

Centrify Zero Trust Privilege Services Advanced Upgrade Jump Start – 1000

This Jump Start package streamlines the migration from classic Zones to hierarchical Zones enabling Centrify customers to take full advantage of the latest Centrify Zero Trust Privilege Services Platform technologies built to address recent cyberattacks on Identity and Privilege Management. This Jump Start package is limited to Zone migrations within a single domain.

Why Migrate to Tiered Hierarchical Zones?

- Hierarchical Zones make it easier to manage Linux and UNIX identities with inheritance capabilities that reduce the need to duplicate policies that control access and privileges. Flexibility in the management model is simultaneously improved with hierarchical Zones through the ability to use overrides at any level within the hierarchy.
- Hierarchical Zones introduce Computer Roles, which simplify the assignment of privileges across servers. For example, you might create a Computer Role for web servers, which gives your web developers consistent access rights and privileges to web servers across your enterprise.
- Granular control of how users can access systems and what users can do based on their job function. Hierarchical Zones provide flexibility in the implementation and management of isolated, granular, least-privilege access which allows for Identity Policy flexibility combining credentials, role definitions, access assignments, and even location and multi-factor authentication or command level enforcement.
- Centrify's best practice security architecture for Identity Management through a comprehensive Identity Policy approach allows you to identify if a potential breach has occurred through compromised credentials, automatic containment parameters to isolate the compromised credential, and a straightforward approach to eradicating the breach.
- Repeatable and Scalable compliance with comprehensive reporting that combines who has access to which servers, and the privileges they have on those servers.

Benefits of the Advanced Upgrade Jump Start

Centrify Professional Services provides the expertise and best practices, acquired through hundreds of successful deployments, to help organizations migrate to Tiered Hierarchical Zones 30% faster.

Your organization will benefit from an in-depth analysis of your current Centrify implementation, planning sessions, and a pilot migration to the latest version of the Centrify Zero Trust Privilege Services. The resulting recommendations and initial implementation will focus on ways you can:

- Realize cost savings and reduce human error through automation of everyday tasks for controlling access and privileges
- Improve enterprise security by replacing sudoers with consistent management and enforcement of security policies across your cross-platform enterprise

- Reduce potential AD latency within a large Centrify deployment
- Reduce administration costs through optimized role definitions and role-assignment
- Increase user productivity with seamless privilege elevation

Service Scope

- Preserve your investment in Centrify technologies by upgrading up to 50 of your Linux/UNIX agents to the most recent version of Centrify Zero Trust Privilege Services
- Access for up to fifty Linux/UNIX systems will be migrated from classic Zones to Hierarchical Zone inheritance which enforces a security best practice "deny all" approach while applying DirectAuthorize Role membership for any access to migrated systems.
- An optional Group Policy implementation to remove or restrict the existing sudoers file on UNIX systems while moving to a more streamlined and secure privileged management approach with DirectAuthorize.
- All Windows Server Suite management consoles such as the Zone Provisioning Agent, Deployment Manager, and Access Manager (on up to 5 systems) will be upgraded to the current Centrify Zero Trust Privilege Services platform.

Engagement Management

Engagement management provides end-to-end oversight and management to ensure successful service delivery and on-site training. Centrify's engagement management adds dedicated resources that provide the following essential elements to your project:

- Management focus and expertise
- Quality control and management
- Cost management

Your Centrify engagement manager will ensure your staff, change control processes and equipment are prepared for Centrify staff to work productively and efficiently on-site, so projects are completed on time and with the highest quality levels.

Deliverables

As part of the service, you will receive the following:

- A formal analysis of your organization's existing deployment of Centrify Zero Trust Privilege Services
- Three Classic Zones, or up to fifty Linux/Unix systems will be migrated to a Hierarchical Child Zone and associated Computer Role for access.

- Up to five distinct sudoers privileged roles will be configured with DirectAuthorize Role Based Access Control and migrated to Centrify Zero Trust Privilege Services platform with an optional Group Policy to remove or restrict the existing sudoers files on migrated UNIX systems
- A customized design document to help upgrade Centrify Zero Trust Privilege Services to the entire Linux/UNIX environment and provide a migration methodology for the rest of your classic zone upgrade and migration.

Duration

- Four (4) days of instructor lead Standard Training before the project begins.
- Twenty (20) days of remote consulting services. (If on-site consulting is preferred, expenses will be invoiced back to the end customer at actuals.

Who Should Participate

Linux/UNIX, Windows, Security and System Administrators. If a project or change manager or business representative is assigned to the project, they should also attend.

Prerequisites

- Prior installation of Centrify Deployment Manager in customer's environment and completion through step 3 in the 'Analyze your Environment' section of the Deployment Manager documentation.
- All issues identified during Step 3 resolved prior to onsite services
Note: Must be completed for 50 target systems and log results sent to Centrify Customer Success two weeks before the project commences.
- The "Deployment Report" tool executed and results sent to Centrify Professional Services. This report includes the version numbers installed.

- This engagement does not apply to Centrify Suite 4.1 or earlier.
- **This engagement is designed for customers with up to 1000 UNIX systems.** We can help customize this offering if your organization has more than 1000 deployed UNIX systems running the Centrify Zero Trust Privilege Services, Standard Edition, or if your organization is running the Centrify Zero Trust Privilege Services, Enterprise Edition.
- Customer personnel will require root or equivalent access for all systems in scope of deployment, and the privileges to install software on the Windows computers with the existing Centrify DirectControl consoles
- If outages/change control are required, then these must be scheduled in advance

Format

Daily interdisciplinary consulting sessions held during the normal working day hours. We highly recommend that the same room that was reserved for the Training be reserved and utilized as a project room to ensure limited disruption while coordinating via online conferencing sessions.

Pricing and Ordering

This offering is invoiced on purchase and is valid for 6 months from the date of purchase. Contact your Centrify Sales representative for pricing details for your region and to arrange for a time, place, and schedule.

Customizations

The Centrify Professional Services team has the skill and expertise to handle or assist with many implementation customizations where needed. If there are extra implementation tasks that are required, custom scripting needs, custom integration requirements, or any other technical services that will be useful to customer success with Centrify, our services team can set up a pre-sale scoping call to provide custom implementation estimates to fulfill these needs.

Daily Logistics

DAY	DESCRIPTION
1-2	<p>Centrify Professional Services and your personnel discuss the existing Centrify deployment in your network environment.</p> <ul style="list-style-type: none"> • Interviews with key personnel and systems owners, such as provisioning, Active Directory, UNIX, Security, and auditing or compliance • Review of existing installation procedures for the Centrify Zero Trust Privilege Services, Standard Edition • Review of existing Zone design and implementation • Review of configuration management of Server Suite • Process validation testing of user provisioning, auditing, and user account revocation • Review of privilege management of local accounts and associated compliance / auditing risks • Design review of existing implementation and Active Directory storage structure decisions
3 - 4	<p>Custom workshop on additional functionality and Centrify's best practices for the current Centrify Zero Trust Privilege Services, Standard Edition using VM overviews, and whiteboard collaboration.</p> <ul style="list-style-type: none"> • Optimal design for Architecture, OU structure, delegation, separation of duties, and Zone configuration, with automation • Optimal configuration of Zone Provisioning Agent (ZPA), DirectAuthorize Roles, Global access, Zone-level access, child zone-level access, and computer overrides • Build out of Provisioning source groups for users and groups, and all Unix users. • Optimal design covering the migration from up to three Classic Zones to an optimized design with Computer Roles

Daily Logistics

DAY	DESCRIPTION
5	<p>Management components are upgraded on Windows</p> <ul style="list-style-type: none"> Upgrade of the Centrify Zero Trust Privilege Services, Standard Edition Access Manager Console to the most current product release on up to 5 Windows systems. Upgrade of the Zone Provisioning Agent to the most current product release
6 - 7	<p>Non-invasive migration of UNIX data in Active Directory</p> <ul style="list-style-type: none"> Configure design decisions from day 3 and 4. Customize a script to mirror the existing environment by creating a parent Zone and migrating up to thirty existing UNIX computers and their users from one or more classic Zones to a hierarchical child zone (up to 30 UNIX computers or up to three classic zones) Configure Roles in the new hierarchical child zone to include (listed, login, root-equiv, and root-read) Configure up to three sudoers privilege management roles into DirectAuthorize Roles and Commands Overview of configuring a Group Policy to centrally distribute a limited sudoers file once all Roles and Rights are defined in Server Suite
8 - 9	<p>Use of Deployment Manager to upgrade the Centrify Zero Trust Privilege Services, Standard Edition to the most current product release on up to thirty non-production UNIX computers</p>
10 -18	<p>Non-invasive migration of computers to a hierarchical child zone</p> <ul style="list-style-type: none"> Customization of a script to build out up to three Computer Role(s) for up to three current Classic Zone(s), User Role group, Computer Role group, and associated DirectAuthorize Role to User Role Group membership. Paste Classic Zone user membership to appropriate user role access group membership. Use of Server Suite's Deployment Manager tools to migrate up to thirty computers from one or more classic Zones to the appropriate hierarchical child zone and proper Computer Roles or script the precreated computer object in the hierarchical child zone and associated computer role membership. Use show effective users to determine appropriate access to appropriate system configuration Run the adchzone command for the computer object to migrate from the current classic zone to the new hierarchical child zone and associated computer role membership. Validation of access, authorization, and privilege (EX: adinfo, dzinfo, and dzdo)
19	Validation of Overall Deployment Process and Ownership
20	Project closeout: overview of all Deliverables, handoff of Final Release Design Document and Review

Key Assumptions

- Client understands that Centrify's performance of the Services and delivery of agreed upon deliverables under this Jump Start is dependent in part upon Client's actions, and Client therefore agrees to cooperate with Centrify in a commercially reasonable manner in the completion of the Services by Centrify. Centrify will promptly notify Client of any delays of potential delays in Centrify's ability to undertake and complete performance in accordance with the applicable schedule resulting from the inaction of Client.
- Client understands that the implementation of Centrify best practices are part of engagement estimation. It is expected that the single OU and sub-OU architecture will be implemented using our supported CreateOU powershell script, or the same architecture will be built manually before this engagement commences.
- Client understands that the implementation of Centrify best practices will include a Parent Zone for standardized POSIX information for all users requiring Unix access. A Child Zone for

computer objects that are in-scope of this engagement. For every classic zone being updated and migrated a Computer Role will be created inside the Child Zone for specific user access.

- Client will verify that each student computer for use during onsite training meets the minimum system requirements by using the system check at: <https://use.cloudshare.com/Ent/Machine.mvc/testpage>
- Client will provide the assigned consultant for the engagement a list of students for the onsite training. This list must be emailed a minimum of two weeks in advance of the scheduled training dates
- Client will provide all hardware, software, facilities, equipment, and Client personnel (including technical resources) necessary to complete the project. These resources will be provided when they are needed in order to avoid project delays.
- Client will appoint a single point of contact for the duration of the project. This person will have project management responsibilities, be technically astute and familiar with Client change request processes as well as have the authority to expedite if necessary.

- Client management will make decisions and resolve issues in a timely manner in order to avoid project delays.
- If any Consulting Services engagement is cancelled by Client less than three (3) weeks before the scheduled start date for such Services, Centrifly will most likely not be able to reschedule the engagement and be out the revenue. Centrifly will make every effort to redeploy the consultant and if Centrifly is able then the Client agrees to pay Client agrees to pay any reasonable fees and expenses incurred by Centrifly in terms of travel cancellations. If Centrifly is not able to redeploy the consultant then Client agrees to pay the full amount of the Consulting Fees that would have been properly invoiced by Centrifly had Client not cancelled such engagement, and also any reasonable fees and expenses incurred by Centrifly in terms of travel cancellations. For multiple week engagements this only applies for each week that is less than the three (3) week cancellation notice.
- Centrifly assumes that Client has a single Active Directory Forest in scope of this engagement.
- Centrifly assumes that no computers in a DMZ at Client are in the scope of this professional services engagement.
- Centrifly assumes that Client has a single logical project team in the same physical location, with representatives from the UNIX and Windows platforms participating as needed in the design discussions.
- Client will have network connectivity and name resolution between all Client systems (including workstations and servers the Centrifly Suite will be installed on, regardless of on-premise vs. off-premise computer locations) and Active Directory connectivity functioning correctly prior to work beginning.
- All Client servers will be in the same data center or, if multiple data centers, there will be at least T1 connection speed between the main data center and the remote sites. It is also recommended that resources from other sites be identified in advance as project resources, if multiple remote sites are in scope.
- Client will provide Centrifly with an associate that has the proper administrative access to all agent servers and will have the ability to reboot servers as necessary within twenty-four (24) hours of request. Any applications the customer has running on these systems that need to authenticate to the operating system could be affected after the agent is installed since Centrifly is adding Centrifly's PAM module. Some applications need to be restarted after Centrifly's agent is installed in order to run properly. There is no way Centrifly can know every application running on all of the servers of Client and how they will react. What Centrifly has found is rebooting the server is the most reliable and safest way to ensure those applications are restarted appropriately.
- Client will ensure all systems meet the minimum patch requirements and system requirements for the Centrifly Suite (see Centrifly Product Release Notes for specific platform requirements). Centrifly recommends the use of 'adcheck' or Deployment Manager to verify system requirements.
- All systems and applications that will have Centrifly's Suite of technologies installed must be on the Supported Platforms list at: <http://www.centrifly.com/directcontrol/platforms.asp>
- If the scope of this project involves any specialized customization or software development that is outside the current functionality of the Centrifly Suite of Products, that development work is subject to a 30-day warranty beginning on the completion of that development work.
- All materials and information generated or used by Centrifly in the performance of the Services, including but not limited to the work product delivered to Client ("Consulting Materials"), and all intellectual property rights therein, shall be the property of Centrifly. Centrifly hereby grants to Client a personal, non-transferable, non-sublicensable, non-exclusive license to use, reproduce, copy and display any Consulting Materials solely for Company's internal business purposes. Client obtains no title or ownership in any Consulting Materials, and Centrifly retains all right, title and interest in and to any Consulting Materials. Client retains all right, title, and interest in and to Client data.
- **Engagement Management** includes activities performed in support of this Jump Start that require management expertise, oversight, control, and direction in team building, communications, time management, quality assurance and quality control and management, and cost management. Centrifly Professional Services will regularly communicate personnel and resource requirements for this Jump Start to be a success, ensure appropriate staffing and scheduling of Centrifly personnel for this Jump Start, and ensure deliverable quality and timeliness. This entails ensuring that Client is prepared for the services with all equipment and information as outlined in Exhibit A, as well as regular communications and the close out of the project.
- **Impracticability.** Centrifly shall not be required to provide any portion of the Services to the extent the performance of such Services becomes "Impracticable" as a result of a cause or causes outside the reasonable control of Centrifly including unfeasible technological requirements, or to the extent the performance of such Services would require Centrifly to violate any applicable laws, rules or regulations or would result in the breach of any software license or other applicable contract.

Scope Change Control

During the performance of the engagement, certain issues may arise that effectively prevent the completion of the work outlined in this Jump Start within the planned timeframe, such as, but not limited to, hardware or network failures or outages in Client's environment, problems with Client's in-house software or Client's third-party software, or the unavailability of key Client personnel. If this situation occurs, the designated Centrifly representative will work with Client to identify and document the scope change, its impact on the project approach, timing, fees, resources, and the quality of project results. Centrifly will document this using either the Centrifly Change Request Form or an appropriate Change Control form provided by Client.

Any change in scope must be agreed to in writing prior to Centrifly reengaging on the project and will require the signature of the Centrifly Technical Services Vice President and the appropriate Client representative. Any other problems, disputes or issues arising during this engagement should be communicated as soon as possible after identification to the designated Centrifly Consultant for resolution.

Timeframe and Resources

Centrify estimates that Centrify’s work on the project will require the number of person-days reflected in the total days below in order to complete based upon the scope and assumptions described in this Jump Start and will be performed according to the following planned schedule:

Activity	Estimated Days
Centrify Zero Trust Privilege Services	
Advanced Upgrade Jump Start	24
Total Days	24

This proposal is based on a standard eight (8) hour workday. Off site documentation has been included for this estimation. Any work performed in excess of a standard eight-hour workday may be subject to an hourly over time charge based on the hourly rate currently being charged to Client. If this condition occurs, Centrify will notify the Client contact, provide a change request form and obtain approval in writing from the customer prior to the overtime work being performed.

In performing this engagement, Centrify will assist in prioritizing and sizing Centrify’s recommended changes, and will assist with implementing the recommended changes as time permits (i.e., up to the amount of time presented in the table above). Centrify cannot commit to assisting with implementing all of the changes Centrify will recommend as it is impossible at this point in time to determine the amount of effort that will be required to fully implement those recommendations.

Circumstances may necessitate changes to the tasks and/or time estimates. If this situation occurs, Centrify will follow the change control procedures defined in the Jump Start.

Period of Performance

The period of performance for this Jump Start begins upon the date of mutual signature by authorized representatives of Centrify and Client and continues through the Completion Date (as defined below). All work must be scheduled to be completed within six months (180 days) of the start of the performance period. Any modifications or extensions will be requested through Change Control (1.3) for review and discussion.

Completion date. The “Completion Date” will be the earlier of (1) the date on which all Services and Deliverables defined in Section 1 are completed, or (2) six months after the date of mutual signature of this Jump Start by authorized representatives of Centrify and Client.

Fees and Expenses

The fees for the Services will be outlined in the customer quotation/ product schedule. Any fees that are quoted on a daily basis are equated to an hourly rate based on an eight (8) hour day (hourly rate = daily rate divided by eight hours). Unless otherwise set forth in the customer quotation/product schedule, all Services are recorded and will be billed on this hourly basis. This fee estimate

does not include any travel expenses which will be invoiced to the end customer at actuals as they are incurred.

Personnel Quality. Centrify agrees that all personnel used by Centrify to perform the Services will be competent and adequately trained by Centrify to perform the Services in accordance with the provisions of this Jump Start.

Background Checks. Centrify shall perform commercially reasonable background checks on all personnel assigned by Centrify to provide the Services under this Jump Start. These background checks include and are not limited to: criminal history for the past seven years, verification of employment, credit history, and education verification. Client may request in writing a letter of proof from Centrify’s background check provider that the Background Check was completed successfully.

Subcontractors Permitted. Centrify may engage a Subcontractor to perform all or any portion of its duties under this Agreement provided that any such Subcontractor agrees in writing to be bound by confidentiality obligations at least as protective as the terms of this Jump Start regarding confidentiality. Subcontractors are subject to Centrify’s standard Background Checks. Centrify remains responsible for the performance of such Subcontractor.

Centrify will obtain written permission from Client before assigning a Subcontractor to work on this Jump Start.

Subcontractor Defined. As used in this Agreement, “Subcontractor” will mean any individual, partnership, corporation, firm, association, unincorporated organization, joint venture, trust or other entity engaged to perform hereunder. Subcontractors will be Centrify Certified Administrators who have undergone a rigorous training program from Centrify.

Tasks to be completed by Client before Professional Services engagement begins

- Client will determine the owner and/or responsible individual for determining privileged access to each in-scope system.
- Client will execute Centrify’s adcheck’ across all UNIX servers in-scope of the initial design validation phase. Client will clear all error and warning result codes from the use of ‘adcheck’ on all in-scope servers.
- Client will execute the deployment report tool and send results to Centrify Professional Services. This report includes the version numbers installed.
- Client will be responsible for preparing and filing change management in advance as required to prevent schedule delays
- Client will provide a list of all Classic Zones and host membership for each zone.
- Client will provide a working sudoers file for mapping purposes
- Client will provide availability and contact information of an Active Directory Administrator with Enterprise Forest Admin privileges.

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