

Transcript

00:00:00 Joe

The #ShiftShow captains Log Episode 4 first contact.

00:00:06 Joe

In this episode, Dewayne and Joe discuss their three year mission to migrate and modernize file services for thousands of their users across dozens of offices and research centers.

00:00:17 Joe

As they boldly go to improve services, save money and increase performance, they'll pass through the Triple Star system of storage in the Microsoft Cloud.

00:00:27 Joe

This Starship is about to get an upgrade to get to your battle stations because we're going to red alert with the shift show.

00:00:50 Dewayne

Hey hey buddy you ready to go to the cloud?

00:00:54 Joe

I am I'm ready.

00:00:56 Joe

I am going to talk a little about shifting some files a little.

00:00:59 Dewayne

Yeah.

00:01:01 Joe

I think there's going to be a little bit of a who moved my cheese.

00:01:05 Joe

Episode basically.

00:01:07 Dewayne

We're moving all the cheese, yeah so.

00:01:10 Dewayne

All the cheese we have is getting moved.

00:01:14 Dewayne

I think we should probably start for our audience by kind of describing what we what we deal with, not what we deal with, I guess.

00:01:22 Dewayne

But what we're responsible for would probably be a better way of saying that.

00:01:27 Dewayne

Uh, I'll start with a little bit of it.

00:01:30 Dewayne

'cause this is, you know, Joe and I moonlight as systems administrators from time to time we act like we know what we're doing when it comes to systems management and servers and storage and backups and all those sysadmin type things.

00:01:44 Dewayne

So occasionally we have to remind ourselves that that's what we do.

00:01:48 Dewayne

And it's not just modern workplace.

00:01:50 Dewayne

Stuff so you know.

00:01:51 Joe

Sometimes we have to go back into the cubicle.

00:01:54 Dewayne

Yes yeah yeah, the cubicle.

00:01:56 Dewayne

Cool.

00:01:59 Dewayne

Well, not anymore though.

00:02:00 Dewayne

You know the the.

00:02:02 Dewayne

I guess the fictitious cubicle, the.

00:02:04 Dewayne

Exactly, yeah, so I I enjoy working from home.

00:02:08 Dewayne

I feel far more productive, but that's a discussion for another day.

00:02:13 Dewayne

So, so we have a I would say we're considered. Are we considered large? Maybe 5000 computers in our area that we're responsible for?

00:02:25 Dewayne

A few more users than that 'cause we have people that come and go.

00:02:30 Dewayne

Some people external to us and stuff like that.

00:02:33 Dewayne

But we you know Joe and I work in Florida, and our responsibilities include about 70 remote offices that cover pretty much every part of Florida.

00:02:45 Dewayne

And we we divide those into. We could divide those into two different categories. So we have the small offices where we've got a dozen people and then we have the not as small offices where we've got 20 or 25 people. And then we have some that are kind of large where we might have 200 people or 300 people.

00:03:03 Dewayne

So I know that was three categories when I said it would be 2, but you get the idea.

00:03:07 Dewayne

We have small offices and not as small offices.

00:03:10 Dewayne

That that we're responsible for.

00:03:12 Dewayne

So we you know we're managing servers and all of these places and Joe and I are going to talk about well, what's our next play?

00:03:20 Dewayne

How are we going to do this better?

00:03:22 Dewayne

How are we?

00:03:22 Dewayne

Going to move forward though.

00:03:25 Joe

Well, we've just been a plan for what about about three years of us putting this on paper?

00:03:32 Joe

Three years almost to the day of presenting at Microsoft edge days down here in Florida.

00:03:39 Joe

But we came up with kind of an idea of really our first time of how we can improve our users.

00:03:47 Joe

Experience in these office.

00:03:48 Joe

Says

00:03:49 Joe

Around our access to Office 365 that we have where we work and the advent of teams and OneDrive.

00:04:01 Joe

And helping these remote workers.

00:04:06 Joe

Do their job better, easier, simpler.

00:04:08 Joe

A lot of our users are not just in a remote office, but they work remotely into these counties and coming up with a solution.

00:04:17 Joe

While we were also coming around on a hardware refresh, seeing if you know what, what could we do now?

00:04:23 Joe

It's been five years of standard, actually longer.

00:04:27 Joe

Of course, I've just standard file servers.

00:04:31 Joe

What can we?

00:04:31 Joe

What can we do and how could we do that better?

00:04:34 Dewayne

So one of the philosophies that we follow.

00:04:36 Dewayne

So that we try to adhere to is the three to one rule, and for those who may not be familiar with that, that means that it's kind of for data protection.

00:04:47 Dewayne

You know, backup rule.

00:04:48 Dewayne

I guess you could call it.

00:04:50 Dewayne

We try to maintain 3 copies of all the data on two separate systems.

00:04:58 Dewayne

One of those copies needs to be offsite from wherever the file server is.

00:05:04 Dewayne

So that's what we're doing now and you know, as Joe mentioned, you know we're looking at one drive and teams and Office 365 and all this new stuff. And so we thought to ourselves three years ago. How do we? How do we do this better? How do we give our people more access to their stuff? How do we make it more?

00:05:25 Dewayne

Resilient, and most importantly for us, how do you make it cheaper?

00:05:29 Dewayne

So while we're in the midst of this hardware refresh where we you know like your desktop workstation, you should replace your servers every five or six years.

00:05:39 Dewayne

You know we're at that point, so it's time to buy new stuff.

00:05:41 Dewayne

Well, now we have these new capabilities.

00:05:44 Dewayne

How do we make sure that we make a fiscally responsible purchase for hardware while also leveraging some of these new things and so?

00:05:53 Dewayne

Joe, we're. I guess we should go ahead and admit, you know, we work in education. I think we said that before, but that gives us some different things when it comes to Office 365 from your standard enterprise business. So what do we get?

00:06:10 Dewayne

In the cloud, that's a little bit different like we get.

00:06:13 Dewayne

Some.

00:06:14 Dewayne

Benefit from this, right?

00:06:16 Joe

Yeah, definitely one. We get the basic setup of Office 365 for free, so we're getting the equivalent of an enterprise one, an academic one, so that's the base level.

00:06:32 Joe

And when you have.

00:06:32 Joe

When you.

00:06:34 Joe

Hundreds of thousands of basic accounts available to you that adds up quickly as far as the total amount of storage.

00:06:41 Joe

I think we have, like petabytes of storage available to us, and it's a free service to higher education.

00:06:49 Joe

K through 12.

00:06:51 Joe

Available to anyone who wants to take advantage of that and.

00:06:54 Joe

Significant cost savings certainly is what we've been able to, you know.

00:06:58 Joe

Look at that as a possibility, specially when.

00:07:02 Joe

Every year every one of our users can start off with five terabytes in their OneDrive.

00:07:08 Joe

In teams, every one of our teams can start off at 25 terabytes of storage in there.

00:07:15 Joe

And that's a lot of lot of data for for us when we've got mostly small offices in these areas aren't producing a ton of a ton of data.

00:07:27 Joe

Could we take advantage of that?

00:07:28 Joe

And also at the same time improve access to content and collaboration for our users?

00:07:36 Dewayne

You know that's a really good point talking about improving access because you know. Well, first of all, let me back up for a minute. So 5 terabytes per human, that's ridiculous, like that is. And from my understanding, that's like a soft ceiling like you could give a user 25 terabytes and their OneDrive if they really needed it.

00:08:00 Dewayne

You know, for those of you out there, you know you might call these things different names, home folders, personal folders, user drives, whatever.

00:08:07 Dewayne

You have a network share sitting on a server somewhere, it's got a drive letter associated with it, and it only belongs to that person, and it's sitting on your server, right?

00:08:17 Dewayne

And so going back to the three to one rule.

00:08:20 Dewayne

Let's say we give our user one terabyte of storage per user at an office, and we've got 10 users, you know?

00:08:26 Dewayne

So we've got 10 terabytes of storage.

00:08:27 Dewayne

Potentially that could be used.

00:08:29 Dewayne

We need to duplicate that three times.

00:08:32 Dewayne

An not only that, we actually need to. The backup systems need to be larger than 10 terabytes because they need to be able to assume 100% of the data being used. Plus any of the churn that's associated with it.

00:08:46 Dewayne

So you know you've got. Let's say you go 50% overhead. You've got a 15 terabyte backup target, plus another 15 terabyte backup target that needs to be offsite.

00:08:58 Dewayne

So I know I'm getting into the nerd weeds here with this, but I'm just trying to emphasize like that's a lot of storage that we have to manage and keep on some system somewhere in our network and so 5 terabytes.

00:09:14 Dewayne

In the cloud per person, with the potential to go to 25 terabytes plus the team and it costs us nothing. It would be stupid not to use this like absolutely. So that's a big part of our direction. Like I just, you know, can you?

00:09:29 Dewayne

Elaborate a little bit.

00:09:31 Dewayne

You know.

00:09:31 Dewayne

I know that there's some documents will probably drop in the show notes, but Microsoft has produced some things that show you like where does your data live?

00:09:41 Dewayne

You know what data centers whole house teams, data and OneDrive data?

00:09:46 Dewayne

And what about the resiliency of it?

00:09:47 Dewayne

You know there's kind of operating under.

00:09:51 Dewayne

You know there's LRS ZRS and stuff like that, so we have a slide that we have in our presentation that talks about that you want to fill us in a little bit on how safe this stuff.

00:10:00 Dewayne

Says

00:10:01 Joe

That well again, kind of going along with our R32 one rule when you go to cloud and you're going to use platform as a service like that you you are giving that company some responsibility to manage that for you and they you know they're taking that on. They're doing that for us and there we like to say.

00:10:23 Joe

They are providing some some backup services and some replication services, specially that are beyond anything we could afford or build order.

00:10:32 Joe

Sign when we push our data up into one drive, it's going to end up on basically both coasts.

00:10:41 Joe

It's going to go up it probably up into Virginia for us.

00:10:43 Joe

And then there's going to be a Geo replication over to the West Coast.

00:10:49 Joe

For us, being here in Florida, and that's not something that we can we can afford or or handle that kind of process or that amount of storage and cost around that so.

00:11:02 Joe

That's that's a significant you know, factor for comfort.

00:11:06 Joe

Level two of explaining and describing this to people to let them know that as far as you losing your data from the Corporation, we're pretty safe from that.

00:11:21 Joe

That's a that's a great benefit that that our some of our our researchers like to see two when they have to worry about where their where their data is at.

00:11:28 Joe

That goes up and up into the.

00:11:30 Joe

Out.

00:11:31 Dewayne

Yeah, we always.

00:11:32 Dewayne

We always crack a joke at our training where we say that if a meteorite hits the East Coast of the United States, your data will be safe on the West Coast, but we won't be.

00:11:40 Joe

You may not care.

00:11:40 Dewayne

Around to care about it so.

00:11:43 Dewayne

You know, I don't know where this page went, but I'm going to read a quote that I swear came from a Microsoft site. I think it was the AKA dot Ms Slash where's my data page? But it says Office 365 provides NGO data, residency, business continuity and disaster recovery.

00:12:04 Dewayne

For core customer data.

00:12:06 Dewayne

To maintain reliability and high availability, we replicate your customer data an at least two geographically distributed data center locations and then again, like Joe mentioned earlier, it looks as of you know, let's see it's February 2021 EUS and West US is where teams.

00:12:28 Dewayne

Data goes, so yeah, you get Geo replicated data on both sides of the continental US. That's and if you're in education, that's free.

00:12:39 Dewayne

That's read that again, you'd be dumb not to look at this like you have to look at this.

00:12:43 Dewayne

It's basically.

00:12:45 Dewayne

Irresponsible not to look at this like I know.

00:12:47 Dewayne

That seems pretty extreme.

00:12:49 Dewayne

To say that that, but I just feel like you need to look at this so.

00:12:56 Dewayne

Especially in our case.

00:12:57 Joe

Yeah.

00:12:57 Joe

Yeah, I think we always we always come back to what of our users asking us and how can we help them based upon the things that we know that they need to do and and how they how they work and uh.

00:13:08 Joe

Great.

00:13:09 Joe

If this wasn't also a solution that.

00:13:12 Joe

Provides them greater benefit and the user experience changes very little.

00:13:19 Joe

You know it would be a harder sell, but basically instead of going to a mapped drive on their local hard drive, they're going to a slightly different location on their hard drive.

00:13:28 Joe

To get to this data.

00:13:30 Joe

And it synced locally often.

00:13:33 Joe

Now it's actually faster access instead of accessing it off a off a network share, even in in some of our smaller offices and things like that so.

00:13:43 Joe

Enabling the end user again is usually what you know what's driving us and if we can help them and also help us and dump things less complex and provide some better safety Nets.

00:13:55 Joe

That's a great win for both of us.

00:13:57 Dewayne

Oh yeah, definitely a win win for everyone.

00:13:57

Oh yeah.

00:14:01 Dewayne

One of the things that you just said that I want to talk about is you said, you know.

00:14:07 Dewayne

Access getting to this stuff and we've talked about this before on our podcast, and I think another podcast, but I want to.

00:14:14 Dewayne

I want to touch on this again.

00:14:16 Joe

And.

00:14:17 Dewayne

We we were.

00:14:18 Dewayne

Already underway, as you said earlier, this has been a three year plan for us.

00:14:22 Dewayne

We've been on a 3 year mission so to speak, and we're trying to we're trying to get this stuff there and so there is a lot of work involved in this.

00:14:30 Dewayne

Like if you've got, you know, depending on how big your.

00:14:33 Dewayne

You know environment is you've got terabytes and terabytes and terabytes of data.

00:14:37 Dewayne

You've got to move it to the cloud.

00:14:39 Dewayne

And so we're we're big, big on that.

00:14:42 Dewayne

And we've been working **** ** that.

00:14:44 Dewayne

And we've been using some of the tools first party tools like Microsoft has the SharePoint Migration.

00:14:49 Dewayne

Tools there's some third party tools out there, like the avepoint fly migration tool.

00:14:55 Dewayne

The Sharegate has a tool so there's options out there for you if you're trying to do this, but we got kind of lucky because we spent a lot of time scripting and working and automating the SharePoint Migration tool.

00:15:10 Dewayne

Before covid

00:15:12 Dewayne

But

00:15:13 Dewayne

And so we were already underway and moving these files and then when Covid hit.

00:15:18 Dewayne

And all of our people all of a sudden we're scattered all over the place.

00:15:22 Dewayne

They're not in the office, they're not able to, you know, they can connect to that server over VPN, maybe.

00:15:28 Dewayne

You know the ease of access to this stuff is one of the biggest sells to our users is hey, if you're working with a customer, you can just pull your phone out of your pocket.

00:15:39 Dewayne

You can pull up that file and you can show it to him.

00:15:42 Dewayne

You know you can't do that with a shared drive.

00:15:44 Dewayne

It's not possible.

00:15:46 Dewayne

So that's been a big that's been a big help that's actually made our people more effective, more efficient, which I think is a big big point to point out.

00:15:56 Dewayne

It's hard, too hard to put a dollar sign on that, you know, but it's been big deal.

00:16:04 Joe

You know, we did start with what we thought was going to be the easiest move, which is, which is one drive 'cause people are maybe familiar with that process.

00:16:13 Joe

Personally with other cloud tools and services, maybe consumer level OneDrive or Google Drive and things like that.

00:16:21 Joe

So that was going to be an easier change for them.

00:16:25 Joe

And while we were kind of doing that work, we also.

00:16:28 Joe

Had to go around and train folks on on the next layer which was getting content that is shared among groups of people and getting that into teams is where that solution was heading.

00:16:42 Joe

So while we're we drove around the state, did a lot of training.

00:16:47 Joe

Presented them with these solutions.

00:16:49 Joe

Got by in and then we're able to kind of go back to the office and do these migrations.

00:16:56 Joe

I think it would be helpful to kind of talk about little bit, a trick you've come up with on how to how to take advantage of a high high bandwidth pipe to get some of this data out from your branch offices.

00:17:08 Dewayne

So that that three to one rule that we talked about earlier are the number one was having. One of your copies offsite. So for us we back up all of these remote offices using Microsoft's data Protection Manager, Prod.

00:17:24 Dewayne

But she won't review during this podcast, and it's good.

00:17:31 Dewayne

It gets the job done, that's for sure.

00:17:34 Dewayne

We are fortunate enough to have a copy of all the data that's on every single one of these remote site servers in our main our main building.

00:17:46 Dewayne

An our main building has a very fast Internet connection, so whereas this you know remote office may have DSL or cable or in some cases wireless in a lot of cases actually LTE connected offices, you know we don't want to try to upload every single person who works there.

00:18:06 Dewayne

We don't want to upload all their data in bulk at one time using their office Internet connections.

00:18:11 Dewayne

So yeah, we've been able to leverage the, you know, don't call it on Prem 'cause it's all on Prem, but our local copy of their backup data we can take that and move that to the cloud.

00:18:24 Dewayne

Then run a final.

00:18:26 Dewayne

You know sync between anything that may have changed and then cut them over to one drive.

00:18:32 Dewayne

And like you said earlier, you know when you're if you're on a Windows PC and you go to, you know my computer or this computer or whatever it's called now you may see a drive letter called.

00:18:44 Dewayne

H or U or in or whatever it is that you have it labeled as and so it's a matter of telling people instead of clicking there.

00:18:53 Dewayne

Click where it says one drive. It's 4 1/2 inches up from where where your drive letter was. So we're not asking a lot and so.

00:19:04 Dewayne

It looks the same once you click it, the contents are the same.

00:19:08 Dewayne

Uh, but we had to do some work to get that populated, though you know we we ran into some issues, mostly issues.

00:19:16 Dewayne

Some technical technicalities around migrating data to a OneDrive that maybe the user had never logged in before, so you want to tell us about, you know, remind me what did we do to fix that? 'cause we still were on Prem Active Directory group policy? All those things are still in play. We're not like 100% cloud.

00:19:38 Dewayne

You know Intune and all that good stuff.

00:19:40 Dewayne

So what did we do to fix that?

00:19:42 Joe

Well, there was some policies brought out that enabled us to.

00:19:47 Joe

Basically do an auto login to one drive for users behind the background when they sign on login first time.

00:19:58 Joe

Were able to turn on basically one drive for them.

00:20:01 Joe

Auto Logemann signum in.

00:20:04 Joe

They don't have to go through that onboarding process.

00:20:07 Joe

We basically are able to on board them and that lights up there.

00:20:10 Joe

One drive for them.

00:20:13 Joe

We did a little scripting around confirming before we went into an office to make sure that everybody had a OneDrive. We're not global admins, we have to. We have to do some other methods around that. And basically you can try to hit the URL of everyones OneDrive and see if you get a 404 or you get.

00:20:33 Joe

You know login request.

00:20:36 Joe

Make sure that people have stood that up before you go in and try to basically migrate.

00:20:41 Joe

You know one of your offices like on the weekend kind of thing.

00:20:44 Joe

Get that, get that in play.

00:20:45 Dewayne

That might be something that would be helpful to folks who are listening is to know that just because you license somebody for OneDrive, you know or as having OneDrive doesn't mean that it's actually been provisioned in the cloud in order for it to be provisioned, the user actually has to sign into one drive or attempt to access it via the web.

00:21:07 Dewayne

And so since this was kind of a new thing to our users, we were running into a situation where lots of people hadn't done.

00:21:12 Dewayne

Yeah.

00:21:13 Dewayne

And I'm not going to wait on, you know, I've got an office with 50 people at it.

00:21:18 Dewayne

I need all 50 of you to go to this website and log in now.

00:21:22 Dewayne

We did through group policy and having you know that that brings up a management capability that we don't have with any other platform is I can ensure that.

00:21:34 Dewayne

If you go from one office to another and log into a completely different computer.

00:21:40 Dewayne

When you log in, it's going to automatically connect you to your OneDrive, and you're going to see your stuff.

00:21:45 Dewayne

And that's a great benefit to have from a management perspective as well as a user experience perspective.

00:21:52 Dewayne

You know we want to make it easier for them.

00:21:53 Dewayne

They shouldn't have to think about it.

00:21:55 Dewayne

They should just log in and their stuff should be there just like it would have been if it was a mapped drive.

00:22:00 Dewayne

So those policies are great.

00:22:02 Joe

And it's for our area.

00:22:04 Joe

If they move around or hot desk or things like that, especially a little more prevalent now with.

00:22:11 Joe

Move it.

00:22:13 Joe

That's automatically be, you know, being provisioned every time they sign on a computer.

00:22:17 Joe

If they haven't, if it's one of our managed systems.

00:22:20 Joe

And if your if your global admin, you can there's a way to kind of bulk queue the provisioning of a bunch of you know accounts into one drive.

00:22:29 Joe

So if you do have that ability or it can work with the team to do that, you can.

00:22:33 Joe

You can push up or request basically to enable and provision those one drives in bulk.

00:22:41 Dewayne

We'll talk about the SharePoint Migration tool a little bit, and if you're listening if you go to AKA dot Ms Slash SPMT that will take you to the home page for the SharePoint Migration Tool an they have done some great work.

00:22:58 Dewayne

Like Joe said, we've been using this tool for.

00:23:01 Dewayne

Bout three years now and we've gotten to see it grow and change and improve over the years.

00:23:07 Dewayne

And it's actually gotten to the point where it's easy enough to use that we've actually had end users run it on their workstation.

00:23:15 Dewayne

And just to move some stuff.

00:23:18 Dewayne

You know you can run this tool. It prompts you to log into office.com or into the Microsoft Cloud, and you can say I want to take this folder and I want to move it to this team into this channel. You know it's all. It can be GUI based like you can just say here. You know I want to hand this to an end user and have them.

00:23:41 Dewayne

Move all their stuff, you know, direct them to this link.

00:23:44 Dewayne

Give him some you know, quick play by play instructions, and they're off to the races and ready to.

00:23:48 Dewayne

Yeah, but it also supports.

00:23:51 Dewayne

There's a PowerShell module included with it, you know you can bulk move stuff with a CSV file, so we've done some work around that.

00:23:59 Dewayne

It has some new stuff that's coming out that we're really excited about, so I can't wait for large file support.

00:24:08 Dewayne

Just got announced yesterday.

00:24:10 Dewayne

Or yesterday, Joe.

00:24:11 Dewayne

February 10th so.

00:24:14 Dewayne

We have some interesting things we've run into with large files in large file names, so yeah.

00:24:23 Joe

Some of those you might have to do a little manual work around.

00:24:26 Joe

With the long, long path and long filenames.

00:24:32 Joe

But there's a few, yeah.

00:24:32 Dewayne

Oh my gosh, some of the following as we've seen.

00:24:37 Joe

It's like if you don't actually save a save your word file with choosing a filename.

00:24:44 Joe

It's going to baby, like take the first paragraph.

00:24:46 Joe

Sometimes it looks like for us so.

00:24:50 Joe

Yeah.

00:24:50 Dewayne

Yeah, for those listening, there's a 400 character limit to the entire URL, so once you add your tenant you know share point online or whatever, all that stuff, the team name every time you put a space in the file name or the folder name, it adds a. What is the job percent 20 I think is the.

00:25:13 Dewayne

The code for that, you know all that stuff as it adds up. If it exceeds 400 characters, can't do.

00:25:20 Dewayne

You know an you think that that's yeah OK, sure, yeah, we've run into that a lot.

00:25:26 Joe

So 'cause I? I guess we we went ahead and also kind of enabled long file path support on our servers and things like that to help get past the typical 256 path. So give a little and we take take a little bit back.

00:25:27 Joe

Has some great qualities.

00:25:42 Joe

So.

00:25:43 Dewayne

Yeah, yeah, Luckily the SharePoint Migration tool doesn't doesn't really care about long file paths on the local server. But yeah, if you exceed that 400 in the cloud, you're going to have problems. So one of the things that you can do with the SharePoint Migration tool is you can run it in scan only mode and I would definitely suggest this. You don't ever want to, just.

00:26:04 Dewayne

Blindly run into a migration and migrate everybody.

00:26:07 Dewayne

You need to scan.

00:26:08 Dewayne

You need to see what you're dealing.

00:26:09 Dewayne

With you know, find potential problems, reach out to those users and say hey you need to rename this or you know up until recently it was hey your files you know you got 18 gig video of dancing with the stars like you need to take that out so but but now.

00:26:30 Dewayne

You know will migrate it, why not so with 100 gig crawl support that just got announced and I I need to stress this part 'cause somebody told me I needed to it preview that's that's the preview build of the SharePoint Migration tool supports up to 100 gig files which.

00:26:48 Joe

Eventually it's going to have to go higher, yeah?

00:26:49 Joe

I'm a little.

00:26:51 Dewayne

Yeah, I'm a little unclear because the way the way I think I understood it was there's not really, you know, once the API was changed.

00:27:00 Dewayne

It wasn't 100 gig, it was any gig because Microsoft just announced that one drive is going to support 250 gig files for individ.

00:27:08 Dewayne

Files so we do have.

00:27:11 Dewayne

We do have situations we run into that you know.

00:27:13 Dewayne

We we categorize our offices into a few different.

00:27:16 Dewayne

You know.

00:27:16 Dewayne

We had small offices and not so small.

00:27:17 Dewayne

Offices are not so small offices.

00:27:20 Dewayne

We have folks that are stitching together, you know, tons and tons of satellite imagery and doing all kinds of crazy stuff with drones and things like that.

00:27:28 Dewayne

And you know?

00:27:28 Dewayne

They got datasets where there I don't even know. I don't even know they're doing stuff and it turns into a 45 gig file. You know, it's not unthinkable to think that it could be 110 gig file, but really excited to try this. Really happy to see this.

00:27:47 Dewayne

Getting a large file into teams or OneDrive before it was was painful.

00:27:52 Dewayne

It was basically you gotta sync it with the sync agent and hope that it doesn't crash.

00:27:59 Joe

Well, one thing you will have to get good at is if you do a number of these is reading the log files.

00:28:04 Joe

They are a little bit of a struggle.

00:28:08 Dewayne

Yeah, you basically get a CSV that it spits out.

00:28:14 Dewayne

So let's say you do that scan.

00:28:16 Dewayne

You're going to go through that CSV, and you're going to have to unpack it and filter it and get good with Excel and those types of things.

00:28:24 Dewayne

We are one of our long term goals is to plug this into power BI or something like that so that we could.

00:28:31 Dewayne

We could feed it to a power BI dashboard and get a report that does most of the work for us.

00:28:37 Dewayne

Uh.

00:28:38 Dewayne

Haven't got there yet because like any sysadmin.

00:28:42 Dewayne

I just don't have the time so one.

00:28:45 Dewayne

Of these days, you do that.

00:28:46 Joe

We've learned we've learned to read him pretty quickly and look at look at what what errors are are ones that we can ignore, and ones we need to go.

00:28:54 Joe

We need to.

00:28:54 Dewayne

Go fix yeah yeah, some of them are OK.

00:28:58 Dewayne

'cause you know you've got a illegal character in the name so.

00:29:04 Dewayne

A few versions back in SharePoint Migration tool, they automatically can correct that.

00:29:08 Dewayne

So if you're if the file name starts with a period or starts with an empty space, you can replace it with an underscore.

00:29:16 Dewayne

You know an is that going to break the users experience.

00:29:20 Dewayne

Probably not.

00:29:21 Dewayne

You know you moved all their cheese anyway.

00:29:24 Dewayne

If you add an underscore to the front of the name, Big Deal.

00:29:28 Dewayne

So yeah, those types of things you can ignore.

00:29:31 Dewayne

But basically looking for long file paths, long filenames.

00:29:37 Dewayne

Large files, which again in the preview version that shouldn't be a problem anymore, but yeah you need to get comfortable with those CSV's and figure out how to read those so.

00:29:47 Joe

So you brought up.

00:29:50 Joe

The third level of kind of environment we have.

00:29:53 Joe

Branch offices really big are kind of research Y kind of areas and they do have these large files and they don't really work as far as a file size.

00:30:07 Joe

In the one drive in teams and things like that, for while we were beginning this process.

00:30:13 Joe

But they also work differently.

00:30:14 Joe

They're doing a lot of local.

00:30:17 Joe

Data manipulation and they need to.

00:30:20 Joe

They might have an application that streams a bunch of data off of who knows they might be.

00:30:28 Joe

A microscope or streaming stuff off of a drone and they they have to have different storage capacity.

00:30:36 Joe

And a different workflow than something that probably is supported in like OneDrive or or teams or something that goes straight to the cloud.

00:30:48 Joe

So let's there's this kind of 3rd world that we've got to deal with, and that's something that we've started to work on.

00:30:55 Joe

You want to talk a little bit about how we're going to how we're handling those where we we still need in some other locations.

00:31:01 Joe

A traditional file server.

00:31:04 Joe

But is there something we can do?

00:31:04 Dewayne

Oh yeah, yeah.

00:31:05 Joe

Is there something we can do better around support of those environments?

00:31:13 Dewayne

I mean, we're all about.

00:31:15 Dewayne

The shift you know.

00:31:16 Dewayne

I mean obviously shift show.

00:31:21 Dewayne

But to think that we could totally eradicate file servers I think is not feasible.

00:31:27 Dewayne

Uh, so we came up with a plan.

00:31:30 Dewayne

I'm a little bit of a redneck I grew up in the Ocala National Forest and so I deemed it the Storage Frog Gig.

00:31:39 Dewayne

You know, if we were more sophisticated, we would call it the storage Trident, but we're not there yet, so you know, we've got one drive.

00:31:45 Joe

I can't remember which which one did we use at edgy days, I think.

00:31:48 Joe

We went with broad gauge there.

00:31:48 Dewayne

It was like Frog gig, yeah?

00:31:52 Dewayne

Yeah, the storage frog gig.

00:31:53 Dewayne

For those of you who don't know.

00:31:56 Dewayne

Google it or Bing it.

00:32:00 Dewayne

So you know a Trident of three pronged spear kind of thing.

00:32:06 Dewayne

Your three pronged approach.

00:32:07 Dewayne

How are we going to handle all the various scenarios that we find our data in an we love one drive in teams and it's great but we have to.

00:32:15 Dewayne

We have to understand and admit.

00:32:17 Dewayne

Like Joe saying that some of those, some of those types of.

00:32:20 Dewayne

Files or datasets?

00:32:21 Dewayne

They don't.

00:32:22 Dewayne

They don't work the best if they're in teams or OneDrive.

00:32:25 Dewayne

You know, maybe it's.

00:32:27 Dewayne

You know one drive has files on demand, so it's only going to sync what you access.

00:32:31 Dewayne

But what if the files huge?

00:32:34 Dewayne

What if the file is being accessed by a specific application that needs to always look at a uniform path and multiple people are working with it?

00:32:43 Dewayne

You know, there's all kinds of various scenarios that we can find ourselves in so.

00:32:47 Dewayne

We realize, like.

00:32:48 Dewayne

Yeah.

00:32:49 Dewayne

Yeah, we're going to run file servers.

00:32:51 Dewayne

There's no way around it.

00:32:53 Dewayne

We have to continue to offer that service and it will.

00:32:58 Dewayne

I would like to think we're pretty good at it.

00:33:00 Dewayne

We've been doing it successfully for quite a while, and you know, we use Windows file servers.

00:33:06 Dewayne

We leverage their deduplication technology.

00:33:09 Dewayne

You know we get a lot of space.

00:33:11 Dewayne

We get a lot of bang for our Buck out of these servers that we've deployed.

00:33:15 Dewayne

So what do we do?

00:33:16 Dewayne

Next, to make it better and how do we?

00:33:20 Dewayne

How do we think forward instead of keep?

00:33:23 Dewayne

We don't want to keep on doing the same thing.

00:33:25 Dewayne

You know we have to move forward.

00:33:27 Dewayne

We're in it.

00:33:28 Dewayne

If we're not moving forward, I think we're failing, you know?

00:33:31 Dewayne

So we have to think about what's the next big thing it needs to be better.

00:33:36 Dewayne

One of the things that comes up you know, you know you and I were talking about this earlier.

00:33:41 Dewayne

Was these triangles that people come up with.

00:33:43 Dewayne

You know, we had a few that were out there.

00:33:46 Dewayne

There was the somebody said to me.

00:33:48 Dewayne

A consultant said to me once you know, cost, performance and reliability, pick two.

00:33:50 Dewayne

You know?

00:33:54 Dewayne

Implying that I could only get two of the three, otherwise it was going to cost me \$1,000,000. You know? Or 10s of \$1,000,000, whatever. Whatever your budget is, I think we can do it.

00:34:05 Dewayne

I think I think we can break that myth or bust that myth.

00:34:09 Dewayne

I think that we can have lower or equal cost, much more performant and much higher reliability.

00:34:18 Dewayne

So what are we looking at doing?

00:34:20 Dewayne

You know we kind of got like.

00:34:22 Dewayne

OneDrive server kind of thing.

00:34:24 Dewayne

What is this thing that we're thinking about?

00:34:26 Joe

Doing it's basically one drive, one drive for OneDrive for a server, so we're the third prong, one drive teams, and the third process is technology called Azure Files.

00:34:41 Joe

OK.

00:34:42 Joe

And it is.

00:34:43 Joe

It is basically a way to think of a Google Drive one drive technology.

00:34:51 Joe

Even Dropbox of course now is got that files on demand capability that tiering capability.

00:34:58 Joe

And this operates at basically a server level file server level a share level on a low.

00:35:05 Joe

Or locally connected file server.

00:35:10 Joe

So the researchers the end users.

00:35:14 Joe

They will continue to have a mapped drive to this file server.

00:35:18 Joe

They don't really know that this processes is happening in the back end, but on the server those files are synchronized into the Azure cloud service up there called Azure file.

00:35:32 Joe

And the piece that runs on on our servers.

00:35:35 Joe

The Azure file sync agent and that is.

00:35:40 Joe

Copying that data up there, synchronizing that data where we can then can capture it for backups and snapshots, and do recoveries.

00:35:49 Joe

That's our backup and ER environment up there.

00:35:53 Joe

It also has the ability for us to expand our storage.

00:35:59 Joe

I mean, I think we're probably seeing.

00:36:02

Yeah.

00:36:02 Joe

Two percent, 5% of total storage. That's probably been accessed in the last, you know 30 to 60 days, but we've got terabytes of sitting there that's just resting.

00:36:13 Joe

We're able to, you know, give someone 5 terabytes and it could look like 10 through this ability to tear some of that data off.

00:36:21 Joe

And we talk about.

00:36:22 Joe

Tearing, you know basically what's happening is just like in you're used to in one drive, as those files get tiered to the cloud and they become basically just pointers and aren't taking up any hard drive space anymore.

00:36:34 Joe

And if the user needs to access them, they are instantly recalled, just like one drive.

00:36:40 Joe

So we're able to potentially invest in.

00:36:47 Joe

The amount of storage we give them not have to overprovision thinking about the future.

00:36:54 Joe

We how much live data do they have and give them some headroom on that.

00:36:59 Joe

We're able to be able to do that and reduce some costs around that.

00:37:04 Joe

We've got a significant cost reduction across the board.

00:37:10 Joe

All of these other sites were able to move to one drive and to teams those used to have full rack mounted servers.

00:37:17 Joe

Local Synology boxes for backup.

00:37:23 Joe

Storage back up on Premisys lot of those sites are able to significant cost reduction in the type of hardware we bring them.

00:37:35 Dewayne

Oh yeah, yeah we were spending yes thousands of dollars per site.

00:37:35 Joe

Thousands of dollars and less.

00:37:39 Joe

Yeah, and simplified, those are now simplified for us too.

00:37:44 Joe

We can even do a quicker.

00:37:46 Joe

Quicker restore what we've got now is basically we can ship something out if we really wanted to with a rebuilt server and get something to our remote sites in the event they're down, so it's faster. Dr For us in these other sites and we're able to capture that.

00:38:04 Joe

That software, or that that hardware savings and move it into.

00:38:10 Joe

Actually better performance hardware for our larger research centers.

00:38:16 Joe

And capital, you know that capital expense and the other goes into the cloud, and to operating expense.

00:38:25 Joe

So we think we're going to come out even or better, but on top of it we have some better disaster scenarios living in a hurricane state is helpful and better performance on these new servers looks like we're going to be able to provide.

00:38:45 Joe

Even going esds everywhere and that's important for some of these large datasets and the work that our researchers are doing in some of these.

00:38:53 Dewayne

Right, absolutely you know right now.

00:38:57 Dewayne

Obviously our server fleet is 6 years old and overdue for a refresh.

00:39:03 Dewayne

But to be able to tell a researcher you know, hey, we got a server, it's on 10 gig and it's all flash and you can do whatever you need, you know is a big benefit and.

00:39:13 Dewayne

One of the things that you said that I want to highlight real quick is you're talking about how much of that data is actively being accessed, and so if that data is at rest.

00:39:25 Dewayne

And it's not, you know somebody hasn't touched that file for six months.

00:39:25 Dewayne

And it's not.

00:39:30 Dewayne

You know why?

00:39:32 Dewayne

Why should my on Prem local file server?

00:39:34 Dewayne

Why should I be paying the extra amount to store that on a pool of drives that are all flash?

00:39:41 Dewayne

It just doesn't make sense.

00:39:42 Dewayne

Doesn't make sense, and so one of the things that Azure File Sync allows us to do is we can tier inactive data.

00:39:50 Dewayne

You know Azure File Sync has this concept of the hot store in it, where it's hot mapping your data and figuring out, well, OK.

00:39:57 Dewayne

What are people using and if they haven't touched it?

00:40:00 Dewayne

You know, based on a policy that you define, it could be an age policy or a volume policy, where you say I always need 20% of this disk available.

00:40:11 Dewayne

You could have an on Prem 10 terabyte All Flash server. It's only housing the most active data that people are using. Everything else gets tiered to 100 terabyte Azure file share.

00:40:25 Dewayne

And if somebody ever needs one of those files again they double click it and just like one drive, it's going to recall it might take a second, depending on the Internet connection, but it will come back down and they can access it just like they normally would, and this this process is completely transparent to the end user.

00:40:40 Dewayne

They have no idea.

00:40:42 Dewayne

And so again, this is one of those things we go back to that triangle.

00:40:46 Dewayne

You know, you tell me cost, performance and reliability and tell me that I can only pick two.

00:40:50 Dewayne

I'm going to tell you that you're wrong.

00:40:53 Dewayne

We can do this.

00:40:54 Dewayne

We've proven it.

00:40:56 Dewayne

We've got the spreadsheets to prove it based on our budget and what we spent last time and what we're projecting to spend this time and I feel like 100% confident we're going to provide a more resilient, higher reliability, more accessible, more performant solution for our users.

00:41:17 Dewayne

For equal or less money than what our previous deployment was.

00:41:22 Dewayne

So I'm super excited about this.

00:41:25 Joe

It really comes down to you know these problems we were looking at three years ago around, you know, hardware lifecycle.

00:41:36 Joe

This storage footprint of managing.

00:41:40 Joe

I mean, ultimately I think we we have a couple of petabytes of data that we manage across.

00:41:48 Joe

You know the central storage, the backup.

00:41:52 Joe

We've got data Accessibility.

00:41:55 Joe

We're interested in improving and issues around offices going offline during hurricanes, and we've got a mobile workforce.

00:42:04 Joe

We've got agents that work in the field and in all of these in these counties the pain of RDP or VPN access and real file access.

00:42:13 Joe

Those were our problems three years ago.

00:42:16 Joe

Having this this this Frog gig, this is this three pronged attack of taken advantage of.

00:42:23 Joe

Of.

00:42:24 Joe

Like you said, this financial ability to take advantage of one drive and teams that are provided to us at Higher Education Institute and turn that cost savings into.

00:42:38 Joe

Better performance where it's needed.

00:42:40 Joe

Better Accessibility where it's needed has been really important for us to show this and get it accepted by our users and our faculty and our researchers.

00:42:53 Joe

Getting them to buy in.

00:42:56 Joe

As you know, that's the icing on the cake there.

00:43:00 Dewayne

Definitely, you know we were very big believers and explaining.

00:43:06 Dewayne

Everything that we can to our users to let them know.

00:43:09 Dewayne

Here's what we're doing.

00:43:10 Dewayne

Here's why we're doing it.

00:43:12 Dewayne

Here's what it gets you.

00:43:14 Dewayne

You know our rollout of teams was not.

00:43:17 Dewayne

Hey, here's teams.

00:43:19 Dewayne

Please use it by you know we had to get out in front of them and tell them.

00:43:24 Dewayne

Here's what it is.

00:43:25 Dewayne

Here's what it does and here's why.

00:43:26 Dewayne

It's better for you.

00:43:27 Dewayne

Same with one drive, same same.

00:43:30 Dewayne

You know with Azure file sync, it's.

00:43:33 Dewayne

It's really an incredible technology.

00:43:36 Dewayne

I don't want to oversimplify and call it one drive for servers, but that is an easy way to describe it, but one of the things that we can do that you talked about earlier is if we do have an event you know we are in a state that is prone to getting whacked by gigantic hurricanes and we will have an office that goes offline for months at a time.

00:43:54 Dewayne

You know we had.

00:43:55 Dewayne

A couple of years ago, a category five hit the North Northwest side of the state, so that's not uncommon.

00:44:03 Dewayne

Unfortunately, for where we are.

00:44:05 Joe

We could.

00:44:06 Joe

Good.

00:44:07 Dewayne

Reroll a server in our main data center VM, provision it with some storage, install the Azure file sync agent.

00:44:18 Dewayne

Connect it to that Azure file share.

00:44:20 Dewayne

It will synchronize what they refer to as the namespace and all the data would appear to be there.

00:44:29 Dewayne

And so if a user were to click on it, it would recall, but the data would instantly instantly, but very quickly look like it's all there.

00:44:38 Dewayne

We use DFS targets for all of our network drives, so we go into AAD and change the DFS target and we're up and running in an hour.

00:44:46 Dewayne

I mean that is.

00:44:48 Dewayne

That's incredible, you know.

00:44:50 Dewayne

Refer recovery plan for hey, my office just got wiped out and an hour later I can give everybody access to their stuff.

00:44:58 Dewayne

That's yeah, that's top notch, so I'm excited.

00:45:02 Dewayne

I hope that we can complete our vision.

00:45:05 Dewayne

Our three year mission that we've been on to do this so.

00:45:09

Yeah.

00:45:09 Joe

It's yeah, it's been a ride.

00:45:12 Joe

It's great to see this coming to come into the final final destination.

00:45:13 Joe

To see this.

00:45:21 Dewayne

Yeah, I.

00:45:21 Joe

And talking final final destination kind of end in our podcast here on time.

00:45:29 Joe

Got any got any wins?

00:45:32 Joe

You're interested in talking about?

00:45:35 Dewayne

Yeah, so we like to end on a win, you know, positive note.

00:45:40 Dewayne

I've got a personal win I I have successfully convinced my wife to put up with me for 15 years, so we just had our 15th anniversary at the end of January.

00:45:53 Dewayne

Very.

00:45:54 Dewayne

I've very very lucky because I'm a mess and she knows it so.

00:46:02 Dewayne

That was fun.

00:46:03 Dewayne

Got to to we have some friends who their anniversary is around the same time, so we spent some time with them and you know got to hang out and get away from the house for a little while and spend some time together and and it was a lot of fun.

00:46:17 Dewayne

We really enjoy.

00:46:18 Dewayne

Put it at a good time and like I said, you know she's great, specially because of me and what I put her through and what I do and all the nerd things I talk about all the time and she's like yeah, Azure OK?

00:46:31

So.

00:46:32 Dewayne

But you know, explaining to her the struggles of work and political battles that we fight, and all those things, and and.

00:46:41 Dewayne

You know, I really appreciate. I really appreciate her. She's she's. She's good for me 100%.

00:46:46 Dewayne

Classic.

00:46:47 Joe

That's a great.

00:46:48 Joe

That's a great win.

00:46:49 Joe

That that is, that's awesome.

00:46:50 Joe

So I'm heading towards one of those milestones soon, so I'll be happy to get there.

00:46:57 Dewayne

Hope you make it.

00:46:58 Joe

Yes.

00:47:00 Joe

Not somewhere around here. One of our other wins actually for us to this we had a case study published by Microsoft for some of the work we did around our online conferences. One of our large ones that was done about 1300 users and very sad.

00:47:21 Joe

Put up very quick.

00:47:23 Joe

For a large national organization and it was a team effort, a lot of good people helped us with that, but that's a nice nice nice.

00:47:37 Joe

Thing to see some recognition there that that kind of work.

00:47:41 Joe

We did really had an impact for the folks and.

00:47:47 Joe

Nice little case study.

00:47:48 Dewayne

Yeah, definitely our our podcast is young, but if you're a listener and you go back to episode two, we kind of talk about that.

00:48:00 Dewayne

And there are some pretty cool stuff that happened there.

00:48:03 Dewayne

Joe did some really amazing work with automating external user invites, and we've even learned more since then.

00:48:11 Dewayne

About how we would do it differently if we were going to do it again, which I think we'll have that opportunity soon.

00:48:17 Dewayne

Yeah.

00:48:17 Dewayne

But yeah, that was that was cool to see you know, Microsoft.

00:48:23 Dewayne

Our account executive got us involved in this case study process and we talked to their some of their media folks and did an interview with them and and talked about how we did this.

00:48:33 Dewayne

And you know one of the great things about that particular story was the savings that was a part of it.

00:48:41 Dewayne

You know, we talked to the President of the Association.

00:48:45 Dewayne

It's like you said, it's national. Typically there would be people flying, driving, whatever hotels catering all that stuff. That would be a part of that, and it was like in the two plus \$1,000,000 range. Was, you know kind of the calculations that were done.

00:49:03 Joe

Yeah, and that was important for for a lot of budgets at a lot of you know, a lot of universities.

00:49:10 Joe

Really had to kind of knuckle down and be prepared for potential and in some cases of course some budget issues.

00:49:17 Joe

So still be able to provide.

00:49:21 Joe

The education around this.

00:49:24 Joe

For their, their conference was was important.

00:49:28 Dewayne

All right?

00:49:28 Dewayne

Well, that is our episode on, you know, our journey into the cloud trying to make first contact with Azure and teams and OneDrive and all those things.

00:49:39 Dewayne

So we appreciate you listening to our episode and this was a lot of fun, will hopefully in a few months we'll have an update on how all this is going for us so.

00:49:49 Dewayne

We appreciate your time and thank you for listening to the ship show.

00:49:55 Dewayne

We hope you enjoyed this episode of the ship show. If you found our content useful, please consider subscribing and leaving us a Five star review. This will help others find our show. If you'd like to connect with us, you can find us on LinkedIn or on our homepage at AKA Dot MI Forward Slash Shift Show will be back next month.

00:50:16 Dewayne

For a new episode.

00:50:18

Transporter room standby to beam up landing party.