



**Mainframe Services**  
**Service Availability Plan**  
**Office of Technology Services**

Version 1.1

April 3, 2014



## 1. Executive Summary

The purpose of this availability plan is to ensure that existing and future availability requirements for Mainframe Services offered by the Office of Technology Services (OTech) can be provided cost effectively and meet the vital business function (VBF) needs of its customers. Availability is a foundational factor in the formation of Service Level Agreements (SLA) and upon which SLA warranties and penalties are calculated.

### 1.1. Description of Service Area

The mainframe z/OS application hosting platforms comprise the hardware and operating system that run those systems, including network services and storage systems used by those platforms. This includes the installation, configuration and support of system and application enabling software components that reside on z/OS platforms.



## 2. Introduction

### 2.1 Purpose

This plan is intended to ensure that existing and future availability objectives for mainframe IT services can be cost effectively provided and meet customer VBF requirements.

### 2.2 Objectives

The following objectives shall be met within this plan:

- i) Define availability level requirements for future mainframe IT services
- ii) Document the activities of monitoring and reporting service availability
- iii) Improve the availability of current mainframe IT services

### 2.3 Scope

This plan applies to the following IT service: Mainframe Services.

### 2.4 Deliverables

As a result of executing this plan, the following deliverables will be produced:

- i) A monthly Service Availability Report (see Section 3.5)
- ii) A Service Interruption Analysis (SIA) report, upon the conclusion of each service interruption. This report will document the timeline, cause(s), and restoration efforts that took place to restore the interrupted service. In addition, the report will suggest lessons learned and opportunities for service improvement.



## 3. Plan Content

### 3.1 Background

Availability has an immediate impact on the way the business and the users perceive the quality of the services they receive. This plan addresses the service warranty of availability, and sets the operational activities to monitor and report on service quality.

### 3.2 Service Operations

#### 3.2.1 Service Hours

Service hours provide a timeframe of when the service or service component is available and indicates when certain support and performance levels are available. The Mainframe Service has established preventative maintenance (PM) windows that will not be factored into the available service hours.

#### 3.2.2 Operations Center

The OTech Operations Center is available twenty-four hours a day, seven days a week, and 365 days a year (24x7x365). Any customer requiring service assistance can contact the Operations Center at (916) 464-4311.

Operations Center staff will:

- i) Serve as the single point-of-contact for service-related incidents
- ii) Log and manage service-related incidents
- iii) Monitor service operation and availability
- iv) Communicate service interruption, degradations and restorations to impacted customer(s)

#### 3.2.3 Technical Support Resources

Technical support resources are available and on-site during primary business hours from 8:00 a.m. to 5:00 p.m. Pacific Standard Time, Monday through Friday, excluding holidays and non-State work days.

On-site technical support resource availability is not guaranteed outside of primary business hours.

#### 3.2.4 Maintenance Schedule

*Table 1: Planned Maintenance Schedule – Mainframe Service*, shown below, documents the planned maintenance schedule (scheduled downtime) for the Mainframe Service resources. Service may be available and operational during the indicated timeframes, but it is not guaranteed.



**Table 1: Planned Maintenance Schedule – Mainframe Service**

Mainframe Resource	Reason/Use	Start	End
<b>Monday</b>			
<b>S1S1/S2S2 (IPL) Shared Mainframe System</b>	System Maintenance/IPL Monday* after the second and fourth Sunday of each month *Except Mondays when S1S1 or S2S2 box is scheduled for IML	0001 Monday	0200 Monday
<b>S1S1 (IML)</b>	System Maintenance/IML Second Monday of February, May, August, November	0001 Monday	0200 Monday
<b>S2S2 (IML)</b>	System Maintenance/IML Second Monday of March, June, September, December	0001 Monday	0200 Monday
<b>Thursday</b>			
<b>CWS - SOC (IPL)</b>	System Maintenance/IPL Third Thursday of January, March, April, June, July, September, October, December	0200 Thursday	0400 Thursday
<b>CICS Regions (Mainframe Systems)</b>	Terminal Installs, Table and JCL Changes for CICS Regions	0215 Thursday	0245 Thursday
<b>Saturday</b>			
<b>CWS - SCT2 (IPL)</b>	System Maintenance/IPL Second Saturday of January, March, April, June, July, September, October, December	1300 Saturday	1500 Saturday
<b>CWS - SCT1 (IPL)</b>	System Maintenance/IPL Second Saturday of Month	1500 Saturday	1700 Saturday
<b>SY3 (SCO)</b>	System Maintenance	2200 Saturday	0600 Monday
<b>Sunday</b>			
<b>SY8/SY8B</b>	CMC Roll to Backup (when needed)	0300 Sunday	0400 Sunday
<b>CWS - SOCP (IPL)</b>	System Maintenance/IPL Fourth Sunday of February, March, June, August, September, November, December	0300 Sunday	0500 Sunday
<b>CWS - SOCP/SCT1 (IML)</b>	System Maintenance/IML Fourth Sunday of January, April, July, October	0300 Sunday	0500 Sunday
<b>SY2/SY7 (IPL)</b>	System Maintenance/IPL First and Third Sunday* of each month (24/7 backup system) *Except Sundays when SY2 or SY5 box is scheduled for IML	2000 Sunday	2200 Sunday
<b>SY2 Box (IML)</b>	System Maintenance/IML First Sunday of February, May, August, November Includes the following LPARs: SY2, SY3, SY6, SY8P, SOC, SCT2	2000 Sunday	2200 Sunday



<b>SY3 (SCO) (IML)</b>	System Maintenance/IML First Sunday of February, May, August, November	2000 Sunday	2200 Sunday
<b>CWS - SOC/SCT2 (IML)</b>	System Maintenance/IML First Sunday of February, May, August, November	2000 Sunday	2200 Sunday
<b>SY8P</b>	CMC IPL First Sunday* of each month *Except Sundays when SY2 box is scheduled for IML	2100 Sunday	2200 Sunday
<b>FEP</b>	FEP (Front End Processor) Reload First Sunday of every other month  FEP (Front End Processor) Reload First Sunday of every month	1930 Sunday	2030 Sunday
<b>SY3 (SCO) (IPL)</b>	IPL Weekly on Sundays* *Except Sundays when SY2 box is scheduled for IML	2030 Sunday	2130 Sunday
<b>Secure File Transfer (SFT)</b>	System maintenance	2000 Sunday	2359 Sunday
<b>ZLX1</b>	First Sunday of each month *except Sundays when SY4 box is scheduled for IML	2030 Sunday	2130 Sunday
<b>ZLX2</b>	Second Sunday of each month *except Sundays when SY2 box is scheduled for IML	2030 Sunday	2130 Monday
<b>SY4/SY5/SY6 (IPL)</b>	System Maintenance/IPL First and Third Sunday* of each month *Except Sundays when SY2, SY4, or SY5 box is scheduled for IML	2300 Sunday	0145 Monday
<b>SY4 Box (IML)</b>	System Maintenance/IML First Sunday of January, April, July, October Includes the following LPAR: SY9	2300 Sunday	0145 Monday
<b>SY5 Box (IML)</b>	System Maintenance/IML First Sunday of March, June, September, December Includes the following LPAR: SY7	2300 Sunday	0145 Monday

### 3.2.5 Service Incident Management

The OTech Operations Center is the single point-of-contact for all mainframe customers to report service incidents. The OTech Operations Center will record, track, and manage service incident resolution for the Mainframe Service on a 24x7x365 basis. The OTech Operations Center will acknowledge each reported service incident by providing the customer with a unique service incident reference number (INC #) when a service incident is reported via telephone. The OTech Operations Center will provide service incident resolution progress updates via email to all impacted customers.

Upon receipt, the OTech Operations Center will assess and classify service incidents using the criteria illustrated in *Table 2: Service Incident Classification*,



shown below. All service incidents that cannot be resolved by the OTech Operations Center will be automatically escalated to an OTech technical service group for troubleshooting and resolution.

Service incident resolution efforts by OTech technical service groups will occur based on the service incident priority. With the agreement of the customer, the priority of a service incident may be lowered before a service incident is resolved. This typically occurs when circumvention (work around) is available. *Table 2: Service Incident Classification* depicts how OTech will apply technical team efforts to resolve service incidents based on the service incident priority.

**Table 2: Service Incident Classification**

<u>SEVERITY</u>	<u>IMPACT</u>	<u>RESOLUTION APPROACH</u>
<b>Critical</b>	<b><i>Extensive/Widespread</i></b> <ul style="list-style-type: none"><li>• Major system or network outage;</li><li>• Multiple sites or organizations down; or</li><li>• Service incident affects one or more customer resources (designated by the customer in advance) that require an expedited service incident response due to their role within the Customer organization.</li></ul>	Effort is applied continuously until the service incident is resolved or the customer lowers the priority.
<b>High</b>	<b><i>Significant/Large</i></b> A single site or organization is down, or significantly degraded.	Effort is applied continuously until the service incident is resolved or the customer lowers the priority.
<b>Medium</b>	<b><i>Moderate/Limited</i></b> A single user is down, or service is degraded, but operational.	Effort is applied during primary business hours. Effort may be delayed or interrupted by allocation of resources to higher priority service incidents.
<b>Low</b>	<b><i>Minor/Localized</i></b> No immediate significant impact on service performance.	Effort is applied during primary business hours. Effort may be delayed or interrupted by allocation of resources to higher priority service incidents.

When the service incident is resolved, the OTech Operations Center will contact the customer to report the repair is complete and will request the customer validate the service restoration was successful. The status of a service incident is then changed to *closed*, but only after the customer agrees that the repair was successful or after several documented, unsuccessful attempts to contact the customer for verification. *Table 3: Service Incident Resolution Service Objective*, shown below, lists the resolution timeframe service objective.



Table 3: Service Incident Resolution Service Objective

Service Hours	Priority	Interval				
		Initiate Repair	1st Notification	Status Update	ESCALATION NOTIFICATIONS	
					Service Incident Acceptance	Service Incident Resolution
Primary Hours	1	20 min	30 min	60 min	Every 15 minutes	Every 4 hours
	2	25 min	60 min	60 min	Every 30 minutes	Every 4 hours
	3	1 hour	12 hours	12 hours	Every 2 hours	None
	4	1.5 hours	24 hours	24 hours	Every 4 hours	None
Extended Hours	1	Best Effort	30 min	60 min	Every 15 minutes	Every 4 hours
	2	Best Effort	60 min	60 min	Every 30 minutes	Every 4 hours
	3	Best Effort	12 hours	12 hours	None	None

### 3.3 Service Objectives

#### 3.3.1 Service Availability

The Mainframe Service Availability Objective is 99.9% of 24x7x365 with exclusions as identified below.

#### 3.3.2 Exclusions

The Mainframe Service Objective and any applicable Service Levels do not apply to any performance or availability interruptions or degradations in the following:

- i) Any factors outside OTech’s reasonable control;
- ii) Caused by a customer’s or third party application code, hardware, software, or network;
- iii) Caused by actions or inactions of the customer, their agents, or third parties;
- iv) Caused by customer’s use of the service after OTech advised customer to modify its use of the service, if customer did not modify its use as advised;
- v) During scheduled downtime and maintenance.



### 3.4 Service Measurement Details

For service measurement purposes, the primary source for monitoring the targets in this Service Availability Plan is the information collected into the IT Service Management tool (Remedy). In the case of measuring elapsed times (resolution time which is pivotal for rating the service), the value is calculated from the time the service incident is created in the system until the time the service is restored and logged in the system.

#### 3.4.1 Downtime

Defined as any period of time when a customer application is scheduled to be available but is unavailable. Downtime does not include the exclusions listed in Section 3.3.2 – Exclusions.

#### 3.4.2 Scheduled Downtime

Defined as those times where OTech notifies customers of periods of downtime or it falls within predefined OTech PM windows.

#### 3.4.3 Monthly Uptime Percentage

Calculated for a specific customer by taking the total number of minutes in a calendar month multiplied by the total number of customer applications minus the total number of minutes of downtime experienced by all customer applications in a given calendar month, all divided by the total number of minutes in that calendar month multiplied by the total number of customer applications. This is reflected in the following formula:

Total number of minutes in a month	X	Total number of customer applications	-	Total minutes of downtime experienced by all customer applications in that month
Total number of minutes in a month		X	Total number of customer applications	

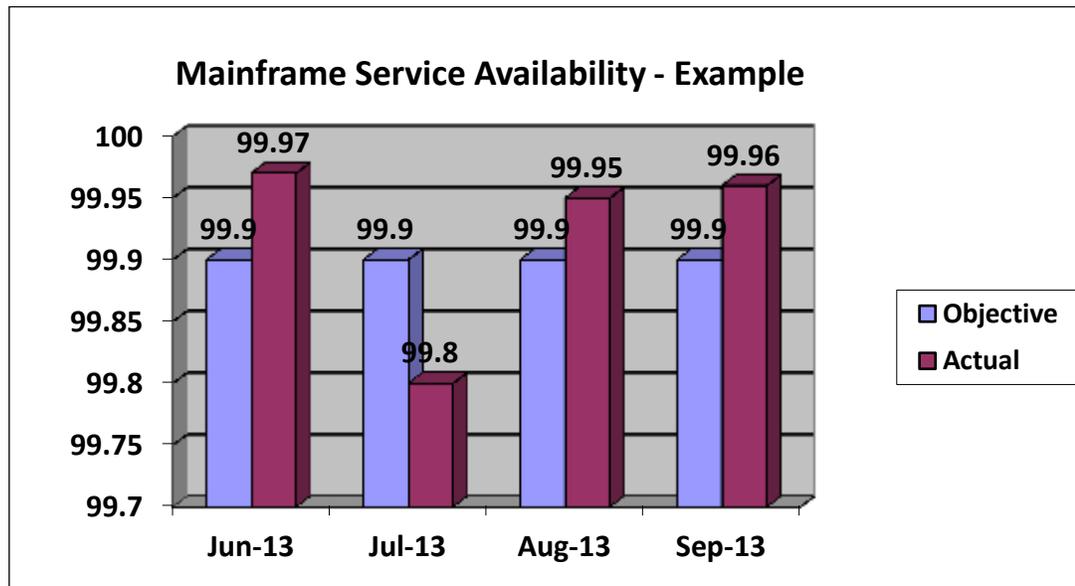


### 3.5 Service Availability Report

A service availability report will be produced 15 business days following the close of the reporting period. Reporting periods begin the first day of the month and conclude on the last day of the month.

Service availability reports will be published after they are reviewed and approved by service managers, in scope for this plan, and the OTech Deputy Directors.

The approved availability report will be made available to subscribing customers through their Customer Delivery Division Account Lead and published on the OTech website: [http://www.otech.ca.gov/services/SLM\\_Availability.asp](http://www.otech.ca.gov/services/SLM_Availability.asp).



### 3.6 Schedule of Planned Service Interruption Analysis (SIA) Assignments

Service Interruption Analysis (SIA) is produced to improve the overall availability of the services. A detailed SIA shall be completed within 15 business days of a documented Mainframe Service interruption. The objectives of SIAs are to identify:

- i) Underlying causes of service interruptions
- ii) Service restoration efforts conducted
- iii) Opportunities to enhance the reliability of service availability

The SIA is developed for internal service and process improvements and is provided to impacted mainframe customers.