# System Administration and Server Management
## Service Level Agreement (SLA)

### OVERVIEW

The goal of this SLA is to delineate responsibilities, communication paths and other details for computing capacity and support provided by the IS&T Windows Server Hosting Team for servers in the centrally managed Windows domain (win.mit.edu).

<table>
<thead>
<tr>
<th>Client:</th>
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</thead>
<tbody>
<tr>
<td>Server Names:</td>
<td></td>
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<tr>
<td>Server Location:</td>
<td></td>
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<tr>
<td>Effective Date:</td>
<td></td>
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<tr>
<td>Annual Cost:</td>
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### Client Contact Information

<table>
<thead>
<tr>
<th>Contact - Primary:</th>
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</thead>
<tbody>
<tr>
<td>Emergency Contact:</td>
<td></td>
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<tr>
<td>Group Email address:</td>
<td></td>
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<tr>
<td>Technical Contact - Primary:</td>
<td></td>
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<tr>
<td>Billing Contact:</td>
<td></td>
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<tr>
<td>Cost Object for service charges:</td>
<td></td>
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</tbody>
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For pageable servers:

<table>
<thead>
<tr>
<th>Emergency Contact - Primary:</th>
<th></th>
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<tbody>
<tr>
<td>Emergency Contact - Secondary:</td>
<td></td>
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</table>

### IS&T Contact Information

| Location | MIT  
|----------|---|
|          | Building W91  
|          | 565 – 570 Memorial Drive  
|          | Cambridge, MA  
| Windows Server Hosting Team | WSH-Help@mit.edu |

### Signatures

<table>
<thead>
<tr>
<th>IS&amp;T Windows Server Hosting Representative:</th>
<th></th>
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<tbody>
<tr>
<td>Departmental Financial Contact:</td>
<td></td>
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<tr>
<td>Departmental Technical Contact:</td>
<td></td>
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<tr>
<td>Date:</td>
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</table>
Customer Agreement

The Windows Server Hosting Team and the client agree to the terms outlined in this document for supporting their servers to be located in the W91 Data Center.

Terms of the Agreement

This SLA may be cancelled with 30 days written notification. Fees will be pro-rated to the end of the quarter in which service is terminated.

Payment

IS&T Finance will bill clients quarterly and will occur on or shortly after the midpoint of each quarter (February 15, May 15, August 15 and November 15). Service fees begin on the first day of the month after the server installation begins. IS&T Finance will complete a journal voucher (JV) transfer from the cost center provided in the client profile.

Service Overview

The IS&T Data Center provides an environmentally secure location for housing servers and related equipment. IS&T provides rack space, power, cooling and network connectivity, including hostnames/IP addresses for the machine, 24x7. IS&T will install, house and maintain the machine, including appropriate software, in an access-controlled machine room in the co-location facility. IS&T will monitor the system and provide support based on the Service Level described below.

WSH will provide the following services with appropriate assistance from the IS&T Data Center:

- Act as a liaison to DOST
- Install and house the hardware
- Monitor and maintain machine room environment
- Maintain the machine including appropriate software
- Setup and maintain an IS&T Request Tracker (RT) Queue for each server SLA, to be used both for reporting problems and for tracking client initiated changes to the system.
- Control access to the machine room
- Provide dual supply, non-UPS conditioned power
- Provide network connectivity via a 10Gb/s switched connection to MITnet
- Register hostname(s)
- Register IP address(es)
- Monitor system to ensure server availability
- Keep operator and client documentation
- Conduct reboot and system status checking procedures
- Maintain equipment list with MIT Property tag, serial number, make and model
- Act as hardware field service contact
- Maintain hardware maintenance contract information
- Install operating system and apply updates and patches
- Windows System Administration within win.mit.edu
  - Basic Windows Server and Workstation OS and Application Administration
  - Active Directory Group Policy settings & Software assignment
  - Windows System Security configuration settings and tools
  - Windows scripting (Windows command language and Perl)
  - MIT Athena integration (Moira ACL lists, Cross Realm Kerberos Accounts)
  - Liaison with Network Operations
- Apply security patches
- Manage TSM backup: setup, restore
- Provide support based on the Service Levels described below.
- De-install old or replaced hardware if applicable.
- Disposal of old equipment if applicable.
Server Access
Clients may access their servers remotely. The Client is responsible for any changes made using remote administration.

The clients will provide pre-authorized lists of MIT Kerberos accounts for those who will have remote access to the server. The clients will be responsible for maintaining “sponsored” accounts for any outside vendors or contractors who will need to access the managed servers. WSH will, in consultation with the client, setup Moira ACL lists, that the client will have access to for adding and removing access right to additional users of the managed system.

Service Levels
Identification of critical applications/services:

Please indicate critical dates and times for your server. Include times of the year that are important to your department’s business. WSH will record this information, as well as any special instructions, in the client profile and use the information to prioritize shutdown and startup order.

Ex: The xyz server is accessed by new applicants 24x7 during the months of December, January, March and April.

Response Time requirements and agreement:
For identified 9x5 servers:
- Next business day

For identified 24x7 servers:
- Call back within 60 minutes of client call.
- On site within 4 hours of client call.

Notification requirements:
For planned outages:
- Notification by email at least 48 hours in advance of outage

For unplanned outages:
For identified 9x5 servers:
- Notification as soon as possible after outage with a goal of notifying within 4 hours of the event.
- Email notification of problem resolution.

For identified 24x7 servers:
- Email or telephone notification within 60 minutes of knowledge of outage.
- Status updates during outage every 8 hours.
- Email or telephone notification of problem resolution.

Remedies for resolution of SLA non-compliance
- Meet with client to discuss cause of non-compliance and find ways to address any issue.
- Review processes with WSH.
### Basic Cost Factor Components

#### Storage
- 1 point per 100GB for external low-end storage
- 2 points per 100GB for external high-end storage

#### Level of Service
- 1 point - 9x5
- 2 points - 24x7
- 4 points – Client Pageable

#### Type of Backup
- 1 point for TSM service

#### Application Installation Support
- 0 points for no application support
- .5 point for Microsoft Web or server applications
- .5 point per processor for Microsoft SQL standard server (database)
- 1 point for non-Microsoft Database or Applications
- $150/yr. licensing fee for Windows Server 2003 Enterprise
- Other outstanding Microsoft SQL licensing costs based upon per seat or per processor usage (vary)

**Note:** A "point" is currently assigned a value of $1,155.
SERVER OPERATIONS POLICIES AND PRACTICES

The section below describes specific expectations of WSH and the client.

Virtual Server Configuration

*Virtual servers supplied will by default meet the following minimum standards:*

- Hosted on Dell PowerEdge 1950 servers
  - Rack mounted (available in various configurations)
  - Raid 1/5 or higher
  - Redundant power
  - Virtual server will begin with 15 GB hard drive space, 1 virtual CPU and 512 MB of virtual RAM
  - Work with clients on additional storage, memory and CPU requirements
  - 4 year minimum hardware support warranty

OS and other Software

WSH will maintain the operating system on the machine. WSH will also maintain the "standard" win.mit.edu environment on the machine, including remote login (RDP) and required administrator access to the machine via Athena Kerberos principles. WSH will coordinate fixes necessary to address security and other support issues for the server as needed.

If requested, we will also maintain a client application server installation (excluding content) on the machine. This will include initial installation, configuration, and the subsequent installation of: any upgrades and/or other necessary patches. When a planned outage is required to perform preventative maintenance on part of the system that we maintain, we will coordinate a time with you.

The client is responsible for any application license costs, including any vendor support. Vendor support is required for non-MIT standard applications. For these applications, WSH will act as a liaison between the client and vendor, if needed.

WSH will provide the clients with access to an RT queue where issues can be logged and tracked. Additionally it is the client’s responsibility to log any administrative or system configuration changes made to the servers using remote administrative access.
Service Levels

While all servers are monitored 24x7, the service level determines how quickly support is available.

The three levels of service are:

9x5
We carry a 9x5 maintenance contract on the server. If contacted during business hours, we will coordinate any maintenance, reboots, etc., with the client. Outside of business hours email may be sent to WSH by the client, requesting service. Action will be taken on the following business day.

24x7
We carry a 24x7 maintenance contract on the server. If contacted during business hours, we will coordinate any maintenance, reboots, etc., with the client. If contacted after business hours, we will perform emergency maintenance, reboot, etc., as deemed necessary. Email or telephone notification will be sent to the client, informing them of the problem/resolution.

Client Pageable
Emergency client contact information is required. There is a 24x7 maintenance contract on these servers and auto-paging is set up. WSH will make every effort to reach the emergency client contact immediately upon discovery of a problem and, if possible, coordinate any maintenance, reboots, etc., with the client contact. If the emergency contact cannot be reached, WSH will perform emergency maintenance, reboots, etc. according to instructions in the client profile for the server in question.

Backups

WSH will perform regular backups of the machine. This includes daily system backups including databases, when applicable. In special cases, the standard backup procedures can be modified to meet specific needs. The default retention for daily backups is 30 days.

TSM Backup software is used for this purpose. The major features are:
- Off site backups (in case of fire or other catastrophic event in the main data center)
- Increased storage capacity over 300GB’s

Application Monitoring

For accurate monitoring of performance and to plan maintenance, the client will supply the WSH with basic application usage requirements. This is especially important for non-business hour maintenance when the staff must coordinate activities across multiple machines.

Maintenance Windows

WSH will make every effort to coordinate all maintenance outages with the client, but there may be cases where emergency intervention is necessary that may result in an unexpected interruption of service.

The client will identify the times of year when availability of the server is most critical. WSH will use this information for advance planning of maintenance activities, especially where multiple systems may be impacted.

Contacting the IS&T Windows Server Hosting Team
For all requests, you may contact us by sending mail to WSH at WSH-Help@mit.edu. In the event of an emergency, please call the WSH hotline at 617-715-4132.