INSIDER'S INSIGHT
from TribalHub's Executive Officer, Mike Day

The challenges presented by the pandemic have been the catalyst for a rapid move to the cloud for most every tribe across the country. Necessity is not only the mother of invention, it is also the catalyst to rapid changes, bulldozing down hurdles and eliminating procrastination.

If you are reading this and are still a bit unclear about the term "cloud", it simply refers to using computing resources located outside of your own network. Basically, a tribe would be using a third party data center for data storage, their servers to run the tribe's software and business applications, with all of the hardware and connectivity maintained by the third party. That includes their technical resources for support, so your tribe would not have to incur the large capital cost to buy and manage expensive servers or the ongoing human resource cost to support them. A third party data center will typically be more secure, have superior backup and redundancy built into it, and in many cases it will be less costly.

For many years we have been working closely with tribes and our TribalHub Members to discuss methods to leverage the benefits of cloud services. For many (if not most) tribes, the move to cloud services was historically blocked by an overarching fear that it would whittle away at a tribe's sovereignty. This prevented many tribes from benefiting from cloud services, even for systems and data that did not include potentially sensitive tribal information.

Meanwhile, the vendors that provide software and hardware to tribes (as well as to the commercial industry) have spent the last five to ten years investing most of their resources into developing cloud focused products and services. Tribes that did not embrace cloud products or services, were in effect getting a diminished value for their investment and thus, were at a competitive disadvantage.

Of course, the 2020 global pandemic has changed this for most every organization, including tribes and tribal enterprises. Suddenly, remote work and remote access created new challenges, and cloud services became a necessity for tribes to communicate and to function. In just a few months, starting in March 2020, I would venture to guess that cloud adoption advanced in use and acceptance by three to five years from a world not dealing with a global pandemic. There will be no going back, rather I expect to see tribes press the gas pedal down on expanding cloud services.

Many tribes lack(ed) the systems and processes to effectively and securely utilize cloud services while protecting tribal sovereignty. Many tribes will still find themselves scrambling for the next year or more to put in place the best practice infrastructure for cloud services.

Among many challenges, this includes things like:

- Data governance policies relating to what data can be in the cloud and what should not
- Cloud security and encryption policies and products
- Employee training on cloud services, access and security concerns
- Personal device access policy and procedures for cloud access
- Recovery and disaster planning and testing of cloud services and infrastructure
- Leading and managing an increasingly remote workforce

Our research and communications with tribes all point towards the continued expansion of cloud services to communities and businesses. Tribes are beginning to understand and utilize the benefits of cloud and gaining a comfort level with using these services. I would expect to see tribes having an increased focus on the additional processes and products they can implement to further secure their cloud communications and cloud data services to protect the sovereignty of their data.

What technology services or systems are you currently leveraging the cloud for?

EMAIL:

In House Postfix/iRedMail with Thunderbird Clients
Outlook/Exchange
Mimecast
Office 365 Exchange Online

CALENDARS:

Google Calendars
Nextcloud Caldav
Outlook/Exchange
Mimecast
Office 365 Exchange Online
SharePoint Calendars

DOCUMENT STORAGE & DOCUMENT SHARING:

Nextcloud
Microsoft Teams
Amazon
SharePoint
OneDrive

VIDEO CONFERENCING:

Zoom
Microsoft Teams & Microsoft Teams Live Events
Webex
StarLeaf

ANY CLOUD BASED CORE BUSINESS SYSTEMS *in government, health, gaming or hospitality:*

Payroll
Water Billing
Phone/Voice System is Running vi Microsoft Teams

PEER-TO-PEER

We asked a number of IT leaders from tribes across the nation to share with us how the 2020 pandemic has changed their plans relating to cloud based services and their organizations.

Has the pandemic changed (or loosened) your tribe's stance on moving information technology services or data to the cloud? If not, how are you enabling any remote work, communications, or social distancing?

"We have been slowly moving some items to cloud based services, mostly for ease of use while outside our network. We did not have the infrastructure fully in place to support remote working. It was not fun getting all people connected while maintaining a secure connection"

"The need to conduct remote work and collaboration has definitely led further into the cloud with no resistance. The need to maintain operations and revenue has definitely led to a more open minded approach to cloud services."

"No, the pandemic hasn't changed our tribe's stance on moving information technology services to the cloud because all our remote work is done via VPN back to the primary tribal government network."

"The pandemic hasn't changed our stance, but it's accelerated our move to cloud for IT services and data storage. We still have a combination of on-premise services as well as services such as Active Directory, file servers, etc.. and while we have access to those through client VPNs it creates some challenges. We've also become invested heavily with Microsoft Teams as a video conferencing platform, as well as a phone system."

"Currently, we are using cloud services for payroll and water billing. There is not a 100% comfort level with having too much data or too many services hosted off reservation. The pandemic may help to increase that comfort level. We were able to successfully transition to having most personnel work remotely by quickly ramping up our remote access capabilities through Microsoft RDP. Zoom was also an important tool for meetings and collaboration. We are still working with staggered schedules with departments splitting time between working onsite and working from home. Going forward, our IT department will be proposing a bigger shift to cloud services."

Are you allowing more remote work now than pre-pandemic? If so, what software or platform are you using to allow remote access for your team members? Do you expect to continue to allow remote work?

"We moved all staff to remote work in a very short period of time. Part of what enabled that change was our already established investment in Office 365, hosted voice, and hosted fax service. We've been growing our internet site (SharePoint) before COVID, and that's just been growing even faster now. Although the Tribal Government hasn't officially changed their policies for when the pandemic subsides, I have a feeling things will never go back to how they were. Remote work and working from home will now become the norm."

"Yes, about a third of our workforce is set to work remotely. We use industry standard VPNs that are built into windows and that connect to a Mikrotik router/VPN server. I expect most of our current VPN users will continue to work remotely, at least part time, for the foreseeable future."

"Remote work used to be frowned on, now it is embraced by the organization as a whole. Now that we have worked out many of the kinks I doubt we will ever go back to the pre-covid resistance to the concept of remote work."

"Yes, VPN via OpenVPN, RDS remote desktop."

"The Tribe is allowing more remote work now. Microsoft RDP is the main remote access mechanism. Zoom will continue to be used for meetings and collaboration when personnel are off-site. Departments will continue to work staggered schedules for the foreseeable future."

How has the pandemic changed in-person group meetings, conference room use, and department meetings?

"In person meetings, conference room use, and department meetings have all changed drastically. Everything is done over Microsoft Teams now. Where as before we may sparingly invite a team member to remotely connect to an in person meeting, it's now been the only way we chat."

"We have most of our meetings via media such as Webex or Zoom, conference rooms are only being used for smaller meetings that allow us the space to appropriately social distance."

"In-person meetings are being held again, but within social distancing guidelines. The number of in-person attendees has been reduced. Meetings are typically a combination of Zoom, conference call, and in-person attendees."

Thank you to those who participated in our September Industry Insights Report:

JIMMIE BIDTAH, *IT Director,* Port Gamble S'Klallam Tribe
ERIC CUTRIGHT, *IT Director,* Karuk Tribe
CHRIS DeCAMP, *IT Director,* Win-River Resort & Casino
KEN DERNBACH, *IT Manager,* San Pasqual Band of Mission Indians
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