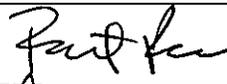
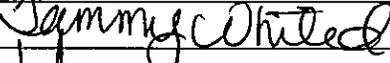
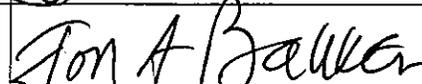


# Roll-up Service Level Agreement for IT Services at Fermilab

CS-doc-4830

## DOCUMENT APPROVALS

By signing below, all parties agree to the terms and conditions described in this Agreement.

Name	Title	Signature	Date
<b>Computing Sector :</b>			
Rob Roser	Chief Information Officer or Deputy		3/22/18
Tammy Whited	Service Manager		3/22/18
Panagiotis Spentzouris	Scientific Computing Division Head		3/22/18
Jon Bakken	Core Computing Division Head		3/22/18
<b>Senior Fermilab Leadership:</b>			
Timothy Meyer	Chief Operating Officer		3/22/18

### Purpose

This document is a high-level overview of some services provided by the Office of the CIO, Core Computing Division and Scientific Computing Division. It will communicate services and their service levels that Computing is capable of managing based on current funding. Signature by laboratory executive management indicates agreement that these services have been reviewed and communicated and agreement that these services are what are currently provided and used by Fermilab users. Also included in this document, is a summary report of Computing's Business Continuity Recovery Capabilities for the business processes the laboratory has deemed as required within twelve hours in a continuity situation.

### Scope of Services

Fermilab Computing provides services that are consumed by Fermilab users. This service level agreement has been aggregated into a summary format for the services which are ISO20000-certified. Appendix A includes details regarding incident and request response and resolution times. Appendix B includes links to the detailed service level agreements for all computing services.

# Roll-up Service Level Agreement for IT Services at Fermilab

CS-doc-4830

## GENERAL

**This document is under the Change Management Control Policy.**

<b>Description</b>	Roll-up Service Level Agreement for IT Services at Fermilab		
<b>Purpose</b>	Executive summary of IT services, service levels, responsibilities and terms and conditions.		
<b>Applicable to</b>	<i>All IT Services</i>		
<b>Supersedes</b>	<i>N/A</i>		
<b>Document Owner(s)</b>	Service Manager Service Level Manager	<b>Owner Org</b>	<i>Computing</i>
<b>Effective Date</b>	11/20/2014	<b>Review Date</b>	Annually

## VERSION HISTORY

<b>Version</b>	<b>Date</b>	<b>Author(s)</b>	<b>Change Number</b>	<b>Change Summary</b>
1	1/11/2017	B., McKittrick	N/A	Annual review
2	2/1/2017	B. McKittrick	N/A	Annual Review
3	3/1/2018	B. McKittrick	N/A	Annual Review

## Assumptions and Disclaimers

The service levels described in this document apply for support of services consumed at the local (Batavia, IL) campus and do not specifically cover remote Fermilab sites. The service availability and support levels are the target service levels that were identified based on the current service implementations, resources and a high-level assessment of historical performance. Service performance will be evaluated against these levels going forward to validate each service's ability to deliver at these levels and to initiate investigation of any identified gaps to identify causes, correct them and possibly adjust these service levels as needed in the future. For a more detailed evaluation or understanding of the service level for a specific service, please review the applicable service level agreement.

## Services Summary

### Service Desk

- **Description:** Provides a single point of contact for questions, technical incidents, service requests, user communications and account creation/authorization tasks.
- **Entitlement:** Online access to Service Desk web application, phone, walk-in and remote access support is available to the Fermilab community.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Critical incidents are handled by on-call rotation 24x7.
- **Service Availability:** The Service Desk web application, ServiceNow, is available 24x7, 365 days per year.

### Authentication and Directory Services

- **Description:** Enables end-user password management with the Self-Service Password Reset application. In addition, provides central authentication to computing resources and support for EDUROAM.
- **Entitlement:** The Self-Service Password Reset application is available to all users with the appropriate accounts.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays.
- **Service Availability:** 24x7, 365 per year. Critical incidents are handled by on-call rotation 24x7.

### Central Web Hosting

- **Description:** The Central Web Hosting Service provides an enterprise-level web service
- **Entitlement:** All employees and approved visitors wishing to serve content on the Internet
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays
- **Service Availability:** 24x7, 365 days per year

#### Data Center Services

- **Description:** Provides core services in support of operation of 3 computing centers and one communications room at Fermilab that together include over 28,000 square feet of space for computing equipment that provides Information Technology services.
- **Entitlement:** Fermilab Computing Professionals
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Critical issues are handled by on-call rotation 24x7.
- **Service Availability:** 24x7, 365 per year

#### Database Hosting

- **Description:** Provides Oracle, SQL Server, MariaDB, PostgreSQL and MySQL database hosting for the laboratory.
- **Entitlement:**
  - Oracle is available for applications which require Oracle databases and/or require minimal downtime, high availability and escalated vendor support (escalated support provided by Oracle).
  - SQL Server is available for applications which require SQL Server databases and/or require minimal downtime, high availability and escalated vendor support (escalated support provided by Microsoft).
  - PostgreSQL, MariaDB and MySQL are open-source solutions available when escalated vendor support is not required and maintenance costs associated with proprietary databases is deemed undesirable or cost prohibitive.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays, for Oracle, SQL Server, MariaDB, PostgreSQL and MySQL standard support. 24x7 support for critical Oracle, SQL Server and PostgreSQL databases is available with negotiated enhanced support via 24x7 monitoring/alerting and on-call rotation. 24x7 support for MySQL is currently not available.
- **Service Availability:** 24x7 for Oracle, SQL Server, MariaDB, PostgreSQL and MySQL.

#### Desktop Services

- **Description:** Provides services including the purchase, installation, troubleshooting (remote and desk-side), and disposal services for Windows and Macintosh hardware platforms (desktops and laptops) and associated application software. Support for other Fermilab-owned desktop peripheral devices. Installation and configuration desktop or laptop systems based on pre-defined standards and configurations. Also provides limited advisory and support for email configuration and access to the Fermilab network for handheld mobile devices such as iPhone and a limited selection of Android and Windows Mobile devices and tablets designated for specific department'(s) operational purposes
- **Entitlement:** available to the Fermilab community
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays
- **Service Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays

### Engineering Support Services

- **Description:** Provides lab wide engineering, design and manufacturing services. Engineering services include installation, support and troubleshooting of computer-aided engineering (CAE) software packages such as Teamcenter, ANSYS, NASTRAN and COMSOL. Design services include installation, support and troubleshooting of computer aided-design (CAD) software such as NX and AutoCAD. Manufacturing services include installation, support and troubleshooting of computer-aided manufacturing (CAM) software.
- **Entitlement:** Engineering professionals associated with Fermilab
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays
- **Service Availability:** 24x7, 365 per year

### FermiMail

- **Description:** Provides integrated email and calendaring services that are accessible on all supported operating systems and browsers
- **Entitlement:** FermiMail services provide enterprise email and calendaring capabilities to all Fermilab employees as well as those contractors and visitors who are granted rights to use the service. In addition a forwarding service is provided for visitors, contractors, users and retirees. Chat and mail list services are available to all employees and others with entitlements.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays
- **Service Availability:** 24x7, 365 days per year

### Data Center Systems

- **Description:** Install/move/add/change of servers, racks/power distribution units, consoles and network cabling. These services may include support and repair of IT assets currently under warranty, IT assets that may roll off of warranty during the term of the support agreement or IT assets that are no longer under warranty.
- **Entitlement:** Fermilab Computing Professionals.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Critical issues are handled by on-call rotation 24x7.
- **Service Availability:** 24x7, 365 per year

#### IT Server Hosting

- **Description:** Provides centrally managed Windows, Linux and Solaris servers.
- **Entitlement:** Fermilab Computing Professionals.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Critical issues are handled by on-call rotation 24x7.
- **Service Availability:** 24x7, 365 per year

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#### Managed Print

- **Description:** Managed Print Services provides core printing services and copier management.
- **Entitlement:** Fermilab community
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Critical issues are handled by on-call rotation 24x7.
- **Service Availability:** 24x7, 365 per year

#### Network Services

- **Description:** Provides network infrastructure and support for the Fermilab campus, wireless access to the Fermilab network and guest access to Fermilab Internet.
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays for client issues. Critical networking is handled by on-call rotation 24x7.
- **Service Availability:** 24x7, 365 per year

#### Networked Storage

- **Description:** Provides storage options for organization file storage and backup and restore options depending on the storage option selected.
- **Entitlement:** Members of the Fermilab community

- Support Availability: Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays
- Service Availability: 24x7, 365 per year

### Scientific Collaboration Tools

- Description: Provides solutions, software and consulting for a range of tools either developed at Fermilab or acquired from the public domain.
- Entitlement: Fermilab scientific community
- Support Availability: Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. High-impact issues may have an enhanced response agreement.
- Service Availability: 24x7, 365 per year

### Scientific Linux Engineering

- Description: Scientific Linux Systems Engineering provides Linux and DAQ Infrastructure engineering and system management services used for scientific computing.
- Entitlement: Fermilab Scientific Community
- Support Availability: Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Off-hours support for high-impact issues are negotiated with each experiment.
- Service Availability: 24x7, 365 per year

### Scientific Data Storage and Access

- Description: Provides direct file-based tape storage, called Enstore, and disk cache storage, called dCache, (both tape-backed and non-tape backed). These offerings have tiers of service that accommodate different needs of customers.
- Entitlement: Fermilab Scientific Community
- Support Availability: Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays
- Service Availability: 24x7, 365 per year

### Video Conferencing

- Description: The video conferencing service provides support to facilitate communication for Fermilab users with their on-site or off-site collaborators.
- Entitlement: The Fermilab Community
- Support Availability: Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Off-hours and weekend support is negotiable.
- Service Availability: Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays

## Virtual Server Hosting

- **Description:** Provides a centrally managed Infrastructure for hosting virtual machines.
- **Entitlement:** Fermilab Computing Professionals
- **Requirements:** Systems must run Microsoft Windows, SLF/Red Hat Linux
- **Support Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays.
- **Service Availability:** Mon. through Fri., 8 a.m. to 5 p.m., excluding lab holidays. Critical issues are handled by on-call rotation 24x7.

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## Appendix A. Service Commitments

The targets defined below describe the minimum service levels applicable to the Services in this document. There may be additional targets described in service-specific documents.

Service levels and commitments, when applied in the context of a service, are a warranty which ensures that the service is available when needed and fixed promptly when not usable.

### ***INCIDENT AND REQUEST PRIORITIES***

The priority for incidents (something is broken) and requests (something is needed) is determined by a combination of the impact and the urgency. The impact is driven by how many people are affected, and whether there is a serious business or financial loss at risk. The urgency is driven by whether the user can perform other tasks or use a workaround for a time, or whether a time-critical task is blocked. The priority determines the service response and restoration targets.

The priority of a ticket may be adjusted by service personnel after consultation with the user.

The table below provides priority guidelines.

Incident Priority Matrix				
Impact \ Urgency	Extensive Service is out for Enterprise	Significant Service is out for many users or degraded for Enterprise	Moderate Service is out for 1 user or degraded for many	Localized Service is degraded for 1 user
<b>Critical</b> <i>Based on event</i>			Priority - Medium	Priority - Medium
<b>High</b> <i>Required</i>			Priority - Medium	
<b>Medium</b> <i>Important</i>	Priority - Medium	Priority - Medium	Priority - Medium	
<b>Low</b> <i>Desirable</i>	Priority - Medium			

#### SERVICE RESTORATION AND TARGETS

An incident is any event, not part of the standard operation of a service, which causes or may cause an interruption to or a reduction in the quality of that service. Service restoration is the action of resolving an incident permanently or via an acceptable workaround.

Computing Foundation Commitments				
Incident	Critical	High	Medium	Low
90% - Respond within	1 hour	4 hours	8 hours	8 hours
90% - Resolve within	5 hours	2 days	4 days	7 days
	<i>Clock Hours</i>	<i>Business Hours</i>		

A critical incident is the highest priority incident, one in which a highly visible and important service is no longer operable and there is no acceptable workaround. The exact definition of what constitutes a critical incident may be clarified by each service.

#### SERVICE REQUEST FULFILLMENT

A request, in a service management context, is a request for information, a standardized change to a service or access to a service. Unlike an incident, a request usually does not involve the interruption or threat of interruption of an already provisioned service.

Each service, within its service catalog document, may define standard requests which are available in the service management web application. Each standard request may have further defined fulfillment targets.

Since restoring established services takes precedence over provisioning new services, service restoration tends to be treated with greater urgency than request fulfillment.

Should the execution of a request require an interruption or represent a significant risk to an already provisioned service, computing, in conjunction with the service provider, may elect to defer the delivery of the request to the next scheduled maintenance window for the service.

Computing Foundation Commitments				
Request	Critical	High	Medium	Low
90% -Respond within	1 hour	4 hours	8 hours	8 hours
	<i>Clock Hours</i>	<i>Business Hours</i>		

## Appendix B. Service Catalog Document links

- [Foundation](#) (CS DocDB 4042)
- [Service Desk](#) (CS DocDB 4591)
- [Authentication and Directory Services](#) (CS DocDB 4314)
- 
- [Central Web Hosting](#) (CS DocDB 4321)
- [DAQ and Engineering](#) (CS DocDB 5701)
- [Data Center Services](#) (CS DocDB 5475)
- [Database Hosting](#) (CS DocDB 4664)
- [Desktop Services](#) (CS DocDB 3716)
- [Distributed Computing](#) (CS DocDB 5840)
- [Engineering Support Services](#) (CS DocDB 5161)
- [FermiMail](#) (CS DocDB 4310)
- [FermiWorks](#) (CS DocDB 5419)
- [High Performance Computing](#) (CS DocDB 5700)
- [High Throughput Computing](#) (CS DocDB 5841)
- [Data Center Systems](#) (CS DocDB 4773)
- [IT Service Hosting](#) (CS DocDB 4316)

- Managed Print (CS DocDB 5254)
- Network Services (CS DocDB 4312)
- Networked Storage (CS DocDB 4311)
- Scientific Collaboration Tools (CS DocDB 5413)
- Scientific Linux Engineering (CS DocDB 5316)
- Scientific Data Management (Cs DocDB 5653)
- Scientific Data Storage and Access (CS DocDB 5032)
- Scientific Database Applications (CS DocDB 5653)
- Scientific Production Processing (CS DocDB 5563)
- Scientific Server Infrastructure (CS DocDB 5845)
- Scientific Software Infrastructure (CS DocDB 5834)
- Video Conferencing (CS DocDB 4313)
- Virtual Server Hosting (CS DocDB 4612)

## Appendix F. Glossary

- Description: Short description of service from customer point of view.
- Entitlement: Who can consume the service
- Requirements: Any items/approvals need to use the service.
- Support Availability: When support resources are available to provide technical support. If an incident or request is opened after business hours, it will be handled on the next business day. Only certain services provide support after business hours of 8x5.
- Service Availability: Describes the timeframe that a service is generally designed for use. It does not mean support is available during that same timeframe; support availability must be referenced for that information. Each service level agreement will define the availability target (i.e., percentage of uptime) for a specific service.

Appendix G. Computing Recovery Capabilities for Critical Business Processes

Service Continuity Rollup from COOP							
Business Area	Source	Business Processes	Needs IT Services	COOP Required Recovery Time (hrs)	Max of IT Recovery Time Objectives (hrs)	Max IT Recovery Time observed (hrs)	Max IT data loss objective
ESH	COOP	ESH Management Oversight; Comm Center (WHGF or Site 52); Security service; Security-- access control; Security-- property protection; Medical Office; Radiation Dosimetry Badging	Safety and Health Services : ESH&Q Applications; Network : High-availability Networking; Telecommunications : Analog Phone Service; Network : VoIP; Authentication and Directory Services : Authentication and Directory Service; Network : Network - all critical services; Managed Print : Scan Documents to a Central Storage Area	12	24	9	24 hours
<p><b>ESH Note:</b> All business processes have required recovery of 12 hours in COOP although some should be less. Managed Print Scan service (used by medical office) is the only IT service with 24 hours - all other IT Services are 12 hours or less. Database Hosting Services support ESH&amp;A Applications and there is a risk that in a disaster recovery situation a very large database could take more than 12 hours to be recovered.</p>							
CS	COOP	Data Center Facilities; Service Desk; Internet Access; Data Security; Internet Security	Data Center : Feynman Computing Center (FCC) 3; Data Center : Feynman Computing Center (FCC) 2; Data Center : GCC Tape Room; Data Center : Wilson Hall 8 Fiber Central (WH8FC); Data Center : Grid Computing Center (GCC) Computer Room A; Network : Network - all critical services; Service Desk : ServiceNow Self Service; Service Desk : Call-in support; Network : High-availability Networking; Network : Wide area Network; Network : Standard Network Access; Computer Security : Computer Security - critical services	12	12	8	24 hours
<p><b>CS Note:</b></p>							
DIR	COOP	Office of Communications	Central Web Hosting : Apache httpd Website Hosting; Tier 1; Safety and Health : Everbridge	12	4	3.5	24 hours
<p><b>DIR Note:</b> All business processes have required recovery of 12 hours in COOP Everbridge is hosted off-site with a recovery under 4 hours</p>							
FESS	COOP	Fire Protection Oversight	Safety and Health Services : ESH&Q Applications	12	12	8	24 hours
<p><b>FESS Note:</b> This is the wrong organization in the COOP - should be ESH&amp;Q</p>							
FI	COOP	Finance Payroll; Finance Month end Accounting Close; Procurement	Financial Services : PeopleSoft Payroll; Financial Services : e-Business Suite; Financial Services : Peachtree Accounting; Financial Services : Project/Budget/Receiving Wizards; Financial Services : Noetix Views; Financial Services : PBCS	12	12	8	not defined
<p><b>FI Note:</b> There are risks that in a disaster recovery situation a very large database could take more than 12 hours to be recovered.</p>							
WDRS	COOP	Personnel support activities; HR services - Records & Systems; Benefits Administration	Human Resources Services : Fermiworks - all services; Financial Services : PeopleSoft Payroll; FermiWorks : User/Visitor Management; FermiWorks : Benefits Management	12	12	8	12 hours
<p><b>WDRS Note:</b> All business processes have required recovery of 12 hours in COOP although some perhaps should be less. Many processes have 4 hours or less recovery time since they are supported by Workday in the Cloud.</p>							