

INTERNET BUSINESS SOLUTIONS

DELIVERING SCALABLE AND HIGHLY AVAILABLE WEB SOLUTIONS

BASES ON CLOUD COMPUTING TECHNOLOGIES



# SQS & alternative solutions

By

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<http://linxsys.pl>

# About Myself

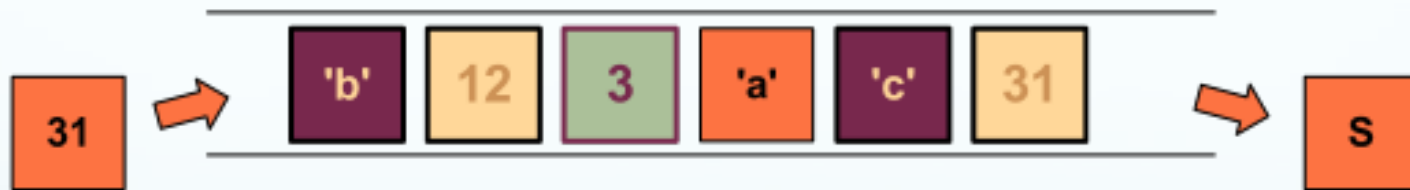
- 10+ years of professional experience in Unix administration
- 6+ years of professional experience in AWS administration, after 100+ AWS projects
- Founder at Linxsys, first AWS Partner in Poland
- Two AWS Certifications: Solution Architect and SysOps Administrator
- Email: [jacek.biernat@linxsys.pl](mailto:jacek.biernat@linxsys.pl)

# Queue?

## QUEUE

insert

delete



FIFO (First In First Out)

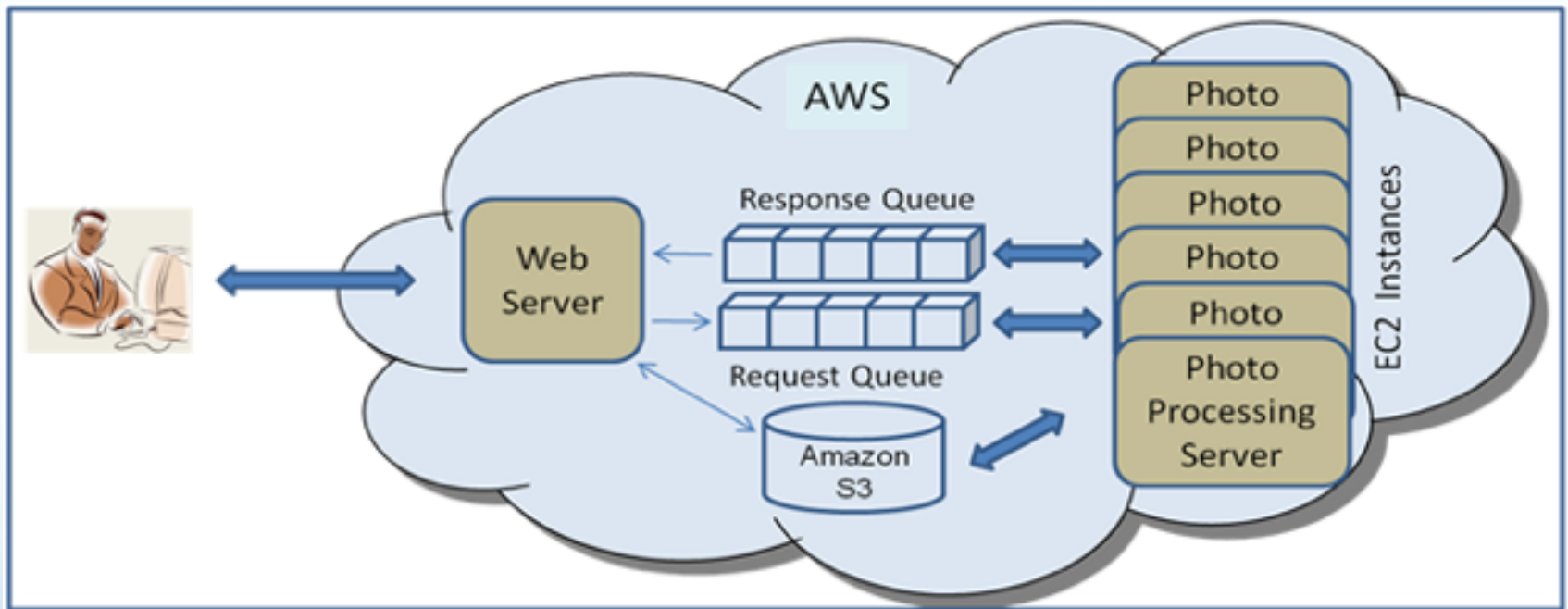
# Fun Queue



# What is SQS?

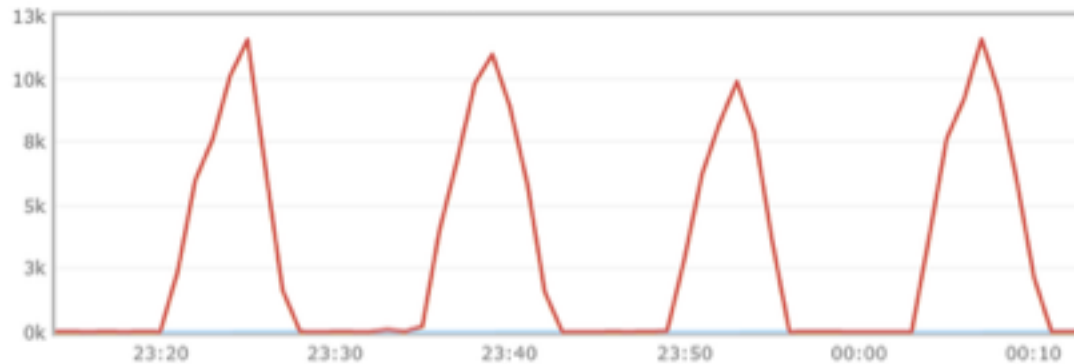
- Amazon **S**imple **Q**ueue **S**ervice is a fast, reliable, scalable and fully managed queue service that ‘just works’
- Amazon SQS enables asynchronous message-based communication between distributed components of an application or applications

# Example Use Case



# The behavior of the queue

Queued messages (chart: last hour) (?)



Message rates (chart: last hour) (?)



# Simple Queue Service (SQS)

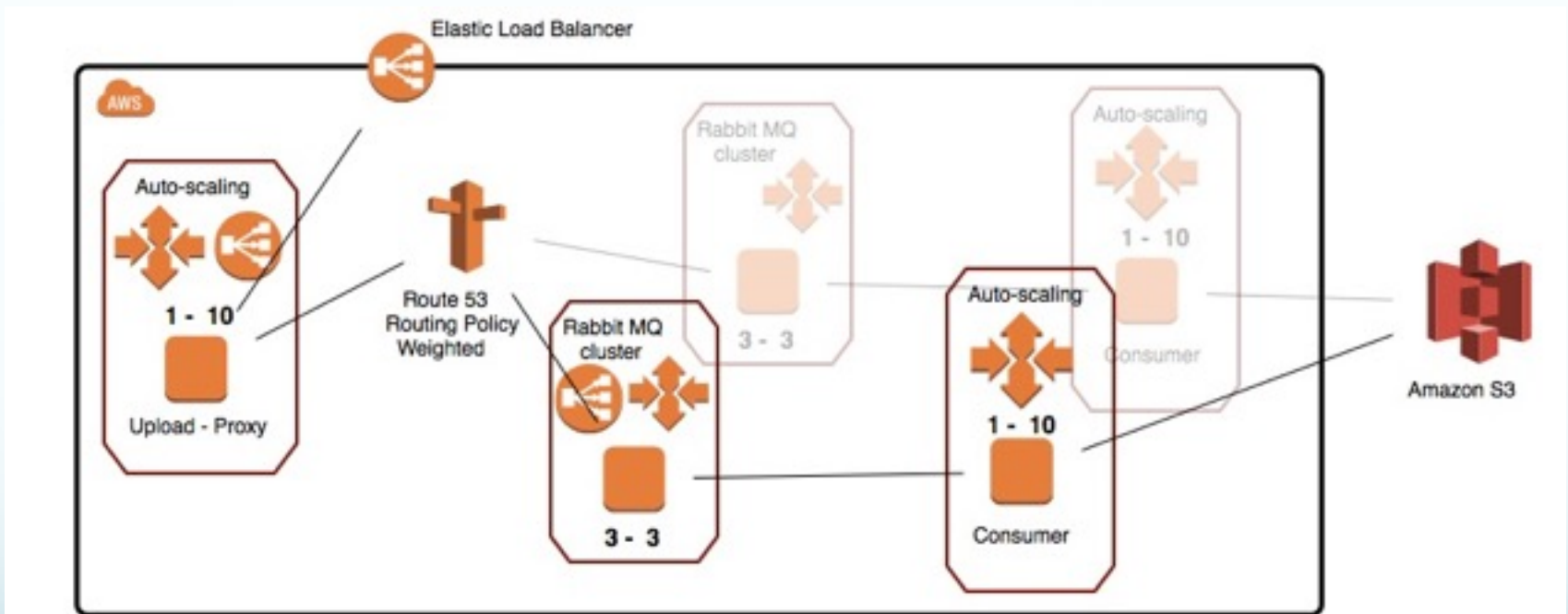
- Key Highlights:
  - Message can be sent, received or deleted in batch of 10
  - Retained in queue for up to for 14 days
  - Secure sharing of queue data with other AWS Accounts
  - We can lower the cost of SQS by using “long polling”
  - Message body can contain 64KB of text



# Alternative Queues

- RabbitMQ
- Redis
- ActiveMQ
- AWS DynamoDB

# Case Study - Linxsys



# Financial component

**Is it possible to implement independently service with the same properties, but for smaller money?**

$(1600 * 3600 * 30) = 172.800.000 \text{ msq} * 4 = 691.200.000$   
requests

- AWS SQS: \$345.10
- RabbitMQ (6 AWS EC2/6 EBS @60-140GB):  
\$341.52-350.32 monthly

<http://calculator.s3.amazonaws.com/index.html#r=DUB&s=EC2&key=calc-3A4D7694-D80F-4CA5-9D3F-0310B342692C>

# Which solution is faster?

RabbitMQ test starting: 2014-10-25 18:58:37.15362

RabbitMQ test finished: 2014-10-25 18:59:08.67174

Finished 8000 messages @100KB in 0:00:31.518121

SQS test starting: 2014-10-25 18:26:38.340640

SQS test finished: 2014-10-25 18:58:37.153342

Finished 8000 messages @100KB in 0:31:58.812702

Thank you