

Document Objective: *This document focuses on several key areas related to account management, reporting, delegation where a considerable amount of savings can be achieved upon deployment of ManageEngine ADManager Plus.*

The document helps you understand that ManageEngine ADManager Plus not only helps you drastically reduce the costs associated with “efficiencies and skilled manpower demand”, but it also elaborates savings of security costs, which could be owed to the error free reporting mechanism and controlled delegation of ADManager Plus. A separate section throws light on the usage of scripts in managing Active Directory and how ADManager Plus scores against the usage of such scripts.

With ADManager Plus, there are no extra installations required, and no OPEX, no dependencies on other software!

Return on Investment – ManageEngine ADManager Plus

The Return on Investment on any good or service purchased is directly proportional to the value gained in quantifiable monetary terms. It is a known fact that ADManager Plus – Active Directory management and reporting software will help organizations to save costs. This document provides you an idea on the Total Cost of Ownership of a product like ADManager Plus and also the possible returns achieved on deploying such software.

To put you in better position to appreciate the returns ADManager Plus has to offer, here is a platter of the “ADManager Plus offer”, which saves you a great deal of money & effort. Some of the several distinct advantages of ADManager Plus over Active Directory:

- Instant provisioning/ de-provisioning of Active Directory objects.
- Complete provisioning & de-provisioning (create user accounts with Exchange mailboxes & when you delete them, even delete associated home folders!)
- Easy-to-construct helpdesk delegation model which can turn even non-technical HR personnel into specialized IT helpdesk technicians.
- Instant Reports (including IT compliance oriented).
- “Point-n-click” management of common administrative activities. (e.g. Reset password, move users, unlock users)
- MS Exchange management

These are only a few of the several improvements upon Active Directory features. (There are several others as discussed below). Features like these save a great deal of time and effort, and assure high returns of investment.

To arrive at the actual percentage of ROI, let us take a look at the “Direct” and “Indirect” Benefits:

Direct Savings	Indirect Savings
<ul style="list-style-type: none">❖ Savings based on Minimal Resource Usage<ul style="list-style-type: none">➤ Computation of costs by native methods<ul style="list-style-type: none">▪ Calculating Costs of User Provisioning.▪ Calculating the Cost of Account Unlocks and Password Reset Tickets.▪ Calculating the cost of Account Modifications.➤ Computation of Costs by deploying ADManager Plus<ul style="list-style-type: none">▪ Calculating Costs of User Provisioning.▪ Calculating the Cost of Account Unlocks and Password Reset Tickets.▪ Calculating the cost of Account Modifications.➤ Comparing the Costs.➤ Computing the savings achieved by Minimal Resource usage.❖ Other Direct Cost Savings<ul style="list-style-type: none">➤ Active Directory training costs.➤ Savings possible with the help of cross domain management and centralized access capabilities.	<ul style="list-style-type: none">❖ Savings by eliminating the use of Scripts.❖ Savings by organized Delegation and complete control❖ Professional outlook of your IT department❖ Savings possible with readily available actionable data❖ Savings possible with a perfect Active Directory Clean-Up mechanism

Computing Salary Costs

Any ROI document will be incomplete without the computation of salary of workforce involved. Active Directory management includes 3 different types of users.

1. The System Administrator
2. Helpdesks and
3. End Users.

Tabulated are the type of tasks done by them and their costs.

Deployment Size Calculation Parameters	Assumed values		Comments
Total Number of users in assumed company	1000		
Salary Calculation Parameters	Annual Salary Rate	Hourly Rate	Comments
Cost of Active Directory expert		\$80	Training users in the use of native Active Directory.
Average salary of system administrators	\$70,500	\$34	Accounts adds, deletes, modifications, moving users etc.,
Average salary of helpdesk personnel	\$62000	\$29	Account provisioning, account modifications, password resets, unlocking accounts.
Average salary of an employee	\$75,000	\$36	Authentication, password entry, account modifications, non-productivity time.

Source:

Source of salary assumptions: http://swz.salary.com/salarywizard/layouthtmls/swzl_compresult_national_IT10000135.html

Hourly Rates: 8 Hours per day, 22 Days a Month and 12 Months a year is the time an average employee is expected to work.

Operational Savings based on Minimal Resource Usage

Costs associated with Resource Usage in managing Active Directory:

Before we get to “cost factor associated with resource usage”, let us observe what are the usual Active Directory tasks.

- User are to be Provisioned/ de-provisioned as and when HR recruits or terminates employees.

Provisioning involves providing various account privileges and setting up profiles, profile paths, Exchange restrictions, home folders, mailbox and other details.

De-provisioning involves removing the user information and Exchange privileges.

This is primarily dependent on an organization's **employee growth and turnover rates**.
- Domain Users raise password reset and Account lockout tickets frequently.

It is estimated that, on an **average 30%** of the calls attended by helpdesk technicians are password related. Users tend to forget their passwords more often which results in password reset tickets. Each user on an average forgets his password once every 3 months and each **password reset ticket consumes 30 minutes of unproductive time**.
- Project managers raise various account management and modification requests on a daily basis.

User Information Update in Active Directory, Creating User Mailbox, Setting / Modifying Storage and Exchange restrictions, Moving user accounts from one OU to another, Creating Terminal Services Profiles, Modifying user attributes, Modifying permissions, Managing Computers, Managing Contacts, Managing Groups and more are other Active Directory management tasks raised by managers.

Account modification or management of any of the above types is **raised by 1 of every 3 users within a single year**.
- Most Active Directory management tasks will be delegated to helpdesk technicians.

Not all management tasks are done by System administrators they delegate the bulk of their routine tasks to helpdesks and limit themselves to tasks that are of strategic importance. And in other cases in the absence of a helpdesk technician these tasks are done by system administrators. This follows a ratio of **20% to 80%**. There is a cost associated with the delegation of tasks to helpdesk technicians.

Now, let us take a closer look at the costs associated with accomplishing the above mentioned tasks.

Cost of Account provisioning requests

For assumed 1000 employees mid-size company.

	Average rates assumed	For a 1000 employee organization (Count)	Comments
New Users added (Dependent on Growth)	7-15% Assumed – 10%	10% x 1000 = 100	Growth in organization strength annually
Users terminated or leave the organization	10-20% Assumed – 12%	12% x 1000 = 120	Employees Terminated annually
Users added to fill existing positions	Same as above 12%	12% x 1000 = 120	Filled annually
<i>Total Provisioning requirement</i>	<i>New users added + Terminated + Added to fill existing positions.</i>	<i>100+ 120 + 120 = 340</i>	

Total number of provisioning tasks based on the requirement raised by a HR department = 340

When is user provisioning required?	How is the user provisioning list obtained?
On recruitment	Excel sheet emailed to the administrator with the list of employees recruited.
On termination	Excel sheet emailed from the HR to the administrator or a helpdesk technician on list of users terminated.
Some accounts that are lying inactive. Identify and remove/disable them once in every 30 days	Users who have not logged on to their domain computer over a selected period of time are considered to be inactive. It requires a report on Inactive Users for a desired time period. This list of users generally goes unnoticed. Generating such a list requires Active Directory and scripting knowledge. The users in the list are to be de-provisioned.

Time required provisioning a user account in Active Directory: 5 – 30 minutes depending on the number of attributes that are to be provisioned. (Let us assume an average of 15 minutes)

Cost of User Provisioning in Native Active Directory:			
It is estimated that on an average the time required to provision / create an Active Directory account is 15 minutes (1/4 of an hour).	15 minutes		
The average hourly wage of a helpdesk technician. (Source: http://www.sfgate.com/cgi-bin/article.cgi?f=/q/a/2005/07/11/wastingtime.TMP).	\$29 /hour		
For a single user account to be provisioned in Active Directory.		\$29 x 15 min	\$7.25
Total Number of Provisioning tickets in a year for an organization that has 1000 employees	340		
Total cost of account provisioning Active Directory for 340 accounts		340 x 7.25	\$2465
PS: The man hours wasted by an employee waiting for his ticket to be resolved is not taken into consideration in this case. This again is an added cost that is saved by an efficient and automated system.			

Cost of Account Lockout and Password Reset Incidents:

To resolve a single password reset or account lockout ticket the time required is computed below.

Helpdesk cost

Time involved:

- User raises a ticket → Help Desk Technician → Technician Time to resolve password reset task → Technician time to close the ticket.
- This requires on an average → 30 minutes.
- Cost of Help Desk Technician → \$ 29 per hour.

End User Cost

- Unproductive end-user time. ()
- The frustrating time is equivalent to the ticket time → 30 minutes
- Cost of an employee → \$ 36 per hour.

Cost per password reset ticket:

Employee	Time Involved for a ticket	The Task	Cost
Helpdesk	30 minutes	User raises a ticket → Help Desk Technician → Technician Time to resolve password reset task → Technician time to closes the ticket.	$\$29 / 2 = \14.5
Employee	30 minutes	Unproductive time experienced by the user. (In the case of Account lockout)	$\$ 36 / 2 = \$ 18$
Total	1 hour		\$32.5

Total Cost of Password Resets / Account Unlocks:

Cost of Password Reset computed for 1000 User organization			
Average number of instances a user forgets his password in a year		4	
Cost of a single password ticket		\$32.5	
Total cost of password ticket per user in a year	Tickets per user x cost per user.	4x \$32.5	\$ 130
Percentage of employees who forget their passwords		30%	
For a 1000 employee organization		300	
Total Cost of Password Reset for a 1000 User organization	Number of password tickets x Cost of a password reset	300 x \$130	\$ 39000

Cost of Account Management and Modification requests raised by managers and end-users

Employee	The Task	Time Involved for a modification or management task	Cost
Helpdesk cost per ticket	User raises a ticket → Help Desk Technician → Technician Time to resolve management or modification task by accessing Active Directory → Technician time to closes the ticket.	20 min	\$29 = \$ 5.8

Total Cost of Account Management or modification requests:

Total Cost of Account Management or modification requests			
Average number of instances a user modification tickets raised in a year by a single user		1 / 3 times (or) 33%	
Cost of an account modification task		\$ 29	
Total Number of modification tasks in a year for a 1000 user organization	Number of Tickets / user x Total number of users	1/3 x 1000	333.33
Total Cost of Account Management / Modification	Total Number of tickets x Cost of a modification task	333.33 X \$ 5.8	\$ 1933.2

Calculating the Operational Costs after deploying ADManager Plus

Deployment of ADManager Plus helps to drastically reduce the operational costs with its comprehensive set of features that include

- Delegation of Tasks.
- Centralized Access.
- CSV and Template based creation / modification process.
- Bulk management capabilities.
- Multi-domain / cross domain management capabilities
- Scheduled Reporting and notifications

These features provided by ADManager Plus will help execute tasks with the least man-power and the least cost. Take a look at how much you will save when you do the same tasks using ADManager Plus.

Cost of Account Provisioning
<ul style="list-style-type: none"> • ADManager Plus allows you to perform most of the mundane bulk management tasks efficiently and also within minutes. • This it does with built-in Template and csv update features – object creation, modification and management can be done in bulk using ADManager Plus.

Time required to create multiple templates (administrator)	1– 2 hours		
Number of instances tickets are raised (Approx). Assumption that 10 employees are provisioned in a single ticket.	30		
Time required importing a list of users into an existing template. (Helpdesk time required to provision a list of users.)	1 minute		
Helpdesk Cost for provisioning the entire list of users sent by the HR in a year.	2 hour of admin time + 30 minutes of helpdesk time	\$68 + \$ 14.5	\$ 82.5

Cost of Password Reset

- The product is web based and allows easy access by the administrator from anywhere in the domain.
- ADManager Plus reports provide an administrator with the list of users whose passwords are to expire in X number of days via. email. This helps the administrator notify users well ahead of password expiry time and hence reduce password reset or account lockout tickets from users working from home or VPN users.
- Any delegated administrator/technician can reset user password for the entire list of Active Directory users by just importing the list into the product or from the report.
- With Password reminders sent to administrators the chances of account lockout reduces drastically. The number of tickets can be reduced to one third of the total incidents. (Notification eliminates the Account Lockout incidents for VPN / OWA users, moreover administrators can rectify account lockout incidents in the office with the help of Account Lockout Reports from ADManager Plus.)
- The time required to reset password for a single user or an entire list of users is less than a minute. (For computation purposes let us assume **1 minute**.)

Time to schedule reports of password expired /locked out users / soon to expired users	1 minute		
Time required to reset passwords / unlock accounts for a list of users using ADManager Plus	1 minute		
Number of password reset tickets from end-users after deploying ADManager Plus for a 1000 user organization.	1/3 X 300	100	
Time required to reset a password with ADManager Plus	1 minute		
Total cost of password reset with ADManager Plus deployed	Number of tickets x Time required per ticket (single or list of users)	100 x 1 minute	1 hr and 40 minutes
Hourly wage of a Helpdesk technician	\$ 29		
	Hourly wage of helpdesk x Number of hours	\$ 29 x 1 hr and 40 minutes	\$ 48.5
Helpdesk cost for password reset and Account unlock with ADManager Plus			\$ 48.5

Cost of Account Modifications

- Each Account Modification Task is by itself a laborious process which requires dedicated workforce to complete them. The use of ADManager Plus drastically reduces the response times for these user management or modification tickets.
- Tasks that require hours to complete using the native Active Directory can be executed in minutes.

<ul style="list-style-type: none"> • Template based Account modifications, CSV File based Account modifications and Modifications from reports drastically reduce administrative workload and costs. • Account modifications also require a similar amount of time and efforts as required for Password Reset and we can substitute the same values here. 			
Average Number of Account modification requests raised by a user	.33 / year		
Total Number of Account modification requests for a 1000 user environment.	330		
Time required for a modification task	1 minute		
Total time required for modifications if raised as individual requests	330 x 1 minute	330 mins (5 ½ hrs)	
Experience suggests that not all management or modification tasks are sent as single requests. Most of the modification tasks are done in bulk.	40 individual tickets 20 bulk tickets	60 mins (1 hour)	
Cost of a Helpdesk	\$ 29 / hour		
Total cost of helpdesks to execute modification tasks with ADManager Plus	Cost of Helpdesk per hour x Number of modification tickets	\$29 x 1 hr	\$ 29
If all modification tasks are executed as individual tasks		\$29 x 5 ½	\$ 159.5

Comparing the Costs of Active Directory management before and after the deployment of ManageEngine ADManager Plus:

	Native Active Directory	Using ADManager Plus
Cost of Account Provisioning	\$ 2465	\$ 82.5
Cost of Account Unlock / Password Resets	\$ 39000	\$ 48.5
Cost of Account Modifications	\$ 1933.2	\$ 159.5
Cost of Product Purchase (1 Domain and 2 Helpdesk Technician professional version)	-	\$ 1495
	\$ 43398.2	\$ 1785.5

Operational Savings by deploying ADManager Plus:

Operational Savings by deploying ADManager Plus:	
Operational expenditure to perform Active Directory tasks with native Active Directory	\$ 43398.2
Operational expenditure to perform Active Directory tasks after deploying ADManager Plus	\$ 1785.5
Savings	\$ 41612.7

From the tables above, it is clearly visible on the costs saved by the deployment of ADManager Plus in terms of operational costs alone within a year.

The operational costs saved by deploying ADManager Plus = \$ 41612.7

On deploying ADManager Plus: An organization with employee strength of **1000** will be able to save **\$ 41612.7** within the first year of deployment. This is with reference to the reduced Man Power cost and alone.

Training Cost Saved by the Deployment of ADManager Plus:

ADManager Plus is cost-effective when it comes to training too!

Cost of Training		
Cost of an Active Directory Expert	Approx. \$ 80 an hour.	
Cost of training helpdesk technicians or other employees to manage the native Active Directory:		
Average wage of an Employee:	approx. \$29 an hour	
Number of hours required for training	approx. 100 hours	
Number of employees to be trained: (This varies depending on the size of an organization, assume 2 technicians are trained.)	2	
Total training Man hours	2 x 100 hrs	200 hrs
Cost of attending a training (by computing Man hours required)	200 x \$ 29	\$ 5800
Average cost of a trainer	\$ 3000 (assumed)	\$ 3000
Total Cost of Training	Cost of Trainer + (Number of Man hours trained* average wage of employee).	\$ 8800
Cost of training an employee to use ADManager Plus		
Cost of ADManager Plus training	\$ 495	
Number of hours required for training a single employee	6	
Number of attendees	2	
Total training Man hours	2 x 6	12
Cost of Trainer	Included in the cost of training.	-
Total cost of training 2 technicians	\$ 495 + (12 * \$ 29)	\$ 843
Total cost ADManager Plus + Training costs	\$ 1495 + \$ 843	\$ 2338
ADManager Plus is simple to use and easy to understand. The investment in training is not a mandatory expenditure as most employees find the software easy to understand and can do designated tasks with just an hour of training.		
Let us also take into account the cost of attrition. Here, trained employees are the most in demand. Average attrition rate in this class is estimated to be 20 %. Deployment of ADManager Plus allows even a technically naïve user to work with it efficiently and provide an output surpassing that of the trained technicians or script-based task automation.		

Training costs Saved by deploying ADManager Plus:	
Cost of training helpdesk technicians or other employees to manage the native Active Directory:	\$ 8800
Cost of training an employee to use ADManager Plus	\$ 2338
Savings	\$ 6462

ADManager Plus saves the need to employ multiple Active Directory experts who require hefty pay checks. Instead any user in the domain or users who perform the role of a **manager, Human Resource** or any other **organizational roles** can be trained to use the ADManager Plus software and execute delegated tasks to perfection.

The training costs saved by deploying ADManager Plus = \$ 6462.

Cross Domain management and centralized access reduces the need to employ new resources everywhere:

ADManager Plus drastically reduces the number of technicians required to perform an Active Directory management task. Any user in the domain can be delegated specific AD Management tasks even without providing them administrative privileges. All that the technician does is he logs into the ADManager Plus GUI with his credentials and perform only the task delegated to him and nothing else. Further, an administrator can control the OUs that the delegated technician can manage.

This allows tasks like updating user information in Active Directory or resetting passwords to be done immediately.

- It saves on the need for skilled workforce.
- It relieves an administrator from dealing with tasks that are trivial and lets him deal with others of strategic importance.
- Multiple tasks can be performed as a workflow

With ADManager Plus delegation feature an administrator can:

- Delegate a single individual to do multiple tasks(roles) across domains (or)
- Delegate a single responsibility for a user and restrict his privileges to within an Organizational unit (or)
- Delegate a single responsibility for a user across domains (or)
- Work single handedly across domains.

Each of the above listed benefits allows for organized management of Active Directory with the least resource which otherwise will not be possible. In a multi-domain environment consider the cost involved in deploying helpdesk users at each unit. This is both difficult to manage and cost intensive.

Savings through Cross Domain management and Centralized management of Active Directory	
In a 2 Domain environment, minimum number of resources to manage each domain using native Active Directory	2
With the deployment of ADManager Plus	1
Savings	50% of employee costs

The combined benefits of direct savings possible with ADManager Plus are easily visible from the illustrations shown above.

Indirect Savings by the deployment of ADManager Plus:

In addition to the above mentioned Direct savings deployment of ADManager Plus, helps in reduced costs with the help of the below listed savings

- [Savings by eliminating the use of Scripts](#)
- [Savings by organized Delegation and complete control](#)
- [Professional outlook of your IT department](#)
- [Savings possible with readily available actionable data](#)
- [Savings possible with a perfect Active Directory Clean-Up mechanism](#)

Savings by eliminating the use of Scripts

Cost of Scripts

Assuming you ignore the manual process and resort to scripts / command line tools:

What is the cost of writing these scripts?

Writing a script requires scripting and Active Directory knowledge. Employing skilled workforce for these tasks will add to the existing costs.

How accurate are they? Are they scalable to a large enterprise?

Scripts that work for a single management task require a different approach when it comes to scaling it for a large enterprise. The time /cost required to restore an activity done by the execution of a wrong script is just not justifiable.

Cost of combining the actions of multiple scripts?

One script will not serve all purposes. Tasks that seem simple when done as an individual entity might seem inordinately large when they are to work in conjunction with other management tasks. It is therefore required to create multiple scripts. For example: Writing a script for reporting and password resets are totally two different actions. But reports on password expired users is a must have in a password reset function.

Cost of training your employees to use scripts? Cost of skilled workforce if providing existing employees with training is a concern?

It is not an easy task for every employee to use scripts and execute a management or modification task in Active Directory. This requires proper training. The time and cost of this training is also to be taken into account.

Savings by organized Delegation and complete control:

Limited Distribution of administrative rights – Not all users in the domain require administrative privileges.

Managing Active Directory through native methods forces administrators to unwillingly provide privileges to managers and others who have not much to do with Active Directory with those privileges. ADManager Plus role based delegation feature ensures that tasks are done without administrative privileges being shared.

Huge amounts of losses have accounted due to inappropriate privilege distribution which is well addressed by ADManager Plus. Your Active Directory is safe with ADManager Plus delegation capabilities.

Savings possible by limited distribution of privileges in Active Directory:

ADManager Plus allows delegation of a role to helpdesk technicians. This role can be performed by any unskilled technician from ADManager Plus console itself. This saves on any chance of the user accessing Active Directory directly and hence any privileges provided to the user. Complex tasks can be executed by any delegated user without any previous knowledge of Active Directory and even without him having to access the Active Directory.

Cost of Security lapse is very huge which can be averted by the deployment of ADManager Plus.

Professional outlook of your IT department

Professionalism of IT Department.

ADManager Plus allows automation of several AD administration tasks. A feature like scheduled reporting and email notifications ensures professional and timely management of your Active Directory. This notifies the need for action to the right person who does it with ease using the ADManager Plus User Interface.

Reduced errors while performing Active Directory management tasks saves any cost related to rework. Aided by the accurate data provided by ADManager Plus reports Active Directory tasks performed by ADManager Plus are error-free a huge cost saving.

Savings possible with readily available actionable data

Readily available Actionable Data: – Timely action at the time it is required

At all times, there are about 150+ actionable reports available. These carry all the data required by an administrator would require to manage his domain.

- Immediate availability of data pertinent to day-to-day administration
- IT compliance oriented reports
- Reduction in time spent on scouting data
- Scheduled reports that are delivered to an administrators' mailbox as desired.

Readily available actionable data helps in quickly processing any Active Directory management task. This enhances the speed of operation, reports required by compliance auditors and others are supplied instantly which otherwise should have cost several man-hours to produce.

Savings possible with a perfect Active Directory Clean-Up mechanism

Unused Accounts in Active Directory are to be cleared immediately or at scheduled time intervals. If not, this leads to minor challenges with regard to **capacity utilization** and major hiccups related to **security**.

Might not be too obvious at first glance, but some organizations have paid a heavy prize, to the tunes of millions sometimes, for taking Active Directory clean-up lightly. The Scheduled Cleanup feature of ADManager Plus serves in solving any challenge related to unused Active Directory Accounts.

In addition to the above, a perfect clean-up possible with ADManager Plus, ensures an effective “asset or license management”. Once you know about the dormant accounts, it will not be a tedious task for you to revoke or reuse licenses associated with dormant user accounts. This is a huge cost savings indeed.

Conclusion:

From the above document it is evident that ADManager Plus provides great value for money. This has been elaborated with sufficient illustrations and explanations, while detailing detail the direct and indirect savings achieved through by the deployment of ADManager Plus.

For a starting prize of \$ 495 for the standard edition and \$ 795 for the professional edition and considering the total cost of ownership of the product which includes the product scope, security features, cost savings, centralized control and more.... ADManager Plus must be a steal for an organization that uses its full functionalities and features. Even for other users who use only some of the features ADManager Plus is a real value for money.