Migrating to a NFV-based Home Gateway: an Evolutionary Approach

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***Abstract*—Virtualizing network functions is becoming a major trend in todays research on cloud computing. Among networking elements, the Home Gateway appears to be one with the most diverse functions to handle and thus, with great potential for virtualization. This paper focuses on this and proposes a solution to ease adoption by Service Providers of the latest breakthroughs in cloud computing technologies towards a virtualized Home Gateway. Although NFV approach pretends bringing operational advantages in terms of CAPEX and OPEX, it is essential to prove them for Home Gateways scenarios where scalability, compatibility and versatility are strong requirements. The paper highlights a migration path towards full Home Gateway virtualization and proves its concept through a real implementation and evaluation on a practical use case related to video streaming.**

***Keywords*—Home Gateway, Network Function Virtualization, OSGI**

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intro

II. Background and related work

background

III. Migrating to a NVF-based home gateway

migration

IV. Implementation and results

implementation

V. Conclusion and future work

conclusion

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References

[1] J. Chang, K.-W. Chang, J. Chu, Y. Lee, and Y. Zhao, "Technology Induced Change in Film/Television Distribution," The Anderson School of Management at UCLA, Tech. Rep., Jun. 2004.