**COMMONWEALTH OF MASSACHUSETTS**

EXECUTIVE OFFICE OF ADMINISTRATION AND FINANCE

INFORMATION TECHNOLOGY DIVISION

MassIT Services Definition

**SUPPORT SERVICES
24x7 Monitoring Services**



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# Introduction

## Purpose & Scope

The MassIT monitoring service~~s~~ provides proactive monitoring, alerts, capacity reporting, and performance metrics. This service also provides dynamic reporting for customers’ hosted IT services including servers, network devices, and applications.

The monitoring services are delivered primarily for fully managed customer IT services that are hosted at MassIT.

## Document Ownership

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# Service Offerings

## Description of Service

MassIT provides 24x7 Monitoring services for fully managed IT services at MassIT’s Data Center.

The monitoring service uses software agents to determine the health of all infrastructure hardware and software components of a hosted service.

This service:

* Proactively anticipates and preempts potential service outages before they result in a service disruption.
* Provides data for analysis and restoring of a service outage.
* Provides historical utilization and performance data to assist in service improvements.

**Standard services**:

Standard monitoring services include performance statistics and alert notifications if a threshold is reached.

Standard services include:

* Server monitoring
	+ Up/Down Alerts
	+ Alerts for CPU, memory, & disk space at pre-defined threshold levels
	+ Performance metrics for CPU, memory, disk, network, I/O & other parameters that can be viewed in real-time
	+ Performance data for long-term analysis
* Network Service
	+ Monitor URL for availability
	+ Real time performance statistics
	+ Monitor simulated transaction
	+ Alerts upon failure
* Web Service Monitoring
	+ Monitor URL for availability and response time
	+ Monitor simulated transaction for availability and response time
	+ Performance statistics are available in real time
	+ Historical summarized performance metrics are stored for multiple years for long term analysis
* Network Devices
	+ Up/Down alerts
	+ Utilization statistics
	+ Utilization for network device network throughput
	+ Alerts are generated if a utilization reaches pre-defined threshold
* Database monitoring
	+ SQL & Oracle
	+ Alerts upon failure
	+ Historical summarized performance metrics are stored for multiple years for long-term analysis
* Application Monitoring
	+ Process monitoring and alerts
	+ Log file monitoring
	+ HTTP Webserver, Apache, Peoplesoft
	+ MQ & Message Broker
	+ Historical summarized performance metrics are stored for multiple years for long-term analysis
* Appliance Monitoring
	+ Data Power appliance (XML Gateway)
* Available performance statistics
	+ Server statistics are accessible to customers
	+ Provide alert notifications if a threshold is reached

**Additional Services:**

Monitoring of Weblogic and Websphere middleware application services that require additional software modules and/or other tools includes monitoring and alert for various parameters, and performance metrics available for users.

Please note: Certain types of Security related monitoring, for example for Denial of Service (DOS) attacks, virus alerts, etc., are performed under the MassIT Security Service separately from the Monitoring Service described here.

## System Alerts

Alerts are generated based on a standard set of criteria established by the Monitoring Group and requirements as defined by the customer. Alerts are not generated during periods of planned downtime such as maintenance windows. By default, Alerts have three different levels:

* **Warnings** – These alerts are the lowest level caution message, which indicates a need to monitor/inspect a given resource. The message appears on the Monitoring browser only.
* **Major –** These are action level alerts, which indicate an immediate need to respond by increasing capacity or otherwise addressing resource degradation. An email notification is sent to defined individuals/groups to address these alerts.
* **Critical –** These alerts are generated when there is a “Failure of service” and also instructs staff as to next (page on call person, wait, escalate, call).
	+ Some examples include:
		- A server is down (i.e. non-pingable at 10 sec intervals for duration of 30 sec.);
		- A windows Email is sent to individuals/groups and Operation staff is notified on 24 X 7 X 365 about the failure.

## Service Targets

|  |  |
| --- | --- |
| **Service Requirement** | **Description** |
| Service Availability | Service availability hours are 24x7x52.  |
| Incident Management\* | MassIT Service Management Office has standard processes for managing incidents, requests and changes. |
| Request Fulfillment\* | Staff will respond to service requests during the hours of 8:00 AM to 5:00 PM Monday through Friday excluding holidays.  |

\*Incidents, requests, or changes that are outside the scope of the defined service description or normal service hours will be direct charged to the customer.

## Service Reporting

The following reporting information is provided to customers as part of this service:

|  |  |  |
| --- | --- | --- |
| **Report** | **Description** | **Reporting Interval** |
| Performance Reports | Performance reports are available to users upon request. Performance reports can also be viewed through Tivoli Enterprise Portal (TEP). | Upon request via email to CommonHelp.  |

## Service Requests

|  |  |  |
| --- | --- | --- |
| **COMiT Service Request** | **Description** |  **Lead Time-Business Days** |
| Request New Monitoring Service | This request is to set up or establish monitoring to a network, software or hardware device.  | 5 Days |
| Modify Alerts | This request is to modify thresholds that are already set. | 1 Day |
| Modify Notification | This request is to modify who gets notified. | 1 Day |

## Metrics Reporting

|  |  |  |
| --- | --- | --- |
| **Performance** | **Description** | **Measurements**  |
| Not available at this time.  |  |  |

|  |  |  |
| --- | --- | --- |
| **Availability** | **Description** | **Measurements** |
| Alerts NotificationPerformance Statistics | Measures availability of alerts via mail and via console notifications to Operations. Viewing Performance Statistics through TEP. | 96%95% |

# Customer vs MassIT Responsibilities

This section describes scope of responsibility for both customers and MassIT in relation to providing the defined service.

During the technical review process, customers must identify monitoring requirements.

Individual Product/Service owners (i.e. Hosting, Storage, Application owners, etc.) are responsible for understanding the use of the Tivoli Monitoring tool (specifically TEP, the Tivoli Enterprise Portal) and for maintaining an awareness of and responding to monitoring alerts and messages on the TEP, Situation Event Console. The Operations Monitoring group provides training in the use of the TEP dashboard to these Product/Service teams.

Individual Product/Service owners are responsible for providing the Monitoring Service with the timeframes for established Maintenance Windows (i.e. during which Monitoring should be disabled). These groups are also responsible for notifying monitoring with requests for changes to or additional requirements for monitoring based on changes to an existing service (i.e. new application functionality, new batch processing, etc.)

Service Management Responsibilities that are common across many MassIT Services e.g. Facilities Management, Incident Management, Change Control, are described in the “*Service Management Services Guide*” (to be defined).

## Summary of Customer Responsibilities

Customer responsibilities include but are not limited to:

### Server Monitoring and Fault Management

Server Monitoring and Fault Management provides 24x7x365 support for the fault management of the customer’s servers in the MassIT data center by performing monitoring, troubleshooting, and testing activities necessary to restore any disruption to server services.

| **Responsibilities** | **Customer** | **MassIT** |
| --- | --- | --- |
| Define requirements for business services monitoring based on SLO. | X |  |
| Procure, assess, select and implement monitoring tools. |  | X |
| Monitor managed server hardware and software environment on a 24x7x365 basis. |  | X |
| Monitor and respond to application alerts and events per incident management process. | X | X |
| Monitor and respond to system alerts and events per incident management process. | X | X |
| Monitor and respond to hardware alerts and events per incident management process. |  | X |

### Server Performance and Capacity Management

Server Performance Management includes monitoring, measuring, analyzing, and reporting systems performance. Server Capacity Management includes the development and maintenance of tactical and strategic plans to verify that the computing environments meet customer’s growing or changing business requirements.

|  |  |  |
| --- | --- | --- |
| **Responsibilities** | **Customer**  | **MassIT** |
| Provide Customer deployment plans and user growth forecasts. | X |  |
| Define requirements for performance/capacity planning monitoring tools. | X |  |
| Implement and maintain tools for performance/capacity planning and management. |  | X |
| Define performance indicators and establish thresholds to monitor server performance against indicators. | X |  |
| Communicate Future Architecture Strategy and impact on Capacity Planning. | X |  |
| Provide analysis and report on server performance trends and exceptions. | X |  |
| Recommend corrective action to resolve system performance and capacity problems. | X | X |
| Implement corrective actions approved by the Change Management process. |  | X |
| Monitor and document servers’ current capacity baselines for determining future capacity requirements. |  | X |
| Provide analysis of server capacity trends (CPU, Memory, Disk). | X | X |
| Recommend server resource utilization alternatives. | X | X |
| Recommend server configuration changes to optimize utilization of assets. | X | X |
| Identify requirements and provide recommendations for additional system capacity to ensure service level attainment. | X |  |
| Provide server resource planning/balancing. |  | X |
| Provide forecasting of server resource utilization. |  | X |
| Provide server modeling and benchmarking. |  | X |
| Recommend server hardware upgrades and refreshes. |  | X |
| Recommend addition of physical resources (cpu, memory or disk space). |  | X |

### Batch Job Control

Batch Job Control includes controlling production batch work including the scheduling of resources, the processing of data and transactions, and the monitoring of all jobs for successful completion within the computing environment and alerting customer as required.

|  |  |  |
| --- | --- | --- |
| **Responsibilities** | **Customer** | **MassIT** |
| * Monitor batch jobs and alert customerper instruction:
* Monitor production schedule cycles
* Monitor production schedule batch jobs
* Invoke customer -provided resolution and restart procedures in case of failures in the batch jobs
* Notify the designated customer contact of delays in batch schedule processing per Problem Management process
 |  | X |
| Identify scheduling conflicts in the production schedule cycles |  | X |
| Resolve and track scheduling conflicts in the production schedule cycles | X |  |

## Server Hardware/Software Maintenance

Server Hardware Maintenance includes preventative hardware support, repair, and/or replacement activities for server components. Standard maintenance will be performed during a standard maintenance window agreed to by MassIT and the customer. Emergency maintenance may be performed during a nonstandard maintenance window at a time approved by MassIT and the customer.

|  |  |  |
| --- | --- | --- |
| **Responsibilities** | **Customer**  | **MassIT** |
| Implement hardware/software maintenance services procedures, including the criteria for deploying hardware/software maintenance personnel. |  | X |
| Coordinate and schedule maintenance activities with customer Change Management process. | X | X |
| Dispatch hardware maintenance service personnel/technicians in accordance with established Problem Management process. |  | X |
| For all new servers to be implemented, or servers which need to be rebuilt (as approved via the Change Management process), MassIT will be responsible for installing the OS software and proprietary software to the latest stable build.  |  | X |
| Customer will be responsible for providing application software and coordinating installation of application software. | X |  |
| Coordinate warranty/repair service with appropriate equipment manufacturer.  |  | X |
| Update the status of hardware maintenance service requests per Problem Management process.  |  | X |
| In the event of an application failure or hardware failure to a CUSTOMER server, a technician will be available 24x7x365 to troubleshoot or rebuild. | X | X |
| Provide support assistance to MassIT upon request in resolving hardware/software issues. | X |  |

##

## Server Access Rights and Control

Server Access Rights and Control describes the authority granted to MassIT to use server management and performance/capacity tools.

|  |  |  |
| --- | --- | --- |
| **Responsibilities** | **Customer** | **MassIT** |
| Maintain tools for remote management and alert monitoring.  |  | X |
| Provide customer access to server management and alert monitoring tools.  |  | X |
| Provide customer appropriate access to servers for performance and capacity planning and management. |  | X |

# Funding Model

## Summary of Costs

There is no charge for this service and all costs are included in MassIT Overhead.