

# Research and application of OpenStack in Chinese Spallation Neutron Source Computing environment

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Cloud computing can make IT resources configuration flexible and reduce the hardware cost, it also can provide computing service according to the real need. We are applying this computing mode to the Chinese Spallation Neutron Source (CSNS) computing environment. So from the research and practice aspects, firstly, the application status of cloud computing science in High Energy Physics Experiments and the special requirements of CSNS are introduced in this paper. Secondly, the design and practice of cloud computing platform based on OpenStack are mainly demonstrated from the aspects of cloud computing system framework, elastic distribution of resources and so on. Thirdly, some improvements to OpenStack we made are discussed further. Finally, some future prospects of CSNS cloud computing environment are summarized in the ending of this paper.

## Primary Keyword (Mandatory)

Cloud technologies

## Secondary Keyword (Optional)

Computing facilities

## Tertiary Keyword (Optional)

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