Virtual Assistant – Chatbot Project

# Introduction

Virtual assistant as service platform Solving the problem of the customer needs and modern application approach and rapidly increasing the customer support using the virtual assistant.

in this virtual assistant service has several risk factors in terms of data security, data quality, quality of the service an integration applications complexity of neural network capabilities.

in this document we are analysing the risk plan and identification with medications.

# Risk Planning and Identification

In terms of the risk planning and identification contain planning, development, testing and deployment.

## Risk Environment

In this virtual assistant platform will be hosted on the any cloud or on premise based solutions. Corresponding Voice Assistant are virtual assistant contain the services of interface for customer chat and bot engine for analysing the natural language processing based on the customer inputs. the overall process as a large amount of computation in terms of user load which contain number of concurrent users.

also the environment should be vertically as well as horizontally scalable in terms of the payload on top of the cloud environment are or premises cluster.

Security aspects we will encrypt the bot messaging communication end to end based on the user authentication and authorization which will be seamlessly validating the service.

## Risk Planning

Virtual assistant service contain seamless integration with enterprise applications and Many devices.

following the plan to control the risk :

* Highly secure communication
* velocity of entire network run communication
* load balancer and application firewall to control the Internet threads
* container service to provide the durable service
* log monitoring and alert systems ensure the systems treads

## Risk Identification

Risk identification which also Monitor and alert in terms of environment issues, security issues, data storage and capabilities with identify the corresponding data set to provide the seamless service.

following the risk has been identified and we have taken the action against that :

|  |  |
| --- | --- |
| Risk Identification | Action |
| NLP Search Service | PyTorch based NLP Process with Local Dataset |
| Speech Service | Web Speech API integration |
| Integration Service | Serverless based integration using Logic Apps |
| Customer Load | Container based deployment with AKS Cluster |
| Deployment Issue | Integrated CI/CD Build and Release Pipeline |

# Risk Analysis

following the diagram will provide analysis of the each stages

Risk

Development

## Technological Factor

Technological factors basically Which package and current version of the application also improving the data set based on the conversations quality improvements.

## Strengths

We are providing the on premises as well as cloud based multi cloud capability virtual assistant service.

which can be independent solution for any cloud or on prime based solutions

## Weaknesses

we are improving the data set period of time this also will be resolved.

## Opportunities

we have opportunity for various industries like education, hospital, support, supply chain management many of the industries required On Prime based solutions since it's on the cloud be services but we have a cap ability to build on their own self.

# Risk Migration and Control

In terms of the migration and upgradation system contain based on the data set based on the use case as well as multilingual capabilities

Use cases we are going to plan for our virtual assistant as a service platform and so migration from cloud to cloud or cloud to on prime will be seamlessly interactable.

following the Migration strategy to avoid the migration issues and future risk

1. lift to shift mechanism
2. re host mechanism
3. refactoring mechanism