

Cloud Migration and Security

NCC Group employs experienced cloud experts to help you to build a secure migration readiness plan and ensure that critical data is collected prior to initiating any deployment. NCC Group reviews any vendor specific elements, the dependencies on other applications and the applicable secure migration paths needed.

NCC Group scopes migrations, prioritising and staging the processes

NCC Group works with you to stage migrations, which consists of a cloud readiness analysis and the use of secure migration services using a best practices approach, including application code analysis, testing and secure migration practices.

The migration of security services

NCC Group helps to develop your TO-BE Cloud platform solution. This includes advising on the necessary application changes and the service integration tools to use. This ensures that your applications are cloud compliant with your migrated or new build security, identity and access management, storage and central logging services

Communication and know-how for migration related cultural changes

The reorganisation of skills sets and different skill mixes are usually required for migrated applications. This often results in less infrastructure management but greater levels of business tasks. NCC Group therefore conducts Training Needs Analysis (TNA) and wider education, awareness and knowledge transfers

Post-migration support to manage security and reporting

NCC Group reviews the size of applications and data repositories to ascertain paths to modernisation for your organisation's cloud environment. This can include re-factoring, whereby code is not altered but components are replaced, or more strategic cloud native re-writes to provide full cloud benefits and optimisation saving your organisation op-ex costs.

Enforce governance, decommission old platforms, develop exit strategies

NCC Group includes Continuous Risk Treatment (CRT) and apply this to templates and development to assimilate secure DevOps routines in Continuous Integration / Continuous Deployment (CI/CD) methodology. Infrastructure as Code (IaC) based methods are used to provision adaptive security architecture coupled with constant visibility and assessment.

Benefits

- Secure cloud architecture scoping and business case development
- Deep knowledge and experience of secure cloud architectures
- Using world-class cloud security management tools and methods
- Consultancy on re-factoring workloads to serverless and microservices
- Goes beyond technical focus into people, process

Understanding the Role of Cloud

NCC Group assesses and assists you with secure cloud solution architecture and design. NCC Group plans the cloud migrations and workload consolidation identifying the applications that are potential cloud candidates and then assessing them for cloud suitability. From this actions are taken to modernise and prepare such applications for cloud via modifying or re-writing the code or alternatively recommending that it is replaced with a SaaS solution. NCC Group works with partners and incumbent System Integrators or Development Teams to support the secure modernisation. Alternatively, the recommendation may be to retain the application in its on-premise location. The options for automated migration are also investigated, as well as how you wish to track reports and progress regarding data migration and new deployment.

Use of a Cloud Application Migration Framework

NCC Group uses a cloud readiness assessment framework for migration engagement and, in the planning period, a governance structure is created that includes:

- An application list for cloud assessment and cloud-readiness metrics to be used as well as identifying owners for each application to assist in the preliminary analysis
- Completion of a best fit assessment for applications with an analysis of the responses with selected applications for detailed analysis
- Conducting a code analysis and a review of workload and application architecture we use code analyser tools and plugins to scan application source code such as Java or .Net for security vulnerabilities and for run estimation
- Development of the cloud platform solution and making the necessary code and application configuration to ensure compliance with security, identity and access management needs.

Use of a Cloud Application Migration Framework

NCC Group uses a proven approach to migrate existing systems based on our Security Design Pattern framework; this includes:

- A data migration plan covering the different types of data, how and when do users access new services for the first time, planning required for additional one-time migration capabilities such as the use of burstable bandwidth on-demand and the phasing of rollouts.

- A review of requirements for dedicated and encrypted bandwidth, the numbers and geographies of remote workers, needs for distributed access etc.
- Services to cover specialist expertise, methodologies and potential project accelerators.
- Planning to optimise dates for migration, erasing duplicates, cleansing and enhancing metadata etc.

Cloud Assessment

NCC Group conducts a Cloud Assessment based on business data, workshops, interviews and the use of Configuration Management Database (CMDB) repositories. Discovery tools and vulnerability scanning are also used, and code analysers are run to identify and resolve any migration inhibitors and to determine the costs, risks and efforts required.

We assess assets, identify relationships and conduct dependency mapping and use supplementary tools for security reporting and planning scenarios. NCC Group assist in migration execution, in prioritising migration order and the creation of templates and standards for secure compute, network and storage. We help certify that secure environments are built for:

- Production, Pre-Production, Test and DR
- The secure replication of code and data
- Conducting mock migrations and dry runs
- Data migration and environment cut over with synchronised data, updated DNS and validated application functionality and security
- Review of the utilisation, behaviour and the right sizing of the environments.

Summary

NCC Group's Migration Security Service follows a defined best practice pattern. NCC Group can help scope migrations accurately, prioritise the order and have practices to cleanse existing platforms and archive old data.

NCC Group works with you to review the success criteria for the migration (i.e. after a six-month time window) and conduct analysis of source workloads. This includes an application security inventory and a data classification review. Suitable data is identified for migration and analysed for any new functionality needed, scoping the migration by workload, reviewing the security needs and the roadmap for execution.

NCC Group helps conduct Proof of Concepts (PoC) and assess migration tool robustness. Secure migrations are planned between the source and target and the methods to be used. A phased migration approach is conducted and if required the platforms can run simultaneously with data securely synchronised. Post-migration support for your ongoing security operations and administration is provided.

About NCC Group



NCC Group is a global expert in cyber security and risk mitigation, working with organisations to protect their brand, value and reputation against the ever-evolving threat landscape.

With our knowledge, experience and global footprint, we are well placed to help organisations identify, assess, mitigate and respond to the risks they face.

We are passionate about making the Internet safer and revolutionising the way in which organisations think about cyber security.





**For more information from NCC
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