MAY 2022

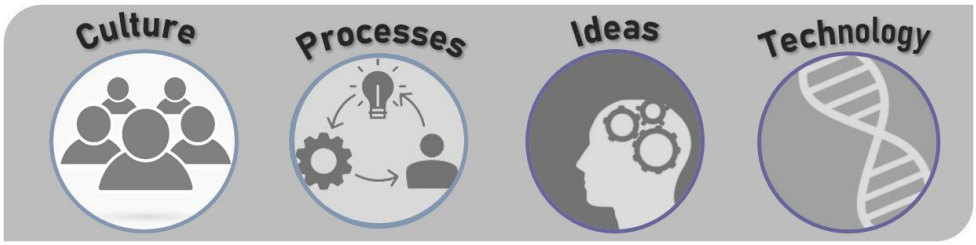
Dragon Innovation NEWSLETTER

This document provides information to XVIII Airborne Corps Soldiers and Civilians, across all units and installations, about the Corps' focus on building a culture of innovation.

XVIII AIRBORNE CORPS
DRAGON INNOVATION PROGRAM

Together, we will transform XVIII Airborne Corps to meet the challenges of today and tomorrow.

All of us, regardless of rank, are empowered to solve problems and identify opportunities to improve how we fight and how we support our people. We will establish the right culture, processes, and capture our initiatives in programs of record that will outlast all of us.



Scan the QR code

Account Registration

or click:
https://unum.nsin.us/xviii-airborne

XVIII Airborne Corps and the National Security Innovation Network (NSIN) have forged a community of problem solvers.

Have an idea to improve your unit, the XVIII Airborne Corps, or the Army?

Whether your idea solves a new problem or makes an old system better, we want to hear from you.

Submit your ideas today!

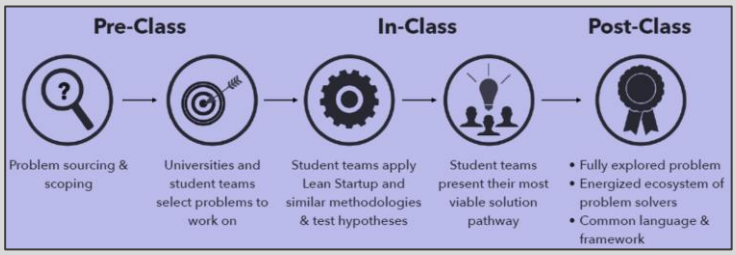
To Access the Dragon Innovation Program

1. Scan the QR code above.
2. Click the menu button.
3. Select 'become a member'.
4. Create account using email and password (no CAC required).
5. Click activation link sent to your email.
6. Sign in, fill in your info or skip.
7. Take a tour of the site or skip.
8. Start innovating!

NSIN

HACKING FOR DEFENSE (H4D)

H4D is a DoD program that brings talented engineering, business, and policy college students to work on important national security problems over the course of an academic semester.



Submit your problem here: https://www.h4d.us/submit-a-problem

Education Partnership Agreements

Having now signed six Education Partnership Agreements (EPAs) with academic institutions in close proximity to our units, XVIII Airborne Corps Soldiers and Civilians now have access to over 370,000 students and faculty from over 21 universities. This means access to 3D printing, laser cutting, milling, robotics, and AI opportunities.

Why is this important?

These partnerships allow us to form Soldier-Academic teams at the edge to tangibly improve our readiness and support our people.

If this sounds interesting, contact nathan.e.schnittger.mil@army.mil

Duke
Georgia Tech
MIDDLE TENNESSEE STATE UNIVERSITY
Syracuse University
THE UNC SYSTEM
VANDERBILT UNIVERSITY

Dragon Innovation Team Training (DITT)

What is DITT?

DITT is an eight-day virtual course partnered through NSIN to connect our Soldiers and Civilians with the nation's brightest academics. During DITT, XVIII Airborne Corps participants learn innovative skills for creative thinking, problem solving, and solution development. Each DITT serial has a unique course problem to bring positive change across our organization. DITT makes us better by educating our people, solving real problems, and driving an innovative culture across XVIII Airborne Corps.

DITT Serial 2202,
3-12 May 2022

DITT Serial 2202 is focused on improving predictability for our Soldiers, Civilians, and Families. America's Contingency Corps will be ready when the call comes!

Apply for DITT

DITT Serial 2203
Is Coming Soon:
Fall 2022

Want to attend?
Scan here!

3rd INF DIV – Rock Of The Marne

Marne Innovation Center

The 3rd Infantry Division is in the process of converting a former youth development center to the Marne Innovation Center. The Civilian Military Innovation Institute, via Army Future Command's Catalyst-Pathfinder program, is providing technical capabilities in the building to enable 3ID Soldiers to prototype innovative solutions to challenges faced at the unit level. This facility will also serve as a location on Fort Stewart for 3ID collaboration with our industry and academic partners.

GA Tech Capstone

GA Tech held its summer Capstone event on 25 April 2022 at which they presented the Tank Pulley System prototype, namely a modified design from the original Soldier-led concept proposed by LTC Harlan at Dragon's Lair 5. Two organizations have shown interest in manufacturing the prototype this summer for testing on an M1A3.

Division Innovation Team

Primary: MAJ Patrick Kerins at Patrick.kerins.mil@army.mil
Deputy: 1LT Christopher Aliperti at christopher.c.aliperti.mil@army.mil

10th MTN DIV – Climb To Glory

During DITT Serial 2201 which focused on vehicle fleet readiness, we developed a pilot program to grant GCSS-A access to 10-level maintenance operators so they can rapidly input vehicle faults. This solution has been implemented across the battalion to improve fleet readiness. To build on the success, a proposal to implement across the brigade is now being considered.

20 Mountain Soldiers received an introduction to data literacy on a USMA sponsored course. Data will be vital in the future fight to increase speed and inform decisions.

Our Education Partnership Agreement with Syracuse University has been officially signed. We look forward to working together on problems to improve how we fight and how we support our people.

Finally, we're working on an exciting proposal to empower innovation across the Mountain Team. Stay tuned for Mountain Innovation Teams Network. It is coming soon!

Division Innovation Team

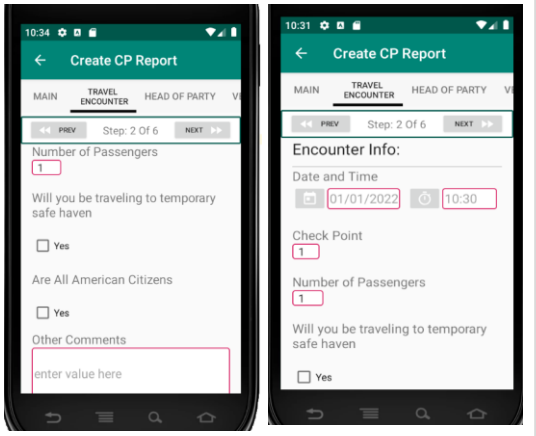
Primary: MAJ Mike Fitzgerald at michael.c.fitzgerald22.mil@army.mil
Deputy: MAJ Marydell Westman at marydell.v.westman.mil@army.mil

82nd ABN DIV – All The Way

The Airborne Innovation Lab (AIL), which is expected to open in June 2022, will provide the Soldiers and Families across Fort Bragg with access to technologies and collaboration space. This facility will also provide tools bringing innovative ideas to a prototyping stage and assisting Paratroopers with developing the skills to solve problems to optimize how we fight.

Additional programs and focus areas for the All American team:

- ✓ Application development: ATAK NEO App, Training Management App, LOGSTAT Reporting App, Leader Engagement Tool 2.0
- ✓ Fort Bragg Traffic Study: Center for Advanced Transportation Technology Lab (University of Maryland & Army Research Lab)
- ✓ Small Form Factor Cross Domain Solution Prototyping
- ✓ M777 Digital Fires Preservation Power Project
- ✓ Robotics Platoon Creation
  - UAS/Universal Controller No Cost Loan
  - MCDID Coordination for Equipment



ATAK NEO Tracking Application by 82nd Developer Team & Project Ridgway

Division Innovation Team

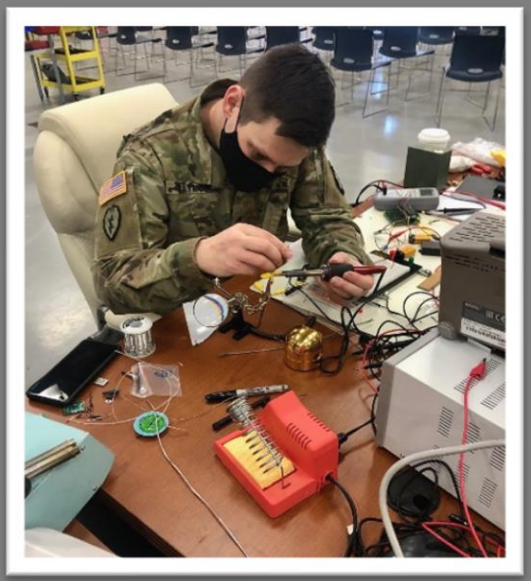
Primary: LTC Kyle Kirby at kyle.w.kirby3.mil@army.mil
Deputy: CPT Alexander Adkins at alexander.k.adkins.mil@army.mil

101st ABN DIV – Air Assault

Since the December 2021 grand opening of the EagleWerx Applied Tactical Innovation Center (ATIC), Eagle Soldiers have designed and validated working prototypes for:

- ✓ Low cost electromagnetic warfare targeting training aid
- ✓ Efficient, modular assistant gunner bag to feed ammunition
- ✓ Lightweight, low cost lane markers for breaches

Additionally, seven 101st Soldiers developed minimum viable products and defined product features through user evidence. Outcomes include low cost emitters as tactical deception tools and an edge power and energy generator using the Army Research Lab's and TDA Research's technology. Soldiers learned to do this through North Carolina State's H4X Lean Acquisition Innovation course, from which they graduated on 24 March 2022.



SSG Chris Taylor designs and builds the EW training aid that emits the same signature as an ASIP radio so he can realistically train EW targeting.

Division Innovation Team

Primary: MAJ Benjie Hall at benjie.s.hall.mil@army.mil
Deputy: CPT Tyler Meredith at tyler.j.meredith.mil@army.mil

Vehicle Solar Project: Green Energy Provides Additional Charge to Vehicle and Equipment Batteries to Reduce Maintenance Costs

The Vehicle Solar Project originated from a Soldier-led idea from CW2 Matthew Swift of the 82nd Airborne Division that was presented at Dragon's Lair 5 on 27 September 2021.

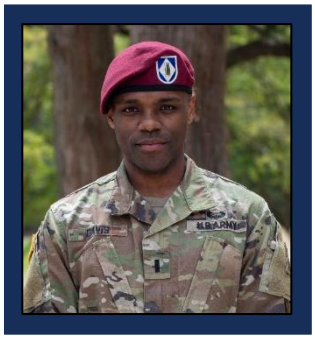
CW2 Swift, the Maintenance Chief for 3-319 AFAR, developed the concept of a vehicle solar install to mitigate the loss of vehicle battery charge over extended periods of equipment inactivity. A project was fully funded for both the kits and installation costs. Future testing will verify if this system also improves communications equipment usage while reducing fuel consumption due to vehicle idling to recharge batteries.

A summary of current progress on the vehicle solar project is as follows:

- ✓ Initial installs complete for a 3k and 60k generator, a DRASH unit, and two FLAs.
- ✓ Twenty additional kits are being installed on generators and HMMWVs.
- ✓ An additional 20 kits will arrive in early May 2022.
- ✓ The expected completion date of initial installation is the end of May 2022.

Thereafter, based on interim results, an assessment will be made if this innovative pilot project leveraging green energy will be further expanded across XVIII Airborne Corps.

MEET THE XVIII AIRBORNE CORPS DATA WARFARE COMPANY



1LT Antoine Davis
A native of Jacksonville, NC, 1LT Davis graduated from the United States Military Academy in 2019 with a Bachelor's in Information Technology. He previously served as a Battalion Chemical Officer in the 82nd Combat Aviation Brigade and joined Project Ridgway to lead the effort of augmenting the Warfighter with technological innovation at the Corps.

SGT Mark Arbuckle
Born in Lakewood, CA, SGT Arbuckle's technical background includes education in Information Technology, Electronics, Programmable Logic Controllers, and an Electrical Certification. He was motivated to join Project Ridgway to expand his technical skills and challenge himself. His skills will turn abstract concepts into tangible solutions for Soldiers.

SGT Cherokee Walters
Raised in Pickens, SC, SGT Walters joined the Army in pursuit of unique experiences and personal growth. His broad experience serving as a Fire Control Specialist and maintaining Military Intelligence systems led to his desire to inspire others during his own journey in software development as a member of Project Ridgway.

SPC Morian Senador
Born in the Philippines and raised in St. Augustine, FL, SPC Senador served in 44th MED BDE as a 68A, Biomedical Equipment Technician, prior to joining Project Ridgway. He holds a Bachelor's in Computer Science and found his passion for software development while pursuing his degree and working on side projects.

SPC Dustin Stiles
Raised in Tampa, FL, SPC Stiles joined the Army following a career in Full Stack Software in order to solve real world issues with lasting impact. Actively recruited to the Project Ridgway team, he will combine a background in technology with Army experience to support our Soldiers and optimize the readiness of XVIII Airborne Corps.

Data Warfare Company

The XVIII Airborne Corps Data Warfare Company, which was established on 1 April 2022, provides the foundation of innovation project management and development in support of America's Contingency Corps. Based at Fort Bragg, NC, it will be fully mission capable in July 2022. The force management process, facilitated by the XIII Airborne Corps G37 team, provides the opportunity to request approval through FORSCOM to establish an ad hoc provisional company in support of unique purposes or missions. The activation of the Data Warfare Company will set conditions for an enduring force structure which is empowered to provide data-centric problem solving to enable command and control and develop tools to improve how the XVIII Airborne Corps fights.

Tactical Innovation

Episode 53: "Innovation at the Edge"
The XVIII Airborne Corps discusses our culture of innovation and how to inspire another generation of thought leaders.

Listen Now

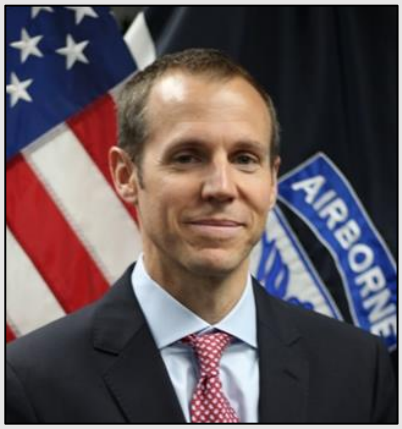
Dragon's Lair returns on 16 August 2022, co-hosted by Army Futures Command in Austin, Texas.

Submit your ideas today!

Winner will receive a MSM, school of choice, 4 day pass and chance to implement their great idea!

Thoughts from the XVIII Airborne Corps Chief Technology Officer (CTO)

Mr. Jared Summers



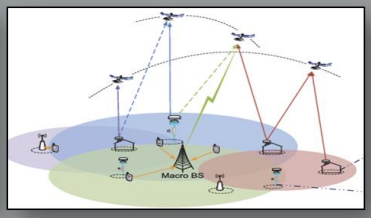
Our XVIII Airborne Corps CG and CSM clearly articulated their vision for innovation within America's Contingency Corps and our investments to date have been well aligned.

We have focused our efforts to solve problems, create opportunities, and allow our people to be present. Through these efforts we have learned that there are four critical dependencies below necessary for us to succeed in data centric warfare. Each has a critical role to enable us to be flat, fast, accurate, and lethal/effective. The good news is that we are well underway testing and demonstrating capabilities in each of these areas; however, we have a lot more to do, and we need each of you to help push us forward.

What We Learned: 4 Critical Dependencies

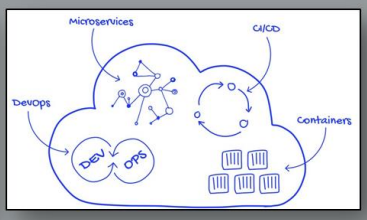
Trained People

IT Experts Must Learn to Transition & Trust



Diverse Dynamic Transport

Agnostic, Auto fail over, LEO/MEO, 5G



AI-Enabled Apps

Cloud-Native, Data-rich Mission Command Applications

Edge Compute

Lightweight Cloud Nodes in Expeditionary Environs

XVIII Airborne Corps Chief Data Officer (CDO) On Why Data Matters

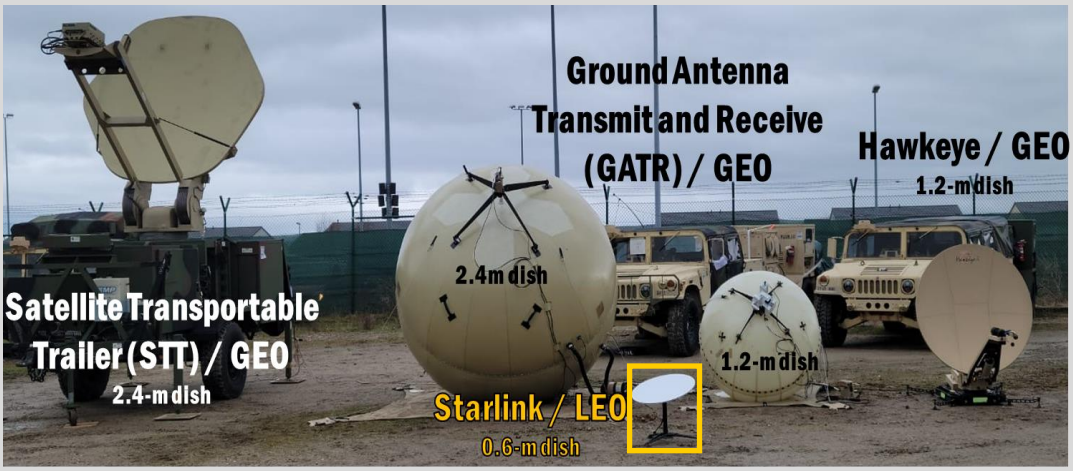
Mr. Jock Padgett

Data is a critical asset for both Army and Joint Forces. Providing the foundation for analytics, data has the potential to change the battlefield of the future as it offers rich insights into humans and systems, both friendly and enemy.

At XVIII Airborne Corps, we seek evidence-based decision making with data at the center point. A good analogy is that data is like water. First, we want it to flow freely and irrigate each organizational level to produce the best decisions. Second, stagnant data via slides and spreadsheets have the same negative effect as stagnant water. While data can be complex, it is a rich resource to improve informed decision making and provide insight at echelon across the institution.

Starlink

XVIII Airborne Corps rapidly deployed to Europe in February 2022, integrating nine Starlink terminals across three countries to provide increased bandwidth to tactical command posts (CPs) from the Brigade to Corps level. Lighter, smaller, faster and more resilient than geo-synchronous (GEO) MILSATCOM, Starlink proved to be a game changer. Starlink leverages thousands of low-earth-orbit (LEO) satellites and the global reach of the Internet to deliver secure and resilient data transport.

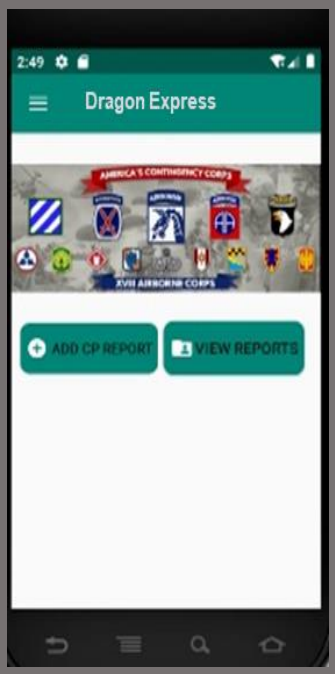


Starlink facilitated high speed data transfer between CPs, cloud instances, and home station servers. This hybrid architecture enabled the Corps to deploy small edge servers to run critical applications such as the common operating picture, while reaching the enterprise for email and portal.

XVIII Airborne Corps reliably used Starlink at echelon to connect to Maven and Intel Community clouds to provide real time data, enabling commanders with the unprecedented ability to see, understand, and anticipate developments in Ukraine and across Europe.

To optimize pre-existing network infrastructure for high speed data, the Corps worked closely with PEO-C3T, DISA, and NETCOM to realize Starlink's full potential at the tactical edge. This partnership yielded SIPRnet speeds of 59Mbps – 700% more than GEO MILSATCOM. Starlink and other commercial transport and Internet capabilities give the Army a foundation to rapidly establish the decision dominance required to fight tonight and win against peer adversaries in large scale combat operations.

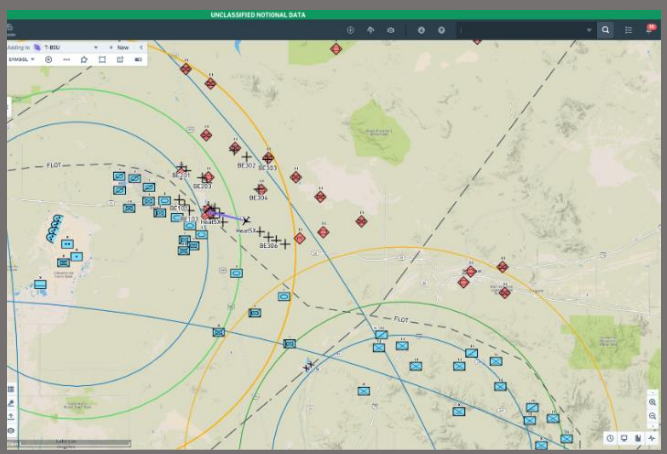
Dragon Express



In support of assurance and deterrence operations in Europe, Project Ridgway designed, coded, and deployed an application called Dragon Express to meet the immediate mission requirements of XVIII Airborne Corps and 82nd Airborne Division. Dragon Express consisted of a custom Android application hosted in the PM Net Warrior TAK environment to collect vital information and multimedia at the edge.

Single Pane of Glass

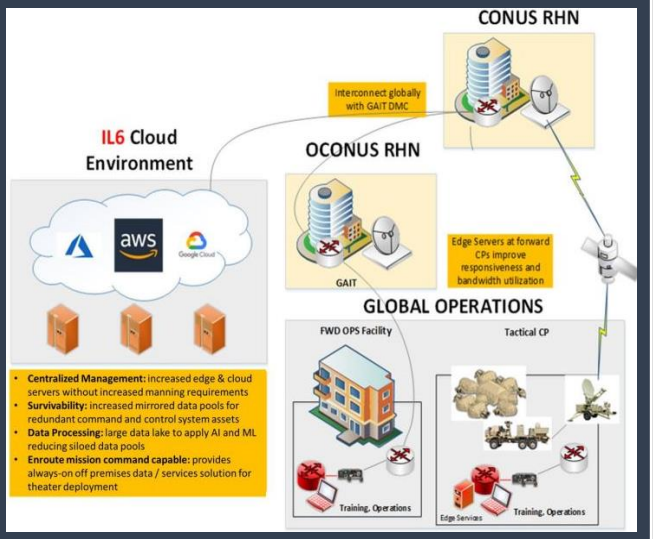
By integrating all warfighting functions' digital workflows into a single decision-support system, it accelerates decision dominance and ensures we can deploy, fight, win, and survive/thrive.

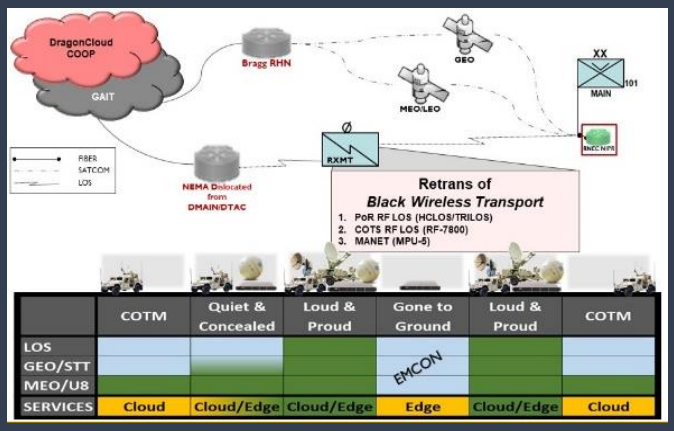


XVIII Airborne Corps in the Cloud

During recent operations, the 82nd Airborne Division and the 101st Airborne Division (Air Assault) validated the effectiveness of cloud capabilities for enabling distributed Mission Command (MC). The All Americans used their DragonCloud instances to rapidly establish communications during recent deployments to Poland.

The 82nd Airborne Division unequivocally demonstrated the value of DragonCloud-based MC in an expeditionary deployment. Cloud-based MC systems allow commanders to access data and resources needed to make decisions far faster than adversaries. Combined with exciting tactical network advancements offered by LEO technologies like Starlink, the first echelons of units deploying to austere locations can rapidly achieve decision dominance. The 82nd connected to Command Post Computing Environment (CPCE) in the cloud in minutes, instead of the hours required to transport and bring fielded physical servers online. A legacy app like CPCE in the cloud reveals the 'art of possible'; still, data-centric warfare requires cloud native apps. This represents a game changing capability that accelerates unit deployments and saves aircraft space by breaking dependencies on logistic-intensive legacy equipment that arrives late to need.





The Screaming Eagles used their instance of DragonCloud to train rapid transitions of MC between command posts (CPs) during Operation Lethal Eagle II. DragonCloud hosts the preponderance of the Eagle MC programs and mission data. This allows the Division staff and subordinate units to access data even when the CP that created or used the data is 'off the network' temporarily while re-positioning to a new location on the battlefield. During a Division CP move, the Division G3 and G2 maintained access to CPCE (hosted in DragonCloud) from a moving vehicle by using GRIPPS and mobile broadband kits (4G cellular). This innovative and intuitive capability enabled the Division G3 and G2 to continuously battle track the Division's deployment to the field, without hands on assistance from Signal Soldiers or signal equipment such as the Tactical Communications Node (TCN) and server stacks.

The All Americans and the Screaming Eagles will continue to explore innovative ways to employ cloud capabilities at the unit level while providing feedback to the Enterprise Cloud Management Agency (ECMA), PEO Command, Control, Communications-Tactical (PEO-C3T), and Network Cross Functional Team (N-CFT).

If you want more information on data training opportunities or you want to work on the Dragon Cloud, scan here!

coursera

GLOBAL ANALYTICS PLATFORM JSOC

We are an Army in transition that must win in the current environment and build for the future.

LTG Christopher T. Donahue, Dragon 6