Dashboard Cloud Cams

6/20/2022

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Dashboard Cloud Cams (DCC) will require the use of AWS s3 standard storage at a cost of $.023 per gigabyte for the first 50tb or $690. As Dashboard Cloud Cams is a relatively small company capping storage at 50tb will be suitable for initial implementation. DCC will save on facility costs by moving to the cloud; as there will no longer be a need to house their own servers. DCC is expecting a reduction in facility fees by 20,000 year over year. The full time labor costs for the 3 employees are expected to be around 500,000 this cost is expected to increase by approximately 50k per year. For media services DCC will leverage Amazon Interactive Video Services. This service is priced at $.0375 for the first 10,000 hours. DCC will start with 8,000 hours worth increasing by 1,000 hours per year. DCC will leverage AWS PrivateLink to enable private connection that is priced at .0035 per GB of data processed. In order to be consistent with the amount of cloud storage we have we will consider 50 tb of storage. We will leverage the free tier Amazon EC2 as 750 hours of time per month should be suitable for our monthly work schedule to begin. The Dash Cam software will be developed and maintained in house, however there will be software charges associated with the microsoft suite of products. Microsoft 365 business standard costs 12.50 per user per month. This will come to 450 dollars per year for 3 users. DCC will leverage Amazon for all maintenance activities related to the newly purchased cloud products.  The maintenance cost will be 10% of monthly cloud expenditure which comes to $117 in the first year.

The initial implementation cost of the cloud solution will be approximately $200,000. Revenues are expected to be $600,000, $700,000, and $750,000 in the first 3 years. With these financial values Net Present Value (NPV) is expected to be approximately $194,447. Return on investment (ROI) is expected to be about 97.22%. Internal Rate of Return is expected to be approximately 39.92%. This leads to a payback period of approximately 1.6 years.

The table below details the NPV, ROI, IRR, and payback period estimates

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **0** | **1** | **2** | **3** | **Total** |
| Revenues |  | 600,000 | 700,000 | 750,000 | 2,050,000 |
| Investment | 200,000 |  |  |  | 200,000 |
| Expense: Cloud services |  | 1,107 | 1,401 | 1,695 | 4,203 |
| Expense: Software license |  | 450 | 450 | 450 | 1,350 |
| Expense: Labor |  | 500,000 | 550,000 | 600,000 | 1,650,000 |
| Cash flow | (200,000) | 98,443 | 148,149 | 147,855 | 194,447 |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
| **Year** | **0** | **1** | **2** | **3** | **Total** |
| Cash flow | (200,000) | 98,443 | 148,149 | 147,855 | 194,447 |
| Present value of cash flow | (200,000) | 98,443 | 148,149 | 147,855 | 194,447 |
| Discount rate (you can set this) | 1.00% |  |  |  |  |
|  | NPV | 194,447.00 |  |  |  |
|  | ROI | 97.22% |  |  |  |
|  | IRR | 39.92% |  |  |  |
|  |  |  |  |  |  |
| **Payback period** | 1.6 years |  |  |  |  |

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Dashboard Cloud Cams (DCC) can benefit from a cloud implementation for many reasons. Although the initial move to cloud may be considered costly in the short term, the long term savings from cloud implementation are worthwhile ( see table below for on-prem vs cloud projections). Operating in a cloud ecosystem will allow DCC to scale up or down as needed. Additionally there is no need for expensive installations as AWS will handle this for DCC. This allows employees to focus on business operations rather than scaling IT. Having data in the cloud ensures that it is backed up and protected in a secure and safe location. This minimizes downtime due to natural disasters or power outages. The cloud offers increased collaboration over traditional computing methods. Employees are able to easily access the same files from various locations. Cloud computing offers employees flexibility in their work practices. An employee can easily access the same file at home, in the office, or while in transit.  Finally employees have access to automatic updates ensuring that employees are using the latest available software.

DCC will require approximately $200,000 in initial funding to migrate existing systems to the cloud. This includes stored video cam footage, the implementation of DCC cam software into the cloud computing environment and migration of all current workflows into the cloud environment. As well as the setup of AWS S3, Amazon Interactive Video Service, AWS PrivateLink, and Amazon EC2. Although this might seem costly in the short run the 3 years savings of switching to the cloud are expected to be approximately $40,000.

The below a comparison of On-prem vs Cloud cost options

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **On-prem** |  |  |  |  |
|  | **Year 1** | **Year 2** | **Year 3** | **Total** |
| Storage | 1,000 | 1,200 | 1,300 | 3,500.00 |
| Maintenance (AWS) | 200 | 200 | 200 | 600.00 |
| Facilities | 70,000 | 80,000 | 90,000 | 240,000.00 |
| Full-time Equivalent Labor (FTE) | 500,000 | 550,000 | 600,000 | 1,650,000.00 |
| Media Services (Amazon Interactive Video Service ) | 500 | 600 | 700 | 1,800.00 |
| Network (AWS PrivateLInk) | 200 | 300 | 400 | 900.00 |
| Server Hardware | 1,000 | 2,000 | 3,000 | 6,000.00 |
| Server Maintenence | 500 | 600 | 700 | 1,800.00 |
| Software licenses | 450 | 450 | 450 | 1,350.00 |
| TCO | **573,850.00** | **635,350.00** | **696,750.00** | **1,905,950.00** |
|  |  |  |  |  |
| **Cloud provider** |  |  |  |  |
| Disk Storage (AWS s3) | 690 | 920 | 1,150 | 2,760.00 |
| Maintenance  (AWS Support Plan) | 117 | 143 | 170 | 429.75 |
| Facilities | 60,000 | 70,000 | 80,000 | 210,000.00 |
| Full-time Equivalent Labor (FTE) | 500,000 | 550,000 | 600,000 | 1,650,000.00 |
| Media Services (Amazon Interactive Video Service ) | 300 | 338 | 375 | 1,012.50 |
| Network (AWS PrivateLInk) | 175 | 175 | 175 | 525.00 |
| Virtual machines (Amazon EC2) | 0 | 0 | 0 | - |
| Software licenses | 450 | 450 | 450 | 1,350.00 |
| TCO | **561,731.50** | **622,025.75** | **682,320.00** | **1,866,077.25** |
|  |  |  |  |  |
| **Savings** | **12,118.50** | **13,324.25** | **14,430.00** | **39,872.75** |