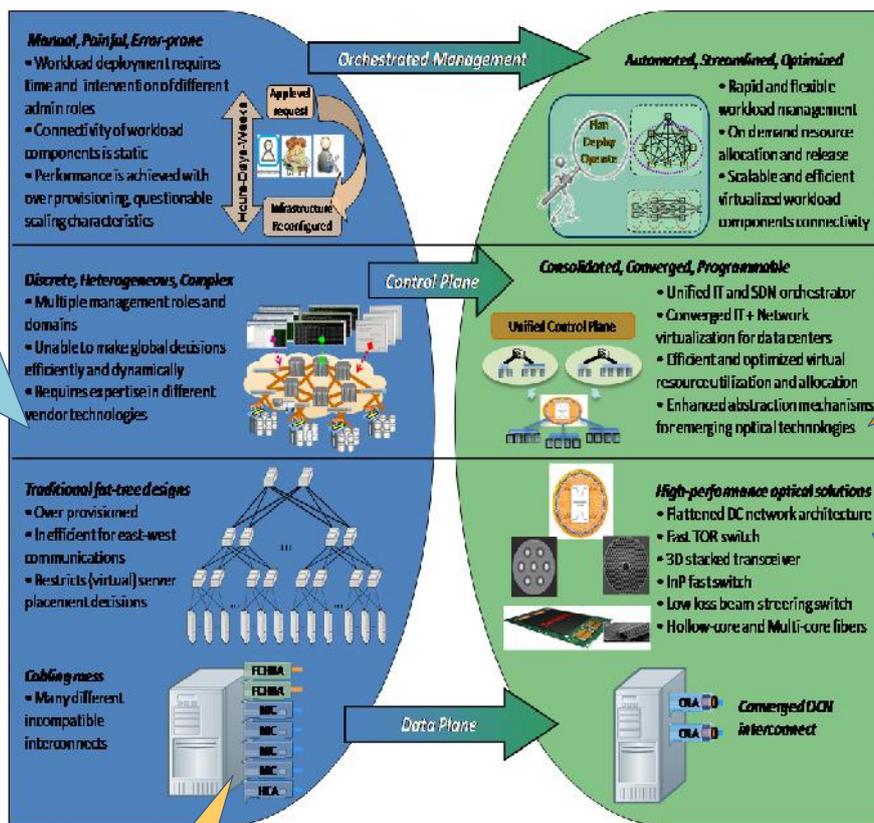


COSIGN



Combining Optics and SDN In next Generation datacentre Networks

The main goal of COSIGN is to define and implement a flat, scalable DCN architecture, empowered by novel optical technologies and SDN based network control and service orchestration for future-proof dynamic, on-demand, low-latency, and ultra-high bandwidth intra-data centre applications.



COSIGN is positioned at the forefront of DC research worldwide a vertical approach that addresses DC architectural as well as control plane and data plane issues to accommodate future ultra-high bandwidth intra-DC applications. COSIGN differentiates significantly from the common research activities by adopting a flat data centre network architecture combined with SDN control supported by novel optical switching technologies.

COSIGN will adopt and develop SDN-based open standard, vendor and technology agnostic protocols and interfaces that allow the separation of the optical data plane and control plane within the DC environment allowing the capability to execute software/user defined flow based routing, control, and management in a controller which will be located outside the data path.

The aims of COSIGN are to define a flat and scalable DCN architecture, equipped with novel optical technologies and SDN control and orchestration solutions, for future dynamic, on-demand, low-latency, and ultra-high bandwidth intra-DC applications.

Current technologies are not able to support the scaling of DC networks. In particular today's DCN hardware solutions lead to architectures that impose unsustainable overheads in terms of capacity, connectivity and energy consumption requirements. Radically new hardware technologies need to be developed, coupled with new frameworks for DCN control and service orchestration in order to enable future-proof DCN architectures. COSIGN brings together the necessary combination of skills and know-how to deliver, for the first time, a coordinated hardware and software architecture for future data centres that will deliver the required scale and performance.

PROJECT DATA

-Start Date: 1/1/2014

-Duration: 36M

-EU Funding: 7.4M€

CONSORTIUM

- Technical University of Denmark, DK, Interoute, UK, Nextworks, IT, I2CAT, ES, Polatis, UK, University of Bristol, UK, Venture Photonics, UK, Universitat Politècnica de Catalunya, ES, University of Southampton, UK, Technical University of Eindhoven, NL, Photonics Networks, NL, IBM Israel - Science and Technology LTD, IL, OFS, DK

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