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-in-the-Cloud: Flexible and Reliable Cloud Resources for National Data Centres

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Capacity building efforts for National Data Centers (NDCs) commonly involve the provisioning and shipment of physical hardware systems and the training, installation, maintenance, and distribution of the NDC-in-a-Box (NIAB) software suite. "NDC-in-the-Cloud" (NIAC) is a set of cloud-hosted resources for National Data Centers that uses cloud services to streamline these efforts, while also offering new flexibility and reliability to users. It provides NDCs with cloud based versions of the familiar NDC-in-a-Box software and data, as well as a blueprint to create secure cloud based resources to use these data and software in their own cloud accounts. With this approach, we seek to increase access and processing capability for NDCs, and decrease any logistical burden associated with shipping physical hardware. The NIAC prototype employs Amazon Machine Images for software distribution, elastic compute cloud virtual hardware in the Amazon Web Services commercial cloud for computing, virtualized desktops accessible via web browser, and an "Infrastructure-as-Code" approach to deploy cloud resources. Internal and external evaluations of NIAC instances note good desktop responsiveness and adequate computing and storage capacity, and we seek to refine the prototype through further collaborations.

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Promotional text

The study shows how the use of the NIAB software on cloud platforms could expand NDC capabilities and their use of IMS data by performing the analysis and data pulls utilizing cloud resources, reducing local bandwidth and infrastructure issues.

Oral preference format

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