1.              **Challenge**

Given a set up for an intergalactic cookie oven, recommend an architecture to improve the productivity and resilience. Please document any assumptions and limitations, roles needed and effective timescales to deploy on your favourite cloud provider. Please note that the architecture depicted is a reference architecture and certain components may vary or be replaced in the future. All the components will be supported by appropriate software-based end points. Emphasis will be given on customer satisfaction.

Assumptions

1. Ingredients are filled and oven is ready to prepare.
2. Network connectivity is available and end points are configured

Limitations

1. Oven is limited to make cookies

Roles

1. Role of the mixer is to read the specified amount of dough and liquid mix ratio, when a fault is occurred in the mixer it signals to machine handler, the machine handler redirects the ingredients using recovery mode and pass it on to the conveyor belt that sends to setB machines.
2. Laminating has the dimensions to be cut and fed in to the machine, any irregularity occurs, it will be passed back to mixing and if any fault occurs it signals to machine handler.
3. Each of the process will signal to the machine handler.

**Timescales to deploy**

|  |  |  |
| --- | --- | --- |
| **SNO** | **Process** | **Man days** |
| 1 | Mixing | 10 |
| 2 | Laminating | 20 |
| 3 | Forming | 22 |
| 4 | Baking | 20 |
| 5 | Filling | 15 |
| 6 | Cooling | 10 |
| 7 | Freezing | 10 |
| 8 | Packing | 15 |
| 9 | Machine handler setup | 40 |
| 9 | Total | 314 |

Architecture to improve productivity /resilence

Process Set A

Process Set B

Mixing

Filling

Sheet / Laminating

Cooling

Forming

Freezing

Baking

Packaging

Identify process in Set B

Machine Failure