

## Enterprise Infrastructure Consolidation Guidelines

22-07-NJOIT

### PURPOSE

In support of the structure under which we operate in the Executive Branch as codified within Executive Order 225 and New Jersey's hybrid consolidation model, this IT Circular outlines the processes supporting the current IT Infrastructure Consolidation. This effort provides NJOIT and Agency teams with new tools to support quicker migrations, additional dedicated staff, and includes collaborative support for affected Agencies and NJOIT technical units.

The objective of this IT Circular is to standardize the consolidation efforts of infrastructure equipment, defined by EO 225 as "computer, storage, network, database infrastructure and data center assets" of all Executive Branch Agencies. NJOIT targets substantial completion of outstanding consolidation work by December 31st, 2023.

Infrastructure portfolio includes Commonality and Consolidation of IT Services such as Backup, Archiving and Service Availability and Recovery, two site DC Strategy, Centralized DC Services, footprint, power, cooling, UPS, and Backup Generators for maintain Service Availability. Cost Reduction and Avoidance efforts include: Software licensing, VMware, Windows Server DC Edition, Red Hat Linux Enterprise, Backup Software, Commvault.

Procedurally, Agencies are expected to identify infrastructure equipment that is subject to consolidation via scanning and inventorying efforts. Based on the results of the inventories and in partnership with NJOIT and agency business leadership, agencies then propose actionable consolidation plans to achieve consolidation compliance. NJOIT retains primary ownership and accountability for the execution of the consolidation plan in accordance with the agency's plan, but the agency owns all initial inventory and planning tasks, taking business needs, dependencies, and priorities into account.

## SCOPE

All Executive Branch departments and State agencies are directed to cooperate fully with the NJOIT and the CTO to implement the provisions of this IT Circular, and to ensure effective use of information technology within the Executive Branch of State Government.

## PROCEDURE

The updated and optimized process will be centered on **Identification** (Scan), **Plan** and **Execute** working with each agency CIO and staff.

**Identification-** NJOIT will provide a tool to agencies to scan the agency's complete inventory of infrastructure devices that are hosted outside the NJOIT Enterprise Datacenter (EDC). The agencies will provide access to their locations and networks to support the scan. Agencies will be the primary lead of this effort working with the vendor and NJOIT will be coordinating with the agencies to provide support and facilitating the effort. NJOIT staff will be visiting the agency sites to manually verify the inventory after the scan reports are received from the tool.

**Plan-** Review of the inventory collected from the scan tool with the agencies IT teams and plan to migrate them onto the NJOIT EDC (the NJOIT Shared Infrastructure environment). Agencies will be the primary lead of this planning effort, including preparation of the migration and consolidation plan in consultation with NJOIT. NJOIT will be coordinating with the agencies to provide support, best practices learned from prior consolidation projects, and hardware to migrate off their existing infrastructures currently hosted at agency facilities. Agencies propose migration priorities, phases, and timing schedules. Strategically, production, test, and staging systems will be hosted on NJOIT enterprise infrastructure at the NJOIT EDC. Disaster Recovery and high-availability systems will be hosted on NJOIT enterprise infrastructure at Hamilton.

**Execute-** NJOIT will be responsible for the execution of the migration plan along with the agency staff to support the migrations and test the applications, in accordance with the migration plan proposed by the agency and accepted by NJOIT.

### NJOIT IT Consolidation Migration Process:

The three different approaches that we consider moving the physical equipment from agencies will be: Physical to Virtual; Virtual to Virtual; Lift and Shift.

**Physical to Virtual:** The physical devices will be migrated to a virtual environment using VMware/HCX or Hyper-V, as appropriate. Agencies decommission and retire legacy physical assets at agency locations. Agencies are charged for enterprise resources as consumed, according to then-current service rates. See [name of IT Circular that address decommissioning responsibilities – if that's not an IT Circular, it needs to be issued as one along with this doc.]

**Virtual to Virtual:** The virtual devices will be migrated from the agency virtual environment to NJOIT Shared Virtual environment using VMware/HCX or Hyper-V, as appropriate. Oracle Sun Solaris, and IBM Power Platforms will also undergo a Virtual-to-Virtual migration. Once all resources on an agency frame are migrated, agencies decommission and retire legacy physical assets. See [same IT Circular reference discussed above here.] Agencies are charged for enterprise resources as consumed, according to then-current service rates.

**Lift and Shift:** The physical devices will be lifted from the agency sites and moved to the NJOIT EDC or Hamilton, as appropriate based on the IT infrastructure's role. The applications and data will be backed up using NJOIT enterprise backup and archive services before the lift and shift will be attempted. Agencies bear the cost of relocation of the device (services etc.) to the appropriate enterprise data center location, as well as specialized backup and recovery services if the enterprise NJOIT services cannot reasonably meet the requirements. Consumption of NJOIT backup services is allocated based on data ingestion, after de-duplication of storage volumes, at then-current rates.

#### NJOIT IT Consolidation Decommission Process:

Submit a ServiceNow Request to the IT Consolidation team.

IT Consolidation team will identify the asset and confirm ownership.

IT Consolidation team will identify the correct decommissioning approach and provide the agency with the appropriate decommission form. The Agency or IT Consolidation team submits the completed forms as a request in ServiceNow assigned to OIT Capacity Planning group. The OIT Capacity Planning group opens a change order with the appropriate workflow, which notifies all affected groups.

Assets within the EDC: All NJOIT assets will be decommissioned by NJOIT, following the existing

processes.

#### Assets at Agency Sites:

**Servers:** For server hardware decommissioning, agency staff will prepare the appliance by removing all cabling connected to the appliance and remove the hard drives. NJOIT will remove the appliance. Removal of any cables, racks, monitors, p.c.'s, etc. are at the agency's discretion and control.

**Hard Drives:** For hard drive decommissioning, agency staff will follow their existing process to inventory and ship hard drives to the Treasury Warehouse for shredding, including coordination of site pickup and delivery to the Warehouse.

**SAN/Storage Appliances:** For SAN appliance(s) managed by NJOIT, deployed by NJOIT, and cabled by NJOIT, NJOIT will un-cable and remove the SAN appliance upon decommission using existing data center decommissioning processes. Disks within NJOIT managed SAN appliances

that serve a single agency will be removed and provided to the agency for hard drive decommissioning.

Disks within NJOIT managed SAN appliances that serve multiple agencies will be decommissioned by NJOIT. Agency managed, deployed, cabled SAN devices will follow that Agency's decommissioning process.

NJOIT decommission does not include the removal of equipment racks, P.C.'s, monitors, cables, etc.

## AUTHORITY

**Executive Order 225 (EO 225) Infrastructure Consolidation, and New Jersey's hybrid consolidation model.**

NJOIT reserves the right to change or amend this Policy to comply with changes in Agency procedures. Any changes or amendments will be announced and made available on NJOIT's Intranet under Policies. Changes in this Policy will be effective upon such publication or distribution.

## TERMS AND DEFINITIONS

The definitions for terms in this Policy can be found in the NJOIT Policy Glossary located at:

<http://highpoint.state.nj.us/intranets/oit/policies/glossary.html>

<http://www.nj.gov/it/business/index.shtml#glossary>

Additional definitions can be found in the Statewide Information Security Manual (SISM). For the most recent publication, refer to: <https://www.cyber.nj.gov/grants-and-resources/state-resources/statewide-information-security-manual-sism>

## SIGNATURES



09/27/2022

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**CHRISTOPHER J. REIN**

**DATE**

Chief Technology Officer,  
State of NJ Office of Information Technology

## DOCUMENT HISTORY

*Printed copies of this document are uncontrolled; please refer to the NJOIT website for the current version in effect. Please visit our website at: [www.tech.nj.gov](http://www.tech.nj.gov)*

Version	Published Date	CTO	Sections Modified	Description of Modifications
1.0	9/28/2022	C. Rein	All	Initial