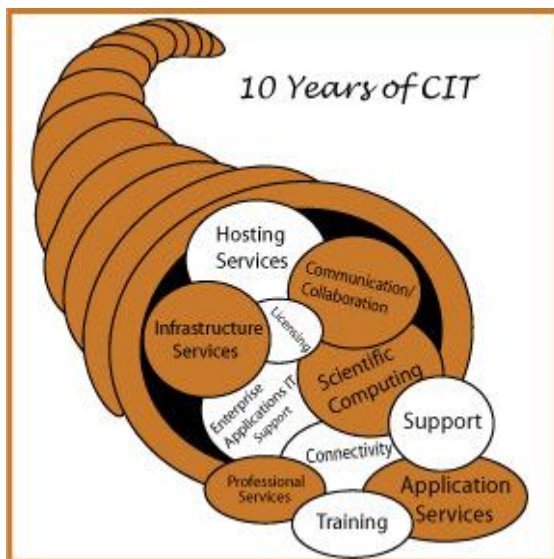


Fall 2008 [Number 242]



Major Articles

Happy 10th Anniversary, CIT!

Save Time, Money, and Fuel with CIT Web Collaboration

Podcasting at NIH

Kiwi Wiki Service Now a Full Production Service

Understanding Your CIT Invoice: Chargeback

CIT Computer Training Celebrates 40 Years!

Published By
Center for Information Technology
National Institutes of Health
Health and Human Services

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<http://www.nih.gov> is one of the most frequently visited federal government websites.

| | <i>July</i> | <i>August</i> | <i>September</i> |
|---------------------------------|-------------|---------------|------------------|
| Total hits for the month | 73,536,749 | 67,452,179 | 75,271,213 |
| Hits per day | 2,372,153 | 2,175,876 | 2,509,040 |
| Different individuals per month | 2,381,604 | 2,298,515 | 2,546,055 |

The server has been up 100% of the time* during October 2008.

* Server uptime is independent of network accessibility.

Articles

Happy 10th Anniversary, CIT!

Ten years ago, computer and information technology (IT) at NIH was scattered across campus, divided among the Division of Computer Research and Technology (DCRT), the Office of Information Resource Management (OIRM), and the Telecommunications Branch/Office of Research Services (ORS). In 1998, NIH leadership combined all NIH IT and related functions residing with DCRT, OIRM, and ORS to create the Center for Information Technology (CIT) to ensure unified policies, standards, and strategies. To lead this organization, Alan S. Graeff was appointed to serve both as the director of CIT and as the first NIH Chief Information Officer (CIO).



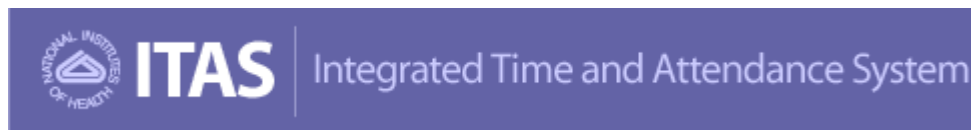
CIT's Mission

CIT's original mission to provide, coordinate, and manage information technology, and to advance computational science, has involved adapting to shifting paradigms brought by the rapid pace of technological change. To meet the many challenges posed by competitive sourcing studies, budget cuts, administration changes, and other hurdles, CIT has been proactive in its quest for technical excellence, and its desire to be a vital partner in the NIH mission through information and information technology.

Responding to NIH's business needs

CIT played a key role in developing solutions to fit NIH's business needs from the very beginning. In 1999, the Fellowship Payment System was created to provide a mechanism to record pay stipends and insurance premiums for NIH fellows.

Along with the development of numerous web pages, conference registration systems, and IC-specific databases, CIT has been responsible for other business systems used by staff at all levels through the NIH. The Integrated Time and Attendance System (ITAS), NIH Enterprise Common Services (NECS), including NIH Login and NIH Portal, the Contractor Performance System (CPS), and the Human Resources Data Base (HRDB) are just a few. In response to renewed attention to the NIH ethics program, CIT created the NIH Enterprise Ethics System (NEES) to automate the method to request, review, track, and report on all ethics-related activities.



CIT took a leadership role in 2002 to forge NIH's strategy for common services. This included hosting the improved and expanded NIH Portal, which allows for a single, user-friendly customizable web interface by which data and documents can be readily accessed by NIH staff and other users.

In 2003, CIT modernized the legacy NIH Data Warehouse and provided comprehensive reporting solutions by creating the nVision reporting tool. In April 2007, the NIH Data Town interface was retired and a new nVision interface was implemented to create a single, central website—the nVision Data Warehouse Portal—to address all business reporting needs.



CIT helped to increase collaboration significantly within NIH, as well as beyond the campus, by implementing the external Active Directory "Forest" in 2005, which allowed over 75 projects throughout NIH to have external staff included in internal communication mechanisms. In 2007, CIT joined the Federated Login to ensure that the NIH community could easily and readily integrate with outside customers, at their convenience. This enhances communication between NIH ICs and external institutions while minimizing costly account creation and maintenance.

At the same time, new programs such as the Relationship Managers and the Continuity Assurance Program were created to better meet and exceed customer expectations.

Saving time and working more efficiently

CIT's Remote Access and BlackBerry services have played a critical role in improving productivity, accessibility, and responsiveness for NIH workers away from the office. These technologies have also helped to facilitate NIH's implementation of federal Telework initiatives. In 1999, the first BlackBerry was connected to the NIH network, and today CIT supports over 6,400 devices.

To strengthen information security efforts and help NIH users remember their network passwords, CIT implemented iForgotMyPassword in 2006. In just under two years over 6,400 users have signed up for the service. Most recently, CIT initiated an internal Instant Messaging service, utilizing Office Communications Server (OCS) and Jabber, in 2008.



The CIT Videocast service, established in 1997, has now been successfully used for most large meetings held across the NIH. It not only makes it possible for NIH staff to share their meetings with outside communities, it also allows people unable to attend events to participate in real time and to view programs at a later time, with over 4,100 archived events available to users. As the CIT Videocast service evolved, it provided enhanced services including video bridging, IP bridging, and web conferencing. CIT recently launched a Podcast service, which already hosts 484 archived events (see also "Podcasting at NIH" in this issue).

CIT's efforts towards desktop security have been a priority throughout the years. In 2001, the NIH Incident Response Team was the first civilian federal agency to receive the prestigious Office of Personnel Management Guardian Award for exceptional contributions in ensuring the confidentiality, availability, and integrity of NIH information resources. Prior to 2005, CIT handled and successfully contained 19 major virus outbreaks; since 2006, NIH has had no major outbreaks. CIT has been vigilant in pursuing

best practices in desktop security and sharing its knowledge with the rest of the NIH through its Antivirus website (<http://antivirus.nih.gov>) and by holding workgroups and meetings on the topic.

The CIO's role

For the last 10 years, the CIT Director has also held the role as NIH's Chief Information Officer. One of the first committees created to support the CIO was the NIH Information Technology Management Committee (ITMC) in 1999. This committee was formed to develop and communicate recommendations and decisions at the NIH Institute and Center level, provide a forum for building consensus across NIH, and serve as an umbrella organization to the NIH IT process management and technical committees. Since its inception, ITMC has held regular meetings to share information and opinions on IT matters that affect all of NIH.

NIH leadership decided this year to separate the roles of the CIT Director and the NIH CIO. The NIH Director appointed Dr. Jack Jones as the NIH CIO; Dr. Jones continues to serve as the Acting Director, CIT. In supporting the NIH CIO's focus on improving information and information technology for the entire NIH, CIT provides operational resources to assist in carrying out the CIO's strategies and vision.

Since 2002, one of the key efforts of the CIO's office has been in the area of Enterprise Architecture. Serving at that time as the Chief IT Architect, Dr. Jones assembled domain teams from across NIH to examine the technology and standards needs of areas that were about to undergo significant consolidation, such as email systems and wireless networks. Currently, these domain teams continue working to select the right "bricks and patterns," the building blocks of IT architecture, that can be used across all of NIH.

Ensuring a secure, solid infrastructure for NIH's data and communication needs

From its inception, CIT's Data Center has been well known across NIH and government agencies. It has undergone many transitions and upgrades over the years to improve the security of NIH's IT data, expand upon its services, and cater to the needs of customers. The most recent physical upgrades included installing high-end UPS systems, a leak detection system, and Very Early Smoke Detection Apparatus (VESDA), and replacing nine air conditioning (CRAC) units to ensure a constant temperature. Data Center service offerings have also expanded by offering co-location services in Sterling, Virginia for backup, redundancy, and Continuity of Operations (COOP) planning, and a customer service area within the Data Center to allow customers to manage their own systems within the secure site.

Within the Data Center, hosting services have become more efficient with wider offerings and choices for the customers' needs. Two very dissimilar OS/390 mainframe systems were merged into the z/OS Titan system, creating a robust central service. Oracle hosting was initially offered in 1999, with SQL hosting joining in 2005. Today, over 190 databases are supported on these platforms. CIT also hosts over 165 specific customer projects, including the Enterprise Systems of eRA, NBS, NED, PMS, EHRP, nVision, UFMS, NIH Login, ITAS, and HCAS.

A central Active Directory was initiated in 2000, which now supports 49,000 customers. With email consolidation in 2003, the Data Center now hosts 22 servers (consolidated from 235 throughout the ICs) and supports over 40,000 mailboxes.

CIT provides the NIH backbone network and the main Internet connections for NIH, maintained by a 24x7 Network Operations Center. Over the past 10 years, the network has been redesigned to handle the continual growth and ever-expanding IT data needs of NIH. CIT has offered remote access services, beginning with the Parachute dial-up service and transitioning to the current two-factor authentication VPN service, for increased speed, security, and data protection. CIT has also increased security to the firewall, eliminating the possibilities of outside intrusion and protecting the data communications of NIH users.



CIT was able to document the cabling topography for the entire outside of the NIH campus backbone. More recently, CIT implemented the Integrated Graphical Database, which shows cabling plans superimposed onto floor plans to assist in moves, renovations, and construction.

Over the years, CIT has been responsible for the installation and management of the telecommunications, cabling, and network infrastructure for the Clinical Research Center, Building 50, bio-terrorism research in Building 33, the NIH Fire Station, the Children's Inn, and the NIH Campus Perimeter Fence, as well as for providing special services for the Global Health Security Initiative Conference, the Year 2000 Command Center, and during emergencies such as September 11th and Hurricane Katrina. CIT continues to stay vigilant and on call anytime our services are needed.



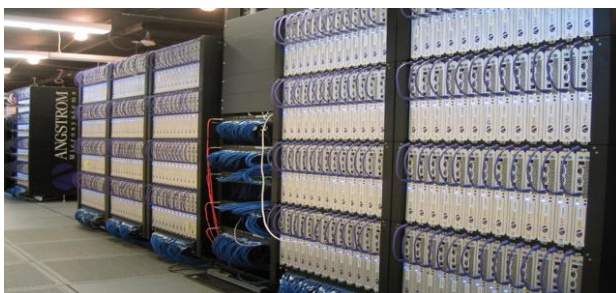
The CIT Command Center

Scientific collaboration

While one focus of CIT has been on the business needs of NIH, CIT has also concentrated on the computational needs of the scientists and researchers. The knowledge and skills of the computer scientists, engineers, and researchers at CIT have come together over the years in collaboration with NIH bench scientists to provide critical, cutting-edge systems and instruments for advancing science.

CIT was instrumental in building many scientific and research systems over the last 10 years, such as the laser capture microdissection system, microfluidic DNA separation system, quantitative lifetime fluorescence imaging system, and portable dual gamma camera small animal imaging system. Along with developing these research systems, the computer scientists at CIT have been responsible for a number of U.S. patents, bringing about innovation and change in a constantly evolving environment.

CIT substantially supports local collaborations within NIH while also developing systems to achieve long-distance medical and scientific work between NIH and other institutions. In 1999, CIT completed work on the predecessor to the TELESYNERGY(TM) Medical Consultation WorkStation, which provides an electronic imaging environment that transmits simultaneous high-resolution images to all sites participating in a medical consultation. CIT joined forces with the National Cancer Institute (NCI) in 2000 to pioneer a TELESYNERGY partnership to reach out to distant community hospitals. Collaborating sites with TELESYNERGY Systems either installed or under construction include hospitals in Fort Lauderdale, Florida; Wheeling, West Virginia; Amman, Jordan; Belfast, Northern Ireland; the United Kingdom; and Dublin, the Republic of Ireland. Through efforts such as these, CIT extends its support of advancements in science to a global level.



The Biowulf Cluster

Another way CIT shares its research is through publications, downloadable applications, and software. Key publications of the last 10 years include the structure of papillomavirus antibodies (which describes how Gardasil works to prevent cervical cancer), and the structure of Kaposi's Sarcoma-Associated Herpesvirus (KSHV). CIT also established the mAdb (microArray Database) in a partnership with NCI and created a way to upload Array data via web-based interface.

CIT scientists receive world-wide recognition through the number of citations and downloads of their work, such as the Medical Image Processing Analysis and Visualization (MIPAV) application, which is downloaded by hundreds of NIH researchers and thousands of researchers from around the world, and

the first Xplor-NIH paper, which was published by CIT in collaboration with NHLBI and NIDDK, and as of today has been cited 365 times while the accompanying software has been downloaded by over 2700 groups worldwide. In addition, the predicted protein structures submitted by Dr. Zhexin (Jason) Xiang of CIT were ranked among those of the top eight research groups (out of more than 140 world-wide that participated in the comparative modeling category) in the blind structure-prediction challenge known as CASP6 (Critical Assessment of Techniques for Protein Structure Prediction). Most recently, CIT founded the statistical analysis core as a component of NHLBI Microarray Laboratory, with responsibility for primary analysis of up to 7,000 Framingham Heart Study samples.

To support the research of other ICs at NIH, CIT created the NIH Intramural Database (NIDB) which collects, stores, and reports data from the NIH Intramural Research Program. The NIDB integrates with the Research, Condition, and Disease Categorization (RCDC) project, making it an integral part of NIH's scientific reporting.

Through collaborations, publications, software, applications, and experiments, CIT has been both a pioneer and a partner in scientific research at NIH and throughout the world. As we move forward into the next decade, CIT will continue to focus on communication and knowledge sharing, meeting the business needs of the NIH community, and creating a growing and thriving IT culture in support of science.

CIT by the numbers

- In 1998, the Technical Assistance and Support Center (TASC) handled 68,000 tickets for CIT service issues. By 2008, after a consolidation of help desks across the ICs, the NIH Help Desk will be handling over 300,000 requests for all types of IT services.
- Over the past 10 years, CIT Telecommunications has managed over 120,000 move, add, and change service requests, supported over 3,000 service requests for major building construction projects, and transitioned from 5-digit to 10-digit dialing for over 60,000 phone lines.
- CIT manages the NIH Main Line (301-496-4000) and has done so non-stop each day for the last 10 years - over 3,700 days and counting.
- The CIT Training Program has doubled the number of people trained - from over 5,000 in 1998 to over 10,000 in 2008 - and they now offer 100 more topics than 10 years ago!
- The iSDP program has grown from managing \$11 million in software licenses to over \$75 million, with all ICs and HHS OpDivs participating in the program.
- CIT hosts 450 CIT and NIH websites and supports over 49 SharePoint sites.
- Since 2004, the Google Search Engine service has performed an average of 15,000 searches each day - that's over 20 million searches!
- 440 million pieces of spam mail are filtered monthly - so imagine what your inbox could look like!
- The Biowulf cluster was introduced in 1999 with 80 dual-processor nodes, and in 2008 a new record was scored as the 1 millionth job was processed.
- CIT manages over 4,800 processors and 140 applications in 14 disciplines.
- Over 286 publications have been published.



Save Time, Money, and Fuel with CIT Web Collaboration

Have you declined a meeting invitation just because you can't afford the roundtrip drive time between Executive Boulevard and NIH Campus or you dread finding parking? Are you tired of trying to find a conference room that's available when you are? CIT's Web Collaboration Services (<http://webcollaboration.nih.gov>) enable you to overcome the difficulties of travel time and geographical locations.

With Web Collaboration at NIH you can:

- Attend a meeting, without leaving your office
- Confer with international colleagues; no plane tickets necessary
- Record a training session and post it online
- Keep in touch with your coworkers while you telework from home
- Include captioning for hearing impaired participants

What is it?

CIT's Web Collaboration allows anyone with a computer and an internet connection to see and speak with colleagues or collaborators across the globe – or just across the NIH campus. CIT's Web Collaboration uses Adobe Acrobat Connect to provide Desktop Web Conferencing – Internet-based, synchronous, real-time meetings with participants in multiple locations using audio and video input devices such as desktop cameras and speaker phones. Offering virtual meeting space at NIH since February 2005, CIT's present licensing provides two seminar rooms of 50 and 150 users, and will support ad hoc meetings with up to 200 participants.

Features

Desktop Web Conferencing allows meeting participants to view and hear each other, access shared content, display any application or document on your computer, remotely control another person's computer, markup documents, perform electronic white-boarding, and present slide-shows.

CIT Web Collaboration Services offer the following features through Adobe Connect:

- Continuous access to customizable, virtual conference rooms (24/7)
- Ease of use and integration with Microsoft Outlook
- Collaboration, document sharing, white-boarding, chat, and online polling capabilities
- Use of Flash to deliver interactive Web content
- Unique support for video, voice, data, animations, and simulations
- Flexibility to view and present meetings on the many platforms used throughout NIH: Windows, Macs, Unix, and Linux. Currently both PCs and Macs can present meetings.

-
- No software installation by users required for its online application (on rare occasions users may need to install the Flash Player, which is available as a free download)
 - Rapid delivery of online seminars and surveys

Creating/attending meetings

Anyone from anywhere in the world can access a Connect meeting using the Internet. If you are simply attending a meeting, an account is not needed. To create meetings, or to view access-controlled content, you need a Connect account. Non-NIH employees can attend and even create meetings, as long as they are sponsored by an NIH IC. You can self-schedule meetings for up to 50 participants. Please contact Connect Support for assistance in scheduling larger meetings.

To request a Connect account, simply contact the NIH Help Desk (<http://ithelpdesk.nih.gov/support>). You will need to provide your CIT Account Code. Contact your administrative officer to determine your billing information.

Contact information and help

To get more information about Connect and view some of the easy-to-follow tutorials, visit the CIT Web Collaboration website (<http://webcollaboration.nih.gov>)—where we offer more than just tutorials. If you have any questions, or need help in setting up a session, please contact the NIH Help Desk at <http://ithelpdesk.nih.gov/support> or call 301-496-4357, 301-496-8294 (TTY) or toll free at 866-319-4357 and ask for the Connect Support Team.



Podcasting at NIH

Podcasting is the fastest-growing form of new media in the world. While the first generation of podcasts were simple audio files, the emergence of portable video-capable media players means that podcasts now can have images as well as sound. This evolution has resulted in a dramatic increase in the demand for, and creation of, podcasts. According to the Pew Internet Project:

- As of May 2008 19% of all Internet users have downloaded a podcast.
- The total podcast audience has increased by 58% in less than two years.
- The dedicated podcast audience – those who download podcasts regularly – has increased by a staggering 300% in the same span.

Podcast subscriptions

While podcasts are inherently like any other audio or video files in that they can be downloaded directly from a host website, one reason for their popularity is how they're made available. Like the majority of blogs today, most podcasts are tied to a Really Simple Syndication (RSS) feed (see also "RSS at NIH" in issue 239), which alerts subscribers when new content is available. Some programs such as iTunes not only allow users to listen to podcasts and copy them to their portable media players, but also offer free subscriptions to RSS feeds for multiple podcasts, so that users can download them as soon as they're made available.

CIT and podcasting

At NIH, CIT has been producing audio and video podcasts since February 2006. In that time, we have produced a total of 486 podcasts. In September 2006, we began producing Enhanced audio and video podcasts, which contain special features such as Chapter Markers and Enhanced artwork. Chapter Markers allow users to skip to a certain part of the program – like tracks on an audio CD. Enhanced artwork features artwork that changes in real time over the course of the program, and hyperlinks to open a website or email with a simple click on the link in the player.

Given the demand of content not only in the world, but also within the NIH – there were over 200,000 downloads of podcasts in 2007 – CIT will continue to use podcasting as a way to better serve NIH and the worldwide medical community.

Try out our NIH podcasts

All of our podcasts are available for download at <http://videocast.nih.gov/default.asp> where you can also find a link to our Podcast FAQ (<http://videocast.nih.gov/faq/podcast/default.asp>), for information on playing and subscribing to our podcasts. To subscribe to the RSS feed for NIH podcasts, visit our RSS

page (<http://videocast.nih.gov/rss>), and browse the different RSS feeds we have available for our Podcasts.

Interested in creating your own podcast?

If you have questions about podcasts or would like to create one for your IC, conference, lecture, etc., please contact the NIH Help Desk at <http://ithelpdesk.nih.gov/support> or call 301-496-4357, 301-496-8294 (TTY) or toll free at 866-319-4357 and ask for the NIH Videocast team.



Kiwi Wiki Service Now a Full Production Service

On September 30, 2008, the Kiwi Wiki Service, which has been running as a pilot service while being developed, became a full production service. During the pilot phase of this service, CIT partnered with its customers to configure more than 40 wikis and to integrate access using NIH Login accounts. Thanks to those participants in the pilot, the Kiwi Wiki Service is now a production service.

What is a wiki?

The word "wiki" comes from the Hawaiian word "wiki wiki," which means "very fast." Wiki technology creates what is essentially a collaborative website, one in which authorized users can add or modify the website's content directly via any web browser. Wikipedia (<http://www.wikipedia.org>) is the most famous example of a wiki. It is an online encyclopedia created through the collaboration of a community of thousands of users from around the world. Many people adding content to the pages of a wiki allows content to accumulate very quickly, or wiki wiki!

The wiki advantages

Wikis are designed to facilitate the collaborative sharing of information within and between teams of people and can be used for large and small collaborative projects. Content in a wiki can be updated immediately without the delay typical of a regular website update. You simply visit the wiki website with any browser and create or edit a wiki page directly using an editor provided by the wiki. Besides text, users can add images and internal and external hyperlinks – links to other wiki pages (internal) as well as links to external websites – to the wiki page. A built-in search engine aides in searching for information, and if you need a previously edited version of a page, it can be easily retrieved. The wiki site retains all revisions of every wiki page, allowing users to easily review and restore any edited pages if necessary. Their ease of use, fast accumulation of content by multiple participants, and ability to easily and continually edit content makes a wiki a valuable tool for collaboration.

CIT's Kiwi Wiki Service

- CIT uses MediaWiki's wiki, the same software that powers Wikipedia.
- CIT configures all wikis based on user specifications, and also provides 24/7 support and routine back-ups for all wikis.
- The wiki owner can define who should have access to the wiki, to read and edit content.
- Login access to each wiki uses NIH Login accounts, so customers do not have to remember new accounts and passwords.
- The wiki owner can be given administrative level privilege to lock pages to editing, delete pages, and otherwise manage the wiki and its content.
- A WYSIWYG editor is added to each wiki as a plug-in, making editing much easier than the default editor provided with the wiki.
- Access to a wiki is only allowed by those computers connected within the NIH firewall.

Possible uses for a wiki

Scientific Collaboration: When scientists work collaboratively, communication is essential. A wiki can foster that communication by providing a common space to document and manage the scientific collaboration.

Documentation Development: Developing documentation can be a difficult task that a wiki can make easier by allowing people to create and edit a common set of documents and use the wiki's discussion pages to discuss aspects of a particular document.

Knowledgebase Maintenance: The wiki's ability to be easily accessed and edited allows users to easily maintain this type of resource. There is no need to have a knowledgebase maintainer since the information can be updated by the individual contributors continually providing an updated knowledgebase. The wiki's built-in search feature would aid in finding specific information.

Project Management: The management of a project involves outlining the project, making midcourse corrections, and reporting progress and milestones. A wiki where individuals responsible for various aspects of the project report their progress can assist in keeping track of the information on project topics in an organized manner. In this example the wiki access would be restricted to the project members.

Lab Wiki: A lab wiki would be devoted to the documentation of methods and results in a laboratory. This new concept may transform how a laboratory organizes its methods, work, and results. MIT is sponsoring Laboratory Wikis as an experiment: <http://openwetware.org/wiki/Labs>. In this example the lab wiki may be restricted to laboratory personnel or access can be as open as the lab would like.

Interest Group Site: Many interest groups use the NIH ListServ or other sites where email or web logs are used to report and discuss information of interest. The problem is that over time this information is often lost or becomes difficult to find. A wiki can provide an expandable site to report information of interest, discuss that information, and have the topic continually updated. An example of this can be seen at http://en.wikipedia.org/wiki/Protein_microarray. In this example the wiki could be open to all of NIH, allowing anyone to create or modify a page, thus building a small encyclopedia of the subject of interest that would be collectively maintained by those at NIH who are interested in the subject.

Questions

If you are interested in using CIT's Kiwi Wiki Service or if you have any questions about wikis, please contact the NIH Help Desk at <http://ithelpdesk.nih.gov/support> or call 301-496-4357, 301-496-8294 (TTY) or toll free at 866-319-4357.



Understanding Your CIT Invoice: Chargeback

Data Center chargeback is an area that seems to elicit considerable discussion. This article describes some of the methodology used to charge customers for CIT services and explains how to use the reporting tools available in Web Sponsor to “drill down” into the chargeback data. Using these reporting tools allows customers to better isolate how the charges are being generated.

The rate group

When the consolidated invoice was designed in 2003, it was decided, for readability, that all monthly invoices generated would list charges by *rate group*.

A rate group is a CIT chargeable service composed of one or more chargeable entities. A rate group such as Video Services has several chargeable entities: video casting, web collaboration, video bridge, and AV room design. The Titan Batch Processing rate group includes prime time CPU time, discount period CPU time, and number of I/Os for all batch jobs submitted by an account for a particular billing period. Many rate groups, such as Oracle Licenses, have just one chargeable entity and are directly billable.

There are over 200 available rate groups. Most customers only see a much smaller subset of these rate group charges. *The key concept is that all production invoices in Web Sponsor summarize charges for accounts at the rate group level.*

The invoice

CIT invoices are generated on the 19th of each month. All rate group charges generated for a CIT account from the 19th of the previous month to the 18th day of the current month are aggregated and presented as a 1 to 2 page invoice that generally follows the format shown on the next page.

In our example invoice, a sample account is invoiced \$63,128.84 for Batch Processing on Titan based on all jobs submitted by users of this account for the month of August. This account was also invoiced \$398,173.07 for Titan Disk Storage based on files managed by users for this account.

Example of a CIT invoice

**National Institutes of Health
Center for Information Technology
Financial Management Office
Summary of Charges for August 2008
Prepared: 19 Sep 2008**

Account: ****
CAN: 00000000
Organization: CENTER FOR INFORMATION TECHNOLOGY
Title: *****

Billing Coordinator/Sponsor

Bill Gates
Bldg 12, Room 2200

Alt. Billing Coordinator Sponsor

Steve Jobs
Bldg 12A, Room 0000

Titan Services

August 2008

Fiscal YTD

| | | |
|--|-------------------|---------------------|
| Batch Processing Titan | 63,128.84 | 1,008,125.23 |
| Interactive Titan | 26,015.19 | 422,668.63 |
| Printing Titan | 182.16 | 3,671.08 |
| Disk Storage | 398,173.07 | 4,848,046.44 |
| Tape Mounts | 187.72 | 1,870.96 |
| Tape Storage | 3,346.84 | 34,526.73 |
| Silk Web Service Titan | 4,710.20 | 41,252.30 |
| DB2 Services | 6,696.08 | 83,624.41 |
| IMS/ADB | 35.69 | 48.61 |
| Model 204 | 2.47 | 74.43 |
| Data Communications | 0 | 150.00 |
| Credit for Titan Services | -3.45 | -2,473.76 |
| Temporary Credit for Shadow Processing | 0 | -2,125.39 |
| Total for Titan Services | 599,259.56 | 6,439,459.67 |

Helix Services

| | | |
|---------------------------------|---------------|-----------------|
| Disk Storage Helix | 2.79 | 30.24 |
| User Fee Helix | 160.00 | 1,760.00 |
| Total for Helix Services | 162.79 | 1,790.24 |

Windows Services

| | | |
|---|------------------|------------------|
| Dedicated Server (Sys & Support) _Windows | 18,109.00 | 72,436.00 |
| MS/SQL Service | 474.00 | 3,098.00 |
| Cold Fusion Hosting | 200.00 | 800.00 |
| Total for Windows Services | 18,783.00 | 76,334.00 |

| | | |
|-------------------------------|-------------------|---------------------|
| TOTAL FOR ACCOUNT XXXX | 618,205.35 | 6,517,583.91 |
|-------------------------------|-------------------|---------------------|

Billing reports

To dig a bit further, customers can select “Detailed Billing Reports” in Web Sponsor (see the box below) to display charging data at a more granular level – either for an entire account or a specific userid assigned to the account:

CIT Billing Reports

Invoice Reports – Displays a web browser version of the printed invoice by account/initials.

Detailed Billing Reports – Provides month-to-date and previous month summary information, month-to-date and previous months detailed transaction listings, and detailed dataset charge information by account or userid.

Selecting “Detailed Billing Reports,” account sponsors can:

1. Produce a detailed account invoice that shows charges by each chargeable entity within a rate group – either for each userid in an account or for a single user; OR
2. Select a second option to list all transactions (Batch jobs, TSO sessions, DB2 charges, etc.) submitted for all users of the account or a single user; OR
3. Show detailed Titan disk storage charges generated for an account or userid for a billing period.

These reports can be generated online for the current billing period-to-date or for any previous billing period. Because of the amount of data to be retrieved, generation of these reports can take several minutes to run. Customers who choose these reporting options are assessed a small batch processing charge to retrieve the data.

The following shows what a detailed invoice for our example account might look like, where all rate group charges for the account are listed.

**National Institutes of Health
Center for Information Technology
Financial Management Office**

Account Number: ****

Billing Period 2008/07/19 to 2008/08/18

| | Total | Rate | Charge |
|-----------------------------------|-----------------------|-------------|---------------------|
| MVS CPU Seconds Discount Shift | 29,549.45 | \$1.23 | \$36,493.57 |
| MVS CPU Seconds Weekend Shift | 11,859.69 | \$1.23 | \$14,646.72 |
| MVS Batch I/O | 28,489,450 | \$0.0206/M | \$ 525.08 |
| MVS CPU Seconds Prime Shift | 4,641.08 | \$2.47 | \$ 11,463.47 |
| Jobs Started | 3,277 | \$0.00 | \$ 0 |
| Batch Processing Titan | 28,538,777.23 | | \$63,128.47 |
| | | | |
| TSO CPU Seconds Prime Shift | 2,409.11 | \$2.85 | \$ 6,865.97 |
| TSO CPU Seconds Discount Shift | 582.31 | \$1.42 | \$ 829.80 |
| TSO CPU Seconds Weekend Shift | 424.51 | \$1.42 | \$ 604.94 |
| Interactive I/O | 1,432,101 | \$0.0206/M | \$ 29.50 |
| Shadow Level 1 Charges | 218.19 | \$2.85 | \$ 621.86 |
| Shadow Level 2 Charges | 224.7 | \$2.61 | \$ 586.48 |
| Shadow Level 3 Charges | 1,595.84 | \$1.21 | \$ 1,930.96 |
| Shadow Level 4 Charges | 23845.38 | \$0.61 | \$14,545.68 |
| Interactive Titan | 1,461,401.04 | | \$ 26,015.19 |
| | | | |
| Lines Printed | 35,768 | \$1.1845/M | \$ 42.37 |
| Cut Sheet Printing | 498 | \$0.06 | \$ 30.77 |
| Continuous Impression Printing | 1,764 | \$0.06 | \$ 109.02 |
| Printing Titan | 38,030 | | \$ 182.16 |
| | | | |
| Level 1 Migrat Alloc Space-Mbytes | 773,324.86 | \$0.01 | \$ 7,965.26 |
| Level 2 Migrat Alloc Space-Mbytes | 23,091,223.87 | \$0.01 | \$237,839.65 |
| Tape Backup Alloc Space – Mbytes | 74,673,080.08 | \$0.002 | \$ 15,382.65 |
| Level 0 South Storage | 13,299,567.03 | \$0.01 | \$136,985.51 |
| Disk Storage | 111,837,195.84 | | \$398,173.07 |

(and so on)

Amount-Due

\$599,260.56

More detailed reporting is available. By selecting the option to list all detailed charges you can list all Titan transactions for the billing period for an account or userid – including Batch jobs, TSO sessions, Shadow charges, Model204 charges, and Print charges.

| Batch: | | | | | | |
|---|-------------------|---------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------|
| 2008/07/19 – 2008/08/18 Batch Detail for Account **** Run Date – 2008/09/16 | | | | | | |
| Acct Code | Run Date | JobNumber | Start Time | Stop Time | Total Batch Charge | |
| ***** | 2008/08/14 | JOB26340 | 23:05:00 | 23:10:58 | \$187.53 | |
| ***** | 2008/08/14 | JOB24958 | 7:00:00 | 7:02:58 | \$102.32 | |
| (and so on) | | | | | | |
| Totals..... | | | | | \$63,135.92 | |
| ===== | | | | | | |
| TSO/ISPF | | | | | | |
| 2008/07/19 – 2008/08/18 TSO Detail for Account **** Run Date – 2008/09/16 | | | | | | |
| Account | Run Date | Userid | Start Time | Stop Time | Total TSO Charge | |
| **** | 2008/07/19 | ***** | 12:16:44 | 13:27:38 | \$ 3.59 | |
| **** | 2008/07/19 | ***** | 14:53:51 | 16:02:39 | \$36.25 | |
| (and so on) | | | | | | |
| Totals..... | | | | | \$8,330.61 | |
| SHADOW | | | | | | |
| 2008/07/19 – 2008/08/18 Shadow Detail for Account **** Run Date – 2008/09/16 | | | | | | |
| Account | Start Date | LEV1 CPU Seconds | LEV2 CPU Seconds | LEV3 CPU Seconds | LEV4 CPU Second | SHADOW Charge |
| **** | 2008/07/19 | 1.70 | 2.56 | 29.84 | 960.59 | \$633.59 |
| **** | 2008/08/01 | 0.69 | 0.00 | 0.00 | 0.00 | \$ 1.97 |
| **** | 2008/08/13 | 1.70 | 2.56 | 29.84 | 28.66 | \$ 65.12 |
| (and so on) | | | | | | |
| Totals..... | | | | | \$17,684.96 | |

MODEL204

2008/07/19 – 2008/08/18 Model 204 Detail for Account ** Run Date – 2008/09/16**

| Account | Start Date | User | Interactive Charge | Batch Charge | I/O Charge | Total |
|--------------------|-------------------|-------------|---------------------------|---------------------|-------------------|----------------|
| **** | 2008/07/19 | **** | \$0.08 | \$1.25 | \$0.01 | \$1.34 |
| **** | 2008/07/19 | **** | \$10.08 | \$1.00 | \$0.01 | \$11.09 |
| (and so on) | | | | | | |
| Totals..... | | | | | | \$14.53 |

Print Charges

Print Charges by Date and Job

| Account | User | Jobname | Output Device | Line Cost | Cut Sheet Cost | Continuous Impression Cost | Total Cost |
|--------------------|-------------|----------------|----------------------|------------------|-----------------------|-----------------------------------|-------------------|
| **** | ***** | TESTJOB | NIHC2238 | \$16.12 | \$0.00 | \$0.00 | \$16.12 |
| **** | ***** | PRODJOB | PRT40 | \$ 0.00 | \$11.00 | \$0.00 | \$11.00 |
| (and so on) | | | | | | | |
| Totals..... | | | | | | | \$240.74 |

=====

Finally, to examine disk storage charges in more detail, select either “Month-to-Date DASD report” or “Prior Month DASD report” option to generate a report showing managed storage consumption by userid by level of storage for the requested billing period. Each data set belonging to a userid for the account is multiplied by the number of days in the month that the data set existed to get the total “megabyte-days” for the data set. The report then totals all megabyte-days for all data sets allocated to each userid in an account.

Data set storage

Titan places disk data on the most efficient media, based on size and usage history. New and actively used data sets reside on primary “Level 0” disk volumes. Less frequently accessed data sets are first moved onto secondary “Level 1” disk volumes and then to “Level 2” tape storage. Titan automatically tracks where each data set resides, moving (“migrating”) data sets off primary volumes as space is

needed and automatically “recalling” them as they are accessed. The report separates storage usage by Level 0, Level 1, Level 2, and Backup Storage.

=====

2008/08/19-2008/09/18 DASD Charges FOR ACCOUNT XXXX Run Date - 2008/09/25
XXXX Cost Report

| Userid | Lev 0 MB | Lev 0 Cost | Backup MB | Backup Cost | Lev 1 MB | Lev 1 Cost | Lev 2 MB | Lev 2 Cost | Total Cost |
|--------|-------------|---------------|--------------|----------------|-------------|---------------|-------------|---------------|---------------|
| User1 | 829.88 | \$8.55 | 517.93 | \$.16 | .16 | \$0.00 | 247.93 | \$2.55 | \$11.26 |
| User2 | 257,617.89 | \$2,653.46 | 2,543,521.38 | \$763.06 | .81 | \$0.01 | 103,103.02 | \$1,061.96 | \$4,478.49 |
| User3 | 16,244.38 | \$167.32 | 1,028,964.77 | \$308.69 | 3,970.89 | \$40.90 | 615,961.78 | \$6,344.41 | \$6,861.32 |

Totals.....

274,692.15 \$2,829.33 3,573,004.08 \$1,071.91 3,971.86 \$40.91 719312.73 \$7408.92 \$11,351.07

=====

Backup versions of Titan data sets are retained for a 42-day grace period after the data set has been deleted. This means that an account or userid may still be charged for storage for up to 42 days after all online data sets for that userid have been deleted.

Questions?

If you need help interpreting the billing reports or have suggestions for new reports, please call the NIH Help Desk (<http://ithelpdesk.nih.gov/support>) at 301-496-4357, 301-496-8294 (TTY) or toll free at 866-319-4357. We will be more than happy to help or discuss new reporting options for chargeback.



Proposed Increase of NIH Data Center Rates for Fiscal Year 2009

Proposed fiscal year 2009 rates for CIT services are under review by the NIH Office of Financial Management (OFM). Each year CIT reviews its rates for all services provided, including those by the NIH Data Center. We evaluate the costs associated with our various services and adjust rates accordingly. We strive to provide a high level of service and we value our customers.

Proposed rate increases in FY09

For many years CIT was able to deliver NIH Data Center services and hold our rates steady. There have been substantial improvements to the NIH Data Center environment to meet the challenges of 21st century science and research, including investments in more energy-efficient equipment, improvements in security, and changes to improve our reliability.

However, since we operate on a cost-recovery basis, we must adjust our rates for the fiscal year 2009 to recover the actual costs of serving our customers. The NIH Data Center is subject to the same economic forces as seen in other sectors of the economy and the escalating cost of doing business has forced us to re-evaluate our charging schedule.

Where to find the proposed rates

The NIH Data Center's fiscal year 2009 rates (proposed) will be available on the Data Center Rates page. This site will be updated whenever rate changes are approved. Major rate adjustments will continue to be announced in *Interface*.

If you have any questions, please call the NIH Help Desk at 301-496-HELP (301-496-4357), 866-319-4357 (toll free), or 301-496-8294 (TTY).



Interested in ITIL?

What is ITIL? What can it do? How do I find out more about it? If you've been asking these questions about ITIL, now there is an NIH ITIL interest group focused on giving you answers.

Origins of ITIL

ITIL, which stands for Information Technology Infrastructure Library, began in the 1980's in the UK as an effort to standardize information technology service and delivery practices. Funded by the UK government, ITIL matured into a series of publications outlining a framework of best practices. ITIL's increasing popularity over time is based on the benefits IT service organizations experience after adopting the best practice framework in their workplaces.

Within information technology groups in the United States, adoption of ITIL has been increasing over the past few years, and NIH is no exception. Of the ongoing NIH initiatives in ITIL, the CIT effort is one of the larger ones.

ITIL at CIT

This August CIT hosted the ITIL@NIH Interest Group's kick-off meeting, which drew representatives from many NIH ICs and offices. The ITIL@NIH Interest Group is an effort to create a collaborative, self-directing group to share ITIL best practices, learn from one another, and bring benefits to each organization through the shared experience of all participating organizations.

However, the groundwork for ITIL at CIT began long before this summer's kick-off meeting. Late in 2006, CIT completed an assessment of IT processes. The study's findings led senior management, seeking to improve service operations across CIT, to embrace the ITIL framework for IT service management because it is based on industry-recognized best practices in IT service and customer support.

Key ITIL benefits:

- Redirects support costs
- Lowers total cost of ownership
- Facilitates outtasking/outsourcing operations
- Represents best practices in the industry
- Is vendor neutral
- Offers consistent concepts and terminology
- Improves customer service
- Improves predictability of IT costs and chargebacks
- Addresses need for an IT Management Process that:
 - Connects all the pieces of systems management
 - Matures into service management

Adopting ITIL represents a paradigm shift for any organization. Focus shifts from IT operations to an ITIL-based service provision, which means that the organizational goal broadens from solely optimizing operations for internal efficiencies to determining the value added to the customer.

Learning more and sharing

The ITIL@NIH Interest Group intends to facilitate organizational learning about ITIL. That includes addressing the following questions: What is the ITIL framework? How does that framework apply to an organization's current processes? What are the best practices applicable to specific processes?

ITIL is a starting point for process improvement related to service delivery. ITIL is not considered highly prescriptive. Rather, it is a set of "good practice" guidance for IT practitioners to follow. They may adhere to these practices strictly, as outlined in each ITIL book, or, a more likely scenario, practitioners may adapt the ITIL guidance as they deem appropriate.

Thus, the ITIL@NIH Interest Group intends, in part, to serve as a forum where answers to ITIL questions are presented and discussed. The intent is to create a collaborative learning environment for all participants.

The Interest Group

The mission of the newly formed ITIL@NIH Interest Group is *...to support the NIH scientific research and business operations by sharing information and best practices among its members concerning ITIL and information technology service management (ITSM).*

As indicated in the recently adopted charter, the ITIL@NIH Interest Group was created to do the following:

- Serve as a standing forum for the exchange of ideas and information regarding ITIL and ITSM issues and policies as related to NIH;
- Develop and make recommendations to appropriate NIH organizations and leaders regarding ITIL and ITSM issues and policies that promote improved operational efficiencies and inter-group cooperation;
- Conduct an outreach component bi-directionally with high-level officials and end users regarding ITIL and ITSM issues and policies as related to NIH;
- Develop tangible media to assist in the exchange of information between NIH organizations;
- Support and promote collaboration across NIH ITSM programs;
- Monitor new technologies and/or NIH projects related to ITSM;
- Participate in matters of concern to the NIH community as related to ITIL and ITSM issues and policies.

The ITIL@NIH Interest Group has a website (<http://itil.nih.gov>) that contains documents, ITIL references, links to various ITIL related articles and websites, and more. Visitors interested in learning more can find meeting schedules, notes, surveys, and discussions groups at the site.

Get involved!

Bring positive change to your IT operations.

Improve the value delivered to your customers.

Participate in the ITIL@NIH Interest Group!



Titan Technical Corner – Distributing SAS Reports & Graphs via Email

Disclaimer: The following article regarding SAS is intended solely as educational and informative material from one federal entity to other interested federal users. Discussion of SAS does not constitute a commercial endorsement.

Since its inception in 1976, SAS has been at the forefront of providing a software architecture that enables organizations to integrate, manage, and analyze data, allowing them to better deploy information across the enterprise. SAS can be used to analyze data from disparate sources to identify problems, recognize opportunities, and provide predictive insights. This can be done via a variety of reporting and visualization tools including preformatted reports, dashboards, scorecards, charts, and other graphical techniques.

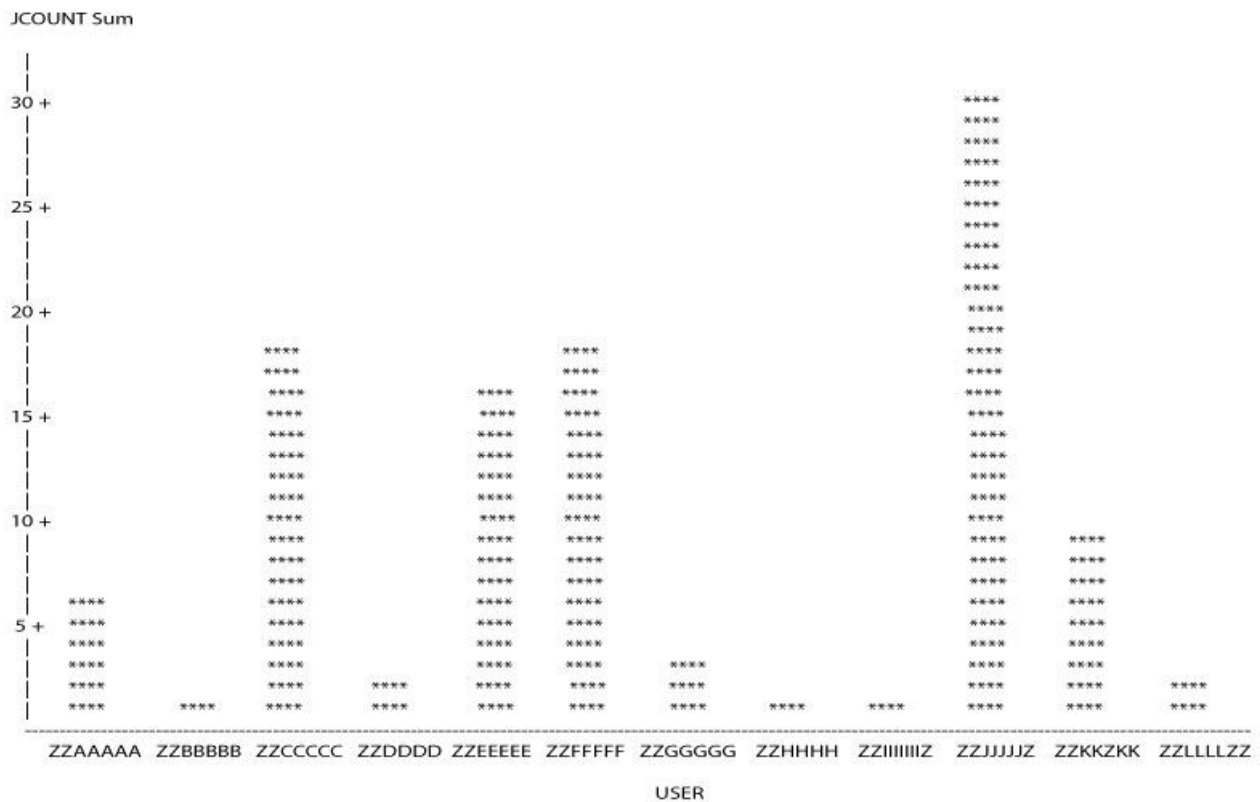
Due to the IT industry's trend toward server consolidation, SAS Institute has retained the option of using mainframes like Titan as a key platform for running its data analysis and reporting software. This is especially true for mission-critical, high-volume environments where data security, integrity, backup, and recovery are cardinal issues.

The remainder of this article will focus on explaining how Titan SAS programmers can use email to move their systems forward into 21st century techniques simply by using SAS to generate a chart that can be emailed via SMTP using standard Titan Batch JCL processing.

Using email to distribute SAS reports

For purposes of illustration, the SAS program presented in this article parses Titan performance data and generates a chart showing the number of jobs processed by users for a generic sample account "ZZZZ." The report is then distributed to interested parties via email in the following format:

Job Count Plot by Account for Yesterday



SAS basics and ODS

One of the most significant developments in version 7 of SAS was the inclusion of the Output Delivery System, or ODS (originally pronounced 'odious' but now pronounced 'ya gotta love it'). Greatly enhanced in versions 8 and 9, ODS allows SAS users to create customized versions of output in a variety of destinations (including HTML, RTF, XML, and PDF) instead of being limited to traditional line-listing printouts.

In our example SAS program, the FILENAME keyword statement defines "OUTBOX" that will be written to as an EMAIL file. Users can specify additional options defining "FROM," "TO," "CC," "REPLYTO," and "SUBJECT" and the file content is defined as TEXT/HTML.

```
FILENAME OUTBOX EMAIL TO = ('DOE@MAIL.NIH.GOV')
                        REPLYTO = ('DOE@MAIL.NIH.GOV')
                        TYPE = 'TEXT/HTML'
                        SUBJECT = ' Job Executions for ZZZZ for Yesterday';
```

SAS programs consist of two basic building blocks - 'DATA steps' and 'PROC steps.' A typical program starts with a DATA step that reads external Titan data files and creates a SAS table. A SAS program then typically passes the SAS table to a PROC step for processing. In general, DATA steps read and modify data, while PROC steps analyze and summarize data, perform utility functions, or print reports.

SAS data sets

Before analyzing or reporting data in SAS, SAS needs to read your data from an external source and convert it into a SAS table. Getting your data into a SAS table is usually the first step in creating a SAS program. SAS is quite flexible and can read almost any data including Titan sequential files, DB2 tables, and Excel spreadsheets uploaded to Titan. Once your data has been read into a SAS table, SAS keeps track of what is in the table and where it is located. In SAS terminology, tables consist of observations and variables. Adopting the terminology of DB2 and other relational databases, SAS data sets are also called tables, observations are called rows, and variables are called columns.

In our example program, a Titan performance data set containing job accounting data is read to create a SAS table named BATCH. In this example each row in the BATCH table represents a job submitted by account ZZZZ.

```

DATA BATCH (KEEP = JOB ACCOUNT USER DATEX) ;
INFILE SMFDATA; /*SMFDATA is DD Name of Performance Dataset */
/* The following defines input layout of SMFDATA */
INPUT @2 SMFRTYPE PIB1. /* SMF Record Type */
      @3 ENDTS SMFSTAMP8. /* Date and Time of Job */
      +4 WID $CHAR4. /* Work Indicator (STC/TSO/BAT)
        SUBTYPE PIB2. /* SMF Record Subtype */
        @; /* Keep column pointer '@' after SUBTYP */
DATEX = DATEPART(ENDTS); /* Strip off the Date for this report */

/* Parse the data to consider only SMF Record type 30 subtype record 5 – there is one record per job */
IF WID=:'STC' OR WID=:'TS' THEN DELETE; /* Don't include started tasks or tso */
IF (SMFRTYPE = 30 AND SUBTYPE =5) THEN GOTO KEEPIT;
ELSE DELETE;
KEEPIT:
/*JOBPTR points to job related data in this record */
INPUT +8 (JOBPTR JOBLEN JOBSEG) (PIB4. PIB2. PIB2.) @;
JOBPTR = JOBPTR-3; /* Adjust job data pointer for batch jobs */
INPUT @JOBPTR JOB $CHAR8. /* Job name */
      PROGRAM $CHAR8. /* Program Executed */
      +40 INITTM SMFSTAMP8. /* (Date time job was initiated */
      RDRTS SMFSTAMP8. /* Date time reader started job */
      RDREND SMFSTAMP8. /* Date time reader finished reading */
      JOBPRGNM $CHAR20 /* Programmer Name from job card */
      ACCOUNT $CHAR4. /* Account from RACF */
      +4 USER $CHAR8. /* RACF Userid */
IF ACCOUNT = 'ZZZZ' THEN OUTPUT BATCH; /* Analyze jobs from account 'ZZZZ' */
ELSE DELETE;

```

SAS PROCs

We next use the SAS 'PROC SORT' to sort the BATCH table by RACF user. We then will use the sorted table to total the number of jobs submitted by each user for account ZZZZ:

```

PROC SORT DATA=BATCH; BY USER;

/* Create SAS table SUMMARY – this table will have one row per user in account ZZZZ */
/* representing the number of times each user in the account submitted a job for yesterday */

DATA SUMMARY (KEEP = DATEX ACCOUNT USER JOBCOUNT);
SET BATCH; BY USER;
IF FIRST.USER THEN DO; /* SET JOBCOUNT TO 0 AT THE START FOR EACH USER */
JOBCOUNT = 0;
END;
JOBCOUNT+1; /* FOR EACH RECORD FOR EACH USER ADD 1 TO JOBCOUNT */ IF
LAST.USER THEN OUTPUT SUMMARY;

/* The following SORT proc orders the SUMMARY USER table by descending JOBCOUNTS */

PROC SORT DATA=SUMMARY; BY DESCENDING JOBCOUNT;

```

At this point we are ready to present the results of our analysis as a report. There are many SAS procedures that can be used to present data including PROC PRINT, PROC FREQ, and many others. PROC CHART has been chosen to present the number of jobs by userid for account ZZZZ. In addition we wish to present this report as an HTML email that can be presented to any outlook email recipient:

```

/* Tell OUTPUT DELIVERY SYSTEM to stop generate reports as listings */

ODS LISTING CLOSE;

/* The following statements tell PROC CHART to generate HTML output to OUTBOX filename for email
*/

ODS HTML BODY=OUTBOX RS=NONE;

PROC CHART; VBAR USER / SUMVAR=JOBCOUNT DISCRETE;
TITLE ' Job Counts by User for Account ZZZZ for &SYSDATE9' ;
RUN;

ODS HTML CLOSE;

```

The SAS program is now ready to be saved as a file on Titan and then executed as a batch job - either as a test job or as a production job scheduled by using WEB submit or CA-7. The following Batch JCL can be submitted to Titan, and once the job is completed, email will be sent via SMTP to the recipient list specified in the program:

```
//SASMAIL1 JOB ,'TITAN SAS JOB',CLASS=X,MSGCLASS=H
//SAS1 EXEC SAS
//SMFDATA DD DSN=NIH.SMFSTD.DAILY.D080911,DISP=SHR
//SYSIN DD DSN=NIH.SAS.DEMO.SOURCE (BATMAIL1),DISP=SHR
```

Conclusions

A simple Titan job can be easily used to generate and email reports, charts, and graphs with SAS Output Delivery System. You can easily email the reports to specific individuals immediately upon compilation of the report, eliminating lost and misrouted printed reports, saving print costs, and improving the ease of use for managers and technicians in reviewing large numbers of analytic reports.

For more information on using this technology, please visit the NIH Help Desk website (<http://ithelpdesk.nih.gov/support>) or call 301-496-4357, 301-496-8294 (TTY) or toll free at 866-319-4357.



QWS3270 Secure

As of October, NIH users can download the latest client version of QWS3270 Secure (4.4.2) from the CIT website (<http://cit.nih.gov>). This software is a 3270-emulation application that allows PCs to connect to SSL-enabled MVS applications over a secure TCP/IP connection. QWS3270 Secure is designed to take full advantage of the "point and click" capabilities of Windows (NT, 2000, XP, and Vista). CIT has purchased licenses, so that NIH staff and contractors who are registered Titan users will be able to obtain this client free of charge for conducting official government business.

In order to enhance data security for our users, CIT provides only QWS3270 Secure, which is a more secure version of Plus.

Features

User Features:

- Sessions only limited by OS resources
- Great performance with minimum system resources per session:
 - 3MB fixed disk space
 - 1MB of ram
- Edit features such as cut , copy, paste, and append
- Configurable font type, size, and style
- Auto connect to last session used
- Print screen function
- Save screenshots to disk
- Auto window-sizing or full screen mode

3270 Mainframe features:

- TN3270 and TN3270E support
- LU1/LU3 Print session support
- Auto-detect screen size
- Configurable display attributes

What you will need

In order to download QWS3270 you must have a registered Titan user ID and RACF password.

To install the software on your PC you must have administrative rights to your PC. Due to the requirements of the new FDCC mandate that has recently been implemented at NIH, an administrative account is necessary for making system changes, installing software, and running some applications.

If you do not have an administrative account you can download the software but you will need to contact the NIH Help Desk (<http://ithelpdesk.nih.gov/support/>) for assistance in installing it.

How to download the software

- Go to the CIT website: **cit.nih.gov**.
- Under the “Quick Links” heading, click **Software Distribution**.
- Scroll down to “Software” and select **Downloads**.
- Choose **Connectivity Tools** from the list. You will then be redirected to the Silk Web page on Titan.
- Under “Connectivity,” click on **NIH Connectivity Tools**. You will then be prompted to enter your Titan userid and password.
- Select the option **QWS3270**.

Because of the special secure port considerations for **QWS3270**, it is recommended that you print and read the installation and configuration instructions **before** you install the software.

The instructions for QWS3270 Secure also contain separate configuration directions for IMS/ADB users to allow them to connect directly to IMS.

If you have any questions regarding QWS3270 Secure, please contact the NIH Help Desk at <http://ithelpdesk.nih.gov/support> or call 301-496-4357, 301-496-8294 (TTY) or toll free at 866-319-4357.



CIT Computer Training Celebrates 40 Years!

As the Fall/Winter 2008 Term opens, the CIT Computer Training Program is pleased to announce its 40th year of bringing high-quality computer training to the NIH community. What a time it has been!

A look back

Things were very different in the fall of 1968 when the Computer Center in DCRT began offering courses designed to assist NIH programmers, analysts, and managers to make more effective and efficient use of the NIH's computers and software. A total of 18 different courses were offered. Elliot Alterman taught the first training session, entitled "SYSTEM/360 at NIH for Computer Operators," on September 3, 1968. Other adventurous training pioneers who volunteered their talents and expertise in that first term were: Rita Minker, Tom Tuffesing, William Speary, Frank Rosenzweig, Joseph Naughton, and Charles Bacon.

Throughout the years, the computer training program has grown and evolved. The 70's brought courses for WYLBUR, Dec10, and the beginning of seminars, as well as audio/visual and computer-assisted courses, so individuals could benefit from the information at their own pace. To the delight of many, the training catalog added a map of the NIH Campus and pictures of the facilities, instructors, and students who attended the courses.

As the 80's began, so did a change in the computing world with enhanced interest in using a personal computer to complete daily tasks. The necessity of courses on personal computing and PC-DOS, which brought with it the advent of PC/Mainframe communication, became evident. The Training program also recognized a need for statistical packages such as SAS and SPSS, which have become two of the longest-running training courses offered through the program.

At the 20-year mark, the 90's pushed computer training into another dimension. While many "traditional" classes were retired, including COBOL, FORTRAN, WYLBUR, and Dec10, a wave of new topics on Unix, Helix, Internet Resources, and Microsoft Windows flooded the scene. As the Training Program developed, so did computer use at NIH, with courses geared to the scientific community becoming more prevalent. These scientific courses currently add up to 60 percent of the program.

In the first decade of the new millennium, CIT offered over 220 different courses, covering a wide variety of computing interests for NIH. In the fiscal year of 2008, CIT Training recorded over 10,000 student course completions. With seminars designed for those in the scientific community, web development, networking, computer security, and statistics, the world of personal and scientific computing has clearly advanced over the years, and CIT Training is proud to continue with this exciting endeavor.

Make new training program history – share what you know

With the ever-changing community at NIH, our courses have evolved to keep pace. One of the unique opportunities afforded through our training program allows individuals from the NIH community to share their expertise with other colleagues. Are you involved in an emerging field of interest which will benefit the mission of the NIH? Are you a project lead rolling out a new or updated program? Contact us so that we can assist you to share what you know to benefit others.

Computer courses now available for registration

Many new sessions this term are the direct result of volunteers participating in our training program. Here is a sampling of new courses:

- Advanced QVR – CRISP/RCDC
- AppScan Orientation for ISSOs
- SAS Enterprise Guide & Tracking Trends in Science
- Leopard Tips & Tricks
- GeneSpring GX 10 & Affymetrix for GeneSpring

The popular returning topics include seminars for scientists, QVR, Blackberry, Office 2007, and Web Search: Thinking Beyond Google. You can obtain full course information, register for Fall/Winter 2008 classes, join our CIT Training Mailing list, and view your transcript or current application status at our website (<http://training.cit.nih.gov>).

Continuing our tradition of free classes

Change may be inevitable, yet one thing has remained the same. Whether the topic was WYLBUR, PC-DOS, Convex, Microsoft Office, computer security, or web development, most courses have always been free of charge to NIH staff! While NIH employees get first priority for classes, contractors are welcome to attend when space is available, the class is related to their NIH work, and they have approval from their NIH supervisor.

If you have any questions about the CIT Training program you may contact us by phone at 301-594-6248 or email us at CITTraining@mail.nih.gov.



Dates to Remember

Now ...

- November 27 • Thanksgiving Day

Later this year ...

- December 2 • Disaster recovery off-site test. ^{E T} [<http://datacenter.cit.nih.gov/disaster>]
- December 25 • Christmas Day

E EOS (Unix system)
T Titan (OS/390 system)

Articles in other issues of *Interface* appear in brackets [].



Subscribe to the "Interface" list via Listserv to receive notification of new issues as soon as they are available on the web [<http://list.nih.gov/archives/interface.html>].

Publications

The following document has become available since the last issue of *Interface* and can be obtained from the CIT publications web page [<http://publications.cit.nih.gov>]. Publications are provided in hardcopy, online or PDF versions under the "View/Print on Demand" (VPOD) system.

To be notified when new or updated documentation has been added to the VPOD system, join the Listserv list, "CIT-doc-renew" [<http://list.nih.gov/archives/cit-doc-renew.html>].

z/OS Connectivity

Updated

Network Access to Titan August 2008



Directories and Reference Information

NIH Computer Center Hardware and Software

[<http://cit.nih.gov/ProductsAndServices/ApplicationHosting/RelatedServices/HardwareSoftware.htm>]

Computer Services Telephone Directory

[<http://cit.nih.gov/NR/rdonlyres/CD8200B2-35E6-424C-A1C9-48DA35CE8155/0/TelephoneDirectory.pdf>]

Online Services Directory

[<http://cit.nih.gov/ProductsAndServices/ApplicationHosting/AboutDataCenter/OnlineServices.htm>]

Popular Websites for NIH Computer Center Users

[<http://cit.nih.gov/ProductsAndServices/ApplicationHosting/AboutDataCenter/PopularWebSites.htm>]

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