VDI Picture Book

The three most complex (but potentially simple)
VDI management tasks in pictures

Let's cut to the chase.

You've got a VDI project in play, or in planning, and it's more complicated than you expected. Call us psychic, but the problem is almost certainly storage. Conventional, LUN-based storage was built for physical workloads, and you're using it to operate hundreds, or thousands, of virtual desktops. That's a misfit that's frustrating your end users and costing you time, money and sanity.

What does the disconnect look like? Well, over the next few pages, we will take a look at some not-so-pretty pictures of all the steps required to:

1 Install and configure storage for VDI

2 Determine performance headroom
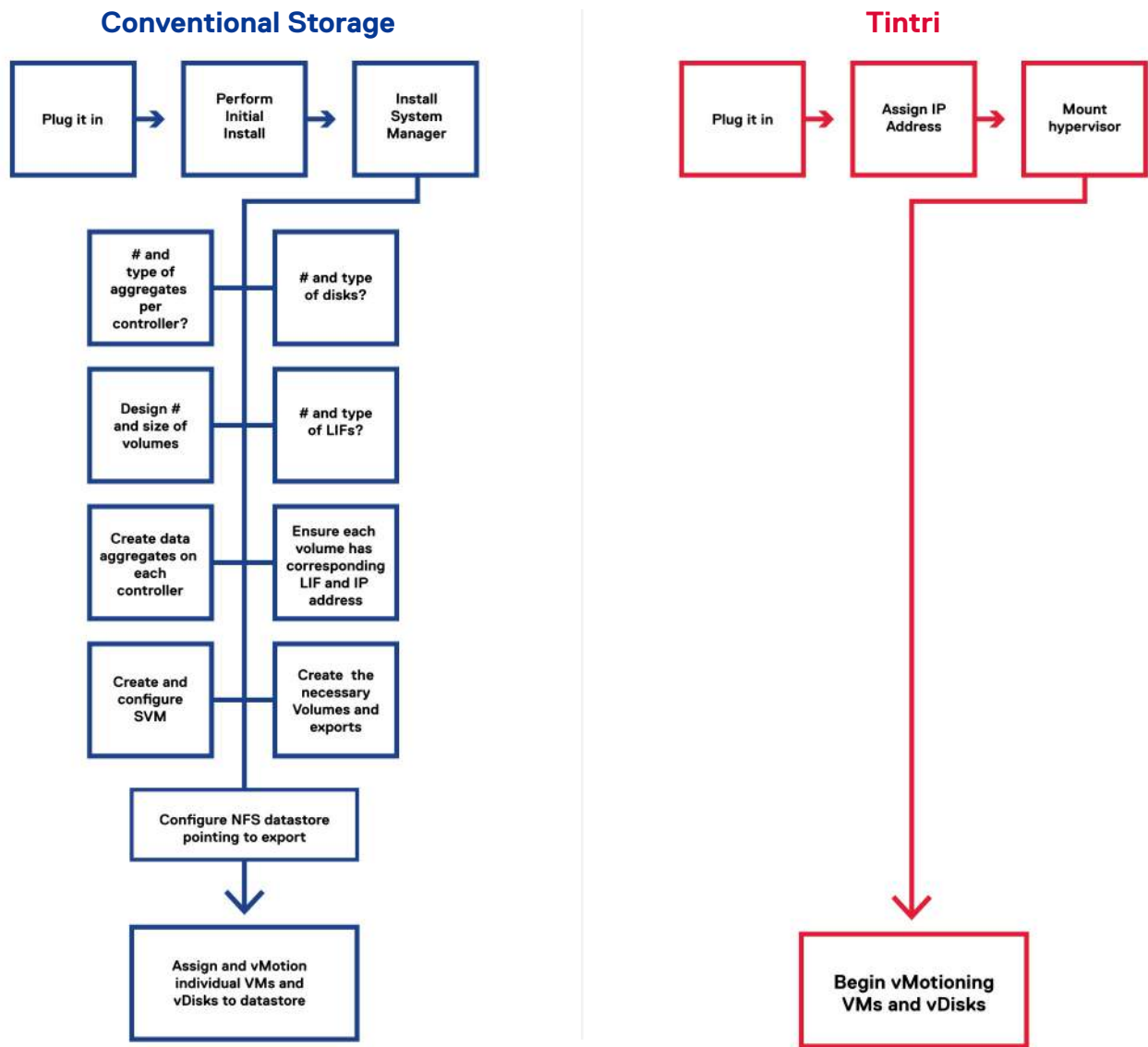
3 Troubleshoot latency issues

Here's the thing: storage doesn't have to be so complex. VM-aware storage (VAS) is built specifically for virtualized workloads like VDI. It eliminates the LUNs that burden conventional storage, so that every storage action can be taken on individual VMs. Now performance is optimized for each desktop and management takes just minutes.

To prove it, we've drawn out the steps required to accomplish the above three tasks using VAS— while at the same time, comparing them to conventional storage. You'll see that VAS requires a fraction of the time and effort, and that it can have your VDI project up-and-running smoothly in less than 30 minutes.

They say a picture is worth a thousand words, but these pictures are worth a thousand hours of your time.

Task 1: Install and configure storage for VDI

The first thing you have to do for VDI is install and configure your storage backbone. While you only have to do it once, you can consider it a sign of things to come. It can take anywhere from three days to three weeks to get conventional storage set-up to manage desktops. But VM-aware storage is ready to begin receiving VMs and vDisks in less than 30 minutes.
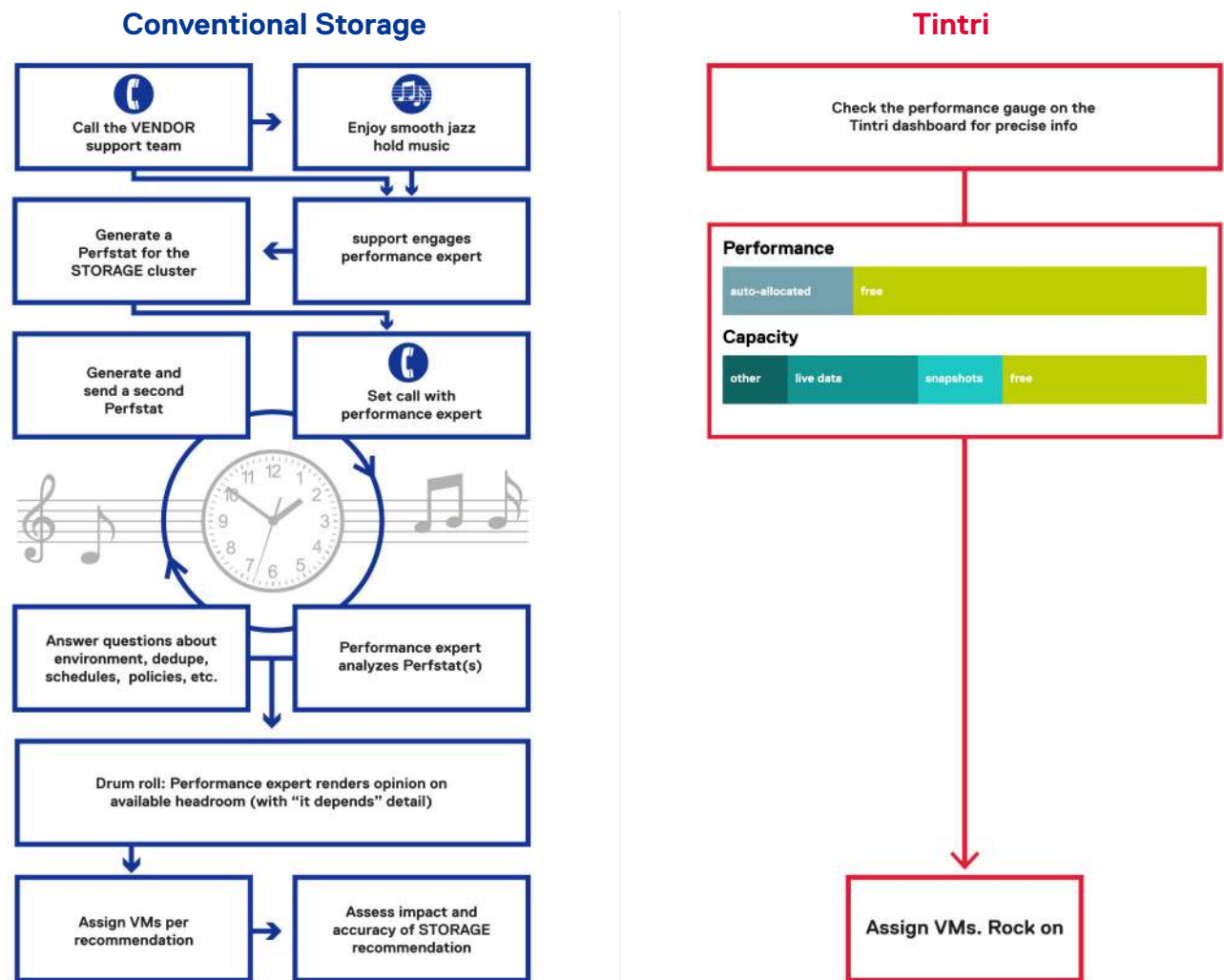

Conventional Storage

- Plug it in
- Perform Initial Install
- Install System Manager
- # and type of aggregates per controller?
- # and type of disks?
- Design # and size of volumes
- # and type of LIFs?
- Create data aggregates on each controller
- Ensure each volume has corresponding LIF and IP address
- Create and configure SVM
- Create the necessary Volumes and exports
- Configure NFS datastore pointing to export
- Assign and vMotion individual VMs and vDisks to datastore

Tintri

- Plug it in
- Assign IP Address
- Mount hypervisor
- Begin vMotioning VMs and vDisks

Imagine what you could do with the days and weeks you save in install and configuration alone.

"We had the system up and running in less than 30 minutes—before the install rep had time to find parking in our company lot." **– Major Healthcare Provider**

Task 2: Determine performance headroom

As your VDI footprint grows, you'll need to determine whether or not your storage has sufficient reserves. Any storage system can present available capacity, but just because there's space doesn't mean it can absorb the performance demands of additional desktops. To get that insight into conventional storage, you have to work through a maze of PerfStats, support calls and estimates. Since VAS can see the performance of individual VMs, it always knows how much performance is in reserve—no wasted time, no guesswork and no over-provisioning.

Conventional Storage

Call the VENDOR support team → Enjoy smooth jazz hold music → support engages performance expert → Generate a Perfstat for the STORAGE cluster → Generate and send a second Perfstat → Set call with performance expert → Answer questions about environment, dedupe, schedules, policies, etc. / Performance expert analyzes Perfstat(s) → Drum roll: Performance expert renders opinion on available headroom (with "it depends" detail) → Assign VMs per recommendation → Assess impact and accuracy of STORAGE recommendation

Tintri

Check the performance gauge on the Tintri dashboard for precise info

Performance
auto-allocated | free

Capacity
other | live data | snapshots | free

Assign VMs. Rock on

No guesswork, no support calls and no over-provisioning.

> "Issues that used to take days now take minutes. The best is that we are able to monitor mission critical VMs in real-time via a simple user interface."
>
> **– Fortune 1,000 Financial Services Company**

Task 3: Troubleshoot latency issues

When an end user calls up or submits a trouble ticket because their desktop is running slow, you've got to get to the root cause. Now, you can play detective, digging into datastores and forming hypotheses—or you can get straight to the root cause in seconds. Conventional storage makes troubleshooting a CSI or Cold Case-like activity. Conversely, VAS gives you total visibility of latency across your entire infrastructure—see latency stemming from host, network and storage with a single click.
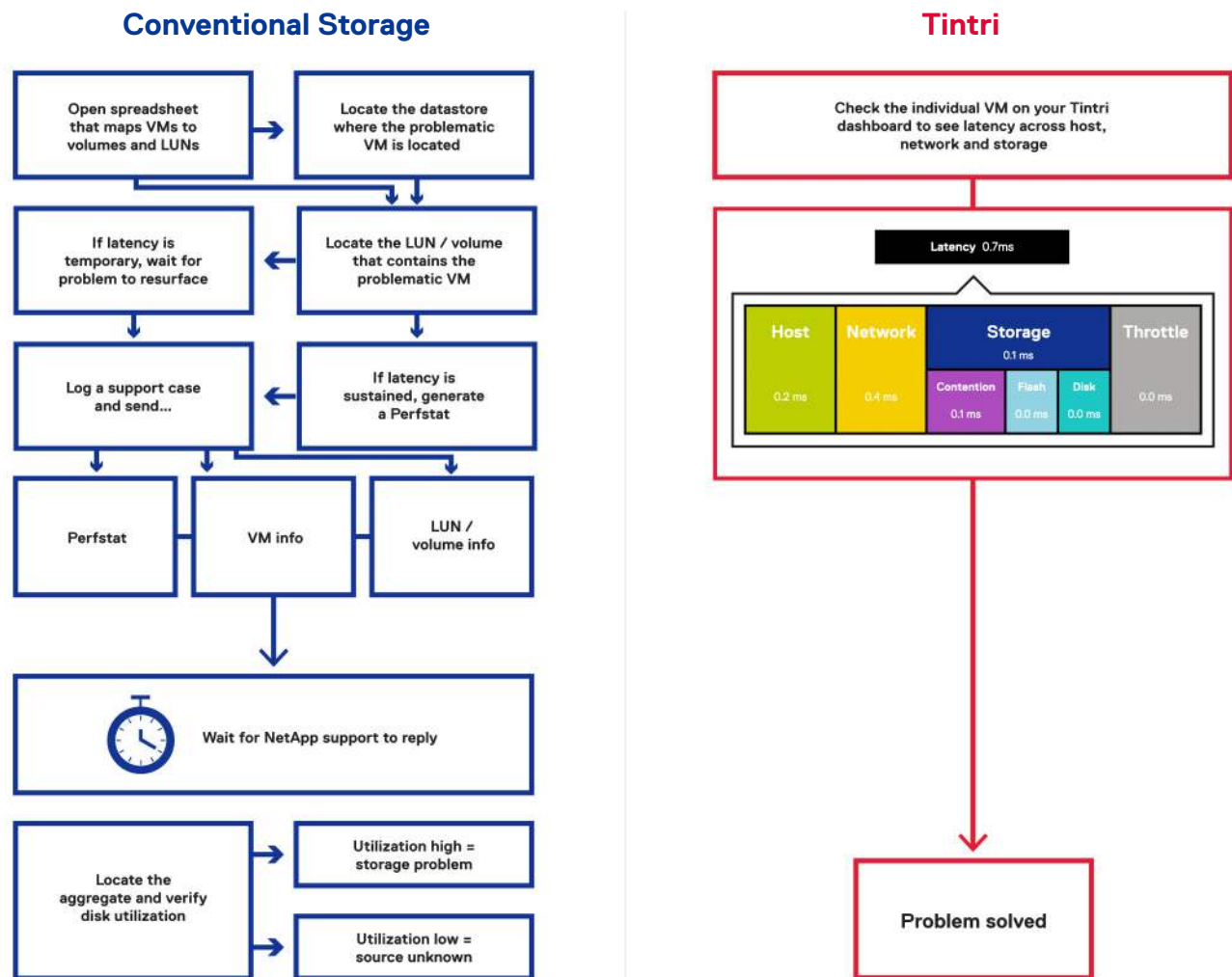
No finger pointing necessary.

"I don't have to manage storage anymore. My performance bottlenecks are either gone or easy to spot." **– National Law Firm**

The case for Tintri VM-aware storage

Tintri is the pioneer of and leader in VM-aware storage. We are trusted with 500,000 VMs and 50 petabytes of data by leading organizations that include six of the Fortune 15. That's because we are specifically designed to store their virtualized workloads.

We can help you eliminate the three major storage pains that hamper VDI:

1. Performance

Boot storms and anti-virus scans can cripple VDI performance. That's not the case with Tintri. If you have thousands of persistent desktops, we can serve those with the only VM-aware All-Flash Array on the market. If you have fewer persistent desktops, or a largely non-persistent footprint, we can handle them with our award-winning Hybrid-Flash system. Tintri's Hybrid-Flash VMstore delivers 99% of I/O from flash to ensure every end user experiences predictably, pristine performance.

6x FASTER
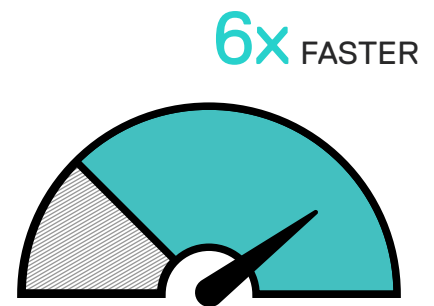
Tintri customers speed performance 6x compared to similar hybrid storage systems.

2. Manageability

Conventional storage requires deep expertise to shuffle LUNs, tune performance and manage policies. Tintri VAS operates exclusively in virtual machines—a language that's common throughout the data center. As shown above, that substantially reduces the time and effort spent managing storage. The Taneja Group, a third-party analyst firm, studied Tintri customers and found they cut management time by 98% on average. That's a number that induces both awe and skepticism, but it's the reality for organizations that turn to Tintri for VDI.

95% LESS

Tintri reduces time spent managing storage by 95% (yes, that's the real average) versus conventional storage.

3. Value

Tintri can pack up to 5,000 desktops in 2U of All-flash, or 3,500 desktops in 4U of Hybrid-flash—in both cases it's a level of VM density that is not possible with conventional LUN-based storage. That's immediate capital expense savings, and given the ease of use and power-sipping, your operating costs will drop through the floor.

90% LESS
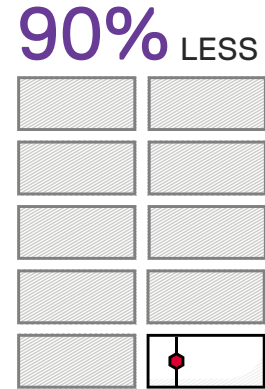
Tintri will shrink the size of your storage footprint by up to 90%.

Summary

They say a picture is worth a thousand words, but our sincere hope is that these pictures are worth a thousand hours of your time. As you've seen, conventional, LUN-based storage was built for physical workloads. You shouldn't be using it to operate hundreds, or thousands, of virtual desktops. It's a misfit that's frustrating your end users and costing you time, money and sanity.

If you've got a VDI project in play, or in planning, and it's more complicated than you expected, it is almost certainly storage. With VAS, built specifically for virtualized workloads like VDI, you eliminate the LUNs. This means that every storage action is taken at the individual VM level, performance is optimized for each desktop and management takes just minutes.

With Tintri, your VDI project can be as pretty as a picture. But, don't just take our word for it, a picture's worth a thousand hours.

We would love to paint a picture of the impact of VAS on your VDI project. For more information about Tintri and to get hands-on with VM-aware storage please get in touch:

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