

Consolidation Architecture Migration Strategy for Distributed Systems

One key goal of the SDC is to provide good stewardship of the state's computing resources by fully utilizing all hardware & consolidating to reduce cost. The new standard architecture for Distributed Systems is being implemented, so it is time to plan the consolidation of existing server workload & requests for new capacity into the new standard environment.

The migration of systems from older equipment to the new environment will take place in phases. The following chart shows the proposed phases & what needs to be in place before each phase can start.

Phase	Description	Dependencies	Time Frame for Roll Out
1	Pilot phase includes: <ul style="list-style-type: none"> • Creation of test/dev environment (14 blades; 60 virtual; 3 standalone) • OSP blade & virtual test in test/dev environment • Servers used for SDC internal management tools (~14 servers today) • Servers at high risk of failure (~40 servers have been identified) 	<ul style="list-style-type: none"> • Shared server environment set up & tested • Environment documented • Monitoring in place & operations trained • Metrics defined 	10/3/2007 – 11/15/2007
2	Forestry & Housing servers in test/dev/production environments (including all Phase 1 dependencies)	For each customer agency being migrated: <ul style="list-style-type: none"> • Develop roll out plan including communication & change management requirements • Complete capacity analysis of existing hardware & software usage & licensing • Hierarchical Storage Management (HSM) & Tivoli Storage Manager (TSM) are implemented & ready to manage customer storage & backup/recovery • Intrusion detection monitoring & Network Access Control in place • Virtualized partition allocations can be captured for billing • Capacity & performance tracking & reporting is operational 	11/15/2007 – 01/15/2008
3	Citrix Farm build out (14 blades & 180 virtual servers to start)	<ul style="list-style-type: none"> • Project readiness & Phase 1 dependencies 	1/2/2008 – 2/29/2008
4	Low risk candidates for migration	<ul style="list-style-type: none"> • Implementation of Tivoli Application Dependence Discovery manager (TADDM) • Phase 2 dependencies 	2/1/2008 – 5/31/2008
5	Remaining Customers <ul style="list-style-type: none"> • Customers volunteering to migrate • All remaining systems in the old environment 	<ul style="list-style-type: none"> • Phase 2 dependencies 	TBD

Consolidation Architecture Migration Strategy for Distributed Systems

Concurrently with migration of the existing environment, requests for new distributed systems processing capacity will be assessed for placement in the new standard environment. When a Support Request is received by the SDC Distributed Systems team, it is reviewed against a set of criteria to determine which platform it will reside on. The following platforms are available (in preferred order):

1. Virtual server environment

The Virtual Server environment is preferred because it represents the most efficient use of computing resources. A physical server is logically separated into many virtual servers, each running its own operating system and logically separate from the other environments. Virtual servers are highly redundant and standardized to provide the highest available uptime.

2. Blade server environment

Blade servers are independent physical servers housed in an environment (a Bladecenter) to provide optimum manageability and redundancy. Blade servers are used when requirements dictate that a virtual server environment can not be used.

3. Stand-alone server environment

A stand-alone server environment will only be considered when neither a virtual server nor blade server environment can be utilized.