



NECS 3.0

NRB ENTERPRISE CLOUD SERVICES

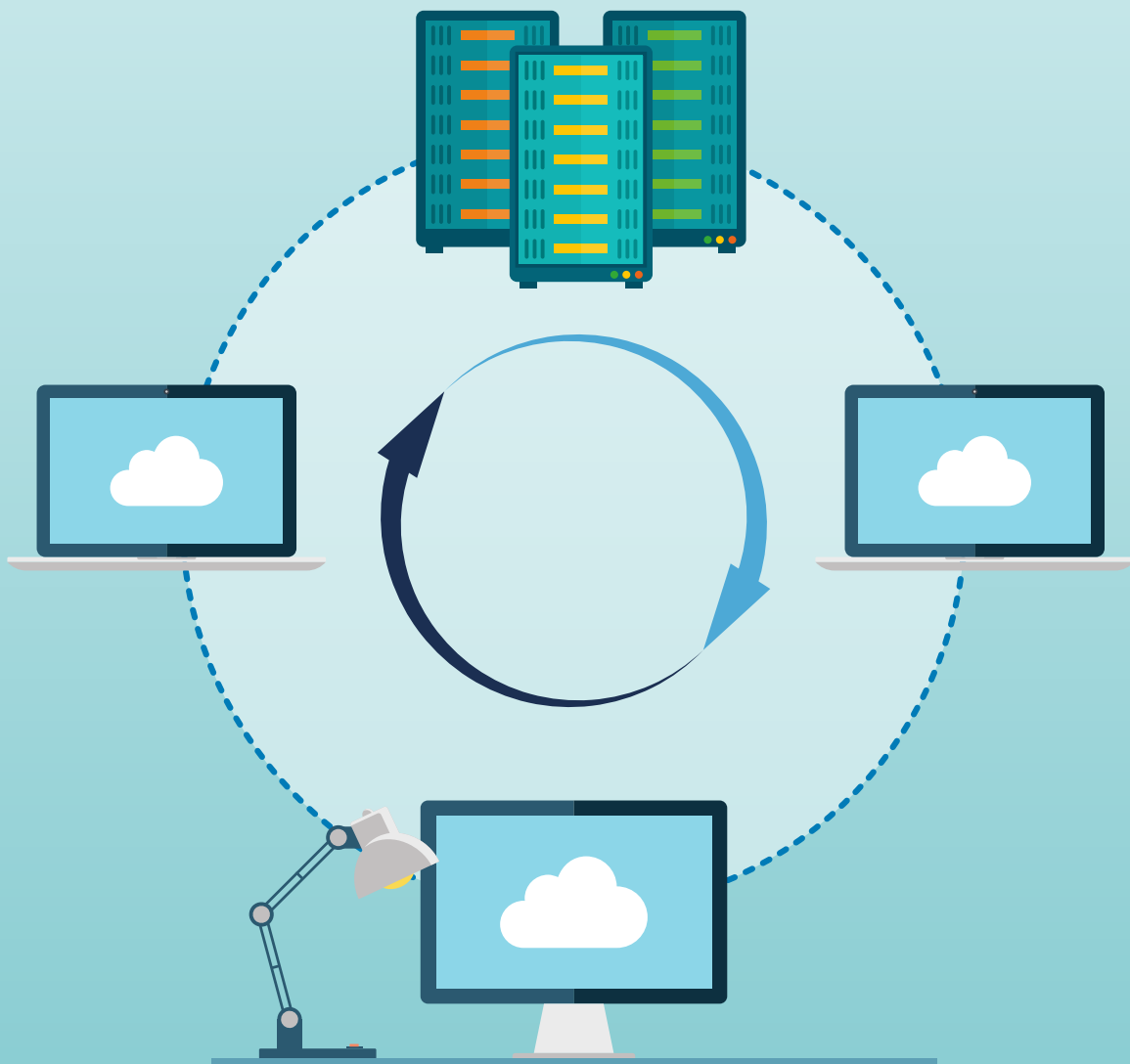
PRIVATE & MULTI-CLOUD SOLUTIONS



NECS

NRB ENTERPRISE CLOUD SERVICES

- Central web portal to easily manage your NRB Private Cloud Infrastructure
- Virtual Machines (VMs) ready in one hour
- Order your VM related SRQs and do-it-by-yourself manuals
- Multi-cloud ready



The conventional IT model, characterised by siloed, costly and inflexible infrastructure, is overtaken by the cloud model, which serves business applications with increased agility, productivity and cost-efficiency. Enterprises are increasingly deploying cloud technologies, including public and private cloud solutions, to deliver highly scalable and automated services on demand.

Private clouds provide many of the benefits of public clouds, such as resource pooling, rapid scaling, automation, and self-service, but also give organisations more control and flexibility with regard to access to and usage of their applications.

THE CHALLENGE OF BUILDING A PRIVATE CLOUD

A cloud is by definition an automated environment where actions are initiated through a web portal. To be automated, processes and infrastructures are standardised. Options permit the necessary granularity and flexibility.

Another characteristic of any Cloud is its “limitless” scalability: all our customers can order VMs and we make sure enough capacity is available at the right time to seamlessly support the growth of their businesses. Finally, it has to be simple and fully secured.

THE FOUR “S” RULE

NRB’S CLOUD PLATFORM COMPLIES WITH THE “FOUR S” RULE:

Simplicity

A simple to use service catalogue with a user – not technology – centric interface.

Security

Your Web Access Management (WAM) solution has a double factor authentication, Role-Based Access Control (RBAC) and every communication is encrypted through secured TLS layers. The solution is validated by a penetration test.

Service

While using our Infrastructure-as-a-Service, you still have access to our experts in all layers of IT to make your IT projects a success.

Scalability

Within the boundaries of your contractual agreement, you grow or decrease your virtual machine volume according to your business needs, without caring about infrastructure logistics.

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MANAGING YOUR NRB PRIVATE CLOUD INFRASTRUCTURE THROUGH A WEB PORTAL

A highly secure web portal is directly accessible online to order new virtual machines (VMs). Fill in a form and click “order”. Everything is completed within an hour through our fully automated delivery processes. After delivery, check the health of all your servers through the monitoring portal, access commodity actions such as rebooting and resizing CPU-RAM or disk space, and access the console for troubleshooting. All these actions can be scheduled to start at a later time without your intervention.

ARCHITECTURE

DRIVING SCALE AND EFFICIENCY WITH AUTOMATION AND ORCHESTRATION

Automation and orchestration are critical to the efficient operation of a cloud computing environment.

At the foundation of the cloud, there is a POD. A POD is a stack of hardware and software: Compute, Storage, Network and Hypervisor solutions specifically designed to work together in an efficient and effective way. NRB has chosen best-in-class solutions in terms of quality and features: Cisco UCS, EMC Vmax, Cisco ACI and VMware 6.5.

On top is an automation layer: all sequential actions are orchestrated by Camunda, the BPMN (Business Process Model Notation) engine. Each time you make a request on the web interface, the orchestrator executes all necessary actions needed to deliver the service. These actions interact through connectors with other pieces of software like the hypervisor, the CMDB (Configuration Management Data Base), the monitoring system, hardware etc. The web interface is provided by Cisco's Prime Service Catalog, adapted to achieve the expected user experience, and to deliver the necessary services.

Around this POD and the Cloud Management Platform that automates it, you get access to a complete set of IT management applications: CMDB, reports, monitoring dashboard and ITSM tool. A Web Access Management solution called Evidian secures the access and provides SSO and identity features.

MY SERVICES

The image displays a grid of six service cards, each with a distinct icon and a title. The cards are arranged in two rows of three. The top row includes 'Cloud Management Portal' (with a user profile icon), 'Configuration Management DataBase' (with a 3D cube icon), and 'My reports' (with a bar and pie chart icon). The bottom row includes 'Company requests and incidents' (with a user profile icon), 'My requests and incidents' (with a user profile icon), and 'Server Monitoring' (with a server rack icon and a 'LIVE DASHBOARD' indicator).

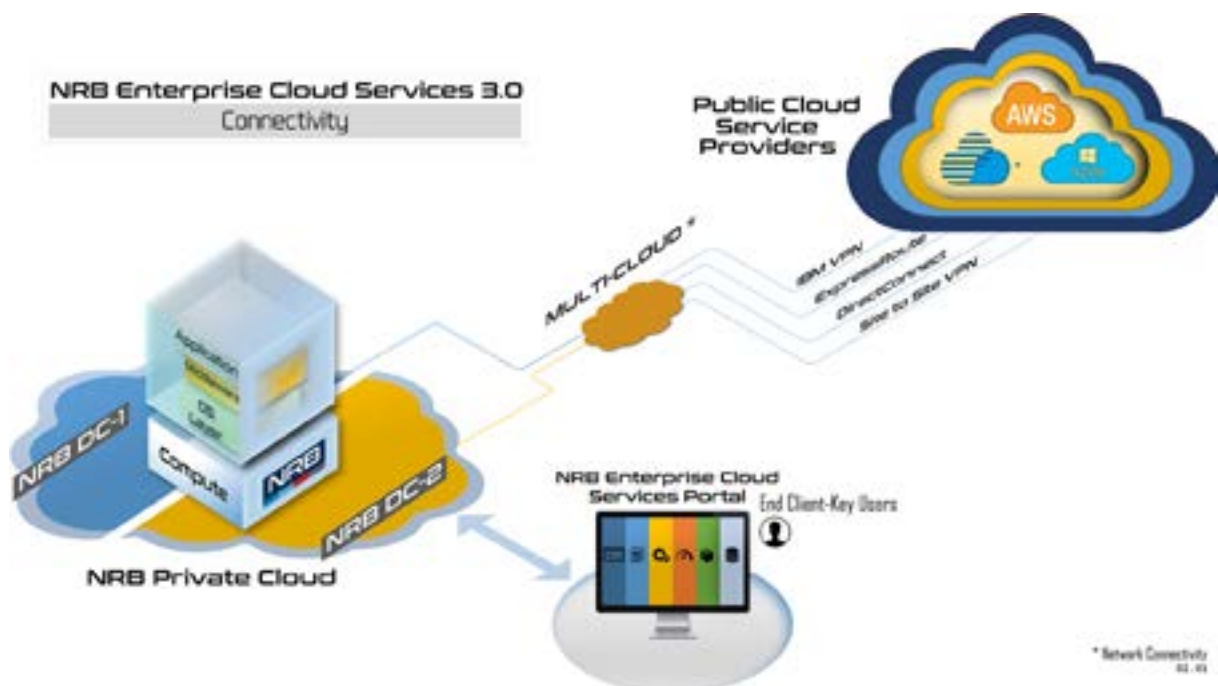
| | | |
|---|--|--|
| Cloud Management Portal Manage my cloud services | Configuration Management DataBase View my assets | My reports View my history of static reports |
| Company requests and incidents View all my company incidents and requests | My requests and incidents View all my incidents and requests | Server Monitoring View events and performances of my servers |

FUNCTIONALITIES

ENJOYING THE CONVENIENCE OF SELF-SERVICE

You control and manage your own cloud footprint through a simple user service catalogue interface.

- **Ordering a new VM**
 - Pre-installed with: Windows 2012 R2, Windows 2016, RedHat 6 and RedHat 7
 - Auto-configured Monitoring & Backup
 - Automatically generated hostnames
 - Automatically reserved IP address
 - Real-time service price calculation & display
 - Order and actions are subject to prior validation by authorised persons within your organisation
- **Performing automated SRQs**
 - Add VCPU
 - Add RAM
 - Hot-add virtual disk
 - Extend an existing disk
 - Start/stop/reboot
- **Other capabilities**
 - Access to the virtual screen (console)
 - Monthly performance reports
- **Inventory, Monitoring, Assets & Reporting**
 - ITSM access to view and create tickets
 - 'My CMDB' to view the inventory of your assets
 - Monitoring dashboard of all the infrastructure
 - 'My reports' to share reports and other documents



PAY IN AN “AS-A-SERVICE” MODEL

With NRB Enterprise Cloud Services, you don't need to make large upfront investments in hardware. You provision the right type and size of computing resources you need in a “as-a-service” mode.

- You pay per existing virtual machine on a monthly basis, according to its size (vCPU, RAM and disk) and the chosen options
- Minimum duration is defined in your contract agreement
- First and last month are invoiced proportionally to the number of days, i.e. from the Virtual Machine commissioning date to end of the month, and from the first day of the month to the decommissioning date of your Virtual Machine.



WHAT MAKES US DIFFERENT?

- **Data is located in Belgium**
Access your data faster with more control on confidentiality
- **Catalog centric web interface**
Easy and fast provision of new services
- **Premium Cloud Services**
Our service delivery manager is your single point of contact
- **Enterprise Performance**
Top-quality highly resilient secure and performant private cloud offering
- **One stop shop for IT solutions and services**
Maximise efficiency through end-to-end services





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