A Message from the CIO

Dear Staff,

Thank you for your continued support and understanding during this transition period. Your dedication, hard work and perseverance will allow the Division of IT to thrive despite the challenges ahead. As we move forward, I know that we can pull together as a team and continue to move the needle of the university forward.

I encourage you to reach out to me, my senior team, your manager and/or HR if you have questions or need assistance during this time. The George Washington University is a great university and the Division of IT is filled with exceptionally talented people, and I know we will support and encourage each other through this time of transition.

Thank you,
Dave Steinour

UPDATES FROM...

OFFICE OF ENTERPRISE INFORMATION SERVICES

Approval Routing Service

The Division of IT launched an Approval Routing Service on March 16th that allows departmental users to route electronic data or documents for review and approval within the university’s TeamSites platform. The service uses Nintex Forms and Nintex Workflow software. As a self-serve offering, the intent is to empower users by providing training and easy-to-use software, which allows them to both design solutions and train other staff members within and outside of their departments. Nintex provides several out-of-the-box templates for common business scenarios, which can be easily modified to meet specific business requirements. Power Users can develop their own templates, which can be used by other members across GW, and can be modified to add process specific variations.

The Division of IT has identified Power Users within the Business Management and Analysis Group (BMAG) and the Systems, Analytics and Insights Group (SAIG) who will help with the delivery of this service. The Power User base is expected to grow organically across the university over time as the service is socialized.

The Division of IT has successfully rolled out three pilots prior to the launch of this service:

• Contract process automation for Division of IT Contracts Office (William Koffenberger/Punitha Kelly/ Lori Tait)
• Purchase process automation for Division of IT Finance (Tammy Hollingsworth/Regina Mays/Nick Martin)
• Telecommute Agreements automation for Division of IT HR (Rea Childs)

Continued on page 2...
OFFICE OF ENTERPRISE INFORMATION SERVICES

The Division of IT is also working with Sara Melita and the Office of the Provost to automate and centralize the Contracts process used by various schools and departments across the university.

Who is a Power User?
A Power User is an individual who becomes a specialist in designing Nintex Forms and Nintex Workflows to automate business processes. She/He socializes the service and trains and mentors people within and outside of their department.

A Power User should:
1. Read the Getting Started Guide, FAQs and Learning Resources on TeamSites
2. Complete training courses provided by TekDog (provided once you register to become a Power User. See instructions below)
3. Be able to make SharePoint out-of-the-box software configurations. (As explained in TeamSites FAQ)
4. Be able to read and create Visio diagrams.
5. Participate in testing Workflows after software upgrades/updates.
6. Share and contribute templates that automate common business processes across the university

Interested in becoming a Power User? Please send an email to ithelp@gwu.edu with a heading “Power User Request for Approval Routing Service” and you will receive instructions on how to become a Power User.

For additional information on this service please contact: Anna Cochon de Lapparent (Service Owner), Meenakshi Sharma (ERP Strategic Lead), Shailaja Sadam (Sr. ERP Analyst), Roberta Reed (Sr. ERP Analyst) or Rebecca Lavey (Business Analyst).

Office of Business Intelligence Services

PI Dashboard making news!

Principal Investigator’s Dashboard from George Washington University Division of Information Technology Business Intelligence Services

We are happy to report that the Principal Investigator’s Dashboard was one of the four innovative tools receiving the most online votes in the Northern Virginia Technology Council (NVTC) Destination Innovation competition and has advanced to the in-person portion of the competition on April 29!

Please click here to view the article from Capital Business on Week 1 winners.

In Round 2 of the competition, we will have an exhibit table at the event to showcase the PI Dashboard and network with attendees. We will give a short pitch about the PI Dashboard including why it is disruptive and how it solves a real-world problem. After all four
OFFICE OF BUSINESS INTELLIGENCE SERVICES (CONTINUED)

of the competitors have presented, event attendees will vote via text message for their favorite product. The two products with most votes from the audience will advance to the final round.

On behalf of the Division of IT, we want to thank each and every one of you who voted in the first round and helped GW advance to the second round!

In related news, on March 20, 2015 at the John Hopkins University, Dr. Jennifer Wisdom, Associate Vice President of OVPR and Jelena Roljevic, Assistant Vice President for Business intelligence Services presented at the Society of Research Administrators (SRA) International Chesapeake Chapter meeting in the category of Analytics Technology.

The theme of the meeting was Research Administration. Highlights included Keynote Speaker Dr. Adam Reiss, 2011 Nobel Prize recipient in Physics, and over 10 concurrent sessions including updates on Uniformed Guidance.

GW's PI Dashboard presentation generated lots of interest from many research institutions including John Hopkins University and the University of Maryland. To learn more about SRA, details about PI Dashboard presentation and other topics discussed at the conference please follow the link below: http://srainternational.org/meeting/chapter/2015-chesapeake-chapter-meeting/concurrent-sessions

UPDATE FROM...

OFFICE OF COMMUNICATIONS AND MARKETING

Division of IT Instagram Account

The Division of IT has started an Instagram account as an additional communication outlet to the GW student body in a way that is new, fun, creative and exciting. The Division of IT Instagram will showcase technology and services through images, giving the GW community more insight into the Division and the services we bring to GW. Have ideas for posts? Send them to Rachel Blevins at Rachel_k@gwu.edu. Have an Instagram? Follow us @GWDivIT.

UPDATE FROM...

OFFICE OF PLANNING AND STRATEGIC INITIATIVES

One Day Project Management Conference at The George Washington University

The date for the PPMO organized one-day Project Management Conference has been postponed until Fall 2015. The new date will be announced as soon as possible.

If you are interested in attending the conference, have questions and/or need more information, please contact Tielor Robinson at tdrobinson@gwu.edu, Leke Adetunji at adetunjl@gwu.edu, or Christina Griffin at cgriffin@gwu.edu.

FY2015 Divisional Goals

The Division of IT FY15 goals have been posted to the Intranet. Please visit the Division of IT FY15 Goals page to review the goals.

Employee Referral Program

The Employee Referral Program is a way for all Division of IT staff to contribute to the continued success of the organization. If you know someone who would be a good addition to the Division of IT team and they meet the qualifications for an eligible open position, it may be worth $1,000 if you refer them for employment and they are hired. If your candidate is hired you will be awarded $1,000, minus applicable taxes, after six months of continued successful employment of the referred individual. Please visit the Division of IT Intranet for more information and to see the current eligible postings.

Congrats on your promotion!

- Wesley Hancock, Linux Systems Engineer
- Shylaja Adimoolam, Senior Identity and Access Management Developer

New Staff

Julian Hough
Office of Service Delivery and Communications

Julian joined the Division of IT on March 31, 2015. He previously worked for a non-profit operated by Georgetown University as the Assistant Coordinator for Operations. In his new role at GW, Julian will be working as a Jr. Support Analyst within the IT Help Desk. He can be reached on the Virginia campus at 571-553-3584 or jhough@gwu.edu.

The State of the Division of IT newsletter is distributed by the Division of IT’s marketing and communications team. If you have been left off a list, have information that you want included in the next edition or have comments, questions or suggestions, please contact Rachel Blevins at 4-2138 or rachel_k@gwu.edu.

Continued from page 2...

Continued on page 4...
Customer Portfolio Meetings

The Division of IT Project and Portfolio Management Office (PPMO) is working to establish Customer Portfolio Meetings with key stakeholder groups at the university. The purpose of the meetings is to conduct a regular review of Division of IT projects that are sponsored by a customer area (and/or have an impact on that customer area), evaluate and prioritize new project requests and identify opportunities for the Division of IT and the customer to align on goals and strategic plan items. The Customer Portfolio Meetings are already in progress for several key stakeholder groups. The portfolios and meeting notes can be found in the Division of IT Customer Portfolio TeamSite for your reference.

The Portfolio Contacts List in the team site reflects the current Division of IT Customer Portfolio Meetings and respective Portfolio Lead, this is the person(s) within the Division of IT who is primarily responsible for facilitating the Customer Portfolio Meetings and coordinating portfolio management efforts for the respective customer portfolio.

For additional information please contact Marcy Day at mkremer@email.gwu.edu.

Projects Lessons Learned Repository

The Division of IT Project and Portfolio Management Office (PPMO) team is working to create a solution for storing and searching lessons learned data. The team has selected TeamSites as the platform for the repository. Our goal is to make lessons learned data easily retrievable and sortable for all of the Division of IT. This will assist us with improving our overall performance on projects by making this data easier to utilize for project kickoffs and planning.

The next step is to work on the search and reporting functionality. We will communicate progress and a timeframe for implementation in subsequent newsletters.

22nd GENI Engineering Conference and US Ignite Application Summit

The 22nd GENI Engineering Conference and US Ignite Application Summit was a success! Presented at GW by the Division of IT, Office of the Vice President for Research and the School of Engineering and Applied Science, the conference brought together innovators showcasing the latest technology and the future of the Internet.

The conference was featured in GW Today and The New York Times. In addition, a GW student competition was held in conjunction with the conference, sponsored by Cisco. Five student teams competed in the competition to design, build and launch a unique application using the GENI infrastructure. The winners of the competition were announced by Dean Dolling during the Demo Night of the conference held at the new Science and Engineering Hall.

To view photos from the conference, including behind the scenes shots of Division of IT staff doing great work, please visit: http://www.caaren.org/GEC22_photos.

To learn more about GENI, please visit www.geni.net.
Metrics and Management Reports

The Service Delivery and Communications team recently released reports and visualizations that speak to four key IT management metrics. These metrics are the culmination of information gathered from a market basket study and connecting with 39 line-managers in the Division. These metrics, detailed below, are meant to provide a stepping-stone for managers as they look to more clearly capture and communicate their work. We recognize that this is not a complete list of metrics for any one group. Instead, these metrics represent the requests from the majority. Each metric was requested by at least nine and as many as 16 groups from across the Division.

1. Metric #1 – Number of Incidents Processed by Status
2. Metric #2 – Number of Work Requested Processed by Status
3. Metric #3 – Ticket Lifecycle
4. Metric #4 – Hours by Project

Access to these metrics is provided through three new Remedy reports and one new PPM report. In Remedy these reports can be found at: http://go.gwu.edu/ITSM. The new reports are Incident, Change, and Work Order. Each report can be adjusted to the date range and management group of the user’s choice. Additionally, the reports deliver both the underlying data and a graphic that helps the viewer gain a greater understanding of the data. Finally, the PPM report will be available through the internal Tableau server in the near future. It includes a variety of options for reviewing hours by project, by individual, and by time period. We look forward to seeing how managers utilize these new reports to assess performance, improve services, and add credibility to the work the Division is doing.

A special thank you to the following individuals for their support in this endeavor:
- ITSM team: John Marshall & Thien Nguyen
- BI team: Mike Wolf & Roger Saplan
- SDC team: Charlie Spann & Chris Megill
- PSI team: Theo Chaojareon

The Division’s Presidential Administrative Fellow, Kelly Bartz, presented on these metrics and provided instructions for these reports on March 24. Please do not hesitate to contact her at kbartz@gwu.edu with any questions or concerns.

SANS Capital City 2015 Conference

The SANS Institute will be hosting their Capital City conference at the Capital Hilton in Washington, DC July 6 – 11, 2015. This event offers excellent training courses on a variety of security topics, including Cloud Security, Web Application Security and Penetration Testing. ISCS has training dollars remaining with the institute, so this is a great opportunity to stretch our training budget and add some security skills. If you are interested in attending, please email Andre DiMino at adimino@email.gwu.edu. For more information about the conference, visit SANS Capital City 2015.
New Critical Vulnerability Patching Policy

Patching systems and servers is an essential part of ongoing security and risk management. Up until now, when a critical vulnerability was reported and a new patch is released, there had not been a policy to require the installation of these patches. To address this gap, ISCS has worked with CES, EIS, SES and other operationally focused teams within the Division of IT to develop a critical vulnerability patching policy.

This policy creates a 30-day window to patch systems that have critical vulnerabilities. This policy applies to systems that are managed and maintained by the Division of IT as well as those systems that are under the management of 3rd parties. This policy will give the Division of IT the ability to mandate this as a requirement when entering into agreements with service providers.

The policy will be available on the Intranet under left hand menu on the front page by clicking on the policies and procedures link.

This policy is still in the final stages of approval but we can always make changes to it down the road as necessary. If you have any questions or comments, please contact Brian Markham. If you have any thoughts on other policies, Division of IT or university-wide, please feel free to share those as well.

Upcoming Audits

It's everyone’s favorite time of year - no not baseball season - audit season! As we kick off our external financial statement audit and PCI assessment please keep in mind the proper protocol for working with auditors. If you are contacted by someone claiming to be an auditor, please do not respond. All requests are to come from either Brian Markham or Noor Aarohi. Using a standard protocol for requesting documents and interviews ensures proper tracking and fulfillment of all audit requests. It also saves you time and limits the risk of scope creep.

When you do get an appropriate request, please do your best to respond as soon as possible. This way if there are any challenges in providing that documentation, we can address them in a timely manner. Keeping the auditor’s work flow moving at a steady pace helps build good will during the audit and lowers our overall level of effort required to support them.

As these audits kick off in late April, please use Brian and Noor as a resource to address any concerns you may have.

Code4Life Update

Many of your Division of IT colleagues have been volunteering with Code4Life, an after school program that teaches basic computer programming skills to middle-school boys and girls in the D.C. public and charter school systems. The program runs for 8 consecutive weeks and is held for 2 hours one day a week.

Volunteers are part of a team, and teach previously developed modules to the students. Volunteers do not need to have previous knowledge of the programming code in order to teach the class.

Currently, six GW staff members serve as facilitators for the program. Each week, one staff member teaches the lesson while the rest work closely with the students. The lessons are a combination of hands-on computer work, as well as more interactive exercises around the classroom.

“It’s great to see the students engaged and working to learn a new skill set,” says Christina Griffin, “they are all very bright, and are typically one step ahead of us in the lesson, or are figuring out something new on their own!”

The Economic Growth DC Foundation, in partnership with Accenture, hopes to expand the Code4Life program in 2015. The Division of IT has been working with the foundation to help develop curriculum. Anjana Ghosh, Margaret Roland and Andrew Gallo have adapted Khan Academy content for use in the Code4Life program. The new curriculum is focused on web page designs using CSS.

The current program runs through the end of April, with plans to continue the program next semester.

"I have enjoyed the experience," says Kathleen O’Siodhail, "I spend much of the time smiling to myself at the antics [the students] get up to. Such bright and inquisitive minds are a joy to be around, as is all the energy."

Interested in volunteering? Contact Rachel Blevins at Rachel_k@gwu.edu.
Continued from page 6...

IDENTITY AND ACCESS MANAGEMENT SERVICES (CONTINUED)

we anticipate having plenty of time to explore configuration issues and also cover baseline practices for participating in the federation.

The workshop will offer the chance to:

- Install a prototype Shibboleth identity or service provider in a virtual machine environment
- Discuss how to configure and running the software in production
- Learn about integration with other identity management components such as LDAP and selected service providers

Knowledge of identity management concepts and related implementation experience is strongly recommended. For more information and a link to register, please visit: www.incommon.org/shibtraining.

To learn more about Shibboleth, see the Shibboleth wiki at wiki.shibboleth.net. More information on federated identity can be found at www.incommon.org.

UPDATES FROM...

OFFICE OF SERVICE AND CONTRACT MANAGEMENT

Contracts Update

As you work toward planning for future projects involving purchase agreements, software licenses or professional services engagements, the Division of IT contracts team asks you to keep the following in mind:

Internal Division of IT Reviews
- **Finance Director, Financial Services**: reviews for any financial issues or concerns and for funding approval
- **HR Client Partner**: needs to be notified if the vendor will be onsite doing business or accessing GW systems so that background checks are completed, if needed
- **Information Security and Compliance Services (ISCS)**: review is needed when we are dealing with confidential information and/or the vendor is accessing GW systems
- **Other Division of IT Managers**: A Division of IT manager may be asked to review an agreement for any IT issues or concerns that are specific to his/her area of expertise

External GW Department Reviews
- **Office of General Counsel (OGC)** review is required for a contract that has signature lines for both parties or has terms/conditions.
- **Office of Risk Management (Risk)** may require review of insurance requirements.
- Others: External Relations, Facilities Services, Real Estate (if needed)
- **Procurement** – note even if not directly involved in contract reviews they review purchases made with signed contracts or agreements
- **Signatories who can approve** include the CIO, Provost, EVPT and Deputy EVPT

A note concerning GW signature authority
Except for the specific delegation of authority to certain university representatives, all proposed agreements, letters of understanding and contracts shall be sent to the Office of the Executive Vice President and Treasurer for signature. The bylaws of the university specify that only the President and the Executive Vice President and Treasurer, or their designees, are authorized to enter into agreements between the university and another party.

Monthly Voice Systems Statistics

<table>
<thead>
<tr>
<th>Voice Systems Users</th>
<th>Foggy Bottom</th>
<th>VA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inbound Calls</td>
<td>289,379</td>
<td></td>
</tr>
<tr>
<td>Total Outbound Calls</td>
<td>385,140</td>
<td></td>
</tr>
<tr>
<td>Total Calls</td>
<td>674,519</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voice Mail Users</th>
<th>Foggy Bottom</th>
<th>VA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inbound Calls</td>
<td>144,501</td>
<td></td>
</tr>
<tr>
<td>Total Messages</td>
<td>28,856</td>
<td></td>
</tr>
<tr>
<td>% Incoming Calls</td>
<td>19.97%</td>
<td></td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Modular Messaging</th>
<th>Foggy Bottom Modular Messaging</th>
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</thead>
<tbody>
<tr>
<td>Total Inbound Calls</td>
<td>144,501</td>
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<td>28,856</td>
</tr>
<tr>
<td>% Incoming Calls</td>
<td>19.97%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Virginia Science and Technology Campus (21,806 total calls)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left message (3,770)</td>
</tr>
<tr>
<td>Retrieved Messages (2,825)</td>
</tr>
<tr>
<td>Dialed Extension (5,183)</td>
</tr>
<tr>
<td>Did Not Leave Message (10,028)</td>
</tr>
</tbody>
</table>
Delegated Signature Authority for the Chief Information Officer
In very specific, limited capacity, the EVP&T has authorized delegation of signature authority to the CIO for Division of IT agreements which include the following:

- Statement of Works/Orders under Master Service Agreements
- Non-Disclosure agreements specific to the Division of IT
- GW Abolishes PIDM Programs (GWapp) agreements

Please note that contract routing sheet approvals, even for agreements outside the Division of IT, are signed by the Division of IT CIO, Dave Steinour. If you are asked how we review and approve agreements that originate from academic and other departments, please convey our process can be initiated with a simple email to our contracts team (itconmgt@gwu.edu). As with other agreements, the contracts team coordinates review by various Division of IT groups and teams for service, vendor / technology, compliance and performance concerns. As the Division of IT contracts team coordinates these reviews, they will summarize and provide an overarching recommendation to the CIO concerning the agreement. Once Dave feels that the reviews are appropriate and that he is comfortable with the agreement moving forward he will sign the routing sheet and return he packet to the contracts team for further processing. Please help us as you work with other units across GW to convey this process, our point of contact and coordination through the Division of IT contracts team and ultimately that Dave should be the Division’s signatory on routing sheets. As always, the earlier we get this information shared, the more complete and faster the review process.

Contract Negotiations
The intended outcome for internal and external contract reviews is for risks and liabilities to be identified and minimized. The Division of IT contracts team works with the contract reviewers and Division of IT Management to determine alternate language and/or solutions that may help mitigate these risks to GW. The primary goal in contract negotiations is to try to resolve any conflicts or issues with a contract’s terms and conditions in which the engagement is mutually beneficial to both parties, with minimal risk to both. As we mature our negotiation approach we will continue to expand our requested inclusions. Recent examples include our request for vendors to define a change management process and to provide advance notice of service impacting changes. We have also begun to ask vendors to define their disaster recovery and business continuity plans so that we can identify weaknesses or opportunities for collaboration and increased planning and testing.

Division of IT contracts team Contacts: Andrea Hansen, hansena@gwu.edu, Punitha Kelly, ptkelly@gwu.edu and Lori Tait, ltait@gwu.edu.
Contract request intake inbox: itconmgt@gwu.edu.

Change Management Update

Retiring of the Google Division of IT Change Control Calendar
As part of the Remedy ITSM project, the Service and Contract Management team would like to announce that on May 31, 2015 the Google instance of the Division of IT Change Control calendar will no longer be available as a secondary resource calendar to view scheduled IT changes, third-party vendor maintenance and GW academic events. The Division of Information Technology’s Forward Schedule of Changes will be the Remedy ITSM Change Calendar.

What will occur with “DIT-Change Control” on Google?
The DIT-Change Control calendar on Google will be disabled on May 31, 2015. There is no change data to export or archive for future use. As part of our migration away from two calendars, beginning April 20, 2015 the Change Management team will no longer add new third party IT changes and GW academic events to the Google based DIT-Change Control calendar.

Why has there been a decision to retire the Google DIT-Change Control calendar?
With the launch of Remedy ITSM Change Management module there is an integrated calendar tool that depicts all scheduled changes. Changes and events can be added to the calendar for reference purposes.

How will IT changes, third-party vendor maintenance get added to the Remedy ITSM Change Calendar?
All changes to the IT infrastructure whether production or non-production should follow the Division of IT change management process. Changes that impact services should be entered by the technical service owner. This includes third-party vendor scheduled maintenance. Once the change request ticket has been processed, approved and scheduled, the change or vendor maintenance will automatically appear on the change control calendar.
How do I request adding a GW Academic or Business event to the Remedy ITSM Change Control Calendar?
It is advised that such information be shared with the Change Management team and Change Advisory Board to assist with ensuring that Division of IT staff are effectively collaborating with the stakeholders leading up to the event. A specific process will be defined and released in April for updates to the calendar for significant academic events to support change planning. It is not anticipated that the change control calendar will replace other sources of information including events and dates.

Who will be affected?
All Division of IT and Local Support Partners who are currently subscribed to Google calendar “DIT-Change Control” will no longer be able to access the calendar as of May 31, 2015.

What should I be doing to assist with this transition?
By logging into the Remedy ITSM change management module to ensure that you can access the module and view the change control calendar will help make the transition smoother: http://itsm.it.gwu.edu.

Who may I contact to discuss questions or concerns about this change? You may contact the Change Management team at CABEM@gwu.edu to express your concerns.
Stay tuned! The Change Management team will be conducting a demonstration in the coming weeks to provide staff a brief overview on how to access and review scheduled changes and business events that appear on the Remedy ITSM Change Calendar.

Disaster Recovery and Business Continuity

The Crisis Management Plan and the Incident Management Plan for the Division of Information Technology have been posted on the Division’s intranet site under Business Continuity and Disaster Recovery Resources. Please take a moment to read through the plans and familiarize yourself with the content.

Two fundamental pieces of the plan that all Divisional Staff should be aware of are the Crisis Management Workflow and the Crisis Management Reporting Structure that is executed during a declared crisis or major incident. This information is contained in the crisis management plan and is broken out below for your reference.

Key points to note in the workflow and organizational chart listed below:
- The Duty Officer is responsible for declaring a major incident or crisis.
- The Duty Officer is responsible for mobilizing the Crisis Management Team.
- Once a major incident or crisis is declared, the Duty Officer is supported from a perspective that he/she represents the Office of the Chief Information Officer during the crisis or incident. (This shifts the reporting lines of the organization chart.)

More information on the role of the Duty Officer and their responsibilities can be found on the intranet under Business Continuity and Disaster Recovery Resources, Duty Officer Roles and Responsibilities.

Division of IT Crisis Management Work Flow

When an incident occurs, the Division of IT Duty Officer is notified of the potential crisis. The Duty Officer assembles staff as necessary for triage and incident review. Most frequently, this assessment will focus on coordination among and between on-call coordinators and the ITSC. If warranted, additional groups that might be involved include an ad hoc damage assessment team (DAT) and other first responders (e.g., facilities manager, communications, HR, etc.). Following the Duty Officer’s assessment, they then decide on next steps. If a crisis or potential crisis is occurring, the Duty Officer will activate the Crisis Management Team (CMT). The Duty Officer can unilaterally declare a crisis and activate the CMT or they can contact others for additional assessment.

Continued on page 10...
Division of IT Crisis Management Structure

Once a crisis or major incident has been declared by the Duty Officer (DO), the following organizational structure is placed into effect:

Exhibit 10: DIT Crisis Management Structure

For questions regarding the Crisis Management Plan or the Incident Management plan, you may contact Donna Hill at dhill3@gwu.edu.
Systems Engineering Services (SES) Unix Team Server Tips : “sudo –l”

When managing applications on SES managed Linux servers, there are times that application managers will need elevated system privileges to manage the application. You need sudo if you’ve ever tried to run a command on a system only to see an error like this:

```
$ /sbin/service jamf.tomcat7 status
You need root privileges to run this script
```

Part of the work involved in deploying a new application is working with the SES Unix Team to determine which command(s) will need to run with elevated privileges and to set up other variables that may be needed to best manage the application. If for any reason you need to recall what commands were set up for application management, run the command: ‘sudo -l’. The following screenshot shows one of the more diverse setups for application managers. This particular application owner requires the ability to stop and start multiple services, as well as the ability to run an application installer, and manage apache:

```
[username] ~]$ sudo -l
Matching Defaults entries for username on this host:
  env_keep="VISUAL EDITOR"

User username may run the following commands on this host:
  (root) NOPASSWD: /etc/init.d/jamf.tomcat7
  (root) NOPASSWD: /etc/init.d/smb
  (root) NOPASSWD: /usr/local/jss/bin/*
  (root) NOPASSWD: /app/installers/JSSInstallerLinux/JSS Installation/jssinstaller.run
  (root) NOPASSWD: /usr/sbin/apachectl
  (root) NOPASSWD: /etc/init.d/httpd
  (root) NOPASSWD: /sbin/service httpd
  (root) NOPASSWD: /usr/local/bin/check_httpd_limits
  (apache) NOPASSWD: /bin/su - apache
  (root) NOPASSWD: /bin/su apache
  (root) NOPASSWD: /usr/bin/tcptraceroute

[username] ~]$
```

The output of ‘sudo -l’ contains a bit more information than just the management commands. In general, there are three fields to know about:

- the username in parentheses is the user that the command will be executed as, in this case (root)
- the second field, NOPASSWD:, means the sudo will not prompt for a password when used
- the third field is the command itself

Once you’ve been granted sudo privilege it is important to know its proper usage. We encourage you to learn more about sudo, by typing ‘man sudo’ on a Linux server’s command line, or by following this link: [http://www.unix.com/man-page/Linux/8/sudo/](http://www.unix.com/man-page/Linux/8/sudo/).