Database as a Service (DBaaS)

Service Description

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1. Introduction

Contour Cloud DBaaS makes it easy to set up, operate, and scale database deployments in the cloud. With Contour DBaaS you can deploy a database in minutes with cost-efficient and re-sizable compute capacity. Contour DBaaS frees you up to focus on your value add application development by managing the time-consuming database administration tasks including provisioning, backups, software patching, monitoring, and hardware scaling.

1.1 Contour Cloud

Contour Cloud is owned and operated by Contour Data Solutions. Contour Cloud is built on enterprise grade platforms and deployed across four data centers in North America. Contour Cloud provides consistent networking and security for applications running on-premise or in the cloud. Our platform utilizes a single management console, *Cinch*, and a common application programming interface. Contour Cloud offers numerous benefits including:

- **Micro-Segmentation Security Policies** Contour Cloud provides control over East-West traffic between native workloads running in private and public clouds. Security policies are defined once and applied to workloads. These policies are supported in multiple, regions and support a multi-cloud strategy. Policies are dynamically applied based on a rich set of constructs, such as workload attributes and user-defined tags. Rogue or compromised workloads can also be automatically quarantined.
- **Network Control and Portability** Contour Cloud provides consistency and control over network policies, while also offering portability. Precise control is given over networking topologies and addressing, providing capabilities such as stretching subnets across availability zones. Provisioning and management of networking and security policies across cloud accounts can be greatly simplified and standardized through the use of templates.
- **Increased Visibility Across Clouds** Contour Cloud improves visibility and analytics for native workloads in the cloud using existing and familiar network management tools.
- **Consistent operations** Contour Cloud brings a standardized and consistent operational model to applications running natively in public clouds. A single management console and common APIs allows cloud teams to simplify their operations and scale across a growing number of public cloud environment leveraging existing automation tools. Existing Day 2 operations tools can be used to provide end-to-end monitoring, troubleshooting and auditing.

1.2 *CINCH*

CINCH is Contour Cloud's proprietary automation platform, enabling self-service to easily create, modify and manage all your infrastructure and cloud data. *CINCH* makes it easy to find information, manage your account and instantly connect with your Contour team. *CINCH* components include:

- *CINCH* **Dashboard** provides a quick overview of your entire account. Instantly view all recent activity, including bills, reports and tickets.
- *CINCH* **Solutions Center** provides real-time status of your active components, ability to manage your components and add additional components on the fly.

- *CINCH* **Management Center** provides details on your individual Contour Cloud instances including IP addresses, hardware specs, inventory items, bandwidth usage and scale optimizer to set rules for potential traffic spikes.
- *Cinch Security Center* provides you the insight to see all your security patches and KPI data
- **Contour Cares Support** provides updates on existing tickets and gives you the ability to open new tickets and contact our support team.
- *CINCH SLAs* provides real-time insight into your systems and whether or not Contour is hitting our agreed upon SLAs.

1.3   Technical Documentation and Training

An on-boarding process may be provided for all of our clients when requested. Documents, training and hand-on training outlining key concepts with usage examples are available.

1.4   Legal Terms

Use of the Contour Service Offerings is subject to the Terms and Conditions of the Master Managed Services Agreement (MMSA).

1.5   Service Support

Contour Cloud Network Operations Center (NOC) will provide support for problems that you report, related to our cloud offerings. The NOC can be reached via the Cinch Portal. Support will be provided to any client with an active subscription.

1.6   Contour DBaaS Standard Service Model Options

- **SQL Server -** SQL Server is Microsoft's relational database management system (RDBMS). It is a full-featured database primarily designed to compete against competitors Oracle Database (DB) and MySQL. SQL Server is sometimes referred to as MSSQL and Microsoft SQL Server.
- **MongoDB -** MongoDB is one of several database types to arise in the mid-2000s under the NoSQL banner. Instead of using tables and rows as in relational databases, MongoDB is built on an architecture of collections and documents. Documents comprise sets of key-value pairs and are the basic unit of data in MongoDB.
- **MySQL -** MySQL is an open source relational database management system (RDBMS) based on Structured Query Language (SQL).

1.7   Service Objects

Service offerings includes the following Service Objects:

- **24x7x365 Management.** The service is backed with experienced DBA's looking after your database environment.
- **Performance Management** our DBAs are driven to optimize the performance of your database using the latest tools and years of tuning experience.
- **Up to 99.95% Availability** Contour offers a range of database architects which are backed by availability SLAs.

- **Free up resources to drive your business forward** Contour's services allow customers to reduce their operational cost and allows you to free you up so you can focus on your value add application development.

2. Service Definition

The following outlines Contour's services related to Database as a Services. Contour DBaaS enables customer to provision database technology, on-demand without the need to purchase hardware or manage complex database deployments.

2.1   Customer On-Boarding

Prior to the service go-live date, Contour may provide a DBaaS On-Boarding service in order to address a range of development, design, configuration and data migration requirements subject to any conditions specifically agreed with the customer.

- Environment requirements (data model, application understanding)
- Operational needs (patching, backups, DR test, Escalation)
- Architecture overview
- Database migration (charges as a professional service)
- Business Requirements (understand critical business processes and impact on IT)

2.2   Event & Incident Management

Database as a Service operates a mature event and incident management methodology to sustain our solution, enabling detection and management of issues that arise through alerts, proactive health checks or contact from customers. Our 24x7x365 Network Operations Center (NOC) will analyze the health of your environment and monitor the operating environment. Our proactive approach ensures best practices and maximize availability.

Events and Incidents are as follows:

Severity	Description
Severity 1 (Critical)	- Database or application inaccessible - There is a critical need and total inability to deliver or use a required business function.
Severity 2 (Major)	- Database or application component degraded - A database, system, component or application is not available but temporary fix may be available. - Where there is not a critical need to resolve but there is an impact to delivery or use of the services.
Severity 3 (Low)	Where there is not a critical need and no inherent impact to the delivery or use of the service.

2.3 Service Request

The Cinch self-service portal allows our customer to request database service changes and enhancements. We completely remove the need for our customer to have in-house database administrators. The table below provides an overview of the included service requests:

Service Request	Included
Start/Stop Database Services	Yes
Create new Database	Yes
Remove Database	Yes
Pause/Resume/Restart/Stop an instance of the Database	Yes
Configure a database user and role/permission	Yes
Clear down of database logs	Yes
Perform database backup	Yes
Verify a backup operation	Yes
Create/modify/Remove a database maintenance job	Yes
Data export/Import	Yes

2.4 Proactive Monitoring

Our advanced monitoring platform combines the best of breed commercial tools with internally developed technology. We work with our customer to identify base-line thresholds for alerts and performance criteria so we can provide the best customer experience.

2.5 Performance Tuning

Over time as configuration changes are made and data workloads grow, our DBAs will work to ensure the database performance doesn't degrade and is tuned to deliver optimum performance out of the platform for the application. Working from an initial performance benchmark we continually measure our progress and challenge the DBAs to improve the speed of interaction of the database with the application layer.

2.6 Backup Management

Contour may configure the native backup to provide customers with a more granular solution. DBaaS pricing allows for monitoring and management of the backups, however additional charges will apply for any additional compute and storage.

2.7 Enhanced Patching

With emergency patching to address security vulnerabilities being delivered via the Event and Incident Management service, this patching module is intended as a quarterly service covering the following:

CPU Patches (Cumulative Patch Updates)

- Quarterly – vendor recommendations for the customer apply these patches to have proactive rather than reactive maintenance.

RUP Patches (Roll-Up Patches)

- Vendor release of occasional Patches to resolve bugs. Contour will identify the suitability of these in the context of our understanding of the customer environment.

2.8 Disaster Recovery Testing

Ensuring your database is operational and retains its data integrity in the event of a disaster is key to any recovery plan. For customers who have a disaster recovery plan which includes DBaaS, this service provides a DBA to assist with a failover test once per year.

3. Service Levels

3.1 Availability

Deployment Architecture	Availability
Single Node	99%
3+ Node Cluster	99.9%
3+ Node Cluster + XDCR	99.95%

3.2 Service Assurance

Severity	Description	Support Hours	Response Time
Severity 1 (Critical)	• Database or application inaccessible • There is a critical need and total inability to deliver or use a required business function.	24x7	30 Minutes
Severity 2 (Major)	• Database or application component degraded • A database, system, component or application is not available but temporary fix may be available. • Where there is not a critical need to resolve but there is an impact to delivery or use of the services.	Business Hours	2 Hours
Severity 3 (Low)	• Where there is not a critical need and no inherent impact to the delivery or use of the service.	Business Hours	4 Hours

3.3 Service Request

As standard the customer is entitled up to five requests per database instance per month.

Request	Description	Resolution
Standard Request	• Implementation of a standard request	NBD
Major Change	• Customer request which needs change board approval	Next Change Window

4. Additional Information

4.1 Service Constraints

- This service shall be allocated a maintenance window between the hours of 11pm and 6am EST and the window shall be allocated during service initiation.
- Configuration changes that cause a reboot/downtime but are deemed urgent shall not impact availability metrics and SLAs and the associated charging mechanism.
- Customers requiring major version upgrades of the database are only available via an additional professional service.
- Contour will not provide any application or middleware level support as part of this offering.
- Contour is not responsible and cannot be held liable for degraded performance in case of physical limitations of the purchased platform (Memory, CPU, Disk Space, Throughput) or software, Contour will notify the customer of such limitations and will make recommendations.
- The customer will require network connectivity either via the internet or via VPN.
- A migration on the Contour platform will be possible once the necessary due diligence and infrastructure sizing assessments have been completed by Contour.

5. Exclusions

- Contour will provide service and support for all aspects of the services defined within scope of the service. The Service Level Agreements (SLAs) will measure Contour's success in the delivery of those services.
- Where external factors influence Contour's ability to deliver against the contracted services, then Contour will not be liable for failure to meet the associated SLAs. These include but are not limited to the following circumstances:
    - o 3rd Parties, not engaged by Contour, fail to deliver services in accordance with their contract.
    - o 3rd Parties use the Contour environment outside recommended best practice.
    - o Where the workload or the level of utilization of the Database cause the system to become unresponsive or suffer from poor performance and where those levels of utilization are deemed outside of the forecasted demand or sizing criteria of the service.
    - o Where customer requested configuration changes cause application downtime.
    - o Application configuration cause database or operating system instability.
    - o Application level and end user testing of all patches and security updates
    - o Any materials and labor provided in these circumstances will be subject to agreement of the parties in writing and; provided on a reasonable endeavor basis (i.e. outside of the scope of these services) unless otherwise agreed upon between Contour and Customer and Charged as additional ad-hoc changes.

6. Customer Responsibilities

- To request all system restores via the *Cinch* portal or via the Service Desk
- To provide Data Governance policy for the backup, restore and data retention of the Customer data incorporating policies for possible media handling, where required
- To appropriately license the database environment or acquire licenses through Contour

- Agree and approve in a timely manner, the purchase of additional resource capacity when advised by Contour
- Responsibility for the content or validity of the data residing on the service
- To ensure there is no excessive system restores required as a result of inappropriate use of the system or negligence by the user community
- Procurement, maintenance and management, of any customer data communications lines not identified in the technical specification.
- Provision, maintenance and management, as the case may be, of any Customer managed software or equipment
- Administration, management and control of Users access to the Customers applications and/or data stored on the Contour Cloud
- Should Contour determine that the customer usage of DBaaS is not compliant with best practice guidelines, the customer must comply with Contour's request for change
- Agreeing a Patch schedule including maintenance window with Contour
- Raising any Customer Request Tickets for patching
- Providing its consent, not to be unreasonably withheld or delayed, to the implementation of any new patches by Contour
- The customer acknowledges that Contour is reliant on the Customer for direction as to the extent of which Contour is entitled to use and process personal data