

Migrating from Microsoft DHCP – what are the options?

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Anna

Hello! As more network managers move their infrastructure to the cloud, they often find that it doesn't make sense to maintain full Microsoft server or environment and license cost just for DHCP. My name's Anna and I'm joined by two experts in DHCP John Grigg and Callum Key from ApplianSys. John, Callum hello!

Callum and John

Hello. Hi Anna.

Anna

So the big question today, **do I need on-site DHCP if my cloud provider offers a DHCP service?**

John

Yes. So a number of cloud providers do offer a DHCP service, but it's typically just for devices within the cloud network itself. I can give you an example of that. Microsoft Azure provides DHCP to virtual machines in customer V Nets, but the standard client server DHCP that we're all used to on-site is not supported, so you're still going to need a DHCP service for devices such as laptops and printers. Second reason for having an on-site DHCP is to help ensure that people can still access the local network for any IT services that remain on-site, especially if connectivity to the cloud is lost.

Anna

So what are the options for network managers who want an on-site DHCP server? Can you give me some pros and cons for each Callum?

Callum

Yeah, sure. Well, there's a number of different options that you have when it comes to providing DHCP services for the local network. And I'll just run through the main options now. So, the first one is maintaining your current Microsoft service solution for DHCP. Some of the things around that and some things that you want to think about is that there there's going to be a lot of features that you might not be using on a Windows Server that if you just want to keep it for DHCP when you move all your services to the cloud, it might be a bit overkill for just DHCP service.

As well something to think about is that the failover for DHCP, particularly around the active/active pool sharing, pool splitting - it isn't always straightforward, and that's what we've heard from some of our customers as well that migrated away from Microsoft DHCP. Can be expensive to upgrade as well to the latest versions, or whenever there's kind of an end of life cycle, which we've also heard from some of our customers. And if you want to do things properly, you're going to have to pay for all of these client access licenses.

And that really adds up to a high cost for a company. And then your next option is to think about and look at routers and firewalls for DHCP. So, some of the main benefits of using that for DHCP is that they're quick and easy to set up oftentimes, and that can depend on the vendor, but usually they're quite simple, but sometimes because of this, the drawback is that they're limited in what they can offer: maybe the DHCP service is restricted to the number of clients that you can have in your pools, maybe there isn't feature support for advanced options or failover or good reporting and visibility, so you're quite limited there. Now obviously, as I mentioned this, the feature set does vary between vendors and depending on what license you have with those, so you have to take that into consideration as well. But overall routers and firewalls can be good for very basic setups.

The third option then is to use something like a DIY DHCP server setup. Maybe on a Linux server using something like ISC DHCP, for example. A main benefit of using that for DHCP for the network is that you have a fuller feature set and more control over your DHCP service and clients. However, the cost here is not in money, but in the overhead and the knowledge and the team required to uphold and manage something like this. So you have to have knowledge to be able to configure it properly, make sure that you follow all of the documentation to make sure that it runs efficiently and then you've got to make sure that this knowledge is passed down for future network administrators, so that's the overhead there.

Anna

And John, I know that you've got past experience with this of BIND management with a previous company.

John

That's right Anna. We developed a solution for authoritative DNS in House. It was reliable and did what we needed but changes in the team and network over time made it more difficult to maintain as Callum has just highlighted.

Anna

So not as low cost an option as it seems. Callum, I think a final option is a dedicated DHCP appliance. What are the choices around that?

Callum

Yeah, absolutely. So, with dedicated DHCP appliances there are a few solutions out there from a couple of different vendors but usually the price here is actually monetary so they're usually very expensive. If you want to use something like this, however, a lot of the time they'll make up with an easy to use management interface and that's one of their strong points. I would say particularly with **DNSBOX**, our solution, is that we wanted to strive and really make this point our main focus. So we always had good feedback from our customers about how clean, simple and easy to use our DHCP interfaces is, and as I mentioned, our customer feedback really has been good around that. And then to try and enhance this even further and take a real big step and try and do this really well, for the last year we've even been renovating some of our DHCP interface and making it nice, new and shiny and really easy to use for our customers.

So they're the main reasons. And then finally, which isn't actually product related it's more about support related, having someone on the end of the phone if you ever need help with migrating over, setting things up or testing. Having someone on the end of the phone, like a support engineer, is really valuable.

Anna

And there can be quite a difference in the level of support you get.

Callum

OK, yes, absolutely. We do hear from some of our customers that certain vendors can be quite challenging to raise support cases or get help when you really need it. Now, our customers that have migrated from those systems or solutions and come to us, often praise us or give us good feedback on the level of support offered here at ApplianSys. When you contact support, either via e-mail for a ticket or via the phone, you get through to someone straight away. There's always someone there on the other side of the phone to help. Someone like me or John, for example, who has been doing this for quite a while now.

Anna

And from the feedback you get from customers I know that they appreciate speaking to you straight away when they pick up the phone. So just as a summary for DHCP servers, when it comes to dedicated solutions, you've got to be careful that you're not overpaying for something that's got more features than you need. It's got to be simple. If you're looking at failover compared to Microsoft, you probably want the solution that's got easy failover. And you want excellent support. **So John, if there's a network manager who's currently using Microsoft DHCP server and wants to move away: very quickly, are there any key things that they should also consider?**

John

Yes, well, the first thing is to check that all of your requirements are supported by the solution you're looking at. We heard Callum mention earlier that firewalls and routers tend to offer limited feature sets, so they may not give you all the functionality that you need. Secondly, does the solution provide the right level of support? If you use an in-house solution for example, you may have to rely on skills that you have within the team and those could change.

And third is about where the DHCP solutions should be located. If all of your services are at a data center or accessed from the cloud, then you could look to deploy the solutions centrally at that data center or a main site. But if you have a number of sites with local services, then you may want to deploy the DHCP solution at each of those sites to ensure that client access to those services is maintained even if there's an issue with any Internet or Wan links.

Anna

Right. **So Callum, in your experience dealing with customers who have migrated, what are their questions? What do they usually worry about?**

Callum

Well, it really depends customer to customer, but I'll give an outline of some of the most frequently asked questions that we get from our customers when they're migrating or when they're thinking about migrating and some of the things that they worry about actually going through that process. The first one really is, is it complicated to manage an appliance compared to what they're currently using?

You know we often hear that people don't want to change and so it can be scary to make that process. But as we've already outlined, especially with DHCP appliance, the aim is to really make that process of managing DHCP simpler and in the long term it's going to keep overhead costs down and it'll be simpler to use once you're used to it and that shouldn't take too long. And then secondly is how difficult is it to import our existing configuration?

We don't want to start from scratch creating all of our subnets and options and reservations manually. Is it possible for us to import this in to make the migration smooth and the answer is well, particularly with **DNSBOX** which is where I can speak from experience and we have tools built in to help customers who are migrating away from, for example Microsoft DHCP where they can export a file and then import that into **DNSBOXes**, so that just makes that much simpler.

And then the third thing is, is everything that I need in my existing or everything that I'm using in my existing network environment for DHCP supported? So, you really want to consider what current options you use, whether there's any advanced things that you do with your DHCP services and you want to make sure beforehand before you go ahead that these options are all covered but with **DNSBOX** particularly, we support a wide range of custom options that make that process of creating those really simple.

And then finally which is a really big one that we hear in almost every deployment is how can I reduce the downtime when I migrate to a new a system for DHCP? Now obviously DHCP is a really key part of the network services and one of the most crucial ones. So we want to try and reduce that as much as possible, any downtime that comes from that. The first thing really is to plan well for it, make sure that you know what you're going to do when it comes to the deployment and also make sure that you can schedule a window in to make these changes and then when it comes to actually deploying, you have two main options.

You can either do a steady slow and well tested approach, which is where you run **DNSBOX** in parallel with your existing DHCP solution. Add a couple of subnets at a time, test things, test all of your options. Test that clients can get DHCP services, and then you can smoothly and slowly migrate over time all of your subnets and then decommission your old solution. And then another approach, depending on the time frame that you have and how urgent this is, is to just configure the new **DNSBOX** with the same IP addresses and the same configuration that your existing solution is using, and then just bring the old one down and bring the new one up and allow **DNSBOX** just to take control from there. So they're really the things to consider and what you choose will really depend on the project timelines, how urgent it is, what the priority is in getting a new system deployed.

Anna

And I know that you and John can help anyone who could consider and migrate and you can help them choose what's right for them in their network.

Callum

Absolutely, absolutely.

Anna

Fabulous. **So, John, final question. What would you say to reassure a network engineer who's on the fence about moving?**

John

So at the end of the day, DHCP is a standards based protocol. It's been around a long time, so it's not cutting edge technology, but it is important that you have an easy to use, reliable and highly available solution that ticks all your boxes.

Anna

Really narrowed it down to the key points. My work here is done, so thank you, John, thank you, Callum, and thank you to everyone who joined us today! If you want to find out more about a dedicated DHCP server, click on the link below or head over to appliansys.com where you can find out more about our DHCP server and hit the contact button to ask John and Callum the question yourselves.