



# STATE OF NORTH CAROLINA, TRANSITIONING FROM A TRADITIONAL ON-PREM ENTERPRISE TO A CLOUD FIRST ORGANIZATION

## VIDEO TRANSCRIPT

### Speaker:

- Charles Carter, Assistant Secretary for Technology Services, State of North Carolina

### Overview:

The State of North Carolina Department of Health and Human Services (DHHS) has embarked on a multiyear journey to be a cloud first organization, with an ambition to have greater than 60% of their business using cloud technologies by 2025. To date the majority of this transformation has been to AWS, however DHHS is expecting to support a multi-cloud infrastructure in the future.

In this interview, Charles Carter, Assistant Secretary for Technology Services, State of North Carolina and Ed Fody, Technical Account Lead at Accenture will focus on the challenges and the benefits the department has experienced on this cloud journey to date, and how the department is progressing against its goals.

>> We're in Las Vegas at The Venetian for our continued coverage here of re:Invent '22, AWS's big show going on. Great success off to a wonderful start. We're in the Executive Summit sponsored by Accenture. And we're going to talk about public health and the cloud, how those have come together in the great state of North Carolina. Charles Carter is going to help us do that. He's assistant secretary for technology services with the state of North Carolina's Department of Health and Human Services. Charles, good to see you. Thanks for joining us here on "theCUBE".

>> Thank you very much for having me.

>> Yeah, thanks for making the time. So first off, let's talk about what you do on the homefront before what you're doing here and where you're going. But in terms of kind of what your plan has been, what your journey has been from a cloud perspective and how you've implemented that and where you are right now in your journey.



>> Sure, so we started. When I got there, we didn't have a cloud footprint at all. There was a-

>> Host: Which was how long ago?

>> I got there in 2016, so about six years.

>> Host: Six, seven years, yeah.

>> Yeah, five, six years. So anyways, we started off with our first module within our Medicaid expansion. And that was the first time that we went into the cloud. We worked with AWS to do our encounter processing system. And it was an incredible success. I think the ease of use was really kind of something that people weren't quite ready for. But it was really exciting to see that. And the scalability, to be able to turn that on and cover the entirety of North Carolina was awesome. So once we saw that and get a little taste of it, then we really wanted to start implementing it throughout DHHS. And we marshaled in a cloud-only cloud-first strategy where you had to actually get an exemption not to go to the cloud. And that was a first for our state. So that was really kind of the what launched us.

But then COVID hit. And once COVID came in, that took us to a new level. COVID forced us to build technologies that enabled a better treatment, a better care, a better response from our team. And so we were able to stand up platforms in 48 hours. We were able to stand up COVID vaccine management systems in six weeks. And none of that would've been possible without the cloud.

>> So forced your hand in a way because all of a sudden you've got this extraordinarily remote workforce, right, and people trying to- And you're doing different tasks that were totally unexpected, right, prior to that. What kind of a shock to the system was that from I get from an IT perspective?

>> Yeah, so from a state government perspective, for example, you never hear you have all the money you need and you have to do

it quickly. It just doesn't work like that. But this was a rare moment in time where you had this critical need. The entire country and our state population was kind of on edge. How do we move through this? How do we factor our lives into this new integration? What is this virus? Is it spreading in my county, in my city, my zip code? Where is it? And that kind of desperation really kind of focused everybody in on build me technologies that can get me the data that I need to make good healthcare decisions, good clinical decisions. And so that was our challenge. Cloud enabled it because it can scale so quickly. We can set up things, we can exchange data. We can move data around a lot easier.

And the security is better from our perspective. So that COVID experience really kind of pushed us, you know, if you will, out the door. And we're never going back because it's just too good.

>> Yeah, was that the aha moment then in a way because you had to do so much so fast and before capabilities that maybe you didn't have or maybe hadn't tapped?

>> Yeah, yeah.

>> I mean what was the accelerant there? Was COVID that big, or was it somebody who had to make a decision to say, this is where we're going with this, somebody in your shoes or somebody with whom you work?

>> Yeah, no, I mean cloud at the end of the day, we knew that in order to do what we needed to do we couldn't do it on-prem. It wasn't an option. So if we wanted to build these capabilities, if we wanted to bring in technologies that really brought data to our key, our governor, our secretary, to make good decisions on behalf of our residents in North Carolina, then we were going to have to build things quickly. And the only way you can do that is in the cloud. So it was when they came back and said, "We need these things," there's only one answer. That's a good thing about technology. It's pretty binary, so it was either go with what we had, which wasn't adequate, or build to what we knew we



could do and pretty short order. And because of that, we were able to actually usher in a huge expansion of cloud footprint within DHHS. And now we've actually been able to implement it in other departments simply because of our expertise. And that's been a huge asset for the state of North Carolina as a whole.

>> So what's your measuring stick then for value in terms of identifying benefit? 'Cause it's not really about cost. This is about service, I assume, right?

>> Right.

>> So, you know, how do you quantify the values and the benefits that you're deriving from this migration over to the cloud?

>> So from our perspective, it hits several different areas. I mean, you can start in security. We know that if we're in the cloud the tools that can manage and give us visibility in the cloud are 10 times better than an on-prem environment. And so if we can take a lot of these legacy systems and move them to the cloud, we'll be in a better security posture. So we have that piece of it. The other part of it is the data aspect of it, being able to- We're 33 divisions strong, right? We have a large footprint. We have a lot of siloed data elements. And cloud allows us to start integrating those data sets in a much more usable fashion so that we can see that if Charles Carter's in one area in division, a specific division with DHHS, is he somewhere else? And if he is somewhere else, then how do we provide a better clinical care for that individual?

And those are conversations that we can't really have if we don't move to the cloud. So those types of- And of course there's always the OKRs, the actual measurements that you apply to things that we're doing. But at the end of the day, can we get the requirements from our business partners, bring those requirements to bear in technology, and really enable the indoctrination of these requirements throughout our clinical and healthcare kills?

>> What about they're always pillars here, right? Governance, huge pillar, security, huge pillar, especially in your world, right?

>> Yeah.

>> So making that move over to the cloud and still recognizing that these are essentials that you have to have in place, I wouldn't say adjustments, but what kind of, I guess, recognition have you had toward that and making sure that you're still very true to those principles that are vital in the terms of public health?

>> It is a great question because our secretary at the time and our governor, Roy Cooper, were very focused on enabling transparency. We had to be very transparent with what we were doing because the residents in North Carolina were just really kind of, "What's going on?" It was a scary time for a lot of us. So transparency was a key element towards our success. And in order to do that, you've got to have proper security. You got to have proper governance. You've got to have proper builds within technology that really enable that kind of visibility. One of the things that we did very early on was we set up a governance structure for our cloud environments so that as we wanted to and stand up an easy-to-environment or we wanted to do some sort of work within a cloud or stand up in a different environment, we were able actually to set up a framework for how do you introduce that.

Are you doing it correctly? Do you have the proper security on it? Do you have the funding for it? Like all the steps that you need to really kind of build into the scaffolding around a lot of these efforts we had to put in place and pretty quickly to get them going. But once we did that, the acceptance and the adoption of it was just tremendous. I mean, it was a light on for all of our business partners because they understood I can either build on-prem, in which case I won't be able to get what I want in any kind of reasonable time period. Or I can build on cloud. And I can have it in some cases in 48 hours.



>> Right, tomorrow. >> Yeah, exactly.

>> You know, it was a huge difference.

>> So where are you there? I mean, this is just not like a really big old lift and shift and we're all done and this is great. Cloud's taken care of all of our needs. Where are you in terms of the journey that you're undertaking? And then ultimately where do you want to go, like how far? What kind of goals have you set for yourself for the next two, three years down the road?

>> Yeah, so this is an exciting part because we have actually- Like I mentioned earlier, we are a cloud-first cloud-only strategy, right? There's no reasons for us to be on-prem. It's just a matter of us kind of sunseting legacy systems and bringing on cloud performance. We hope to be a 60% of our applications, which we have over 400 applications. So, it's pretty large footprint. But we're wanting to migrate all of that to the cloud by 2025. So, if we can achieve that, I think we'll be well on our way. And the momentum will carry forward for us to do that. We've actually had to do a reorganization of our whole IT structure. I think this is an important part to maintain that momentum because we've reorganized our staff, reorganized ourselves so that we can focus more on how do you adopt cloud, how do you bring in platforms which are all cloud-based, how do you use data within those systems?

And that has allowed us to kind of think differently about our responsibilities, who's accountable for what, and to kind of keep those, that momentum going. So, we've got some big projects that are on right now. Some of them are lift and shift, like you mentioned. We have a project with kind of a clumsy, monolithic system. It's called (indistinct). We're trying to migrate that to the cloud. We're in the process of doing that. And it's an excellent demonstration of capability once we pull that off. And then of course any new procurement that we put out there no one's making anything for on-prem anymore. Everyone's making their SaaS products for cloud-based experiences. Or if we're going to

build or just use integrators then we'll build that in house. But all of it's based on cloud.

>> And you mentioned SaaS. How much of this stuff are you doing on your own? And how much are you doing through managed services?

>> Yeah, so like I mentioned, we have over 400 applications. So, we had a pretty large footprint, right?

>> Big, it's huge, right.

>> So we're only who we are, and we can only build so much. So we're kind of taking- We did a application rationalization effort, which kind of identified some threats to our systems. Like maybe they're older things, FoxPro, kind of older languages that we're using. And in some cases, we got people who are retiring. And there's not many people who can support that anymore. So how do we take those and migrate them to the cloud, either put them on a Salesforce or ServiceNow or Microsoft Dynamics platform and really kind of upgrade those systems? So we're in the process of kind of analyzing those elements. But yeah, that's kind of the exciting launch, if you will, of kind of taking the existing visibility of our applications and then applying it to what we're capable of with the cloud.

>> And if you had advice that you could give to your colleagues who are in public health or just in public, the public sector- And your resources, they're finite. This is kind of what you have to deal with. And yet you have needs, and you're trying to stay current. You've got talent challenges, right? You've got rev or spending challenges. So if you could sit down your colleagues in a room and say, "Okay, this has been our experience. Here's what I would keep an eye out for," what kind of headlights would you beat for them?

>> Yeah, so I think the biggest aha that I'd like to share with my contemporaries out there is that you've got a great ability to lower your costs, to excite your own personnel because they want to work on the new stuff. We've actually set up a



whole professional development pathway within our organization to start getting people certified on AWS, certified on other platforms, to get them ready to start working in those environments. And so all of that work that we're been doing is coming together and allowing us to maintain the momentum. So what I'd recommend to people is, A, look at your own individual staff. I don't think you need to go outside to find the talent. I think you can train the talent that you have interior. I think you've got to aggressively pursue modernization because modernization enables a lot more.

It's less expensive. It enables quicker adoption of business requirements and modern business requirements. And then lastly, focus on your data sharing because what you're going to find in the platforms and in the clouds is that there is a lot more opportunities for data integrations and conjoining disparate data sources. So if you can do those elements, you'll find that your capabilities on the business side are much more, much greater on the other end.

>> Don't be scared, right, jump in?

>> Definitely don't be scared. Don't be, the water's warm. Come on in, you're fine, you're fine.

>> No little toe dipping in there. You're going to dive into the deep end, let her rip.

>> Exactly, just go right in, just go right in.

>> Well, it sounds like you've done that with great success.

>> I'm very happy with it. >> Congratulations on that. And wish you success down the road.

>> Thank you very much, I appreciate it.

>> Yeah, thank you, Charles. All right, back with more. You are watching theCUBE here in Las Vegas. theCUBE of course the leader, as you know, in tech coverage.

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