

Dortos Engineering-Technical COMPONENTS of SLA



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**Abstract**

The purpose of the Service Level Agreement (SLA) is to establish a collaborative written agreement between Dortos Engineering and ABC Consulting Incorporated. This document will detail the range of support services available to Dortos Engineering regarding computer, networking , and communication technologies. This SLA will detail mutual responsibilities for Dortos Engineering and ABC Consulting Incorporated. It will outline the roles and responsibilities between these two entities. In the context of this agreement, the terms “customer” and “client” represent the various Dortos personnel who will be using the services provided by this SLA. This document will entail the roles and responsibilities here in enacted within this SLA, a summery of metrics and measurement ranges as required by the customer, the disk space use expected within this agreement, the required response time and uptime expected to be provided to the client and the reporting procedures to be enacted in the event of an incident with the provided services. (Office of Information Technology-Benedictine University, 2020)

**Roles and Responsibilities**

The following responsibilities are herein expected to be provided by ABC Consulting Incorporated.

* Striving to meet the satisfaction of the client overall.
* Responding to requests for support within the established time frames.
* Interacting with Drotos Engineering, i.e. the client in a respectful and courteous manner.
* Requesting feedback for opportunities for improvement of the provided services.
* Regularly reviewing and monitoring established performance indicators.
* The creation of an environment that is conducive to form a cooperative relationship between Dortos Engineering and ABC Consulting Incorporated.
* To define in detail the services to be rendered for the client by ABC Consulting Incorporated and the level of services to the client can expect.
* To meet responsive and resolution times associated with the priority assigned to incentives and services request established by this SLA.
* To establish consistent baselines (with a ticketing system) that allows for the establishment of priority levels, target response, and resolution times.
* ABC Consulting Incorporated will implement design processes to meet service level commitments.
* Quarterly reports will be generated for Drotos Engineering which regard service level performance.

(Office of Information Technology-Benedictine University, 2020)

Being the client and recipient of this SLA, Drotos Engineering will be expected to:

* Have familiarity with the established security policies and procedures for governing the acceptable use of the architecture being provided by this SLA.
* Be willing and available to provide critical information within 1 hour of logging a request with ABC’s User Services for any urgent matters.
* Respond to inquiries from assigned ABC staff responsible for resolving incidents and handling service requests.

(Office of Information Technology-Benedictine University, 2020)

**Services Provided**

|  |  |
| --- | --- |
| **Service** | **Description** |
| Account Management | Access provided to ABC’s systems with appropriate credentials (i.e. username and password) to appropriate Drotos personnel. |
| Advice, Guidance, and Information | The client (Drotos) may ask advice, guidance, and information on technology services, applications, and initiatives being delivered by ABC within the confines of this SLA. |
| Desktop Hardware and Software Services | ABC will provide technical support, management implementation, and installation of necessary hardware and software applications for Droto’s needed applications. |
| Network Services (Including Wireless) | Network infrastructure provided by ABC in order to secure network connectivity to Drotos network as well as remote connections. |
| Remote Access Services (VPN) | Network infrastructure provided by ABC that allows a range of services that allow secure access to Droto network’s remote users; this will provide access to e-mail, file storage, and other core applications from any computer or mobile device with an internet connection. |
| Video Conferencing | ABC will provide a range of video conferencing services that support distance communication and collaboration for research and other business needs of Drotos. |
| Business Systems Support | ABC will support enterprise level applications for ongoing development, and well as user support for Drotos users; as well as the management of information applications and databases for human resources, payroll, finance, and other support services for Drotos Engineering. |

It is to be noted, ABC’s goal is to provide a high level of service availability with no planned outages during Drotos operational hours (Monday to Friday- 8 AM to 5 PM Pacific time); Most services will be available after normal operational hours for Drotos.

The following table outlines availability and support for each service:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Service** | **Business Hours** | | **After Hours** | |
| **Available** | **Supported** | **Available** | **Supported** |
| Account Management | Yes | Yes | No | No |
| Advice, Guidance, and Information | Yes | Yes | No | No |
| Desktop Hardware and Software Services | Yes | Yes | Yes | No |
| Network Services (Including Wireless) | Yes | Yes | Yes | Yes |
| Remote Access Services (VPN) | Yes | Yes | Yes | No |
| Video Conferencing | Yes | Yes | Yes | No |
| Business Systems Support | Yes | Yes | Yes | No |

(Office of Information Technology-Benedictine University, 2020)

**Summary of Metrics and Measurements Ranges**

Metrics themselves are a quantifiable measurement of something. Within a could based system the key metrics used to measure a system being its accuracy, adaptability, assurance, auditability, available, compliance, cost, data integrity, easiness (of use), efficiency, elasticity/flexibility, install ability, performance, reliability, response time, scalability, and security/confidentiality. (Al-Shammari, S., Al-Yasir, A., 2014)

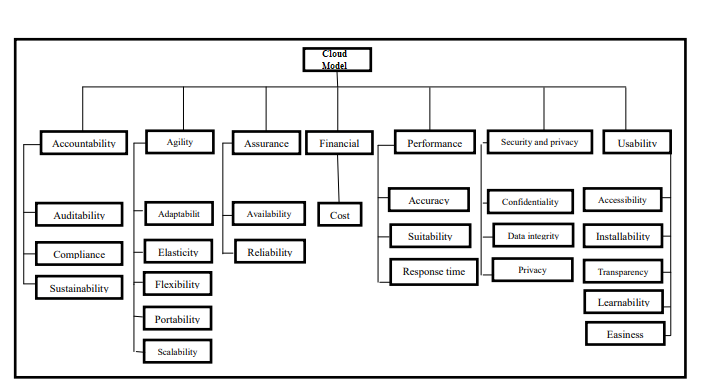


Chart taken from: (Al-Shammari, S., Al-Yasir, A., 2014)

Other relevant metrics within the system are the Service/System Availability. This being the percentage of time that a service or system is available. The goal for ABC’s provisions of its cloud services for its client, Drotos is 99.99%. This would mean a maximum of 52 minutes and 36 seconds of downtime per year (Eisele, 2020) during which ABC’s systems can not provide service to Drotos systems. (Guiding Metrics, 2020).

The next relevant metric being reliability; this in turn is the mean time between failure and mean time to repair. Mean Time Between Failure (MTBF) and Mean Time To Repair (MTTR) are the inherent means by which to measure the reliability of a cloud service. MTBF refers to the average amount of time that a device or product functions before failing. MTTR being the average time required to fix a failed component and/or device and return it to production status. (Guiding Metrics, 2020).

Response time being the metric that is defined as the time it takes for any workload to place a request for work on a virtual environment (VE) and for the VE to complete the request. Generally measured in milliseconds, response time can differ depending on the physical location of the client in relation to the host. The required response time for Drotos being a minimum 50ms per application utilization. (Guiding Metrics, 2020).

Security is paramount with the implementation of this SLA. The SLA should be able to protect loss of service from events such as Denial of Service (DOS)/Distributed Denial of Service (DDOS) attacks, Connection Availability issues, attacks on the cloud infrastructure itself, data security, data integrity, and data confidentiality. According to Guiding Metrics, the average organization experiences 14 insider threats each month. The security infrastructure of this SLA will help to mitigate the possibility of said internal threats. (Guiding Metrics, 2020).

Capacity itself pertains to the disk space use of the system overall. The SLA’s goal between ABC and Drotos’s being a capacity of 95% on all workloads. Capacity is important as it establishes a balance between supply and demand. Capacity’s importance is defined by the minimum amount of memory that must be available to the system at any given point in time. (Guiding Metrics, 2020).

Scalability is the degree to which the service or system can support a defined growth scenario. The scalability of this system should theoretically be able to handle the relevant population of Drotos Engineering whom by which have a legitimate reason to utilize the system. (Guiding Metrics, 2020).

Latency is the interval between submitting a packet and arrival of the packet at is proper definition; essentially how long it takes to transmit data from one entity to the other. The expected latency of ABC’s systems is expected to be no more then 35 milliseconds per transmission. (Guiding Metrics, 2020).

System needs

The base system needs will vary by department. For the Engineering department, the main program utilized is Autodesk Product and Design Suite 2020. The basic requirements of this software call for a 3GH processor with 4 or more cores (or better). 20 Gigs of rams. 100GB of disk space. The graphical processing requirement is a 4GB GOP with 106 GB/S bandwidth. Ergo, the system would have to be able to support these specifications running on multiple machines simultaneously. (Autodesk, 2020)

The accounting department of Dortos requires a 2.4 GHz processor, 20 GB of RAM and a minimum of 2.5 GB diskspace per user. It also requires a minimum of 1 Mbps internet connection speed. Point of sale, payroll, and invoicing will also put additional needs on the network. (Intuit QuickBooks, 2019)

In summation, we have explored roles and responsibilities within this SLA. We have also covered what is expected of the provider of the SLA (ABC Consulting Incorporated) and the client (Drotos Engineering). The relevant metrics of what Drotos Engineering requirements were also covered within this SLA. As well as what services Drotos requires and their established availability.

**References**

Al-Shammari, S., Al-Yasir, A. (2014). Defining a Metric for Measuring QoE of SaaS Cloud Computing.

Retrieved from <https://www.researchgate.net/publication/264548274_Defining_a_Metric_for_Measuring_QoE_of_SaaS_Cloud_Computing>

Autodesk. (2020). System requirements for Autodesk Product Design & Manufacturing Collection 2020.

Retrieved from <https://knowledge.autodesk.com/search-result/caas/sfdcarticles/sfdcarticles/System-requirements-for-Autodesk-Product-Design-Suite-2020.html>

Eisele, R. (2020). SLA Uptime Calculator: How much downtime is 99.9%.

Retrieved from <https://www.xarg.org/tools/sla-uptime-calculator/>

Guiding Metrics. (2020). The Cloud Service Industry’s 10 Most Critical Metrics.

 Retrieved from <https://guidingmetrics.com/content/cloud-services-industrys-10-most-critical-metrics/>

Intuit QuickBooks. (2019). System requirements for QuickBooks 2020 and Enterprise Solutions 20.0.

Retrieved from <https://quickbooks.intuit.com/learn-support/en-us/product-system-requirements/system-requirements-for-quickbooks-2020-and-enterprise-solutions/00/366374>

Office of Information Technology-Benedictine University. (2020). Benedictine University SLA.

Retrieved from <http://www.ben.edu/information-technology/user-services/upload/Benedictine-University-SLA-3-2016.pdf>

Wilson, S. (2018). CompTIA Cloud+ Certification Study Guide, 2nd Edition [VitalSource Bookshelf version].

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