NGB Block 3
Joint Incident Site Communications Capability (JISCC)

2013
NGB-J6-C4
JISCC Overview

• Customers:
  – First responders and emergency managers to federal authorities
  – Local Incident Commander and Military Commander to State command authorities
  – Military Commander to Federal command authorities
• Mobile, commercial off-the-shelf (COTS) communications hardware platform with the associated peripheral equipment
• Provides every State and Territory with NG presence an incident site reachback communications capabilities for enhanced C2 and Shared Situational Awareness (SSA) for Homeland Security, Homeland Defense and Domestic Operations (civil support) response missions
• Provides critical communications capabilities to National Guard missions
  – Large-scale pre-planned events (e.g. NSSE)
  – Man-made or natural disasters
  – Other civil support or humanitarian efforts
JISCC Overview

JISCC based on NORTHCOM deployable communication plans and meets FEMA Emergency Support Function 2 (ESF-2) Net-Centric communication capabilities in support of HS, HD and DSCA mission areas

• Net-Centric Communication Capabilities
  – Information Transport, Enterprise Service Access, Net Management

• Scenarios
  – HS/DSCA High Magnitude Earthquake (New Madrid, San Andreas…)
  – HS/DSCA Major, CAT 5, Hurricane (Camille, Agnes, Katrina…)
  – HS/DSCA Coastal Tsunami (Tonga, Sumatra, LaPalma Landslide…)
  – HD/DSCA CBRNE (JP 3-41)
  – HD/DSCA Terrorist Action (OKC Bombing, 911…)
  – HD/DSCA Continuity of Government
JISCC Overview

• Block 3 JISCC package equates to the NORTHCOM Level 2 response capability
  – Adding the J6 JTFX expansion package to the Block 3 Level II package expands the JISCC to match the NORTHCOM Level 4 response capability
  – Block 3 Level II will permit full network Domain integration with the WMD-CST UCS (if upgraded to UCS Change 3)
  – Block 3 Level II is designed to integrate into the NORTHCOM SATCOM network using the next generation iDirect Evolution hub at the two DISA Teleports used by the JISCC permitting enhanced bandwidth management not available with the Block 2 JISCCs using the current DISA Infinity hubs
Concept of Operation

STATE / FEMA

EMAC

JFHQ

Local and State Civilian Responders

Local Hospitals

Incident Commander

Federal Responders

Block 3 JISCC

HRF

BDE C2

Other Supporting Agencies/ Elements as Required

CoMSUPCEN Logistics Organization

NGCC

State JOC

DART

WMD-CST UCS

CASE

CBRNE TF/CERFP
Bn C2
DECON
S&E
Medical
FSRT (CERFP Only)

Other Supporting Agencies/ Elements as Required

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CASE

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Bn C2
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FSRT (CERFP Only)
Block 3 Modular Capabilities

- Configured to be tailored to meet specific mission requirements
- Ku SATCOM Reach-back to US NORTHCOM network with 1.2m Auto-Acquire Satellite Terminal
  - Supports two SIPRNET Users
  - Supports 15 NIPRNET and Commercial Internet Users (Expandable to 80 Users, JTFX with three remote expansion switch transit cases)
- NORTHCOM Level 4 capability
- Radio System Interoperability with Cross-Banding Capability

- Wireless IP Network
  - Mobility Controller
  - Point to Point Wireless Ethernet Bridge
  - Multiple Access Points (up to 2 Miles LOS)
- JISCC/USC Wireless Network Integration (DOMOPS Domain)
  - Point to Point Bridge Connecting
    - Block 3 system Domains
    - Block 3 system Domain to a Civil Support Team Unified Command Suite Domain (up to 25 Miles LOS)
Block 3 System Components

- **SATCOM (Rockwell-Collins)**
  - CCT120
  - iDIRECT Evolution Modem
  - 50W BUC
  - Antenna Control Unit
  - 2x Media Converter

- **UHF Repeater (RELM)**
  - High Power, portable repeater
  - 6 Cavity Duplexer (380-400 MHz)
  - UHF 20MHz division sub-band Amplifier (380-512 MHz)
  - 2x Digital Full UHF Keypad, 512 channel, 380-470 MHz
  - Mobile Antenna (380-460 MHz)
  - Antenna Mount Tripod (6-ft)
  - Mounting Base (N-Type Connector)
  - Power Supply (14V/10A)
  - Vehicle/Solar Charging Cable
  - KNG-P Series Programming Interface Kit/SW

- **Radio Cross-Banding (Raytheon)**
  - ACU-5000 IP with additional channel
    - 12VDC Power Supply (100/240VAC, 50/60 Hz) and Power Cable
    - PTT Handset with Coiled Cord
  - 2x TDK-Lambda AC/DC Power Supply
  - 12x RJ-45 to D15 Adapter
  - 12x Shielded Cat-5 Cable (one-foot)
  - 6x ACU Generic Radio Interface Cable (one end D15, other end un-terminated)
  - 6x ACU-M Interface Cable
    - XTS-5000 (VHF/UHF/800 MHz)
    - EF Johnson
  - 4x ACU-5000 Interface Cable
    - AN/PRC-152
    - AN/PRC-148
    - AN/PRC-150
    - AN/PRC-117G
    - Raytheon JPS
Block 3 System Components

- **Commercial Radio (ICOM/Harris)**
  - IC-R20 Communications Receiver
  - 6x CH100 Touch Screen Control Unit
  - 6x CH721 Control Unit Microphone
  - 6x Mobile XG-100M (138-870 MHz)
    - Antenna Element, 0db Multi-Band (136-870 MHz)
    - Mobile-Base Antenna Adapter (136-512 MHz)
    - Low-loss Magnetic Antenna Base
    - P25 Trunk/P25 Conventional
    - P25 Encryption
  - 4x Personality Manager SW
  - 2x 2m Ultima USB 2.0 A to Mini-B Cable

- **Tactical Radio**
  - AN/PRC-150 Radio (150W HF/VHF)
    - 150W PA
    - 28VDC/30A AC/DC Power Supply
    - Ground Strap
    - Audio, Control, Coaxial, Asynch Data (PPP) Cable Assemblies
  - AN/PRC-152 KVL3000+ Adapter Cable
  - Antenna Coupler / Whip Antenna Mount
  - AN/PRC-152(v)1c SINGCARS Waveform Tactical Radio (30-512 MHz)
    - UHF/AM G-A 225-512 MHz
    - UHF/AM HAVEQUICK I/II
    - VHF/FM ANDVT (30-224.999 MHz)
  - P25/HPW/DAMA Waveform SW Option
  - MPHH Field Programming Cable
  - 2-Bay AC Charger System
    - RF-5055PS AC/DC Power Supply
    - Tactical Speaker (9-foot cord)
Block 3 System Components

• Secondary Voice (Cisco)
  – 4x Unified Wireless IP Phone Instruments
  – 4x 7925G Power Supply (Li-Ion Battery)
  – 4x Unified Communication Manager License
  – 4x USB Type A(M) to mini USB B(M) cable
  – 4x Holster Carry Case
  – Multi-Charger charging stand
    ▪ + Battery Charger
    ▪ + Power Adapter
    ▪ VX-Series Secure VoIP Interface
      ▪ VX400 Bundle Incl. 4-port FXS, VX SW and 4x Call STU License
      ▪ VXVUE NMS Suite
      ▪ Advanced SIP Security License

• Antenna Equipment
  – 2x STI-CO Tri-Band Antenna System (VHF/UHF/800 MHz)
    ▪ 138-174/380-512 MHz Duplexer
    ▪ 138-174/746-960 MHz Duplexer
  – HF Whip Antenna kit (w/Ground Stake and Guy Ropes)
  – Low-Profile Broadband Antenna (30-512 MHz)
  – Ground Plane kit
  – BlueSky Maast Kit, AL2 (10m and 4m)
    ▪ 2x 4m Mast Guying kit
    ▪ 4x Universal Pole Mount (Dual Side)
    ▪ 3x Universal Pole kit (Single Bolster, 44-in)
    ▪ Universal Pole kit (Dual Bolster, 44-in)
    ▪ 2x Surface Wire Ground System
    ▪ 3x PolyPhaser SpikeGuard Coax Lightning Surge Suppressor
  – HF Crossed Dipole Antenna
  – Foldable High-Gain 240-318MHz UHF SATCOM Antenna
Block 3 System Components

- **Wireless Network Equipment**
  - Aruba Mobility Controller
  - 4x FIPS 140-2 Compliant WAP
    - AP-124 AC Power Adapter
  - 3x Indoor Omni-Directional 2.4GHz/5DBi AP mounted antenna
  - 2x Outdoor Omni-Directional 2.4GHz/5DBi Mast Mounted Antenna
  - 2x Outdoor Directional MIMO 802.11n 14DBi Antenna (3-element, polarized)
  - 2x 120/240VAC 30W Power Injector
  - 3x Rajant Bread Crumb

- **Network Router (Cisco)**
  - 3925 UC Security Bundle
    - 2x 4-port FXS and DID Voice Interface Card
    - AC Primary and Secondary Power Supply
    - Power Supply with POE
    - Cisco configure pro on Router Flash memory
    - 64-channel high-density voice/video DSP
    - IP Base, Security and Unified Communication Licenses
    - Cisco Communication Manager (100-seat license)
    - Console Cable (6-foot, USB Type A and mini-B)
    - Survivable Remote Site Telephony License
Block 3 System Components

- **Network Switch (Cisco)**
  - 3x3750-X 48-port Enhanced Ethernet Switch
  - 4xGigabit Ethernet SFP modules
  - USB to DB9 Serial Adapter Cable (1.5-ft)

- **IP Accelerator (Riverbed)**
  - 2x Steelhead 1050M Accelerator
  - P2P 45600 Full Integrated and Full Connectorized Link (4.5 GHz P2P Bridge)
  - FIPS 140-2 with 256-bit AES-Link (PTP600 Series License)
  - Dual Element Polarized Omni-Directional Antenna (4.5GHz, 2-Group Access Keys)
  - Broadband PTP400/600 LPU End Kit (Motorola)

- **Network Security (Cisco)**
  - 2xASA 5520 Adaptive Security Appliance

- **Encryption (L-3/Motorola)**
  - 2x Type I Encryption Devices (Talon Cards)
    - PCMCIA (KOV-26)
    - KOV-26 Ethernet Adapter
    - Tactical Hardshell Carry Case
    - DS-101 Fill Cable and SKL
    - KVL-4000 Encryption Key Variable Loader
      - KVL-4000 OS Hardening SW
      - Astro 25 Mode / AND Mode
      - AES Encryption SW
      - DES/DES-XL/DES-OFB Encryption
      - APX Portable Keyload Cable
      - Mobile Keyload Cable
      - Keyloading Cable Adapter
      - USB Comm/Charge Cable with Cup
      - RF Adapter Tool
Block 3 System Components

- **Video Teleconferencing (Polycom)**
  - 4xPVX 8.0 VTC SW License
  - 4xCisco IP Communicator 7.0 Soft Phone SW
  - Juniper Networks Odyssey Client SW for Window (FIPS)

- **Printer (HP)**
  - OfficeJet 7500A Wide-Format All-in-One

- **Power (APC)**
  - 4x Smart-UPS 1000 (Rackmount1U)
  - Smart UPS 1500 (Rackmount 2U)
  - 2x Smart UPS 2200 (Rackmount 2U)
  - 3x MK-2551 A/U Surface Wire Grounding System (Wenzlau Engrg)

- **Cases (Pelican/Hardigg)**
  - 2-in Lid and 5-inch Lid
  - 24-inch Depth
  - Airtight Valve
  - Lid Hangers
  - Lid Storage Pouch
    - 2x 9U MAC Rack Transit Case
    - 7U MAC Rack Transit Case
    - 2x 5U MAC Rack Transit Case
    - 8x MAC Rack Transit Case
Block 3 System Components

- **Server Equipment (Dell)**
  - 2xR510 PowerEdge E45645 Rackmount Server
  - Dual (2) Six Core Intel Xeon
  - 32GB 1333MHz DDR3 RAM
  - Perc 6i (256 Mb cache)
  - iDRAC6 express
  - 2x10K 600GB SAS HDD
  - 8X DVD CD-ROM
  - LSI 3081 Controller
  - 1U Rackmount KVM 15-inch LED Display
  - Tandberg RDX QuikStor 640GB Hi-Speed backup drive
  - Dual embedded Broadcom® NetXtreme II 5716 Gigabit Ethernet NIC
  - NEMA 5-15P to C13, 15A Power Cable (2m)
  - MS Window Server 2008 R2
  - 2x VMware vSphere 5 Enterprise Plus

- **PowerVault MD3220i Rackmount Server**
  - 6Gbps iSCSI
  - PERC H800
  - 12x 900GB 10K Serial-Attached SCSI 2.5-inch HDD (hotpluggable)
  - Four RJ-45 1Gb Ethernet Ports
  - NEMA 5-15P to C13, 15A Power Cable (2m)
  - MS Window Server 2008 R2
  - 2x VMware vSphere 5 Enterprise Plus

- **JISCC Operator Computers**
  - 4x Dell Latitude E6420 ATG Notebooks
    - i5-2540M
    - 4GB 1333GHz DDR3 RAM
    - 14-inch LED
    - Integrated Webcam
    - 8x DVD+/- RW
    - 802.11b/g/n Wireless
    - USB SmartCard Reader
Core Components

- Radio Interoperability
- Tactical VHF/UHF/TACSAT
- Tactical HF
- UHF Repeater

Components:
- Network
- Server & Storage
- JTFX Network Expansion
The UCS can support two organic connections at one time with its 4.5GHz Point-to-Point System. If Additional JISCC Block 3 Equipment is Provided it can add Additional End-Points.

The UCS and JISCC Block 3 End-Point Equipment Positioning is Mission Dependant. Both Systems are Interoperable and Configured for Dual Use.

Each Block 3 System has the required Distant End Equipment to Extend its Foot Print to Either a Block 3 System or a CST.
Access to Services

- DOMOPs Domain Attached Printers, Sensors, Storage
- SCAN/REMEDiate PASS
- SCAN/REMEDiate FAIL
- IA RETINA SCAN SCAP SCAN HBSS
- SCAN/REMEDiate PASS
- SCAN/REMEDiate FAIL
- SCAN PASS
- SCAN FAIL
- VLAN Attached Printers, Sensors, Storage
- "DIRTY" INTERNET (VLAN SEGMENT AND IPSEC TUNNEL THROUGH JISCC SATCOM LINK)

Networks:
- GUARDNET
- NIPRNET
- INTERNET
- JISCC Computer
- State Maintained JISCC-Configured Computer
- ANG/ARNG Maintained SDC Computer
- Incident Scene Civilian Responder Computer
<table>
<thead>
<tr>
<th>Table of Services</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>JISCC Configured Computer</strong></td>
</tr>
<tr>
<td>Commercial Internet HTTP</td>
</tr>
<tr>
<td>NIPR Internet HTTP</td>
</tr>
<tr>
<td>VPN Access</td>
</tr>
<tr>
<td>Security Services (IA Retina, SCAP, HBSS, Antivirus)</td>
</tr>
<tr>
<td>Windows Updates (WSUS)</td>
</tr>
<tr>
<td>VLAN Attached Shared File Storage</td>
</tr>
<tr>
<td>VLAN Attached Shared Sensors</td>
</tr>
<tr>
<td>VLAN Attached Print Services</td>
</tr>
</tbody>
</table>

*If IA Scans Failed*  
*If IA Scans Passed or No IA Scan Required*  
*Non-DOMOPs Domain Attached Resources Only*
## Table of Embedded Capabilities

<table>
<thead>
<tr>
<th></th>
<th>BLOCK 2</th>
<th>BLOCK 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIPRNET Users</td>
<td>15 Standard Configuration 80 Distributed over 2 locations if equipped with JTFX</td>
<td>15 Standard Configuration 80 Distributed over 4 locations</td>
</tr>
<tr>
<td>Commercial Internet Users</td>
<td>15 Standard Configuration 80 Distributed over 2 locations if equipped with JTFX</td>
<td>15 Standard Configuration 80 Distributed over 4 locations</td>
</tr>
<tr>
<td>IP Acceleration</td>
<td>Turbo IP/Whisper 400</td>
<td>Riverbed Steelhead 1050M</td>
</tr>
<tr>
<td>SIPRNET Users</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
| Wireless Access Points | 1 Local AP                                                               | 1 Local AP  
1 Remote AP  
3 Breadcrumbs       |
| Laptops Provided    | 8-16                                                                     | 4                                                                        |
# Table of Embedded Capabilities

<table>
<thead>
<tr>
<th></th>
<th>BLOCK 2</th>
<th>BLOCK 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone Services</td>
<td>POTS, DSN, PSTN, VOIP, Voice Acceleration</td>
<td>POTS, DSN, PSTN, VoIP, Voice Acceleration</td>
</tr>
<tr>
<td>Telephones Provided</td>
<td>5-25 VoIP Desk Phones</td>
<td>4 Wireless VoIP</td>
</tr>
<tr>
<td>VSAT</td>
<td>1.2m Auto-acquire with Infinity modem</td>
<td>1.2m Auto-acquire with Evolution modem</td>
</tr>
<tr>
<td>Backend Infrastructure</td>
<td>WSUS, WAIS, FTP</td>
<td>WSUS, WAIS, FTP, Retina, Managed AV, Group Policy, DNS, HBSS, Redundant Core Services,</td>
</tr>
<tr>
<td>Network Domain Interoperability</td>
<td>N/A</td>
<td>Interoperable between all Block 3 Systems and CST UCS with Change III</td>
</tr>
</tbody>
</table>
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<th><strong>BLOCK 2</strong></th>
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</thead>
<tbody>
<tr>
<td>Radio Interoperability</td>
<td>ACU-1000 with 2-VHF, 2-UHF and 2-700/800 Mhz Mobile Radios</td>
<td>ACU-5000 with 6 configurable Multiband Mobile Radios (VHF, UHF, 700/800 Mhz)</td>
</tr>
<tr>
<td>Handheld Portable Radios</td>
<td>3-25</td>
<td>N/A</td>
</tr>
<tr>
<td>Tactical UHF/ VHF</td>
<td>1 Multiband Portable</td>
<td>1 Multiband Portable with 50 watt Amplifier and TACSAT</td>
</tr>
<tr>
<td>High Frequency</td>
<td>1 Commercial</td>
<td>1 Tactical</td>
</tr>
<tr>
<td>Radio Repeater</td>
<td>1 Rack-mounted 100 watt Base Station</td>
<td>1 Portable 40 watt with out of band capability and battery back-up</td>
</tr>
</tbody>
</table>
NGB JISCC Points of Contact

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Backup Slides