NUCLEUS RESEARCH

HPE VERTICA ANRITSU

ANALYSTS
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THE BOTTOM LINE

Anritsu deployed HPE Vertica to replace its previous data storage and analytics platform as it targeted new revenue streams. Nucleus found that the project enabled the company to handle significantly larger scale data input with a faster response time for analysis, thus helping them to target tier 1 telecommunication operators while maintaining their market position with their traditional small-to-medium business (SMB) client base. The choice was simple: the change to Vertica was much more cost effective than scaling their current Oracle system, while offering a much improved performance to execute very complex analytics use cases

ROI: **351%**
Payback: **4 months**
Average annual benefit: **$3,014,583**

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THE COMPANY

Anritsu is headquartered in Kanagawa, Japan and has offices in 22 other countries, with strong presence in both Europe and North America. Anritsu's flagship measuring instrument business provides products and services indispensable to the development, manufacture and maintenance of a range of communication systems as typified in mobile phones and the Internet on a global scale. Anritsu designs, produces, sells, and provides maintenance for all of their products. The service assurance business unit, headquartered in Europe, provides products and services which are responsible for ensuring quality communication services are delivered towards 1 billion subscribers.

THE CHALLENGE

As the service assurance business unit in Anritsu started to break into the domain of analytics, they realized that the data storage need has increased exponentially while the response times expected by the customers for any kind of analysis have decreased drastically. With their previous Oracle system, enlarging storage was complicated and time consuming. Moreover, the cost of the expansion would have been extremely high, while gaining comparatively little in terms of performance. Anritsu wanted to find a solution that would keep costs down while allowing them the flexibility to scale both immediately and in the future if they find that they need to expand again.

Cost : Benefit Ratio | **1 : 4.3**

THE STRATEGY

The company began exploring alternatives to Oracle in late 2012 and continued evaluating options for six months before choosing HPE Vertica. Their decision rested on three main concerns:

- Scalability: Vertica easily allows adding or removing storage because it is modular. This means that servers can be added as needed. If they had stayed with their previous set-up with Oracle, Anritsu feared that they would need to over-expand at the outset and that it would negatively affect how they work with their customers. The flexible scaling has had a significant impact on churn prevention.

- Cost: While Oracle's database requires specialized hardware, Vertica can run on a much wider and cheaper range of servers. This cut costs by as much as $250,000 when comparing equivalent hardware setups for both options. Especially for smaller clients, Anritsu stressed how important it is that the cost base is to be kept as low as possible.

TYPES OF BENEFITS

- Implementation: Anritsu wanted to get their new solution up and running quickly and found that Vertica offered an accelerated timeline compared to an

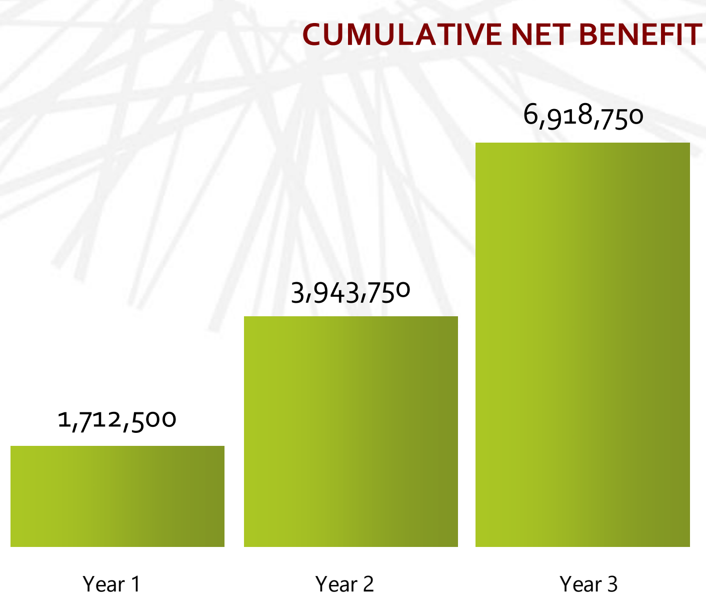
Oracle upgrade, resulting in a shorter payback period. Because they were also able to use their existing hardware and work directly with the HP engineers who designed Vertica, the transition was smooth and speedy.

Before deployment, Anritsu demonstrated proof of concept with a two-month pilot of Vertica. It was implemented in mid- 2013, and for existing customers who moved from Oracle to Vertica right away, the transition took about three months. Anritsu then began offering Vertica and Oracle side by side until the third quarter of 2014 when they stopped using Oracle with new customers. Their aim was to move all of their clients over to Vertica.

KEY BENEFIT AREAS

Anritsu's benefits were almost entirely directly from the reduced cost of hardware and software. Some of the benefits include:

- Avoided upgrade costs. By switching to Vertica, Anritsu was able to avoid huge Oracle upgrade costs, saving over $2,000,000 per year.
- Increased employee productivity. Anritsu employees were able to increase their productivity significantly because deployments with Vertica were much faster to implement for each customer. As a result, Anritsu has been able to increase the number of customers that it can create deployments for.

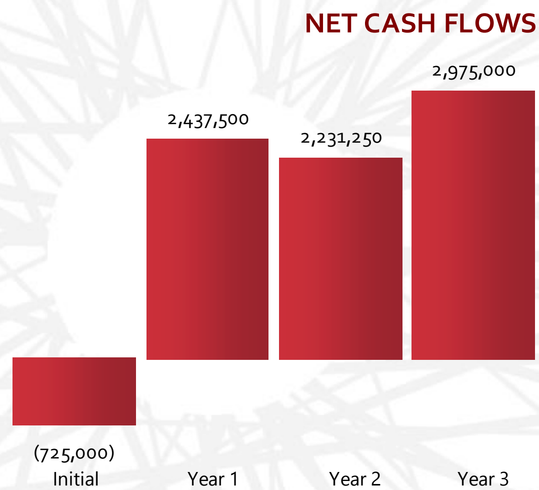


- Increased customer volume capacity. With Vertica, customers are able to handle much larger volumes of data more easily. As a result, the cost for Anritsu customers is lower and, simultaneously, Anritsu is able to manage the requirements of more customers more easily.

- More competitive pricing. Anritsu is able to offer its customers lower prices because Vertica is able to handle a greater volume of data at a lower cost than Oracle.

KEY COST AREAS

Costs for the project included an initial software license fee, training for personnel, and an ongoing yearly subscription fee.



BEST PRACTICES

With customers around the world, Anritsu wanted to grow their business significantly through new revenue streams and also to prepare for potential future expansion. Vertica is a modular software system that can be increased by a simple addition of servers. This feature benefitted them from the outset. Because they were able to use COTS (Commercial Off-The-Shelf) servers, they did not have to pay for specialized hardware. Additionally, Vertica works with any server, which means Anritsu will be able to choose which server they want and exactly how many to buy if they expand again. Its versatility and easy scalability ensure that they will not need to go through another similar upgrade process in the future, ultimately reducing customer churn and leading to smoother growth.

Given that Anritsu had a sizeable customer base with Oracle database, they had to come up with a strategy to lessen the pain of migration for their customers. They achieved this through a three-pronged approach. First, they offered the existing Oracle customer base to stay with Oracle for the next few years. In addition, they only offered Vertica to new customers, and finally, they migrated some of the willing Oracle customer base to Vertica. This helped the company manage the migration to Vertica in an efficient manner while keeping the workload to a manageable level.

CALCULATING THE ROI

Nucleus quantified the initial costs of software license, ongoing subscription fees, and personnel training to determine Anritsu's investment in HPE Vertica.

Direct benefits quantified were the elimination of software license costs associated with the previous limited database as well as the higher cost of expanding the old system. Indirect benefits quantified included increased employee productivity, which was calculated based on the average annual fully loaded cost of an employee using a productivity correction factor to account for the inefficient transfer of time between time saved and additional time worked.

FINANCIAL ANALYSIS

Anritsu

Annual ROI: 351%
Payback period: 0.3 years

BENEFITS	Pre-start	Year 1	Year 2	Year 3
Direct	0	3,050,000	2,800,000	2,800,000
Indirect	0	87,500	131,250	175,000
Total per period	0	3,137,500	2,931,250	2,975,000

COSTS - CAPITALIZED ASSETS	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	0	0	0	0

COSTS - DEPRECIATION SCHEDULE	Pre-start	Year 1	Year 2	Year 3
Software	0	0	0	0
Hardware	0	0	0	0
Project consulting and personnel	0	0	0	0
Total per period	0	0	0	0

COSTS - EXPENSED	Pre-start	Year 1	Year 2	Year 3
Software	725,000	700,000	700,000	0
Hardware	0	0	0	0
Consulting	0	0	0	0
Personnel	0	0	0	0
Training	0	0	0	0
Other	0	0	0	0
Total per period	725,000	700,000	700,000	0

FINANCIAL ANALYSIS	Results	Year 1	Year 2	Year 3
All government taxes	45%			
Cost of capital	7.0%			
Net cash flow before taxes	(725,000)	2,437,500	2,231,250	2,975,000
Net cash flow after taxes	(398,750)	1,340,625	1,227,188	1,636,250
Annual ROI - direct and indirect benefits				**351%**
Annual ROI - direct benefits only				333%
Net Present Value (NPV)				3,261,711
Payback period				**0.3 years**
Average Annual Cost of Ownership				708,333
3-Year IRR				330%

All calculations are based on Nucleus Research's independent analysis of the expected costs and benefits associated with the solution.

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