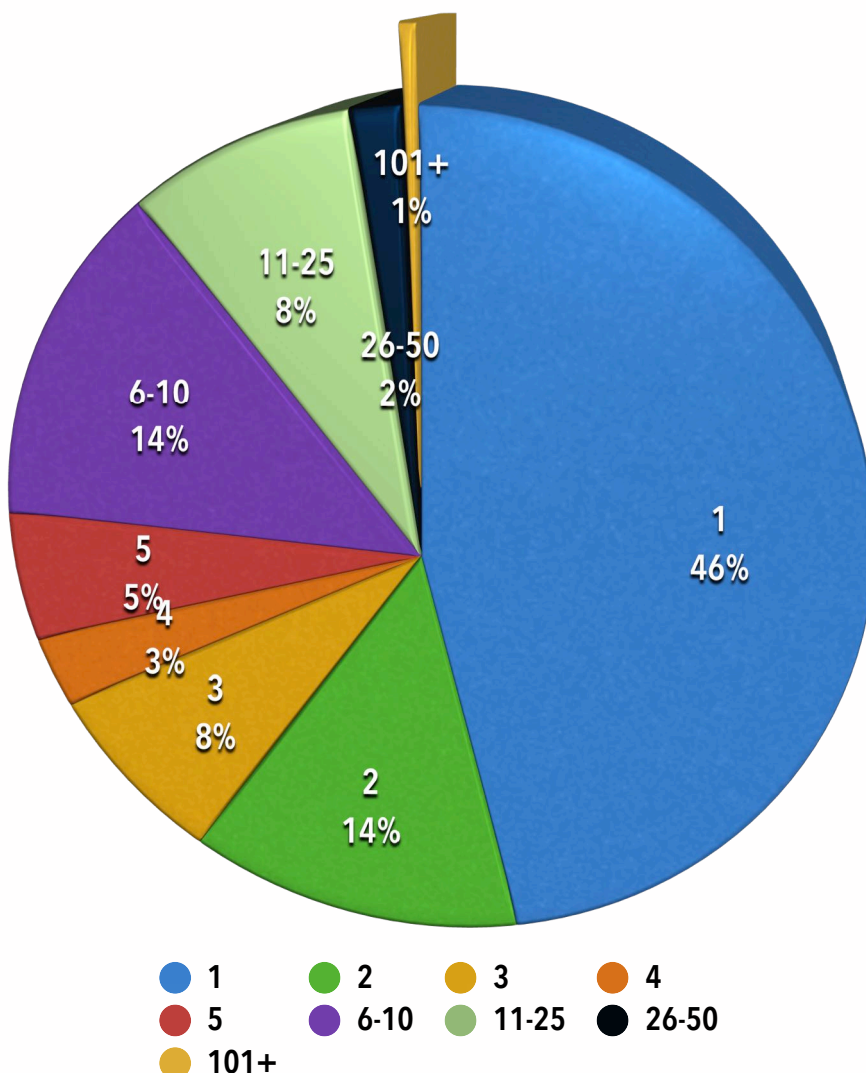
NUMBER OF DATAZONES

Responses

While just over 45% of respondents were running a single datazone within their organisation, it's unsurprising to see a larger number of datazones present. The results were as follows:

Fig 2: Number of datazones

Datazone Count	Number
1	78
2	23
3	13
4	5
5	9
6-10	23
11-25	14
26-50	3
51-100	0
101+	1



Findings

There are several reasons why organisations would run multiple datazones. These include, but are not limited to:

- Internal vs DMZ layouts
- Lab environments
- Multiple geographic regions
- Accommodating very large numbers of clients
- A mix of the above

The presence of multiple datazones within organisations should be seen as a product strength – clearly businesses are managing the administration of more than one datazone, and to think beyond a “single server only” install allows an organisation to build a more flexible data protection system. This doesn’t by any means imply decentralised backup management – just an increased sophistication in deployment models.

Year-on-year, this has seen a slight dip in the number of single-instance organisations. The previous survey saw 48% of organisations running a single datazone – though the variance is minimal enough that it is too early to draw any conclusions.

Last year’s survey saw 23% of respondents running 6 or more datazones within their organisation; this year that figure is 25%. Again this represents a minimal enough variance that it is too early to draw conclusions, but it will be interesting to see in future surveys whether we see any patterns in the decrease of single datazone organisations and a corresponding increase in the number of 6+ datazone organisations.

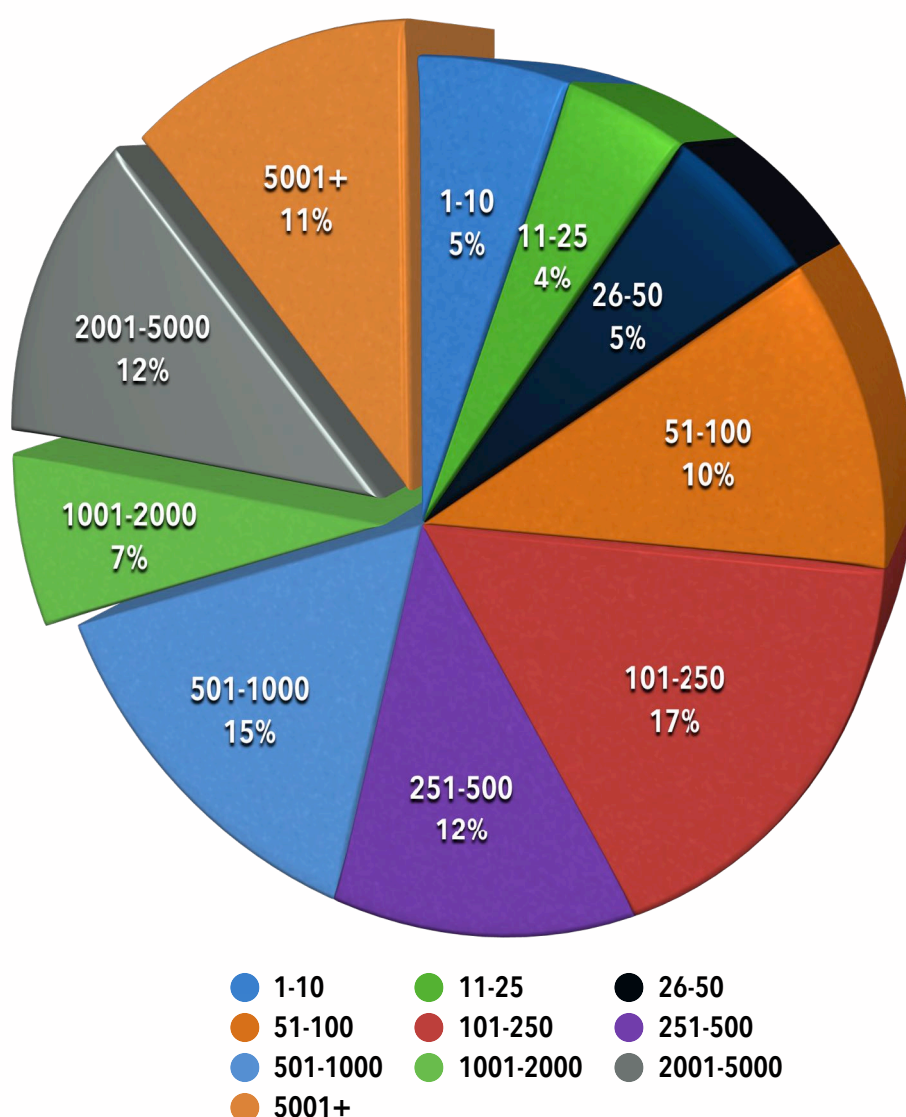
TOTAL CLIENT COUNT – ALL DATAZONES

Responses

This question used exactly the same breakdown as the previous year, and the responses were as follows:

# Clients	Number
1-10	9
11-25	7
26-50	9
51-100	17
101-250	28
251-500	21
501-1000	26
1001-2000	12
2001-5000	21
5001+	19

Fig 3: Total client count across all datazones



Findings

Year-on-year these percentages are remaining relatively similar. Last year for instance 30% of respondents were backing up 1000 or more clients with their NetWorker environments and that's unchanged this year.

A slightly higher number of respondents were backing up 100 clients or less this year than last (24% vs 22%), but this difference is reasonably minimal.

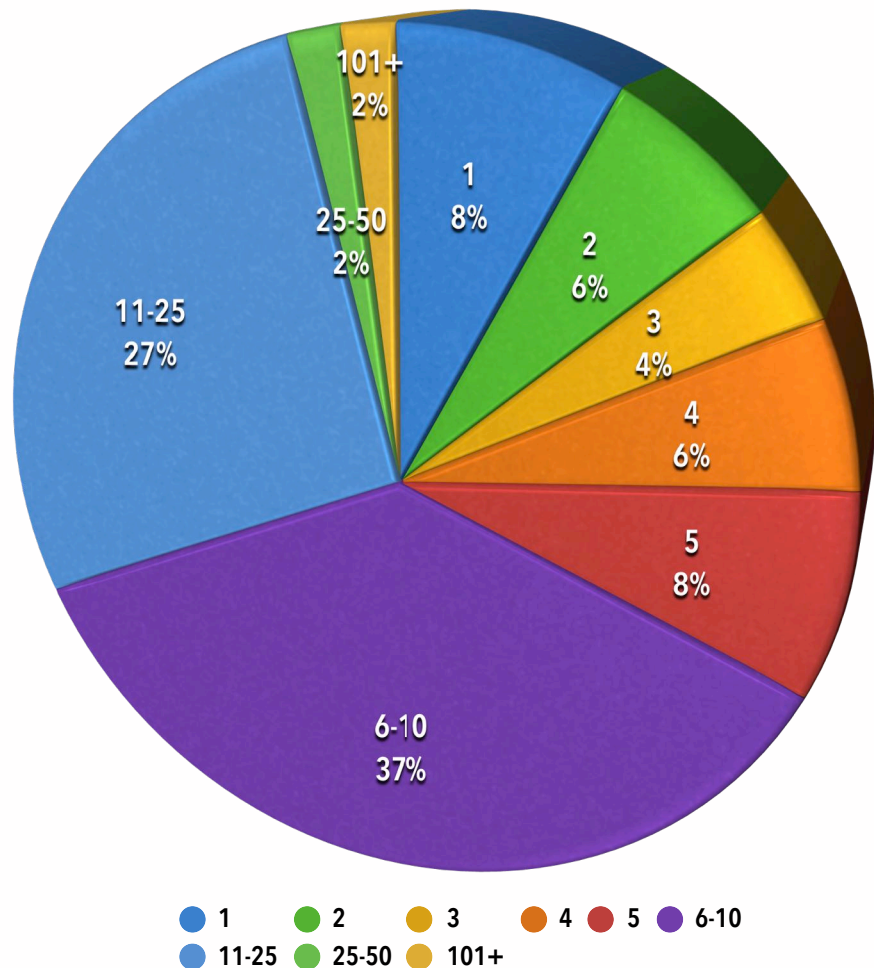
If we focus just on respondents who are using NetWorker to protect 1,001 or more clients, and then compare this with the number of datazones they're running, we see the breakdown shown in Figure 4 on the following page.

Even limiting this to just organisations with 5,001 or more clients, there's still a healthy variance on the number of datazones being used:

- 4 Datazones: 1
- 6-10 Datazones: 6
- 11-25 Datazones: 10
- 26-50 Datazones: 1
- 101+ Datazones: 1

Architecturally, this speaks to the flexibility of NetWorker and available deployment patterns to suit even very large organisations.

Fig 4: Number datazones where client count is 1,001+



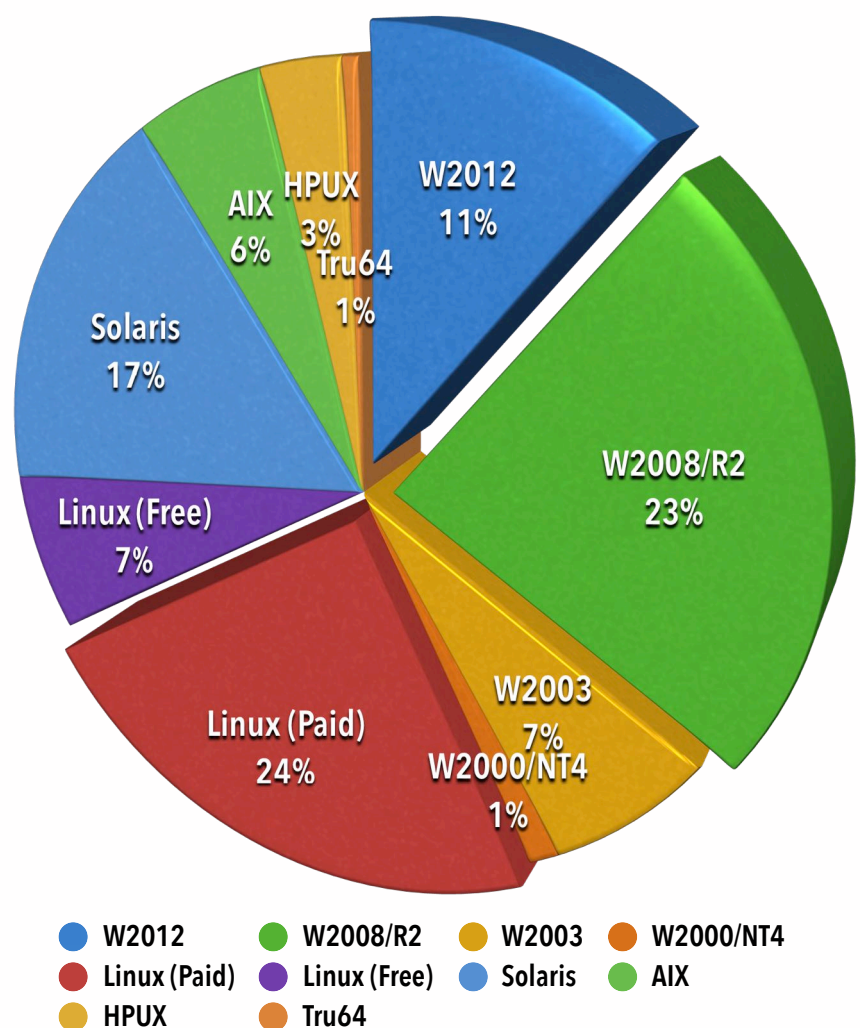
NETWORKER SERVER OPERATING SYSTEM

Responses

This question centred on the NetWorker servers within businesses. Keeping in mind the option for multiple datazones, this yielded a higher number of individual responses.

Operating System	Count
Windows 2012	34
Windows 2008/R2	71
Windows 2003	22
Windows 2000/NT4	4
Linux (Paid)	74
Linux (Free)	21
Solaris	52
AIX	17
HPUX	10
Tru64	2

Fig 5: Server operating system



Findings

Considering all variants at once, Windows remains the dominant NetWorker platform now, a far cry from the days where NetWorker almost exclusively ran on Solaris. Indeed, with 43% of respondents running Windows for their NetWorker servers and another 31% running Linux for their NetWorker servers, what we're seeing most of all is the dominance of the x86/x86_64 style marketplace.

This year represented somewhat of a flattening of Solaris losses in the server space for NetWorker, which over time may become indicative of the lowered market position of that operating system under Oracle's ownership.

Conventional non-Solaris Unix operating systems (AIX, HPUX and Tru64¹) look to be continuing to shrink.

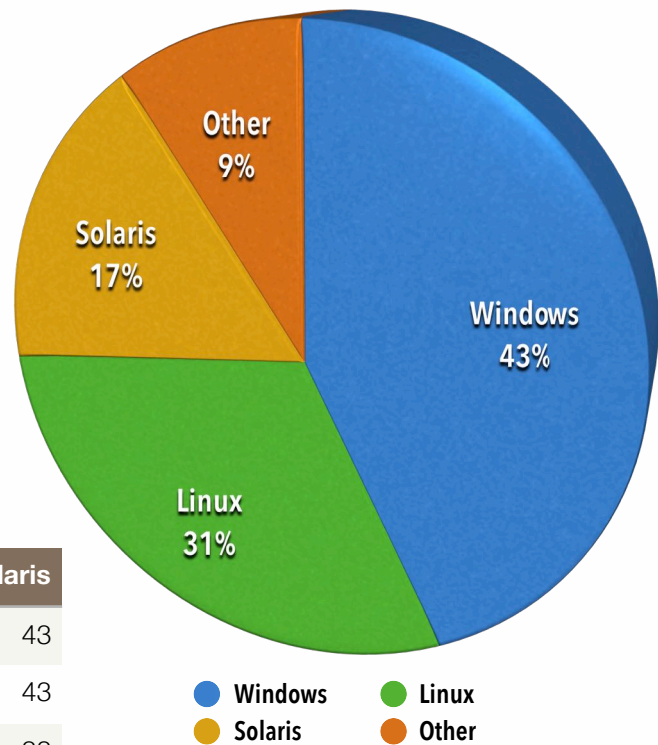
OS Type	Count
Windows	131
Linux	95
Solaris	52
Other	29

If we look at the year-on-year figures from previous surveys, we see the server OS breakdowns as follows:

Survey	Windows	Linux	Solaris
March 2010	29	22	43
November 2010	29	19	43
June 2011	38	23	33
December 2012	41	30	20
December 2013	42	28	18
December 2014	43	31	17

For the time being at least I think the numbers will more closely settle to something approaching 45% Windows, 35% Linux, 15% Solaris and 5% Other.

Fig 6: Major OS Type Distribution



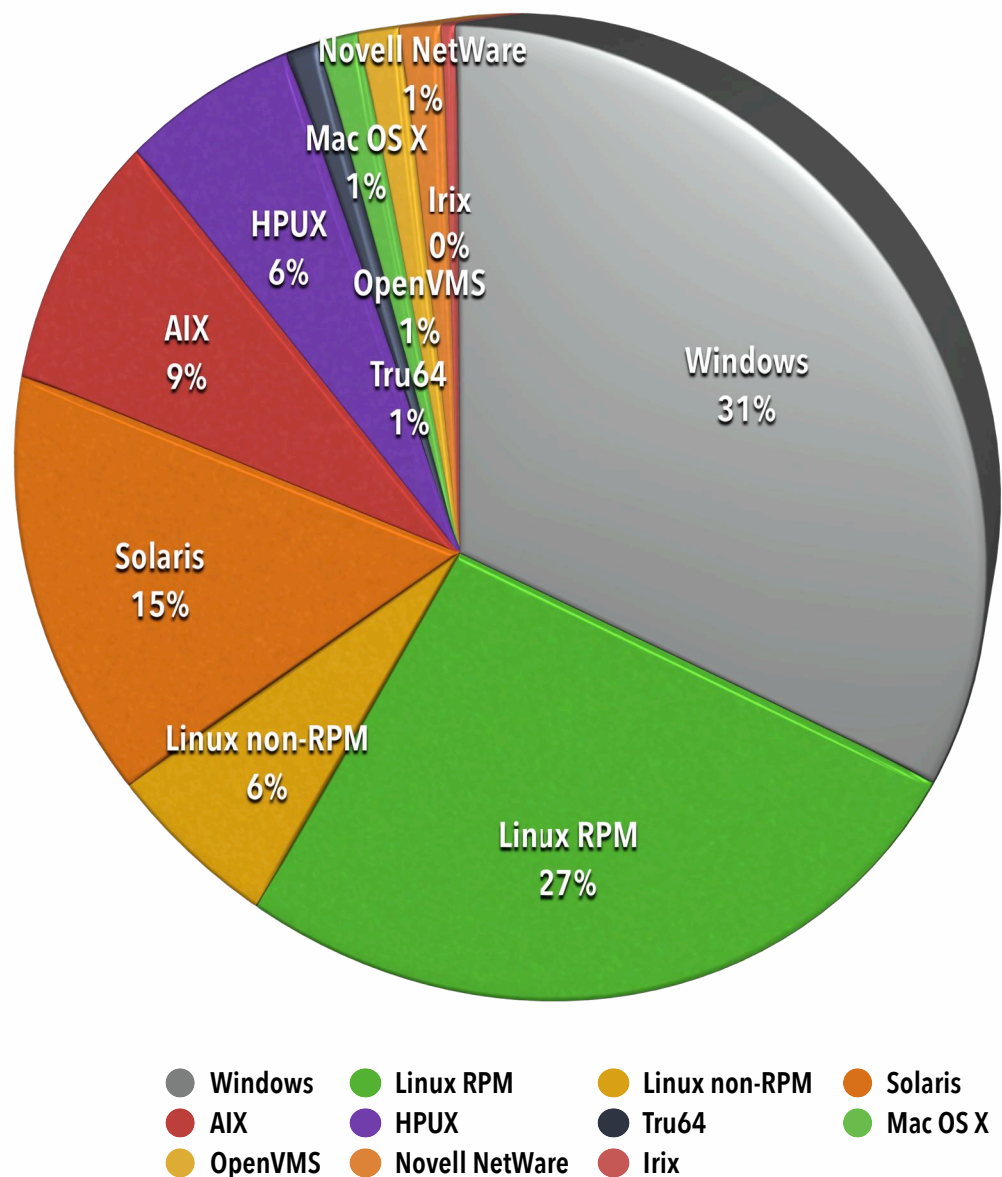
¹ Noting that Tru64 has not been a supported platform for running the NetWorker server platform for some time. However, there are still some sites that are holding on to their older deployments.

CLIENT/STORAGE NODE OPERATING SYSTEM

Responses

While not all operating systems can run NetWorker as a storage node, the two types were combined to avoid confusion between servers and storage nodes. While for NetWorker *servers* we evaluate whether businesses are running NetWorker on a commercial/paid version of Linux or a free version, for *clients* we focus only on the differences between number of RPM vs non-RPM distributions are used. For ease of consideration, all variants of Windows are collapsed to a common type.

Fig 7: Client operating system types



Findings

Windows and Linux continue to represent the lion's share of NetWorker clients. At 31% and 33% use respectively, that leaves just 36% for all other client operating systems combined.

If we look at the year-on-year totals, we see the following breakdown:

Survey	Windows	Linux	Solaris	Other
March 2010	28%	23%	21%	28%
November 2010	28%	23%	22%	27%
June 2011	27%	22%	20%	31%
December 2012	29%	29.5%	17.5%	24%
December 2013	31%	32%	17%	20%
December 2014	31%	33%	15%	21%

While Windows and Linux remain dominant, it's clear the continuing support of a variety of operating systems (not to mention backwards compatibility between server and client versions) allows NetWorker to provide backup and recovery services for a great many businesses.

It's important to note the drop in other operating system types over the last 5 years is entirely expected, given the consolidation of businesses towards virtualised x86 workloads *and* the discontinuation of operating systems such as Novell NetWare.

OS	Responses
Windows	143
Linux RPM	127
Linux non-RPM	29
Solaris	72
AIX	42
HPUX	28
Tru64	5
Mac OS X	6
OpenVMS	6
Novell NetWare	6
Irix	2

BUSINESSES USING DEDUPLICATION

Responses

This was gauged over two different questions, first based on *where* the deduplication was happening, then secondly based on what *type* of deduplication was in use.

Deduplication	Number
Yes/Source Only	8
Yes/Target Only	47
Yes/Source & Target	76
No	38

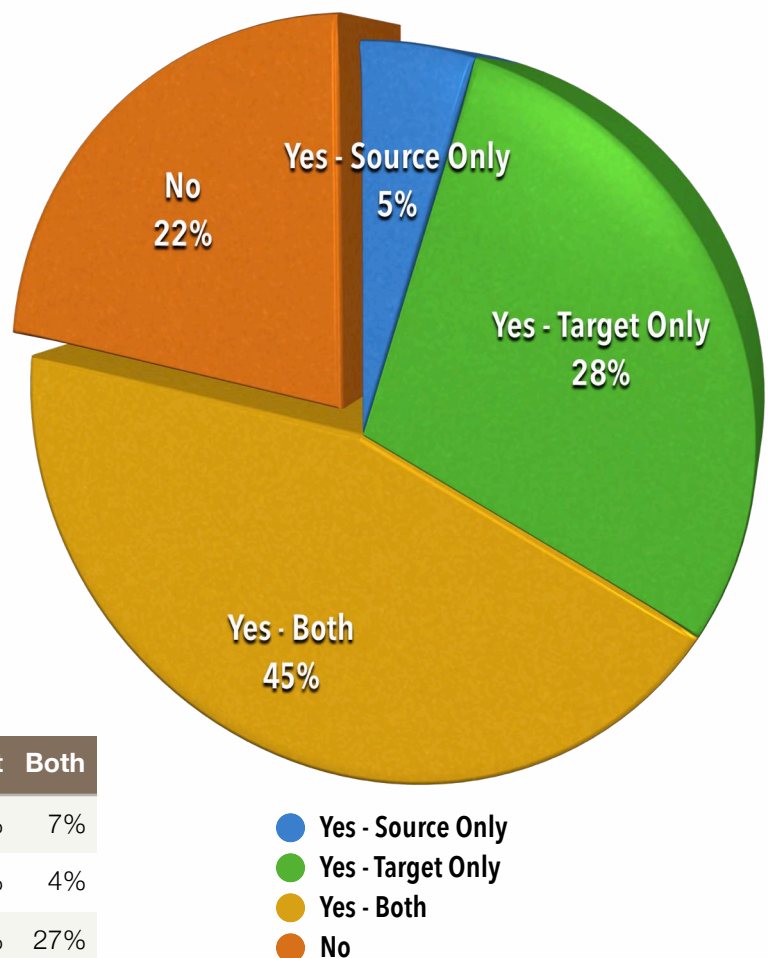
Findings

Deduplication adoption within NetWorker environments continues at a rapid pace, with 78% of respondents now having some form of deduplication within their environment. (This is in comparison to 68% of respondents *not* using deduplication in the 2010 survey.)

The year-on-year findings have been as follows:

Survey	None	Source	Target	Both
November 2010	68%	4%	20%	7%
June 2011	64%	5%	27%	4%
December 2012	37%	5%	31%	27%
December 2013	27%	8%	31%	34%
December 2014	22%	5%	28%	45%

Fig 8: Deduplication in the environment



Short of some miraculous storage capacity technology being developed, it would appear deduplication is well and truly here to stay. With just 22% of respondents not using deduplication, it's fair to say we're now reaching that point where deduplication has moved into full mainstream use and is only avoided by laggards in the product adoption curve or businesses who have extremely specific data types unsuitable for deduplication.

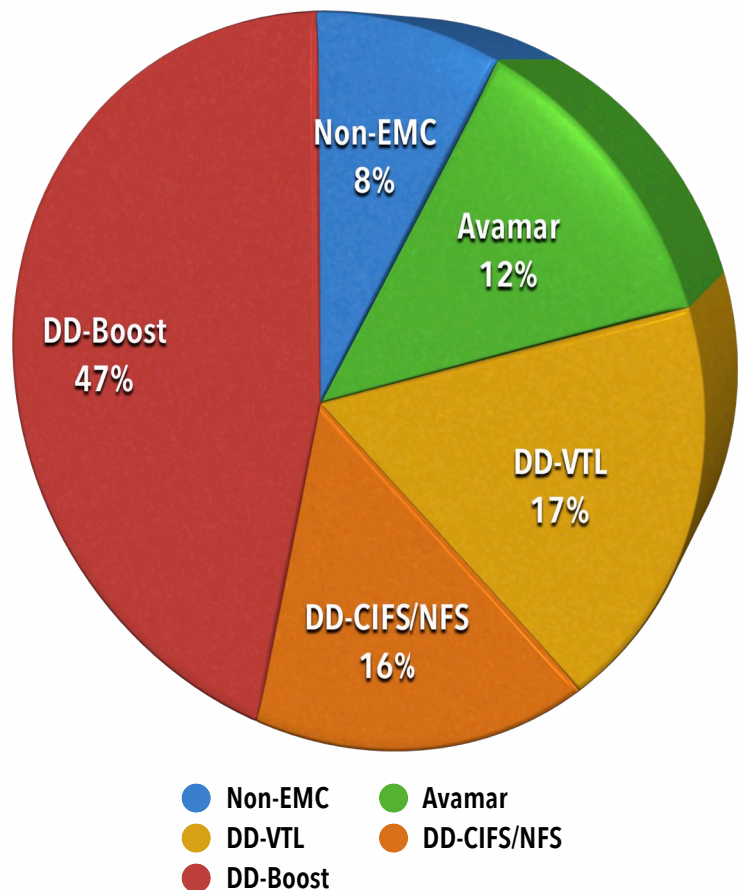
Moving on to the *type* of deduplication used in organisations, we can see Data Domain well and truly rules the roost for NetWorker installs:

Type of Deduplication	Number
Non-EMC	17
Avamar	26
DD-VTL	38
DD-CIFS/NFS	36
DD-Boost	102

Non-EMC deduplication accounts for less than 10% of the deduplication integration within NetWorker. This is not surprising – the advanced integration options for Data Domain in particular (reducing the need to rehydrate data for standard operations such as cloning between similar devices) can considerably ease the operational overheads in a NetWorker environment.

Indeed, Data Domain accounts for 80% of the deduplication usage within NetWorker, and this speaks heavily of the tangible benefit it brings to organisations. EMC have invested heavily in ensuring a wide variety of integration points with Data Domain, and with the latest functionality including such advanced options as virtual synthetic fulls and instant-on access for virtual machine backups (when used with VBA), this adoption percentage should continue to grow for a while longer.

Fig 9: Type of deduplication in use



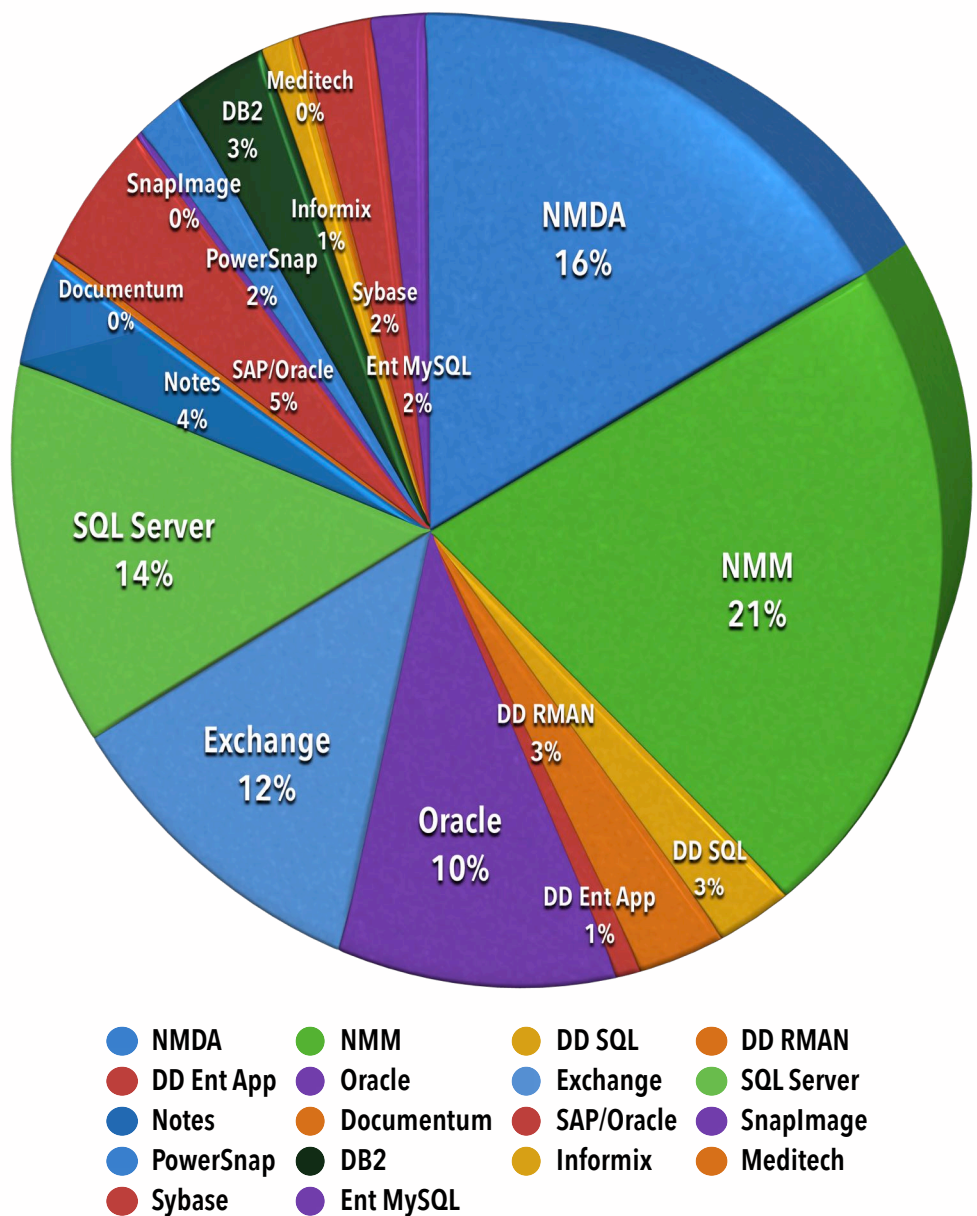
NETWORKER AND DATA DOMAIN MODULES/PLUGINS

Responses

This was the first year where Data Domain plugins were included in the mix. While technically these are outside of the scope of NetWorker, given the degree to which NetWorker and Data Domain are joined at the hip, it's interesting to see the adoption of these plugins designed to give greater control to database administrators.

Module/Plugin	Number
NMDA	70
NMM	93
DD SQL	12
DD RMAN	14
DD Ent. App	4
Oracle	46
Exchange	53
SQL Server	63
Notes	18
Documentum	1
SAP/Oracle	23
SnapImage	1
PowerSnap	8
DB2	15
Informix	5
Meditech	1
EDM	0
Sybase	11
Ent. MySQL	8

Fig 10: Module and plugin usage



Findings

Considering just Microsoft related applications, between NMM, legacy modules and now the plugin for SQL, this represents a considerable area of interest to businesses: 50% of module usage is to backup some form of Microsoft application, a percentage unchanged from last year's survey.

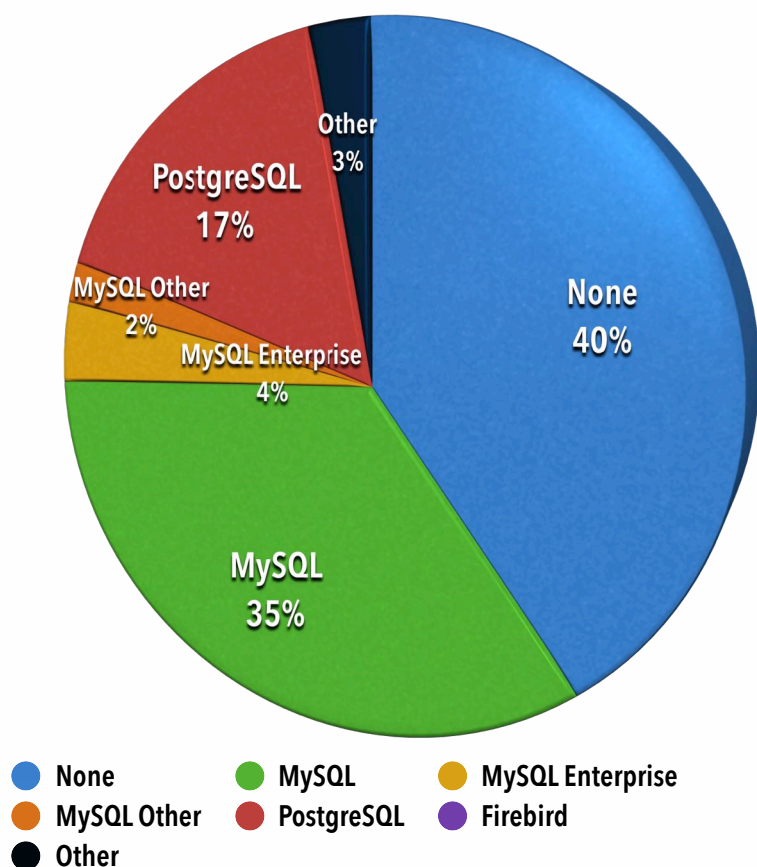
With advanced snapshot functionality being integrated into newer NetWorker releases, it's likely we'll see the PowerSnap utilisation figures fall away. Similarly, even though SnapImage was not heavily used *before* NetWorker added Windows Block Based Backup (BBB), we're likely to see that disappear entirely within a relatively short period of time.

Over time we should see greater consolidation to NMM and NMDA as businesses phase out older databases and messaging systems reliant on the older modules. It's possible this may be disrupted as the Data Domain plugins mature and continue to be adopted given the flexibility they add to the backup process (particularly in relation to allowing easier facilitation of external job scheduling via products such as Control-M).

The MySQL module, currently focused entirely on Enterprise MySQL (an offering from Oracle) has snapped up some attention, but MySQL and PostgreSQL enthusiasts would still likely be keen to see NMDA expanded on this front. When asked about open source styled databases, respondents indicated their usage as follows:

Database	Number
No OSS DB	82
MySQL	71
MySQL Enterprise	8
MySQL Other	4
PostgreSQL	34
Firebird	0
Other	6

Fig 11: Use of open source databases



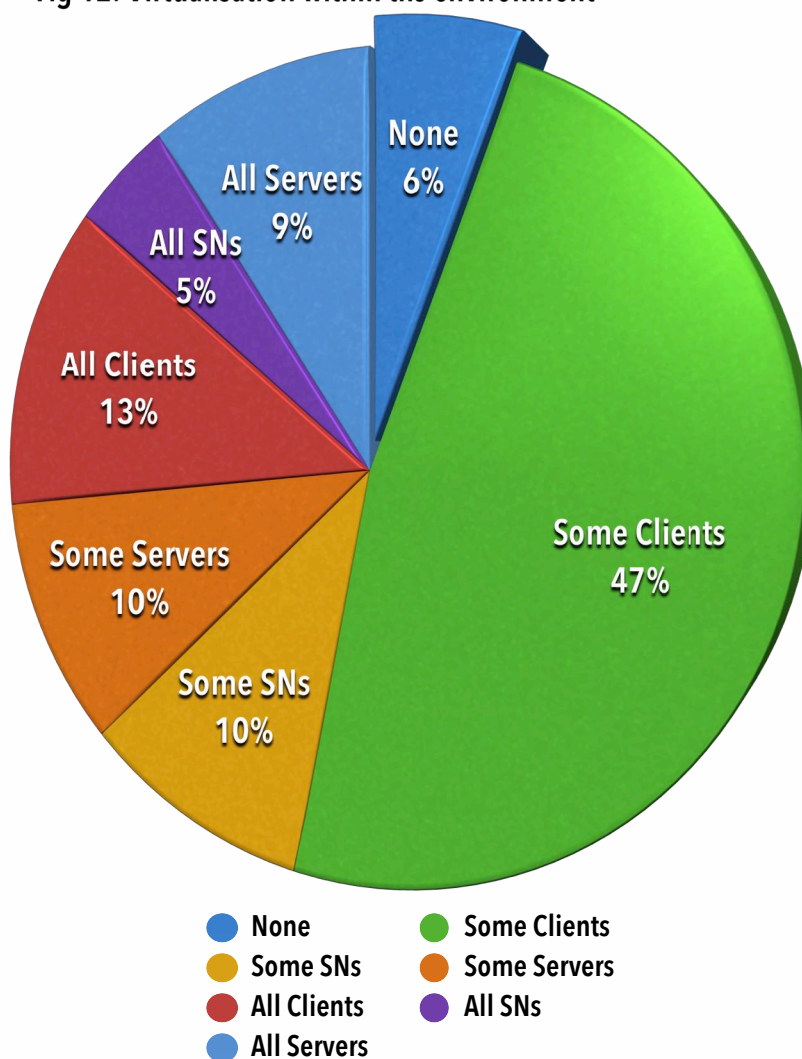
VIRTUALISATION WITHIN THE ENVIRONMENT

Responses

This was a new question for the survey and seeks to determine how virtualisation is adopted within NetWorker environments. The responses were as follows:

Host Type	Number
Nowhere/None	13
Some clients	105
Some SNs	22
Some servers	23
All clients	28
All SNs	10
All server	21

Fig 12: Virtualisation within the environment



Findings

These days it's almost unheard of to encounter a business IT environment that *isn't* making use of virtualisation technology for hosts, so it would have been reasonable to assume that 6% "None" might have been representative of older NetWorker environments. Instead, all environments with no virtual hosts were running NetWorker 7.6 and above.

Some of the more interesting statistics from those businesses **not** using virtualisation include:

- Predominantly Windows-only environments (62%)
- Client counts ranging up to 5000, but 84% 250 or fewer clients, and 69% 100 or fewer clients.
- 80% running NetWorker 8.0. or higher.
- Only one respondent *wasn't* using Windows at all (Linux only site, 1-10 clients).

It's unsurprising now to see NetWorker environments that are *all* virtual, and the relationship between environments where all storage nodes vs all servers are virtual would sit with anecdotal experience: if there is any host in a NetWorker environment likely to require maximum dedicated performance it will be a storage node. That being said, with the continuing integration of Data Domain into environments, and the adoption of advanced virtual infrastructure backup techniques, storage nodes requiring dedicated high performance hardware will likely decrease over time.

If we consider just clients for the moment, the combined virtualisation level between all and some represents 60%. This serves to demonstrate the continued importance of development programmes for virtual infrastructure protection, something EMC is most certainly investing in.

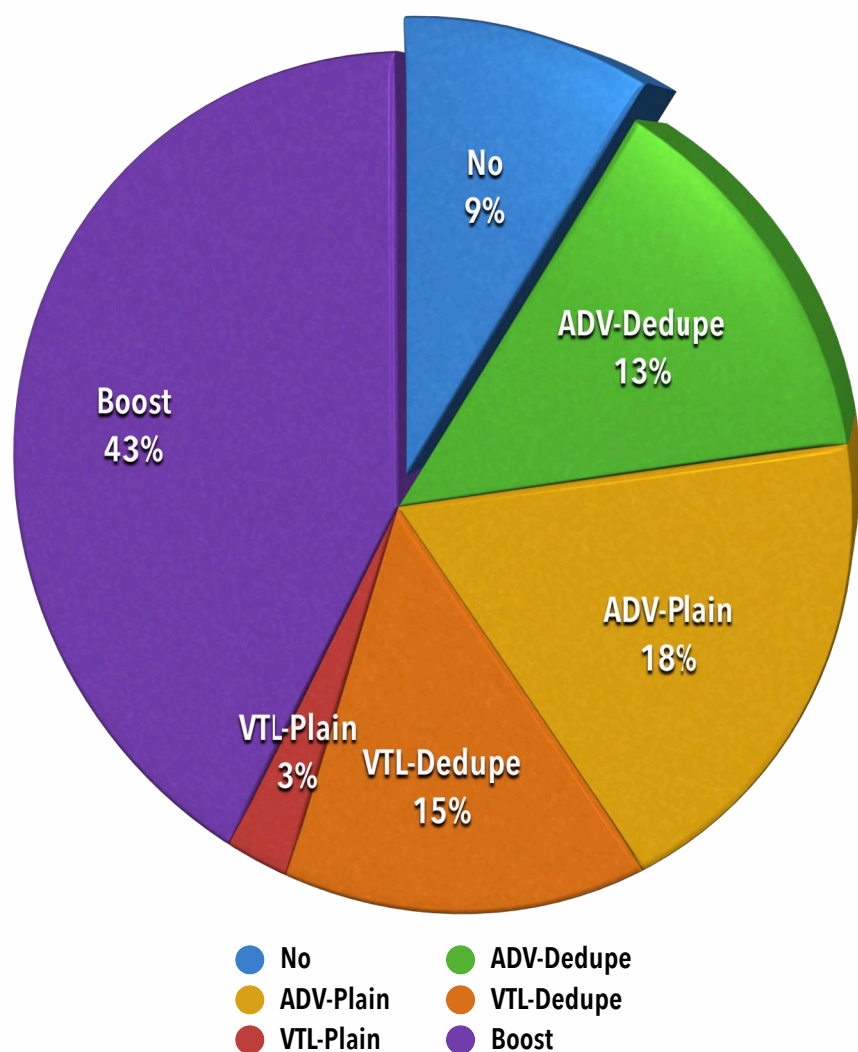
BACKUP TO DISK TECHNOLOGY

Responses

Backup to disk within NetWorker environments continues to remain pervasively popular since it eliminates so many of the manual handling functions surrounding tape backup. Increasingly for most environments, if tape is used, it's used as a secondary target only.

Usage	Number
No	20
ADV: Dedupe	30
ADV: Plain	42
VTL: Dedupe	34
VTL: Plain	6
Boost	98

Fig 13: Backup to disk technology



Findings

For the time being at least, we're probably seeing a plateauing of backup to disk (as a broad topic) adoption, with non-disk environments likely to remain just under that 10% mark.

Year-on-year we're seeing for the time being that VTL usage remains static, with Data Domain Boost more impacting the ADV_FILE style backup to disk usage within NetWorker. Given VTL remains useful for particular workloads (e.g., NDMP) and is offered by a variety of vendors, it's likely this utilisation is unlikely to shrink beyond around 15% for the foreseeable future.

The overall year-on-year figures since 2010 are as follows:

Survey	No	ADV	VTL	Boost
November 2010	16%	52%	32%	N/A
June 2011	15%	47%	33%	5%
December 2012	8%	38%	24%	30%
December 2013	8%	34%	18%	40%
December 2014	9%	31%	18%	43%

DO YOU CLONE WITHIN YOUR ENVIRONMENT?

Responses

This survey explicitly cited Boost controlled replication as an equivalent option of cloning (which indeed it is) to ensure businesses newer to NetWorker didn't confuse the two operations, and we saw the following responses:

Answer	Number
No/No Budget	13
No/Not Interested	11
No/No time	9
All	46
Production Only	12
Selectively	73

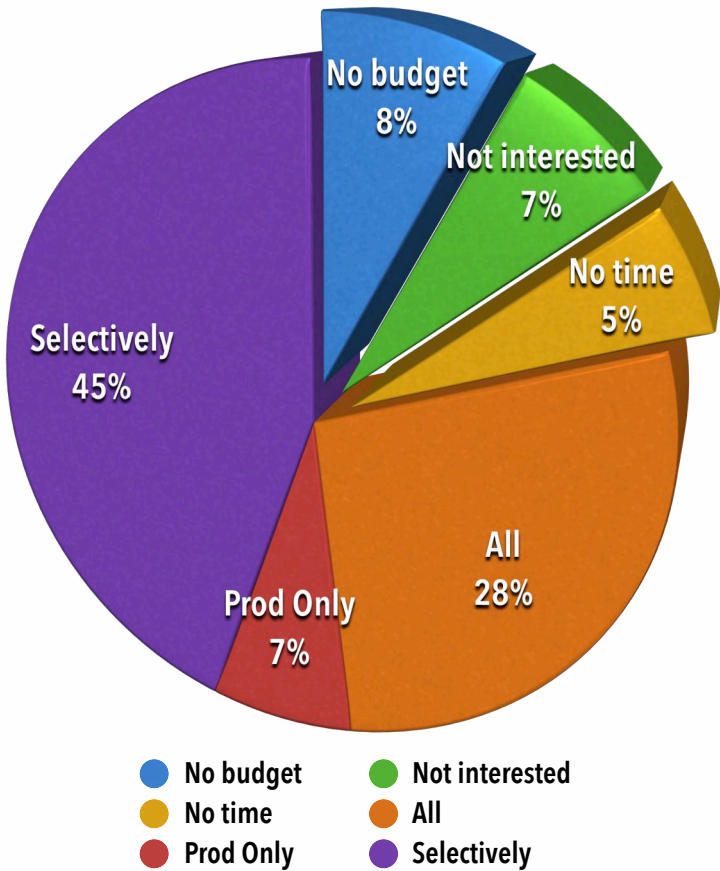
Findings

Backup duplication is a big bugbear for me; businesses that otherwise build themselves solid data protection strategies sometimes succumb to accounting fears and ditch backup duplication, thereby leaving themselves exposed.

This year the number of organisations not cloning has fallen to 20% (from 22% in 2013 and 24% in 2012), and it's pleasing to see a downwards trend on this topic. The "no budget" reason continues to remain the primary reason quoted over the last 3 years for a lack of cloning, suggesting a pervasive ongoing flaw in the budgetary allocations of some companies for their data protection environments.

Those businesses that don't clone pretty much cover the full gamut of client counts followed in the survey. Businesses claiming "no budget" range up to 1,000 clients, while those claiming "no time" or "not interested" both range up to the 5,001+ client mark. Of all businesses not cloning, 52% had 100 or less clients, while 48% had 101 or more. Perhaps more disturbingly 12% of businesses with 1,001 or more clients were not cloning.

Fig 14: Cloning within backup environments



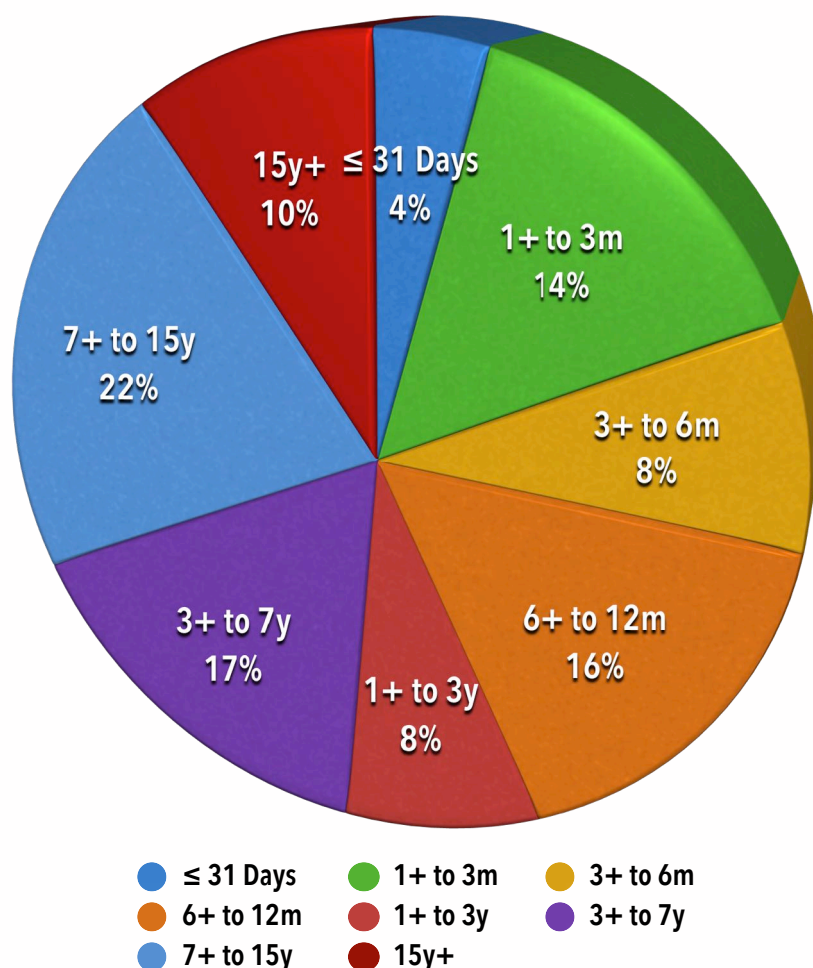
WHAT IS YOUR LONGEST RETENTION TIME?

Responses

This question focuses on how long backups are retained for – not by any means an indication of how long *all* backups are retained for, but rather the longest period for any backup. This gives us a bit of a high level overview of where NetWorker is being used for basic data protection only, and where it is being deployed in compliance-focused organisations.

Time Period	Responses
≤ 31 days	7
1+ to 3m	23
3+ to 6m	14
6+ to 12m	27
1+ to 3y	14
3+ to 7y	28
7+ to 15y	36
15y+	16

Fig 15: Longest retention time



Findings

If we look at 12 months as being a split point, we see approximately 43% of businesses under that threshold with the remaining 57% retaining for more than a year. Looking at just the longer term retentions, approximately 15% keep the backups for 1-3 years while the remaining 85% keep their backups for 3+ years, which is where compliance based retention typically starts to come into play.

BACKUP ENCRYPTION

Responses

This topic covers two distinct areas – whether or not encryption is required (and if so, if it's actually been implemented), and *how* the encryption is actually handled.

Encryption	Responses
Not required	112
Required, not implemented (in-flight)	18
Required, not implemented (at rest)	14
Required, implemented (in-flight)	11
Required, implemented (at rest)	24

How do you encrypt?	Responses
Client (software)	6
Client (boost in-flight)	13
At rest (disk)	10
At rest (tape)	10
Via FC/IP Encryption Routers/Switches	3

Findings

It's interesting to note the continuing presence of environments where encryption of some form or another is known to be required, but is not yet implemented. Of the 67 respondents for whom encryption was required, approximately 48% had not managed to implement encryption within their environment, which may represent a compliance headache for senior management, but also speaks to the general challenge this topic has been within the data protection marketplace for some time.

Having been working for the past 6+ months with Data Domain Boost in-flight encryption, I believe this low success rate may eventually change for many organisations. Where encryption may have been a “nice to have” topic but discounted due to complexity, it may gain more popularity as organisations update to DDOS 5.5 and NetWorker 8.2 and higher.

Fig 16: Encryption requirements

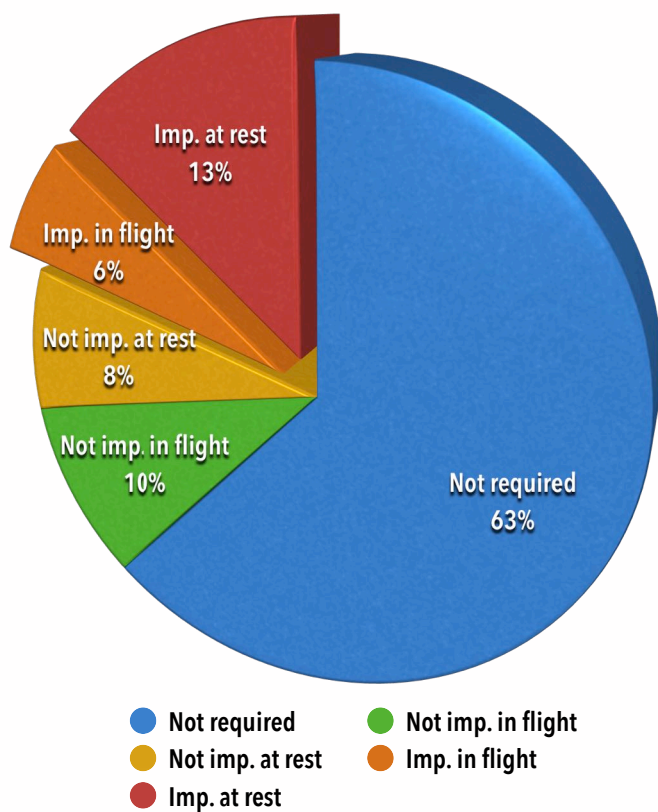
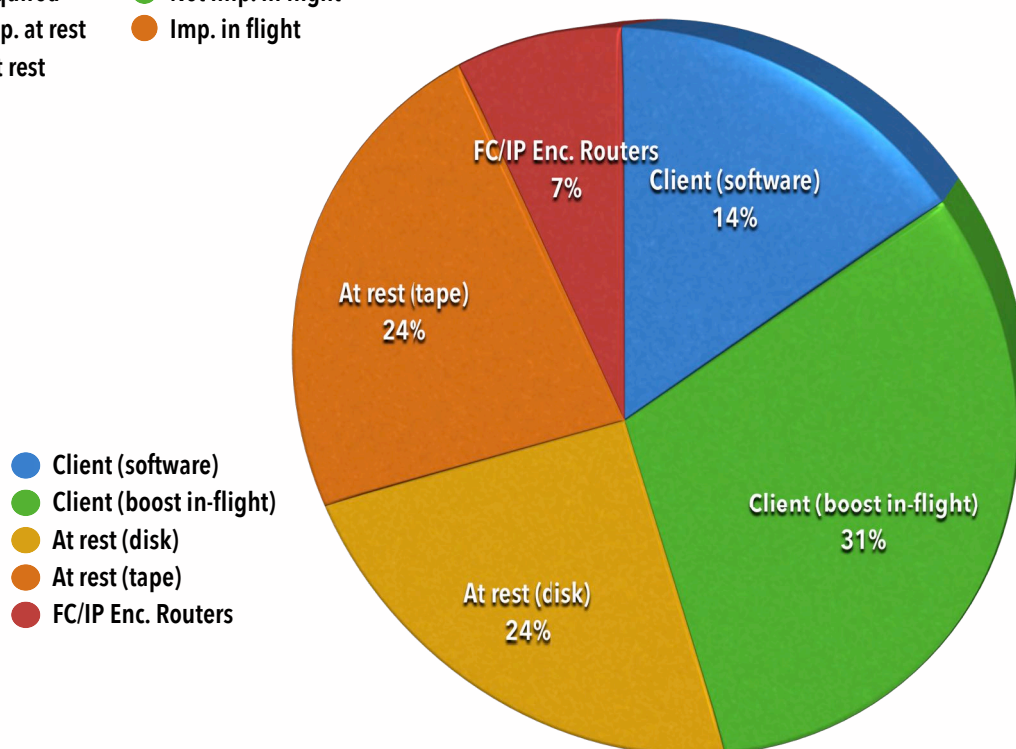


Fig 17: Encryption implementation method



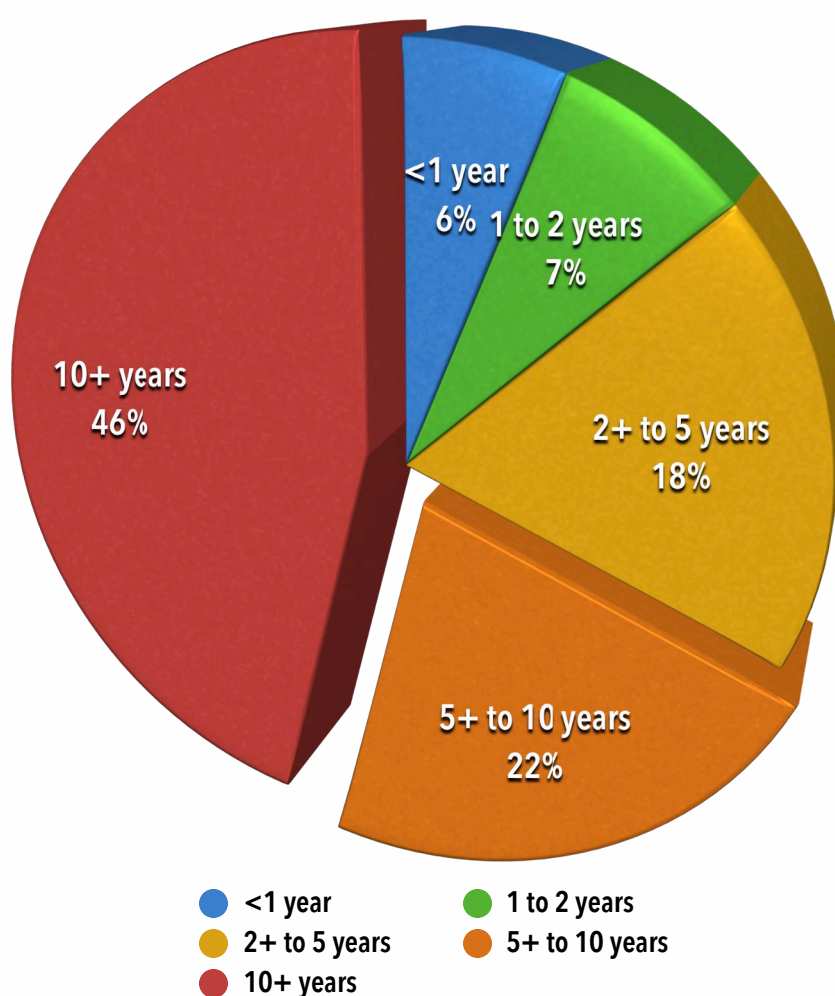
LONGEVITY OF NETWORKER USE

Responses

Particularly for larger organisations, switching between backup products is usually a costly and challenging activity. This question determines how long respondents have been using NetWorker within their environments.

Length of Time	Responses
< 1 year	10
1 to 2 years	12
2+ to 5 years	30
5+ to 10 years	37
10+ years	76

Fig 18: Longevity of NetWorker use



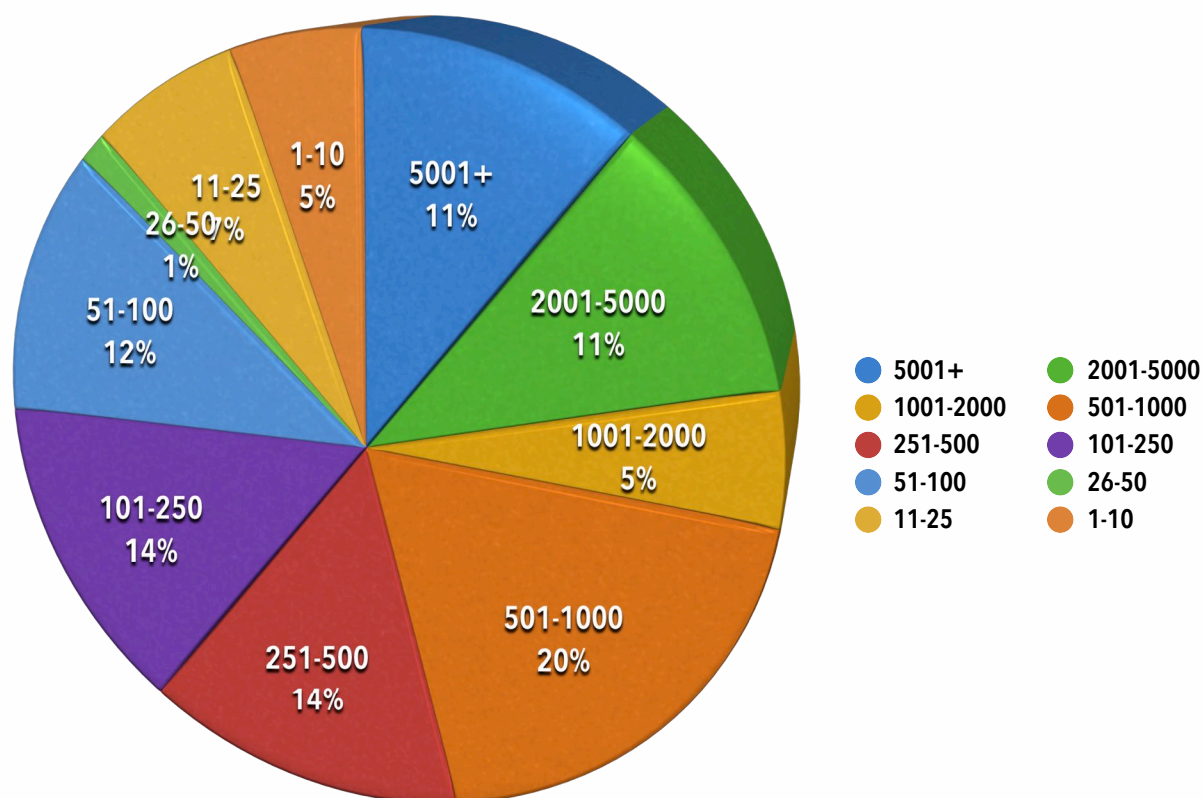
Findings

This remains an important statistic for NetWorker: 46% of respondents have been using it for 10 or more years, and 68% have been using it for more than 5 years – both of which are outside of the typical product-replacement cycle found in most enterprises.

Not only are NetWorker users loyal to the product, but once integrated successfully, NetWorker becomes a valuable asset which does the job it's been commissioned for: to protect the data. Anecdotally, longer-term NetWorker users *trust* the product. Despite any individual challenges faced (as will happen for all products), NetWorker engenders loyalty in its customer base thanks to its strong protection based design strategy.

If we focus just on those sites with 10 or more years of NetWorker, there's still a strong spread in the number of hosts being protected:

Fig 19: Client distribution for 10y+ users



Client Count	Number
5001+	8
2001 - 5000	8
1001 - 2000	4
501 - 1000	15
251 - 500	11
101 - 250	11
51 - 100	9
26-50	1
11-25	5
1-10	4

While a lot of arguments can be levelled as to the usability of a product, I believe when you look at businesses which have been using the same product for their data protection needs for 10 years or more you see a very compelling statement of its capabilities and trustworthiness. That such environments include the largest and the smallest also speak to enterprise scalability of NetWorker.

NETWORKER 8+ FEATURES

Responses

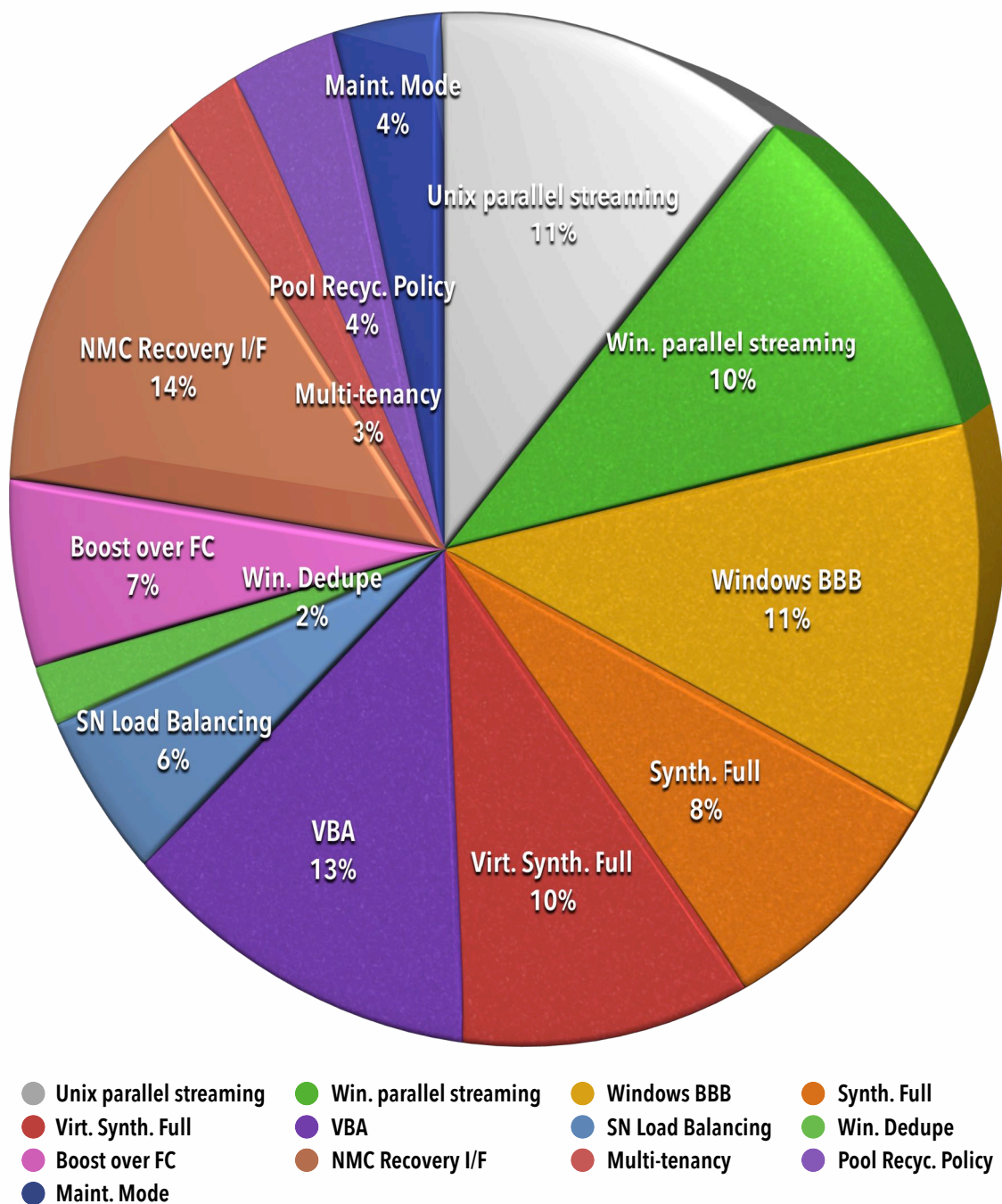
Since the introduction of NetWorker 8, we've been seeing a variety of sometimes quite advanced backup features added to the product. This charts some of those key options.

Feature	Number
Unix parallel streaming	36
Windows parallel streaming (8.2 only)	33
Windows Block Based Backup (BBB)	38
Synthetic Full	26
Virtual Synthetic Full	33
VBA	43
Storage Node Load Balancing	19
Optimised backup of Windows deduplicated filesystems	7
Boost over Fibre-Channel	22
NMC Recovery Interface	46
Multi-tenancy	9
Pool based recycling policies	12
Maintenance mode	12

Findings

Most of those on NetWorker 8 or higher are making use of at least some of the new features – and many are making use of multiple features. This is hardly surprising; NetWorker 8 represented a huge jump in protection functionality and introduced features users had been wanting for years.

Fig 20: NetWorker 8+ advanced feature usage



HOW ARE VIRTUAL MACHINES BACKED UP?

Responses

For the foreseeable future, we're unlikely to see a one-size-fits-all approach to virtual machine backups, simply because of the complexities involved. This was a multiple-choice question, since many organisations will deploy a variety of virtual infrastructure backup techniques to meet their requirements.

How	Responses
No VMs	7
Client in Guest	105
VCB	7
VADP	60
VBA	50
Custom scripts/snapshot	9
3rd party tool	20

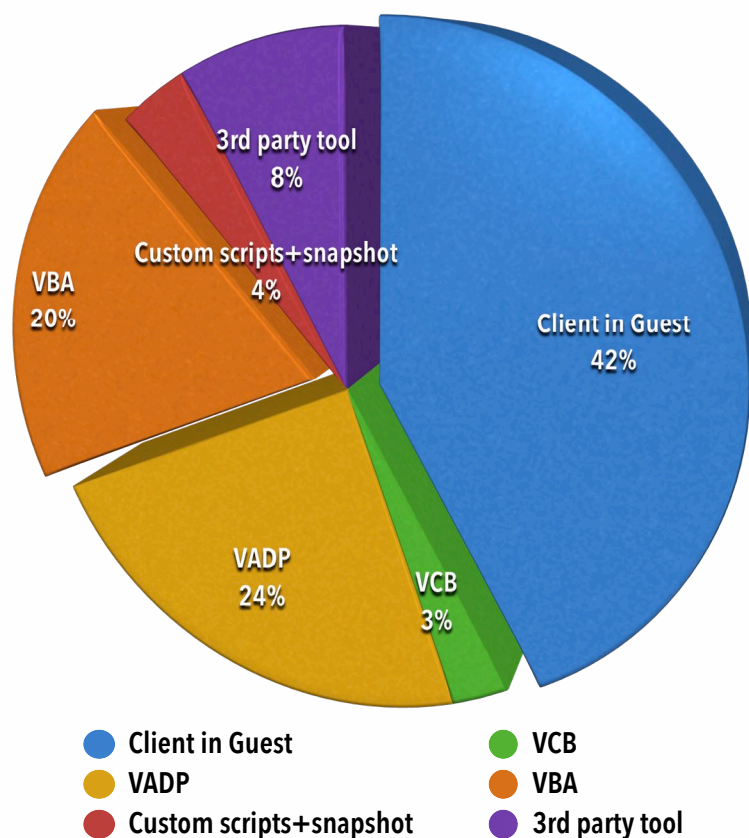
The obvious challenge is coming up with a *single* strategy that allows for virtual machines to be backed up at the image level but *complete database* recoveries at both the full and granular scale being available. One might even say this is the "holy grail" for backup and application administrators.

Findings

It's unsurprising to see such a broad mix of backup options being deployed to protect virtual infrastructure, though it's also good to see such a strong adoption of VBA since its (reasonably recent) introduction.

As mentioned above, most organisations will end up using a variety of backup techniques; it's not uncommon for instance to see in-guest clients deployed for hosts running databases while VBA or similar is used to backup standard application servers requiring no database consistency.

Fig 21: Virtual infrastructure backup techniques



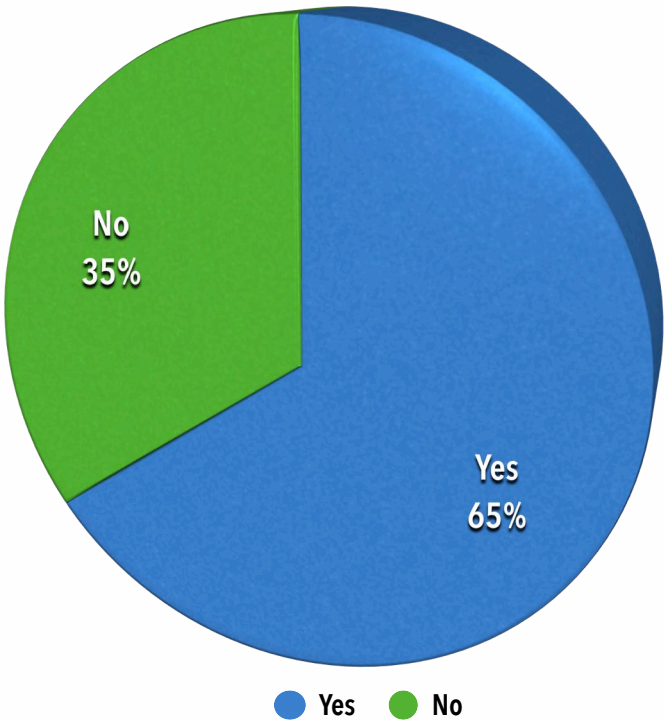
DO YOU HAVE DEDICATED BACKUP ADMINISTRATORS?

Responses

This is a simple yes/no question to gauge at the very high level where backup administrators sit within an organisation - i.e., as independent roles, or as part of broader teams.

Answer	Responses
Yes	108
No	57

Fig 22: Dedicated backup administrators?



Findings

This survey saw an increase in the number of dedicated backup administrators on the previous year (65% to 61%).

While dedicated backup administrators are admirable, they may currently be representing a direction that isn't suitable for a holistic data protection strategy. As virtualisation reaches saturation point in the marketplace and businesses require increasingly tighter SLAs, data protection strategies must evolve to focus on *more* than just whether there are adequate backups.

Data protection as a rule is something that can no longer be handled in isolation by a single team for any but the smallest of organisations. It must take storage *and* virtualisation systems into account in order to be efficient and maximise the return on investment across all data protection for a business.

It should also be noted that the newer functions appearing in NetWorker, including advanced virtual machine backup options, snapshot management and "instant on" restore capabilities will only be used to their maximum potential when backup administrators have either strong knowledge in virtualisation and storage systems in use *or* very close ties to the teams that do.

SIZE OF A FULL ORGANISATION BACKUP

Responses

This question is very much a “gut feel” one – the question simply was: “What is the approximate size of a full backup for all your systems protected by NetWorker?”

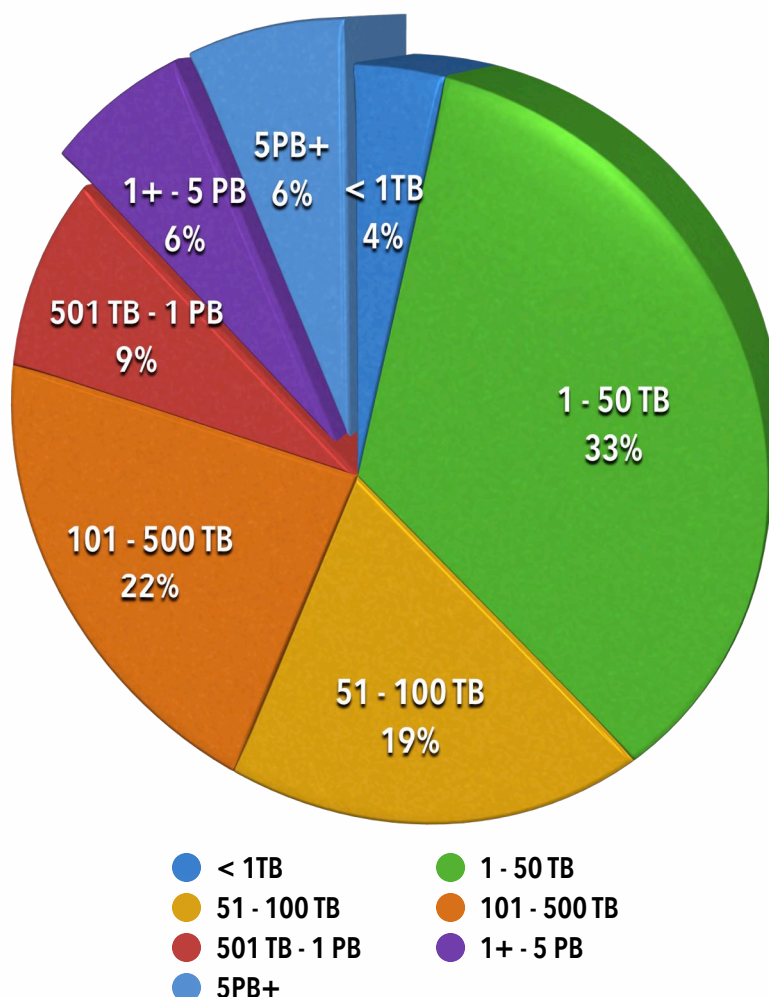
Thankfully, a lot of respondents were willing to make that guess:

Size	Responses
< 1 TB	6
1 to 50 TB	57
51 to 100 TB	33
101 to 500 TB	38
501 TB to 1 PB	15
1+ to 5 PB	11
5 PB+	11

Findings

While 78% of sites estimated a full backup of their NetWorker protected environment to be 500 TB or less, 12% estimated that full backup to be 1 PB or more, and this would be reasonably representative of the distribution between businesses with “average” amounts of data and those at the weightier end of the scale. Regardless, any question regarding scaling to capacity is put to rest when you see multi-petabyte sites.

Figure 23: Size of a full backup



CONCLUSIONS

NetWorker remains heavily used for a large variety of environments, with client counts ranging from the tens to the thousands, accommodated by a number of different datazones.

We're clearly seeing Windows and Linux becoming the dominant platform for NetWorker servers, and this is likely to be representative as much as anything of the overall dominance of the x86/x86_64 system line within businesses. A decade or more ago "midrange" meant commercial Unix systems with a small nod to Windows; now this is anything but the case. Instead, midrange systems are well and truly owned by the Windows/Linux market, with commercial Unix systems taking a role more representative of the "mini computers" of 1-2 decades past such as VMS and Tandem.

Solaris' decline as a NetWorker server platform seems to have plateaued for the time being, and a consistent message in the marketplace is the maintenance costs on the operating system under Oracle have turned prohibitive for many organisations. (This was recently demonstrated by a company remarking they were evaluating Oracle on zOS as the licensing costs on their Solaris servers were becoming unduly burdensome.)

The quick uptake of VBA backup technology demonstrates NetWorker is now definitely starting to tackle the virtualisation beast. VBA requires considerably less resources and offers excellent integration points when compared to its predecessor, VADP, and we should expect to continue to see considerable advances in VBA over the next several iterations, as demonstrated by the integration of the "instant on" restore model in NetWorker 8.2.

Data Domain remains the absolute jewel in the crown for EMC in the data protection space. NetWorker remains a fantastic workhorse and acts as the glue holding a data protection solution together, but when coupled with Data Domain it represents an excellent value proposition for most organisations. I've even been told by solution architects in managed service teams from EMC competitors words to the effect, "We don't push Data Domain to our customers. As soon as they get Data Domain, NetWorker is practically inevitable".

The NetWorker 8.x release series has seen substantial uptake: 70% of respondents are using NetWorker 8 or higher within their organisations. In years gone by NetWorker administrators would find a version they "liked" and then stuck with it for as long as they could; EMC has smashed through this legacy-attachment barrier and achieved a stunning turnaround in version adoption by its customers.

NetWorker's key strengths can be summarised as follows:

- Vertical scalability (number of clients in a single datazone)
- Horizontal scalability (number of datazones)
- Volume (amount of data protected)
- Heterogeneity (supporting a large number of operating systems and applications)
- Deep integration with Data Domain.

The next survey will be conducted in December 2015.