

PiFeed - Feed Your Pets with a Raspberry Pi!

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Objective

The objectives of Assignment 2 were to:

- ▶ Understand the publish/subscribe message model
 - ▶ Sending messages to a message broker
 - ▶ Creating message topics
 - ▶ Getting messages from a message broker
 - ▶ Configuring a message exchange
 - ▶ Creating queues
 - ▶ Binding a queue to an exchange
 - ▶ Subscribing to a particular topic
 - ▶ Properly cleaning up a queue upon disconnect
- ▶ Understand Rabbitmq implementation of AMQP protocol
- ▶ Effectively work on a team of two

Utilization Service

The utilization service was written following the example code.

- ▶ Thing 1
- ▶ Thing 2
- ▶ Thing 3

Stats Client

The stats client was written following the example code.

- ▶ Connect to the message broker
- ▶ Declare the pi_utilization direct exchange (create the exchange if it has not been created)
- ▶ Declare an exclusive queue (create the queue)
- ▶ Bind the queue to the pi_utilization exchange filtering on the routing key
- ▶ Consume messages

Connection Diagram

Disconnection Diagram

Challenges and Obstacles

- ▶ Installing rabbitmq on Arch
- ▶ Determining rabbitmq function error types
- ▶ Getting python's dictionaries within dictionaries to work right

Overcoming !!

- ▶ Installing rabbitmq on Arch → Hacked away at it
- ▶ Determining rabbitmq function error types → Trial and error
- ▶ Getting python's dictionaries within dictionaries to work right
→ Initialize before using