

UNIFIED COMMUNICATIONS
NETWORK INFRASTRUCTURE AND SERVICES

STATEMENT OF WORK (SOW)

[PLACEHOLDER DATE]

[PLACEHOLDER DEPARTMENT]

[PLACEHOLDER BUILDING]

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BACKGROUND

Network Infrastructure and Services (NI&S) began the unified communications (UC) program as part of a comprehensive, technology upgrade initiative to improve the quality of the communications services offered to the university community. UC will provide Virginia Tech's faculty, staff, and students with modern telephone, unified messaging, contact center, conferencing, mobility, and collaboration services. Combined with related projects to upgrade the data network and communications cabling infrastructure, UC will provide Virginia Tech with advanced communications capabilities essential to supporting its research, instruction, outreach, administrative, and public safety activities.

The objectives for the four projects included in the technology upgrade initiative are summarized below.

1. UC Applications. Replace the 20+ year-old campus telephone and voicemail systems to provide Virginia Tech's faculty and staff with a robust set of telephone, unified messaging, mobility, and collaboration capabilities.
2. IP Network Upgrade. Replace the 10+ year-old data network equipment utilized to provide wired and wireless network access and connectivity to the Internet and other state, regional, and national research networks.
3. Cable Plant Upgrade. Replace the 20+ year-old communications cabling in more than 40 buildings on campus.
4. Facilities Upgrade. Construct or renovate more than 40 equipment rooms to support current-generation communications cabling and network equipment.

The level of activity for each project will vary on a building-by-building and department-by-department basis depending primarily on the condition of the existing communications infrastructure and the complexity of each department's technology requirements.

SCOPE OF WORK

The scope of work for the migration to UC includes all the planning, design, implementation, and training activities required to upgrade the telephone and voicemail systems for [Placeholder Department Name] at the [Placeholder Building]. Activities related to each of the projects are summarized below.

UC Applications

The UC Applications project will provide your department with access to modern telephone, unified messaging, contact center, conferencing, mobility, and collaboration services. The scope of work for your building includes all the planning, design, procurement, installation, and configuration activities necessary to:

- replace existing ROLM digital telephones with Avaya 9600 series IP telephones and/or Avaya 9400 series digital telephones (Reference the Final Design Document for details)
- replace existing ROLM analog telephone lines with Avaya Communication Manager analog telephone lines (Reference the Final Design Document for details)
- conduct telephone and voicemail training sessions

Note: The standard UC voice service provides users with enterprise-grade telephone, unified messaging, unlimited direct dial domestic long distance, and caller ID. Optional packages to meet mobility or collaboration needs are available for an additional fee.

IP Network Upgrade

The IP Network Upgrade project will improve the performance and reliability of wired and wireless network service in your building. The scope of work for your building includes all the planning, design, procurement, installation, and configuration activities necessary to:

- provide access-layer diversity for the IP network connections
- provide redundancy in the aggregation layer of the existing IP network
- support telephone devices over the existing IP network
- ensure the prioritized delivery of voice traffic over the existing IP network
- improved coverage and capacity for 802.11 wireless (Wi-Fi) services

Note: The standard wired access service will support speeds up to 100mbs. Enhanced wired access, which supports speeds up to 1000mbs, is available for an additional fee.

Cable Plant Upgrade

The Inside Cable Plant Upgrade project will ensure the communications cabling in your building is capable of supporting current-generation network applications and services. The scope of work for your building includes all the planning, design, procurement, installation, and configuration activities necessary to:

- modify the existing cable management system to accommodate new equipment and systems
- install new telephone cables between the new equipment and the cable management system
- install (cross-connect) cabling between the equipment room cable management system and the building's communications cabling system
- install new Ethernet jumpers for the IP telephones

Facilities Upgrade

The scope of work for the Facilities Upgrade project includes all the planning, design, procurement, installation, and configuration activities necessary to ensure the telecommunications rooms, cable pathways, power, and electrical infrastructure are capable of supporting current-generation network services and applications.

LOCATION OF WORK

The work described in this document will be performed at the [Placeholder Building].

Administrative training sessions will be conducted in Research Building 14 located at 1770 Forecast Drive in the Virginia Tech Corporate Research Center.

CUSTOMER RESPONSIBILITIES

To ensure a successful completion, [Placeholder Department Name] will be responsible for the following:

- Identify and provide a secure, designated, staging area for storing telephones and accessories prior to the scheduled migration.
- During the design phase of the migration, NI&S will identify whether the services in the [Placeholder Building] will be migrated concurrently or in phases. Phased migrations will normally be completed during regular business hours and will require a 15-20 minute interruption in both telephone and network service per user. Concurrent migrations will normally be completed outside of regular business hours and will require a 2-6 hour interruption in telephone service.
 - If your services will be migrated concurrently, NI&S will need a room large enough to accommodate up to 10 people for a 48-hour period starting the day prior to the **Service Migration Start Date**.
 - Ensure all departmental users are informed about the service interruption associated with the migration process.
- Provide NI&S engineers and technicians with access to all service locations in the building.
- Designate points-of-contact who are authorized to make technical and financial decisions on behalf of the department.
- Designate a point of contact who will be responsible for signing for the receipt of accessories and equipment. Accessories will be delivered by the NI&S on or before the date of the service migration. NI&S will contact the individual to arrange a time and place for the delivery of the accessories. If the designated contact is not able/available to sign for the accessories, then the accessories will be available for pickup at the Student Services building. Your designated point of contact is: [Placeholder Contact]@vt.edu.
- Identify and provide escorted access to any sensitive, restricted, or hazardous areas in the building. Services located in sensitive, restricted, or hazardous areas should be identified in the comments section of the design application.

- Ensure all departmental users are informed about the available training sessions and support content available on the NI&S website at:
<http://www.nis.vt.edu/uc/documentation>.
- Ensure all departmental personnel are aware that NI&S requires an ICR for all phone moves. Failure to coordinate phone moves with NI&S could adversely impact our ability to provide emergency responders with accurate location information for E911 calls. A 911 Disclosure Document will be forthcoming.
- Department Heads are responsible for all voice services not associated with a user, e.g. common area phones.
- Coordinate all change requests with the NI&S Ordering and Provisioning group.
- Identify all private networks prior to completion of the design phase of the project.
- Following completion of the project, NI&S will notify department heads when rogue access points are discovered on any of the department's wired access connections. Department Heads will be responsible for the removal of all non-sanctioned 802.11 wireless access points, routers or Wi-Fi Mobile Hotspots.
- Submit all questions or concerns related to the project to the NI&S Ordering and Provisioning group.
- Manage the association between services and service users using the Customer Online Access (COLA) service management application at:
<https://cola.cns.vt.edu/apps/icr/icrupdateserviceuser.action>.

EXPENSES

Services

The one-time infrastructure assessment fee covers the standard planning, design, implementation, and training expenses associated with the UC program. The infrastructure assessment fee entitles [Placeholder Department Name] to upgrade all existing voice and wired access services.

Based on information gathered during the design phase of the project, the following **new** services will be billed to your account. The one-time fee will be billed along with other migrations costs. The recurring monthly fee will be on your monthly bill.

One-Time Fee for New Services

Service	Quantity	One-Time Fee	Total
Total One-Time Fee			

Recurring Monthly Fee for New Services

Service	Quantity	Recurring Monthly Fee (Per Service)	Total
Total Monthly Recurring Fee			

Telephones

The voice service upgrade includes an Avaya 9611g IP telephone and licensing for enterprise telephony and message features for each existing, active, voice service. Digital telephones may be appropriate for users or locations that do not have an existing wired access service or have critical-availability service requirements. Upgrades to other IP or digital telephone models can be accommodated for a nominal upgrade fee.

Additional information on all supported telephone models and upgrade pricing is available on the NI&S website at: <http://www.nis.vt.edu/uc/devices>.

Based on information gathered during the design phase, the following telephone upgrades will be billed to your account.

Extension	Model	Upgrade Fee
Total Telephones Cost		

Accessories

Optional accessories such as headsets, button modules, longer handset cords, and wall-mount telephone brackets are not included in the one-time infrastructure assessment and must be paid for by [Placeholder Department Name]. Based on information gathered during the design phase, the following accessories will be billed to your account.

Delivered with Phone

Item	Quantity	Price	Total
Total Accessories Delivered with Phone Cost			

Delivered to Customer Contact

Item	Quantity	Price	Total
Total Accessories Delivered to Contact Cost			

SCHEDULE

Your building is scheduled for a [Placeholder Migration Type] migration.

Your service migration will occur in the coming weeks. NI&S will contact you after the receipt of the signed SOW to discuss potential migration dates. Individual services will normally be migrated during regular business hours with minimal interruption to service for most users.

Information regarding the schedule for end user telephone and unified messaging training will be provided to the designated points-of-contact prior to deployment. Training will be provided at the NI&S training facility, located in Research Building 14, and will also be provided online via Scholar.

PROGRAM GUIDELINES

1. All voice, messaging, and contact center services listed on the Final Design Document will be upgraded as part of the UC Program.
2. Changes to the software configuration for UC voice, messaging, mobility, contact center, or collaboration applications will be made at no additional charge for up to 60 calendar days after the **Service Activation Date**. Change requests should be made by the department's communications or network liaisons to the NI&S Ordering and Provisioning group.
3. New voice services that are activated after the UC Project **ICR Received Date** and before the **Service Migration End Date** will be converted at no additional charge but will be assessed an early termination fee if they are deactivated within 180 calendar days of the **Service Activation Date**. The early termination fee will be \$180 minus \$1 for every full day of active service.
4. New wired access services that are activated after the UC Project **ICR Received Date** and before the **Service Migration End Date** will be converted at no additional charge but will be assessed an early termination fee if they are deactivated within 180 calendar days of the **Service Activation Date**. The early termination fee will be \$180 minus \$1 for every full day of active service.
5. Replacement of analog devices (modems, fax machines, analog telephones, credit card readers, etc.) is out of scope for the UC Program. Most existing analog devices should be compatible with the new analog service. Replacement of incompatible analog devices is the responsibility of the department whose services are being converted to UC.
6. Ownership of telephone devices transfers from NI&S to the department on the **Service Activation Date** of the associated voice service.
7. New telephones will have a one-year warranty from the **Service Activation Date**.
8. NI&S will provide a report detailing the phones and accessories delivered as part of the migration on the COLA website at:
<https://cola.cns.vt.edu/apps/department/inventorysearch.action>.
9. NI&S maintains a list of communications liaisons for each department at Virginia Tech. The role of the communications liaison is to serve as the point-of-contact for all of the department's billing, provisioning, service management, and audit activities related to NI&S-provided communications services. NI&S will coordinate all UC migration-related activities with the department's communications liaison unless otherwise requested by the Department Head. Department Heads may request a different point-of-contact by sending email to the NI&S Ordering & Provisioning group at design@cns.vt.edu.
10. NI&S will require a signed statement of work attached to a signed ICR prior to beginning the service migration process.
11. Provisioning of UC voice services on network equipment not managed by NI&S (private networks) is not supported.
12. Only cable plant currently associated with an active voice or wired access service will be upgraded. While we are cabling in your building, installation of new cable plant for future use will be installed at 50 percent of the standard rate. The number of allowable "pre-wires" will be based on 10% of the total current Voice Services + Wired Access Services (does not include machine room connections), with a maximum of 15. The current standard rate for new cable installation is \$300.

13. Departmental requests for relocating telecommunications outlets will be assessed on a case-by-case basis. Relocation requests that require significant increases to the time or materials required to upgrade the cable plant must be submitted prior to the completion of the design phase and will be billed on a time and materials basis.
14. NI&S will provide a list of the approximate location of all non-sanctioned 802.11 wireless access points, routers or Wi-Fi Mobile Hotspots (MiFi's) to the department.

FUTURE CHANGES

1. A new model for wireless and remote access services for faculty and staff will be implemented in the future. CNS will publicize specific details about the new model and an effective date in ample time for departments to perform any necessary fiscal planning.

KEY TERMS

1. **Service Migration Start Date** - the date when the first service in a particular building is migrated
2. **Service Migration End Date** - the date when all your department's existing services in a particular building have been converted to UC services
3. **Service Activation Date** - the date when a particular service has been activated
4. **Service Deactivation Date** - the date when a particular service has been deactivated
5. **Census Date** - May 2, 2012
6. **ICR Received Date** - the date on which we receive the signed ICR with the attached SOW
7. **Private Network**- any network equipment (Ethernet switches, routers, firewalls, wireless access points) not centrally managed by NI&S

ACCEPTANCE

Approved by:

Date: _____