

Beyond the Network: Data Center Day

IT departments are primarily responsible for handling a company's technology issues. That's a far-reaching responsibility. Workforce computing devices, collaboration technologies, Data Center hardware – these are just some of what need to be provisioned, managed and ideally incorporated into an overall strategy. The best IT departments aren't just focused on keeping devices running, though, they help the company accomplish business goals. A rare few go so far as to help the company's customers accomplish their business goals – even if it means IT employees taking on unfamiliar roles.

Case in point – Cisco's Data Center Day is a customer-focused event where IT employees share business strategies, operational practices and even guide visitors through one of their production Data Centers to see how various technologies are being used. It's the only event fully managed by Cisco's IT organization. So what exactly happens when you ask IT to put on a major event? Doug Alger explains as we go beyond the Network and behind the scenes of Cisco IT's Data Center Day.

It's early on a Tuesday morning, and people are checking in at the event desk of a Courtyard Marriott Hotel north of Dallas, Texas. About 150 people have come to hear how a major technology company is becoming digital – implementing automation and orchestration throughout its infrastructure and bringing its applications to market as fast as possible.

As part of the day-long event, attendees are to meet IT executives and technical experts, see live technology demonstrations, and conclude with a guided tour of a state of the art Data Center. Participants have traveled from 24 states.

Mark Cline is an IT solution architect from BB&T, a financial services company. It's one of 36 companies attending Data Center Day.

MARK CLINE: “I came here today mainly... At BB&T we have a wholesale insurance line of business, lines of business, and with that we're looking to provide some segregation between BB&T as a bank and the wholesale customers that they have. So, we're building out a new Data Center that is for those wholesale lines of business. And with doing that new Data Center we're looking to see what technology we're going to use and everything in there. So we've already decided to go with ACI in there, and we're building out the rest of the infrastructure so we're looking to see how Cisco has done theirs, and what that looks like from the full stack of network and compute, storage, the cloud native side of it. Just trying to get an idea of how Cisco does it, since we're landing on Cisco platform.”

Jean Kneisler is a vice president for Jabil, a global manufacturing services company. She's hoping for some high level strategy discussions.

JEAN KNEISLER: “We've been actually spending a lot of time thinking through what our long-term data strategy is going to be – where we might want to consolidate, where we might want to expand or partner – and so I thought this would be a really good opportunity to learn from some of the best.”

Organizers from Cisco IT began planning the invitation-only Data Center Day months in advance. Presentations were developed, demonstrations rehearsed, and procedures crafted to smoothly bring 150 people through a fully functioning production Data Center without incident. Countless details have been reviewed, down to the color of the ball caps to be worn by those who will guide attendees in color-coded groups to shuttle buses heading to and

from the Data Center. No one knows it yet, but in spite of all of the planning and preparation, something is going to go wrong.

Attendees have been gradually filling the hotel ballroom for the past hour. They're seated at about 20 large, round tables, quietly chatting and munching on breakfast. Pop music plays from the sound system as a highlight video of last year's Data Center Day appears on two large projection screens. The screens hang from the ceiling and frame a 4 ft. tall stage at the room's back wall. The logos of Cisco and Intel are projected large in white against a deep blue curtain that is the stage's backdrop. A transparent podium sits mid-stage.

At 8 am the music fades and Lance Perry, vice president of Cisco's IT Customer Strategy and Success organization, ascends the stage.

JEAN KNEISLER: "Welcome. This is our sixth annual event for the Data Center. It's great to see you folks here. We thought we were going to lose a lot of you because of the weather outside, but thank you for braving it. We have a great day in store for you.

So this year our subject is around multi-cloud. Many of the years in the past, if you've been here before, we focused on the facility quite a bit, right? But now, we're in this era where all these clouds are coming together. So the vast majority of us have our own private clouds, and there's a lot of public cloud uses, especially around specialized applications. We have to bring that all together. And how many of you have had an executive go on a plane and when they get back they go, 'hey, how come we can't go to this cloud provider?' or 'how come why can't we buy this cheap laptop?' The challenges we face just from the thoughts of how easy it may be and there's lots of challenges out there with using a multi-cloud environment and we're here to share not only what we've done but we encourage you to talk to each other about what your experiences have been."

The day's first session explores how for most companies the foundation of their business strategy is their IT strategy. IT organizations therefore need to not only improve what they already do, but also focus on the bigger picture. They need to be having not just product and technology discussions but business discussions. And have them quickly, because the pace of business continues to accelerate. Business models that once lasted years now change in months.

As the focus of the presentation turns to the concept of digitization, something unexpected happens. The weather that Lance mentioned in his opening remarks has arrived in force, dumping rain and hail across the region.

BRAM VAN SPAENDONK: "And right at that moment the lights flickered and everything went dark."

Bram Van Spaendonk is a manager in Cisco IT's Customer Strategy and Success Organization, and has been with the company for 17 years. He helps manage IT's participation in customer events, and was in the audience.

BRAM: "The whole power went down, everybody was looking at each other, there was a big gasp, like, 'what's going on?' The whole power went down and it turned out the power in the whole hotel had gone down and we were all scrambling trying to figure out what to do.

NATALIE CARDOZO: "It was stressful. Not to mention at first we didn't realize it was actually the hotel power – the whole hotel, I should say – that went down, so here I'm thinking it's just AV people messed up or there's a glitch on their end. So... yeah, very frantic."

That's Natalie Cardozo. She's a program manager who has been with Cisco for 7 years. She works for Bram and has overseen the Data Center Day event since 2016.

BRAM: "So, the lights went off, the presentation went down, slides went down, audio went down, everything just stopped. And so we're all looking at each other like, 'what's going on? What's happening right now?' Everybody is frantically trying to figure out what to do. I saw Natalie pop up, I popped up, walking to the back to the AV team,

the audio visual team, and they were trying to figure out what to do. And it turned out, because of the storm, the entire hotel had lost power, which is pretty ironic if you think about us presenting at a Data Center Day, because in our Data Center, which is a couple of miles from the hotel where we were hosting the customers, that Data Center has so much redundancy in terms of power and backup and different power feeds to prevent any power outage and here we are at a Data Center Day just kicking it off and we had a power outage.”

This isn't the first time that Data Center Day organizers have had to navigate challenges. One year, a rented shuttle bus broke down between the Data Center and hotel. Another time, radios meant to keep Data Center tour groups synchronized failed to work. In each case, the IT staff improvised and the show went on – usually with most attendees unaware of the glitch.

NATALIE: “One thing that I've learned from this is that you can't control what happens. No matter how much planning, rehearsals that you do with the AV teams before and the day of things are going to happen that are really just out of your control and you have to learn to roll with the punches. And just kind of realize 'Ok, well this happened this year. If this happens next year how could we resolve this issue or at least make sure that it's a flawless experience if this were to happen again.'”

Despite the storm the show goes on. Ballroom audio and lights are back up, although the large projection screens continue to turn off and on. It's distracting, but the audience remains engaged and the session concludes to a round of applause. Organizers call for a break so the hotel's audiovisual equipment can be fully rebooted.

LANCE: “Obviously we had a pretty major power outage before. The hotel's generator actually just supports the emergency stuff, like the lights in the hallway and things like that so at lunch time we're actually going to switch over to UPS so that we have a little bit better coverage depending on the weather this afternoon. So I'm going to wish the next couple of speakers the best of luck with the technology. I'm sure it's all going to work out just fine.”

And with that joking vote of confidence, things are back underway. Frank Palumbo, senior vice president of World Wide Data Center Sales at Cisco, shares what they've been hearing from customers. Companies are trying to modernize their Data Centers – a mix of on-site server rooms, co-location facilities and cloud offerings – so they are secure, have transferrable policy models and feature real-time analytics.

FRANK PALUMBO: “If you're going to set policy and business rules, you've got to put it in a technology that touches everything. You can't set a policy for just one piece. And the network is the only place where you're going to see it touch everything. So it's so important the policy model plays in with what's going on with the network. It just makes sense.

The other thing about the network is the network is always your single source of truth. The network never lies. You know when you lose your keys or you lose something, what do you do? You retrace your steps, right? That's what the network does. So when you talk about policy and what you want to do to get into this whole infrastructure conversation and to advance wherever-you-work's digital objectives, make sure the network is included.”

Liz Centoni, senior vice president and general manager of Cisco's Internet of Things Business Group, echoes the changing state of the industry.

LIZ CENTONI: “Every Data Center on this planet was built to do one thing – run applications. But how applications get developed today and who's developing them has so fundamentally changed. Because apps are the face of the business. So much more in custom apps are being developed today. Every company today is looking at applications in terms of driving revenue, getting closer to the customers. How you actually manifest in terms of putting your differentiation out there. So apps for us, in terms of what you tell us, is the new business driver.”

Those changes include where applications reside and how much companies want to be able to easily monitor and manage them.

LIZ: “Gone are the days when applications sat behind the four walls of your Data Center. Today applications can sit anywhere, on-premise and off-premise as well. So when we think about the Data Center, it’s redefined in terms of multi-cloud is the new Data Center.”

As sessions continue on stage, Cisco IT organizers have been making adjustments behind the scenes – amending the schedule to offset the unscheduled break, adjusting when lunch is to be served, and preparing for even harsher weather. The hotel audiovisual systems are functioning normally again, but what if the storm worsens and brings more hail, especially later in the day when people are to be transported to the nearby Data Center? One of the afternoon presenters begins assembling all new slides, in case the live Data Center tour needs to be replaced with a virtual one.

It seems a good time to ask – why again does Cisco IT take this on? As Bram himself notes, planning and hosting events is not their core job.

BRAM: “We do this because we believe there’s value in sharing the practice and the peer to peer networking. So, coming from IT to put an event together is not necessarily what we do every day, which I think is an additional challenge because relying on a lot of other IT people whose day job it is to keep our company running, right? To keep our IT systems up, not necessarily to be speaking on a stage in front of a couple hundred people. But yet we do it, and I’m very proud of our Data Center Days and the things we do to connect with our customers.”

Cisco IT’s first Data Center Day happened in 2013. It involved 27 customers from 18 companies. The event has steadily grown, with expanding attendance and more prominent speakers. Cisco’s then-CEO John Chambers was keynote speaker in 2015.

BRAM: “It really came from a request that came directly from our customers – from a customer, from Sales that come to understand that, hey, we are a Cisco shop we have the latest and greatest stuff mostly implemented inside of our own infrastructure and inside of our own environments. And like I mentioned earlier, a lot of times we talk to customers about that. What we’ve learned. What has worked. What has not worked. If we had to do it again what we would change or what we’ve uncovered as a best practice. So, often we talk about that and it wasn’t until long ago where people were like ‘Can we see actually see it?’ Because I know we all get many Powerpoint presentations, but it’s much more powerful to actually see it, especially at a Data Center where basically the rubber meets the road, because all this equipment needs to work with other stuff, so cables and cooling and power. There’s so many aspects that go into building a Data Center. It’s great to show it. We participate in industry events, meaning Cisco IT speaks about our experience, and this event is our own event, it’s our own Data Center, it’s our own production environment. After it was opened, it’s such a great facility, such a state of the art, that we said ‘Hey we should really show this, we should allow customers to see this first hand versus just talking about it.’”

Today’s Data Center Day sessions have continued into the afternoon, after a break for lunch. Cisco IT technical experts and executives fanned out among the ballroom tables during the meal, encouraging attendees to dine with them and participate in smaller-group conversations.

Cisco IT included something else throughout the day to promote communication, an application known as Webex Teams. Originally called Cisco Spark, it includes group messaging, file sharing, white boarding and even video meetings. A virtual room was setup for Data Center Day. Attendees and presenters could type messages from their laptops or other devices, and presentation collateral was posted there. The space was moderated, and incoming questions answered live – either by the virtual room’s moderator or on-stage during question and answer sessions.

NATALIE: “So, this was actually our first time doing this with the Data Center Day event. I thought it was really great to have that where all the customers, account teams, all the Sales teams, all the Cisco IT reps and even the executives all in one room where customers can just really ask a lot of questions throughout the day and a lot of Cisco IT folks replying. With that also we were able to post a lot of our Powerpoints on there so after each of the presentations really quickly they had access right away to the Powerpoint decks.”

Data Center Day sessions continue through the afternoon, discussing IT infrastructure of today and tomorrow, the need for pervasive security and leading into an executive panel discussion. Eventually, it's time for the event's signature activity – a tour of Cisco IT's state of the art Data Center.

It has been six hours since bad weather disrupted power to the hotel and the keynote presentation. It's still raining outside – too lightly to interfere with traveling to the Data Center, but steadily enough that organizers have altered the route of the Data Center tour so visitors remain inside the facility at all times.

After a 4-minute shuttle bus ride, attendees arrive at the Data Center site. On-site security personnel are ready for their arrival, and the vehicles are guided through a metal security gate and past a traffic barricade, under the watchful eye of multiple security cameras. Attendees are escorted in groups of about 20 to different locations within the facility. Cisco IT subject matter experts begin conducting the tours, which have been synchronized to run simultaneously.

BOB WALENTYNOWICZ: “Telcom comes in two different locations, power comes in from two different locations, dedicated power station for us, feeding our power source over here on the back side.”

That's Bob Walentynowicz, an IT architect with Cisco. His tour starts in front of a monitoring center visible through floor-to-ceiling glass walls. There are four large, wall-mounted video screens, clocks set to several times zones, and 10 smaller desktop and laptop screens. Three technicians are watching the various displays, which convey information about the site's electrical and cooling systems.

BOB: “The most interesting thing here... this is really a facilities management center. These guys are monitoring 32,000 different points of alarm, systems throughout this Data Center. The area that's quite interesting here is this very first graph. If you want to come up a little bit closer and take a look here. That red dot shows you where the temperature is outside, the humidity and what's going on. More than about 56 percent of the time we actually cool our Data Center with outside air.”

The simultaneous tours wind through the entire facility, taking visitors past massive air conditioning units, standby electrical systems and ultimately into a data hall filled with server cabinets. Cisco's Application Centric Infrastructure (or ACI), Nexus switches and Unified Computing System (or UCS) provide the Data Center's foundational networking and computing functions. Bob explains how the company uses an RFID-based asset management system to quickly process incoming hardware and track installations.

BOB: “Equipment gets an RFID tag. We use a system, a third party company, that tracks every piece of gear in this facility. We have a 3-year refresh cycle so we're constantly refreshing. It took us about a year to build the database. Well worth the time, quite frankly, because now we can track every single piece of gear. And then as you walked in here you noticed there's readers. So as that gear's been moved around, we're tracking every single blade. Every single piece of hardware in this facility we now right where it is.”

Visitors are also shown live demonstrations of Cisco's Tetration Analytics Platform and Application Dynamics, highlighting the real-time visibility they provide into the performance and security of Cisco IT's applications and hardware.

The tours are completed, and as with the day's other presenters, those who led them receive a round of applause. Attendees are driven back to the hotel and the event winds down with a happy hour session, providing a final

opportunity for participants to network with one another and Cisco employees. The mood is upbeat, and the Cisco IT organizers seem pleased to have executed another successful event.

What's next for Data Center Day? Cisco IT has begun to offer what they're calling a virtual Data Center Day. The first of these was held simultaneously in three major cities across the United States, using Cisco videoconferencing technology to connect them. Bram, who helps manage IT involvement in customer events, explains.

BRAM: "Well, I was going to say the way to think about this is there's three locations – New York, Chicago and then San Jose – all connected via Telepresence, right? Big screens, big TV screens, where everybody can see each other and make it look like we're all in the same room and then the presentations would happen from these different locations. We had a speaker in San Jose, we had a speaker in New York, in Chicago. They would take turns and present and then we had some videos and we had some demonstrations that we were doing. But even though we were miles apart, thousands of miles apart, it felt like we were part of the same event. Now of course while San Jose was having breakfast the folks in New York were having lunch because the time zone difference that's something we can't control and we cannot fix but having everyone connected through this equipment, through Telepresence, through video sharing, made the event look like we were all in one virtual environment, so what's next for us I think is more of these virtual events."

Fifty-three customers from 32 companies participated in the virtual event.

NATALIE: "We wanted to have at least one executive and one Cisco IT rep at each site to host the customers but to also network with them throughout the event or during lunch times. We wanted to make sure we still kind of kept a lot of that networking experience for the customers inside the rooms with the executives."

BRAM: "One of the big things people get out of this event is the networking, the peer to peer conversation. As I mentioned before, the fact that we're all having similar challenges, similar opportunities – we're all in IT, we're all trying to figure out how to best run our IT organizations, doing this virtually changed that because being all in the same physical room allows for more of that engagement than having three different virtual or having three different locations virtually connected. But I found that, I was myself I was in Chicago, that during the breaks, during registration and during the closing a lot of the folks in the room were introducing themselves to each other and trying to figure out 'Oh, you're with that company. I used to work there' and they knew somebody and one other guy knew a gal that he had worked with before. So even though we're not all in the physical room, the folks who were in the same location, they're in the same region so a lot of them knew each other or had some similarities 'Which side of the town did you come from and this traffic' so there was a lot of engagement and I thought it was very well done."

Cisco IT is now considering hosting other events on different subject matter.

NATALIE: "We got a lot of great feedback with having a virtual event – a Cisco IT virtual event. We're hoping to expand that outside of Data Center. I know we've gotten a lot of people requesting other Security topic or just something else top of mind. With the Cisco IT Data Center Day came our virtual event and with this first Data Center virtual event you'll hopefully start to see things outside of Data Center. So, just keep a lookout for that."

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