Open-coopetition in the open-source arena:
The OpenStack Nova case

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Abstract. In an era of software crisis, the move of firms towards distributed software development teams is being challenged by emerging collaboration issues. On this matter, the open-source phenomenon may shed some light, as successful cases of distributed collaboration in the open-source community have been recurrently reported. In this paper, we explore the collaboration networks in the OpenStack Nova open-source project, by data-mining its source-code version-control-system with Social Network Analysis (SNA). Simple network visualizations and clustering allows us to observe how key events in the cloud-computing industry have affected the collaboration network of the OpenStack Nova Community over time. With our findings, we show: the explanation power from network visualizations capturing collaborative dynamics; and the usefulness of network clustering for detecting sub-communities rivalry; with a high-networked software project over time. We also reveal the WebKit project as a valuable research site manifesting the novel notion of open-coopetition, where rival firms collaborate with competitors by open-source manners.