Reading Report: Satyanarayanan17

Albert Bausili Fernández

June 4, 2023

Upload your report in PDF format.
Use this LaTeX template to format the report, keeping the proposed headers.
The length of the report must not exceed **5 pages**.

1 Content

1.1 Identify the genre[1] of the document, its purpose, and its target audience.

The genre of the document is an article. It's purpose is to inform and explain in a brief way the edge computing history, were it stands today and the future difficulties that it has to solve.

1.2 Summarize the document, indicating the key concepts[2].

Cloud computing, which has dominated IT discourse in the past decade, has a twofold value proposition. First, centralization exploits economies of scale to lower the marginal cost of system administration and operations. Second, organizations can avoid the capital expenditure of creating a datacenter by consuming computing resources over the Internet from a large service provider.

Edge computing is a new paradigm in which substantial computing and storage resources—variously referred to as cloudlets, micro datacenters, or fog nodes2—are placed at the Internet's edge in close proximity to mobile devices or sensors.

In a 2001 article that generalized these concepts, I introduced the term cyber foraging for the amplification of a mobile device's computing capabilities by leveraging nearby infrastructure.

The proximity of cloudlets helps in at least four distinct ways:

- Highly responsive cloud services. A cloudlet's physical proximity to a mobile device makes it easier to achieve low end-to-end latency, high bandwidth, and low jitter to services located on the cloudlet. This is valuable for applications such as AR and virtual reality that offload computation to the cloudlet.

---

[1] Genres: book, article, essay, report, review, manual, white paper, data sheet, weblog, etc.
[2] The summary should help you to answer the questions about the reading in the exam.

- Scalability via edge analytics. The cumulative ingress bandwidth demand into the cloud from a large collection of high-bandwidth IoT sensors, such as video cameras, is considerably lower if the raw data is analyzed on cloudlets. Only the (much smaller) extracted information and metadata must be transmitted to the cloud.

- Privacy-policy enforcement. By serving as the first point of contact in the infrastructure for IoT sensor data, a cloudlet can enforce the privacy policies of its owner prior to release of the data to the cloud.

- Masking cloud outages. If a cloud service becomes unavailable due to network failure, cloud failure, or a denial-of-service attack, a fallback service on a nearby cloudlet can temporarily mask the failure.

2 Assessment

2.1 Rate the readability of the document: easy, readable, difficult, unreadable.

Readable

2.2 Give your opinion of the reading assignment, indicating whether it should be included in next year's course or not.

I've found it quite interesting, although I've found it the one I've liked the least out of all the other readings. So, in my personal opinion I think it should not be included in next year course.