2019-2020
Delivered by NoRisk

Disaster Detection and Recovery As A Service

Preamble:

A security solutions' provider, named NoRisk, aims to offer disaster detection and recovery as a service. In order to ensure continuity and integrity of their business, customers delegate tasks such as monitoring, backup, high-availability and recovery to NoRisK. The objective is to cover networking, computing and storage services of all customers. For this, NoRisK deploys a shared infrastructure based on cloud and virtualization technologies while adapting allocated resources and adopted solutions to specific context of each customer.

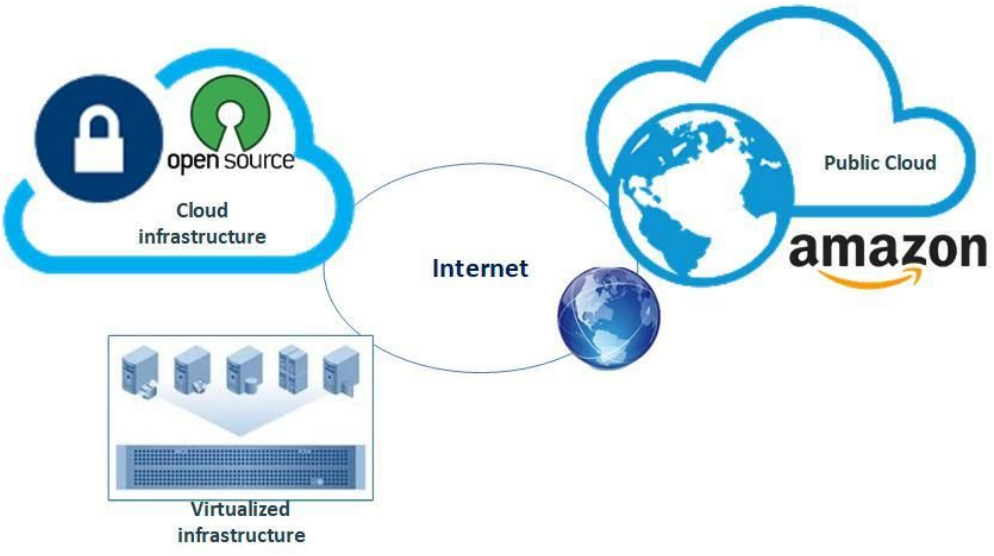
Project Overview:

The main purpose of this project is to implement a proof of concept for NoRisk infrastructure. The PoC should enable redundancy, backup, sharing and recovery for any kind of storage whether it is a virtual machine, a files, an objects or volumes.

NoRisk IT infrastructure is deployed over 3 sites:

- ✓ The main site, located in Berlin, where the cloud Infrastructure as a service solution is deployed.
- ✓ The second site, located in Paris, contains a virtualized infrastructure.
- ✓ To improve service availability and scalability, part of the services is deployed over Amazon public cloud infrastructure.

The communication between the different sites will be throw a secured internet connection.



Detailed technical requirements:

Below this section are the technical requirements:
For the private cloud infrastructure installed in Seattle:

- An open source solution should be used to provide compute, block and object storage.
- It must also provide orchestration capabilities to provision compute and storage resources.
- Private Cloud infrastructure component must be deployed in multiple servers.
- Supports a large choice of hypervisors. For the proof of concept, the most compatible one will be used.
- Medium complexity to setup
- Used for large/medium scale deployment
- Can be used for both private and hybrid deployment
- Provide cloud provisioning functionality for database engines

For the second site, the virtualized infrastructure is composed by:

1. Virtualized servers where a host operating system can be installed on the bottom of virtual machines.
2. A service that will be used for management and provisioning.

For the more, the virtualization solution must be:

- A proprietary one.
- Trusted and widely deployed for production mode.
- The hypervisor used must be a bare-metal one that can be installed directly over the hardware or with a host OS.
- Providing the best performance for VMs that runs windows server as an operating system.
- It should include High availability and fault tolerance features.
- It must provide both cold and hot VM and storage migration.

NoRisk is also using several services that are deployed over the 3 locations as follow:

- Web, mailing and name resolution services are deployed in the private cloud infrastructure.
- Voice over IP and directory service solutions are deployed in the virtualized infrastructure.
- All the services should be deployed in clusters in order to ensure both high availability and load balancing.
- For the more, in case of failure, continuity of service must be ensured and the services should be automatically provisioned from the Amazon public cloud.
- All services are provisioned on demand, automatically without any human interaction.

To manage the hole infrastructure, the private cloud, the virtualized infrastructure and resources that are deployed within the Amazon public cloud, a Cloud management platform (CMP) will be used. The CMP that will be installed on the second site and it should:

- Be an open source solution
- Be able to manage resources deployed over the private cloud infrastructure, Amazon public cloud and the virtualized environment.
- Be able to continuously discover the latest state of the entire infrastructure.
- Enforce compliance across the environment.
- Optimize the performance and utilization of the resources across all the infrastructure.

For NoRisk clients, a web interface should be developed. This web interface will be used to provision resources and to configure and schedule service continuity by switching the workflows to the public cloud in case of outage.

Security aspect should also be considered:
- Only authorized traffic and users should be allowed.
- For the more, confidentiality, integrity and authenticity should be granted for all the date passing cross the internet.

Eligibility and qualifying criteria:

The "Notice for expression of interest" is offered for all firms or companies interested in the implementation of computing systems and which have the capabilities and skills to undertake such an assignment. A proven track of a record in establishing such a system will be an asset.

Call for tender documents:

Interested candidates are invited to post a file including the following documents:

1) A presentation of a general approach for carrying out the project. This approach contains:

- ✓ Scope of the project
- ✓ Objectives
- ✓ Resources needed (human and material resources)
- ✓ Constraints and Assumptions
- ✓ Cost and Its Relationship to Price
- ✓ Work Breakdown Structure

2) A technical study that contains the presentation of technical and organizational solutions that can be adopted. This study should contain a detailed architecture with all the products and solutions that will be installed.

3) A Work schedule that contains:

- ✓ Activity definition
- ✓ Activity sequencing
- ✓ Activity duration estimating
- ✓ Schedule development

4) The financial study that contains :

- ✓ Cost appraisal (assessing the cost of all the technical and human resources needed for the project)
- ✓ Contract negotiation

Provide a presentation of the project management and the methodology chosen to achieve the project on time within the fixed budget and requested quality. Therefore, plan the time, the cost and the resources adequately in order to estimate the work needed and to manage risk effectively during the project execution. The execution of the work defined in the project management plan is needed in order to accomplish the project objectives.

Additional information

All documents related to this project must be written in English.