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SOLUTIONS

# **HOW TO EVALUATE AND DEPLOY HYPER-CONVERGED INFRASTRUCTURE**

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## **ABOUT THIS WHITE PAPER**

As someone who knows the Hyper-Converged Infrastructure (HCI) market well and has been in the IT infrastructure industry a long time, I thought I would write a short White Paper on what the HCI movement is all about.

I started a LinkedIn Group called Hyper-Converged Infrastructure in Northern CA because I found it was more productive to provide value than blindly prospect for sales calls. These days, IT executives like to give the impression they're the smartest guys in the room, even if they're not. I also think of the line, "the smartest guy in the room is the one who realizes he's not". Not to make myself appear smarter than you, because I'm not, but I bet I know more about HCI than the average IT Executive. So, I'm happy to provide some knowledge for your information.

Also, as CEO of Roundstone Solutions, a San Francisco based IT VAR, we've found IT executives don't go out of their way to meet with new vendor or partner sales reps, and look to get most of their education about a new technology on their own. You know what I mean; no one returns phone calls, emails are ignored, webinars are a waste of time as it's only one-way communication. Most executives just go to the website as if the material will be completely clear and the connection will be made. Sadly, it doesn't work that way all the time.

So, here's the education you're probably looking for. In a direct, and honest fashion.

## **WHAT YOU'RE EXPERIENCING IN YOUR IT INFRASTRUCTURE**

We've worked with thousands of people in IT over the years. We've worked with large enterprises, mid-sized companies, small companies, and public sector entities. While everyone likes to think that their issues are unique, the truth is that 80% of what you deal with in IT is identical to what the guy down the block is dealing with. There's only 20% that's truly unique to your company.

With that in mind, we're pretty sure you may be experiencing a lot the same things that others we've worked with have.

You presently spend an inordinate amount of time and money working on maintaining your IT infrastructure. I'm not just talking about maintenance or support costs, I'm talking about all of the various products you have deployed that have to work together so you get what you need.

Here's an example: You might have HPE Proliant servers. On those servers is either Linux or Windows, and on top of that, you're running virtualization software from either VMware, Microsoft, KVM, or Citrix.

Your applications sit on top of that, along with a bunch of middleware that helps you manage the environment.

Next, you have storage. You probably have installed EMC, Dell, NetApp, Nimble, Pure, or some other SAN. Sound familiar? The SAN hardware has some utility software to manage your data, and each of those software programs have to work together with the servers.

To connect that storage, you have a switch between the servers and storage, and that switch has it's own operating system, software, and management tools.

All this hardware and software needs to work together properly, all the time. That's not easy, and you know it. So, a good part of your budget, time, and talent is spent making sure it all works. In other words, it's spent before you get any work out of the infrastructure. You haven't even started running the applications your business needs and you've already spent more than half your yearly budget. How will you every have the time or money to innovate?

But, you're comfortable with this, aren't you? After all, your installed vendors are all solid vendors with your best interests at heart, right? You've known them a long time, and their VAR partners have done right by you. It's all good. Or, is it?

If there was a way to make it all easier for you, *but cause them to sell less to you*, would they really push you to do it? **Nope**. Why? Because they all have families to feed, and they've been making good money selling you the tried and true.

**You know there's a better way than the way it's been being done. Your research has shown you that HCI is doing wonders for those that have deployed it, and you're curious what it could mean for you and your IT Infrastructure.**

So, let's take a look at it...

## **LOOKING AT HYPER-CONVERGED INFRASTRUCTURE**

You've decided that you owe it to yourself to look into HCI, if for no other reason to validate the path you're currently on. After all, at some point, someone's going to ask you if you've looked at HCI, and you need to have an answer.

So, you take a sales call from Nutanix or another HCI vendor or VAR partner. The story's pretty compelling; you can combine compute and storage into one appliance, and simplify your environment. You like what you hear, but you're skeptical. After all, it's a departure from the traditional 3-tier approach, and there's job security in 3-tier, right?

Then you speak to a reference that's currently using HCI, and they rave about it. You do more homework, and you find that, "hey, this stuff really seems to work". Yep. It does.

You wonder how come your existing vendors haven't told you about this, or pushed for you to deploy it. Two reasons; the existing vendors haven't really had a good enough product (and for the most part, still don't), and they don't want to rock the boat...they want you to keep buying more of what you've been buying.

**To get the real story on HCI, you have to change who you're talking with.**

You have to talk to VARs that you haven't used yet, because they have no vested interest in protecting a large 3-Tier installed base. These "unknown" VARs only make money if they can successfully present HCI, so you'll get better information from them than from your existing VARs.

Look, I run one of those "newer" VARs. I don't sell HPE or Dell servers, EMC or NetApp SANs. My only chance to be successful with you is to show you just how much better HCI can be for you. But you have to let me show you.

Once you're thinking it's worth looking seriously at HCI, you should do a Proof of Concept. Nutanix will let you do it remotely, where you can load your workloads onto their platform, and run them for a couple of weeks to test. If you're still not sure, they'll let you use one of their appliances in your own data center for a short period. It doesn't take long to test.

The benefits of HCI will be apparent almost immediately. You'll easily see the main benefits; 1) a Cloud environment in your own datacenter allowing for easy scaling, 2) simplicity in operation, 3) cost savings with this approach, and 4) higher performance.

HCI is being used in ALL aspects of IT, not just VDI, which is where it started. We have deployed SAP, Oracle, EMR systems, and every other workload on HCI. In fact, over 75% of the Nutanix systems purchased are for enterprise applications, not VDI. This is despite what HPE would have you believe.

## **DECIDING WHICH HCI TO DEPLOY**

Once you've decided that this platform can work for you, you should look at all the vendors in the space. What you'll learn is that there aren't many that are truly HCI. In fact, only Nutanix, Scale Computing, and Pivot3 are really HCI. Nutanix is for all sized companies, Scale is for small companies, and Pivot3 is more of a niche player for video surveillance. So for enterprise workloads, Nutanix's the one.

The rest (HPE/Simplivity, Cisco/Springpath, Dell/EMC VxRail) are converged infrastructure. The difference? HCI features a Cloud scale file system (like the Google File System) while the others are pretty much a repackaging of their existing products. Of course, those vendors will disagree, but it's true. You want a fully engineered, purpose built appliance.

Right now, Nutanix has over 50% of the market. You can deploy Nutanix in four (4) ways.

- On a SuperMicro appliance, which is the Nutanix NX
- On Dell hardware, known as Dell XC
- On Lenovo hardware, known as Lenovo HX
- On Cisco UCS, in a "meet in the channel" arrangement

## **DEPLOYING HCI**

It's easy to deploy HCI. With HCI, you can buy it in smaller increments than traditional 3-tier architectures, saving you money until you need to spend it.

You have to change the way you look at your hardware infrastructure when configuring HCI. Rather than look at the capacities that the vendors have decided are the ones for you, you look at the workloads you're going to run on the system. It's the workloads that count, not the HW.

We plug the workloads into a configurator, and out pops the configuration. You get to do it with us. It's totally transparent...and there's no magic. It's all very straightforward.

Once your systems are delivered, the vendor will assist in the installation/deployment, or you can do it yourself. A bit of advice; let the vendor do the first few deployments. Having them do it will allow you to observe and learn.

The installation includes racking and stacking, connecting the nodes to a 10GbE switch (for east-west traffic), assigning IP addresses, loading the hypervisor and testing, and

then turning it over to you for your use. This usually takes no more than an hour.

**That's it.**

## **THE EXPERIENCE**

Once you start loading applications and workloads onto the HCI appliance, you will see how easy it is to use. After a short time, you'll look for other applications that you can add onto the platform. Over time, you'll wonder why you run on any other platform than HCI.

Consider for a moment the workloads that you have moved into AWS or Microsoft Azure. What hardware do those workloads run on? You don't know. Well, I'll tell you.

It's probably white box servers, with HCI software on them. Storage is also white box, and it's connected together with white box networking equipment. The Public Cloud companies don't get any value from the brands that you're used to using, so they don't. They're all about scale and simplicity.

Using HCI in your data center gives you the same thing at a lower cost than using Public Cloud. Plus, everything sits behind your firewall, and you control it.

Overall, once you experience HCI, you'll wonder why you waited so long.

## **AN ADVERTISEMENT FOR ROUNDSTONE SOLUTIONS**

As you can tell, I tell it like it is. That's how I run Roundstone Solutions. We know you don't want to hear BS, so we don't give you any. We know the HCI market well, have deployed it numerous times, and have relationships with most of the HCI vendors.

**We lead with Nutanix, because we think they've got the best offering. We're happy to show you comparisons of all the vendors so you can be assured of objectivity.**

Remember, we don't have anything to lose by working with you on HCI. Neither do you. Call us at 925-217-1177 or email me directly at [tim@roundstonesolutions.com](mailto:tim@roundstonesolutions.com). We're located in San Francisco, and work with companies throughout Northern CA.

Feel free to reach out to me with your thoughts on this topic. I'm open to talking with anyone and everyone about this topic. Even if you disagree...

Thanks.