

IS-01

NEACC COMPUTE SERVICES PROCESS Baseline

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APPROVING AUTHORITY



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DOCUMENT HISTORY LOG

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1. INTRODUCTION

1.1 Purpose

This document defines the current set of processes that NEACC application administrators (AAs) shall use when requesting compute services from the NCS team. The document also specifies the critical guidelines that AA requestors shall follow to ensure that they are not found to be in violation of NCS policies. This document also defines how quickly NEACC AA's can expect NCS to respond to their requests.

1.2 Applicability

This document applies to all NEACC Lines of Business and NEACC Compute Services. The intended audience for this document is all NEACC.

1.3 Applicable Documents

The following documents are required to accomplish the purpose of this document:

- Not Applicable

1.4 Reference Documents

The following documents are referenced within this document and provide supplemental information:

- MSFC ITS-SOP-0005, *Standard Operating Procedure, MSFC IT Security Incident Response*

1.5 Definitions

The following definitions provide supplemental information for this document:

Table 1. Definitions

Term	Definitions
Active Directory	A directory service on Windows domain networks
bReady	Portal storefront supporting NASA Business communities
Centrify	Identity consolidation and privilege management software that can be used for bridging of Linux and UNIX systems to Active Directory, with powerful privilege management and session monitoring across Windows, Linux and UNIX systems
etc	A directory on a Unix-based machine that contains networking configuration files (Sometimes referred to as “ <u>e</u> dit to <u>c</u> onfigure”, pronounced “etsy”)
IS01	MSFC Chief Information Office organizational code

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Term	Definitions
Jira	Part of the Atlassian suite, Jira is an application that supports workflow processing
Linux	Unix-like operating system
NF-1700	NASA Form 1700, an IEMP System Access Request
Oracle	Oracle/MySQL is a worldwide open source database
Rally	A tool used to plan and track work (by Rally Software)
Remedy	An IT service management tool (by BMC Software)
Sev 1 / Sev 2	Severity 1 / Severity 2
Sudo	“superuserdo”, a command that allows a Unix system administrator to delegate authority to give certain users (or groups of users) the ability to run some (or all) commands as root
Unix	A computer operating system (OS). Also, a family of multitasking, multiuser computer operating systems that derive from the original AT&T Unix
Win	Windows

1.6 Acronyms/Abbreviations

The following table defines the acronyms used within this document:

Table 2. Acronyms/Abbreviations

Acronym / Abbreviation	Description
AA	Application Administrator
A&WS	Apps and Web Service
AGCY	Agency
AOM	Applications Operations Management
CSI	Computer Security Incident
CR	Change Request
DBA	Data Base Administrator
ESD	Enterprise Service Desk
IEMP	Integrated Enterprise Management Program
IT	Information Technology
ITSM	IT Security Manager
MSFC	Marshall Space Flight Center

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Acronym / Abbreviation	Description
MISM	Marshall Integrated Services Management
NAMS	NASA Account Management System
NASA	National Aeronautics and Space Administration
NCS	NEACC Compute Services
NEACC	NASA Enterprise Applications Competency Center
NISC	NASA Information Support Center
NDC	NASA Data Center
OS	Operating System
PII	Personally Identifiable Information
PW	Password
SBU	Sensitive But Unclassified
SOC	Security Operations Center
SQL	Structured Query Language
SR	Service Request
TAG	Temporary Access Grant

2. OVERVIEW

NEACC Compute Services (NCS) is the sole provider of compute services to the NEACC. Compute services include hardware builds, storage provisioning, and operating system (OS) installation and maintenance. However, any work associated with the application or the database on a server provided by NCS is the responsibility of the NEACC Application Administrator (AA), which is typically someone associated with one of the following groups:

- Application Operations Management (AOM)
- Apps and Web Service (A&WS)
- Database Administrators (DBAs)
- DevOps
- BASIS

NASA MSFC has established this separation of duties between Compute Services and Application Services to:

- Achieve efficiencies by consolidating resources who perform similar technical functions
- Safeguard systems by reducing the number of individuals who have elevated access to NASA systems
- Ensure compliance with Information Technology and functional audits

This document defines the current set of processes that NEACC application administrators (AAs) shall use when requesting compute services from the NCS team. The document also specifies the critical guidelines that AA requestors shall follow to ensure that they are not found to be in

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violation of NCS policies. This document also defines how quickly NEACC AA's can expect NCS to respond to their requests.

3. COMPUTE SERVICES REQUEST PROCESS

3.1 Compute Service Request Types

Currently there are five types of compute services that a NEACC AA can request from NCS:

- **Build Request:** Request the creation of a new NCS instance for use by the NEACC
- **Service Provisioning:** Request an to perform application and/or database work on an NCS instance
- **Temporary Access Grant:** Request temporary elevated privileges to an NCS instance
- **Decommission NCS infrastructure server:** Request removal and complete decommissioning of system no longer in use
- **Password Reset:** Reset user's password (Note: this will change in 2015 with implementation of Centrify at which time the ESD will reset passwords)

3.2 Landscape Types

The NEACC categorizes system landscapes according to four major types:

- **Sandbox (aka Integration):** instance used for experimentation that has no connection to the promote-to-production landscape
- **Development:** instance where configuration and code is developed and from which completed code and configuration is promoted into a Test or Stage instance
- **Test (aka Stage):** instance that receives promoted code or configuration from Development and where code is tested on Production-like data prior to being promoted to Production
- **Production:** live instance of the application that is used by end users in support of business processes

In the NCS Build process, every Landscape is built according to a pre-defined template, and uses a standard, approved, and vulnerability-scanned Operating System.

- Only NCS system administrators should make any changes to the OS or the configuration files on any landscape.
- However, for each landscape instance, elevated privileges can be modified via Temporary Access Grant (TAG) request, so that application administrators and engineers can accomplish their tasks.

When requesting an NCS service, the AA shall specify the type of system to which the AA requires access. NCS defines access privileges according to the type of system and the associated security risks. If the AA has any questions about how to categorize a system, the AA should contact NCS to coordinate prior to initiating the request.

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3.3 Service Request Process

Table 3 summarizes the current process steps that AAs shall use to request the associated NCS and NEACC Information Assurance services. AAs are advised to contact the Help Desk (256-544-HELP) if they have questions. Currently the NEACC and NCS utilize the Jira application to manage all workflow associated with compute service requests. Additional detailed instructions on submitting or reviewing and approving a Jira request, including screen captures, can be requested from the NEACC DevOps group.

4. GUIDELINES FOR USE

4.1 Elevated Privileges via Temporary Access Grant (TAG)

AAs may request a TAG if they require access to the operating systems to carry out activities essential to the installation and/or configuration of application components. TAG requests are tightly controlled and follow a process that is periodically audited by both internal and external auditors to ensure compliance. As described in Table 3 and in Section 4.1 of this document, TAG requests follow a multi-step approval process. AAs should apply for the TAG at least five days in advance of the need date. The elevated privileges associated with a TAG expose NASA to heightened risk. Therefore, TAG’s should be closed as soon as possible and should, in general, not remain open for extended periods.

When submitting a TAG request, the AA shall describe in detail what actions he or she is planning to perform on the system during the duration of the TAG. It is the AA’s responsibility to be specific and precise about how he or she intends to use the elevated access.

In order for the system to pass security audits and maintain scan compliance, the AA shall not perform any actions on the system that are not described in the TAG request. If the AA determines that he or she needs to perform additional actions, the AA shall submit a new TAG request and include the new information.

The AA shall not, under any circumstances, use access granted via a TAG request to perform any of the following actions on any landscape instance:

- Add: Group or to a server
- Modify: “superuser do” (sudo), password or the host specific configuration (/etc) files
- Fundamentally alter or augment the operating system from that which was delivered by NCS (e.g., by creating alternate directories and / or installing additional operating system components)

Any deviation from the described policy may be considered inappropriate use of Government equipment and a violation of acceptable computing policies and will be reported by the NCS

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immediately per Section 4.2 below, which may result in disciplinary action, to include potential termination of employment for the AA.

If there is ANY question about whether an action may be construed as misuse, it is the AA's responsibility to contact NCS and clarify the situation prior to taking any action in the system. Failure on an AA's part to read and understand these guidelines does not exonerate him or her from the repercussions of failing to follow this policy.

4.2 Procedures for MSFC IT Security Incident Response

MSFC ITS-SOP-0005, *Standard Operating Procedure, MSFC IT Security Incident Response*, contains guidelines pertaining to incident responses that include (but are not limited to) the following:

All personnel:

- Shall report all suspected CSI's immediately to the
 - NASA Information Support Center (NISC) @ 256-544-Help Option 0, or
 - the NASA Security Operations Center (SOC) at 1-877-NASA-SEC (1-877-627-2732)
- Are to be aware of unusual system behavior, which may indicate a security incident in progress
- Shall take notes on paper about the incident. Write down any information that may be helpful.
- Shall not attempt to correct the problem or track down the intruder unless authorized by the MSFC ITSM.

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Table 3. NEACC Request Process

PROCESS STEP	PURPOSE	Windows	Linux/UNIX	ADDITIONAL DETAIL
1 – Build Server	Need a new virtual server	JIRA	JIRA	<ul style="list-style-type: none"> • Include any associated Remedy-SR# in the JIRA request title (<i>EX: SR#12345- New server needed for XYZ purpose</i>) • For audit purposes, access Groups must be specified for each server build - Groups are not copied onto server clones • Linux/UNIX -
2 - Request Resource Management	An needed to manage a server or other resources that are part of the ndc domain (ndc.nasa.gov)	<p>NAMS: AGCY025 (Active Directory Resource Management)</p> <p>And</p> <p>NAMS: 11676 (Win OS)</p> <p>Windows: completed by NCS via Active Directory action</p>	<p>NAMS: IEMCC1500 (Unix OS)</p> <p>Linux/UNIX: completion needs active/approved Remedy SR --> Rally task will auto-gen: MISM CR</p>	<p>Linux/UNIX process also involves:</p> <ul style="list-style-type: none"> • Remedy: Active, approved Remedy SR req'd to create Rally task(s) <ul style="list-style-type: none"> -- Remedy SR -- “tag” if NCS task needed -- All info is related by Remedy SR number • Rally: tagged NCS task(s) will auto-gen a MISM CR • MISM: CR created --> generates MISM SR
3 - Request OS Service	An application requires a network in order	1 - NAMS AGCY031 (Active Directory Service)	1 – JIRA – submit Jira OS Service Request (to create service/network	<ul style="list-style-type: none"> • Add Group or to a server • JIRA: If "direct login" required, provide justification

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PROCESS STEP	PURPOSE	Windows	Linux/UNIX	ADDITIONAL DETAIL
	to perform a function on the server Should not be used to login interactively	- to create service/network account 2 – JIRA – submit Jira Service Account Provision request (to associate account to server) 3 – JIRA - add users to Group associated to this account	account) 2 – JIRA - submit Jira Service Account Provision request (to associate account to server) 3 – JIRA - associate a Group that can use the service account	• JIRA: If sudo required, specify under "Level of Access Required"
4 - Request Temporary Access Grant (TAG)	User needs temporary elevated privilege (admin or root) to OS and application	JIRA NOTE: this will change to NAMS in 2015 as Centrify is deployed across LOBs Windows: admin access to OS service account	JIRA NOTE: this will change to NAMS in 2015 as Centrify is deployed across LOBs Linux/UNIX: root access to OS service account	TAG may NOT be used to: <ul style="list-style-type: none"> • Add Group or to a server • Modify: sudo, PW or etc files • Fundamentally alter or augment the OS from what was delivered by NCS (e.g., by creating alternate directories and installing OS components) • Grants "full" admin access to NCS-built OS and applications (but not a new or different OS) • 5 day lead time (but ~ 1day if Remedy SR is Sev 1 or Sev 2)
5 - Request NEACC Application Service	When an application needs access to data residing on a	NASA Form 1700 – IEMP System Access Request (PDF located on bReady)	NASA Form 1700 – IEMP System Access Request (PDF located on bReady)	<i>This is not part of NCS provisioning</i> A NF-1700 form is needed for each application service.

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PROCESS STEP	PURPOSE	Windows	Linux/UNIX	ADDITIONAL DETAIL
NOTE: includes Oracle/SQL application level services <i>This is not part of NCS provisioning</i>	server (pull or push) <i>This is not part of NCS provisioning</i>	 <i>This is not part of NCS provisioning</i>	 <i>This is not part of NCS provisioning</i>	NOTE: NEACC Application services provisioned by the NEACC Access Management team, Oracle/SQL application level services provisioned by the Oracle DBA team.
6 - Any NCS server config change	Any NCS server config change	MISM CR	MISM CR	Required for, but is not limited to: <ul style="list-style-type: none"> • SUDO for specific command (UNIX) • New Group creation • Changes to system file or directory permissions • Server backup prior to decommission of NEACC server
7 - Password Reset	PW reset on NEACC system	HELP Desk NOTE: this will change in 2015 with implementation of Centrify at which time the ESD will reset passwords	JIRA NOTE: this will change in 2015 with implementation of Centrify at which time the ESD will reset passwords	

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PROCESS STEP	PURPOSE	Windows	Linux/UNIX	ADDITIONAL DETAIL
8 - Request NCS Infrastructure Decommission	Need system decommissioned	JIRA	JIRA	A MISM CR requesting server backup prior to decommission is strongly recommended

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5. NCS EXPECTED RESPONSE TIMES

5.1 Compute Service Request Types and Expected Turnaround Timeframes

NCS strives to complete service requests according to the following performance guidelines:

Table 4. Request Types and Response Time

Request Type	Response Time
Service Provisioning	3 business days from Approval
Temporary Access Grant (TAG)	5 business days from Approval
Build Request	3 business days from Approval
PW Reset	1 business day from Approval

In order for NCS to meet these turnaround timeframes, the AA must properly submit all requests with complete information as described in Table 3. The AA must keep in mind that compute service requests have multiple approval steps that can negatively impact turnaround times.

AAs are encouraged to submit their requests ahead of time so that the NCS team has time to complete the request prior to the actual need date.

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6. RECORDS

The following table lists any records/outputs created due to this document.

Table 5. Records

Name of Record	Storage Location	SBU/PI I*	Retention Schedule	Responsible Party	Email	Phone No.
None						

* SBU – Sensitive But Unclassified; PII – Personally Identifiable Information

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APPENDIX A: POINT OF CONTACT LIST

Table 6. Points of Contact

Name	Position	Center	Phone Number

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