1. **Purpose of the SLA**

The purpose of this Service Level Agreement is to set the expectations for availability, performance, security, and response to problems of [site] elements and resources, and to set expectations for maintaining software levels to recommended specifications [1].

This agreement does not address grid resource allocation or agreements between the VO's and service providers for compute or storage resources.

This agreement is not a contract. Commitment to the terms of the agreement is based on best effort and intent.

2. **Coverage**

This SLA applies to [name of compute/storage service].

Within iVDGL, this service is referenced by the name [rigorous iVDGL system identification], and fully-qualified domain names [FQDNs].

Included in the coverage of this agreement are hardware components of the service, e.g. compute elements, storage elements, and internal network, and grid software components.

3. **Definitions**

Availability means the percentage of time based on 24 hour days, excluding standard maintenance windows that the Tier 2 center is available for processing jobs submitted to Grids built by iVDGL and/or ATLAS.

Performance concerns the expectation that the resources will perform at commonly accepted levels, for example, job run times and file transfers are not degraded.

Security concerns the timely application of security patches and updates, and adherence to effective security practices in managing, operating and using systems.

Response to problems includes two components: initial acknowledgement of the reported problem and actual resolution. The expectations for response to problems include timeliness and good communications.

Recommended software levels [1] are defined as specifications of the iVDGL Stakeholders Committee.

4. **Service Level Goals:**

4.1 **Availability**

The goal is to achieve [90%] production availability.
A scheduled maintenance window is set for [period].

The nominal iVDGL allocation is [number of CPUs of type X and/or storage units]. [The system is a shared facility and as such there may be times when less than the nominal allocation is available.]

Practical and technical concerns such as power outages, hardware failure and Internet networking problems that are out of the administrator’s control will inevitably reduce the availability of these services. System administrators will make every effort to reduce the amount of downtime. [To this end, the machine is monitored 24x7 by an automated system which raises an alert to operators when machine status changes.] [The equipment manufacturer provides a XXX warranty on the system hardware.] Notification for planned downtime outside of the scheduled maintenance window will be provided [48 hours] in advance.

Notification for scheduled and unscheduled outages and reduced availability will be sent to the iGOC for posting as iVDGL-public notice.

The Site Status Test [3] will be used regularly to check availability of all grid elements. The iGOC Nagios monitoring system will be used to continuously monitor availability of the computing systems and network.

4.2 Performance

The goal is to achieve commonly accepted computing, storage, and network element performance capabilities according to the class of hardware and bandwidths installed.

The iGOC Nagios monitoring system will be used to regularly test computing and storage performance to a standard test application [4]. Network performance will be monitored by the iGOC Nagios monitoring system according to ping time.

4.3 Security

Response to critical systems security vulnerability will be completed within 8 business hours of patch release and within 32 hours for moderate vulnerabilities.

All points of the iVDGL Security Practices Guide will be adhered to.

As an important means to limit the spread of a cyber security breach or compromise, all incidents affecting iVDGL elements, and incidents affecting non-iVDGL systems but which pose direct risk to the integrity of iVDGL, will be reported immediately, on a 24x7 basis, to the iGOC for notification to all iVDGL site system administrators.

4.4 Response to problems

A problem report communicated through the iGOC will be acknowledged within two business hours. An attempt will be made to resolve problems within 8 business hours. Problem resolution will be reported to the iGOC forthwith. Regular status reports for extended problems will be provided to the iGOC.

4.5 Software level

Within two weeks of publication of a new software recommendation by the iVDGL Stakeholders Committee the software will be installed. Minor patches and tuning will be made within one business day.
5. Agreement Period
This agreement applies beginning [date] and expires on [date].

6. Parties to the Agreement
This Service Level Agreement is made by and between the iVDGL Management Committee and the site administrative contact listed in Section 7.

7. Contacts:
   Administrative:
   [name]
   [e-mail address]
   [phone numbers]

   Primary System Administrator
   [name]
   [e-mail address]
   [phone numbers]

   Alternate System Administrator
   [name]
   [e-mail address]
   [phone numbers]

   Security
   [name]
   [e-mail address]
   [phone numbers]

   Alternate 24x7 Contact
   [name]
   [e-mail address]
   [phone numbers]

8. References:

[1] iVDGL Software Specifications (this document to be developed)
[2] iVDGL Security Practices Guide (this document to be developed)

   [Editor note: Points for the Security Practices Guide may include things like: monitoring the system for security breaches, enforcement of good practices with]
regard to use of wheel/root-capable accounts, running of the edg- gridmapfile-upgraded, edg-crl-upgraded to maintain currency of the certificates and to revoke compromised or expired certificates, etc.]

[3] (reference to Site Status Test goes here)

[4] (reference to Nagios standard test applicaton goes here)